

Compal Confidential

DFL32 Schematics Document

Banias/Dothan uFCPGA with Intel 855GME + ICH4-M

2003-03-24

REV: 1.0

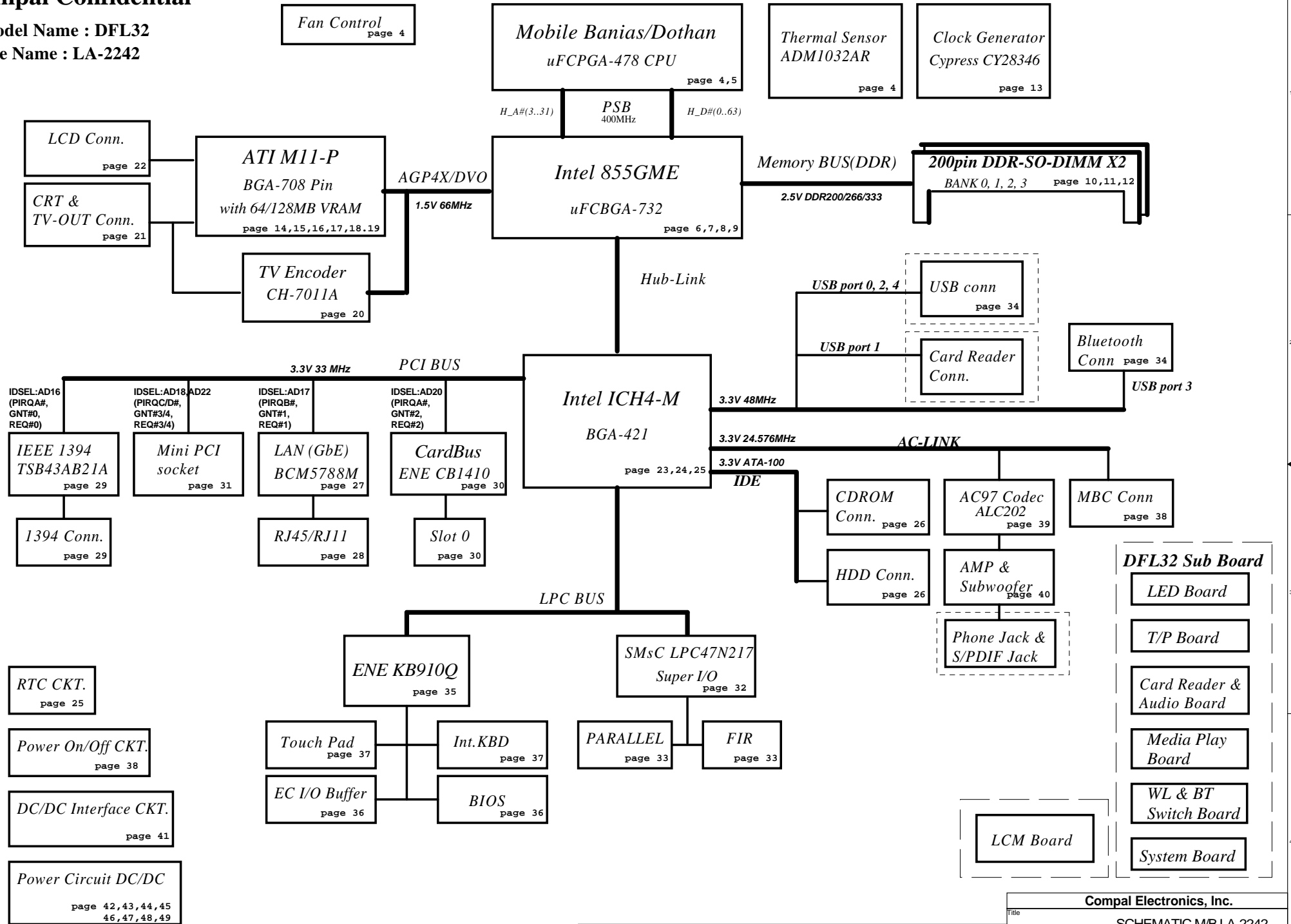
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS

Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 1 of 101

Compal Confidential

Model Name : DFL32

File Name : LA-2242



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 2 of 101	

Voltage Rails

Power Plane	Description	S0-S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+VCCP	1.05V rail for Processor I/O	ON	OFF	OFF
+1.25VS	1.25V switched power rail for DDR Vtt	ON	OFF	OFF
+1.2VS	1.2V switched power rail for VGA core power	ON	OFF	OFF
+1.35VS	1.35V switched power rail for GMCH core power	ON	OFF	OFF
+1.5VALW	1.5V always on power rail	ON	ON	ON*
+1.5VS	1.5V switched power rail for AGP interface	ON	OFF	OFF
+1.8VS	1.8V switched power rail for CPU PLL & Hub-Link	ON	OFF	OFF
+2.5V	2.5V power rail for system DDR	ON	ON	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V switched power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+12VALW	12V always on power rail	ON	ON	ON*
RTCVC	RTC power	ON	ON	ON

Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

Internal PCI Devices

DEVICE	PCI Device ID
HUB	D30
USB	D29
AC97 MODEM	D31
AC97	D31
ATA 100	D31
ETHERNET	D8 (AD24)
LPC I/F	D31
SMBUS	D31


I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	1 0 1 0 0 0 0 X
DDR SO-DIMM 1	A2	1 0 1 0 0 0 1 X
CLOCK GENERATOR (EXT.)	D2	1 1 0 1 0 0 1 X

External PCI Devices

DEVICE	PCI Device ID	IDSEL #	REQ/GNT #	PIRQ
1394	D0	AD16	0	E
LAN	D1	AD17	1	F
CARD BUS	D4	AD20	2	A
Wireless LAN	D2	AD18	3	G
Mini-PCI	D6	AD22	4	H
AGP BUS	N/A	AGP_DEVSEL#	N/A	A

Symbol note:

-  :means digital ground.
-  :means analog ground.
- @ :means reserved.

AS2010,AS2020 Compare Table

Item	* AS2020	AS2010(ATI)	AS2010(UMA)	Page
VGA	ATI M11P	ATI M11P	UMA	7, 9, 14, 15, 16, 17, 21, 22, 38
VRAM	128MB	64MB	N/A	14, 18, 19
TV Encoder	N/A	N/A	CH7011A	20
LAN	BCM5788M(GbE)	BCM4401(10/100)	BCM4401(10/100)	27, 28
S/PDIF	YES	N/A	N/A	N/A
Card Reader	YES	YES	N/A	N/A
Sub Woofer	YES	YES	N/A	33
LCM/B	YES	N/A	N/A	37, 39
MEDIA/B	YES	N/A	N/A	40

Board ID/ Project ID Table for AD channel

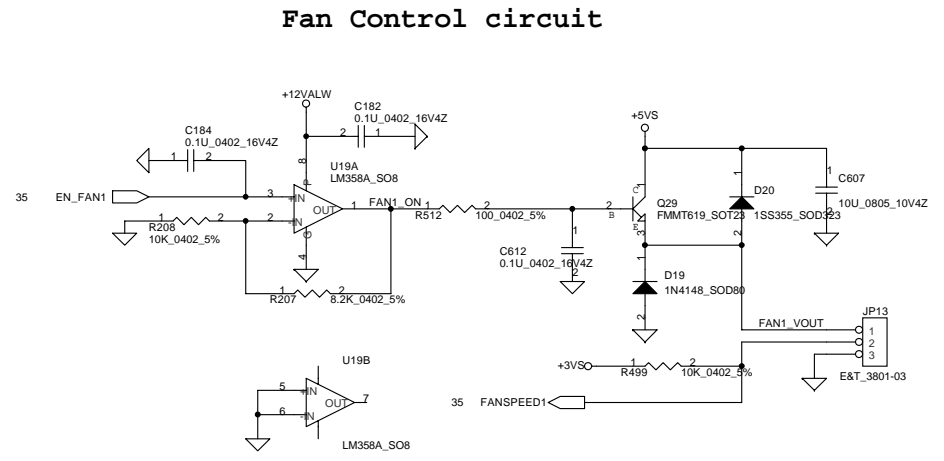
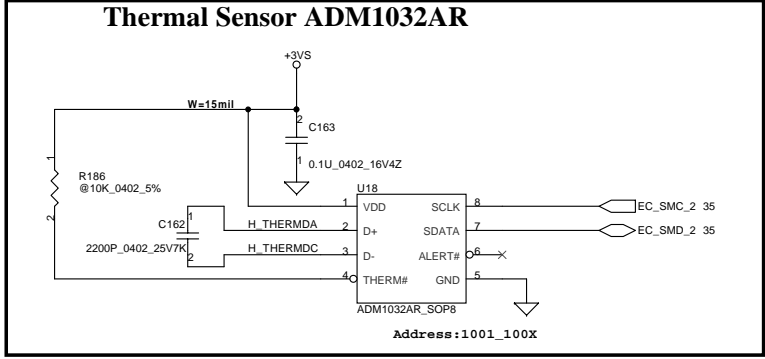
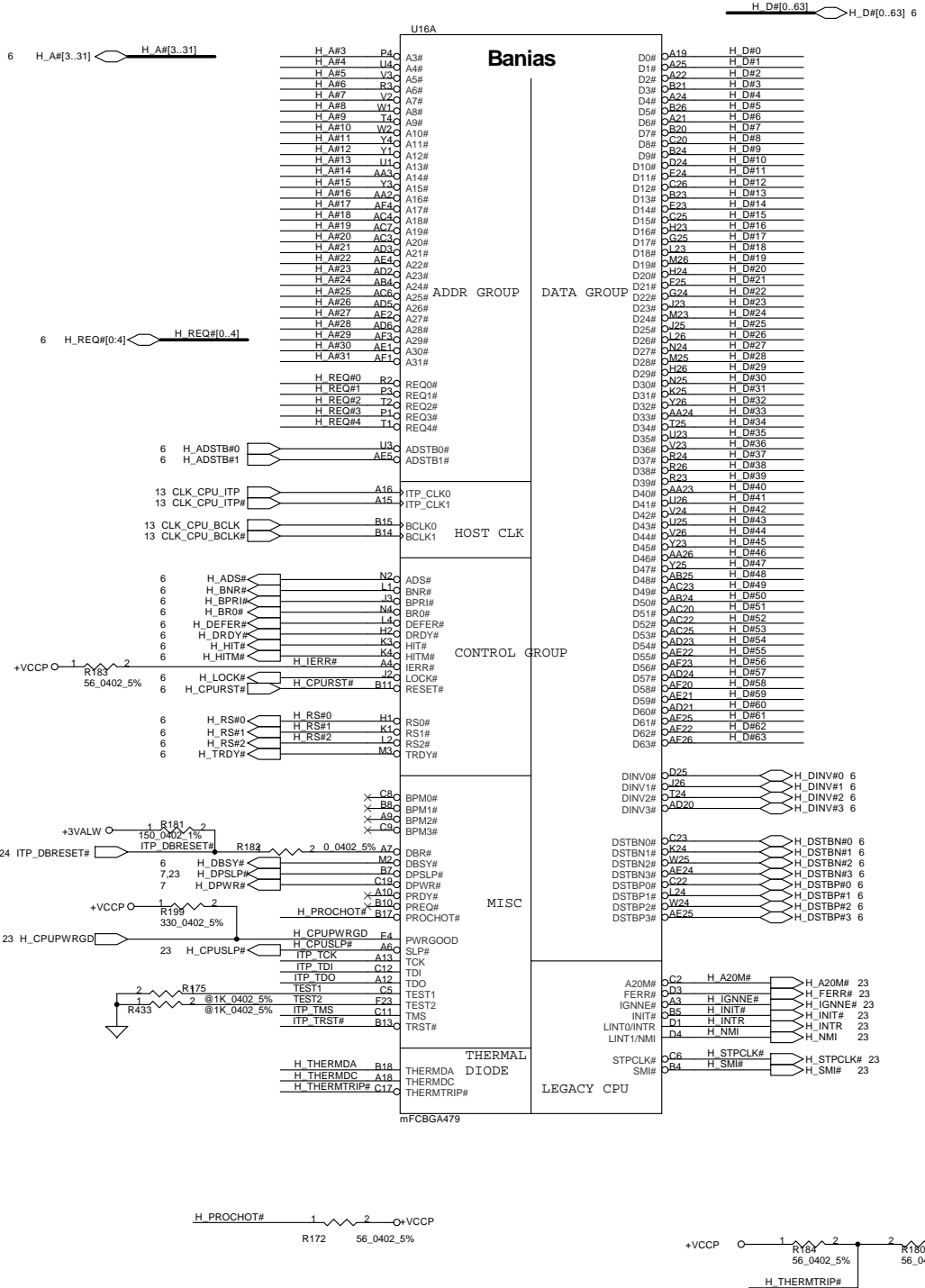
Vcc	3.3V +/- 5%			
Ra	10K +/- 5%			
BID/PID	Rb/Rc	V _{AD_BID} min	V _{AD_BID} typ	V _{AD_BID} max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	1.412 V	1.486 V	1.560 V
2	18K +/- 5%	2.015 V	2.121 V	2.227 V
3	33K +/- 5%	2.406 V	2.533 V	2.659 V
4	56K +/- 5%	2.660 V	2.800 V	2.940 V
5	NC	3.135 V	3.300 V	3.465 V

Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
* 3	0.4
4	
5	
6	
7	

Project ID	Project
* 0	Drongo2
1	Drongo3
2	Drongo4
3	
4	
5	
6	
7	

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title	SCHEMATIC M/B LA-2242		
Size	Document Number	Rev	2A
	401289		
Date:	星期一, 四月 19, 2004	Sheet	3 of 101



Compal Electronics, Inc.		
Title		
SCHEMATIC MB LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 4 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Dothan VCCA update(WW45 2003)
Dothan B-Step support 1.5V only for VCCA

Resistor placed within
0.5" of CPU pin.Trace
should be at least 25
mils away from any
other toggling signal.

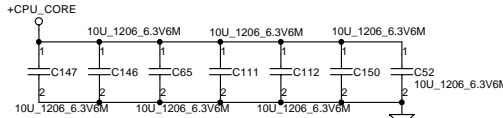
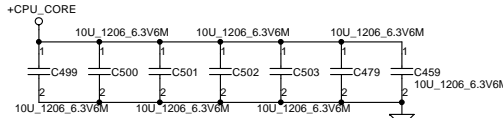
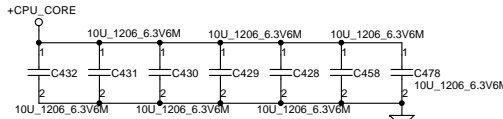
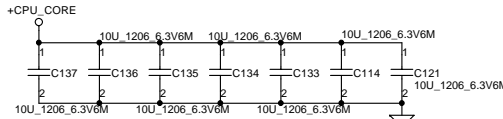
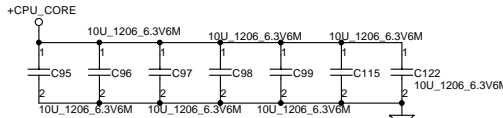
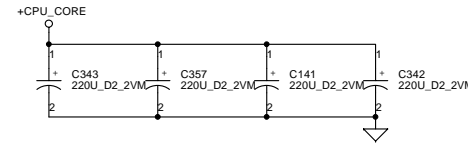
Resistor placed within
0.5" of CPU pin.Trace
should be at least 25
mils away from any
other toggling signal.

Banias

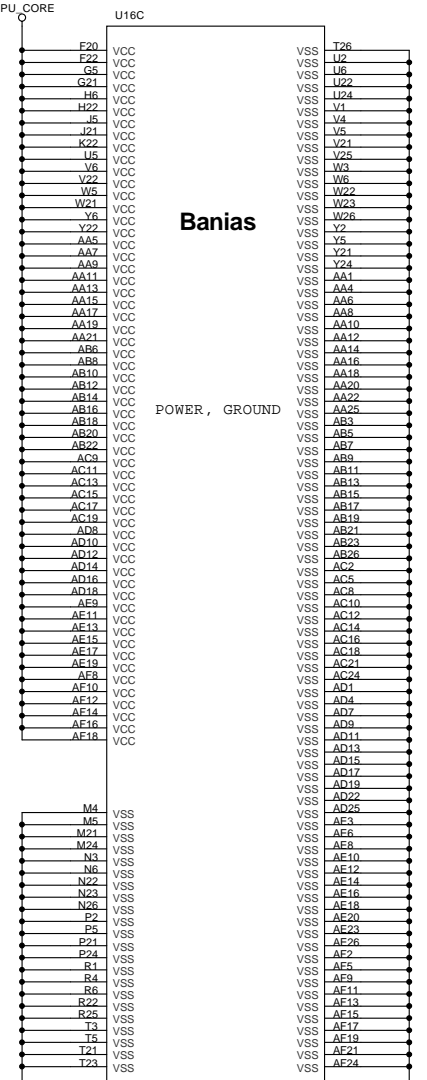
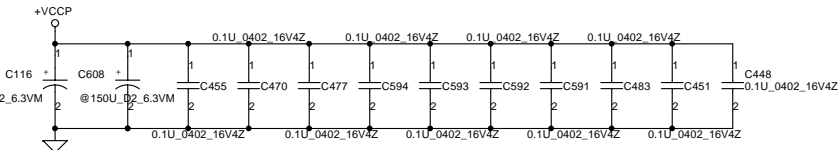
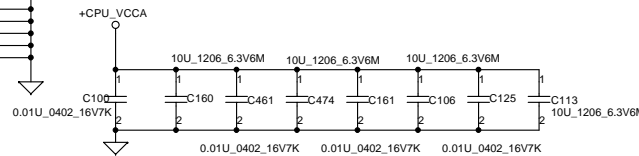
Banias

POWER, GROUND, RESERVED SIGNALS AND NC

POWER, GROUND



Vcc-core Decoupling	C, uF	ESR, mohm	ESL, nH
SPCAP, Polymer	4X220uF	12m ohm/4	3.5nH/4
MLCC 0805 X5R	35X10uF	5m ohm/35	0.6nH/35

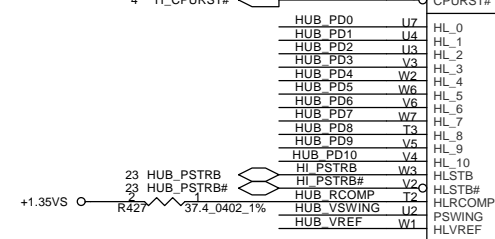
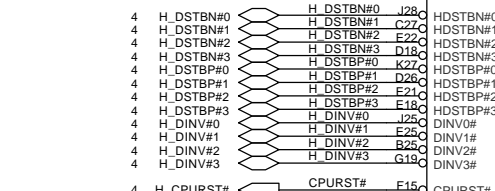
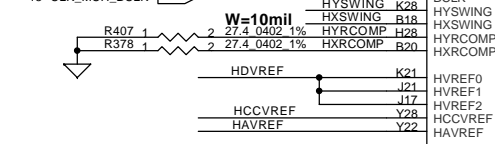
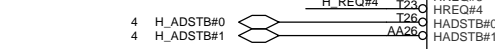
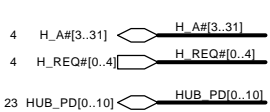


Compal Electronics, Inc.

Title
SCHEMATIC M/B LA-2242

Size	Document Number	Rev
	401289	2A
Date:	星期一 四月 19, 2004	Sheet 5 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



U11A
Montara-GM (L)

H A#3	P23	HA#3
H A#4	T25	HA#4
H A#5	T28	HA#5
H A#6	R27	HA#6
H A#7	U23	HA#7
H A#8	U24	HA#8
H A#9	R24	HA#9
H A#10	U26	HA#10
H A#11	V28	HA#11
H A#12	U27	HA#12
H A#13	T27	HA#13
H A#14	V27	HA#14
H A#15	U25	HA#15
H A#16	V26	HA#16
H A#17	Y24	HA#17
H A#18	V25	HA#18
H A#19	V23	HA#19
H A#20	W25	HA#20
H A#21	Y25	HA#21
H A#22	AA27	HA#22
H A#23	W24	HA#23
H A#24	W23	HA#24
H A#25	W27	HA#25
H A#26	Y27	HA#26
H A#27	AA28	HA#27
H A#28	W28	HA#28
H A#29	AB27	HA#29
H A#30	Y26	HA#30
H A#31	AB28	HA#31

H_REQ#0	R28	HREQ#0
H_REQ#1	P25	HREQ#1
H_REQ#2	R23	HREQ#2
H_REQ#3	R25	HREQ#3
H_REQ#4	T23	HREQ#4

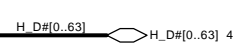
H_ADSTB#0	T26	HADSTB#0
H_ADSTB#1	AA28	HADSTB#1

BCLK#	AD29	BCLK#
BCLK	AE29	BCLK
HYSWING	K28	HYSWING
HXRCOMP	B18	HXRCOMP
HXRCOMP	R20	HXRCOMP
HVREF0	K21	HVREF0
HVREF1	J21	HVREF1
HVREF2	J17	HVREF2
HCCVREF	Y28	HCCVREF
HAVREF	Y22	HAVREF

H_DSTBN#0	J28	HDSTBN#0
H_DSTBN#1	C27	HDSTBN#1
H_DSTBN#2	F22	HDSTBN#2
H_DSTBN#3	D18	HDSTBN#3
H_DSTBP#0	K27	HDSTBP#0
H_DSTBP#1	D26	HDSTBP#1
H_DSTBP#2	E21	HDSTBP#2
H_DSTBP#3	F18	HDSTBP#3
H_DINV#0	J25	DINV#0
H_DINV#1	E25	DINV#1
H_DINV#2	B25	DINV#2
H_DINV#3	G19	DINV#3
H_CPURST#	F15	CPURST#

HL_0	U4	HL_0
HL_1	U3	HL_1
HL_2	V3	HL_2
HL_3	W2	HL_3
HL_4	W6	HL_4
HL_5	V6	HL_5
HL_6	W7	HL_6
HL_7	T3	HL_7
HL_8	V5	HL_8
HL_9	V4	HL_9
HL_10	W3	HL_10
HLSTB#	W3	HLSTB#
HLRCOMP	T2	HLRCOMP
PSWING	U2	PSWING
HLVREF	W1	HLVREF

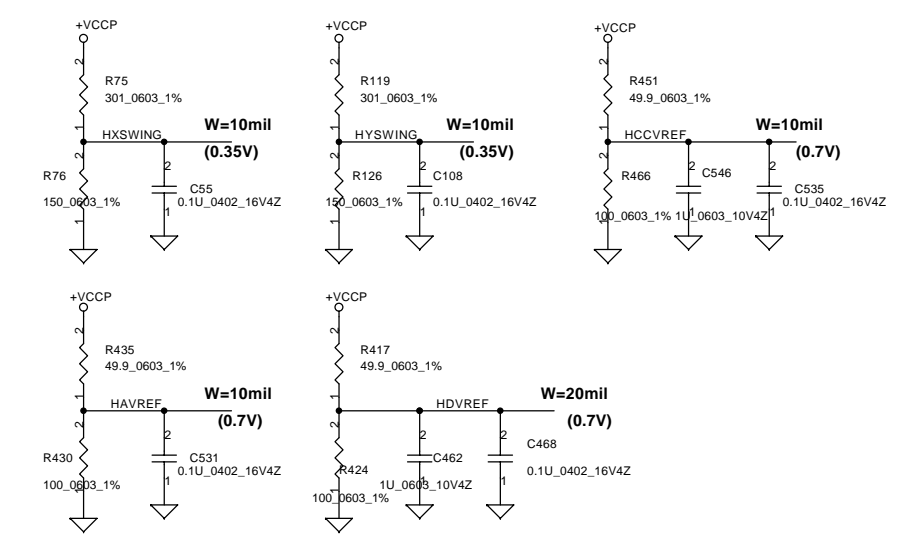
RG82855GME_uFCBGA732



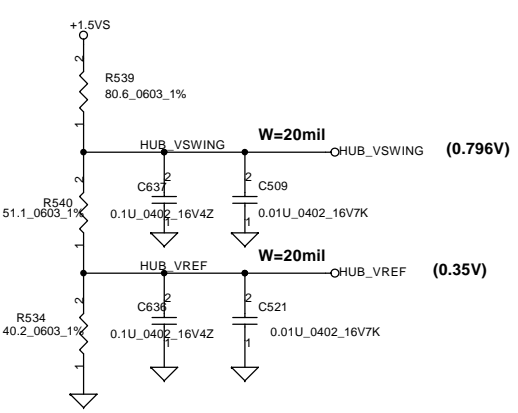
HD#0	K22	H D#0
HD#1	H27	H D#1
HD#2	K25	H D#2
HD#3	J24	H D#3
HD#4	J27	H D#4
HD#5	G28	H D#5
HD#6	L27	H D#6
HD#7	L23	H D#7
HD#8	J25	H D#8
HD#9	J24	H D#9
HD#10	H25	H D#10
HD#11	K23	H D#11
HD#12	G27	H D#12
HD#13	K26	H D#13
HD#14	J23	H D#14
HD#15	H26	H D#15
HD#16	E25	H D#16
HD#17	E26	H D#17
HD#18	B27	H D#18
HD#19	H23	H D#19
HD#20	E27	H D#20
HD#21	G25	H D#21
HD#22	C28	H D#22
HD#23	D27	H D#23
HD#24	G24	H D#24
HD#25	C28	H D#25
HD#26	B26	H D#26
HD#27	G22	H D#27
HD#28	C28	H D#28
HD#29	C23	H D#29
HD#30	B28	H D#30
HD#31	B21	H D#31
HD#32	B21	H D#32
HD#33	G21	H D#33
HD#34	C24	H D#34
HD#35	C22	H D#35
HD#36	C25	H D#36
HD#37	E24	H D#37
HD#38	D24	H D#38
HD#39	D24	H D#39
HD#40	E20	H D#40
HD#41	E22	H D#41
HD#42	B23	H D#42
HD#43	E23	H D#43
HD#44	E21	H D#44
HD#45	C20	H D#45
HD#46	C20	H D#46
HD#47	C21	H D#47
HD#48	G18	H D#48
HD#49	E19	H D#49
HD#50	E20	H D#50
HD#51	G17	H D#51
HD#52	D20	H D#52
HD#53	F19	H D#53
HD#54	C17	H D#54
HD#55	C17	H D#55
HD#56	E17	H D#56
HD#57	R19	H D#57
HD#58	G16	H D#58
HD#59	E16	H D#59
HD#60	C16	H D#60
HD#61	E17	H D#61
HD#62	O16	H D#62
HD#63	C18	H D#63

H_ADS#	L28	H_ADS#
H_TRDY#	M25	H_TRDY#
H_DRDY#	N24	H_DRDY#
H_DEFER#	M28	H_DEFER#
H_HITM#	N28	H_HITM#
H_HIT#	N27	H_HIT#
H_LOCK#	C27	H_LOCK#
H_BR0#	M23	H_BR0#
H_BNR#	N25	H_BNR#
H_BRR#	P28	H_BRR#
H_DBSY#	M26	H_DBSY#
H_RS#0	N23	H_RS#0
H_RS#1	P26	H_RS#1
H_RS#2	M27	H_RS#2

HOST REF VOLTAGE

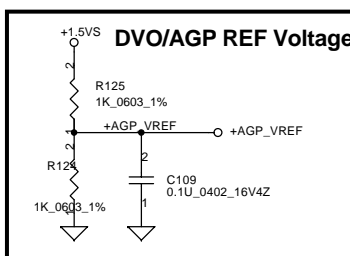
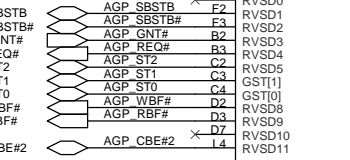
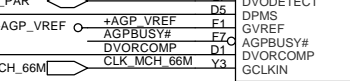
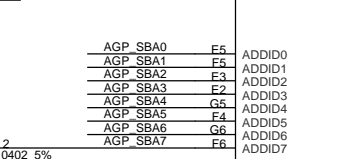
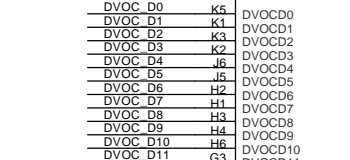
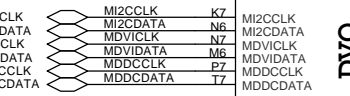
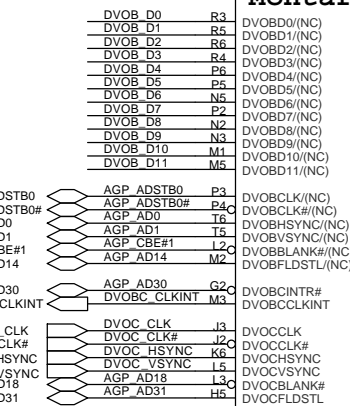
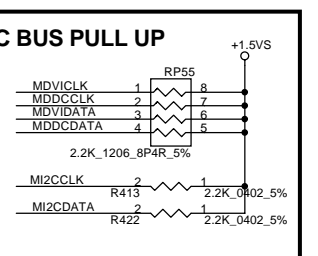
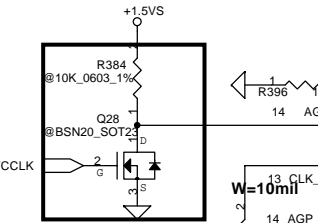
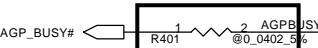
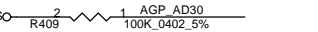
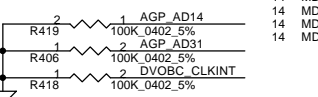
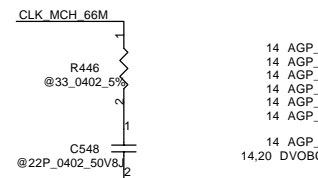
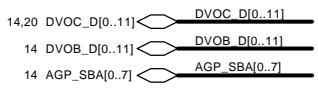


HUB I/F REF VOLTAGE



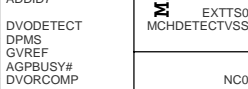
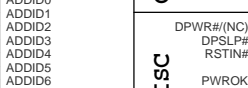
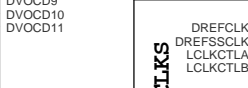
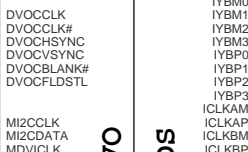
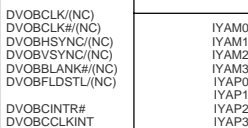
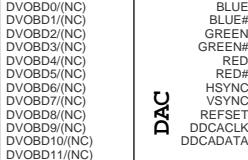
Compal Electronics, Inc.		
Title: SCHEMATIC M/B LA-2242		
Size:	Document Number: 401289	Rev: 2A
Date:	星期一, 四月 19, 2004	Sheet 6 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

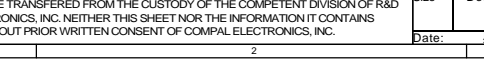
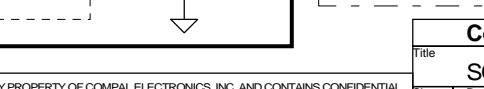
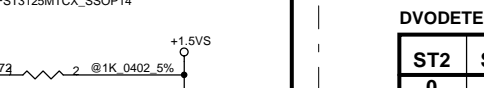
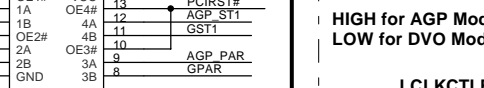
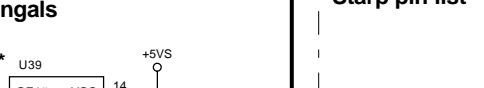
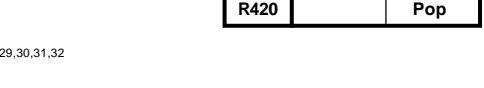
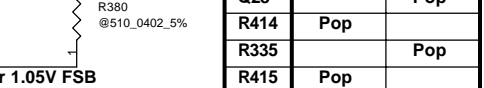
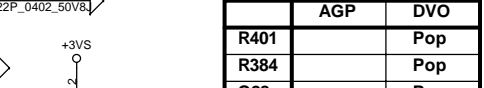
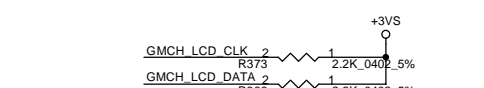
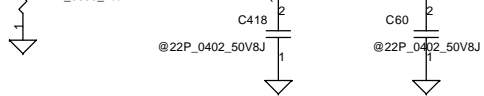
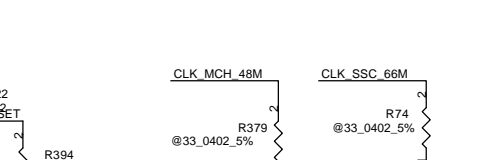
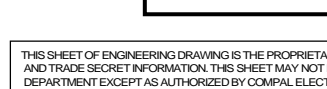
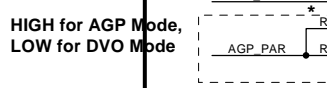
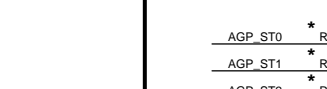
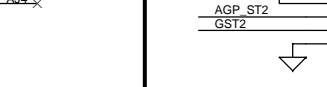
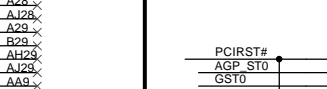
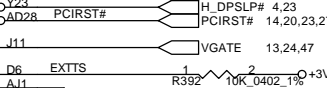
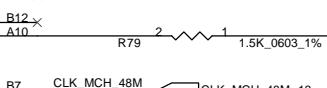
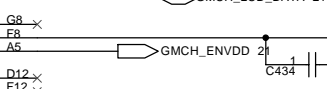
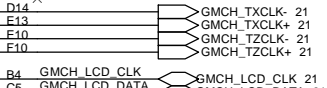
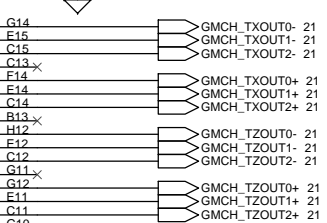
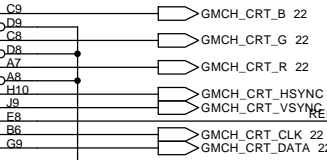


U11B

Montara-GM(L)



RG82855GME_uFCBGA732

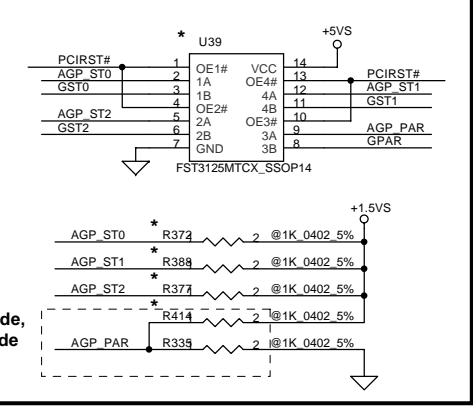


855GME DVO/AGP Pin Muxing

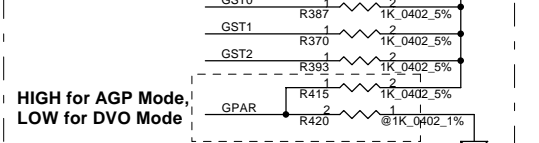
Ball	DVO Mode	AGP Mode
R3	DVOBD0	GAD3
R4	DVOBD1	GAD2
R5	DVOBD2	GAD5
R6	DVOBD3	GAD4
P6	DVOBD4	GAD7
P5	DVOBD5	GAD6
N5	DVOBD6	GAD8
P2	DVOBD7	GCBE#0
N2	DVOBD8	GAD10
N3	DVOBD9	GAD9
M1	DVOBD10	GAD12
M5	DVOBD11	GAD11
P3	DVOBCLK	GADSTB0
P4	DVOBCLK#	GADSTB0#
T6	DVOBHSYNC	GAD0
T5	DVOBVSNC	GAD1
L2	DVOBBLANK	GCBE#1
M2	DVOBFLDSTL	GAD14
G2	DVOBCINTR#	GAD30
M3	DVOBCLKINT	GAD13
J3	DVOCCLK	GADSTB1
J2	DVOCCLK#	GADSTB1#
K6	DVOCHSYNC	GAD17
L5	DVOCVSYNC	GAD16
L3	DVOCLANK	GAD18
H5	DVOCLDSTL	GAD31
K7	M2CCLK	GIRDY#
N6	M2CDATA	GDEVSEL#
M7	MDVICLK	GTRDY#
M6	MDVIDATA	GFRAME#
P7	MDDCCLK	GSTOP#
T7	MDDCCDATA	GAD15
K5	DVOCDO	GAD19
K1	DVOCDC1	GAD20
K3	DVOCDC2	GAD21
K2	DVOCDC3	GAD22
J6	DVOCDC4	GAD23
J5	DVOCDC5	GCBE#3
H2	DVOCDC6	GAD25
H1	DVOCDC7	GAD24
H3	DVOCDC8	GAD27
H4	DVOCDC9	GAD26
G6	DVOCDC10	GAD29
H3	DVOCDC11	GAD28
E5	ADDID0	GSBA0
F5	ADDID1	GSBA1
E3	ADDID2	GSBA2
E2	ADDID3	GSBA3
G5	ADDID4	GSBA4
F4	ADDID5	GSBA5
G6	ADDID6	GSBA6
L7	ADDID7	GSBA7
L7	DVODETECT	GPAR
D5	DPMS	GPIPE#
F2	RVSD1	GSBSTB
F3	RVSD2	GSBSTB#
B2	RVSD3	GNNT#
B3	RVSD4	GREQ#
C2	RVSD5	GST2
C3	GST1	GST1
C4	GST10	GST10
D2	RVSD8	GWBF#
D3	RVSD9	GRBF#
L4	RVSD11	GCBE#2

	AGP	DVO
R401		Pop
R384		Pop
Q28		Pop
R414	Pop	
R335		Pop
R415	Pop	
R420		Pop

Isolating AGP singals



Sharp pin list



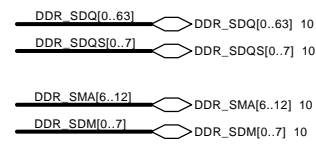
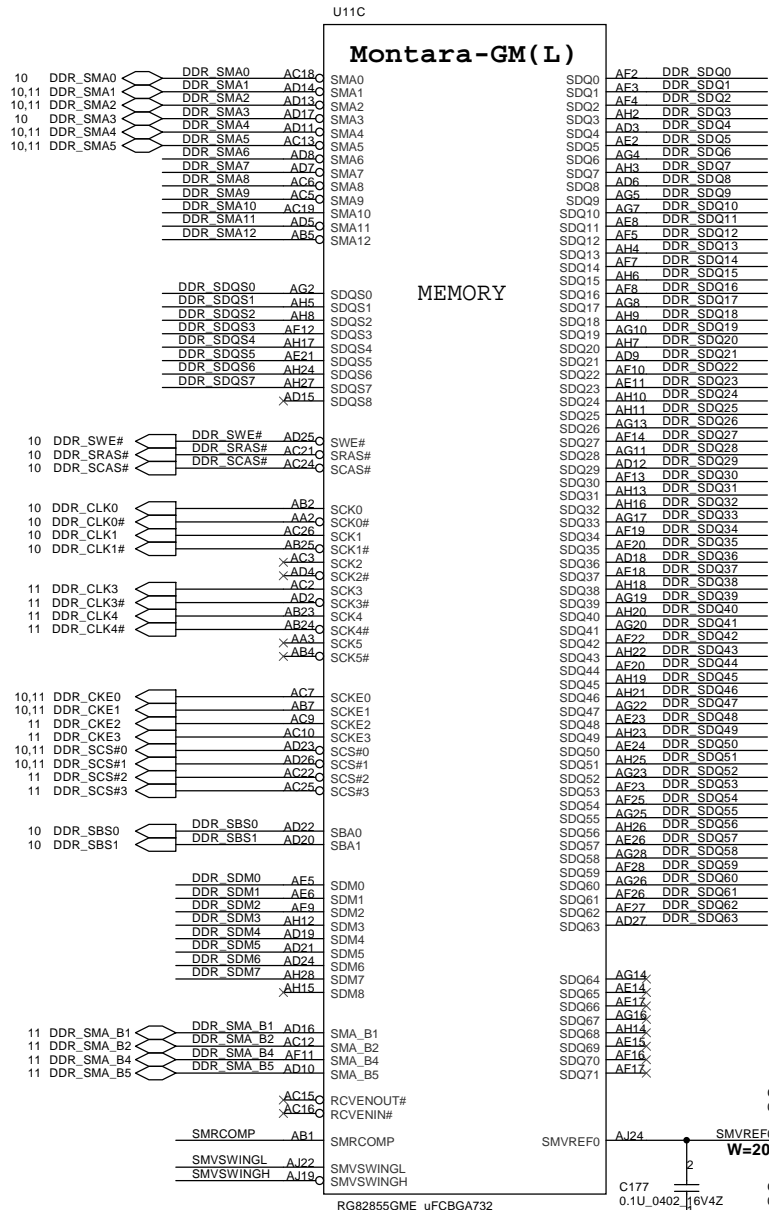
LCLKCTLB: High for P4, NC for Banias
DVODETECT: HIGH for AGP, LOW for DVO

ST2	ST1	ST0	PSB/Mem/GFX
0	0	0	400 / 266 / 200
0	0	1	400 / 200 / 200
0	1	0	400 / 200 / 133
1	1	1	400 / 333 / 250 *

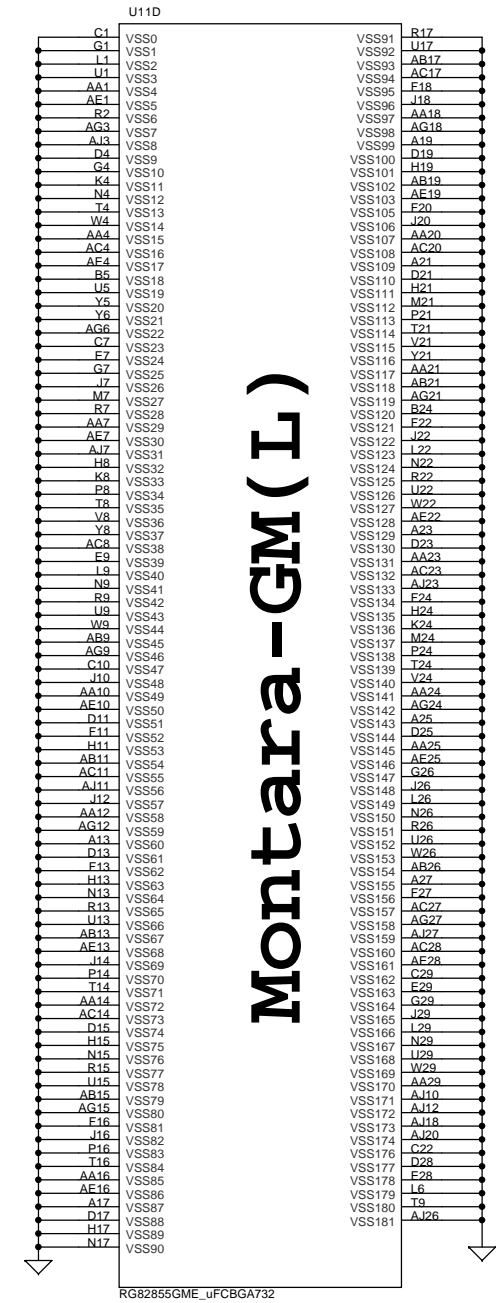
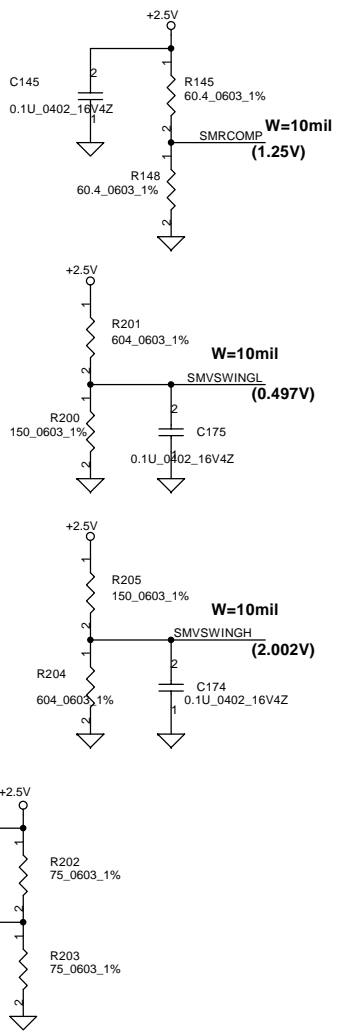
Compal Electronics, Inc.

Title: SCHEMATIC M/B LA-2242
 Size: Document Number: 401289
 Date: 星期一, 四月 19, 2004 Sheet 7 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

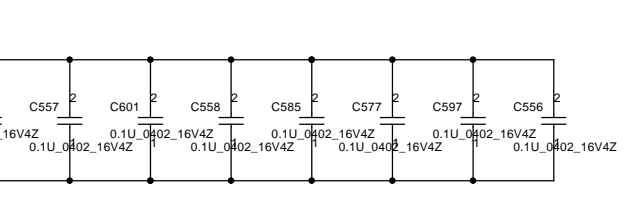
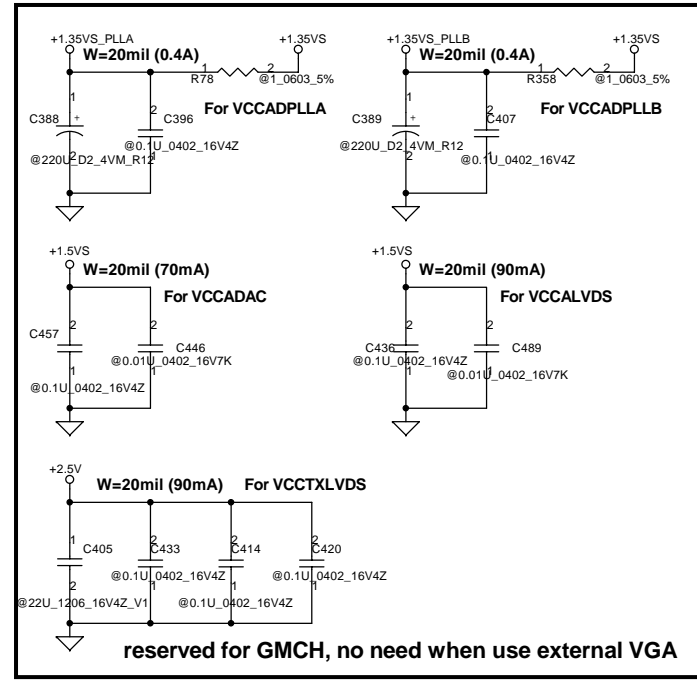
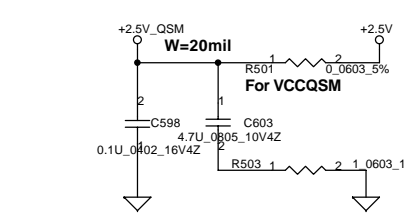
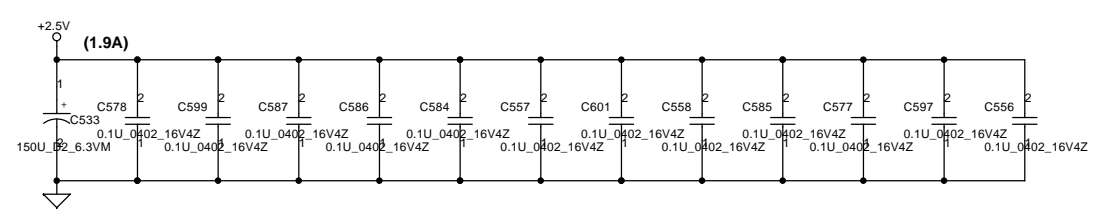
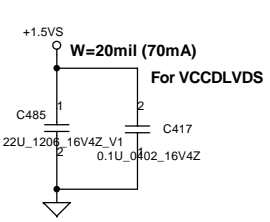
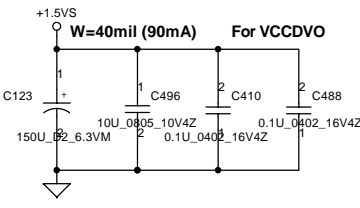
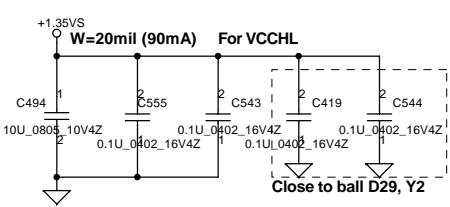
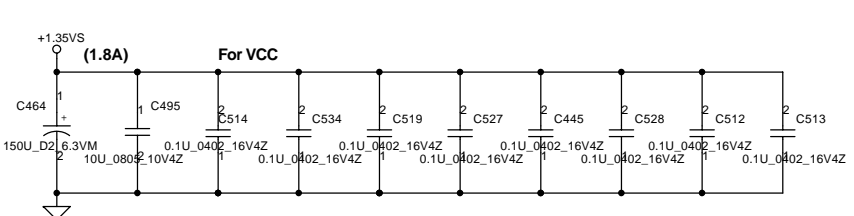
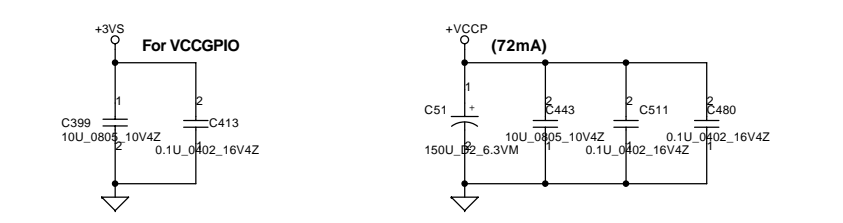
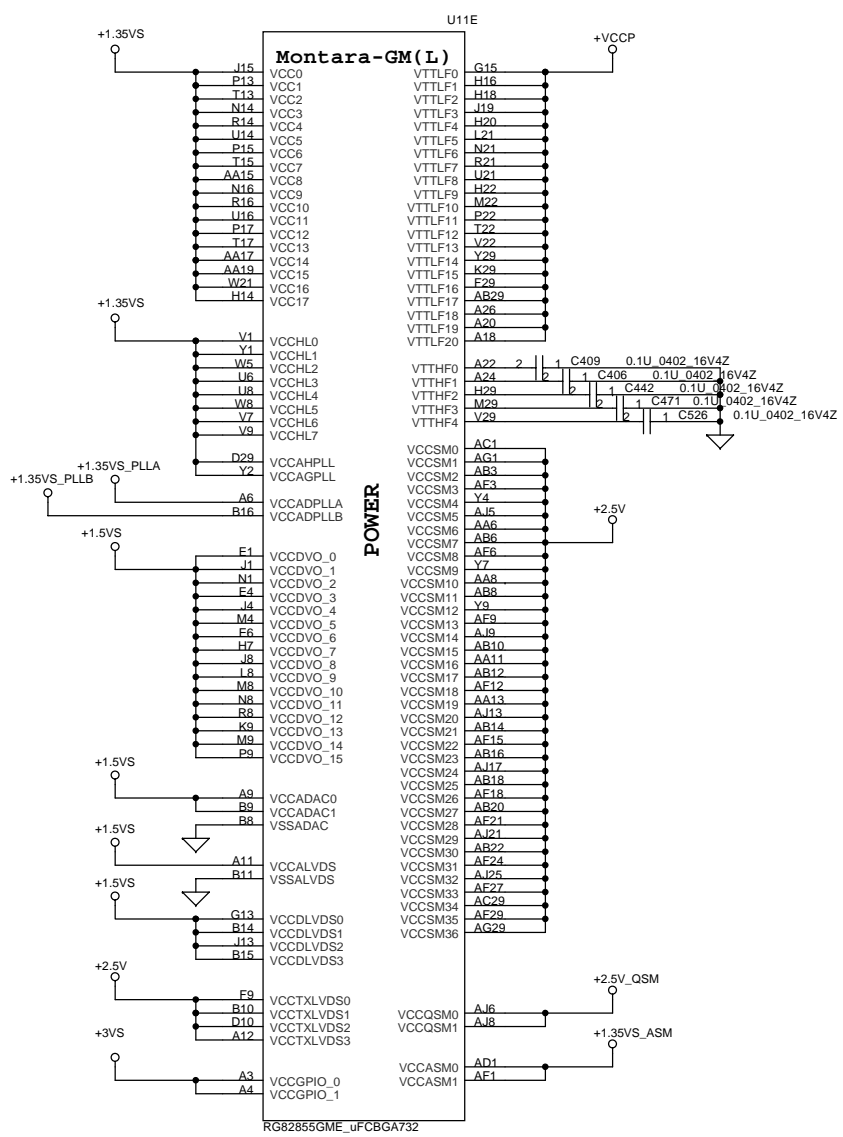


DDR REF & SWING VOLTAGE



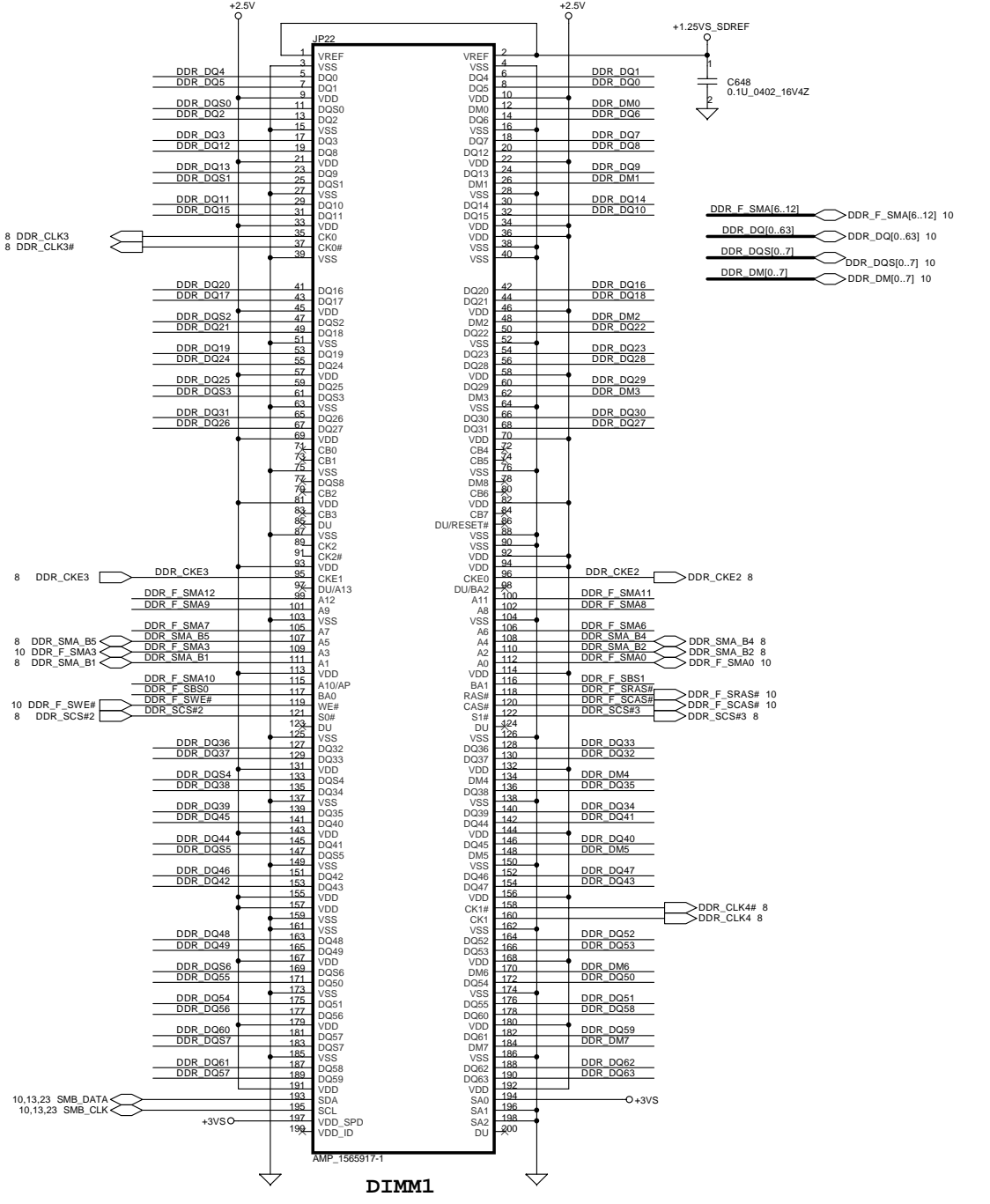
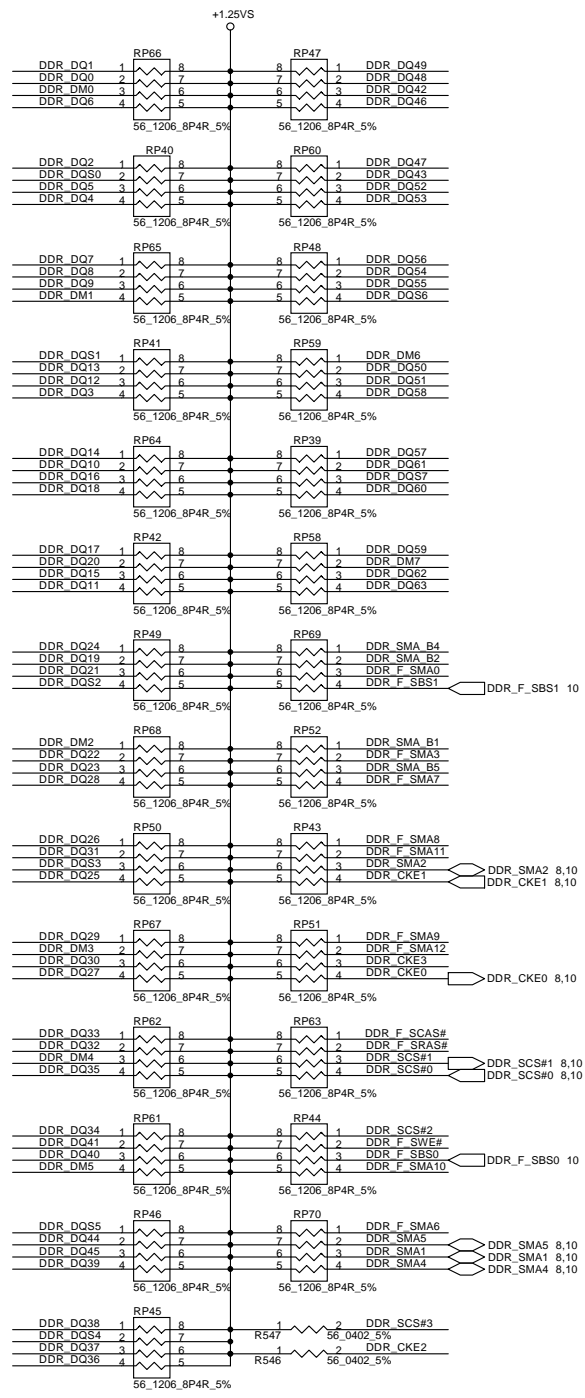
Montara-GM(L)

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



Compal Electronics, Inc.		
Title	SCHEMATIC M/B LA-2242	
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 9 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



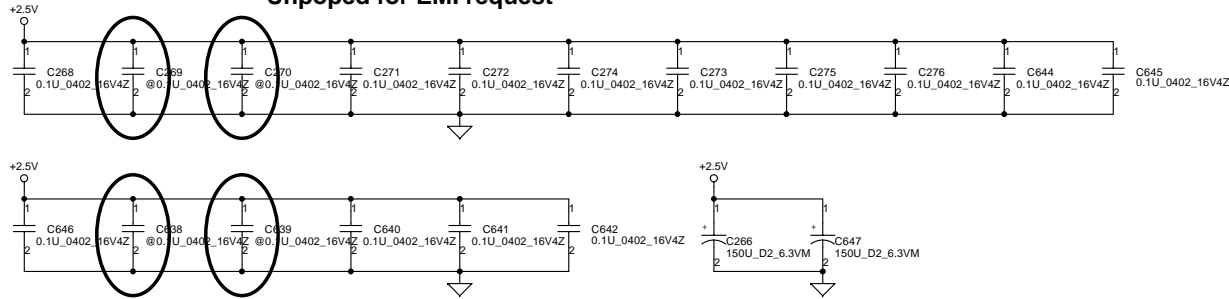
- DDR F_SMA[6..12] 10
- DDR_DQ[0..63] 10
- DDR_DQS[0..7] 10
- DDR_DM[0..7] 10

Compal Electronics, Inc.			
Title			
SCHEMATIC MB LA-2242			
Size	Document Number	Rev	
	401289	2A	
Date:	星期三, 四月 19, 2004	Sheet	11 of 101

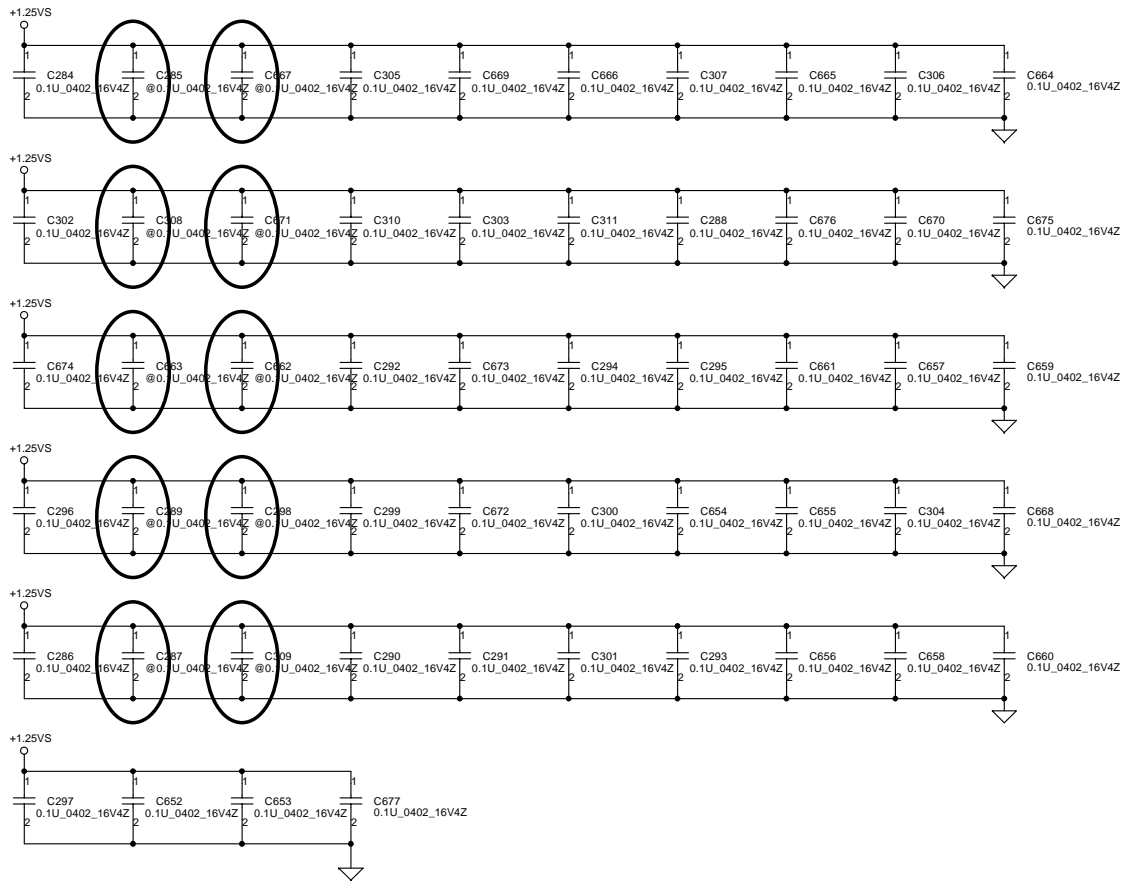
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Layout note :
Distribute as close as possible to DDR-SODIMM.

Unpoped for EMI request



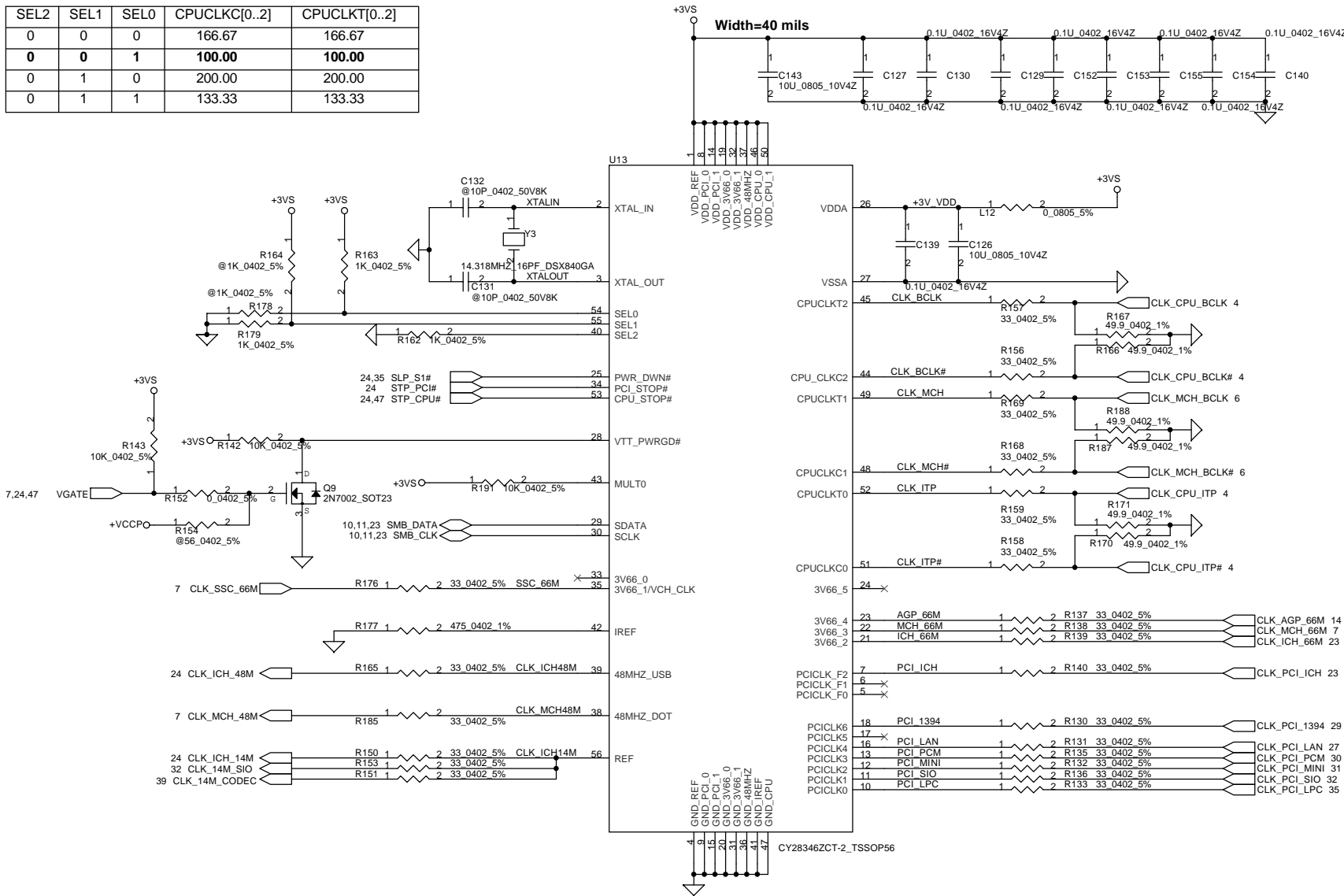
Layout note :
Place one cap close to every 2 pull up resistors termination to +1.25V



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

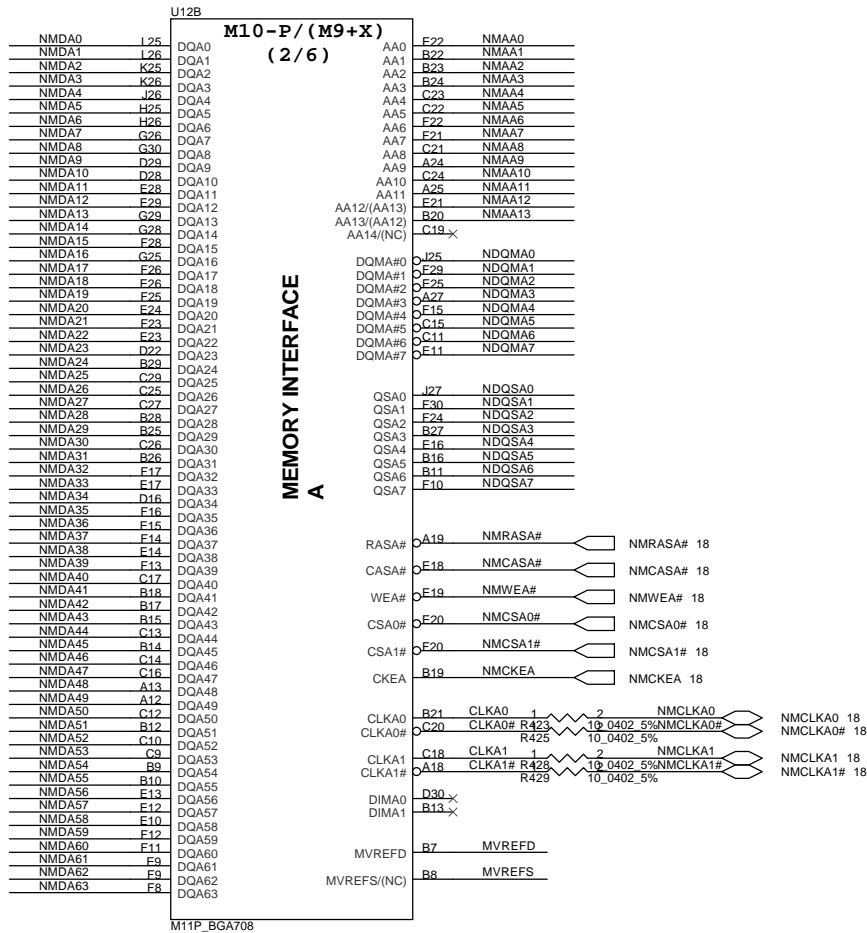
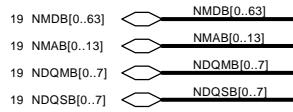
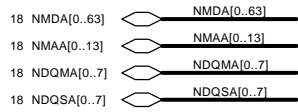
Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number 401289	Rev 2A
Date:	星期四, 四月 19, 2004	Sheet 12 of 101

SEL2	SEL1	SEL0	CPUCLKC[0..2]	CPUCLKT[0..2]
0	0	0	166.67	166.67
0	0	1	100.00	100.00
0	1	0	200.00	200.00
0	1	1	133.33	133.33

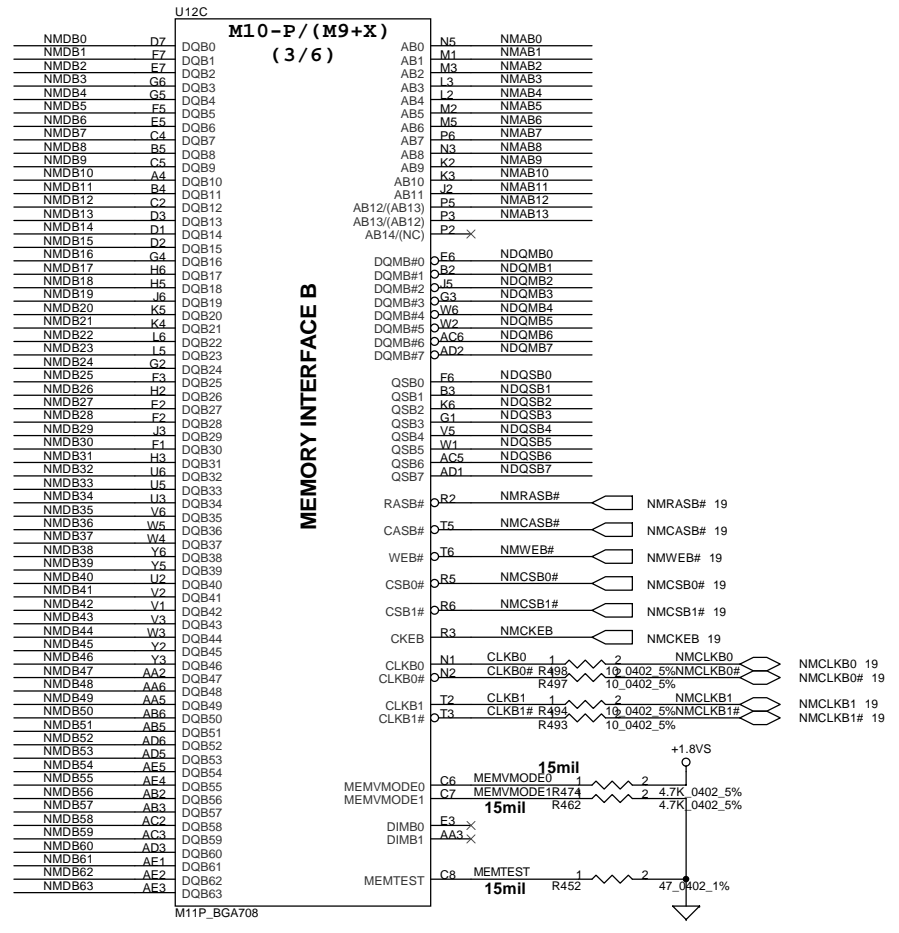


Compal Electronics, Inc.		
Title	SCHEMATIC MB LA-2242	
Size	Document Number	Rev
	401289	2A
Date:	星期二, 四月 19, 2004	Sheet 13 of 101

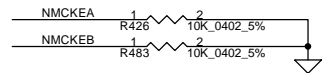
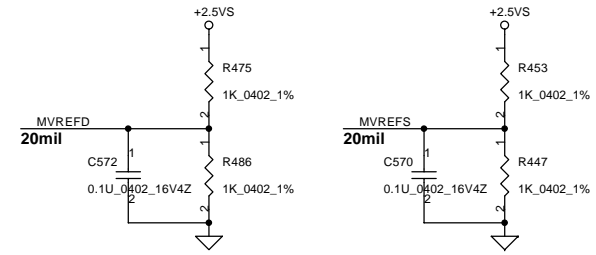
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



M11P_BGA708



M11P_BGA708



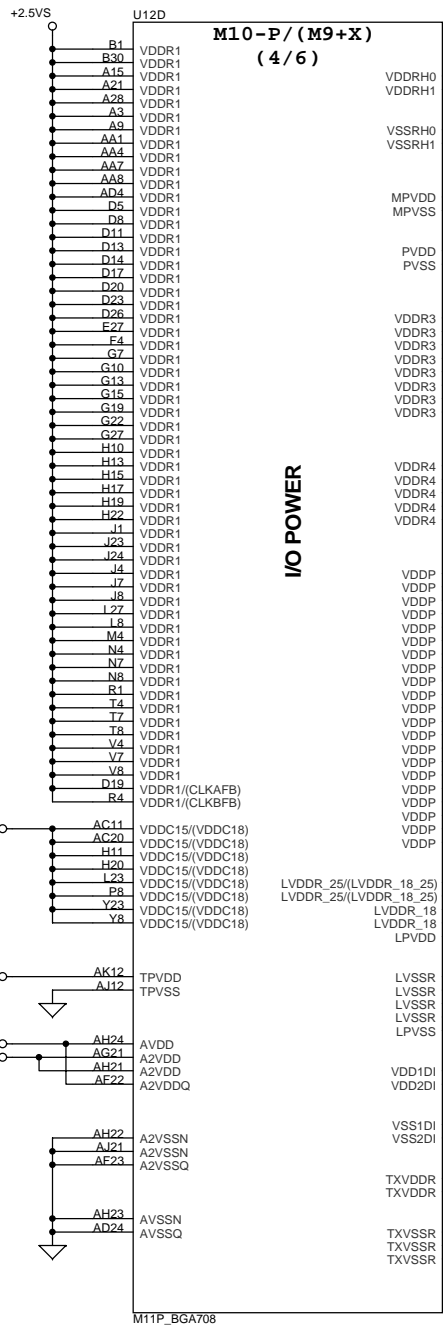
Compal Electronics, Inc.

Title: **SCHEMATIC M/B LA-2242**

Size B Document Number: **401289** Rev 2A

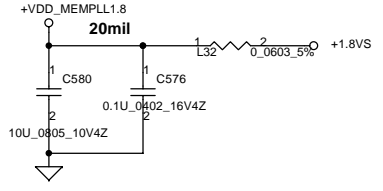
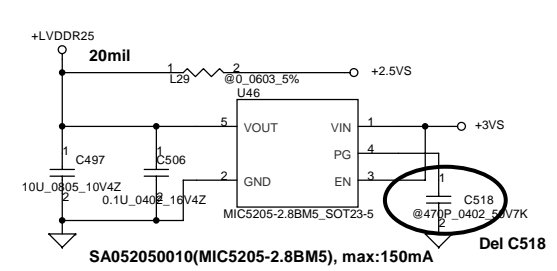
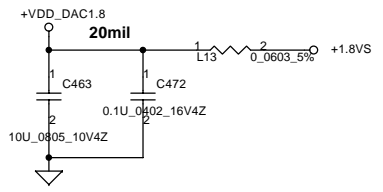
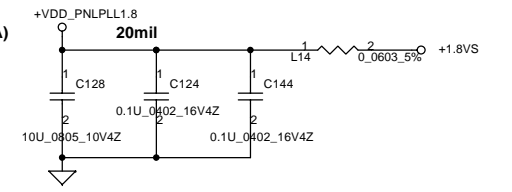
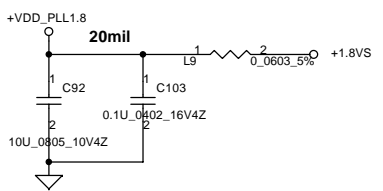
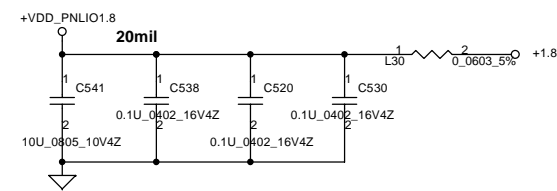
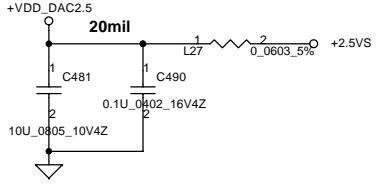
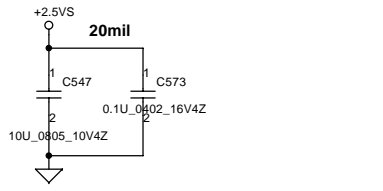
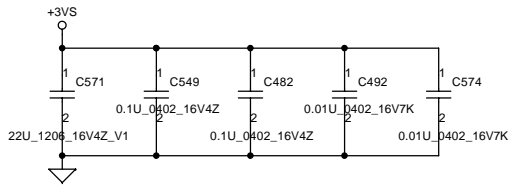
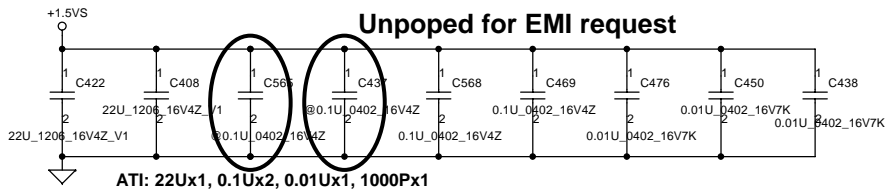
Date: 星期一, 四月 19, 2004 Sheet 15 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



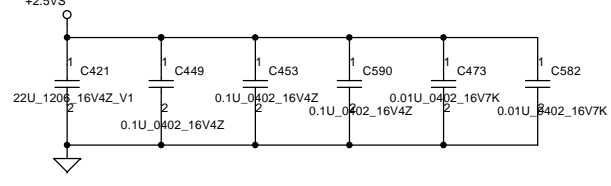
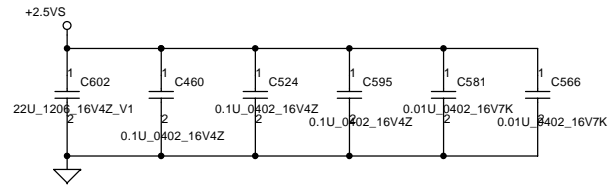
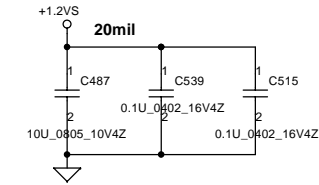
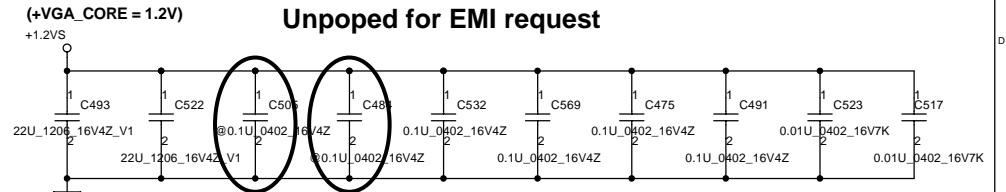
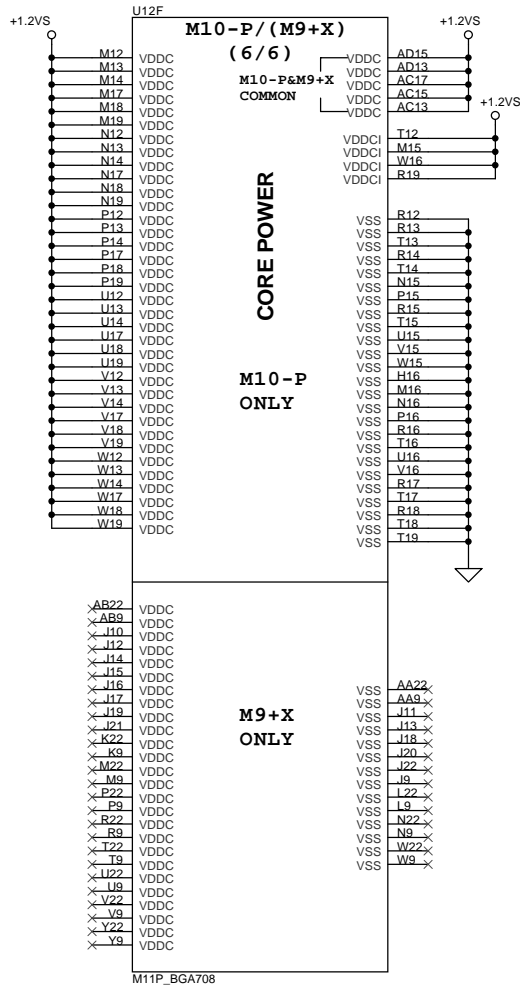
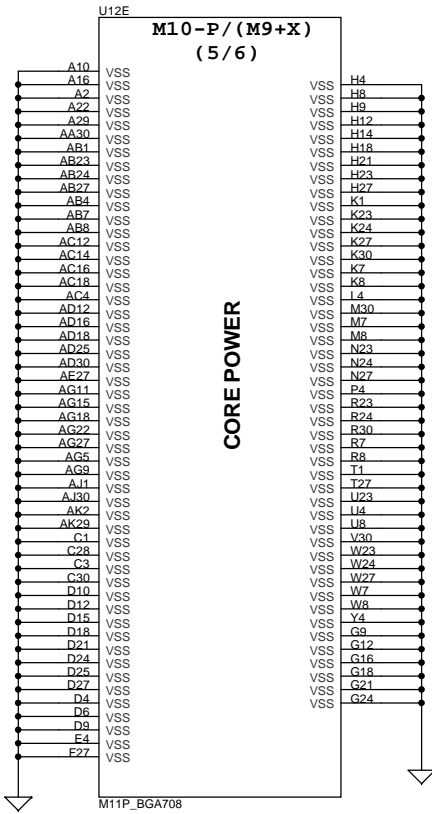
I/O POWER

change to +2.8V (max:350mA)



Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size B	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 16	of 101

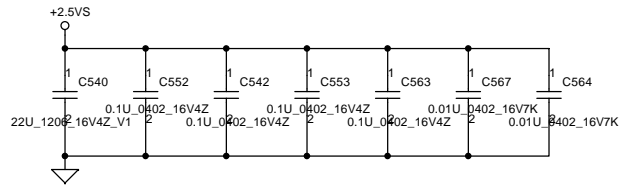
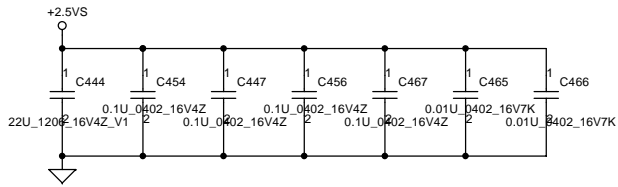
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



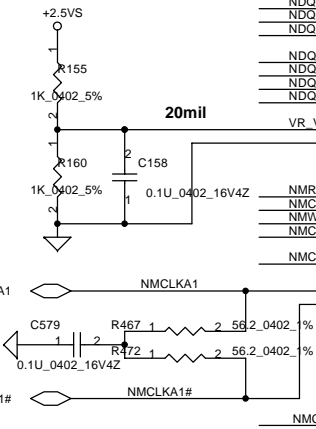
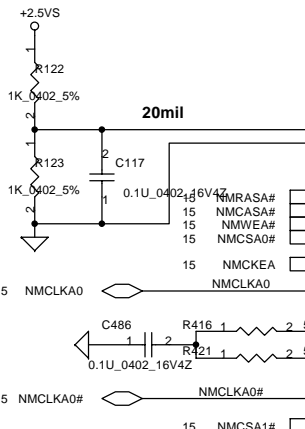
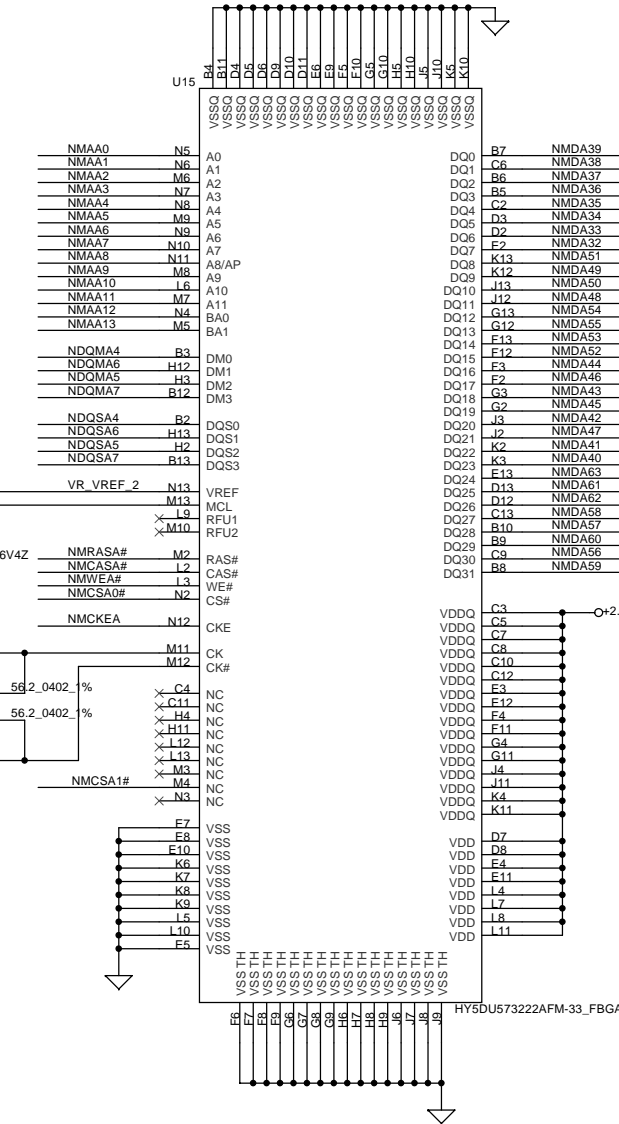
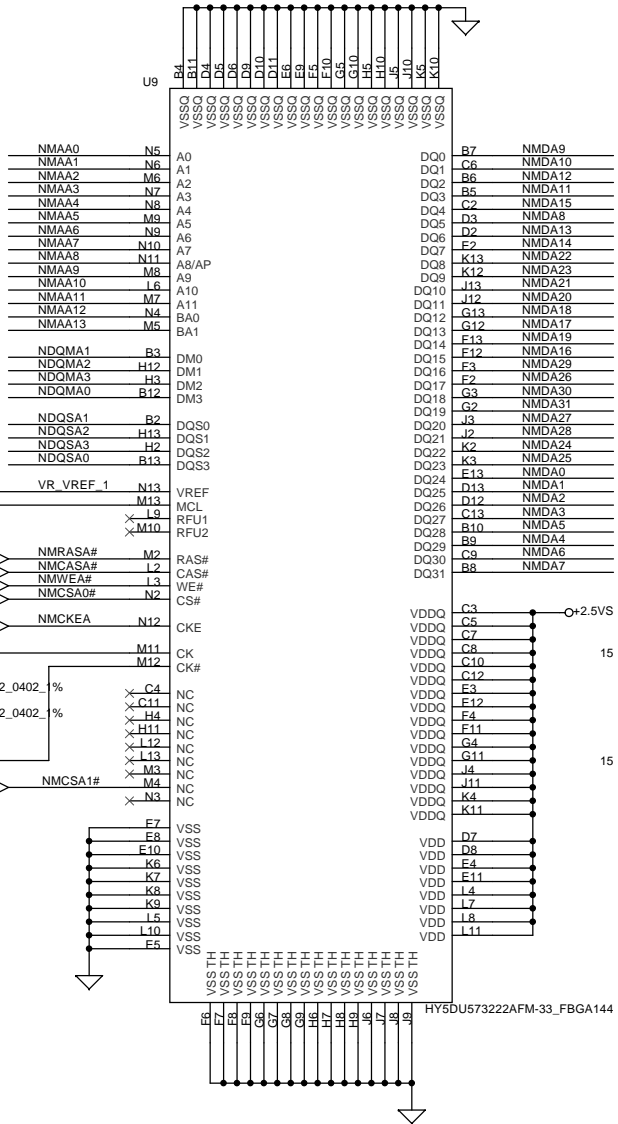
Compal Electronics, Inc.

Title		
SCHEMATIC M/B LA-2242		
Size B	Document Number	Rev 2A
	401289	
Date:	星期一, 四月 19, 2004	Sheet 17 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

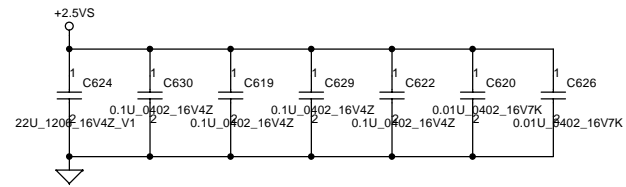
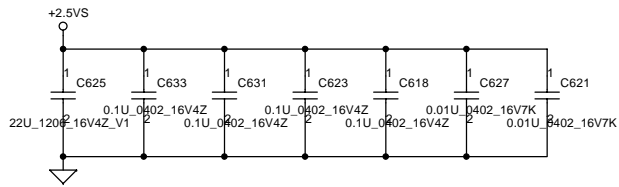


- 15 NMDA[0..63] NMDA[0..63]
- 15 NMAA[0..13] NMAA[0..13]
- 15 NDQMA[0..7] NDQMA[0..7]
- 15 NDQSA[0..7] NDQSA[0..7]

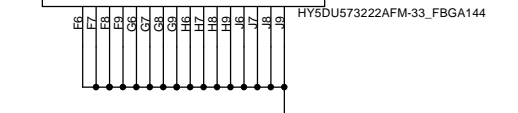
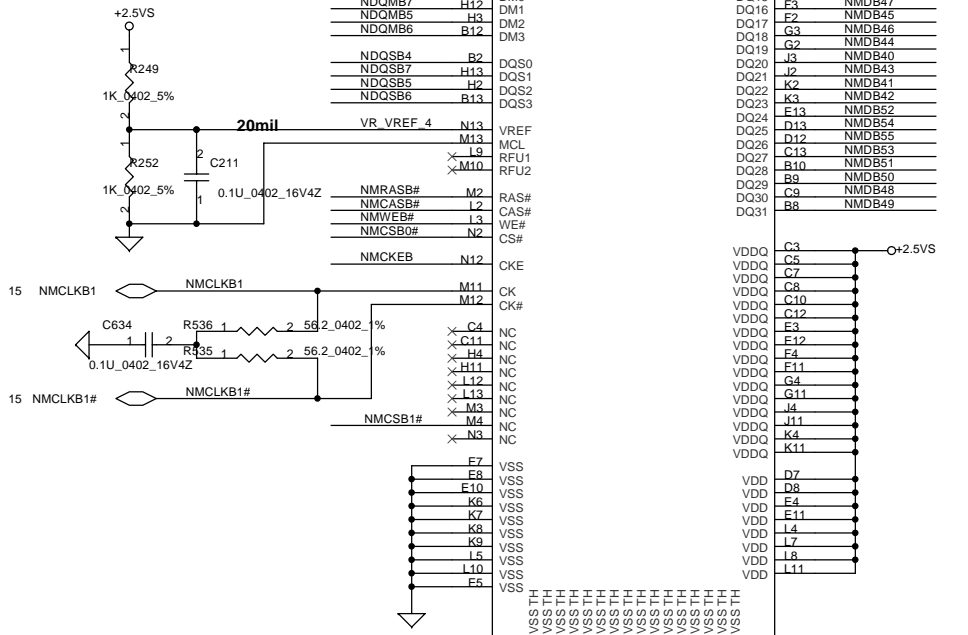
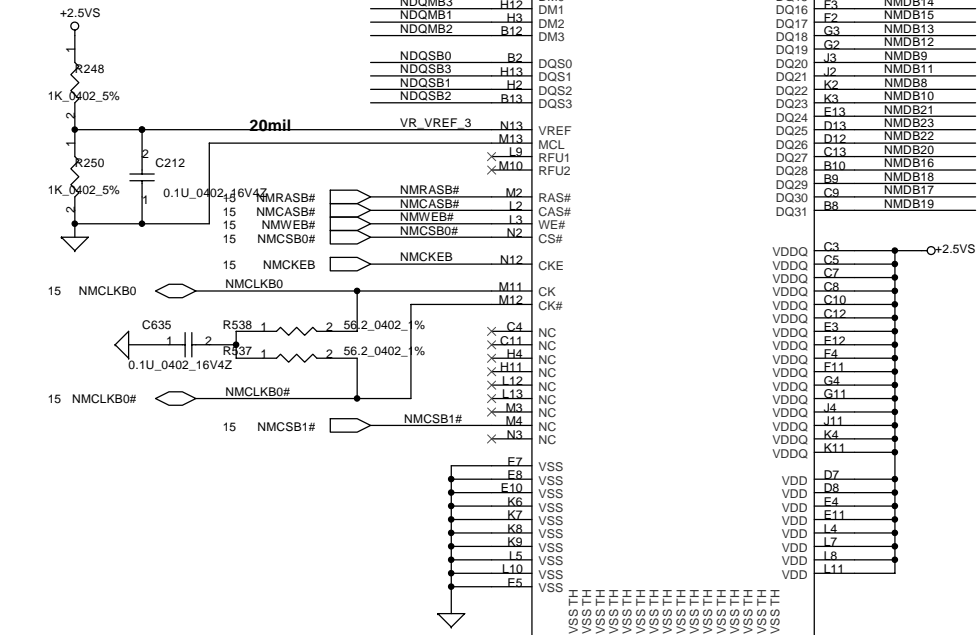
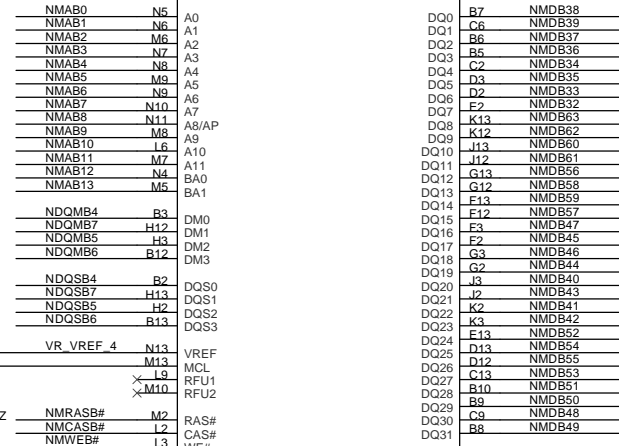
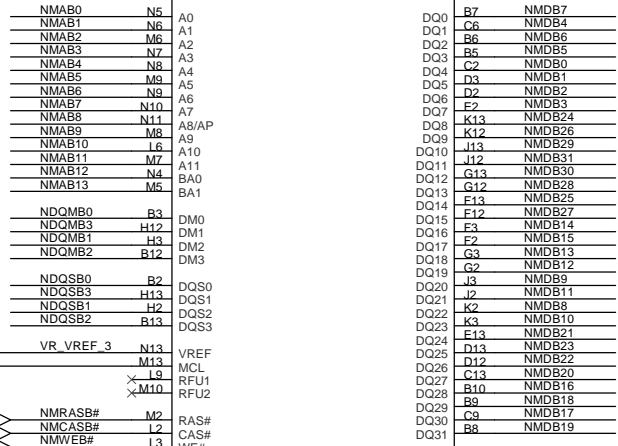


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size B	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 18 of 101	



- 15 NMDB[0..63] NMDB[0..63]
- 15 NMAB[0..13] NMAB[0..13]
- 15 NDQMB[0..7] NDQMB[0..7]
- 15 NDQSB[0..7] NDQSB[0..7]

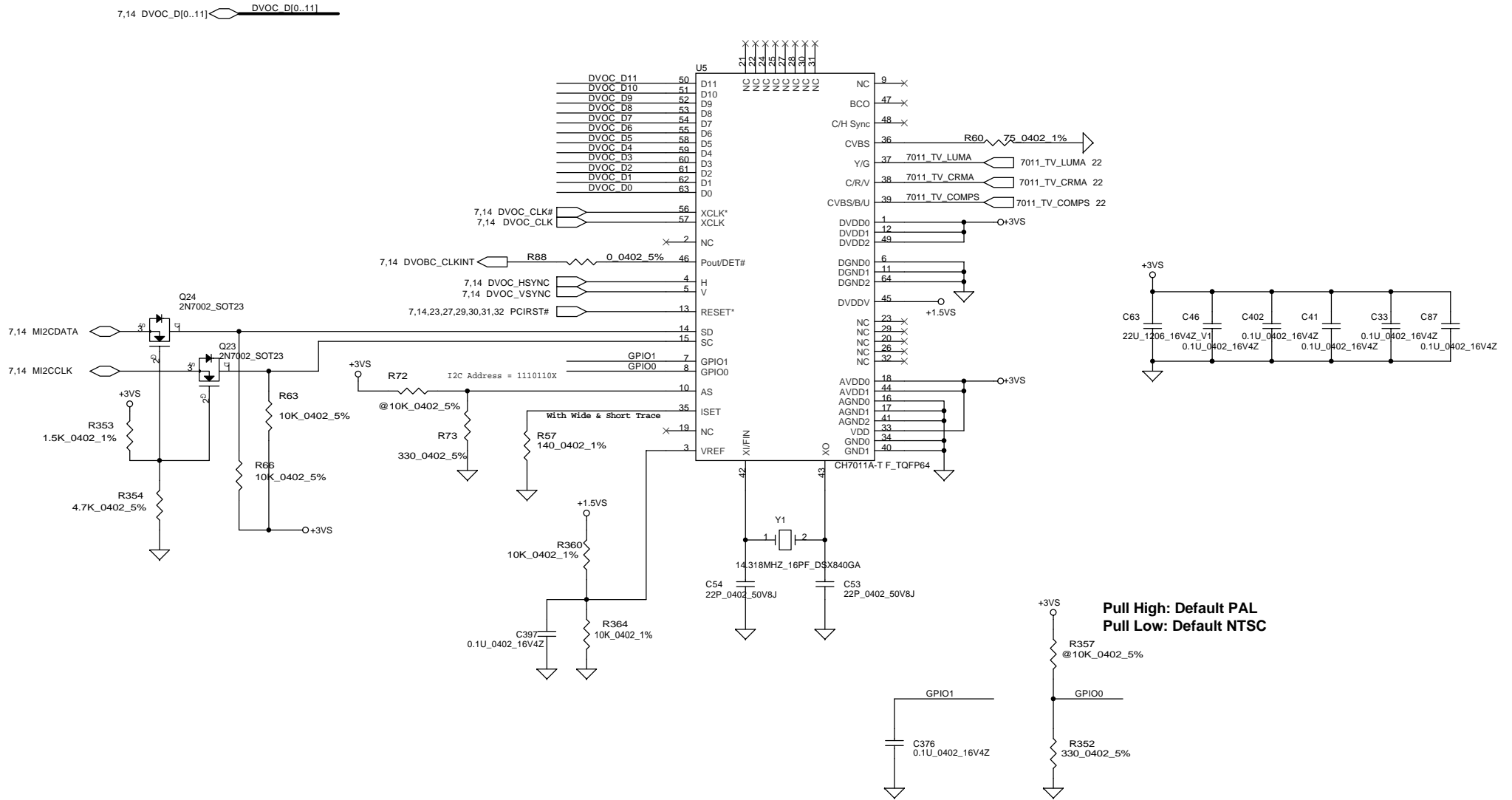


Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size B	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 19	of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

TV Encoder

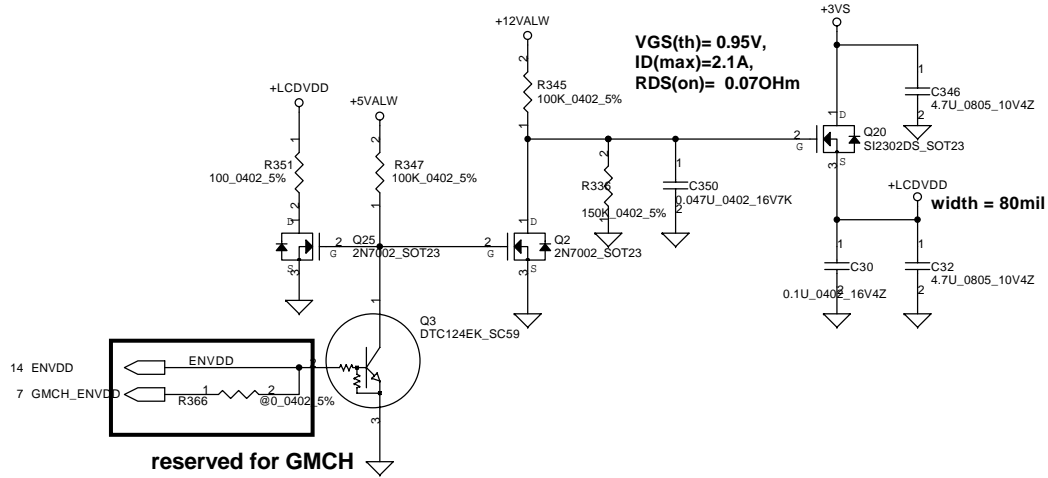
remove this page when use M11P



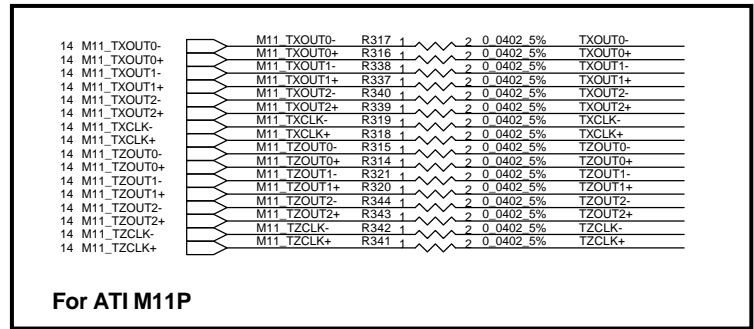
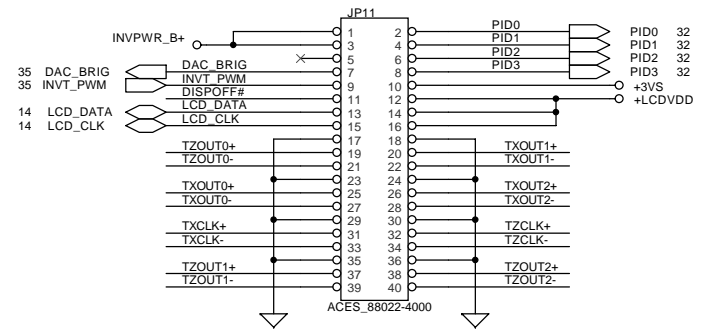
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 20 of 101

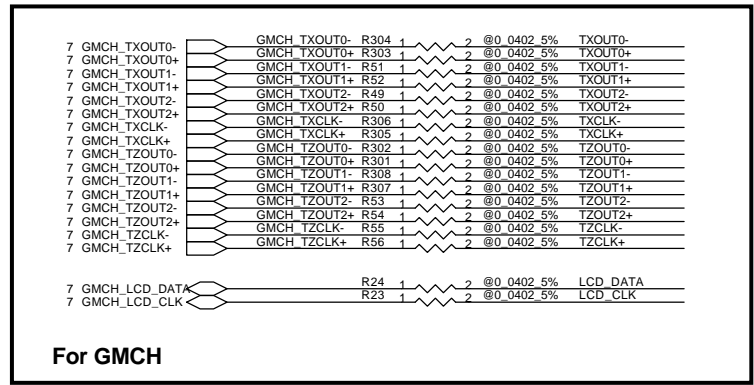
LCD POWER CIRCUIT



LCD CONN.



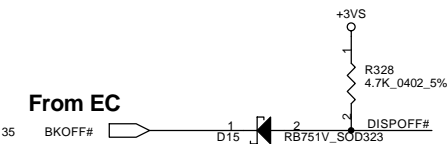
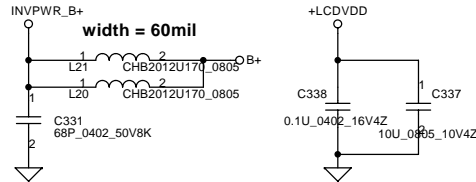
For ATI M11P



For GMCH

Table 1: Panel ID

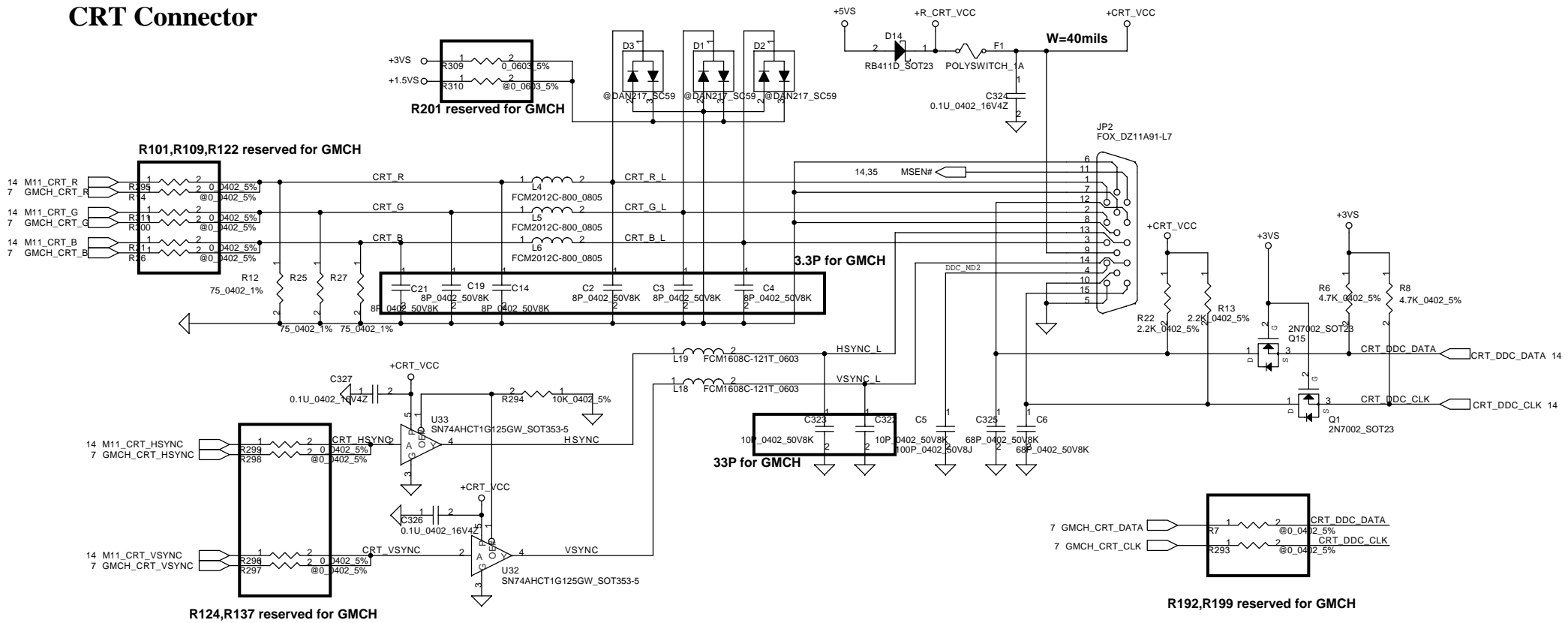
PID3	PID2	PID1	PID0	PANEL
0	1	0	0	SANYO TM154WX-22L31 15.4" WXGA 1280X800
0	1	0	1	AU B154EW01 15.4" WXGA 1280X800
0	1	1	0	CPT CLAA154WA01 15.4" WXGA 1280X800
0	1	1	1	SAMSUNG LTN154X1-L02 15.4" WXGA 1280X800
1	0	0	1	SAMSUNG LTN154P1-L02 15.4" WSXGA+ 1680X1050
1	0	1	0	LG LP154W02-A1 15.4" WSXGA+ 1680X1050



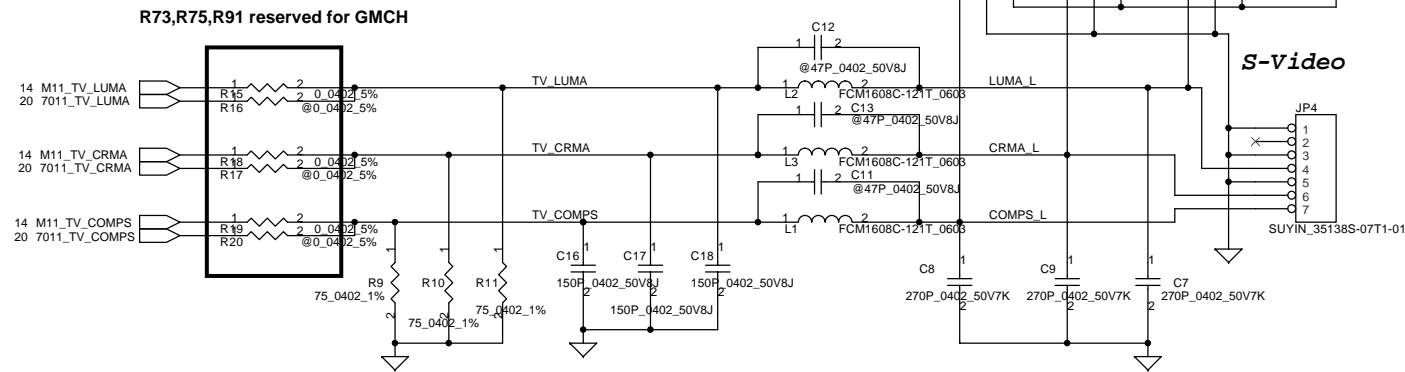
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
title SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 21 of 101

CRT Connector

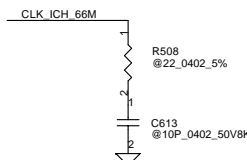
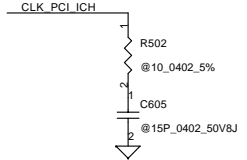


TV-Out Connector

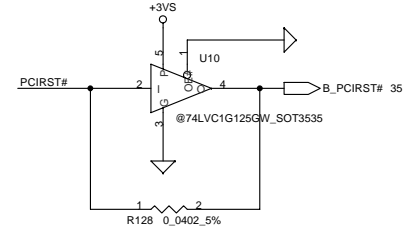
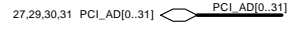
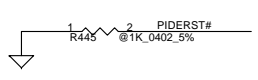
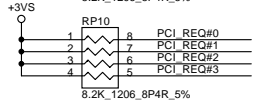
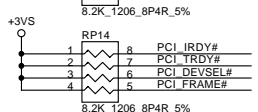
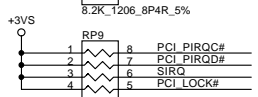
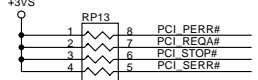
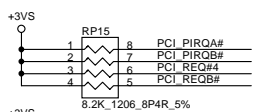


Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number 401289	Rev 2A
Date:	星期一, 四月 19, 2004	Sheet 22 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



PCI Pullups



PCI_A00	H5	A00
PCI_A01	J3	A01
PCI_A02	H3	A02
PCI_A03	K1	A03
PCI_A04	G5	A04
PCI_A05	J4	A05
PCI_A06	H4	A06
PCI_A07	J5	A07
PCI_A08	K2	A08
PCI_A09	G2	A09
PCI_A10	L1	A10
PCI_A11	G4	A11
PCI_A12	L2	A12
PCI_A13	H2	A13
PCI_A14	L3	A14
PCI_A15	F5	A15
PCI_A16	F4	A16
PCI_A17	N1	A17
PCI_A18	F5	A18
PCI_A19	N2	A19
PCI_A20	E3	A20
PCI_A21	N3	A21
PCI_A22	F4	A22
PCI_A23	M5	A23
PCI_A24	E2	A24
PCI_A25	P1	A25
PCI_A26	E1	A26
PCI_A27	P2	A27
PCI_A28	D3	A28
PCI_A29	R1	A29
PCI_A30	D2	A30
PCI_A31	P4	A31

27,29,30,31	PCI_CBE#0	PCI_CBE#0	J2	C/BE#0
27,29,30,31	PCI_CBE#1	PCI_CBE#1	M4	C/BE#1
27,29,30,31	PCI_CBE#2	PCI_CBE#2	M4	C/BE#2
27,29,30,31	PCI_CBE#3	PCI_CBE#3	N4	C/BE#3

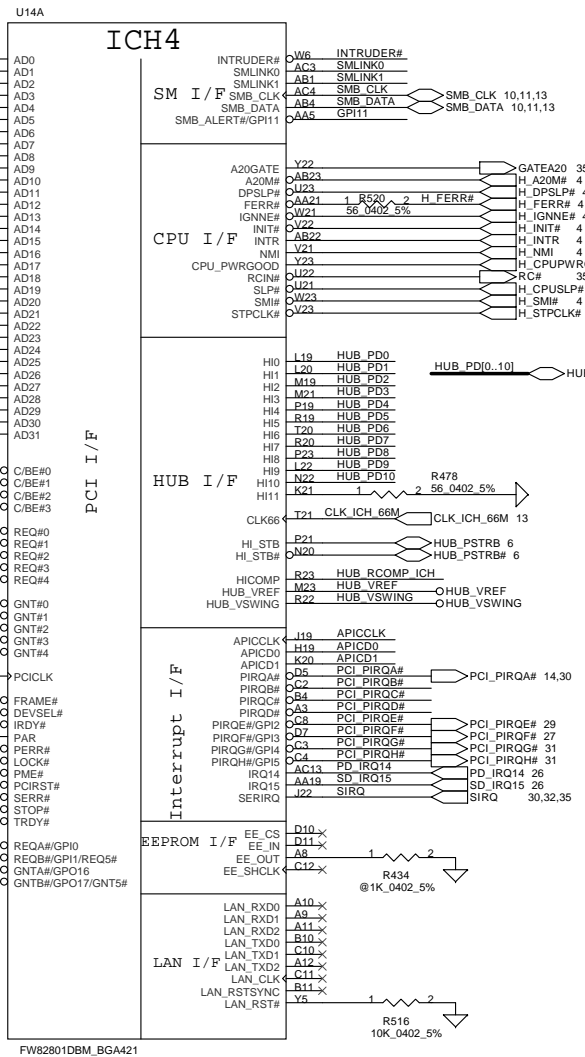
29	PCI_REQ#0	PCI_REQ#0	B4	REQ#0
27	PCI_REQ#1	PCI_REQ#1	B3	REQ#1
30	PCI_REQ#2	PCI_REQ#2	C7	REQ#2
31	PCI_REQ#3	PCI_REQ#3	C7	REQ#3
31	PCI_REQ#4	PCI_REQ#4	B6	REQ#4

29	PCI_GNT#0	PCI_GNT#0	C1	GNT#0
27	PCI_GNT#1	PCI_GNT#1	E6	GNT#1
30	PCI_GNT#2	PCI_GNT#2	A7	GNT#2
31	PCI_GNT#3	PCI_GNT#3	D6	GNT#3
31	PCI_GNT#4	PCI_GNT#4	D6	GNT#4

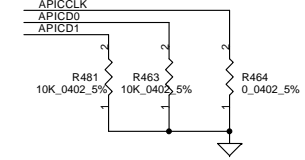
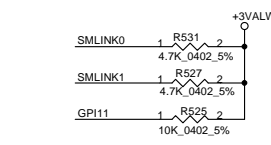
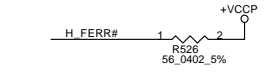
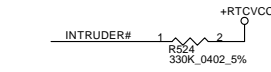
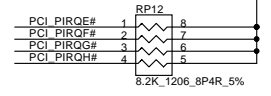
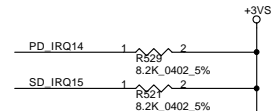
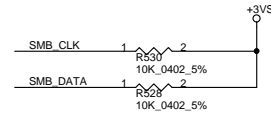
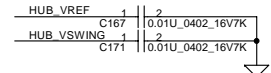
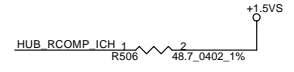
13	CLK_PCI_ICH	CLK_PCI_ICH	P5	PCICLK
27,29,30,31	PCI_FRAME#	PCI_FRAME#	F1	FRAME#
27,29,30,31	PCI_DEVSEL#	PCI_DEVSEL#	M3	DEVSEL#
27,29,30,31	PCI_IRDY#	PCI_IRDY#	L5	IRDY#
27,29,30,31	PCI_PAR	PCI_PAR	G1	PAR
27,29,30,31	PCI_PERR#	PCI_PERR#	M2	PERR#
27,29,30,31	PCI_LOCK#	PCI_LOCK#	M2	LOCK#

7,14,20,27,29,30,31,32	PCIRST#	PCIRST#	U5	PCIRST#
27,29,30,31	PCISERR#	PCISERR#	K5	SERR#
27,29,30,31	PCISTOP#	PCISTOP#	F3	STOP#
27,29,30,31	PCITRDY#	PCITRDY#	F2	TRDY#

26	PCIREQA#	PCIREQA#	B5	REQA#/GP10
26	PCIREQB#	PCIREQB#	A6	REQB#/GP11/REQ05#
26	PIDERST#	PIDERST#	F8	GNTA#/GPO16
26	SIDERST#	SIDERST#	C5	GNTB#/GPO17/GNT5#

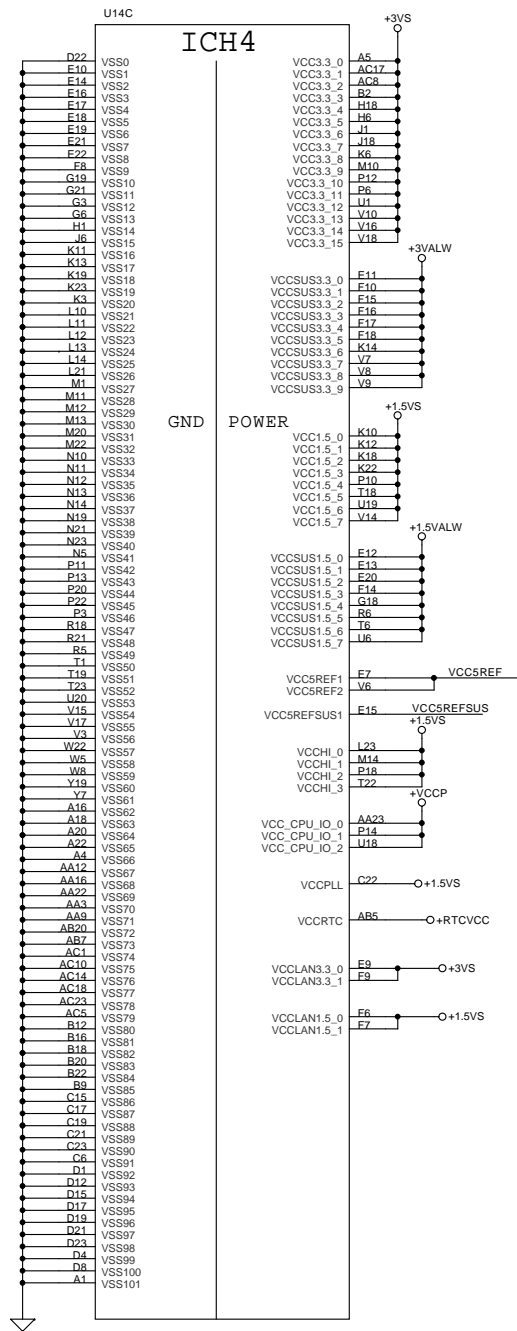


FW82801DBM_BG4421

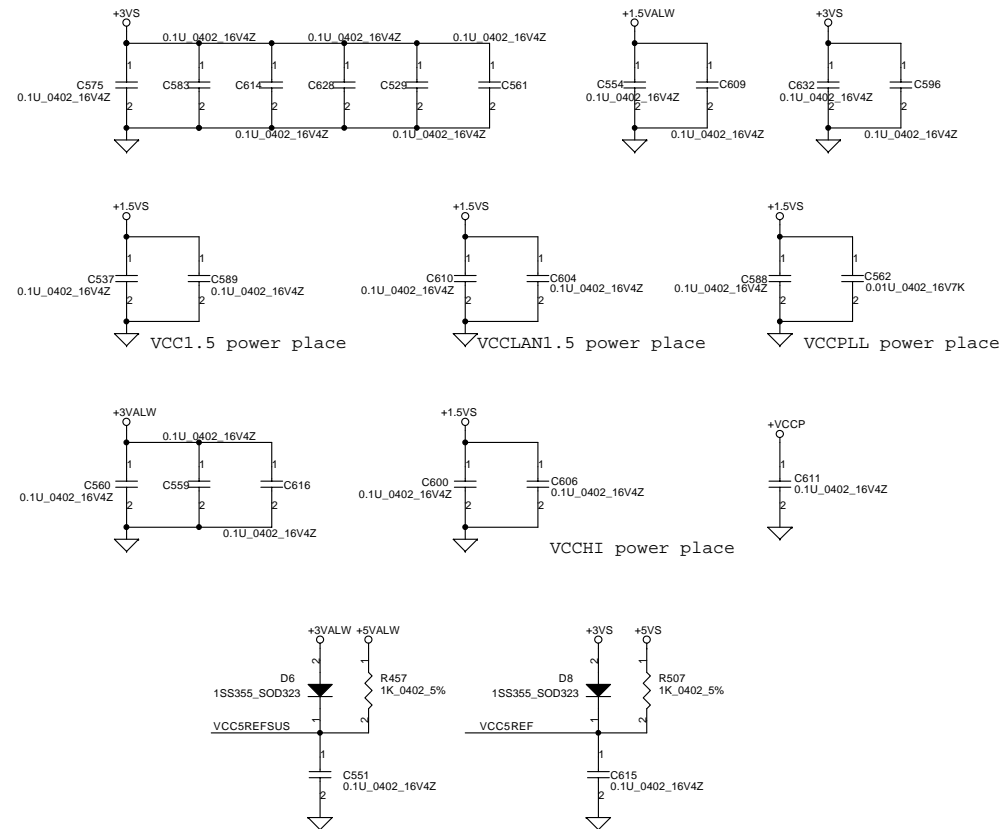


Compal Electronics, Inc.			
SCHEMATIC MB LA-2242			
Title	Document Number	Rev	2A
	401289		
Date	星期一, 四月 19, 2004	Sheet	23 of 101

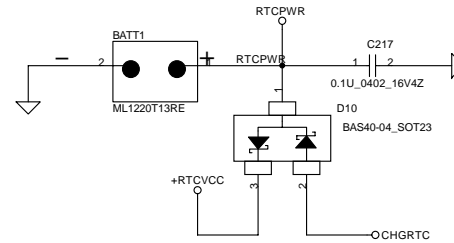
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



FW82801DBM_BGA421

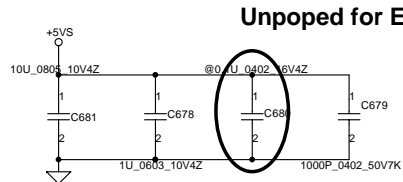


RTC Battery

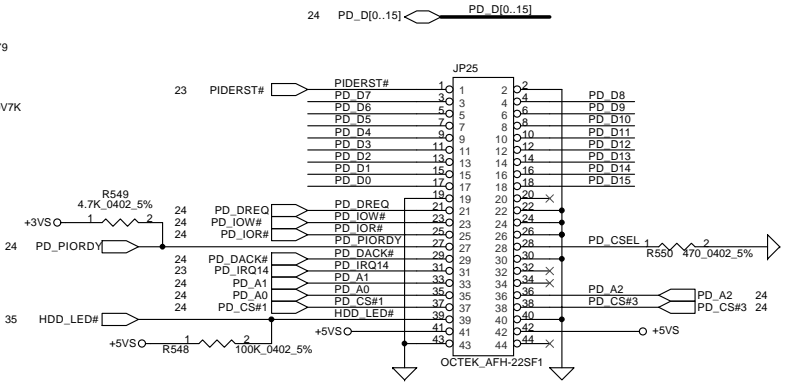


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

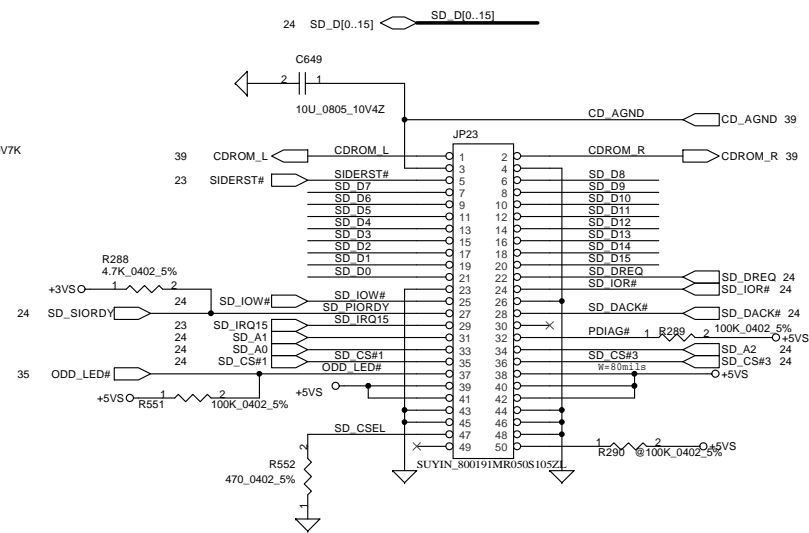
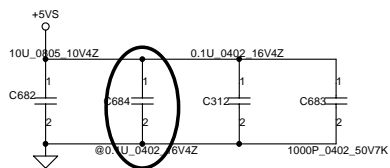
Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一 四月 19, 2004	Sheet 25 of 101



HDD CONN



CDROM CONN

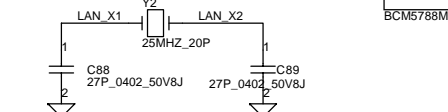
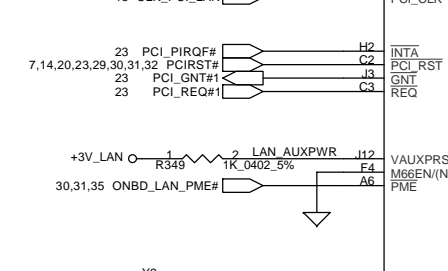
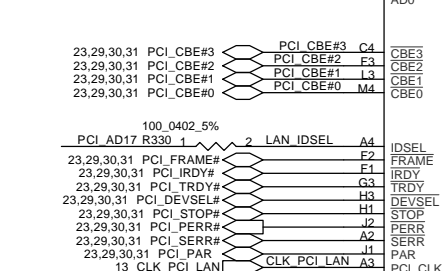
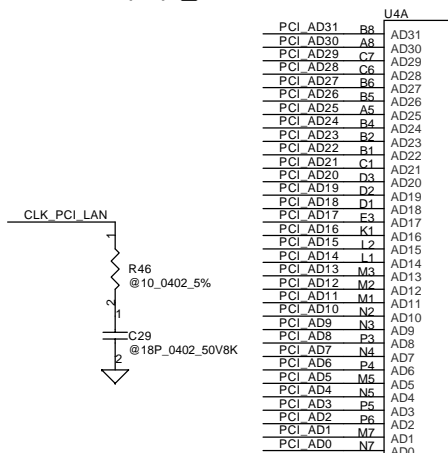
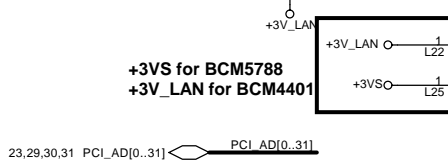


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

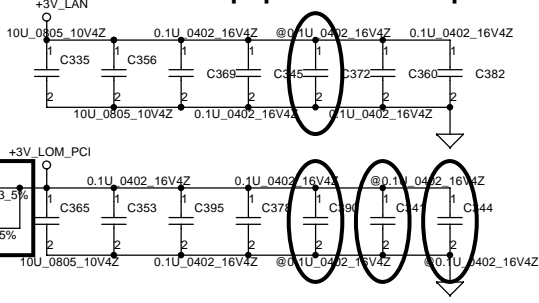
Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 26 of 101

EN_WOL# = Low,
System can wake on LAN
(keep Low when Power On)

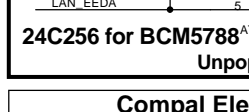
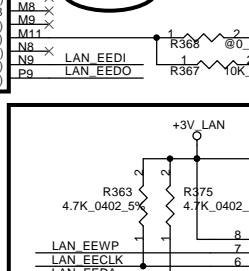
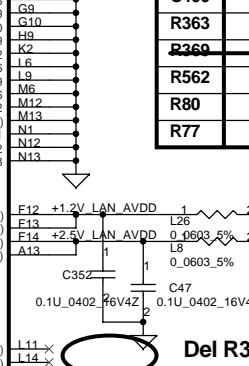
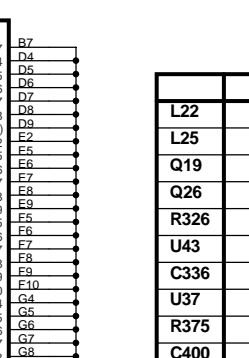
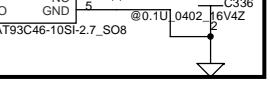
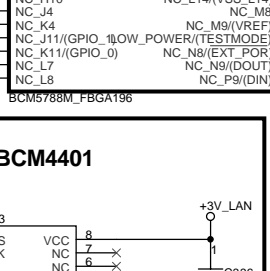
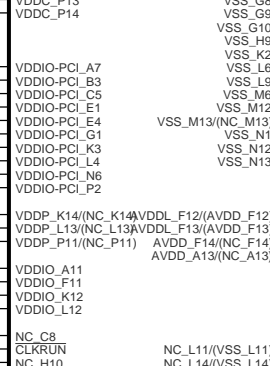
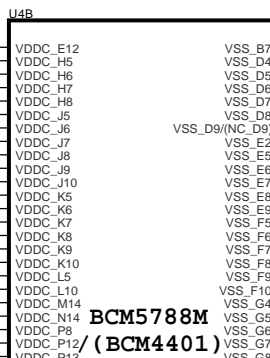
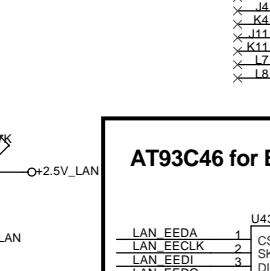
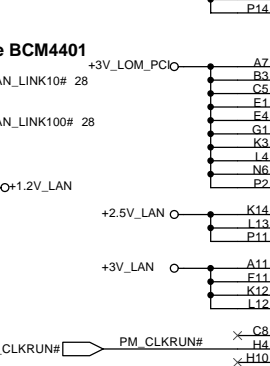
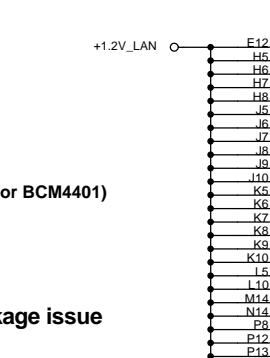
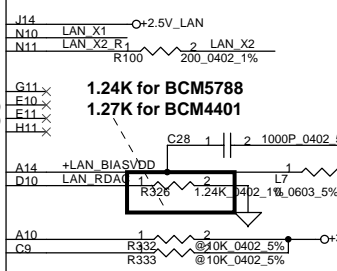
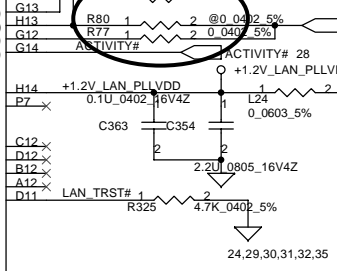
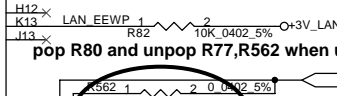
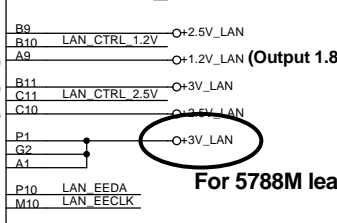
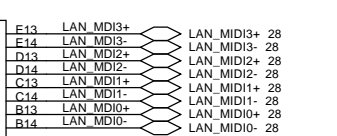
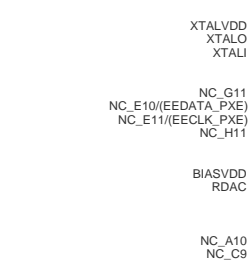
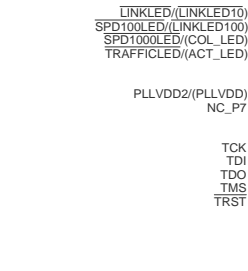
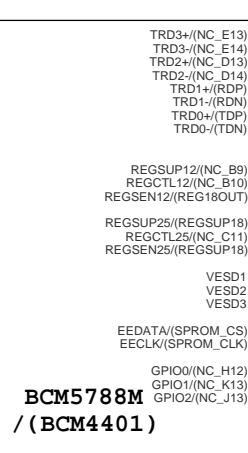
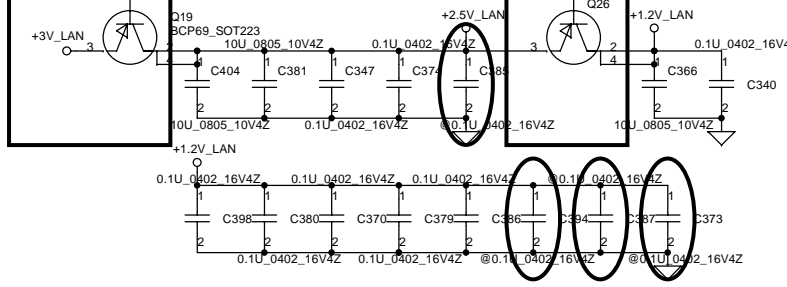
VGS(th) = -0.45V
IDmax = 2.3A



Unpoped for EMI request



unpop when use BCM4401



	5788	4401
L22		Pop
L25	Pop	
Q19	Pop	
Q26	Pop	
R326	1.24K	1.27K
U43		Pop
C336		Pop
U37	Pop	
R375	Pop	
C400	Pop	
R363	Pop	
R360		Pop
R562	Pop	
R80	Pop	
R77	Pop	

BCM5788M / (BCM4401)

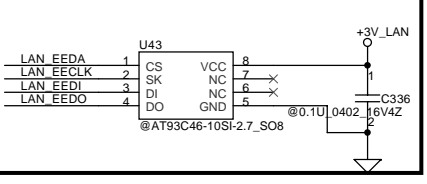
pop R80 and unpop R77,R562 when use BCM4401

For 5788M leakage issue

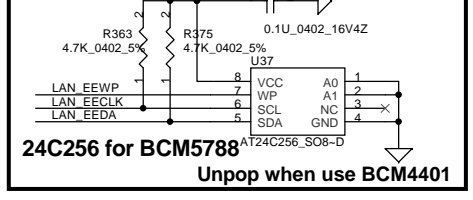
BCM5788M / (BCM4401)

Del R369

AT93C46 for BCM4401



24C256 for BCM5788M

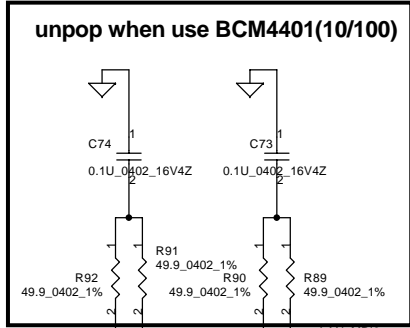


Compal Electronics, Inc.

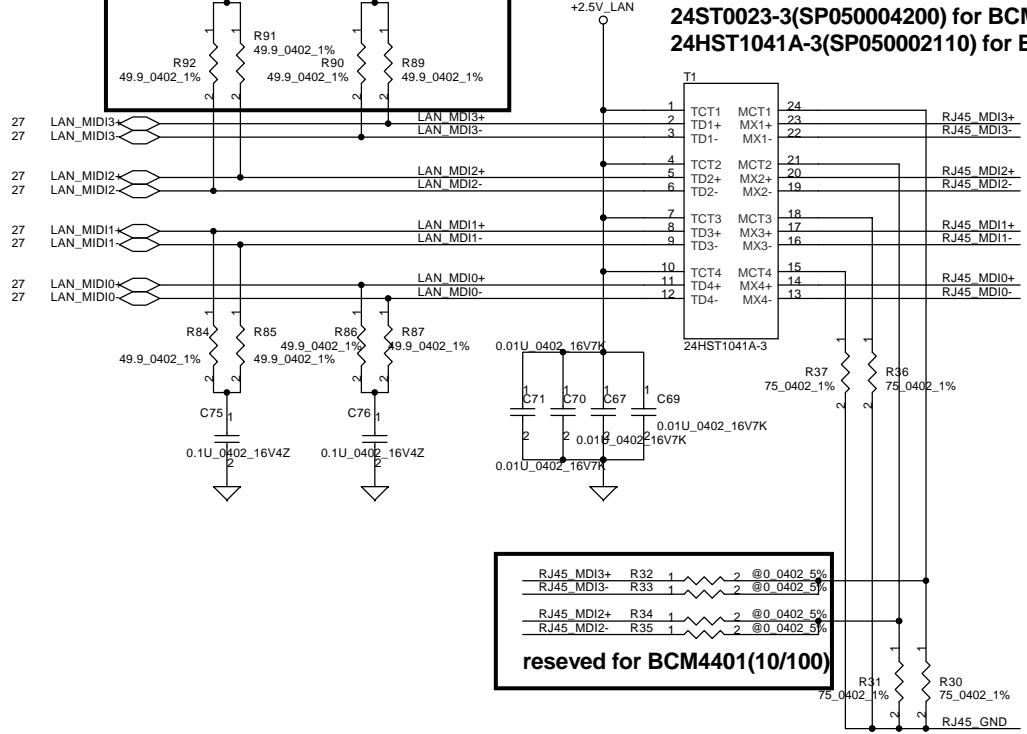
Title			SCHEMATIC MB LA-2242		
Size	Document Number	401289		Rev	2A
B					
Date:	星期一, 四月 19, 2004	Sheet	27	of	101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

LAN BCM5788M/BCM4401KFB

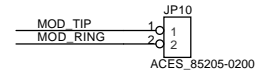
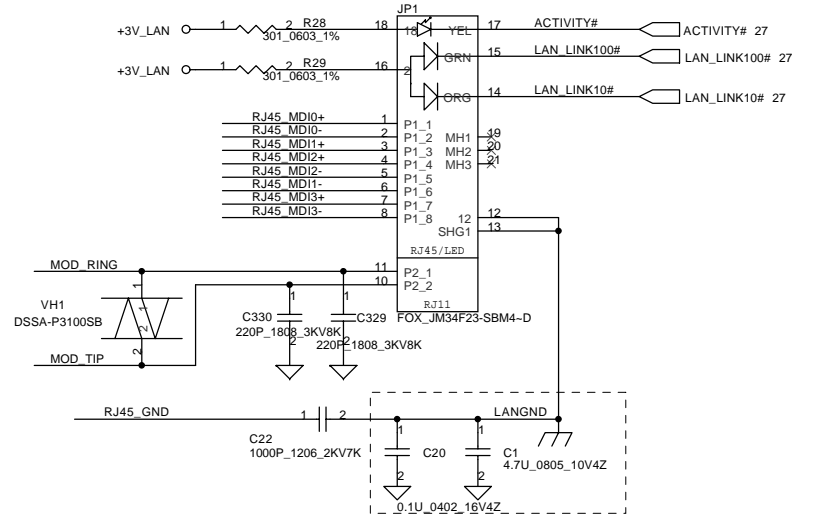


24ST0023-3(SP050004200) for BCM4401(10/100)
24HST1041A-3(SP050002110) for BCM5788M(GbE)



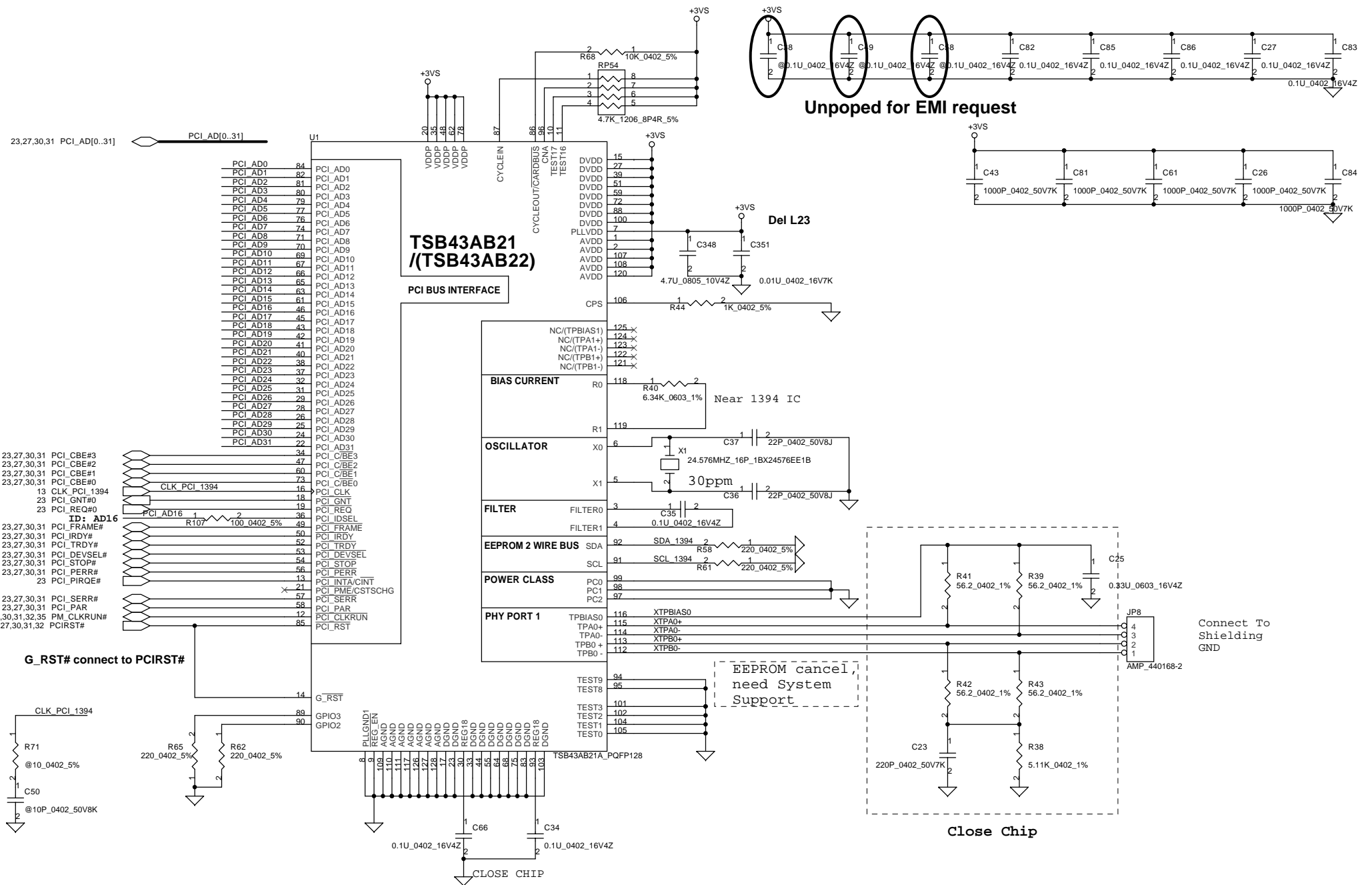
reserved for BCM4401(10/100)

RJ45 MDI3+	R32	1	2	@0.0402 5%
RJ45 MDI3-	R33	1	2	@0.0402 5%
RJ45 MDI2+	R34	1	2	@0.0402 5%
RJ45 MDI2-	R35	1	2	@0.0402 5%

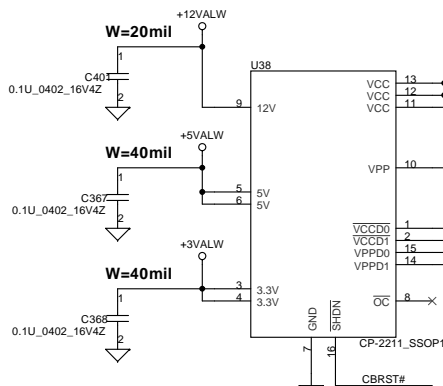


Compal Electronics, Inc.		
Title: SCHEMATIC M/B LA-2242		
Size B	Document Number: 401289	Rev: 2A
Date: 星期一, 四月 19, 2004	Sheet 28	of 101

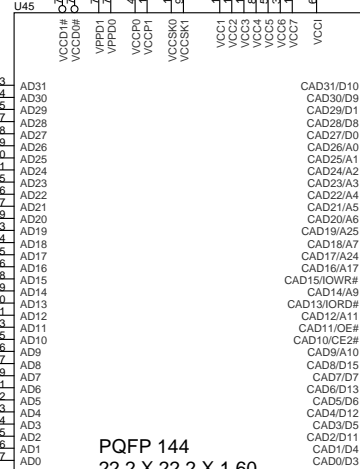
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



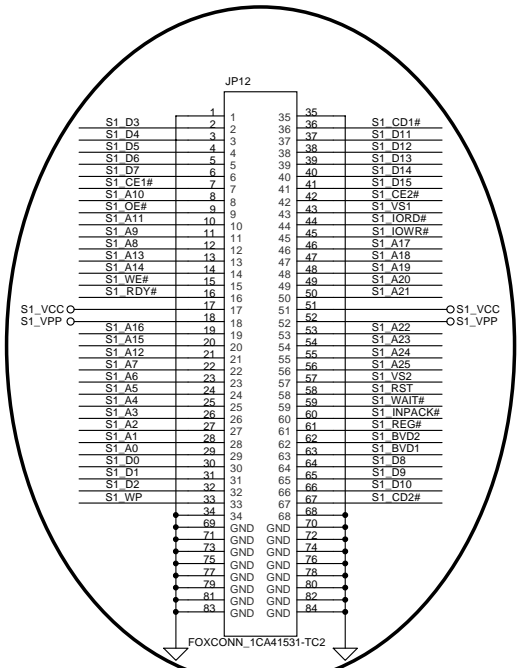
** GPIO2 and GPIO3 defaults as an input and if it is not implemented, it is recommended that it be pulled low to ground with a 220 ohm resistor.



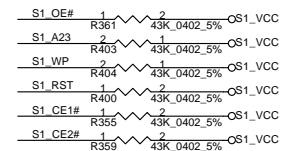
23,27,29,31 PCI_AD[0..31] PCI_AD[0..31]
 23,27,29,31 PCI_CBE#[0..3] PCI_CBE#[0..3]



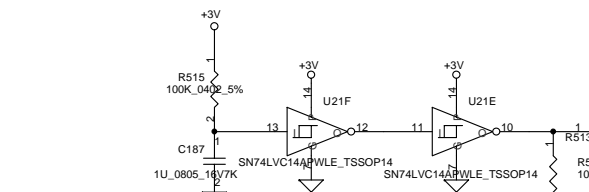
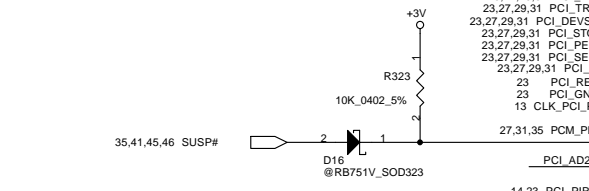
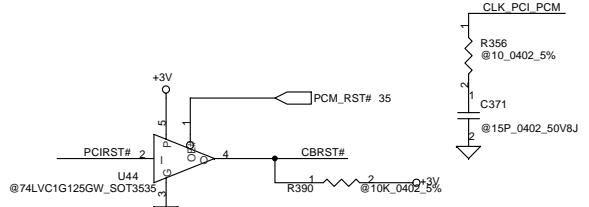
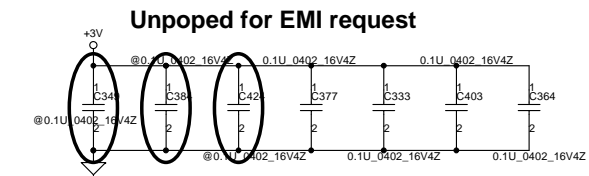
PQFP 144
22.2 X 22.2 X 1.60



change to SP01F002800(BCL50)

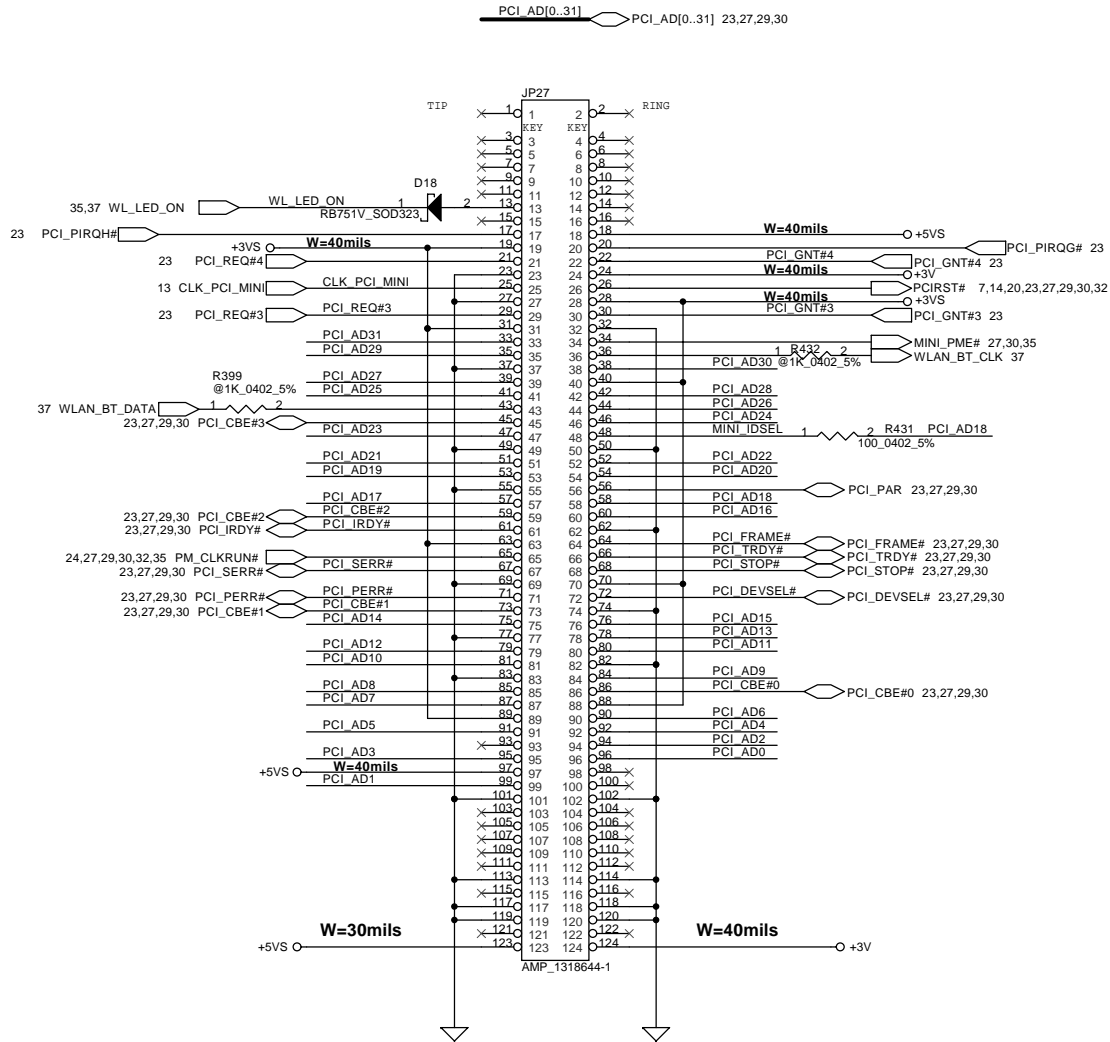
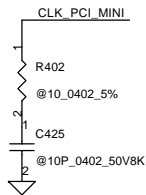
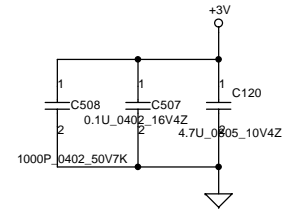
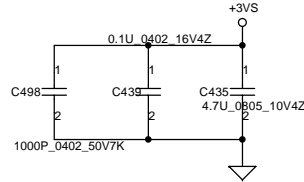
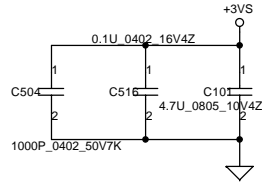
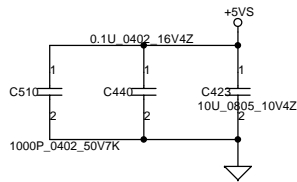


unpop R324



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

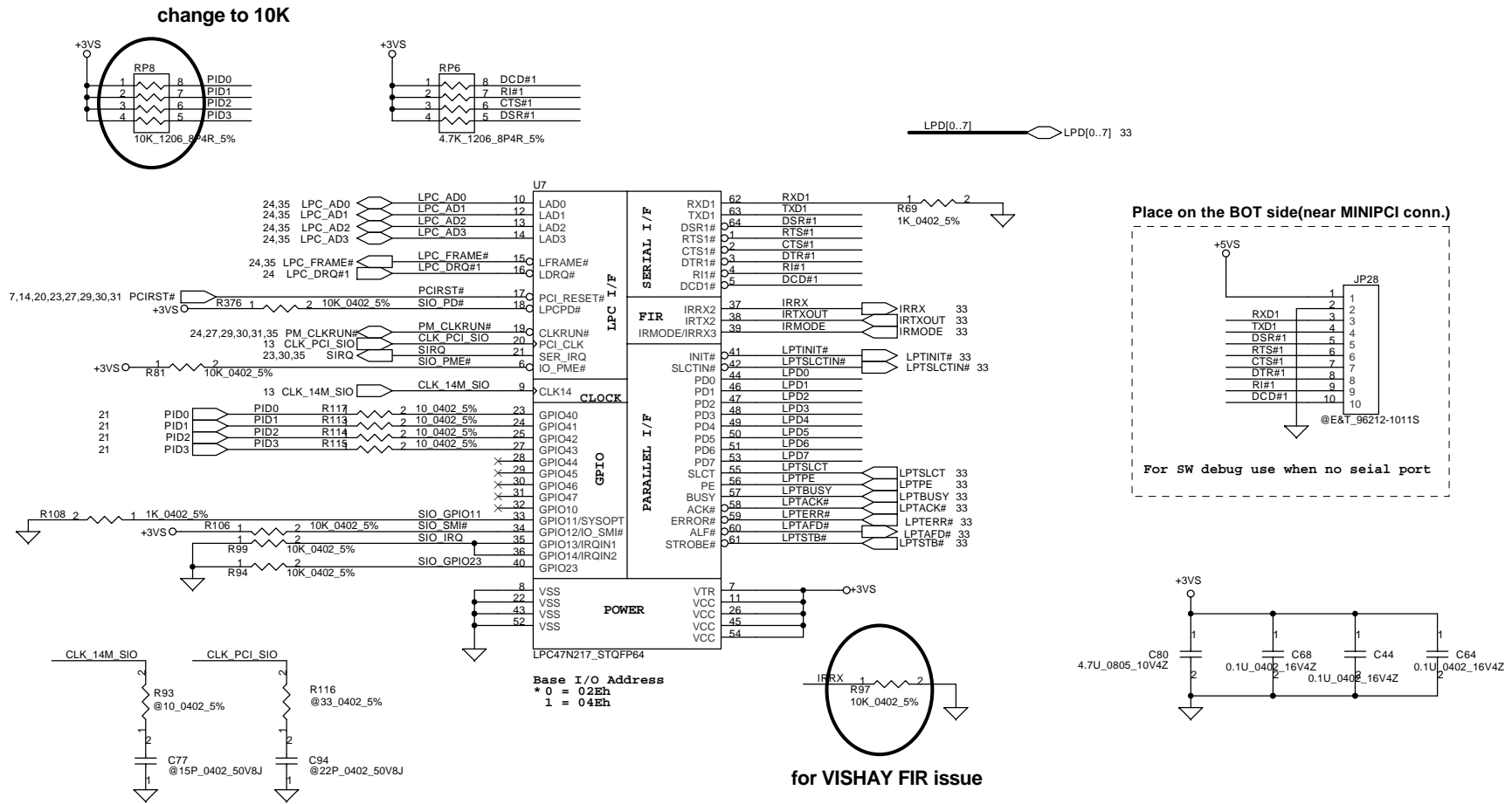
Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number 401289	Rev 2A
Date	星期一, 四月 19, 2004	Sheet 30 of 101



Compal Electronics, Inc.	
Title: SCHEMATIC M/B LA-2242	
Size: Document Number	Rev: 2A
401289	
Date: 星期一, 四月 19, 2004	Sheet 31 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

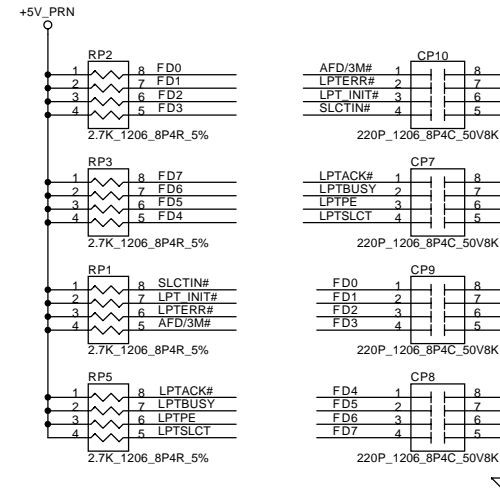
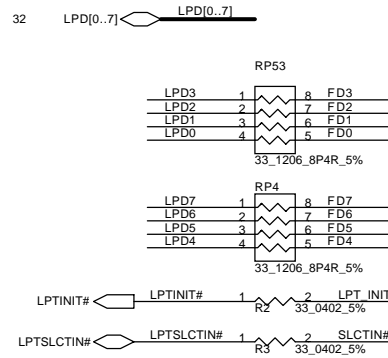
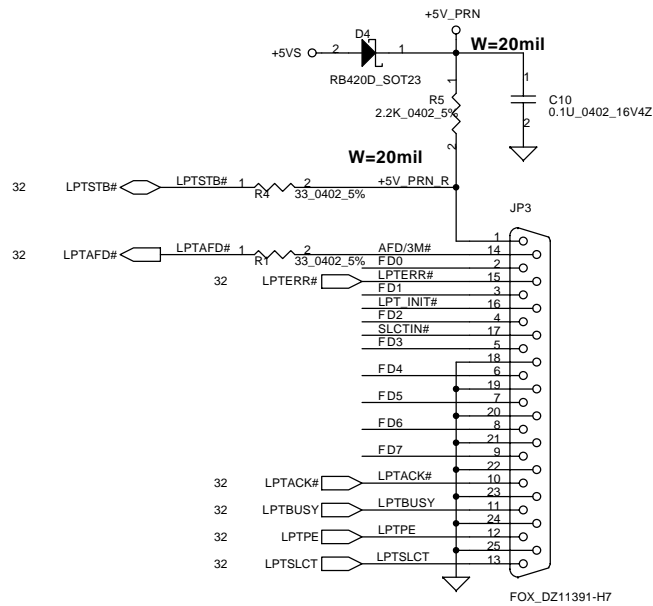
SUPER I/O SMC LPC47N217



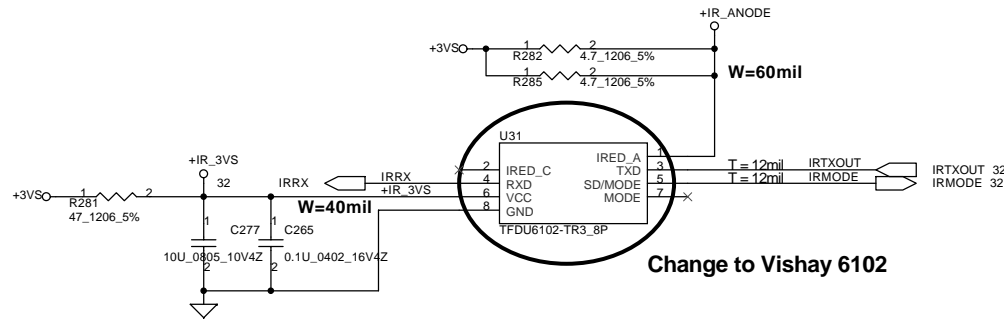
Compal Electronics, Inc.			
Title: SCHEMATIC M/B LA-2242			
Size: B	Document Number: 401289	Rev: 2A	
Date: 星期一, 四月 19, 2004	Sheet: 32	of 101	

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Parallel Port



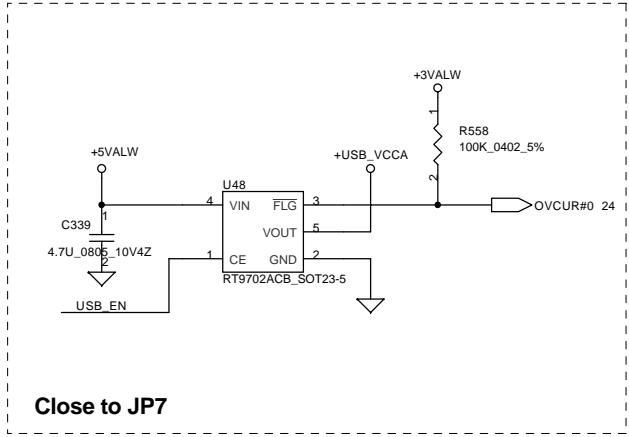
FIR Module



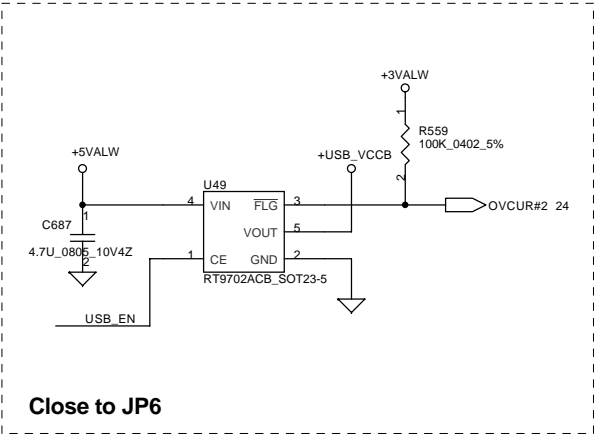
Change to Vishay 6102

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

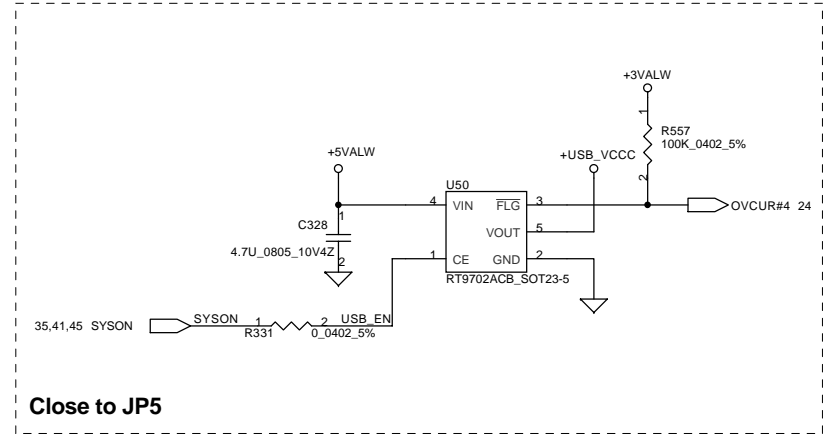
Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 33 of 101



Close to JP7

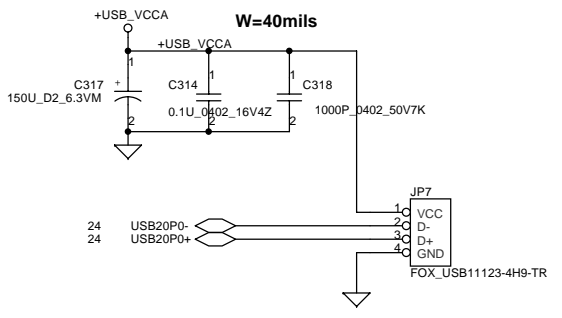


Close to JP6

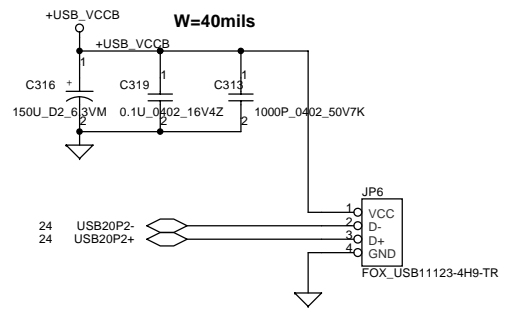


Close to JP5

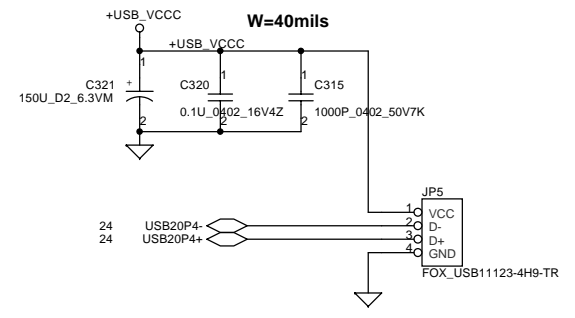
USB CONN. 1



USB CONN. 2

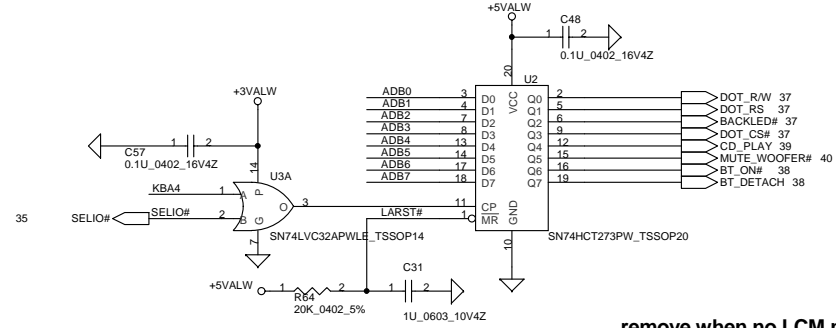
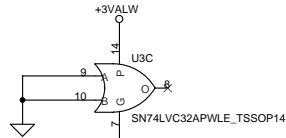
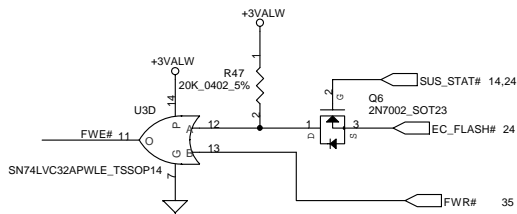
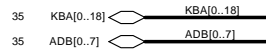


USB CONN. 3

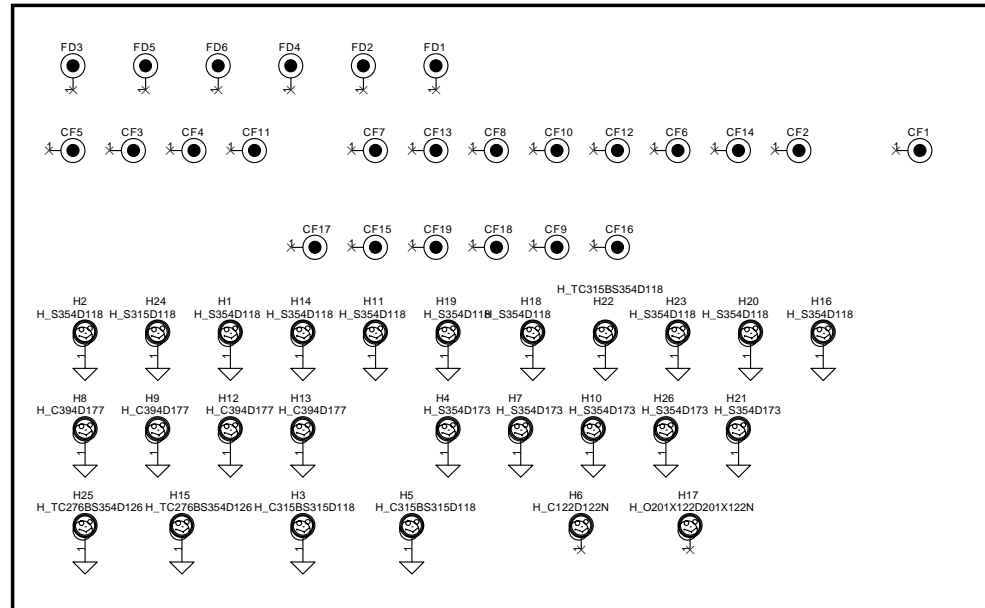
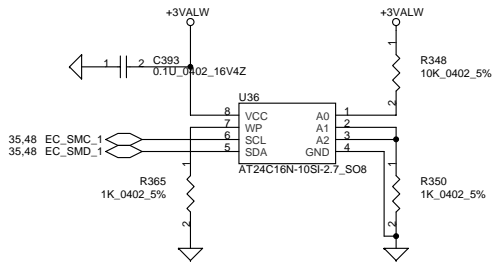
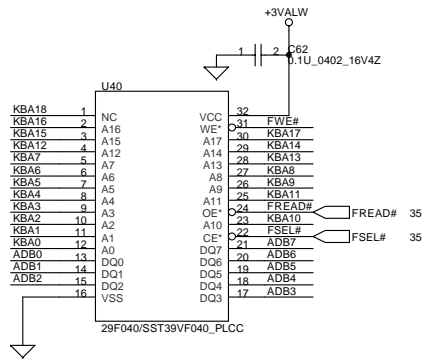
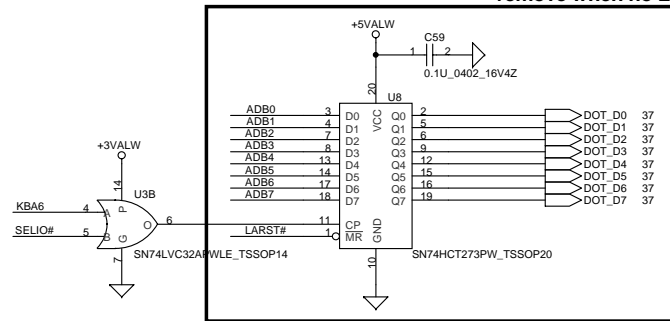


Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 34 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



remove when no LCM module

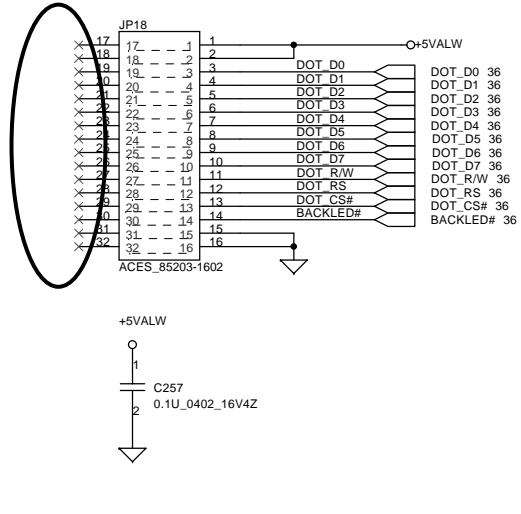


Compal Electronics, Inc.

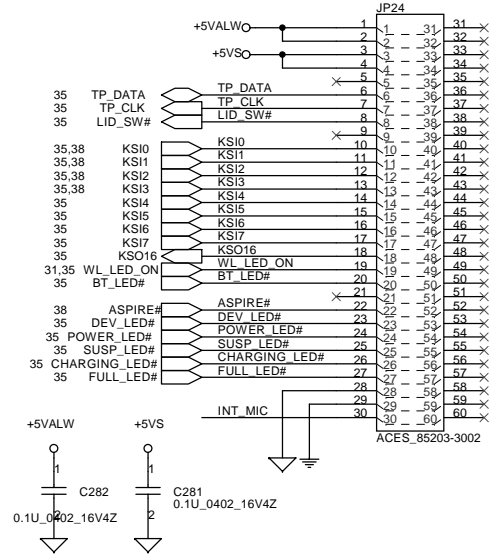
Title		SCHEMATIC M/B LA-2242	
Size	Document Number	401289	
Date:	日期:	Rev	2A
星期一, 四月 19, 2004	Sheet	36	of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

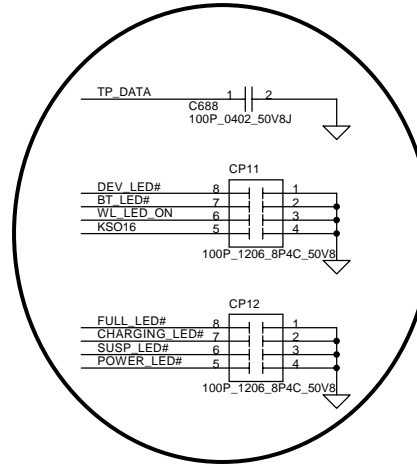
To LCM Board



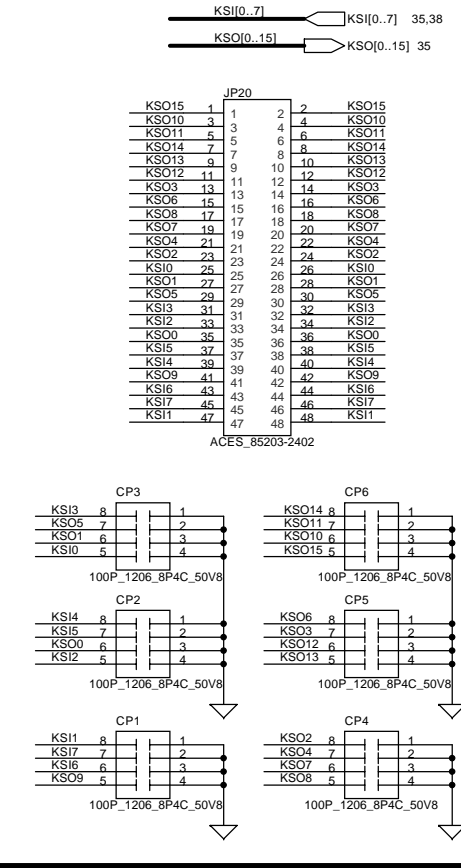
To T/P Board



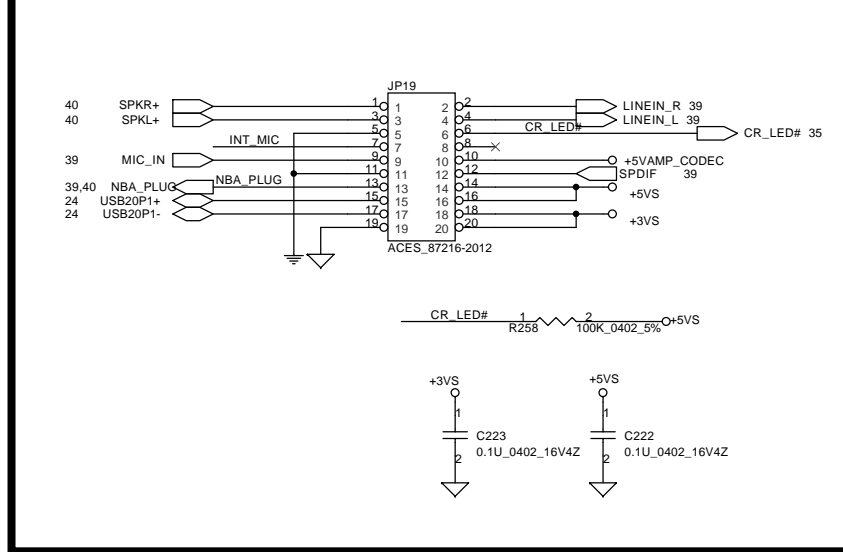
Add CP11,CP12,C688



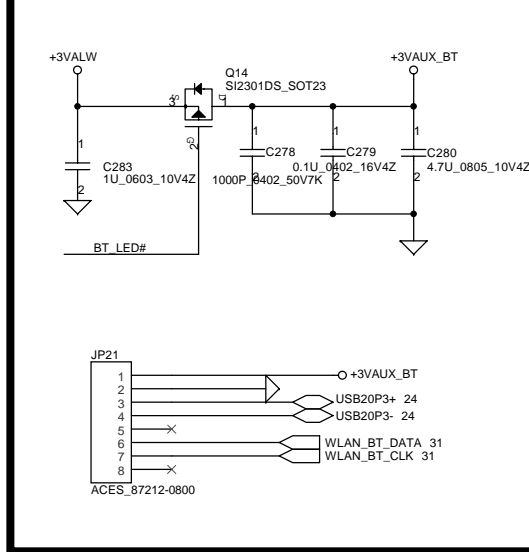
INT_KBD CONN.



To Card Reader Board



Bluetooth Conn.

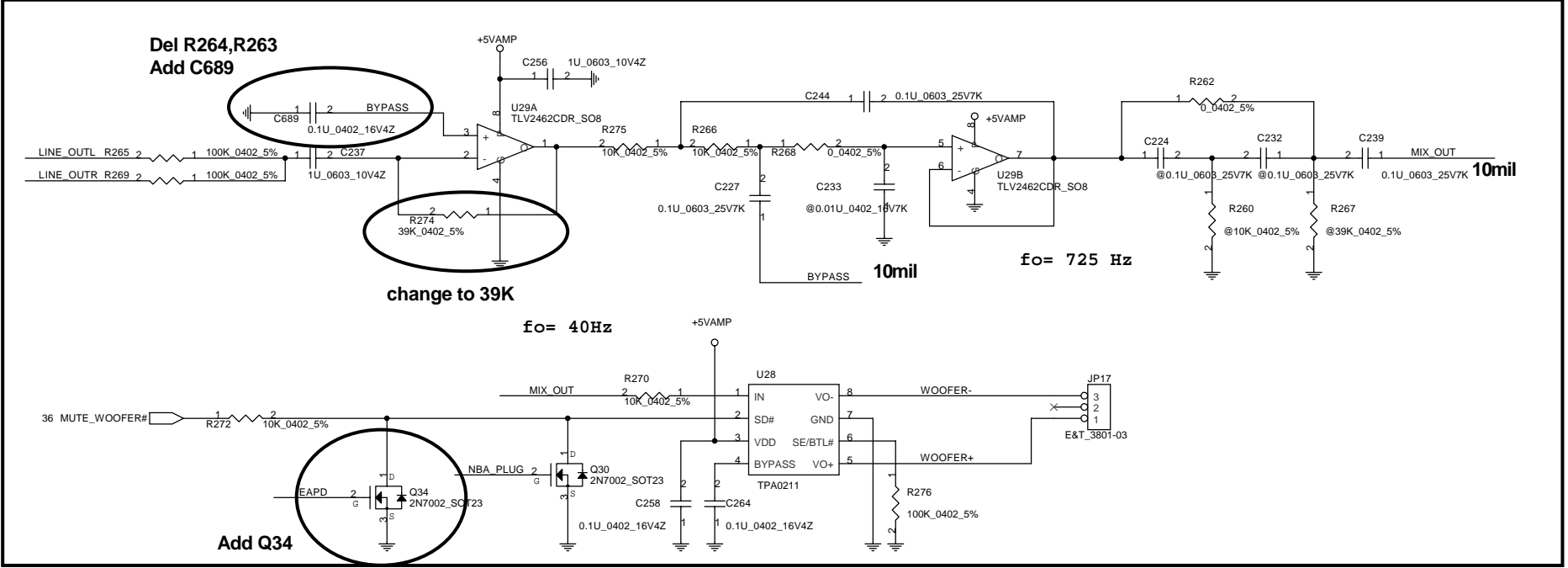
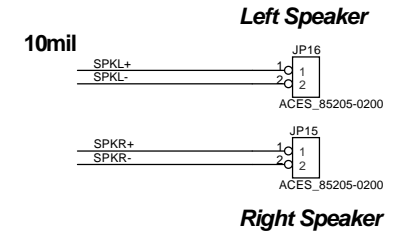
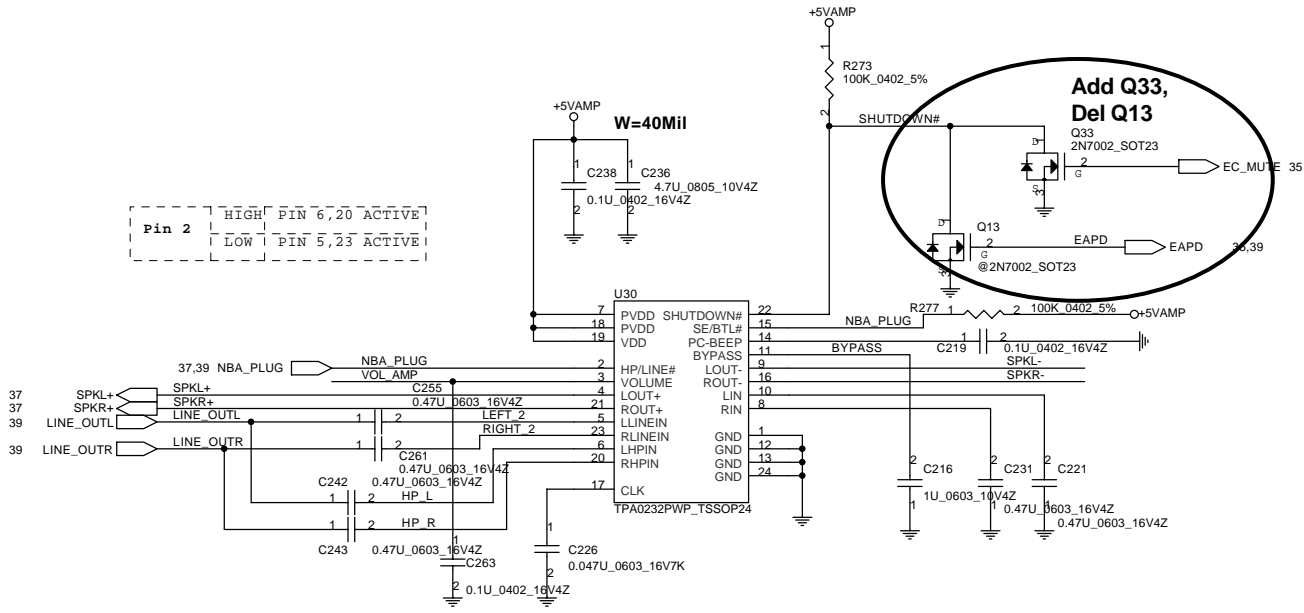
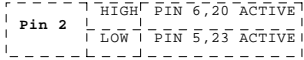
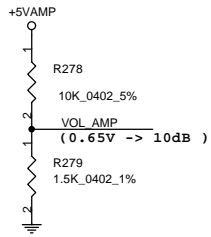


Compal Electronics, Inc.

Schematic M/B LA-2242

Title	Document Number		Rev
Size	401289		2A
Date:	星期一, 四月 19, 2004	Sheet	37 of 101

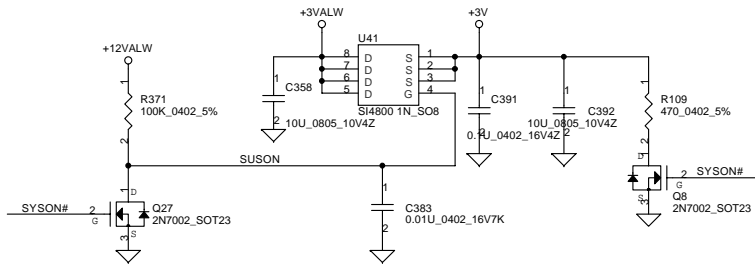
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



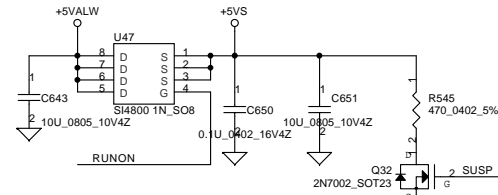
Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number 401289	Rev 2A
Date:	星期一, 四月 19, 2004	Sheet 40 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

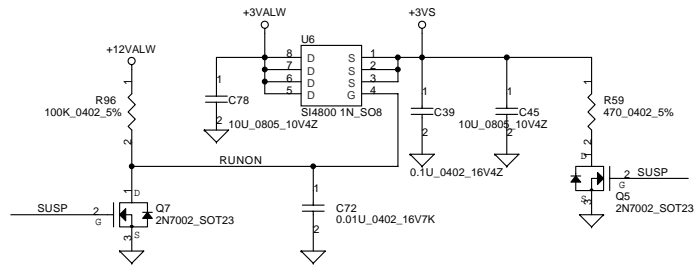
+3VALW to +3V Transfer



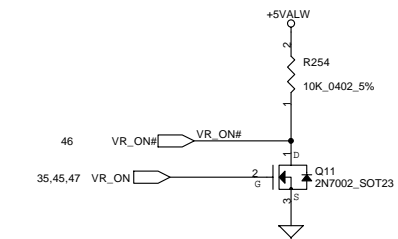
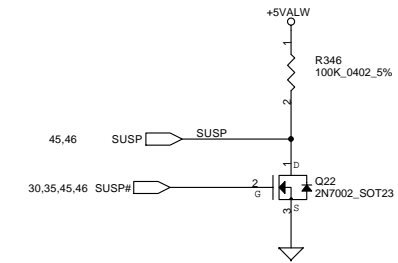
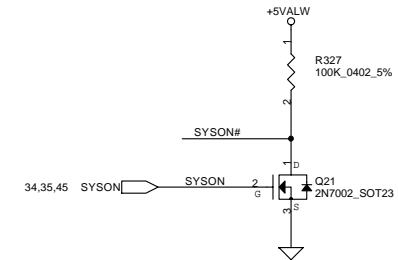
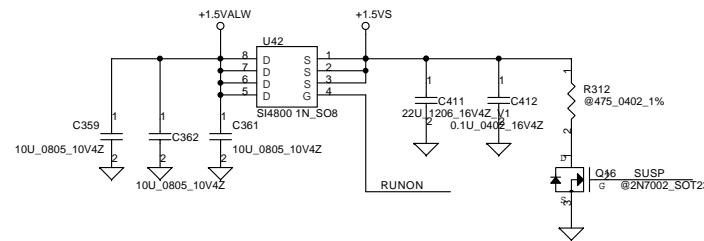
+5VALW to +5VS Transfer



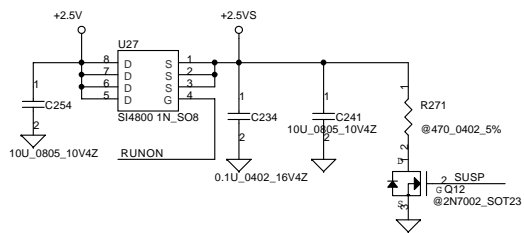
+3VALW to +3VS Transfer



+1.5VALW to +1.5VS Transfer



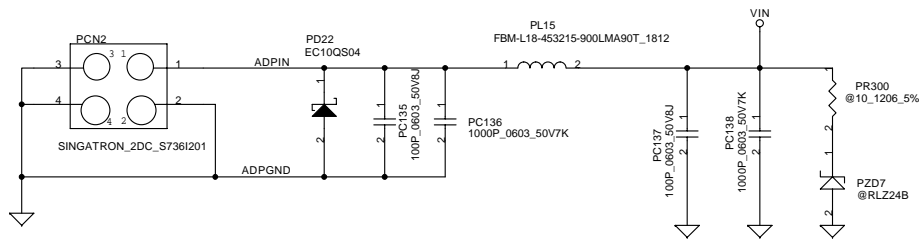
+2.5V to +2.5VS Transfer



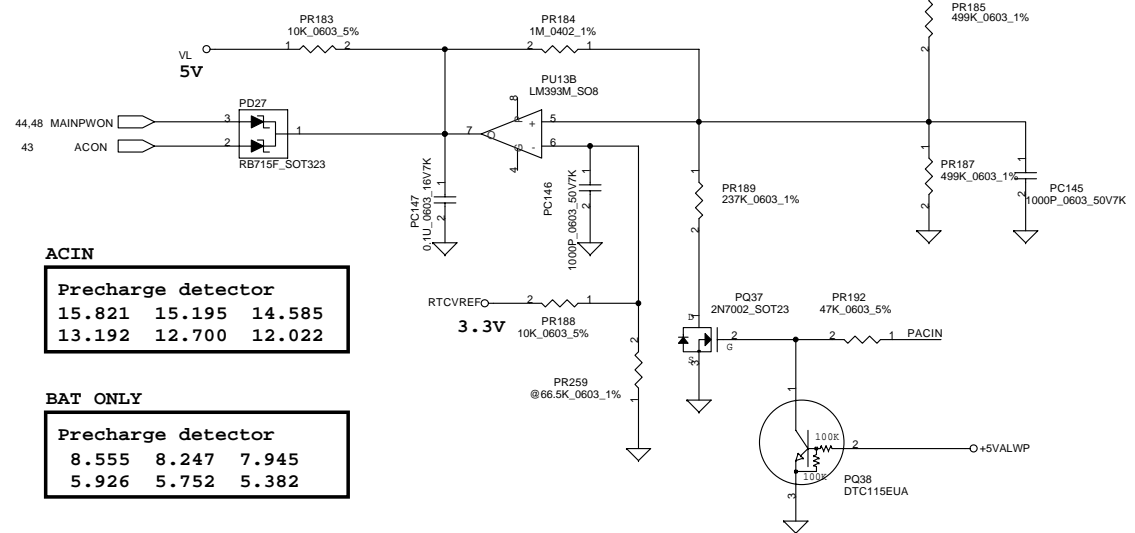
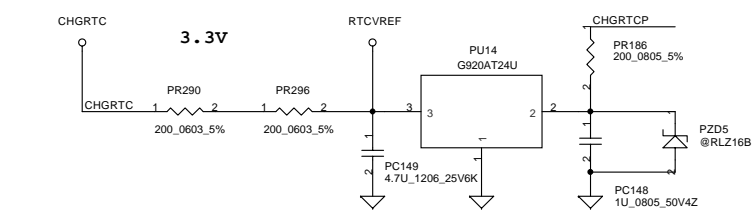
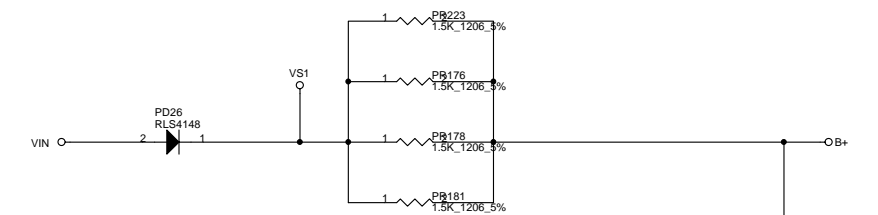
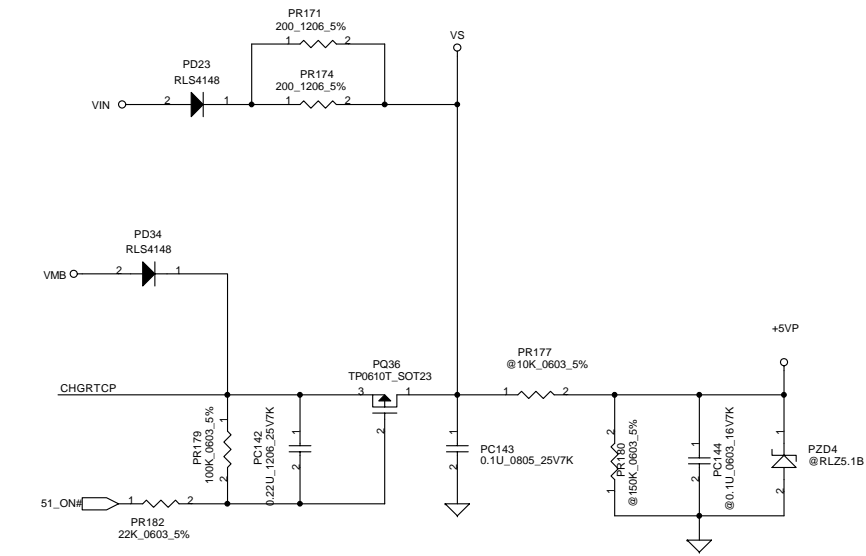
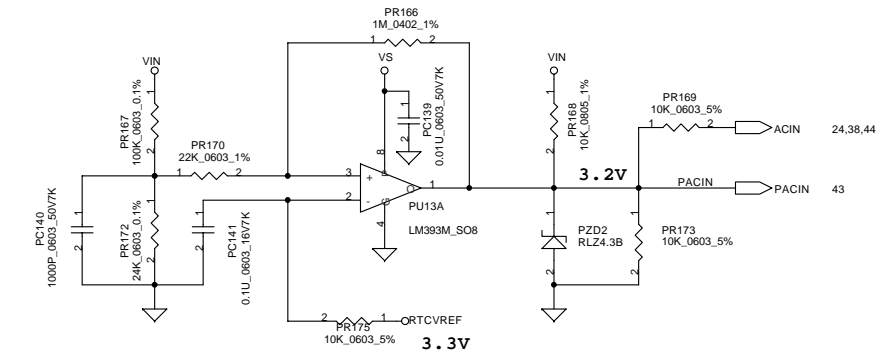
remove on Drongo4

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number 401289	Rev 2A
Date	星期一, 四月 19, 2004	Sheet 41 of 101

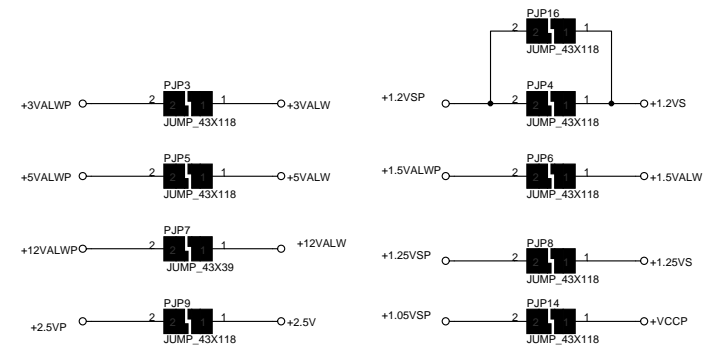


VIN detector		
18.239	17.755	17.273
17.545	17.071	16.587



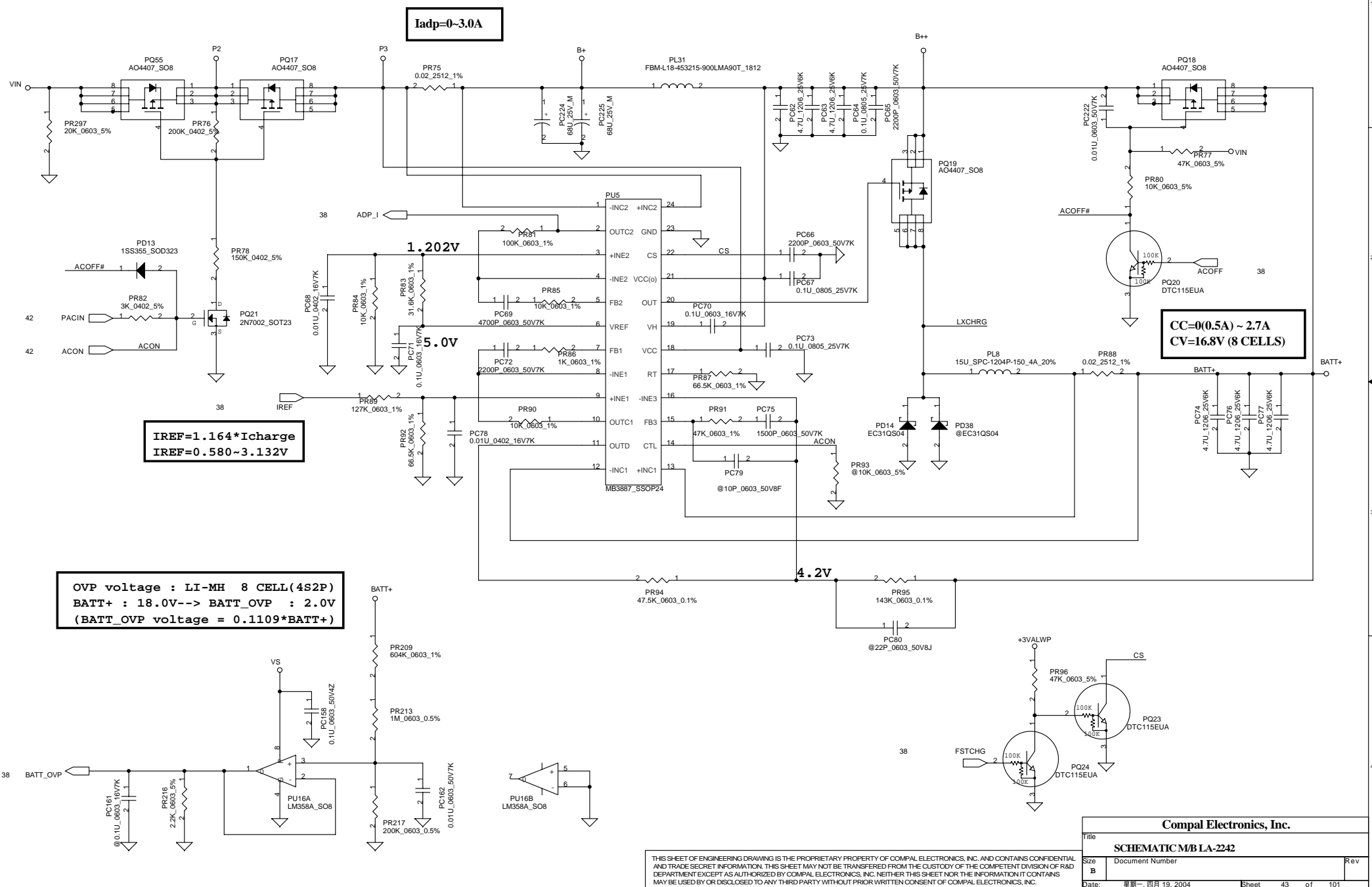
ACIN		
Precharge detector		
15.821	15.195	14.585
13.192	12.700	12.022

BAT ONLY		
Precharge detector		
8.555	8.247	7.945
5.926	5.752	5.382



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
File: SCHEMATIC/MBLA-2242		
Size: B	Document Number	Rev
Date: 星期一, 四月 19, 2004	Sheet: 42	of 101



I_{adp}=0~3.0A

I_{REF}=1.164*I_{charge}
I_{REF}=0.580~3.132V

CC=(0.5A) ~ 2.7A
CV=16.8V (8 CELLS)

OVP voltage : LI-MH 8 CELL(4S2P)
BATT+ : 18.0V--> BATT_OVP : 2.0V
(BATT_OVP voltage = 0.1109*BATT+)

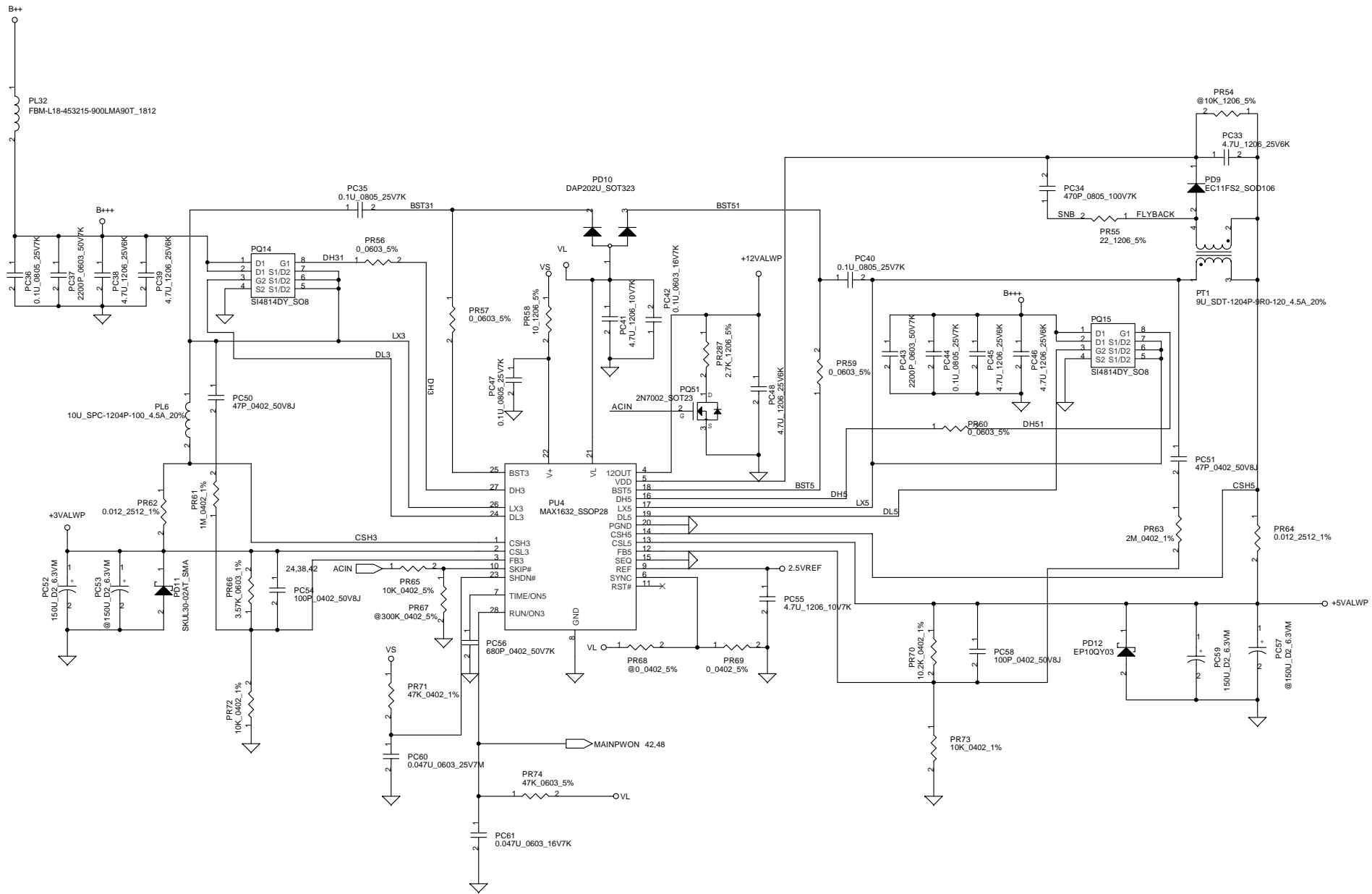
1.202V

5.0V

4.2V

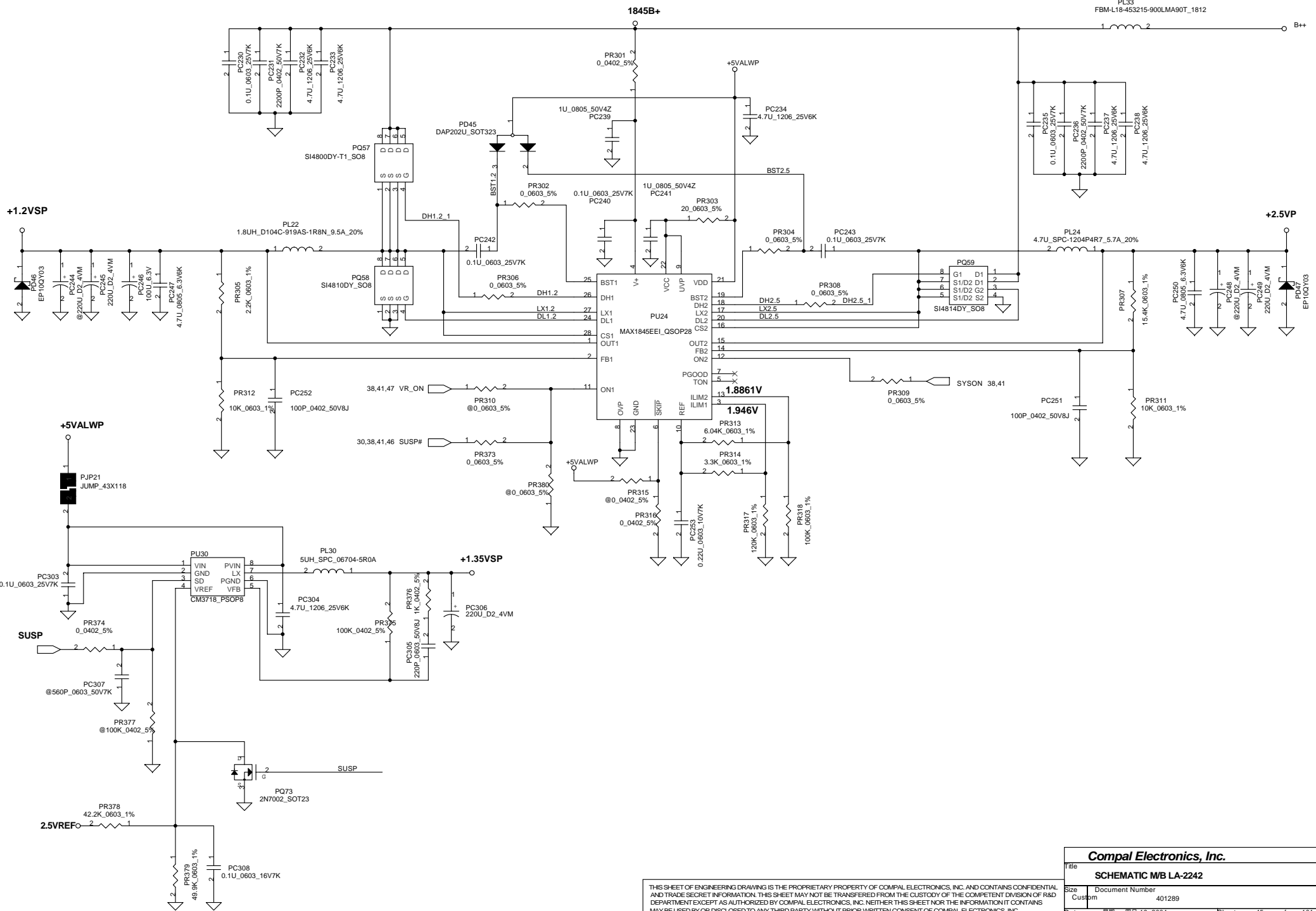
Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size B	Document Number	Rev
Date: 星期一, 四月 19, 2004	Sheet 43	of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

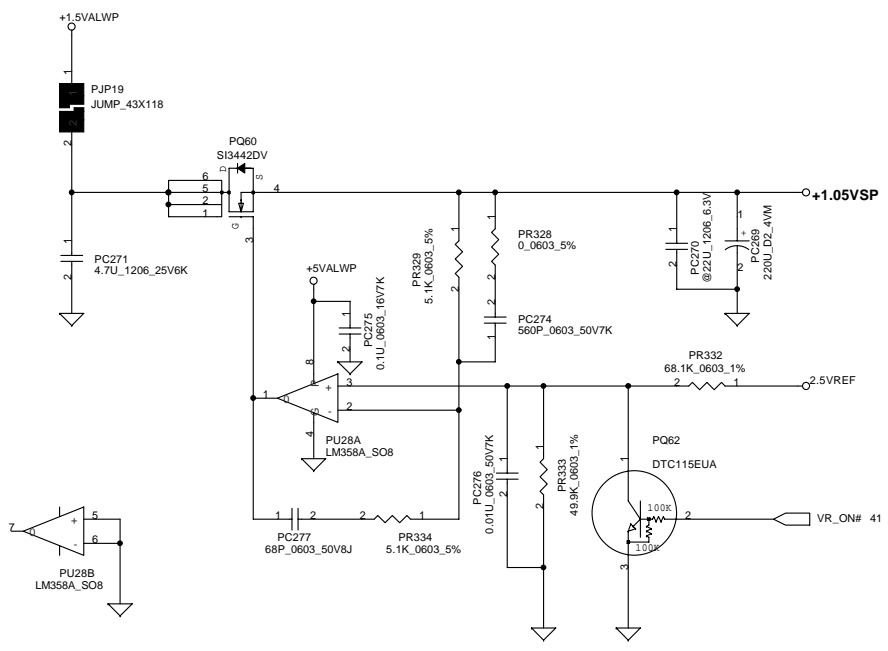
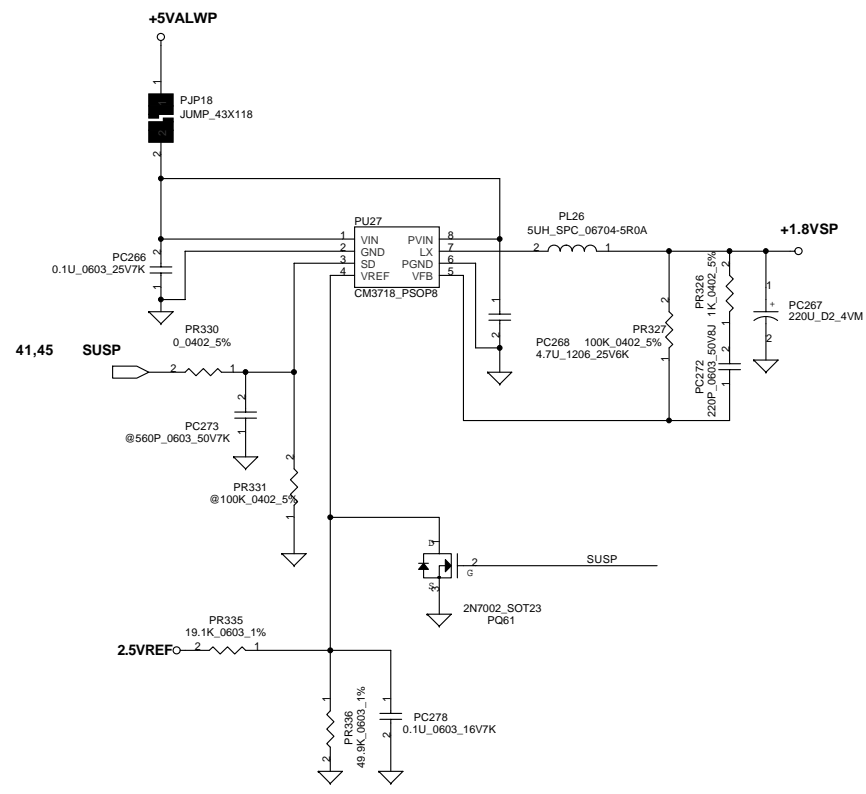
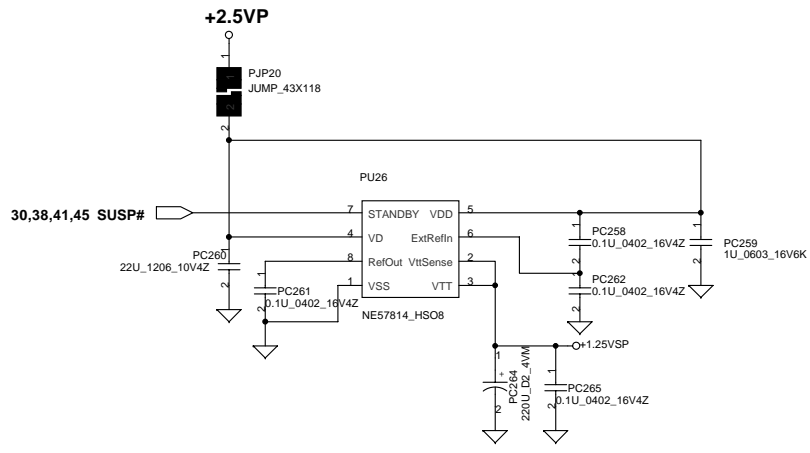
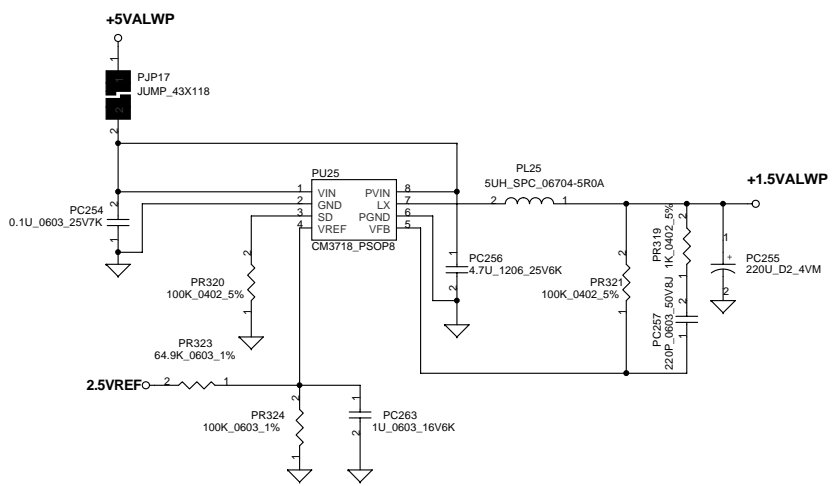
Compal Electronics, Inc.		
Title SCHEMATIC/BLA-2242		
Size B	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 44	of 101



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

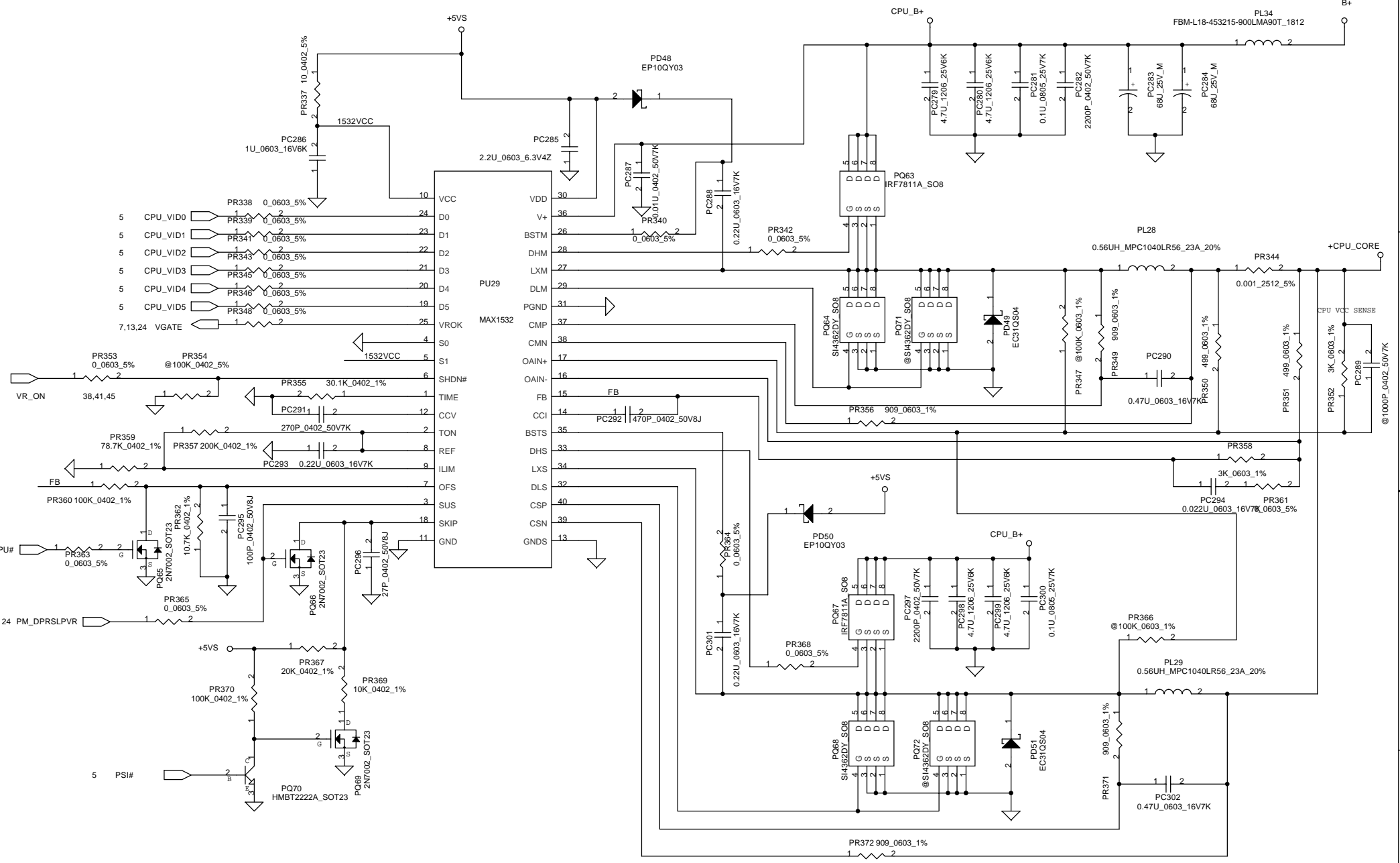
Compal Electronics, Inc.			
SCHEMATIC / MB LA-2242			
File	Document Number	Rev	
Size	401289	2A	
Custom			
Date:	星期一, 四月 19, 2004	Sheet	45 of 101

+1.5VALWP/+1.8VSP/+1.25VSP/+1.05VSP



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS

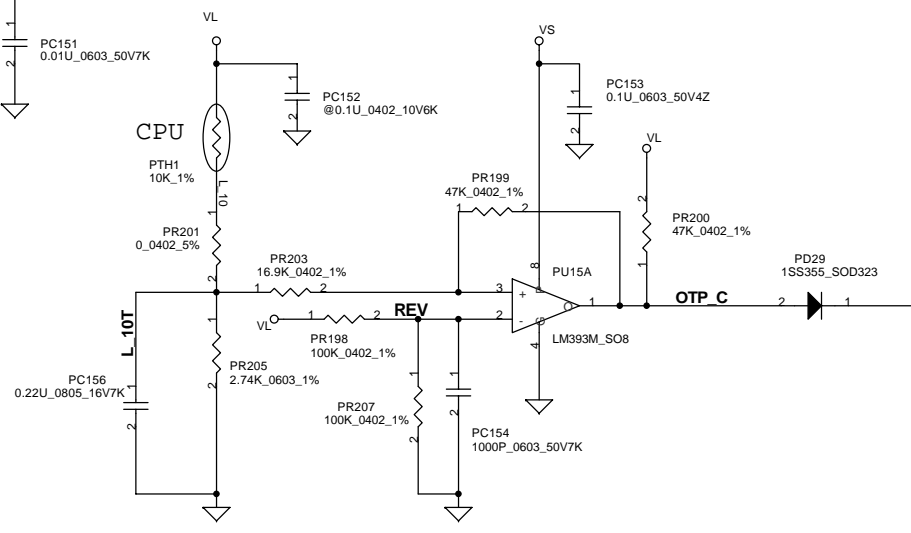
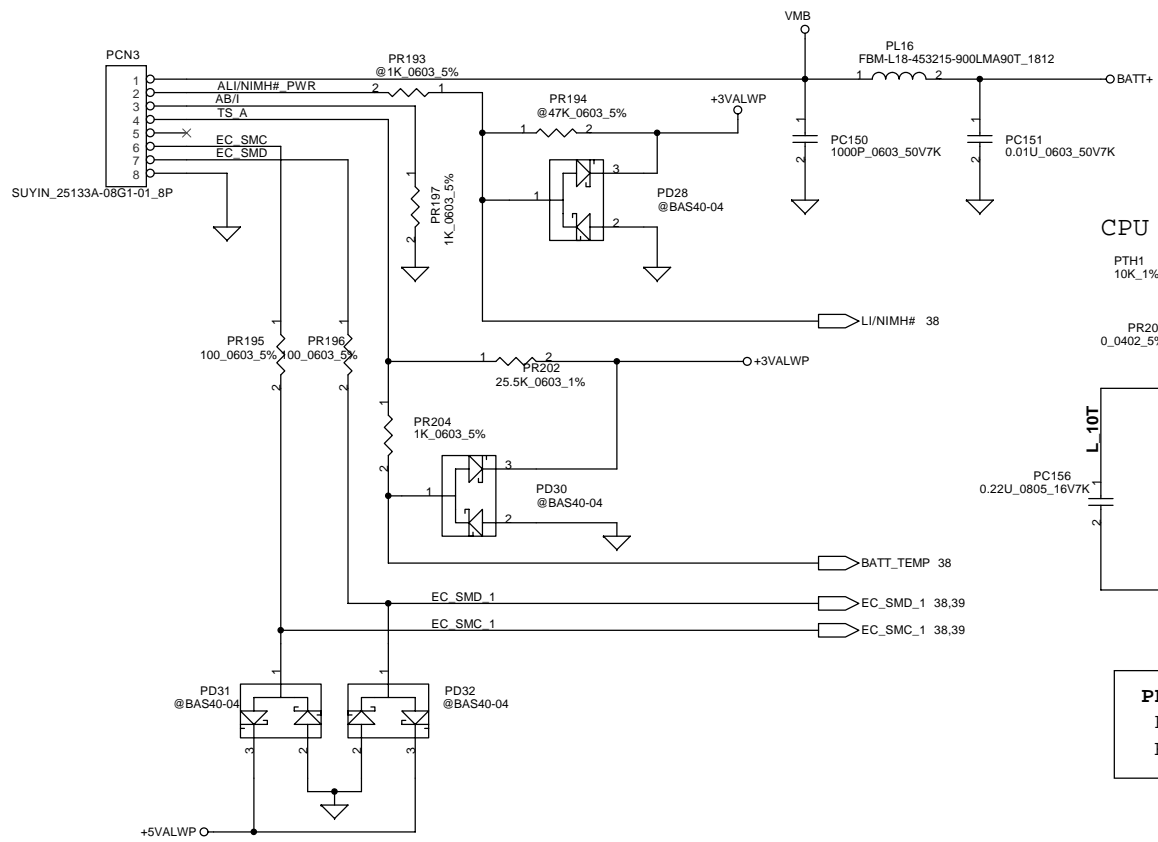
Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 46	of 101



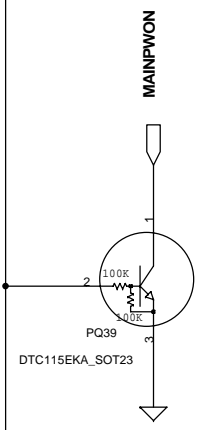
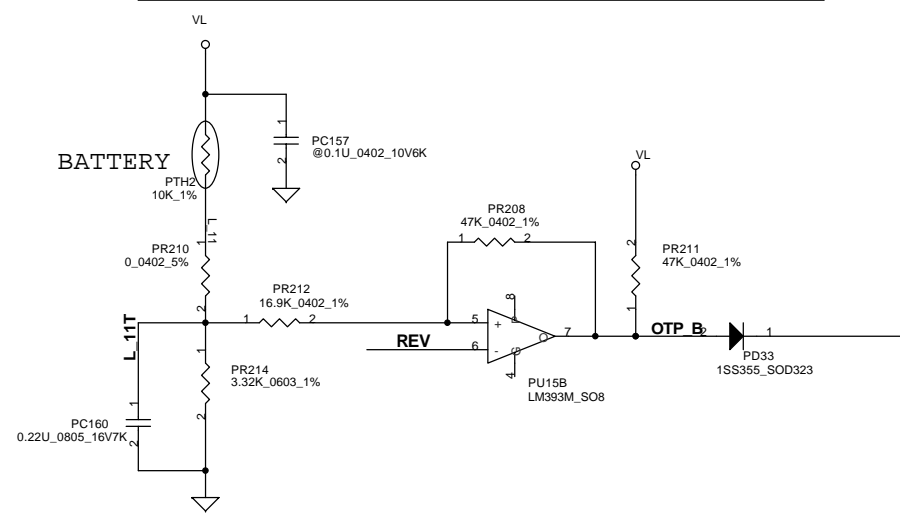
Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
Custom	401289	2A
Date:	星期一 四月 19, 2004	Sheet 47 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

PH1 under CPU bottom side :
 CPU thermal protection at 90 +/-3 degree C
 Recovery at 50 +/-3 degree C



PH2 near main Battery CONN :
 BAT. thermal protection at 84 +/-3 degree C
 Recovery at 45 +/-3 degree C



42.44

Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 48 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Version change list (P.I.R. List)

Power section

Item	Reason for change	PG#	Modify List	Date	B.Ver#
1	1.05V oscillate	46	Delete PC270 and add PC269 (220u D2).	2004.02.07	
2	The single "SUSP" will be pull down to 2.2V	45 46	Delete PR331 and PR377.	2004.02.07	
3	To reduce the response time, when charger into CP mode.	43	Change PR81 from 22K to 100K.	2004.02.07	
4	For EMI request	43;44;45;47	Delete PL5,PL7,PL23,PL27 Change PQ63 and PQ67 to IRF7821 Change PR340 and PR364 to 2.2 ohm	2004.02.11	
5	To speed up 1.8V, 1.35V and 1.05V	45 46	Change PR336, PR333 and PR379 to 49.9K Change PC278 and PC308 to 0.1uF Change PR335 to 19.1K Change PR332 to 68.1K Change PR378 to 42.2K	2004.02.12	
6	To reduce +3VALWP power plane negative voltage	44	Change PD11 to SKUL30-02AT	2004.03.01	
7	For EMI request	43;44;45;47	Add PL31,PL32,PL33,PL34 Change PR342 and PR368 to 2.2 ohm Change PR340 and PR364 to 0 ohm	2004.03.01	
8	For EMI request	47	Change PR342 and PR368 to 0 ohm Change PQ63 and PQ67 to IRF7811A Change PQ64 and PQ68 to SI4362	2004.03.16	
9	Adjust Vin detector	42	Change PR167 to 100K_0603_0.1% Change PR172 to 24K_0603_0.1% Change PR170 to 22K_0603_1% Change PR166 to 1M_0402_1%	2004.03.16	

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title			
SCHEMATIC M/B LA-2242			
Size	Document Number	Rev	
B	401289	2A	
Date:	星期一, 四月 19, 2004	Sheet	49 of 101

Item	Reason for change	PG#	Modify List	Date	
1	PCI_AD[31..0],PCI_CBE#[0..3] reserved	P.27	Correct PCI_AD[31..0],PCI_CBE#[0..3]	2/4	EVT(Rev02)
2	VR_ON# pull up resistor	P.41	Change R254 from 100K to 10K	2/4	EVT(Rev02)
3	AGP Isolating circuit	P.7	Mount U39, unmount R372,R377,R388,R414	2/4	EVT(Rev02)
4	Change Codec to ALC250	P.39	Change U26 to ACL250, mount R242	2/4	EVT(Rev02)
5	Modify VGA strap pin	P.14	Mount R479,R489; unmount R437, R441,R443,R448	2/4	EVT(Rev02)
6	Enter Windows "Beep" noise	P.39	Del C209 and let U26 pin14,15,16 no connect	2/6	DVT(Rev03)
7	For LS-1993 NBA_PLUG signal	P.37	Del R541,Q31	2/6	DVT(Rev03)
8	For DFX	P.24,36,38	Change J1,J2,H22 footprint	2/6	DVT(Rev03)
9	Change USB Power Switch to RT9701CBL	P.34	Change U34,U35, Del R291,R292,R313,R322,R329 Add R557,R558,R559,R560,R562,C685,C686	2/8	DVT(Rev03)
10	Change LAN LED circuit	P.27	Add R562	2/8	DVT(Rev03)
11	For EMI	P.13,16,17, ,23,35,37	Del L15,L16,L31,L28,L23,R542,R543,R283,R284,R471	2/11	DVT(Rev03)
12	Unpoped 0.1UF capacitor for EMI request	P.12,16,17, 26,27,29,30	Del some 0.1UF capacitor for EMI request	2/12	DVT(Rev03)
13	For +LVDDR25 ripple	P.16	Unpoped C518 for LDO issue	3/4	PVT(Rev04)
14	Duplicate AGP_BUSY pill-up	P.24	Del R103	3/4	PVT(Rev04)
15	For BCM5788 +3V_LAN 0.2V leakage issue	P.27	Change VESD[1..3] to +3V_LAN(system power)	3/4	PVT(Rev04)
16	For BCM5788/BCM4401 difference	P.27,28	Del R369 and change T1 to 24ST0023-3 when use BCM4401	3/4	PVT(Rev04)
17	Vishay FIR issue(Nokia 61XX series)	P.32,33	Change U31 to TDFU6102; Poped R97 and change to 10K	3/4	PVT(Rev04)
18	For audio issue	P.35,40	Add Q33,Q34 and EC_MUTE to U17 pin.69 Connect BYPASS from U30 to U29, change R274 to 39K Connect EAPD to EC pin.29	3/4	PVT(Rev04)
19	To simplify Codec circuit	P.36	Unpoped C210,C252, Del Y5,R236,C192,C193 Add C690,C691	3/4	PVT(Rev04)
20	For EMI	P.37	Add C688,CP11,CP12	3/4	PVT(Rev04)

Compal Electronics, Inc.

Title		SCHEMATIC M/B LA-2242	
Size	Document Number	401289	Rev
B			2A
Date:	星期一, 四月 19, 2004	Sheet	50 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Confidential

DFL32 Schematics Document

Banias/Dothan uFCPGA with Intel 855GME + ICH4-M

2003-04-06

REV: 2.0

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS

Compal Electronics, Inc.			
Title		SCHEMATIC M/B LA-2242	
Size	Document Number	Rev	
	401289	2A	
Date:	星期一, 四月 19, 2004	Sheet	51 of 101

Compal Confidential

Model Name : DFL32

File Name : LA-2242

Fan Control
page 4

Mobile Banias/Dothan
uFCPGA-478 CPU
page 4,5

Thermal Sensor
ADM1032AR
page 4

Clock Generator
Cypress CY28346
page 13

LCD Conn.
page 22

CRT &
TV-OUT Conn.
page 21

ATI M11-P/M9+X
BGA-708 Pin
with 64/128MB VRAM
page 14,15,16,17,18,19

TV Encoder
CH-7011A
page 20

Intel 855GME
uFCBGA-732
page 6,7,8,9

200pin DDR-SO-DIMM X2
BANK 0, 1, 2, 3
page 10,11,12

USB port 0, 2, 4
USB conn
page 34

USB port 1
Card Reader
Conn.

Bluetooth
Conn
page 34

Intel ICH4-M
BGA-421
page 23,24,25

IEEE 1394
TSB43AB21A
page 29

Mini PCI
socket
page 31

LAN (GbE)
BCM5788M
page 27

CardBus
ENE CB1410
page 30

1394 Conn.
page 29

RJ45/RJ11
page 28

Slot 0
page 30

AC-LINK
3.3V 24.576MHz
3.3V ATA-100
IDE

CDROM
Conn.
page 26

AC97 Codec
ALC202
page 39

MBC Conn
page 38

HDD Conn.
page 26

AMP &
Subwoofer
page 40

Phone Jack &
S/PDIF Jack

DFL32 Sub Board

- LED Board
- T/P Board
- Card Reader & Audio Board
- Media Play Board
- WL & BT Switch Board
- System Board

LPC BUS
ENE KB910Q
page 35

SMsC LPC47N217
Super I/O
page 32

Touch Pad
page 37

Int. KBD
page 37

PARALLEL
page 33

FIR
page 33

EC I/O Buffer
page 36

BIOS
page 36

RTC CKT.
page 25

Power On/Off CKT.
page 38

DC/DC Interface CKT.
page 41

Power Circuit DC/DC
page 42,43,44,45
46,47,48,49

LCM Board

Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev 2A
	401289	
Date:	星期一, 四月 19, 2004	Sheet 52 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Voltage Rails

Power Plane	Description	S0-S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+VCCP	1.05V rail for Processor I/O	ON	OFF	OFF
+1.25VS	1.25V switched power rail for DDR Vtt	ON	OFF	OFF
+1.2VS	1.2V switched power rail for VGA core power	ON	OFF	OFF
+1.35VS	1.35V switched power rail for GMCH core power	ON	OFF	OFF
+1.5VALW	1.5V always on power rail	ON	ON	ON*
+1.5VS	1.5V switched power rail for AGP interface	ON	OFF	OFF
+1.8VS	1.8V switched power rail for CPU PLL & Hub-Link	ON	OFF	OFF
+2.5V	2.5V power rail for system DDR	ON	ON	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V switched power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+12VALW	12V always on power rail	ON	ON	ON*
RTCVCC	RTC power	ON	ON	ON

Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

Internal PCI Devices

DEVICE	PCI Device ID
HUB	D30
USB	D29
AC97 MODEM	D31
AC97	D31
ATA 100	D31
ETHERNET	D8 (AD24)
LPC I/F	D31
SMBUS	D31


I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	1 0 1 0 0 0 0 X
DDR SO-DIMM 1	A2	1 0 1 0 0 0 1 X
CLOCK GENERATOR (EXT.)	D2	1 1 0 1 0 0 1 X

External PCI Devices

DEVICE	PCI Device ID	IDSEL #	REQ/GNT #	PIRQ
1394	D0	AD16	0	E
LAN	D1	AD17	1	F
CARD BUS	D4	AD20	2	A
Wireless LAN	D2	AD18	3	G
Mini-PCI	D6	AD22	4	H
AGP BUS	N/A	AGP_DEVSEL#	N/A	A

Symbol note:

-  :means digital ground.
-  :means analog ground.
- @ :means reserved.

AS2010,AS2020 Compare Table

Item	* AS2020	AS2010(ATI)	AS2010(UMA)	Page
VGA	ATI M11P	ATI M11P	UMA	7, 9, 14, 15, 16, 17, 21, 22, 38
VRAM	128MB	64MB	N/A	14, 18, 19
TV Encoder	N/A	N/A	CH7011A	20
LAN	BCM5788M(GbE)	BCM4401(10/100)	BCM4401(10/100)	27, 28
S/PDIF	YES	N/A	N/A	N/A
Card Reader	YES	YES	N/A	N/A
Sub Woofer	YES	YES	N/A	33
LCM/B	YES	N/A	N/A	37, 39
MEDIA/B	YES	N/A	N/A	40

Board ID/ Project ID Table for AD channel

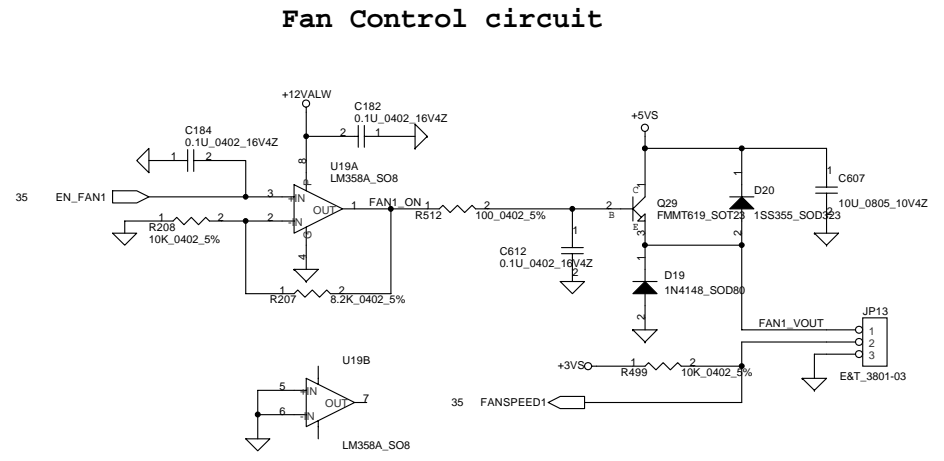
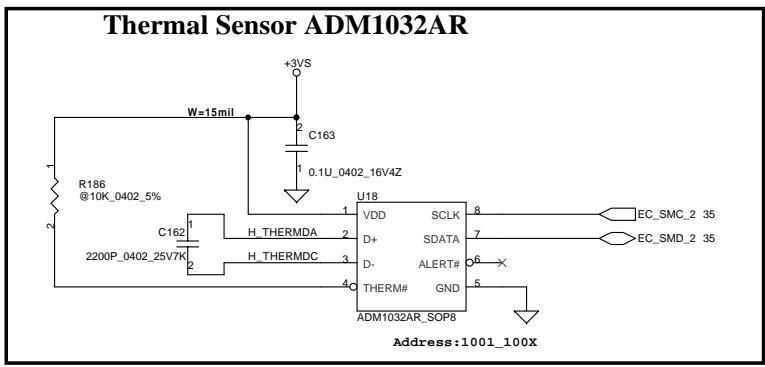
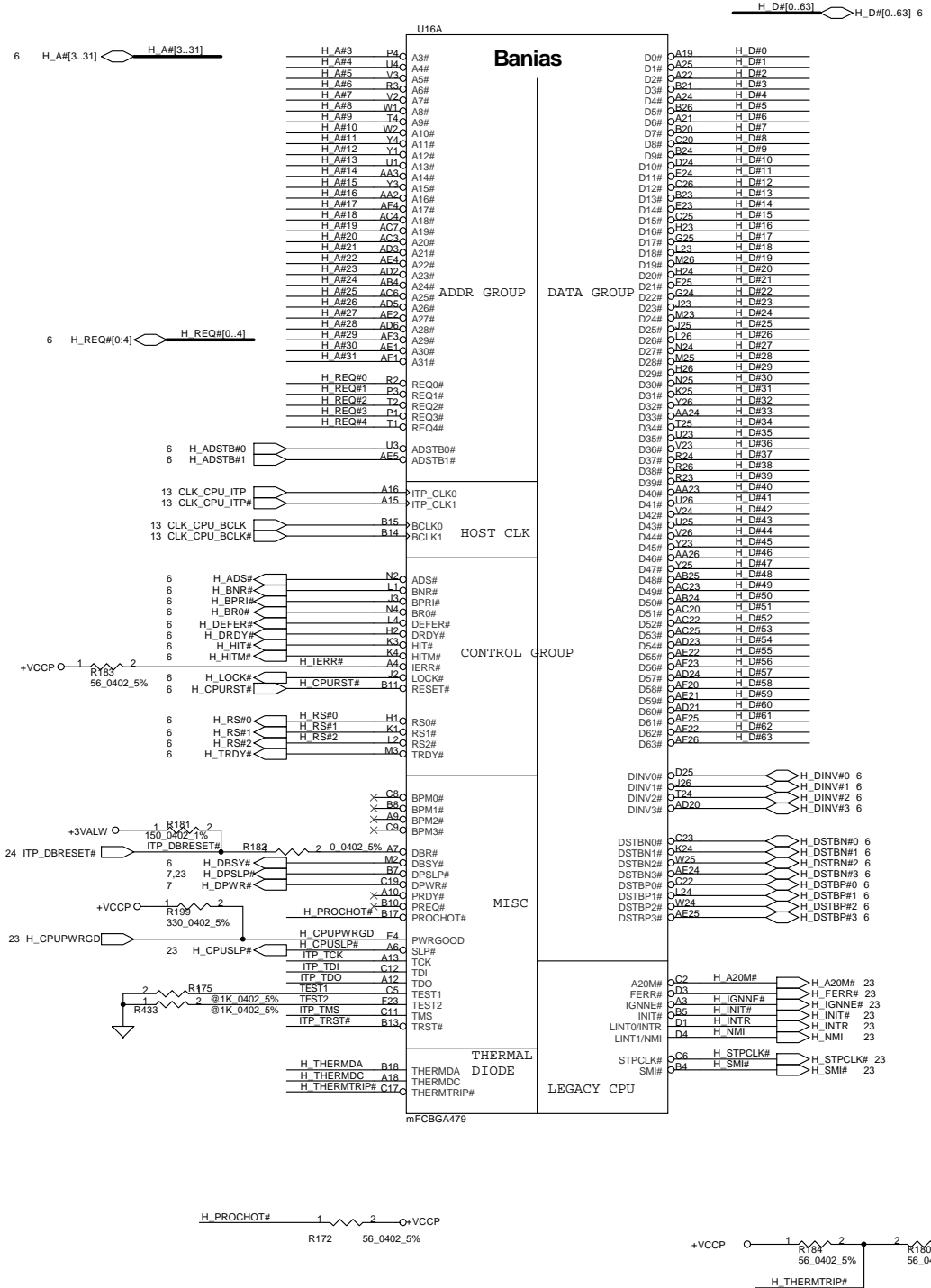
Vcc	3.3V +/- 5%			
Ra	10K +/- 5%			
BID/PID	Rb/Rc	V _{AD_BID} min	V _{AD_BID} typ	V _{AD_BID} max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	1.412 V	1.486 V	1.560 V
2	18K +/- 5%	2.015 V	2.121 V	2.227 V
3	33K +/- 5%	2.406 V	2.533 V	2.659 V
4	56K +/- 5%	2.660 V	2.800 V	2.940 V
5	NC	3.135 V	3.300 V	3.465 V

Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
* 3	0.4
4	
5	
6	
7	

Project ID	Project
* 0	Drongo2(M11)
1	Drongo3(M11)
2	Drongo4
3	Drongo3(M9+X)
4	
5	
6	
7	

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title	SCHEMATIC M/B LA-2242		
Size	Document Number	Rev	2A
	401289		
Date:	星期一, 四月 19, 2004	Sheet	53 of 101



Compal Electronics, Inc.		
Title		
SCHEMATIC MB LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 54 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Dothan VCCA update(WW45 2003)
Dothan B-Step support 1.5V only for VCCA

Resistor placed within 0.5" of CPU pin.Trace should be at least 25 miles away from any other toggling signal.

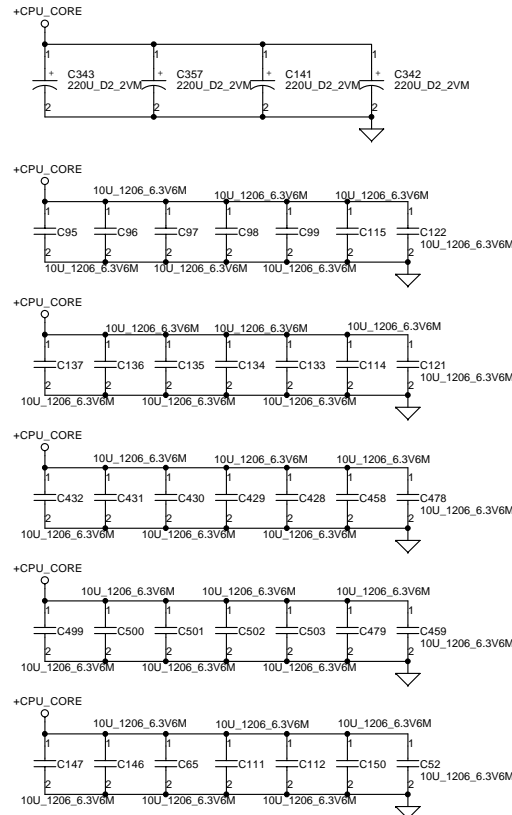
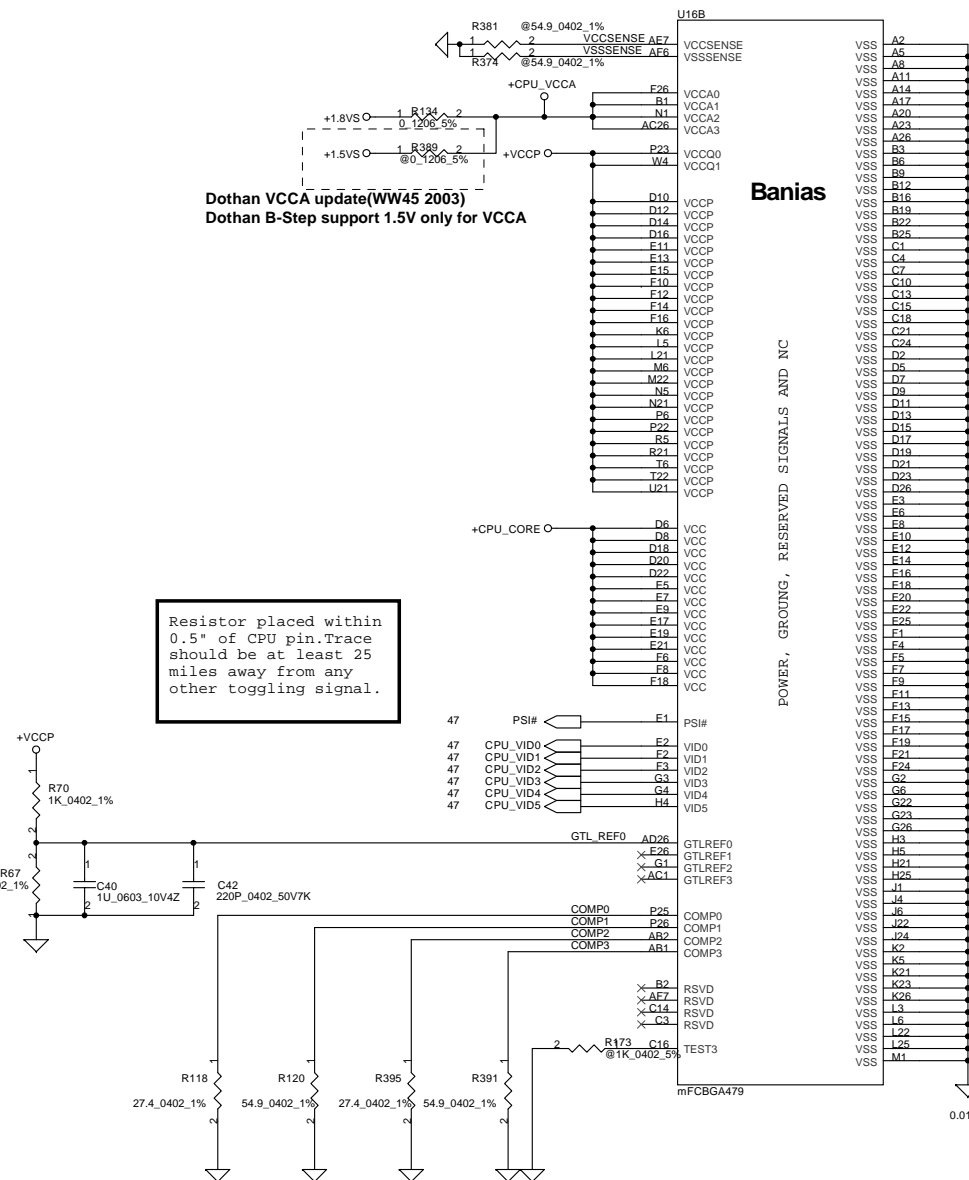
Resistor placed within 0.5" of CPU pin.Trace should be at least 25 miles away from any other toggling signal.

Banias

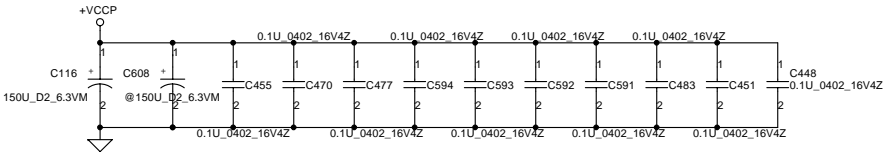
Banias

POWER, GROUND, RESERVED SIGNALS AND NC

POWER, GROUND



Vcc-core Decoupling	C, uF	ESR, mohm	ESL, nH
SPCAP, Polymer	4X220uF	12m ohm/4	3.5nH/4
MLCC 0805 X5R	35X10uF	5m ohm/35	0.6nH/35

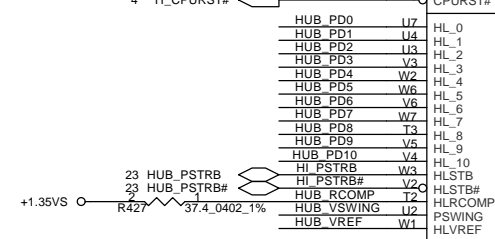
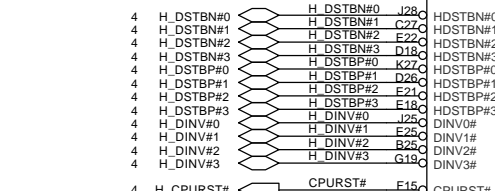
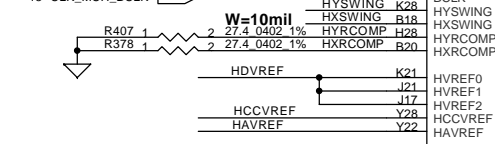
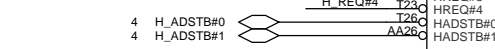
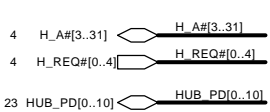


Compal Electronics, Inc.

Title
SCHEMATIC M/B LA-2242

Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 55 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



Montara-GM (L)

H A#3	P23	HA#3
H A#4	T25	HA#4
H A#5	T28	HA#5
H A#6	R27	HA#6
H A#7	U23	HA#7
H A#8	U24	HA#8
H A#9	R24	HA#9
H A#10	U26	HA#10
H A#11	V28	HA#11
H A#12	U27	HA#12
H A#13	T27	HA#13
H A#14	V27	HA#14
H A#15	U25	HA#15
H A#16	V26	HA#16
H A#17	Y24	HA#17
H A#18	V25	HA#18
H A#19	V23	HA#19
H A#20	W25	HA#20
H A#21	Y25	HA#21
H A#22	AA27	HA#22
H A#23	W24	HA#23
H A#24	W23	HA#24
H A#25	W27	HA#25
H A#26	Y27	HA#26
H A#27	AA28	HA#27
H A#28	W28	HA#28
H A#29	AB27	HA#29
H A#30	Y26	HA#30
H A#31	AB28	HA#31

H_REQ#0	R28	HREQ#0
H_REQ#1	P25	HREQ#1
H_REQ#2	R23	HREQ#2
H_REQ#3	R25	HREQ#3
H_REQ#4	T23	HREQ#4

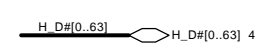
H_ADSTB#0	T26	HADSTB#0
H_ADSTB#1	AA28	HADSTB#1

BCLK#	AD29	BCLK#
BCLK	AE29	BCLK
HYSWING	K28	HYSWING
HXRCOMP	B18	HXRCOMP
HXRCOMP	R20	HXRCOMP
HVREF0	K21	HVREF0
HVREF1	J21	HVREF1
HVREF2	J17	HVREF2
HCCVREF	Y28	HCCVREF
HAVREF	Y22	HAVREF

H_DSTBN#0	J28	HDSTBN#0
H_DSTBN#1	C27	HDSTBN#1
H_DSTBN#2	F22	HDSTBN#2
H_DSTBN#3	D18	HDSTBN#3
H_DSTBP#0	K27	HDSTBP#0
H_DSTBP#1	D26	HDSTBP#1
H_DSTBP#2	E21	HDSTBP#2
H_DSTBP#3	F18	HDSTBP#3
H_DINV#0	J25	DINV#0
H_DINV#1	E25	DINV#1
H_DINV#2	B25	DINV#2
H_DINV#3	G19	DINV#3
H_CPURST#	F15	CPURST#

HL_0	U4	HL_0
HL_1	U3	HL_1
HL_2	V3	HL_2
HL_3	W2	HL_3
HL_4	W6	HL_4
HL_5	V6	HL_5
HL_6	W7	HL_6
HL_7	T3	HL_7
HL_8	V5	HL_8
HL_9	V4	HL_9
HL_10	W3	HL_10
HLSTB#	W3	HLSTB#
HLRCOMP	T2	HLRCOMP
PSWING	U2	PSWING
HLVREF	W1	HLVREF

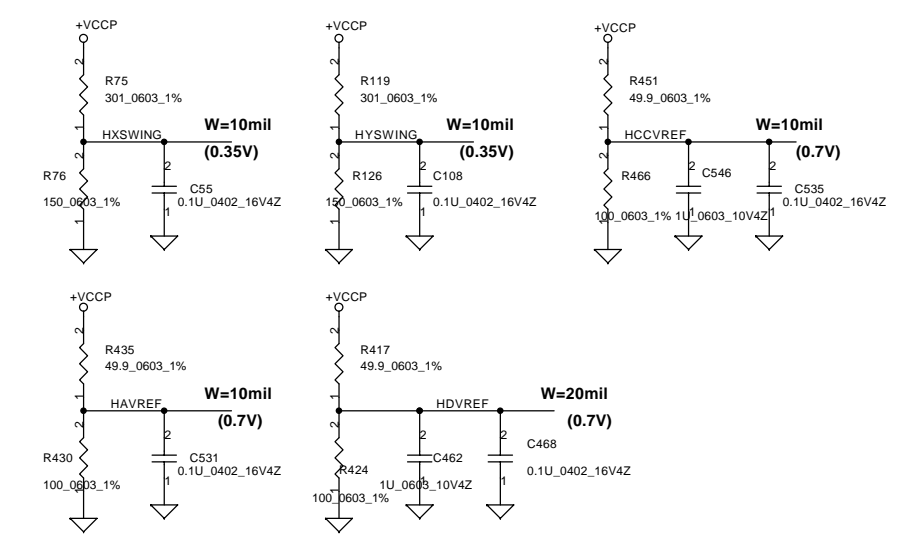
RG82855GME_uFCBGA732



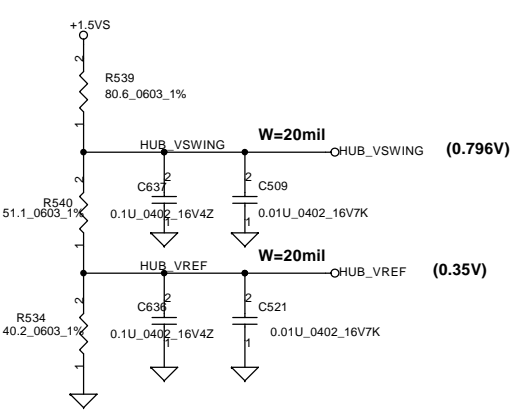
HD#0	K22	H D#0
HD#1	H27	H D#1
HD#2	K25	H D#2
HD#3	J24	H D#3
HD#4	J27	H D#4
HD#5	G28	H D#5
HD#6	L27	H D#6
HD#7	L23	H D#7
HD#8	J25	H D#8
HD#9	J24	H D#9
HD#10	H25	H D#10
HD#11	K23	H D#11
HD#12	G27	H D#12
HD#13	K26	H D#13
HD#14	J23	H D#14
HD#15	J26	H D#15
HD#16	E25	H D#16
HD#17	E26	H D#17
HD#18	B27	H D#18
HD#19	H23	H D#19
HD#20	E27	H D#20
HD#21	G25	H D#21
HD#22	C28	H D#22
HD#23	D27	H D#23
HD#24	G24	H D#24
HD#25	C28	H D#25
HD#26	B26	H D#26
HD#27	G22	H D#27
HD#28	C28	H D#28
HD#29	C23	H D#29
HD#30	B28	H D#30
HD#31	B21	H D#31
HD#32	B21	H D#32
HD#33	G21	H D#33
HD#34	C24	H D#34
HD#35	C23	H D#35
HD#36	C22	H D#36
HD#37	E24	H D#37
HD#38	D24	H D#38
HD#39	D24	H D#39
HD#40	E20	H D#40
HD#41	E22	H D#41
HD#42	B23	H D#42
HD#43	E23	H D#43
HD#44	E21	H D#44
HD#45	C20	H D#45
HD#46	C20	H D#46
HD#47	C21	H D#47
HD#48	G18	H D#48
HD#49	E19	H D#49
HD#50	E20	H D#50
HD#51	G17	H D#51
HD#52	D20	H D#52
HD#53	F19	H D#53
HD#54	C19	H D#54
HD#55	C17	H D#55
HD#56	E17	H D#56
HD#57	R19	H D#57
HD#58	G16	H D#58
HD#59	E16	H D#59
HD#60	C16	H D#60
HD#61	E17	H D#61
HD#62	D16	H D#62
HD#63	C18	H D#63

ADS#	L28	H_ADS#	4
HTRDY#	M25	H_HTRDY#	4
DRDY#	N24	H_DRDY#	4
DEFER#	M28	H_DEFER#	4
HITM#	N28	H_HITM#	4
HIT#	N27	H_HIT#	4
HLOCK#	C27	H_HLOCK#	4
BREQ#	M23	H_BRQ#	4
BNR#	N25	H_BNR#	4
BPR#	P28	H_BPR#	4
DBSY#	M26	H_DBSY#	4
RS#0	N23	H_RS#0	4
RS#1	P26	H_RS#1	4
RS#2	M27	H_RS#2	4

HOST REF VOLTAGE



HUB I/F REF VOLTAGE



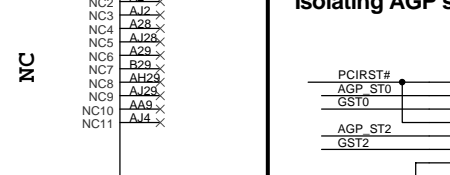
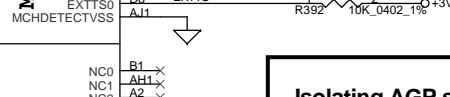
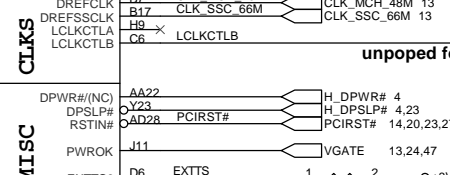
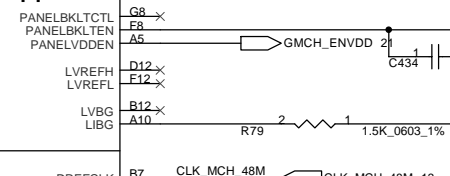
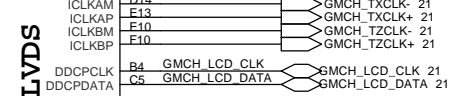
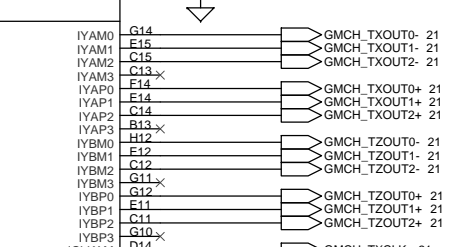
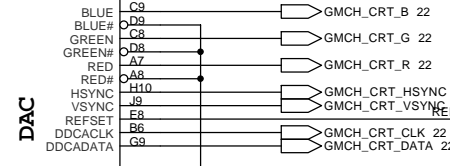
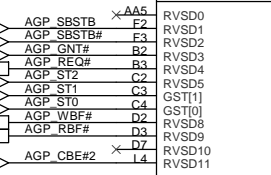
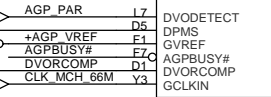
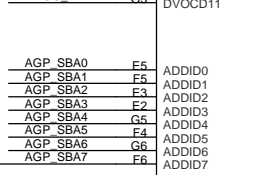
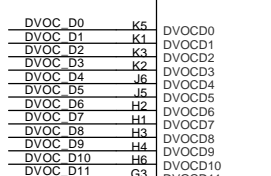
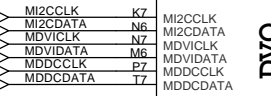
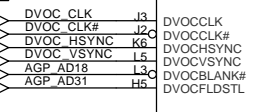
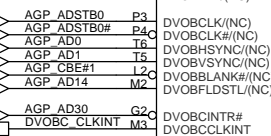
Compal Electronics, Inc.		
Title: SCHEMATIC MB LA-2242		
Size: Document Number	401289	
Date: 星期一, 四月 19, 2004	Sheet: 56	of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



U11B

Montara-GM(L)

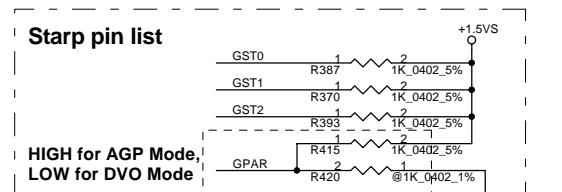
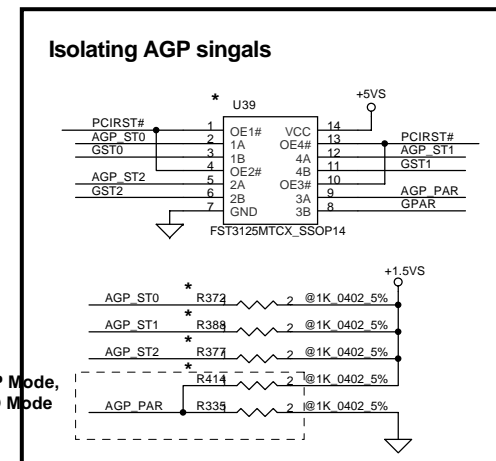
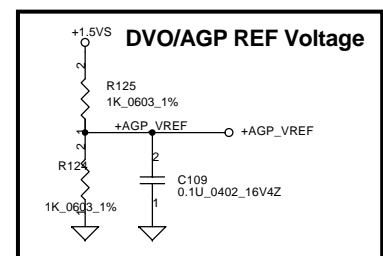
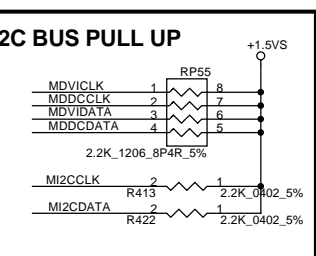
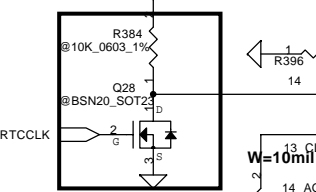
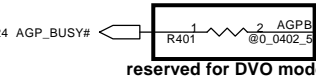
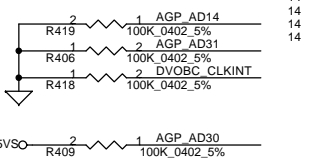
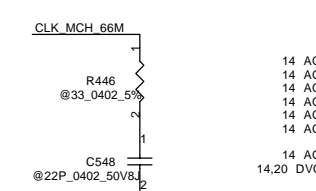


RG82855GME_uFCBGA732

855GME DVO/AGP Pin Muxing

Ball	DVO Mode	AGP Mode
R3	DVOBD0	GAD3
R4	DVOBD1	GAD2
R5	DVOBD2	GAD5
R6	DVOBD3	GAD4
P6	DVOBD4	GAD7
P5	DVOBD5	GAD6
N5	DVOBD6	GAD8
P2	DVOBD7	GCBE#0
N2	DVOBD8	GAD10
N3	DVOBD9	GAD9
M1	DVOBD10	GAD12
M5	DVOBD11	GAD11
P3	DVOBCLK	GADSTB0
P4	DVOBCLK#	GADSTB0#
T6	DVOBHSYNC	GAD0
T5	DVOBVSYNC	GAD1
L2	DVOBBLANK	GCBE#1
M2	DVOBFLDSTL	GAD14
G2	DVOBCINTR#	GAD30
M3	DVOBCLKINT	GAD13
J3	DVOCCLK	GADSTB1
J2	DVOCCLK#	GADSTB1#
K6	DVOCCHSYNC	GAD17
L5	DVOCVSYNC	GAD16
L3	DVOCBLANK	GAD18
H5	DVOCFLDSTL	GAD31
K7	MII2CLK	GIRDY#
N6	MII2CDATA	GDEVSEL#
M7	MDVICLK	GTRDY#
M6	MDVIDATA	GFRAME#
P7	MDDCLK	GSTOP#
T7	MDDCDATA	GAD15
K5	DVOC D0	GAD19
K1	DVOC D1	GAD20
K3	DVOC D2	GAD21
K2	DVOC D3	GAD22
J6	DVOC D4	GAD23
J5	DVOC D5	GCBE#3
H2	DVOC D6	GAD25
H1	DVOC D7	GAD24
H3	DVOC D8	GAD27
H4	DVOC D9	GAD26
G6	DVOC D10	GAD29
H3	DVOC D11	GAD28
E5	ADDID0	GSBA0
F5	ADDID1	GSBA1
E3	ADDID2	GSBA2
F2	ADDID3	GSBA3
G5	ADDID4	GSBA4
F4	ADDID5	GSBA5
G6	ADDID6	GSBA6
F7	ADDID7	GSBA7
L7	DVODETECT	GPAR
D5	DPMS	GPIPE#
F2	RVSD1	GSBSTB
F3	RVSD2	GSBSTB#
B2	RVSD3	GNNT#
B3	RVSD4	GREQ#
C2	RVSD5	GST2
C3	GST1	GST1
C4	GST0	GST0
D2	RVSD8	GWBF#
D3	RVSD9	GRBF#
L4	RVSD11	GCBE#2

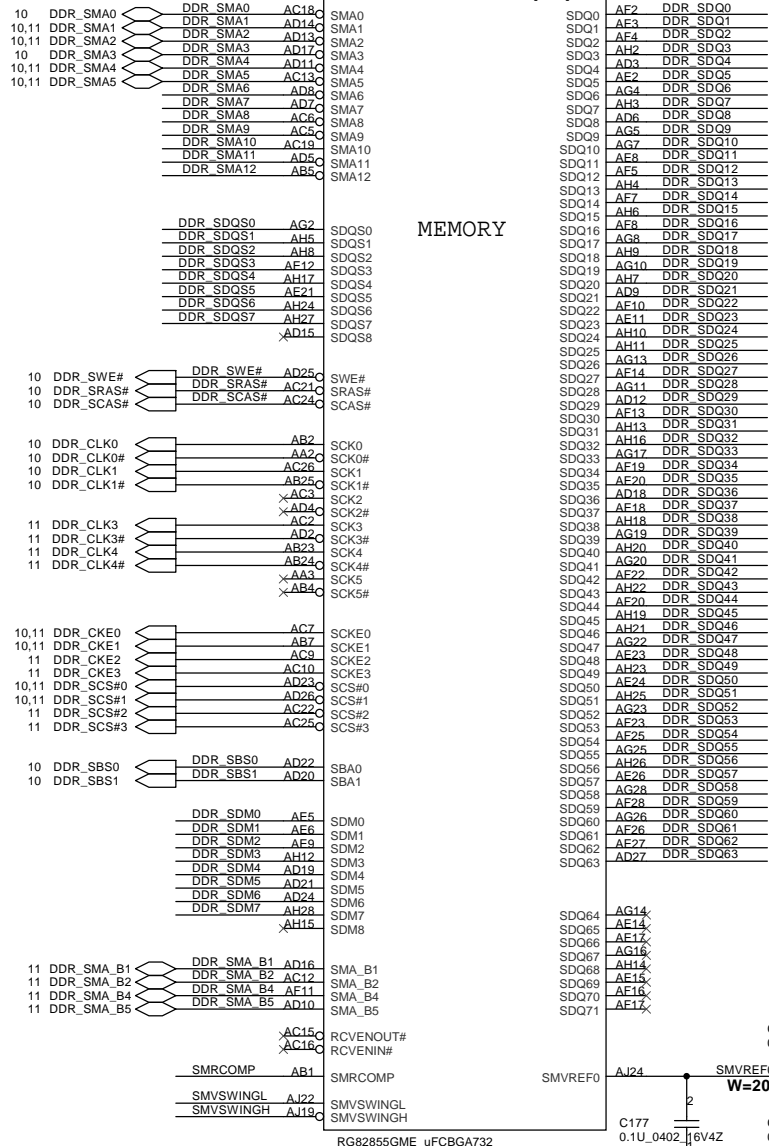
	AGP	DVO
R401		Pop
R384		Pop
Q28		Pop
R414	Pop	
R335		Pop
R415	Pop	
R420		Pop



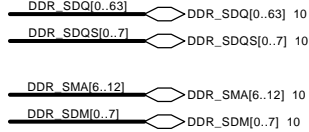
LCLKTLB: High for P4, NC for Banias
 DVODETECT: HIGH for AGP, LOW for DVO

ST2	ST1	ST0	PSB/Mem/GFX
0	0	0	400 / 266 / 200
0	0	1	400 / 200 / 200
0	1	0	400 / 200 / 133
1	1	1	400 / 333 / 250 *

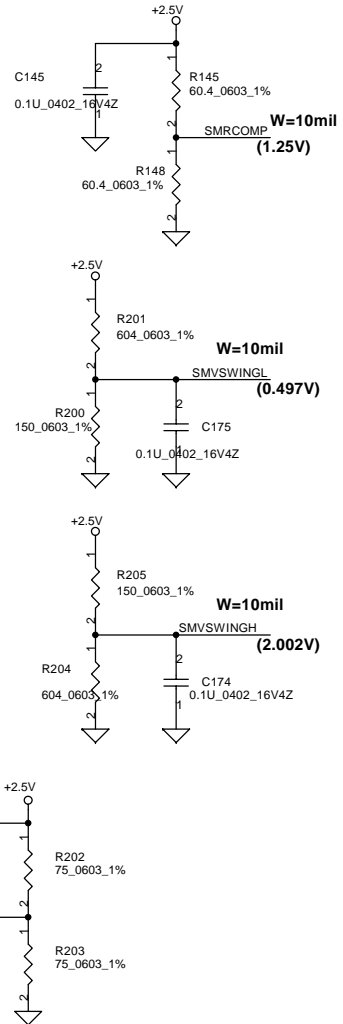
Montara-GM(L)



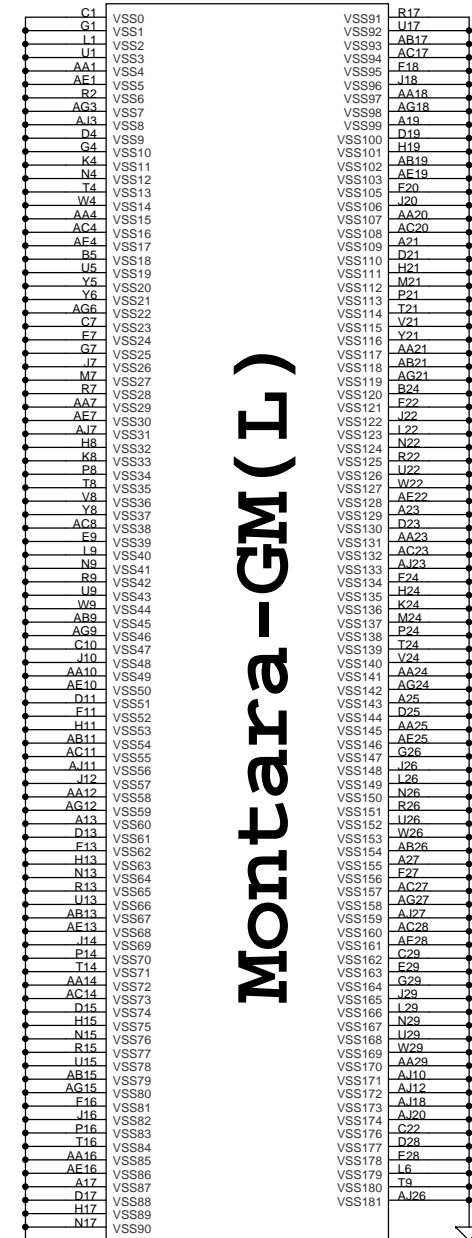
MEMORY



DDR REF & SWING VOLTAGE



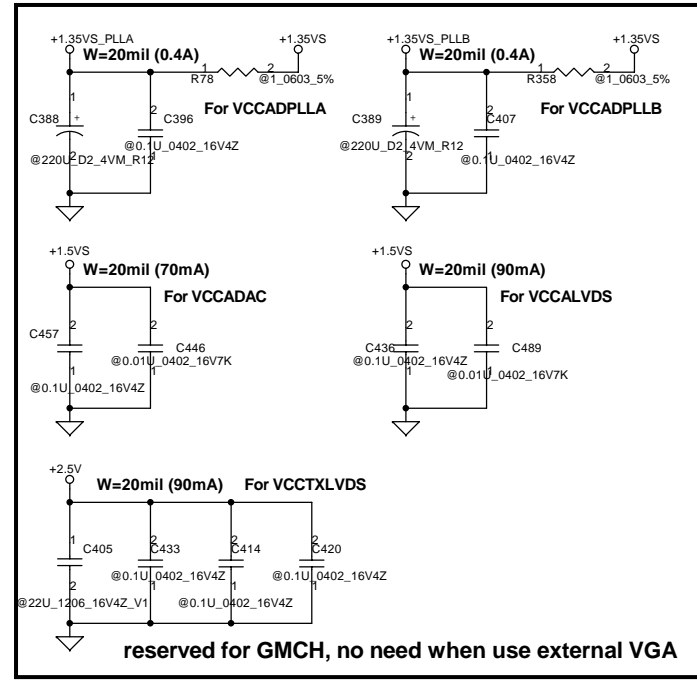
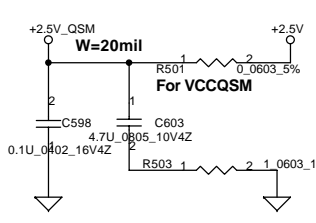
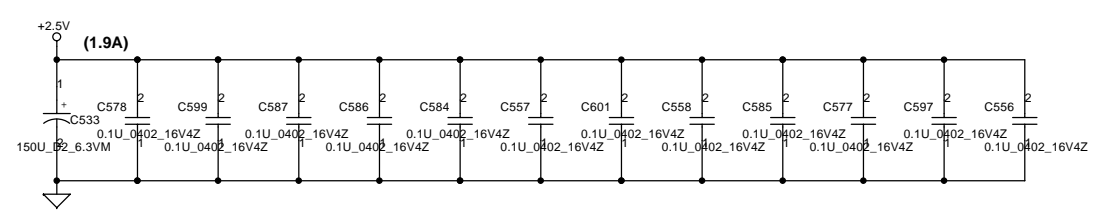
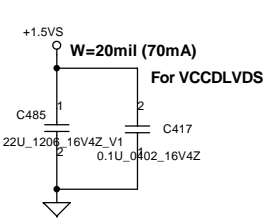
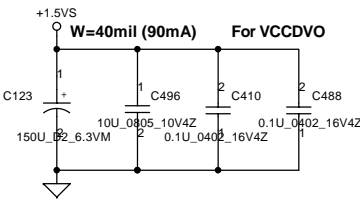
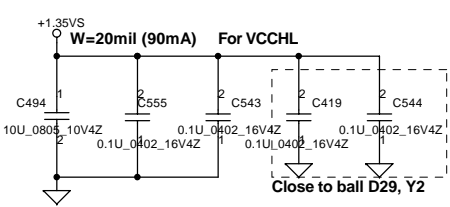
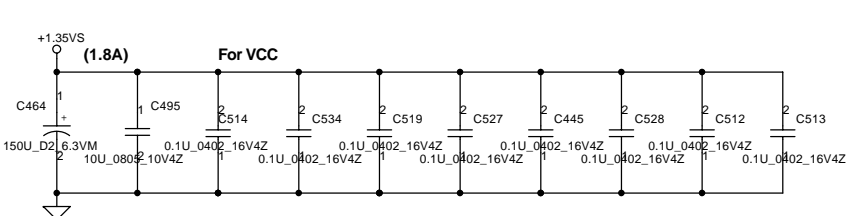
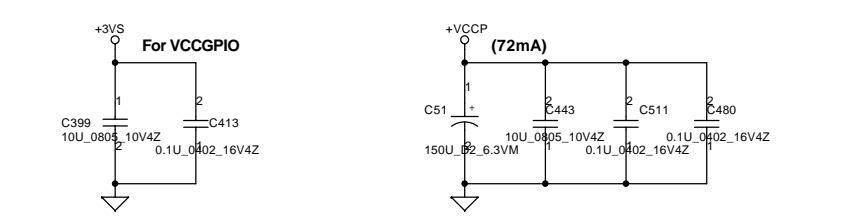
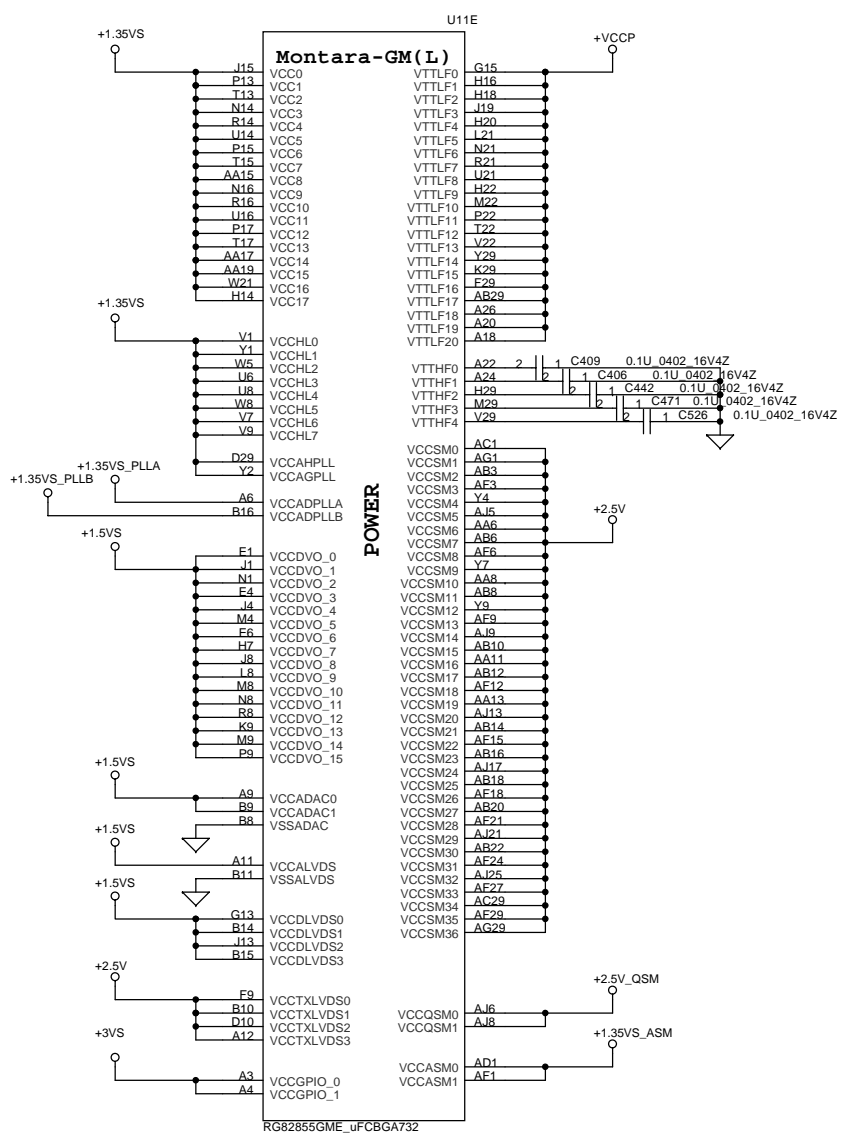
U11D



Montara-GM(L)

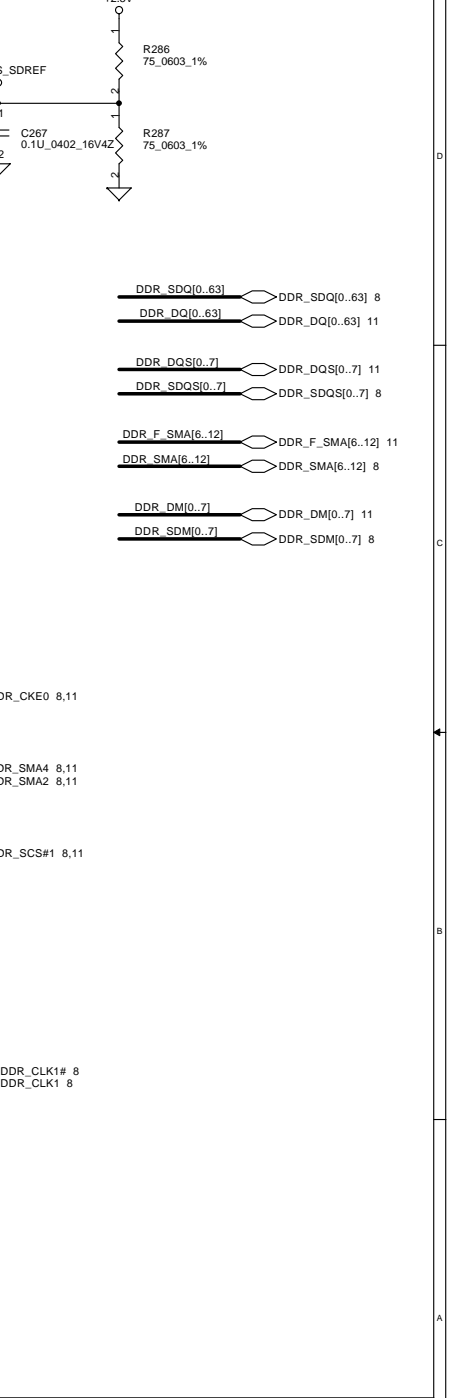
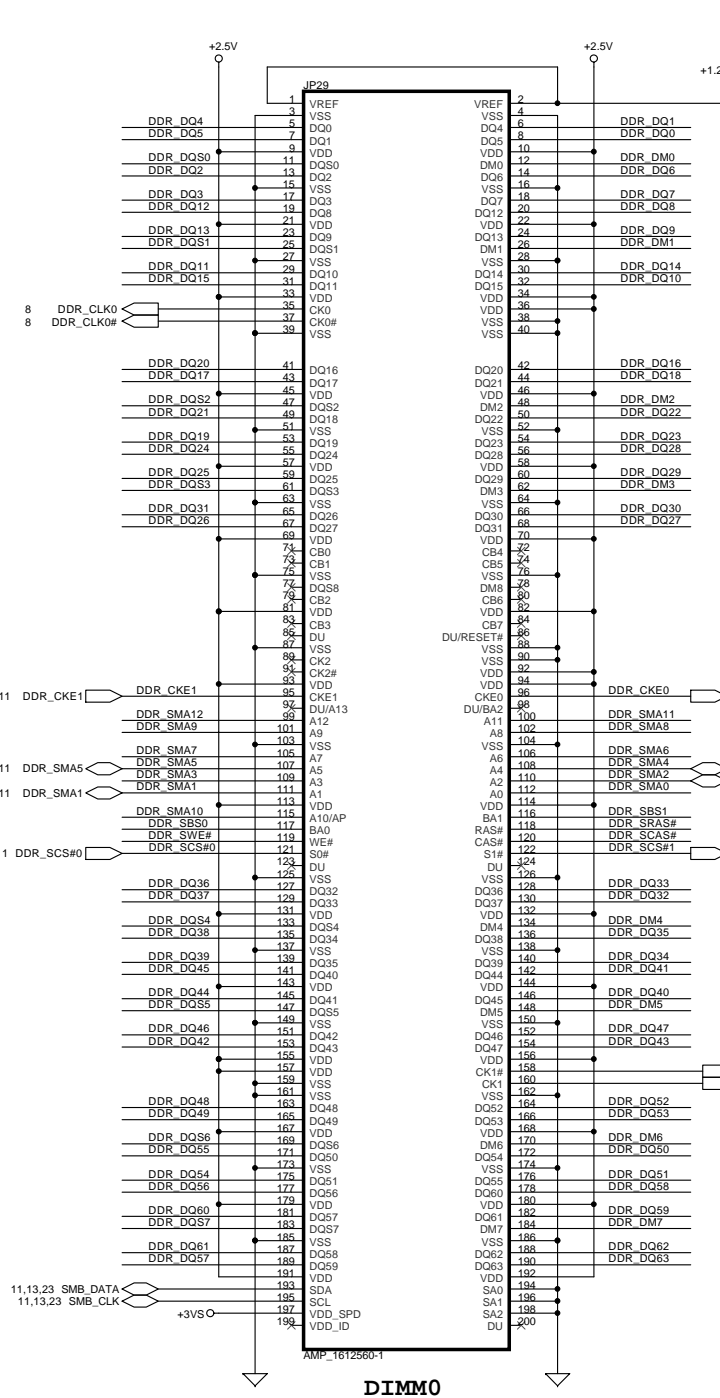
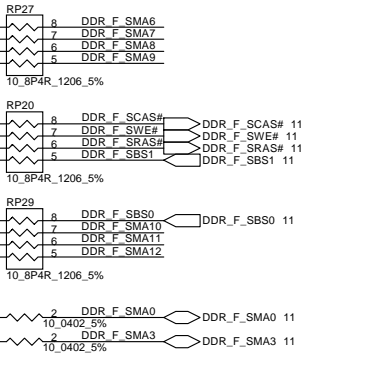
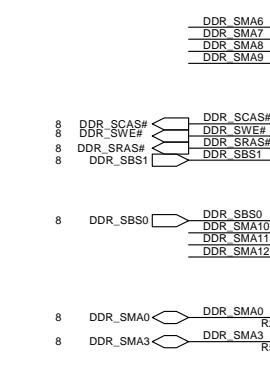
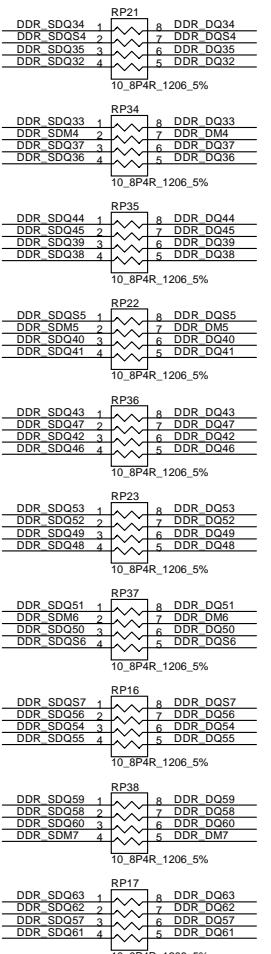
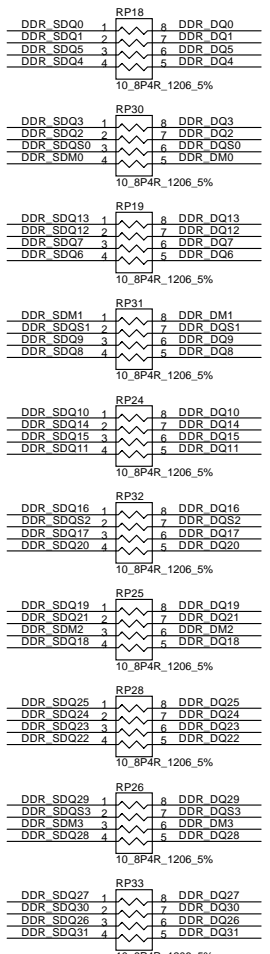
Compal Electronics, Inc.
 Title: SCHEMATIC MB LA-2242
 Size: Document Number 401289 Rev: 2A
 Date: 星期一, 四月 19, 2004 Sheet 58 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



Compal Electronics, Inc.		
Title	SCHEMATIC M/B LA-2242	
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 59 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

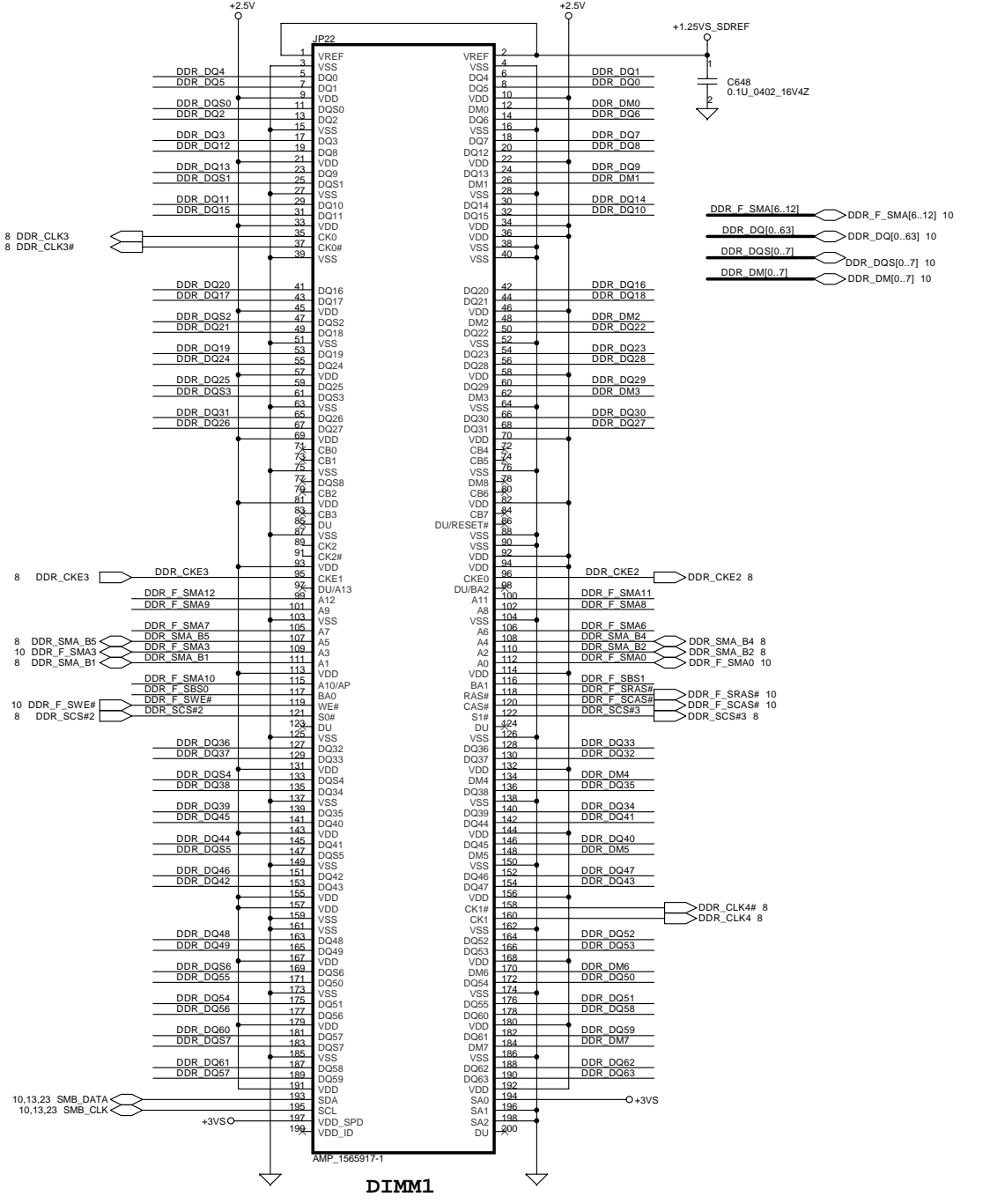
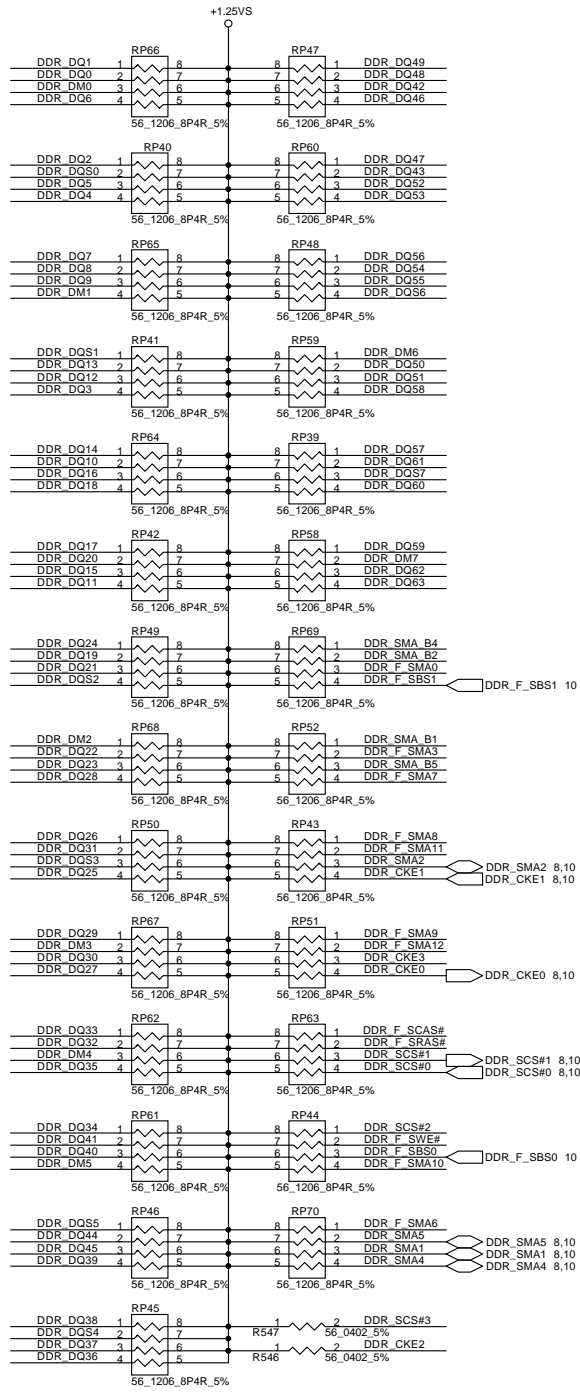


Compal Electronics, Inc.

Title: **SCHEMATIC /MB LA-2242**

Size	Document Number	Rev
	401289	2A
Date:	星期三, 四月 19, 2004	Sheet 60 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



Compal Electronics, Inc.

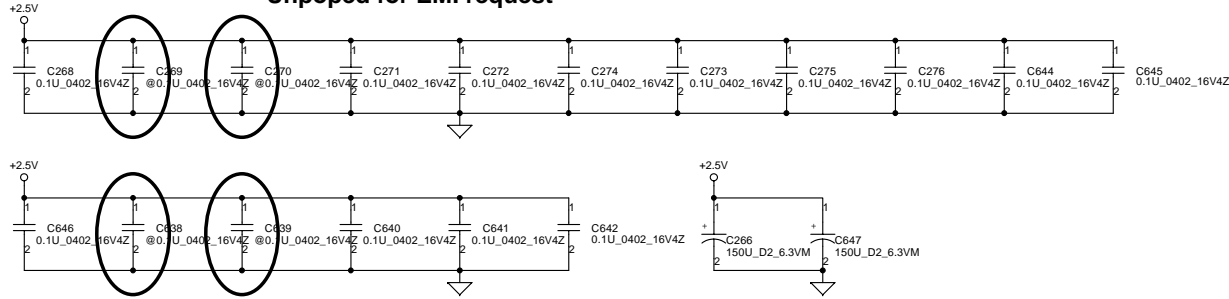
SCHEMATIC MB LA-2242

Title	SCHEMATIC MB LA-2242		
Size	Document Number	401289	Rev 2A
Date:	星期一, 四月 19, 2004	Sheet 61	of 101

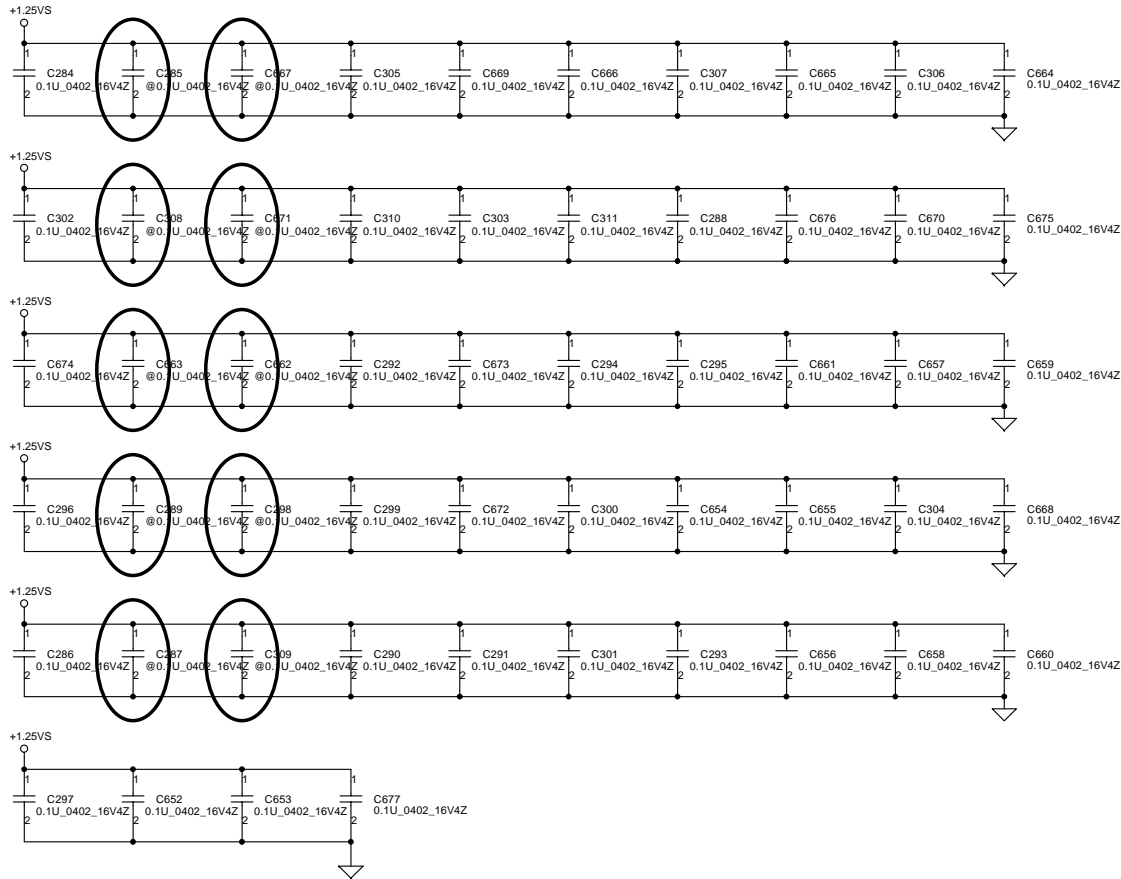
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Layout note :
Distribute as close as possible to DDR-SODIMM.

Unpoped for EMI request



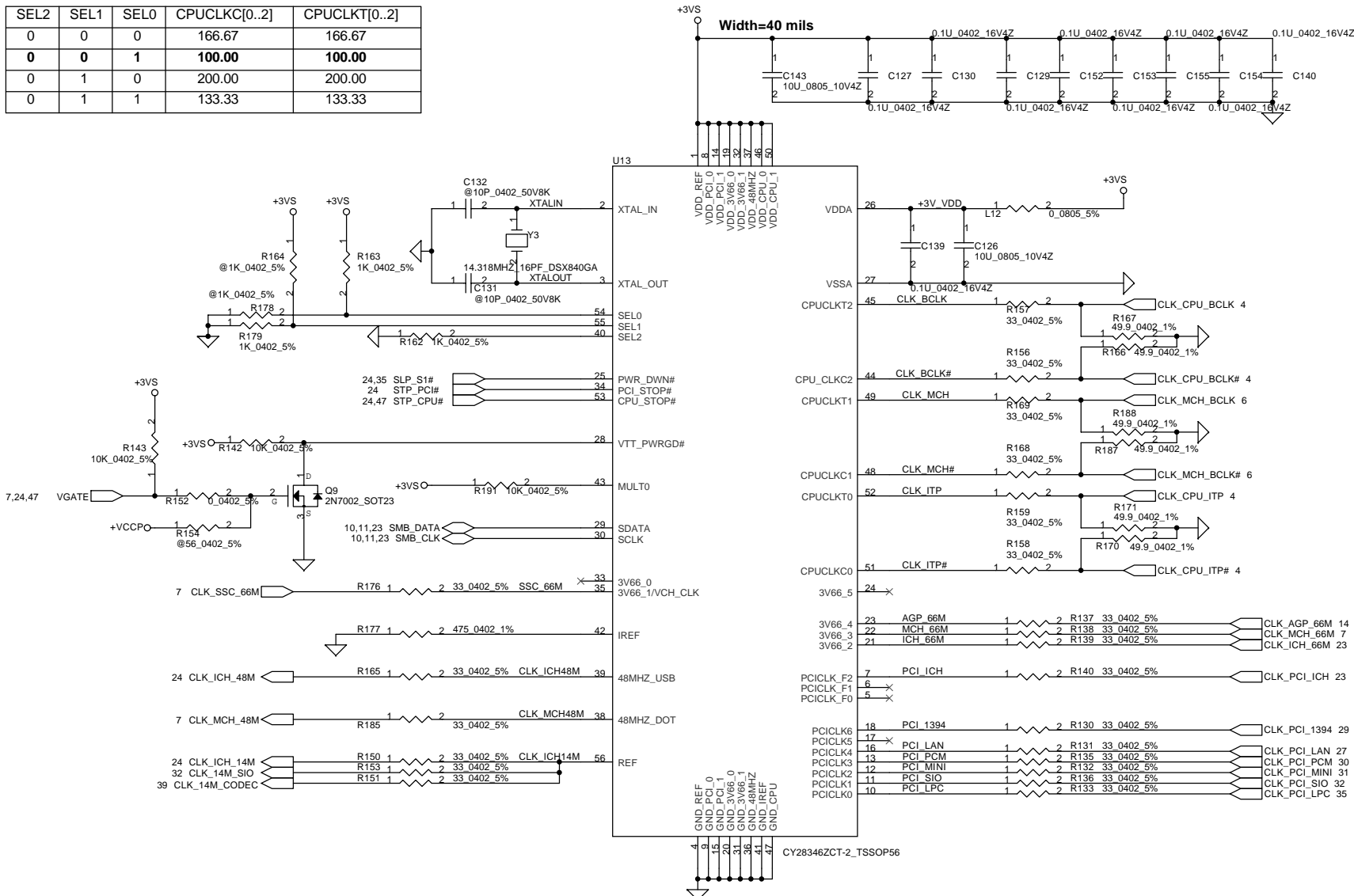
Layout note :
Place one cap close to every 2 pull up resistors termination to +1.25V



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

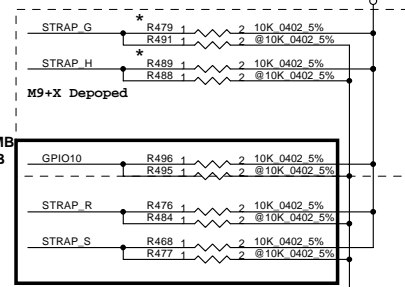
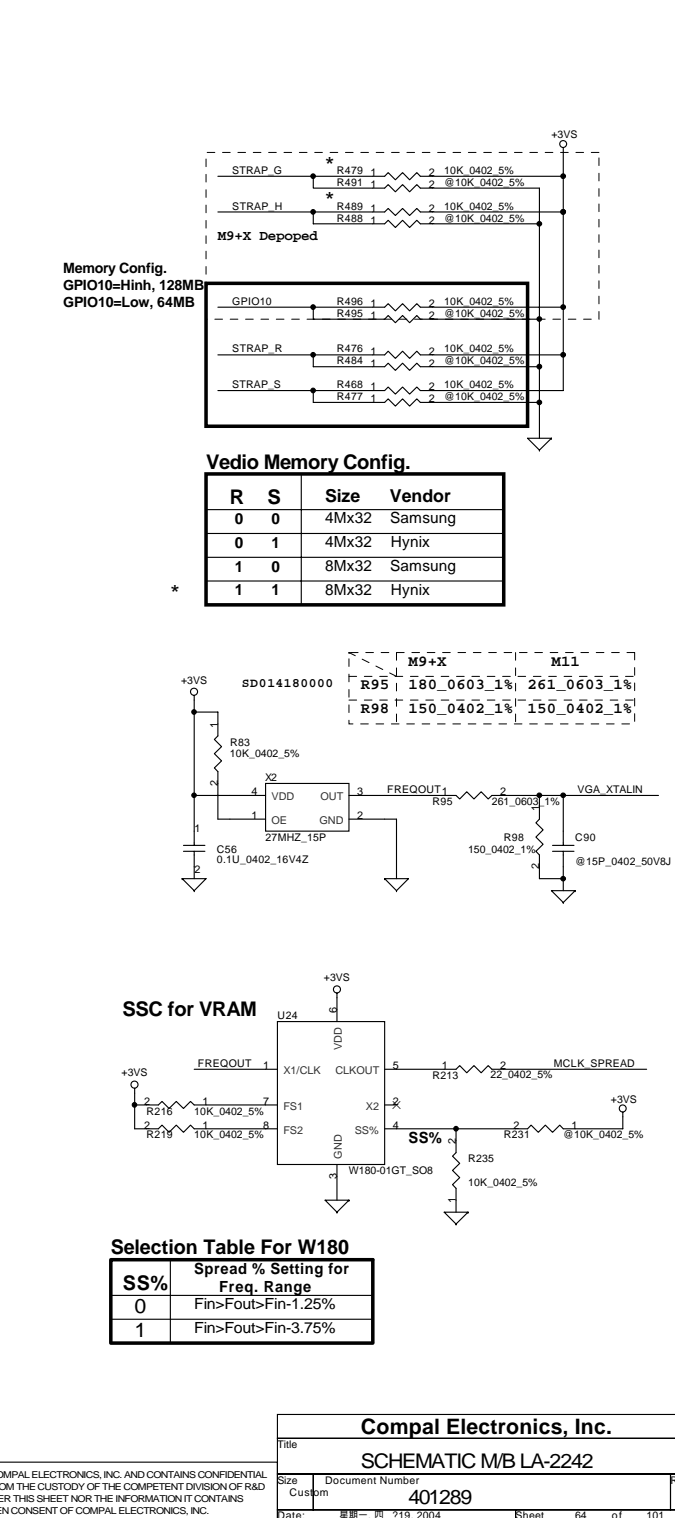
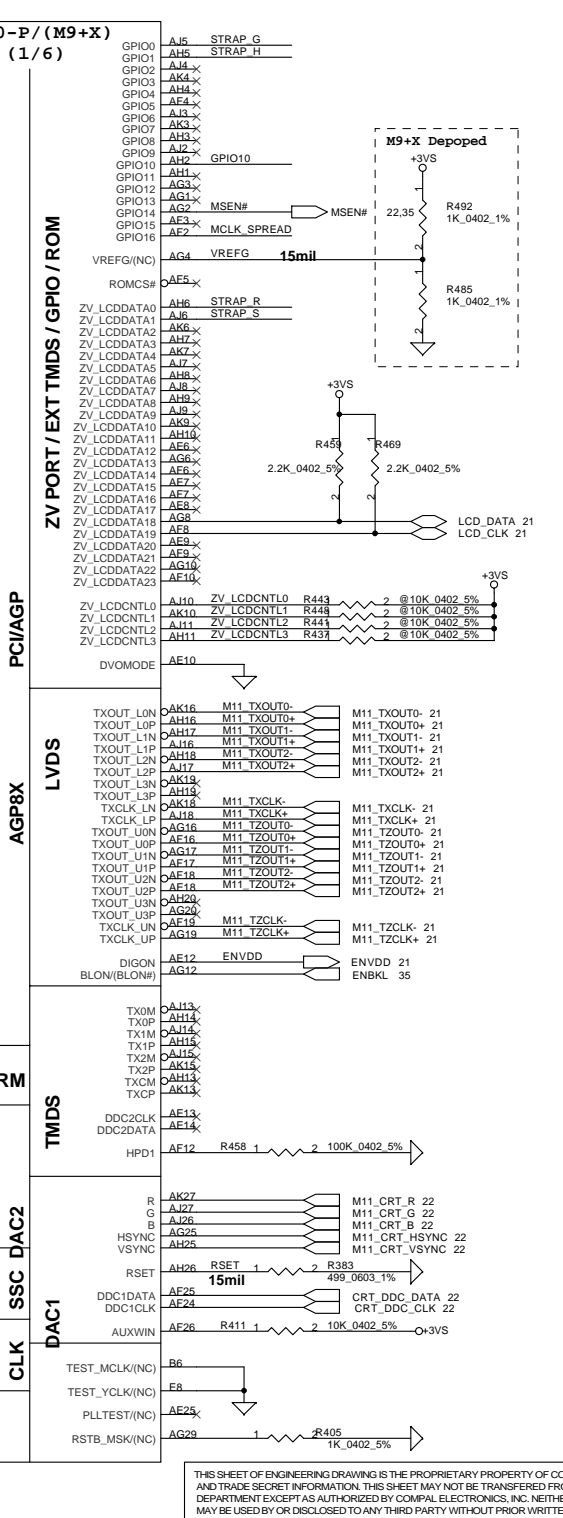
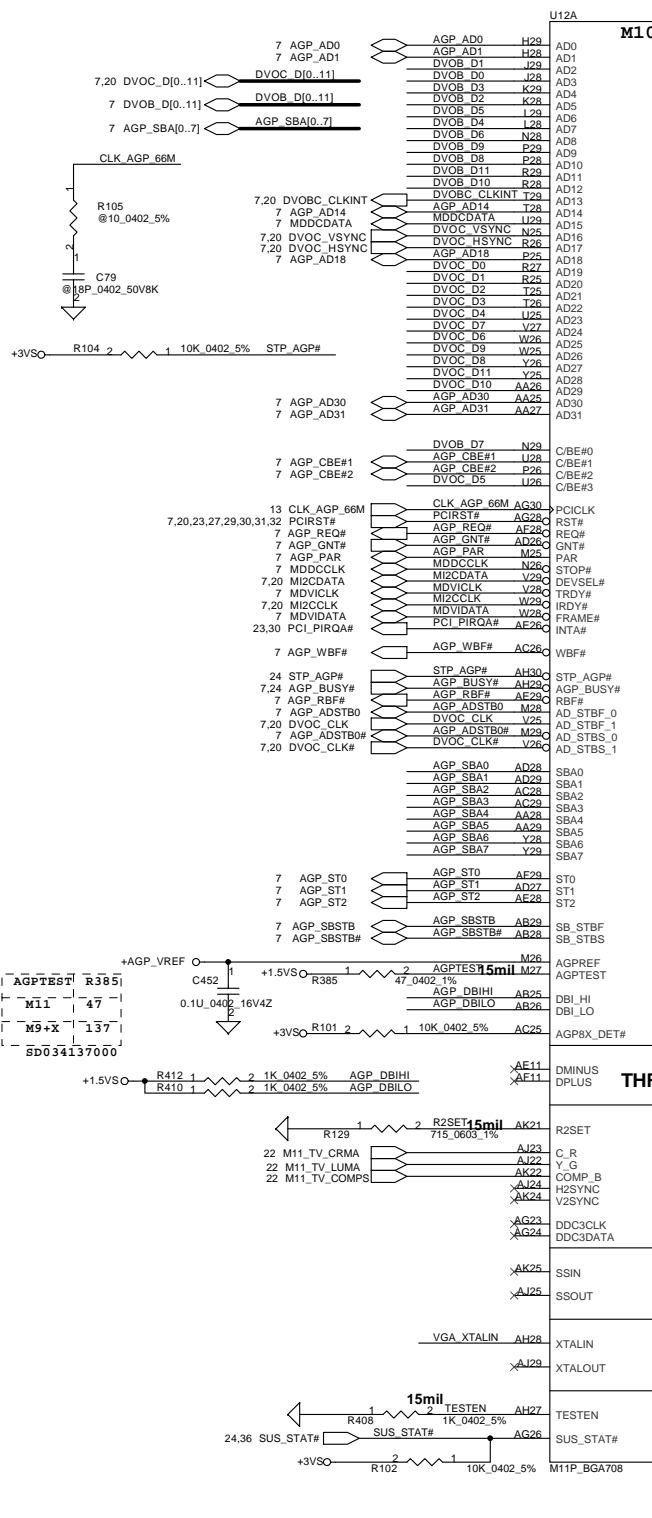
Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number 401289	Rev 2A
Date:	星期四, 四月 19, 2004	Sheet 62 of 101

SEL2	SEL1	SEL0	CPUCLKC[0..2]	CPUCLKT[0..2]
0	0	0	166.67	166.67
0	0	1	100.00	100.00
0	1	0	200.00	200.00
0	1	1	133.33	133.33



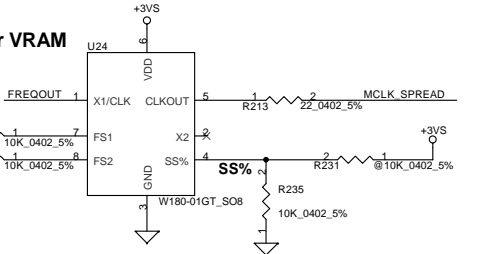
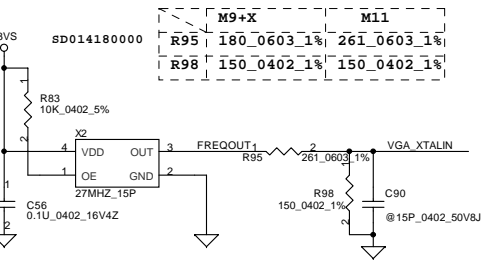
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title	SCHEMATIC MB LA-2242	
Size	Document Number	Rev
	401289	2A
Date:	星期二, 四月 19, 2004	Sheet 63 of 101



Vedio Memory Config.

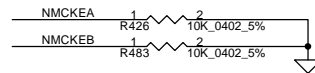
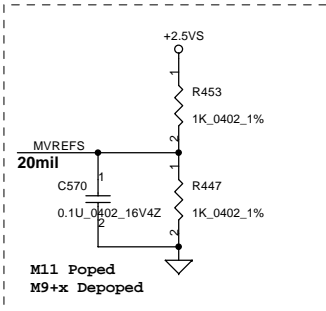
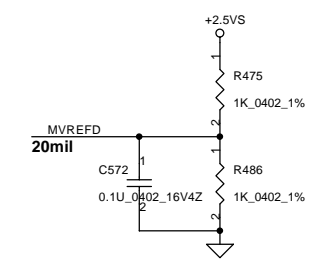
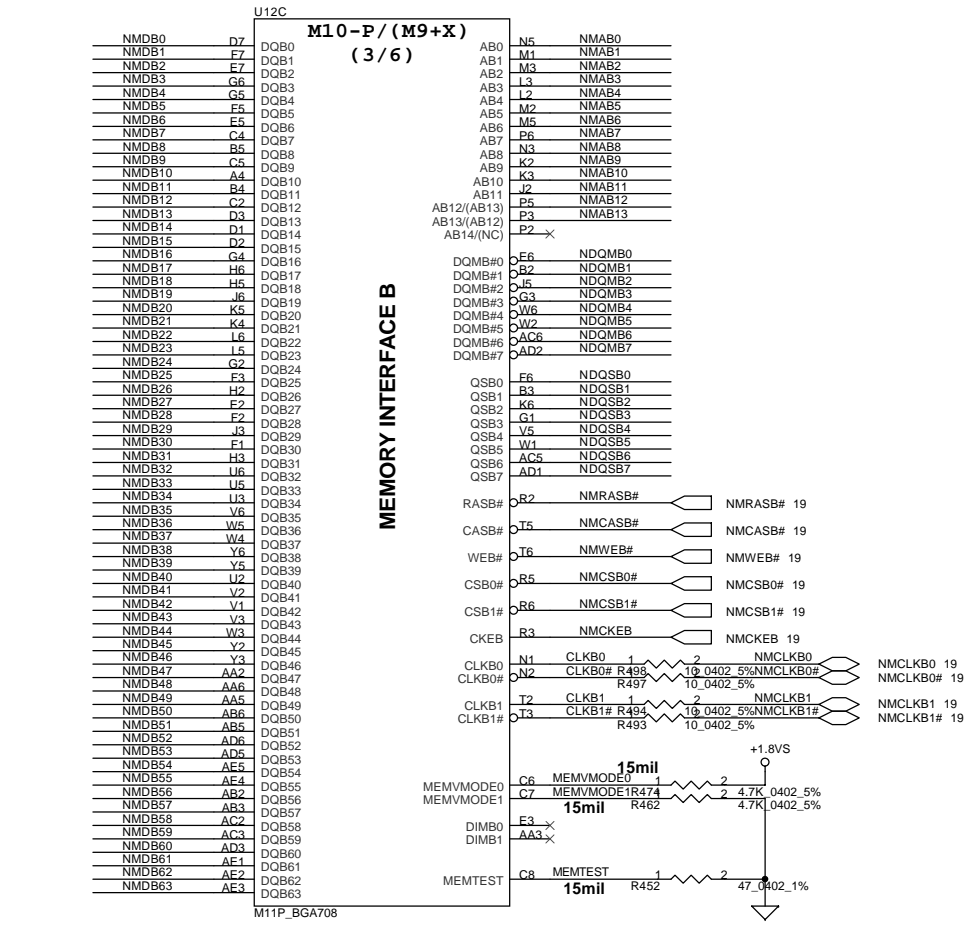
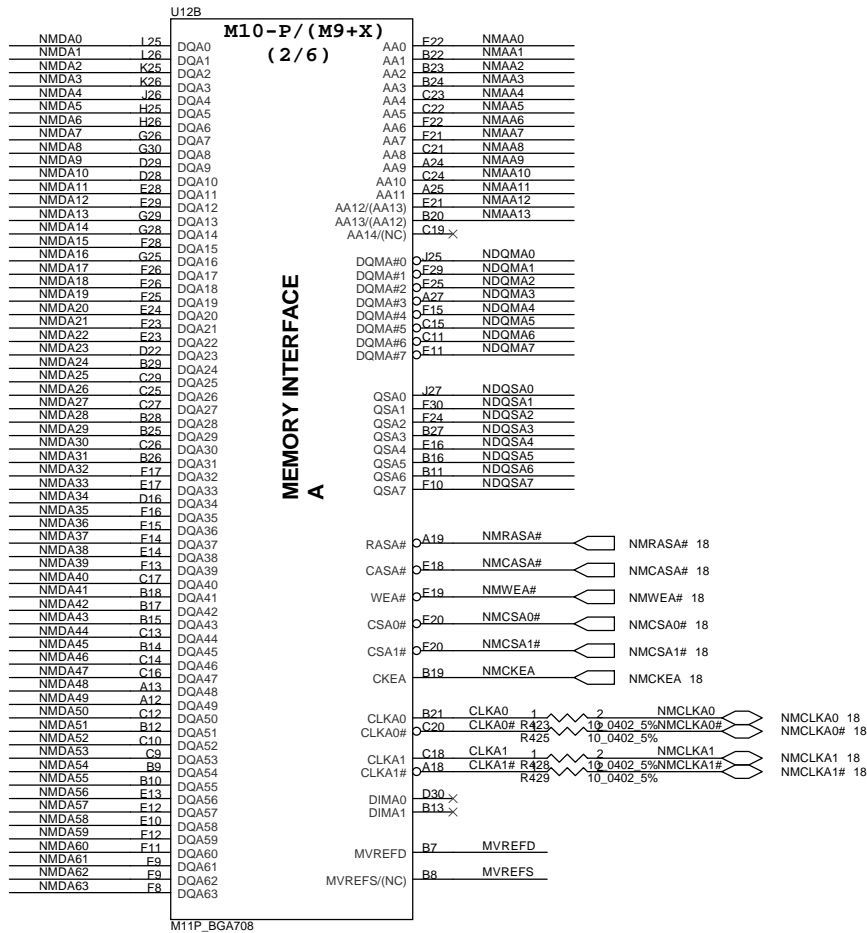
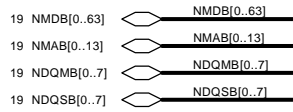
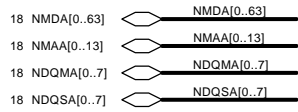
R	S	Size	Vendor
0	0	4Mx32	Samsung
0	1	4Mx32	Hynix
1	0	8Mx32	Samsung
1	1	8Mx32	Hynix



Selection Table For W180

SS%	Spread % Setting for Freq. Range
0	Fin>Fout>Fin-1.25%
1	Fin>Fout>Fin-3.75%

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



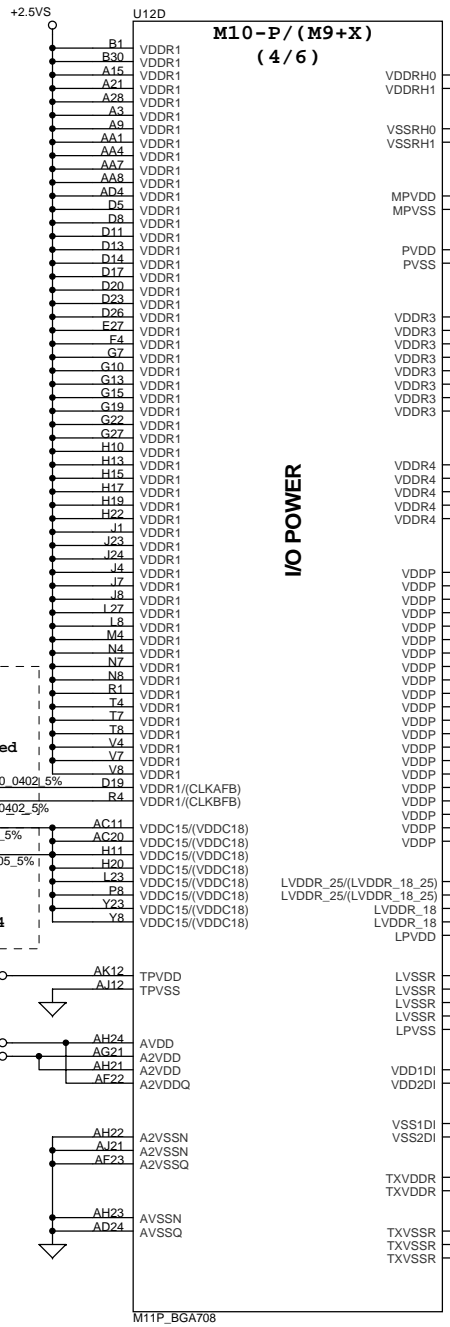
Compal Electronics, Inc.

Title: **SCHEMATIC M/B LA-2242**

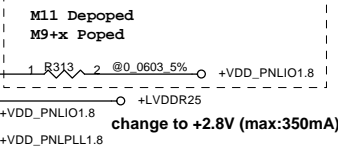
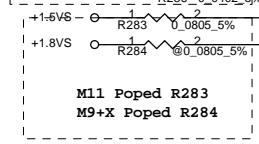
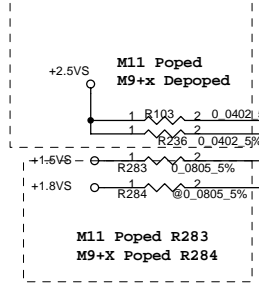
Size B Document Number: **401289** Rev 2A

Date: 星期一, 四月 19, 2004 Sheet 65 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

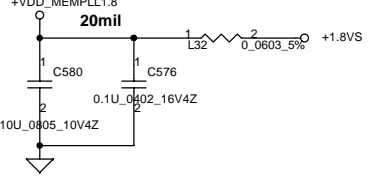
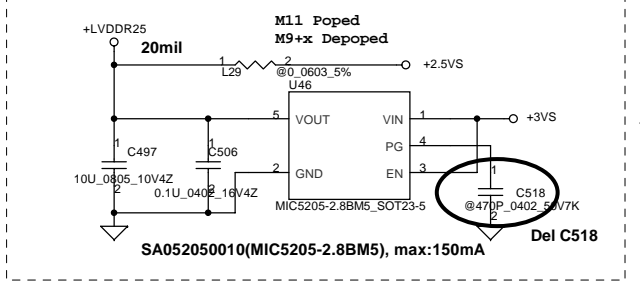
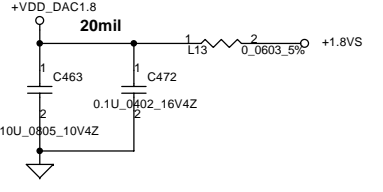
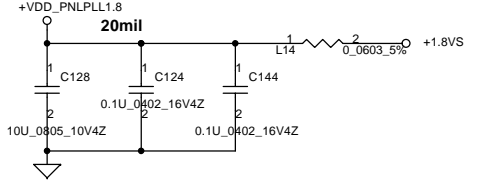
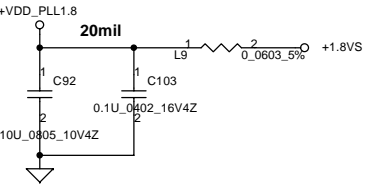
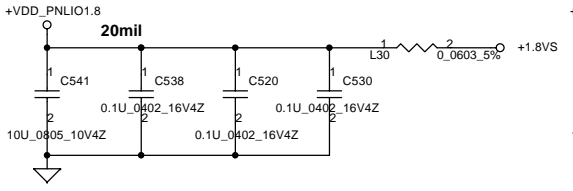
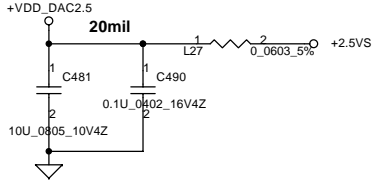
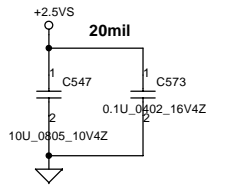
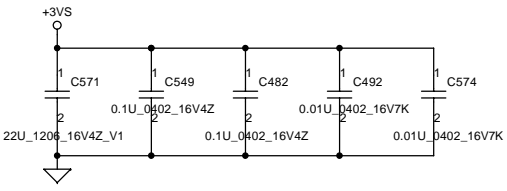
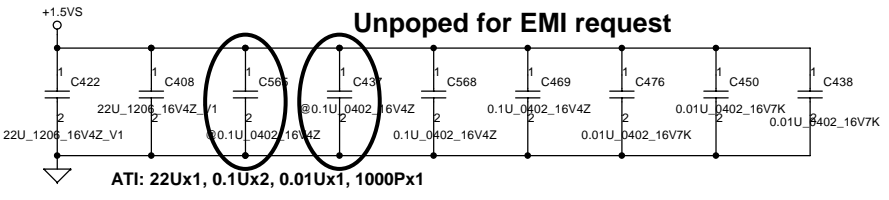


I/O POWER



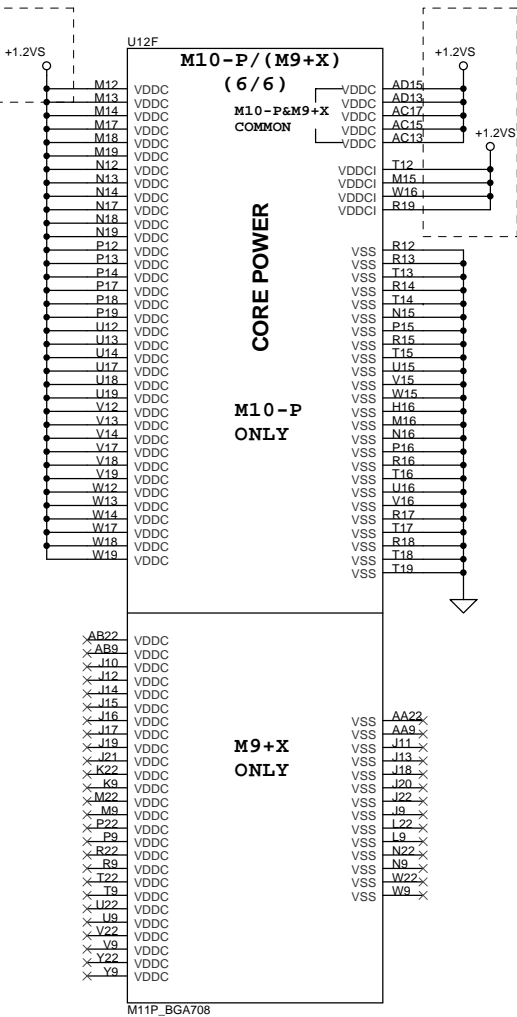
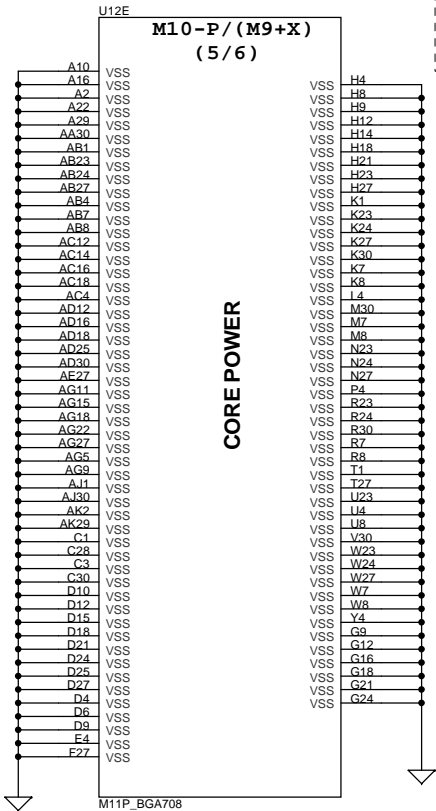
change to +2.8V (max:350mA)

Unpoped for EMI request



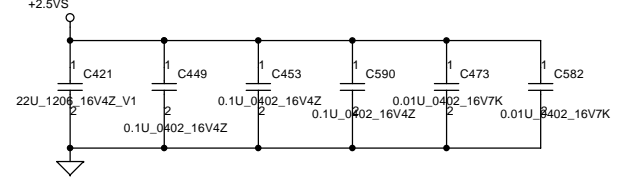
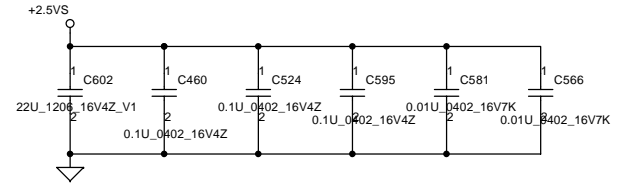
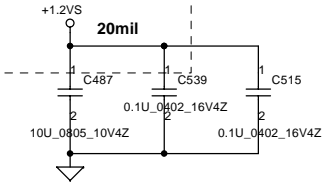
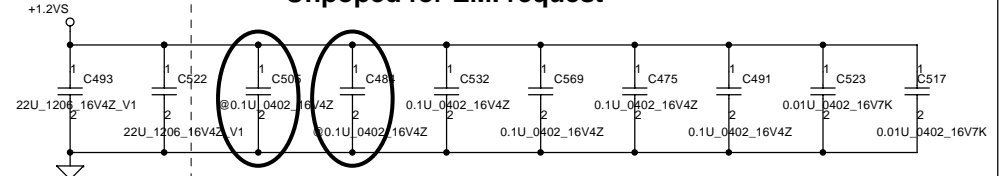
Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 66 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



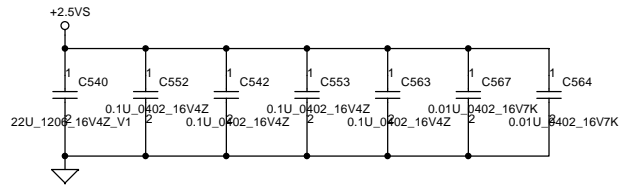
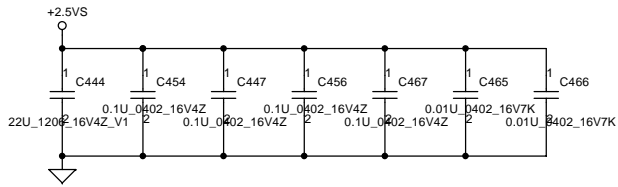
For VGA CORE:
 (M11 +VGA_CORE = 1.2V)
 (M9+X +VGA_CORE = 1.5V)

Unpoped for EMI request

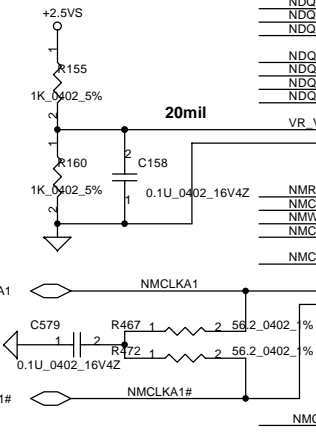
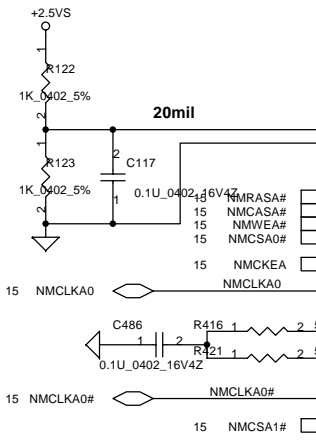
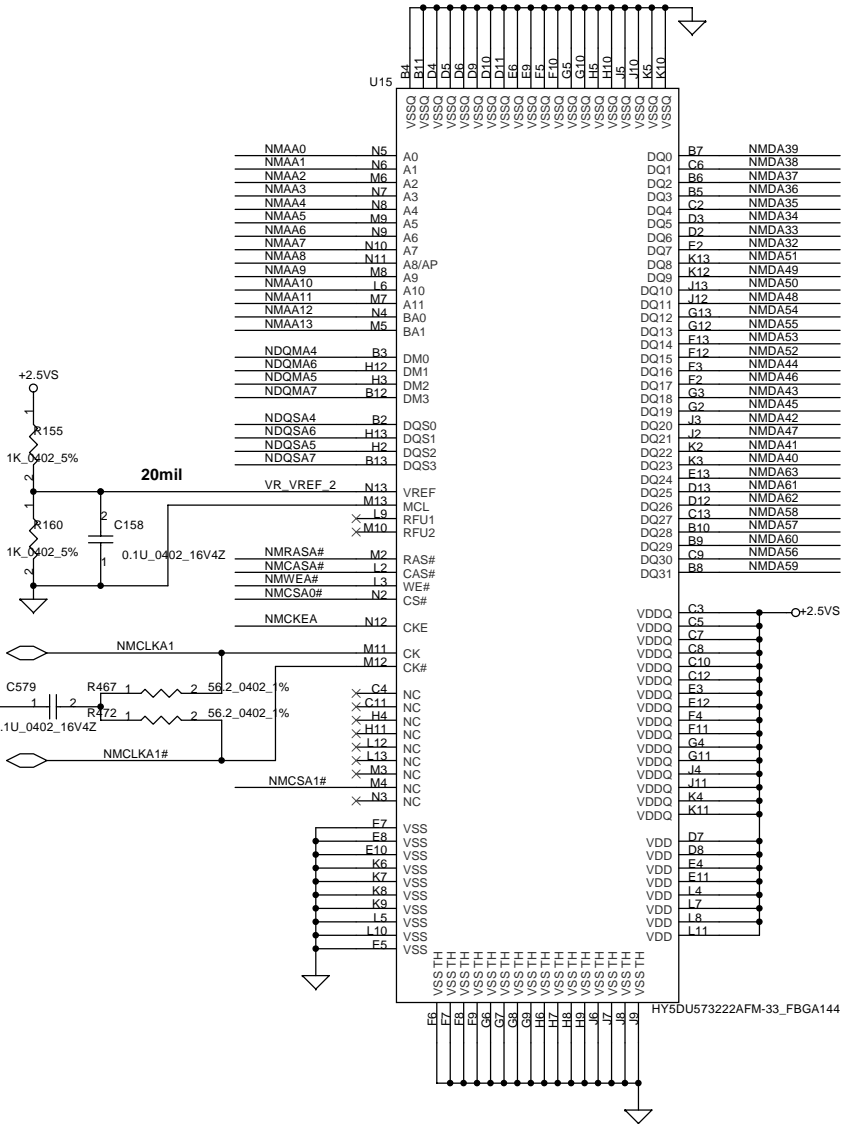
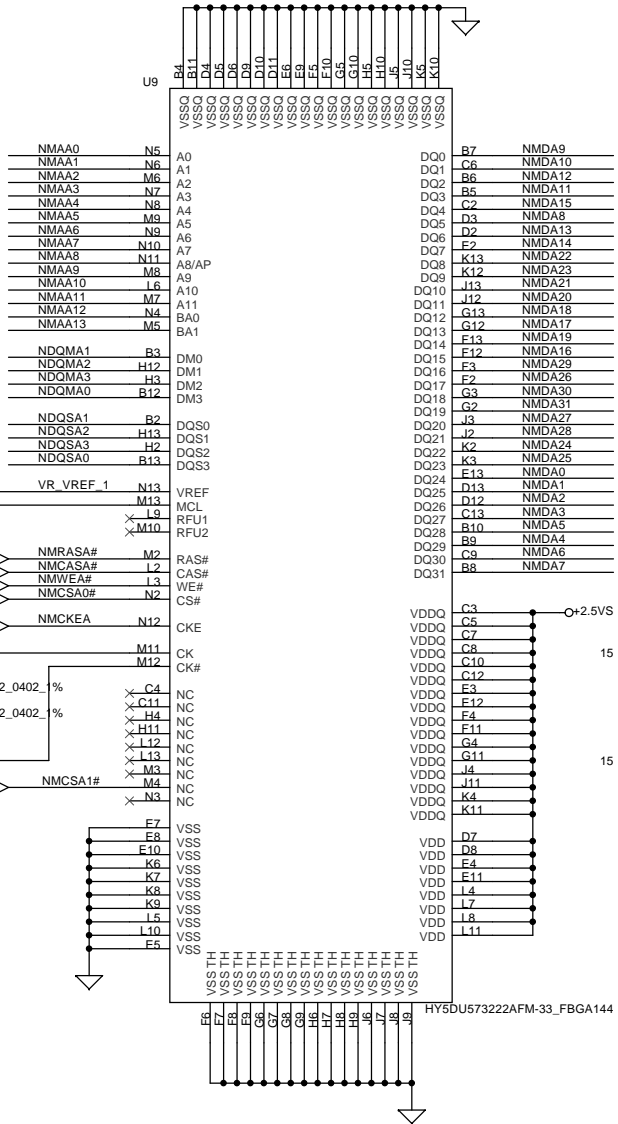


Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size B	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 67	of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



- 15 NMDA[0..63] NMDA[0..63]
- 15 NMAA[0..13] NMAA[0..13]
- 15 NDQMA[0..7] NDQMA[0..7]
- 15 NDQSA[0..7] NDQSA[0..7]

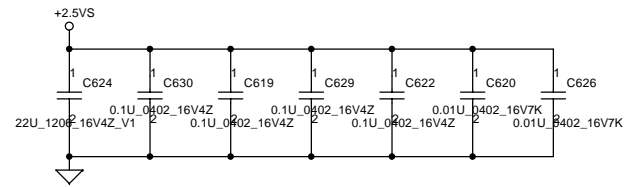
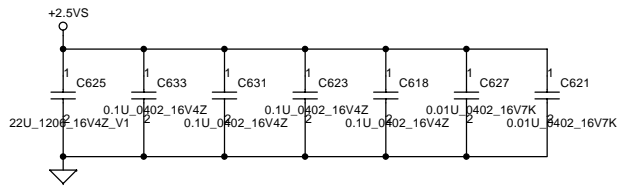


Compal Electronics, Inc.

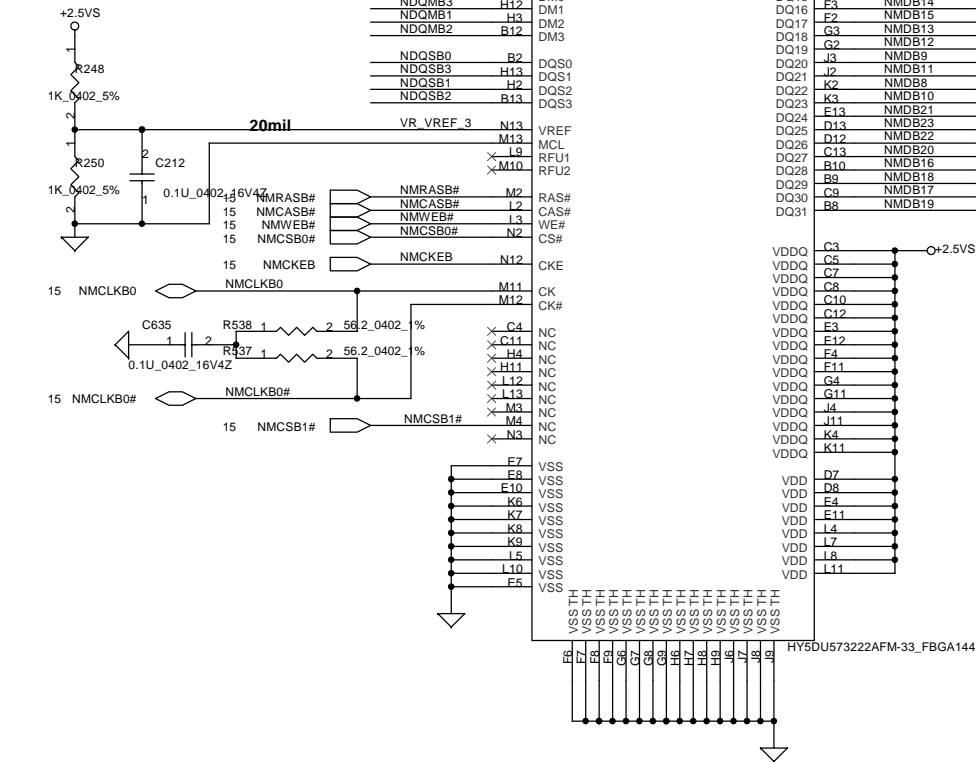
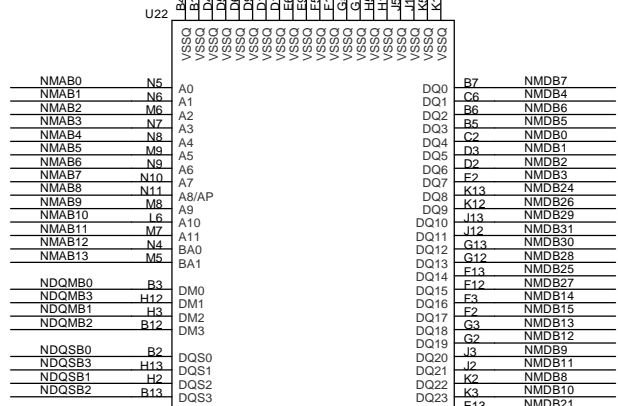
Title: **SCHEMATIC M/B LA-2242**

Size B	Document Number 401289	Rev 2A
Date:	星期一, 四月 19, 2004	Sheet 68 of 101

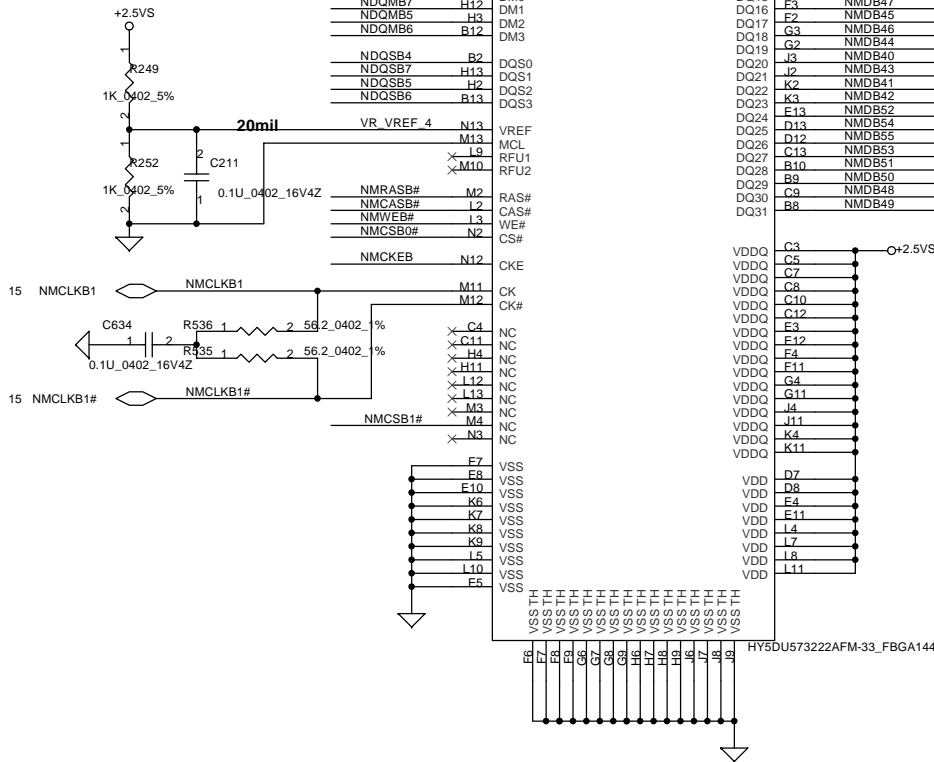
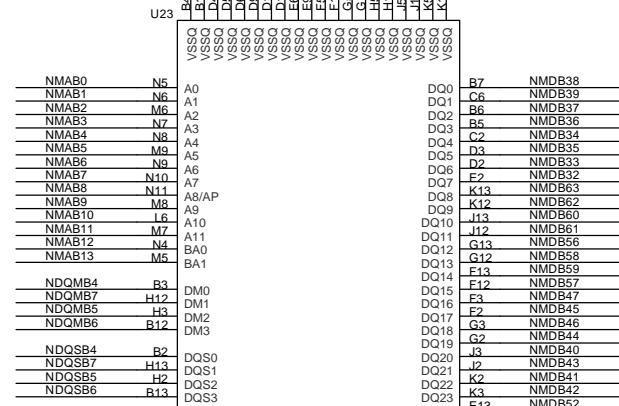
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



- 15 NMDB[0..63] NMDB[0..63]
- 15 NMAB[0..13] NMAB[0..13]
- 15 NDQMB[0..7] NDQMB[0..7]
- 15 NDQSB[0..7] NDQSB[0..7]



- 15 NMDB[0..63] NMDB[0..63]
- 15 NMAB[0..13] NMAB[0..13]
- 15 NDQMB[0..7] NDQMB[0..7]
- 15 NDQSB[0..7] NDQSB[0..7]



Compal Electronics, Inc.

Title: **SCHEMATIC M/B LA-2242**

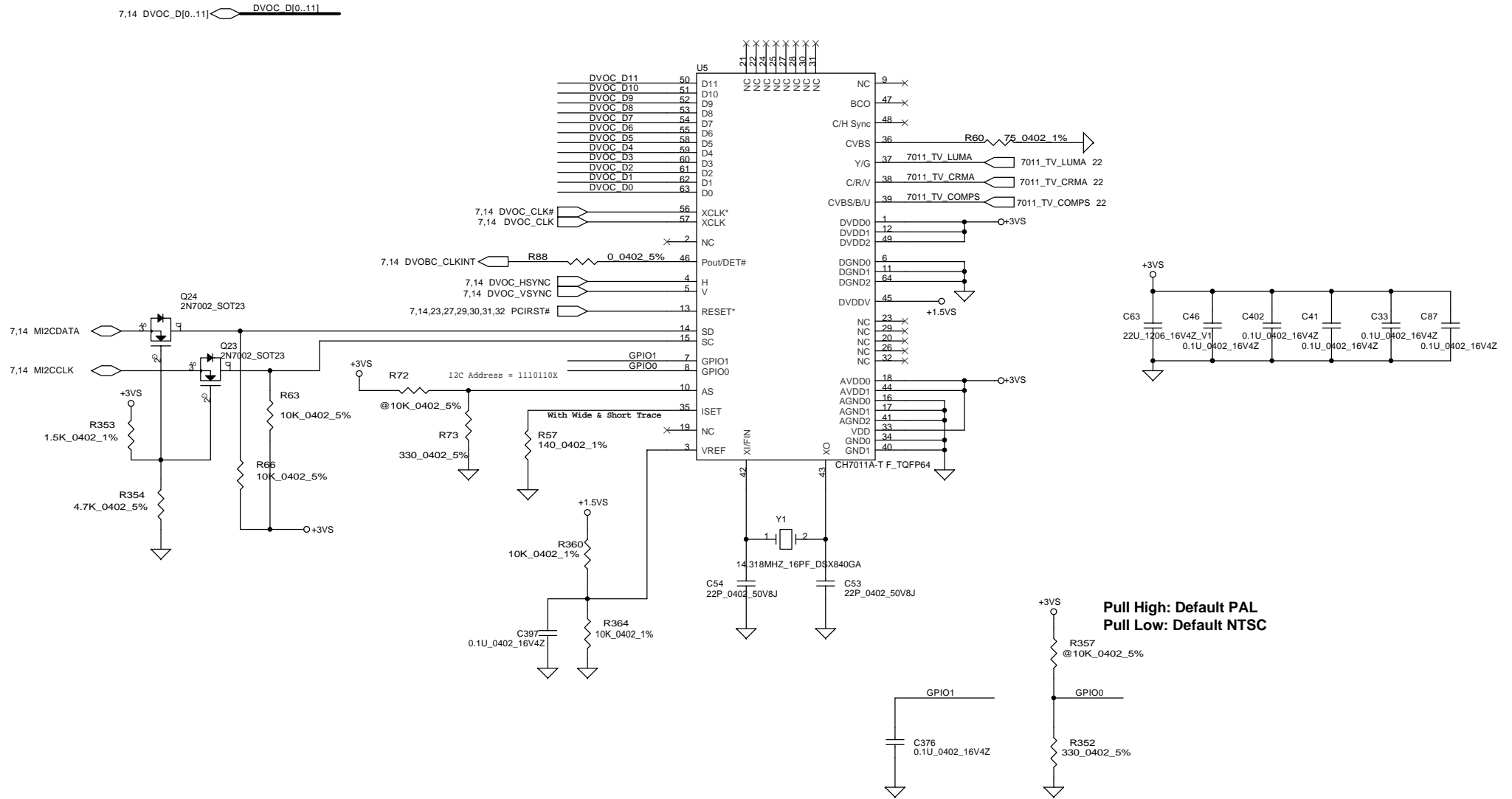
Size: B Document Number: **401289** Rev: 2A

Date: 星期一, 四月 19, 2004 Sheet: 69 of 101

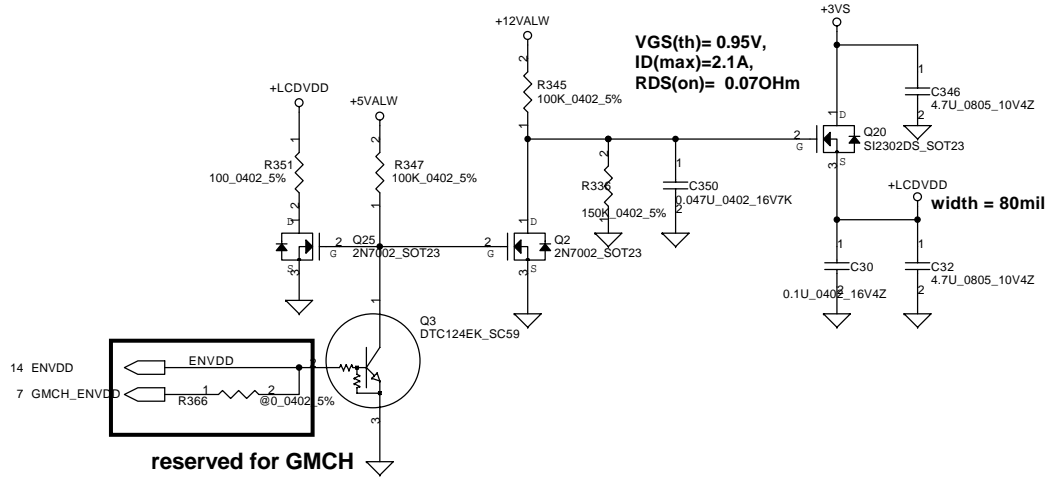
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

TV Encoder

remove this page when use M11P



LCD POWER CIRCUIT



LCD CONN.

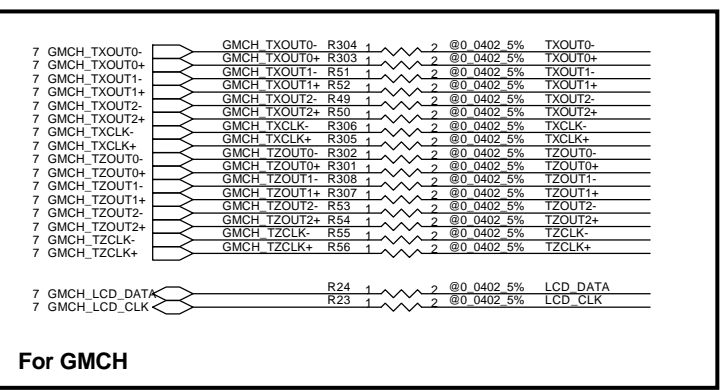
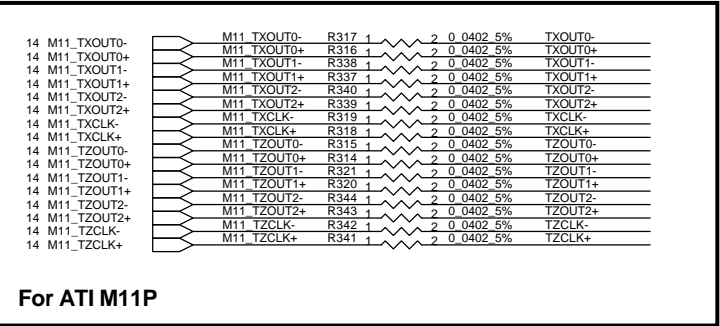
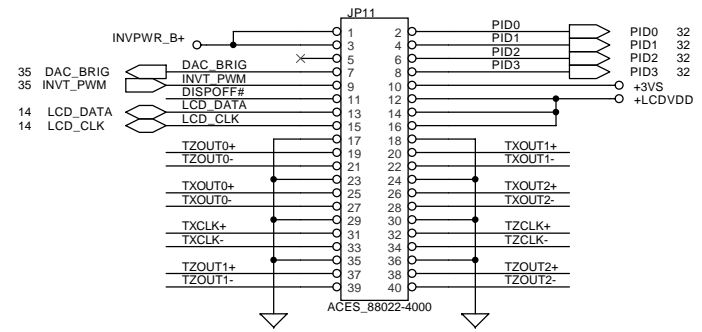
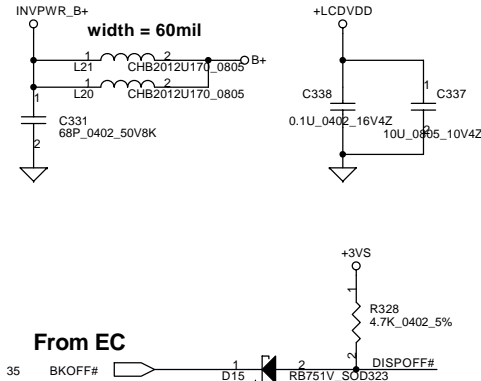


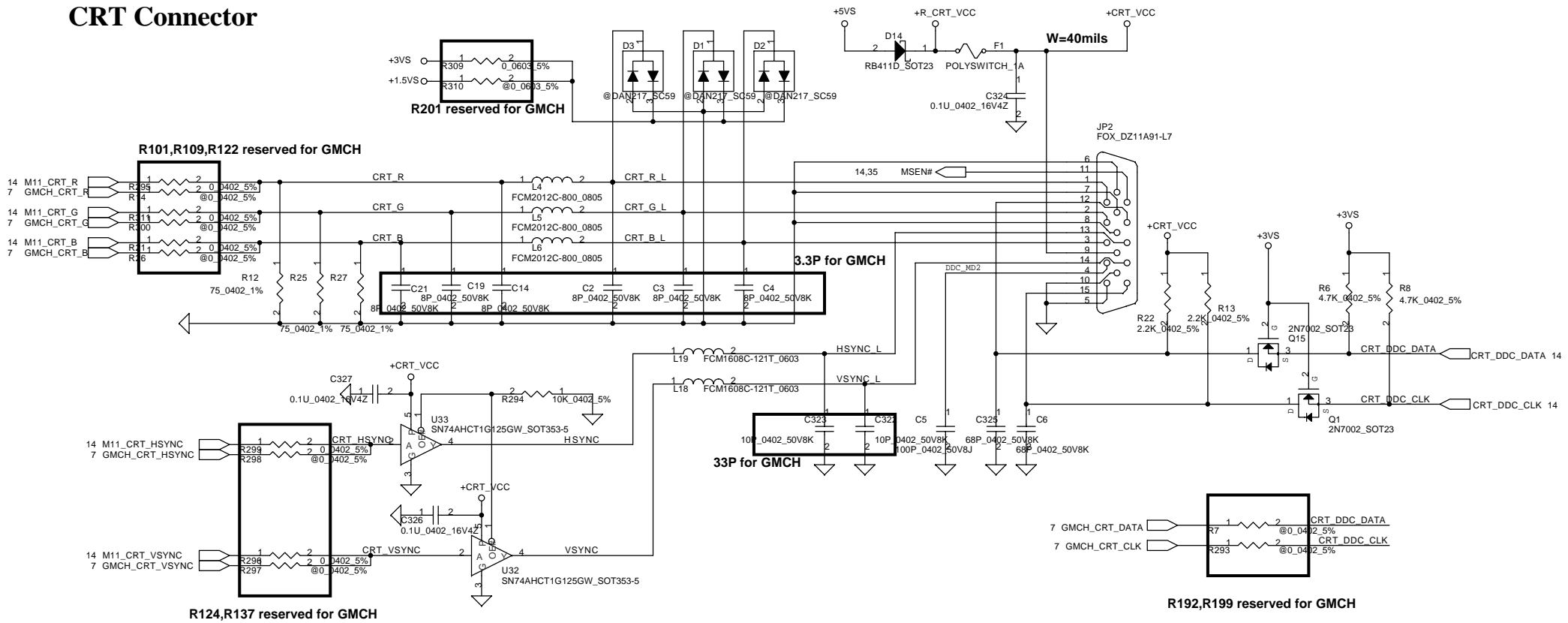
Table 1: Panel ID

PID3	PID2	PID1	PID0	PANEL
0	1	0	0	SANYO TM154WX-22L31 15.4" WXGA 1280X800
0	1	0	1	AU B154EW01 15.4" WXGA 1280X800
0	1	1	0	CPT CLAA154WA01 15.4" WXGA 1280X800
0	1	1	1	SAMSUNG LTN154X1-L02 15.4" WXGA 1280X800
1	0	0	1	SAMSUNG LTN154P1-L02 15.4" WSXGA+ 1680X1050
1	0	1	0	LG LP154W02-A1 15.4" WSXGA+ 1680X1050

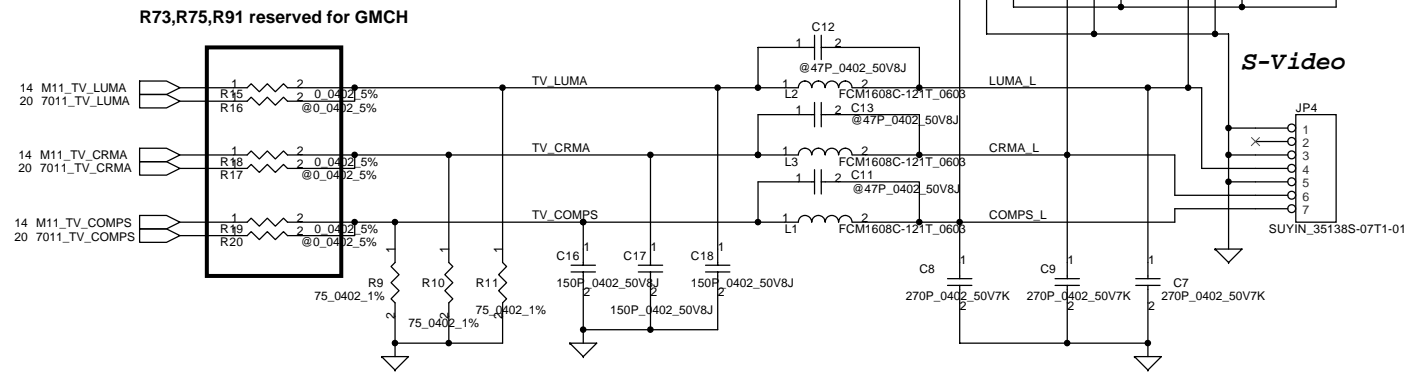


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

CRT Connector

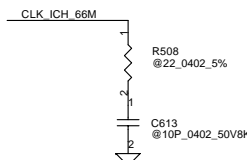
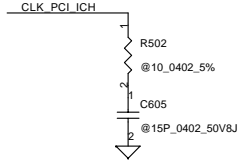


TV-Out Connector

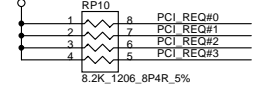
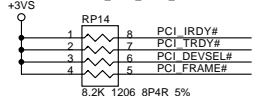
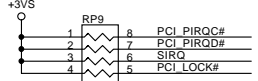
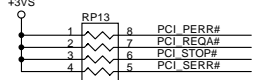
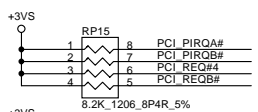


Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number 401289	Rev 2A
Date:	星期一, 四月 19, 2004	Sheet 72 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



PCI Pullups



27,29,30,31 PCI_AD[0..31] PCI_AD[0..31]

PCI_AD0	H5	AD0
PCI_AD1	J3	AD1
PCI_AD2	H3	AD2
PCI_AD3	K1	AD3
PCI_AD4	G5	AD4
PCI_AD5	J4	AD5
PCI_AD6	H4	AD6
PCI_AD7	J5	AD7
PCI_AD8	K2	AD8
PCI_AD9	G2	AD9
PCI_AD10	L1	AD10
PCI_AD11	G4	AD11
PCI_AD12	L2	AD12
PCI_AD13	H2	AD13
PCI_AD14	L3	AD14
PCI_AD15	F5	AD15
PCI_AD16	F4	AD16
PCI_AD17	N1	AD17
PCI_AD18	F5	AD18
PCI_AD19	N2	AD19
PCI_AD20	E3	AD20
PCI_AD21	N3	AD21
PCI_AD22	F4	AD22
PCI_AD23	M5	AD23
PCI_AD24	E2	AD24
PCI_AD25	P1	AD25
PCI_AD26	E1	AD26
PCI_AD27	P2	AD27
PCI_AD28	D3	AD28
PCI_AD29	R1	AD29
PCI_AD30	D2	AD30
PCI_AD31	P4	AD31

27,29,30,31	PCI_CBE#0	PCI_CBE#0	J2	C/BE#0
27,29,30,31	PCI_CBE#1	PCI_CBE#1	M4	C/BE#1
27,29,30,31	PCI_CBE#2	PCI_CBE#2	M4	C/BE#2
27,29,30,31	PCI_CBE#3	PCI_CBE#3	N4	C/BE#3

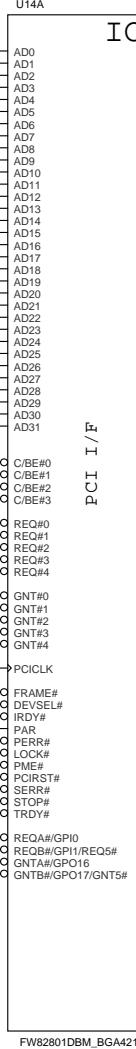
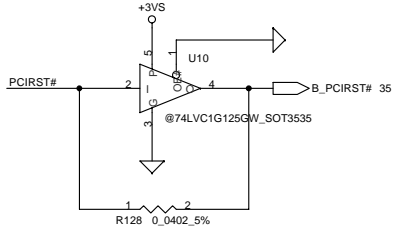
29	PCI_REQ#0	PCI_REQ#0	B4	REQ#0
27	PCI_REQ#1	PCI_REQ#1	B3	REQ#1
30	PCI_REQ#2	PCI_REQ#2	C7	REQ#2
31	PCI_REQ#3	PCI_REQ#3	C7	REQ#3
31	PCI_REQ#4	PCI_REQ#4	B6	REQ#4

29	PCI_GNT#0	PCI_GNT#0	C1	GNT#0
27	PCI_GNT#1	PCI_GNT#1	E6	GNT#1
30	PCI_GNT#2	PCI_GNT#2	A7	GNT#2
31	PCI_GNT#3	PCI_GNT#3	P7	GNT#3
31	PCI_GNT#4	PCI_GNT#4	D6	GNT#4

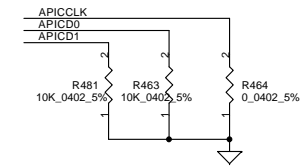
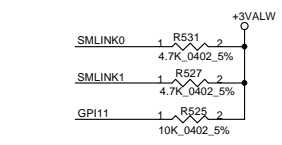
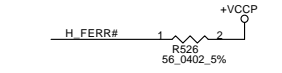
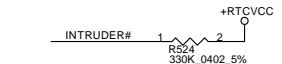
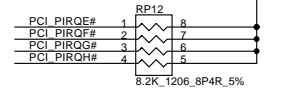
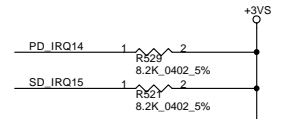
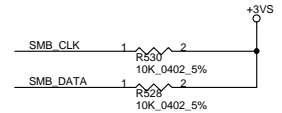
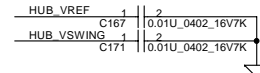
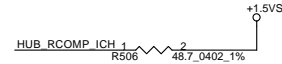
13	CLK_PCI_ICH	CLK_PCI_ICH	P5	PCICLK
27,29,30,31	PCI_FRAME#	PCI_FRAME#	F1	FRAME#
27,29,30,31	PCI_DEVSEL#	PCI_DEVSEL#	M3	DEVSEL#
27,29,30,31	PCI_IRDY#	PCI_IRDY#	L5	IRDY#
27,29,30,31	PCI_PAR	PCI_PAR	G1	PAR
27,29,30,31	PCI_PERR#	PCI_PERR#	M2	PERR#
27,29,30,31	PCI_LOCK#	PCI_LOCK#	M2	LOCK#

7,14,20,27,29,30,31,32	PCIRST#	PCIRST#	U5	PCIRST#
27,29,30,31	PCI_SERR#	PCI_SERR#	K5	SERR#
27,29,30,31	PCI_STOP#	PCI_STOP#	F3	STOP#
27,29,30,31	PCI_TRDY#	PCI_TRDY#	F2	TRDY#

26	PIDERST#	PIDERST#	F8	PIDERST#
26	SIDERST#	SIDERST#	C5	SIDERST#

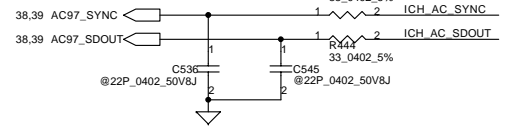
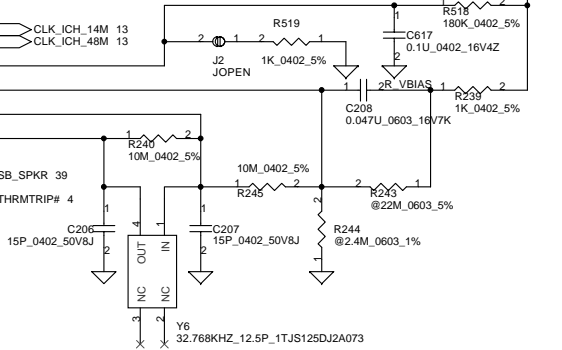
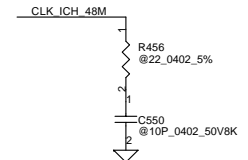
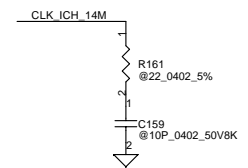
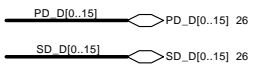
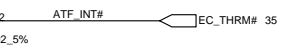
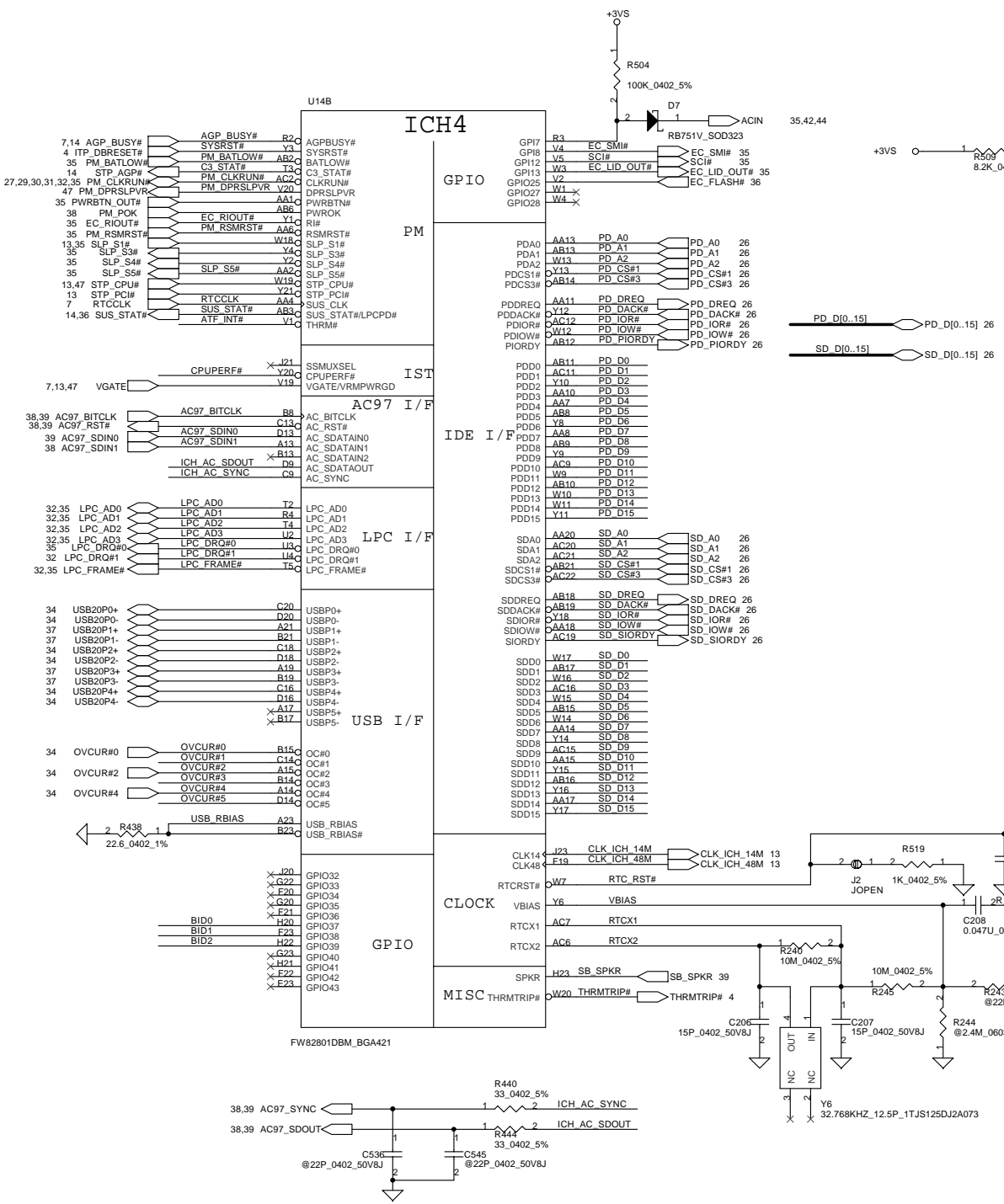
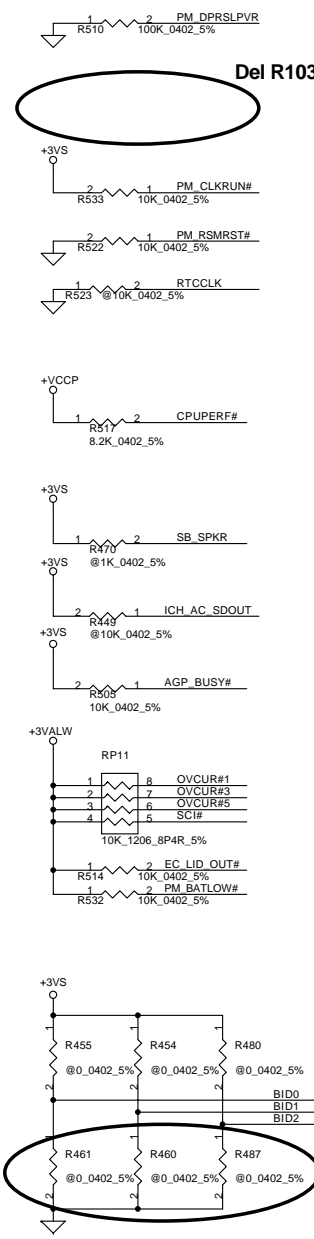


INTRUDER#	OW6	INTRUDER#
SMLINK0	AC3	SMLINK0
SMLINK1	AC4	SMLINK1
SMB_CLK	AC4	SMB_CLK
SMB_DATA	AB4	SMB_DATA
SMB_ALERT#/GPI11	AA6	GPI11
A20GATE	Y22	GATEA20 35
A20M#	U23	H_A20M# 4
DPSLP#	AA21	H_DPSLP# 4,7
FERR#	W22	H_FERR# 4
IGNNE#	W22	H_IGNNE# 4
INIT#	AB22	H_INIT# 4
INTR	V21	H_INTR 4
NMI	V21	H_NMI 4
CPU_PWRGOOD	Y23	H_CPU_PWRGD 4
RCIN#	U22	RC# 35
SLP#	U22	H_CPUSLP# 4
SM#	W23	H_SM# 4
STPCLK#	W23	H_STPCLK# 4
HIO	L19	HUB_PD0
H11	L20	HUB_PD1
H12	M19	HUB_PD2
H13	M21	HUB_PD3
H14	P19	HUB_PD4
H15	R19	HUB_PD5
H16	T20	HUB_PD6
H17	R23	HUB_PD8
H18	L22	HUB_PD9
H19	U21	HUB_PD10
H110	K21	HUB_PD11
H111	K21	HUB_PD12
CLK66	T21	CLK_ICH_66M
HI_STB	P21	HUB_PSTRB 6
HI_STB#	N20	HUB_PSTRB# 6
HICOMP	R23	HUB_RCOMP_ICH
HUB_VREF	M23	HUB_VREF
HUB_VSWING	R22	HUB_VSWING
APICCLK	H19	APICCLK
APICD0	H19	APICD0
APICD1	K20	APICD1
PIROA#	D5	PCI_PIROA#
PIROB#	C2	PCI_PIROB#
PIROC#	B4	PCI_PIROC#
PIROD#	A3	PCI_PIROD#
PIROE#/GPI2	C8	PCI_PIROE# 29
PIROF#/GPI3	D7	PCI_PIROF# 27
PIROG#/GPI4	C3	PCI_PIROG# 31
PIROH#/GPI5	C4	PCI_PIROH# 31
IRQ14	AC13	PD_IRQ14 26
IRQ15	AA19	SD_IRQ15 26
SIRQ	I27	SIRQ 30,32,35
EEPROM I/F	D10	EE_CS
	D11	EE_IN
	A8	EE_OUT
	C12	EE_SHCLK
LAN I/F	A10	LAN_RXD0
	A9	LAN_RXD1
	A11	LAN_RXD2
	B10	LAN_TXD0
	C10	LAN_TXD1
	A12	LAN_TXD2
	C11	LAN_CLK
	B11	LAN_RSTSYNC
	V5	LAN_RST#



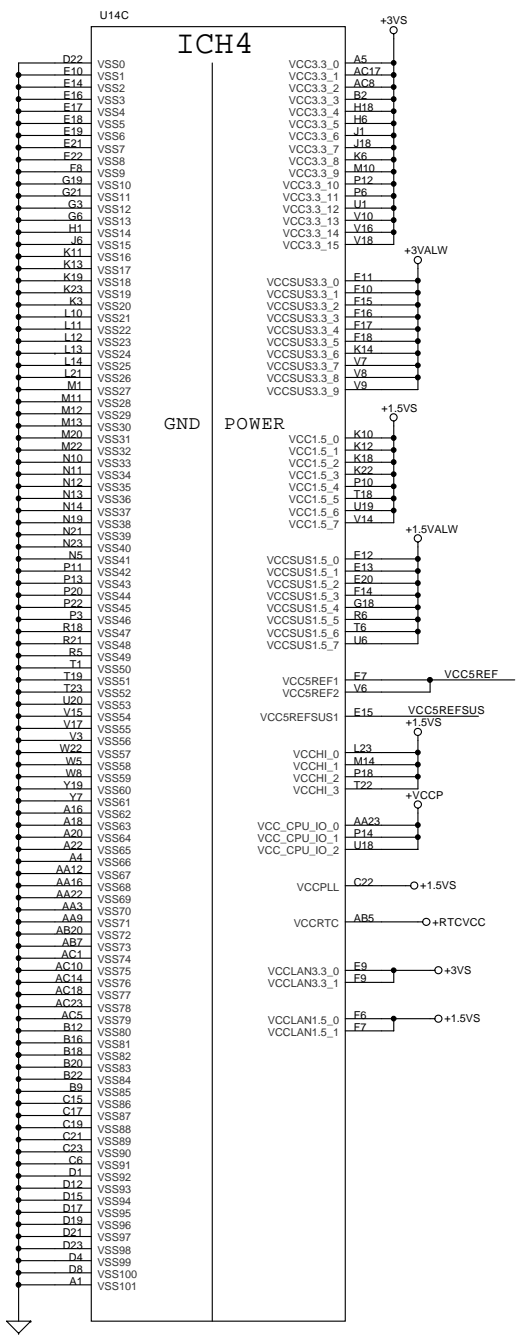
Compal Electronics, Inc.
 Title: SCHEMATIC MB LA-2242
 Size: Document Number 401289 Rev 2A
 Date: 星期一, 四月 19, 2004 Sheet 73 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

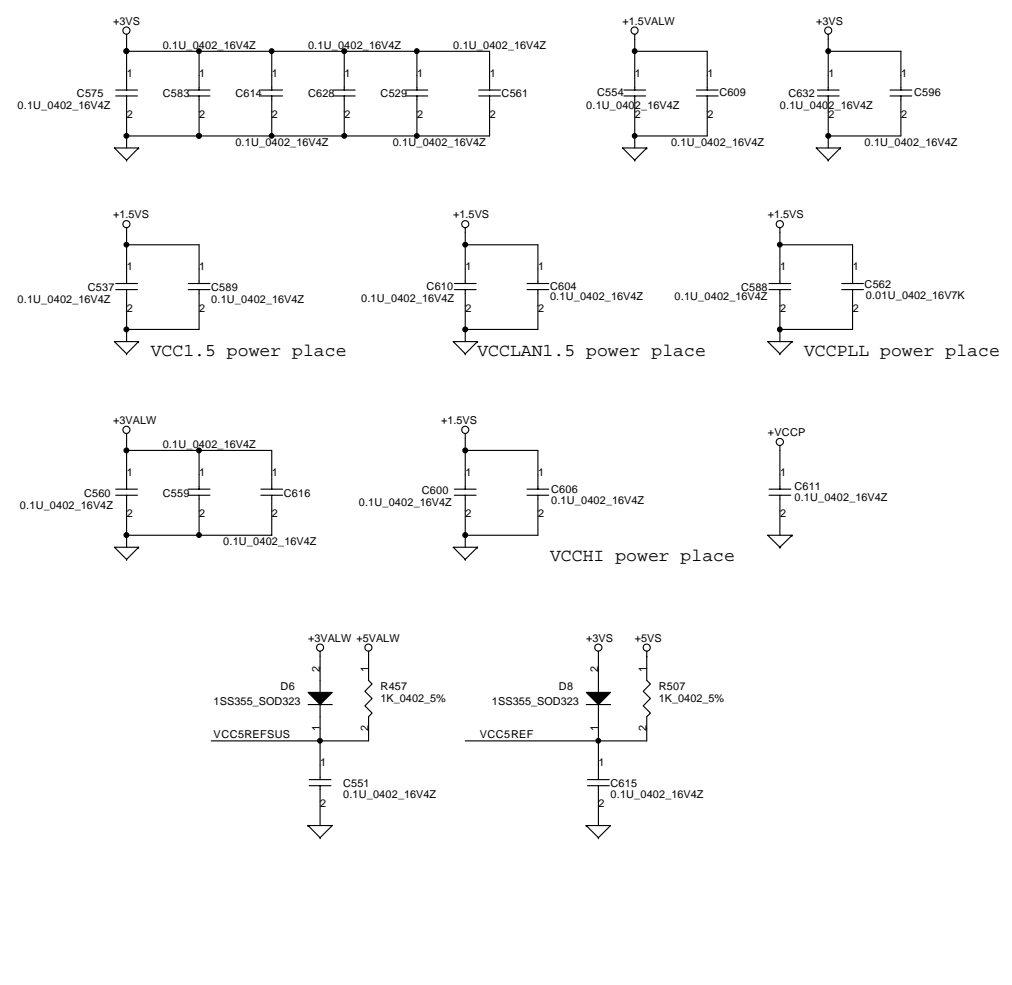


Title			
Compal Electronics, Inc.			
SCHEMATIC MB LA-2242			
Size	Document Number	Rev	
	401289	2A	
Date:	星期一 四月 19, 2004	Sheet	74 of 101

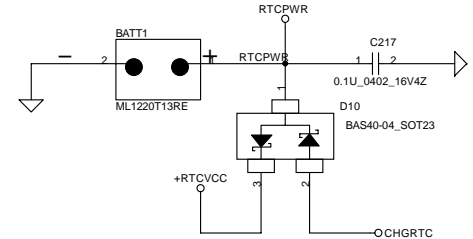
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



FW82801DBM_BGA421

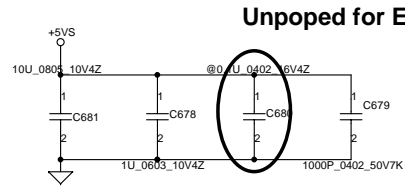


RTC Battery

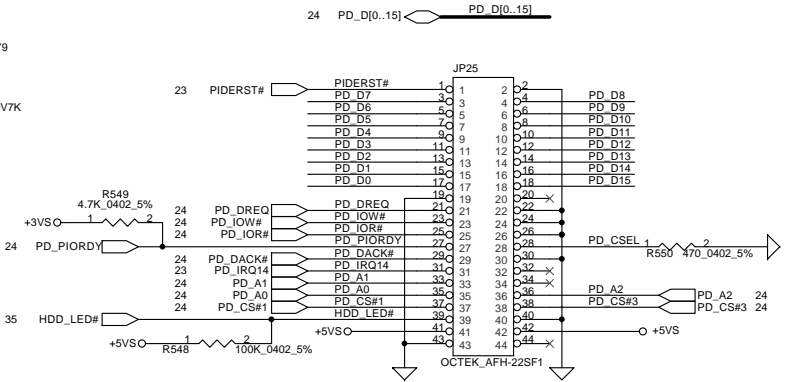


Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一 四月 19, 2004	Sheet 75 of 101

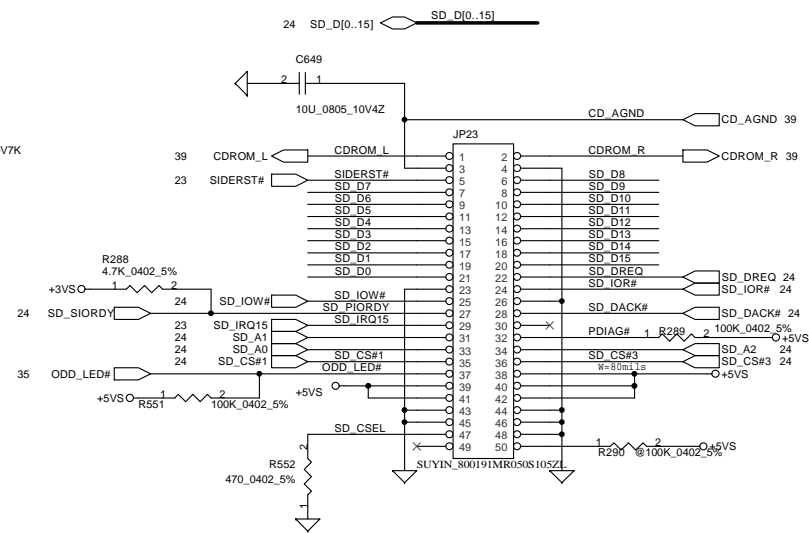
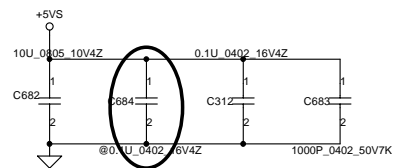
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



HDD CONN



CDROM CONN



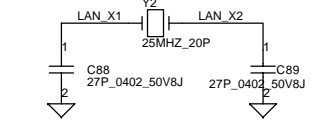
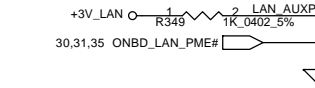
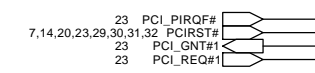
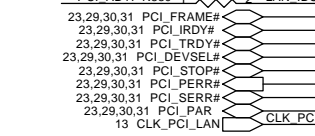
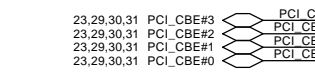
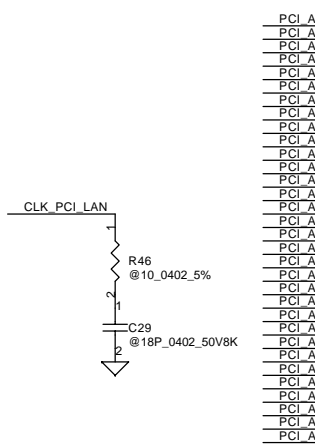
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number 401289	Rev 2A
Date:	星期四, 四月 19, 2004	Sheet 76 of 101

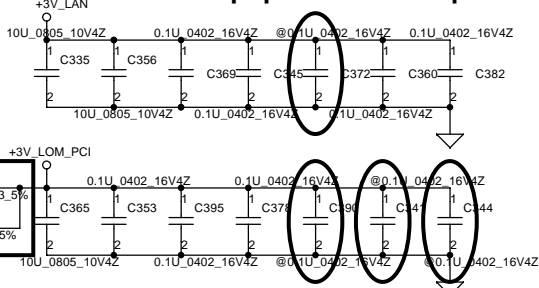
EN_WOL# = Low,
System can wake on LAN
(keep Low when Power On)

VGS(th) = -0.45V
IDmax = 2.3A

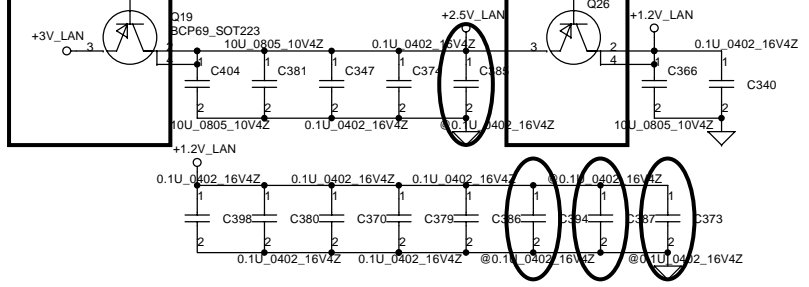
23,29,30,31 PCI_AD[0..31] PCI_AD[0..31]



Unpoped for EMI request



unpop when use BCM4401



Pin	Signal	Pin	Signal
PCI_AD31	B8	AD31	TRD3+(/NC_E13)
PCI_AD30	A8	AD30	TRD3-(/NC_E14)
PCI_AD29	C7	AD29	TRD2+(/NC_D13)
PCI_AD28	C6	AD28	TRD2-(/NC_D14)
PCI_AD27	B6	AD27	TRD1+(/RDP)
PCI_AD26	B5	AD26	TRD1-(/RDN)
PCI_AD25	A5	AD25	TRD0+(/TDP)
PCI_AD24	B4	AD24	TRD0-(/TDN)
PCI_AD23	B4	AD23	
PCI_AD22	B4	AD22	
PCI_AD21	C1	AD21	
PCI_AD20	D3	AD20	
PCI_AD19	D2	AD19	
PCI_AD18	D1	AD18	
PCI_AD17	E3	AD17	
PCI_AD16	K1	AD16	
PCI_AD15	L2	AD15	
PCI_AD14	L1	AD14	
PCI_AD13	M3	AD13	
PCI_AD12	M2	AD12	
PCI_AD11	M1	AD11	
PCI_AD10	N2	AD10	
PCI_AD9	N3	AD9	
PCI_AD8	P3	AD8	
PCI_AD7	N4	AD7	
PCI_AD6	P4	AD6	
PCI_AD5	M5	AD5	
PCI_AD4	P5	AD4	
PCI_AD3	N5	AD3	
PCI_AD2	P6	AD2	
PCI_AD1	M7	AD1	
PCI_ADD	N7	AD0	

Pin	Signal	Pin	Signal
PCI_CBE#3	C4	CBE#3	
PCI_CBE#2	F3	CBE#2	
PCI_CBE#1	L3	CBE#1	
PCI_CBE#0	M4	CBE#0	

Pin	Signal	Pin	Signal
PCI_AD17	R330	1	LAN_IDSEL
PCI_FRAME#	F2		FRAME
PCI_IRDY#	H3		IRDY
PCI_TRDY#	G3		TRDY
PCI_DEVSEL#	H3		DEVSEL
PCI_STOP#	J2		STOP
PCI_PERR#	A2		PERR
PCI_SERR#	J2		SERR
PCI_PAR	A1		PAR
CLK_PCI_LAN	J1		CLK_PCI_LAN

Pin	Signal	Pin	Signal
PCI_PIRQ#	H2		INTA
PCI_RST#	C2		PCI_RST
PCI_GNT#1	J3		GNT#1
PCI_REQ#1	C3		REQ

Pin	Signal	Pin	Signal
VAUXPRSNT	I12		VAUXPRSNT
M66EN(/NC_F4)	A4		M66EN(/NC_F4)
PME	F6		PME

Pin	Signal	Pin	Signal
NC_A10	A10		NC_A10
NC_C9	C9		NC_C9

Pin	Signal	Pin	Signal
E13	LAN_MDI3+		LAN_MDI3+ 28
E14	LAN_MDI3-		LAN_MDI3- 28
D13	LAN_MDI2+		LAN_MDI2+ 28
D14	LAN_MDI2-		LAN_MDI2- 28
C13	LAN_MDI1+		LAN_MDI1+ 28
C14	LAN_MDI1-		LAN_MDI1- 28
B13	LAN_MDI0+		LAN_MDI0+ 28
B14	LAN_MDI0-		LAN_MDI0- 28

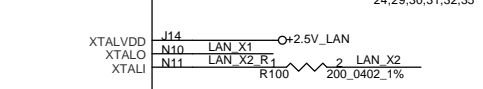
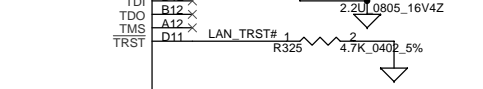
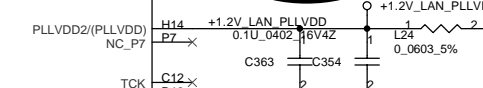
Pin	Signal	Pin	Signal
B9	REGSUP12(/NC_B9)		REGSUP12(/NC_B9)
B10	REGCTL12(/NC_B10)		REGCTL12(/NC_B10)
A9	REGSEN12(/REG18OUT)		REGSEN12(/REG18OUT)

Pin	Signal	Pin	Signal
B11	REGSUP25(/REGSUP18)		REGSUP25(/REGSUP18)
C11	REGCTL25(/NC_C11)		REGCTL25(/NC_C11)
C10	REGSEN25(/REGSUP18)		REGSEN25(/REGSUP18)

Pin	Signal	Pin	Signal
P1	VESD1		VESD1
G2	VESD2		VESD2
A1	VESD3		VESD3

Pin	Signal	Pin	Signal
P10	LAN_EEDA		LAN_EEDA
M10	LAN_EECLK		LAN_EECLK

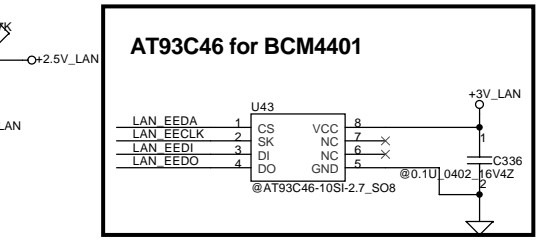
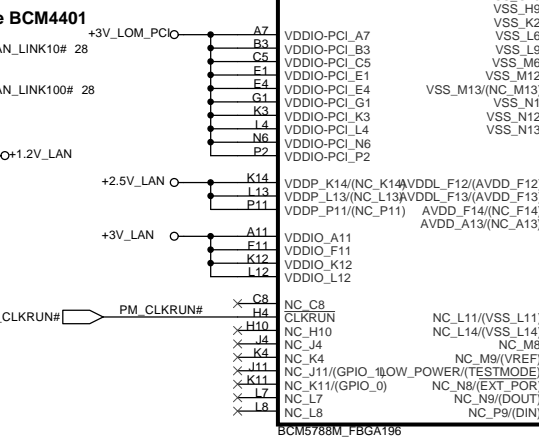
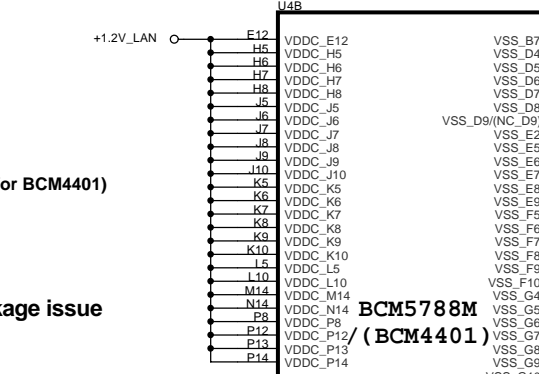
Pin	Signal	Pin	Signal
H12	LAN_EEWP_1		LAN_EEWP_1
K13	LAN_EEWP_2		LAN_EEWP_2
H13	ACTIVITY#		ACTIVITY# 28



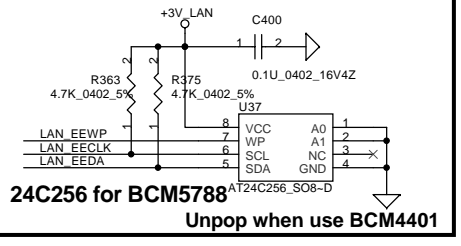
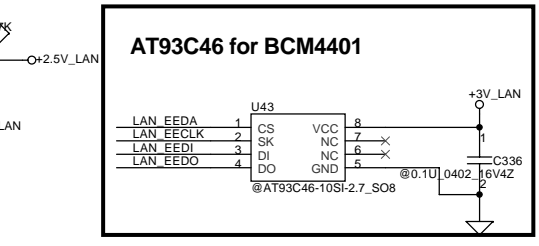
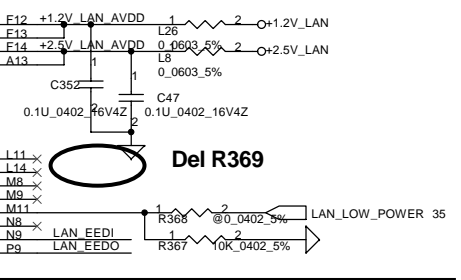
Pin	Signal	Pin	Signal
NC_G11	G11		NC_G11
NC_E10(/EEDATA_PXE)	E10		NC_E10(/EEDATA_PXE)
NC_E11(/EECLK_PXE)	E11		NC_E11(/EECLK_PXE)
NC_H11	H11		NC_H11



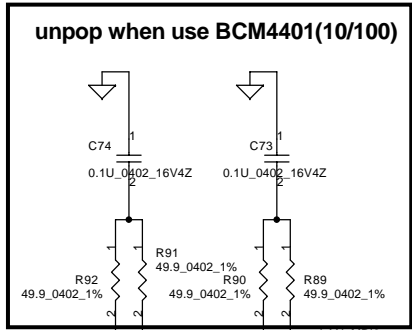
Pin	Signal	Pin	Signal
A14	+LAN_BIASVDD		+LAN_BIASVDD
D10	LAN_RDA#		LAN_RDA#
A10	A10		A10
NC_C9	C9		NC_C9



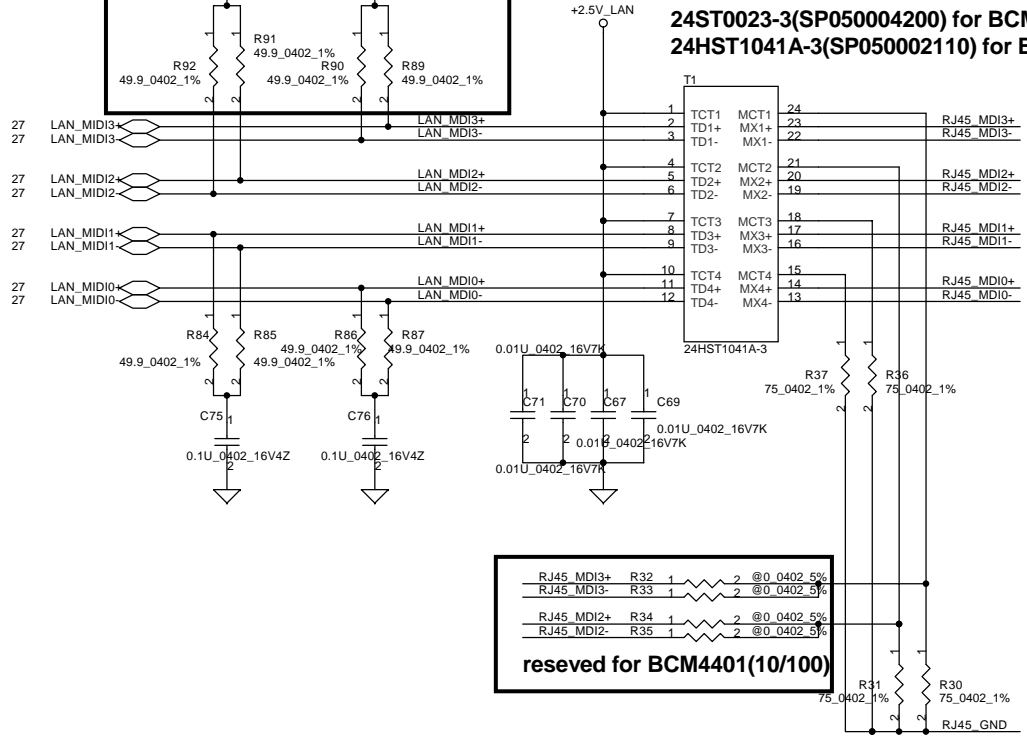
Pin	5788	4401
L22	Pop	Pop
L25	Pop	Pop
Q19	Pop	Pop
Q26	Pop	Pop
R326	1.24K	1.27K
U43	Pop	Pop
C336	Pop	Pop
U37	Pop	Pop
R375	Pop	Pop
C400	Pop	Pop
R363	Pop	Pop
R360	Pop	Pop
R562	Pop	Pop
R80	Pop	Pop
R77	Pop	Pop



LAN BCM5788M/BCM4401KFB

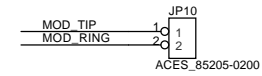
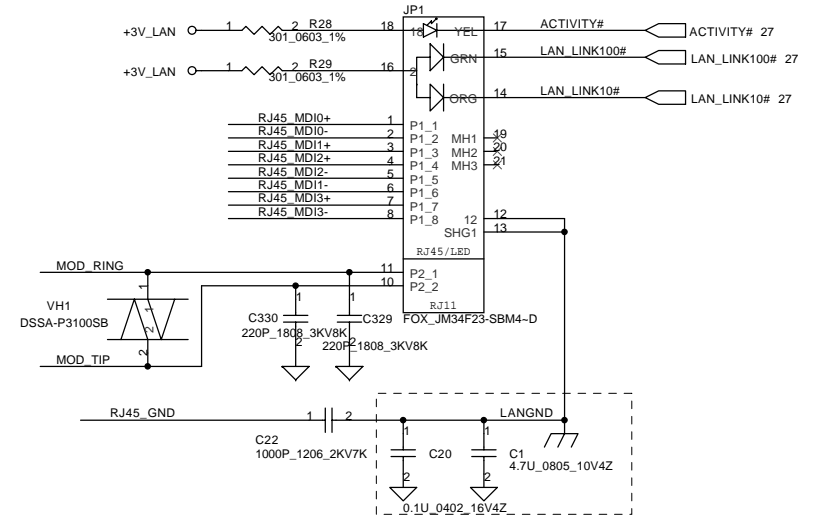


24ST0023-3(SP050004200) for BCM4401(10/100)
24HST1041A-3(SP050002110) for BCM5788M(GbE)



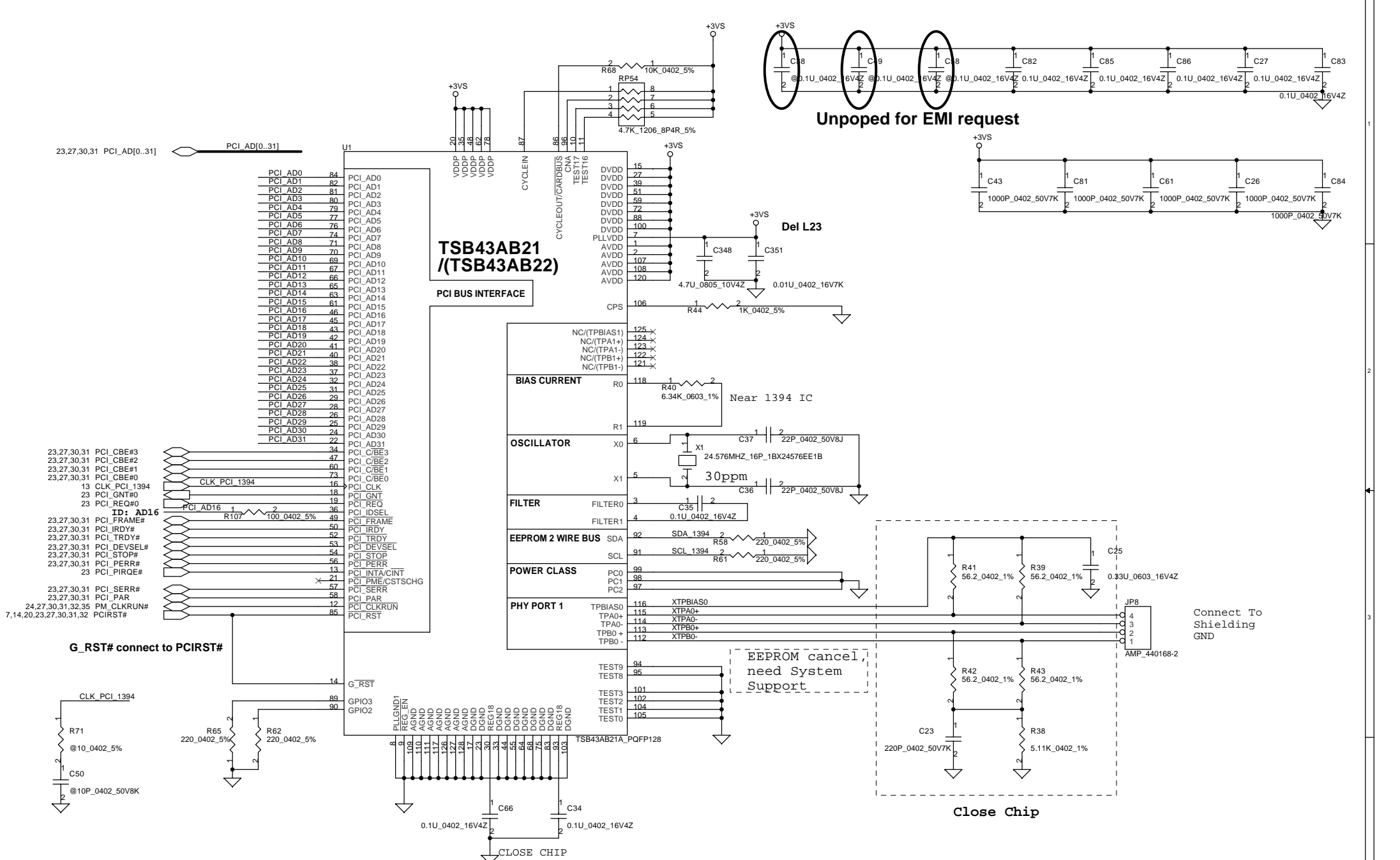
reserved for BCM4401(10/100)

RJ45 MDI3+	R32	1	2	@0.0402 5%
RJ45 MDI3-	R33	1	2	@0.0402 5%
RJ45 MDI2+	R34	1	2	@0.0402 5%
RJ45 MDI2-	R35	1	2	@0.0402 5%



Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 78 of 101

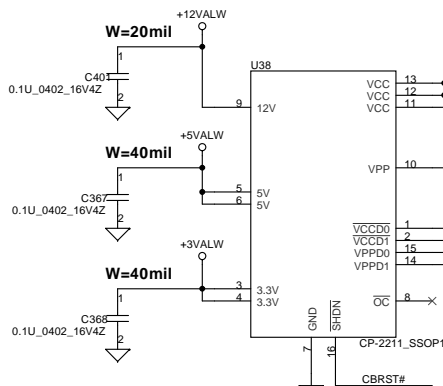
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



** GPIO2 and GPIO3 defaults as an input and if it is not implemented, it is recommended that it be pulled low to ground with a 220 ohm resistor.

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 79 of 101



23,27,29,31 PCI_AD[0..31] \Rightarrow PCI_AD[0..31]
 23,27,29,31 PCI_CBE#[0..3] \Rightarrow PCI_CBE#[0..3]

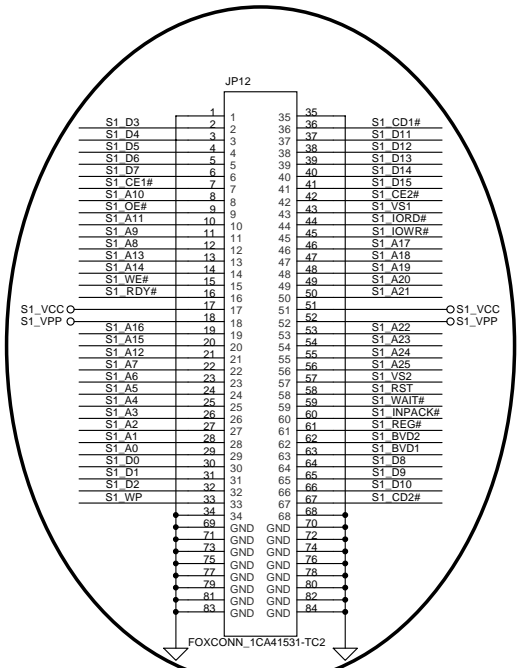
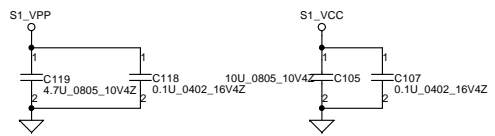
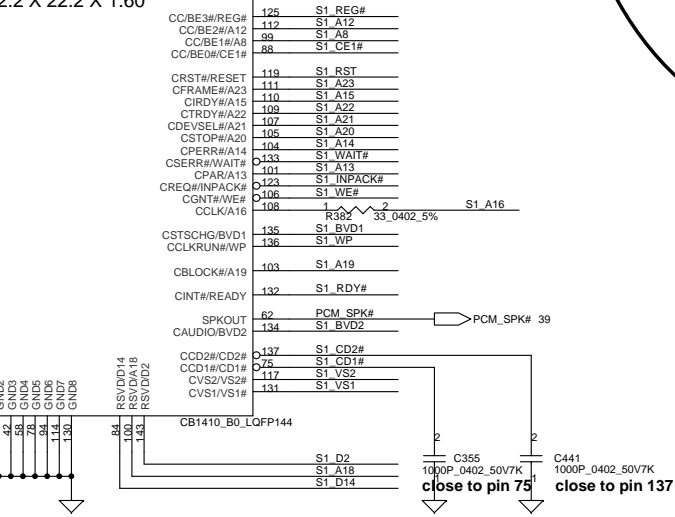
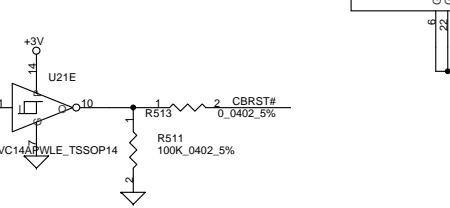
PCI_AD31	3	AD31	CAD31/D10	144	S1_D10
PCI_AD30	4	AD30	CAD30/D9	142	S1_D9
PCI_AD29	5	AD29	CAD29/D8	141	S1_D8
PCI_AD28	6	AD28	CAD28/D8	140	S1_D8
PCI_AD27	7	AD27	CAD27/D0	139	S1_D0
PCI_AD26	8	AD26	CAD26/A0	129	S1_A0
PCI_AD25	9	AD25	CAD25/A1	128	S1_A1
PCI_AD24	10	AD24	CAD24/A2	127	S1_A2
PCI_AD23	11	AD23	CAD23/A3	124	S1_A3
PCI_AD22	12	AD22	CAD22/A4	121	S1_A4
PCI_AD21	13	AD21	CAD21/A5	120	S1_A5
PCI_AD20	14	AD20	CAD20/A6	118	S1_A6
PCI_AD19	15	AD19	CAD19/A25	116	S1_A25
PCI_AD18	16	AD18	CAD18/A7	115	S1_A7
PCI_AD17	17	AD17	CAD17/A24	113	S1_A24
PCI_AD16	18	AD16	CAD17/A17	98	S1_A17
PCI_AD15	19	AD15	CAD16/A17	96	S1_IOWR#
PCI_AD14	20	AD14	CAD15/IOWR#	97	S1_A9
PCI_AD13	21	AD13	CAD14/A8	93	S1_IORD#
PCI_AD12	22	AD12	CAD13/IORD#	95	S1_A11
PCI_AD11	23	AD11	CAD12/A11	92	S1_OE#
PCI_AD10	24	AD10	CAD11/OE#	91	S1_CE2#
PCI_AD9	25	AD9	CAD10/CE2#	89	S1_A10
PCI_AD8	26	AD8	CAD9/A10	89	S1_D15
PCI_AD7	27	AD7	CAD8/D15	87	S1_D7
PCI_AD6	28	AD6	CAD7/D17	82	S1_D13
PCI_AD5	29	AD5	CAD6/D13	85	S1_D6
PCI_AD4	30	AD4	CAD5/D6	80	S1_D12
PCI_AD3	31	AD3	CAD4/D12	81	S1_D5
PCI_AD2	32	AD2	CAD3/D5	77	S1_D11
PCI_AD1	33	AD1	CAD2/D11	79	S1_D4
PCI_AD0	34	AD0	CAD1/D4	76	S1_D3
			CAD0/D3		

PQFP 144
22.2 X 22.2 X 1.60

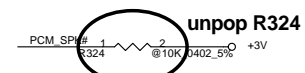
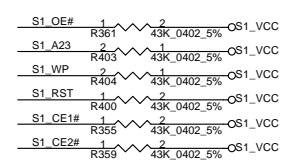
PCI_CBE#3	12	C/BE#3	CC/BE#3/REG#	125	S1_REG#
PCI_CBE#2	27	C/BE#2	CC/BE#2/A12	112	S1_A12
PCI_CBE#1	37	C/BE#1	CC/BE1#	99	S1_A8
PCI_CBE#0	48	C/BE#0	CC/BE0#/CE1#	88	S1_CE1#

7,14,20,23,27,29,31,32	PCIRST#	200	PCIRST#	200	RST#	119	S1_RST
23,27,29,31	PCI_FRAME#	280	FRAME#	280	FRAME#	111	S1_A23
23,27,29,31	PCI_IRDY#	290	IRDY#	290	IRDY#	110	S1_A15
23,27,29,31	PCI_TRDY#	310	TRDY#	310	CIRDY#/A15	109	S1_A22
23,27,29,31	PCI_DEVSEL#	320	DEVSEL#	320	CTRDY#/A22	107	S1_A21
23,27,29,31	PCI_STOP#	330	STOP#	330	CDEVSEL#/A21	105	S1_A20
23,27,29,31	PCI_PERR#	340	PERR#	340	CSTOP#/A20	104	S1_A14
23,27,29,31	PCI_SERR#	350	SERR#	350	CPERR#/A14	103	S1_WAIT#
23,27,29,31	PCI_PAR#	360	PAR#	360	CSERR#/WAIT#	101	S1_A13
23	PCI_REQ#2	10	PCI_REQ#2	10	CPARA13	123	S1_INPACK#
23	PCI_GNT#2	20	GNT#	20	CREQ#/INPACK#	108	S1_WE#
13	CLK_PCI_PCM	210	CLK_PCI_PCM	210	CGNT#/WE#	106	S1_WP
			CLK_PCI_PCM	210	CCLK/A16	108	R382 33.0402_5%
27,31,35	PCM_PME#	580	RI_OUT#/PME#	580	CTSISCHG/BVD1	135	S1_BVD1
			SUSPEND#	700	CCLKRUN#/WP	136	S1_WP

13	PCI_AD20	13	IDSEL	103	S1_A19		
14,23	PCI_PIRQA#	60	MFUNC0	103	S1_A19		
		61	MFUNC1	132	S1_RDY#		
		64	MFUNC2				
		65	MFUNC3				
		67	MFUNC4				
		68	MFUNC5				
		69	MFUNC6				
24,27,29,31,32,35	PM_CLKRUN#	66	CAUDIO/BVD2	62	PCM_SPK#	39	PCM_SPK#
			CBRST#	134	S1_BVD2	134	S1_BVD2



change to SP01F002800(BCL50)

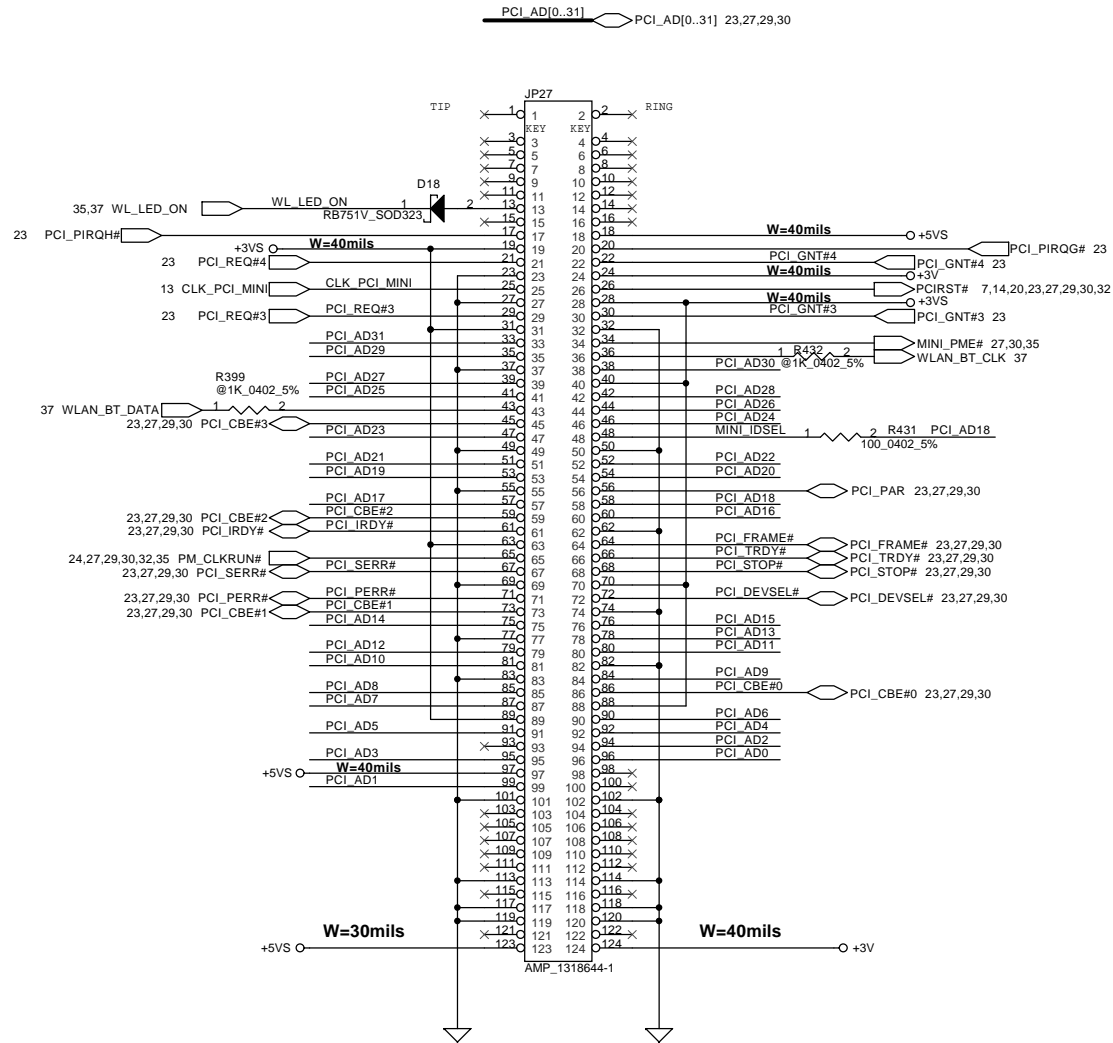
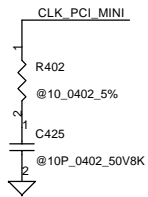
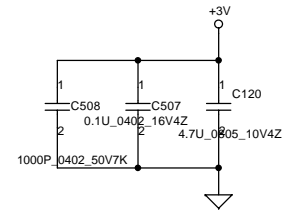
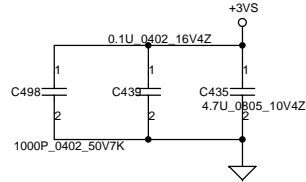
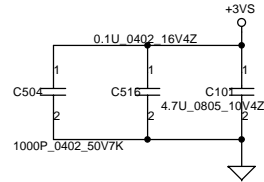
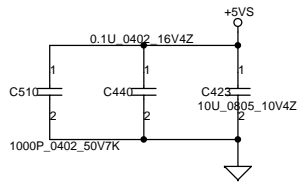


Compal Electronics, Inc.

SCHEMATIC MB LA-2242

Title	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 80 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

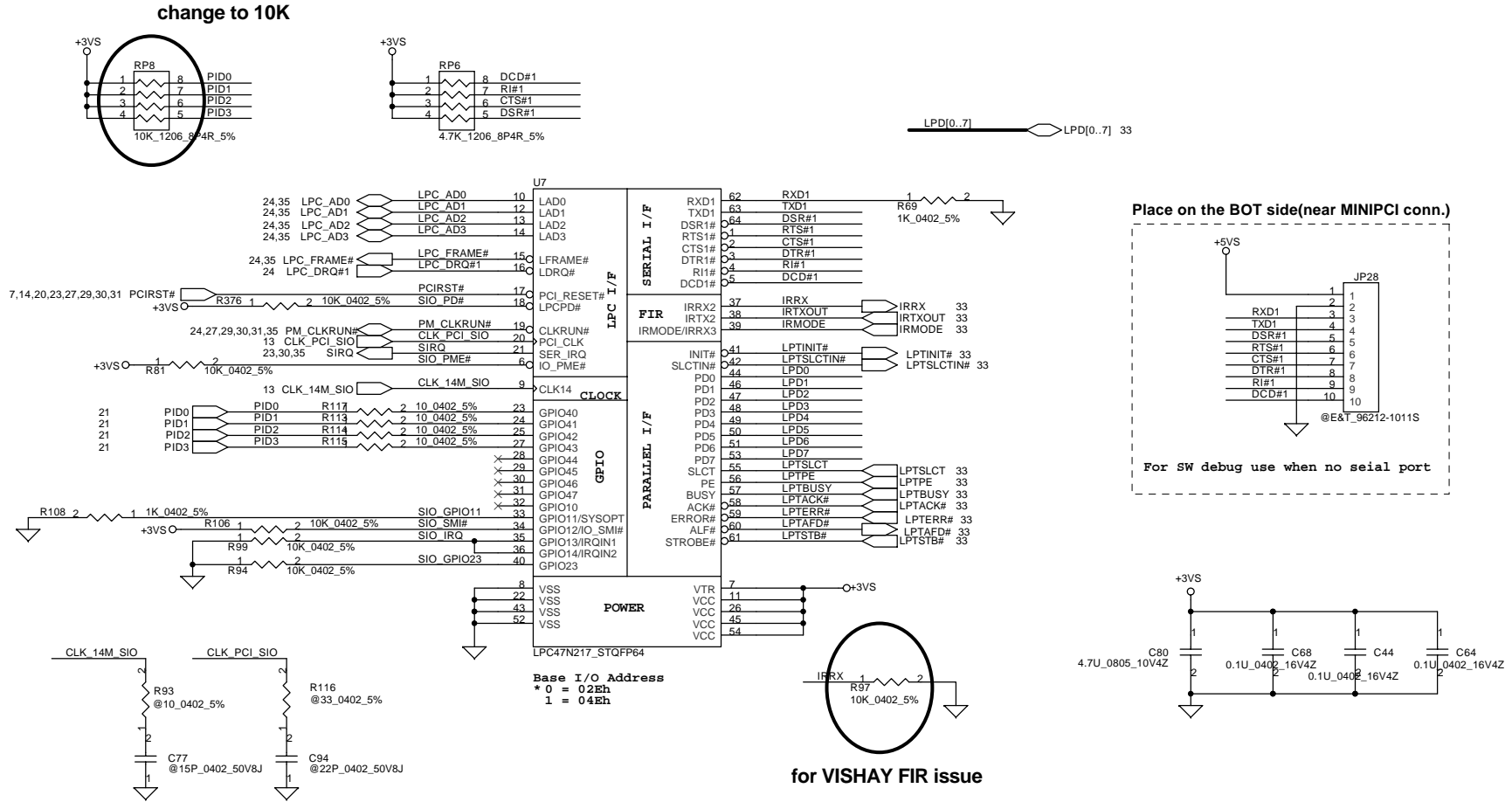


Compal Electronics, Inc.

Title		SCHEMATIC M/B LA-2242	
Size	Document Number	Rev	
	401289	2A	
Date:	星期一, 四月 19, 2004	Sheet	81 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

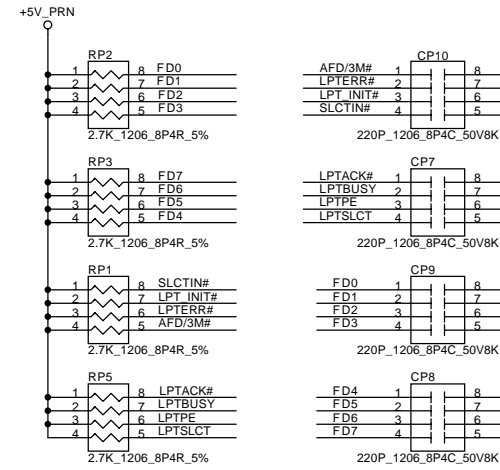
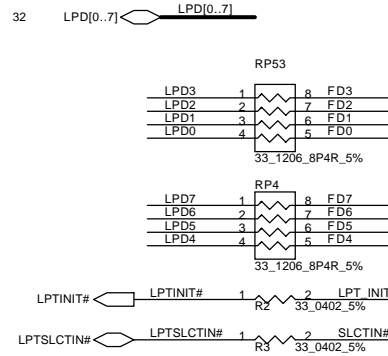
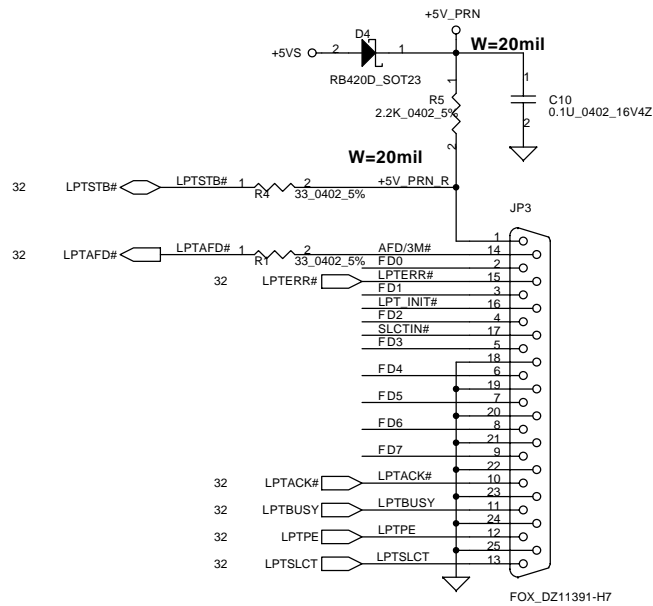
SUPER I/O SMC LPC47N217



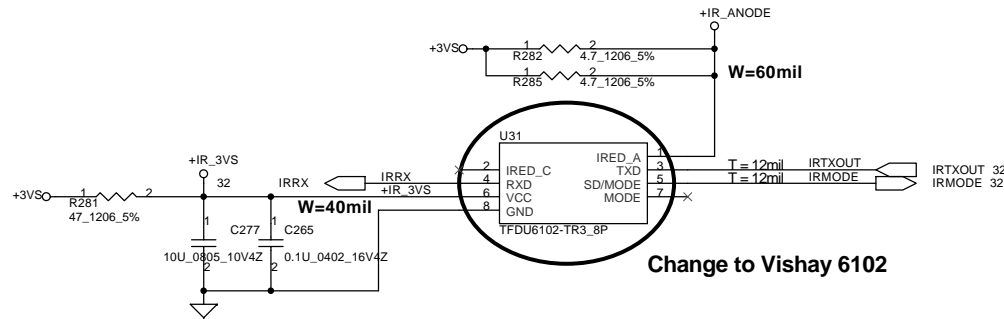
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title: SCHEMATIC M/B LA-2242			
Size: B	Document Number: 401289		Rev: 2A
Date: 星期一, 四月 19, 2004	Sheet: 82	of 101	

Parallel Port



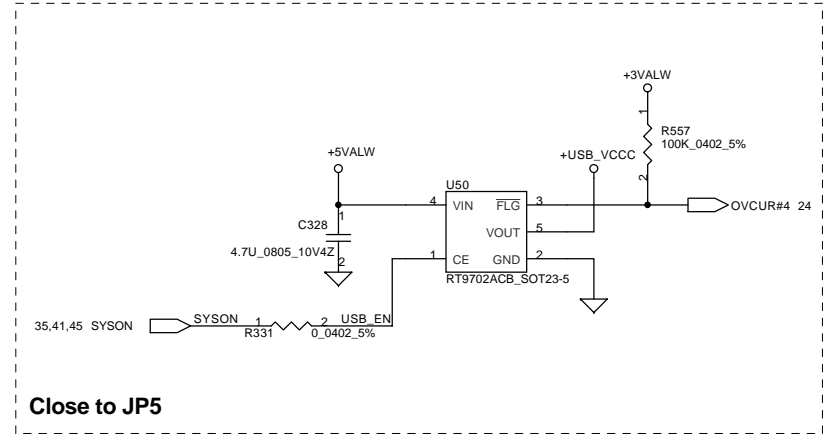
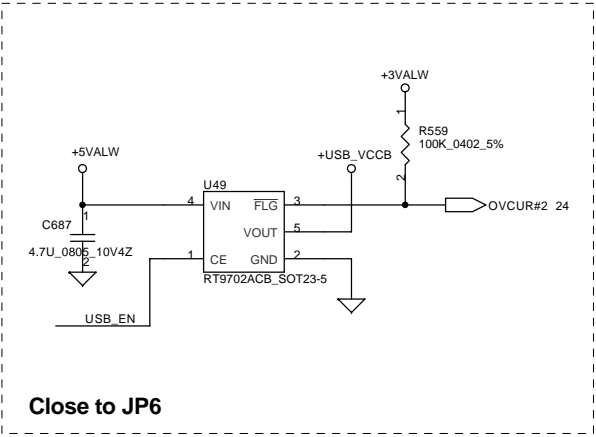
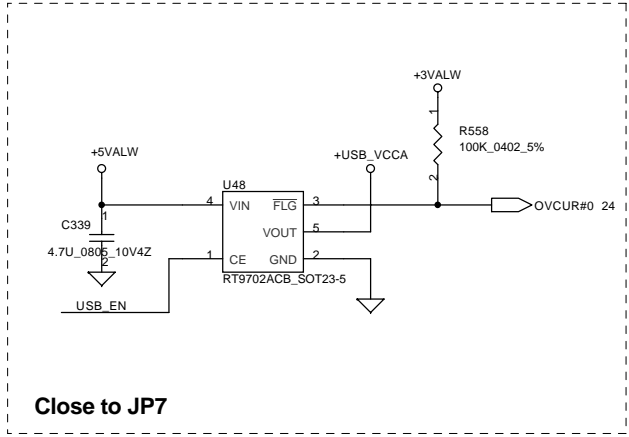
FIR Module



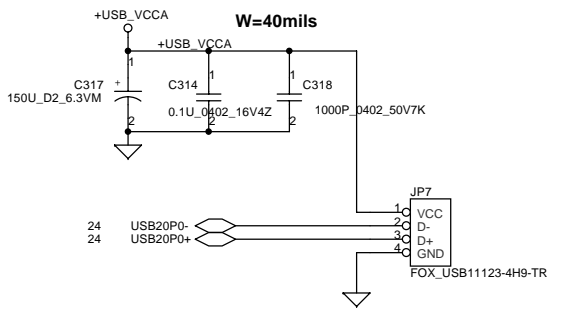
Compal Electronics, Inc.

Title		SCHEMATIC M/B LA-2242	
Size	Document Number	Rev	2A
Date: 星期一, 四月 19, 2004		Sheet 83 of 101	

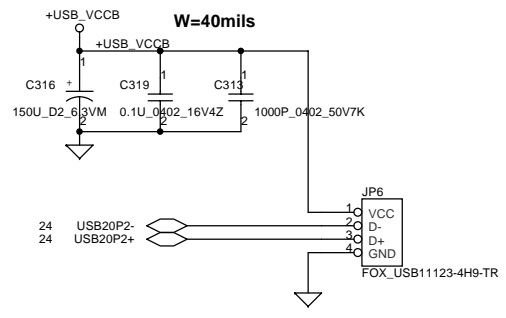
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



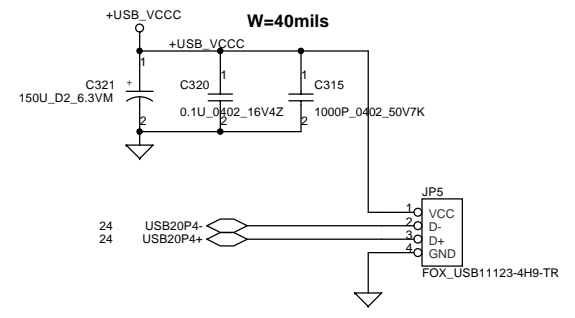
USB CONN. 1



USB CONN. 2

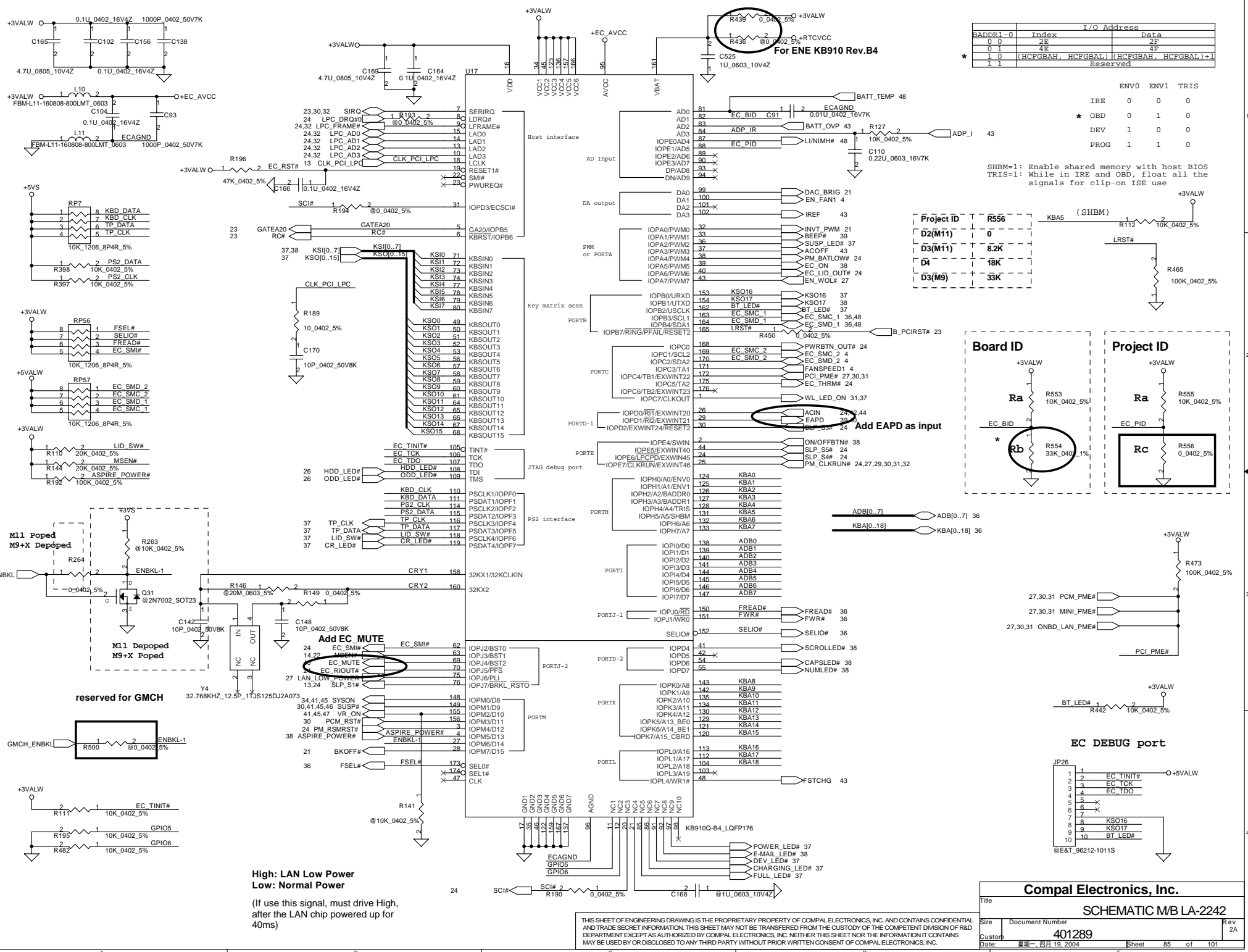


USB CONN. 3



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 84 of 101

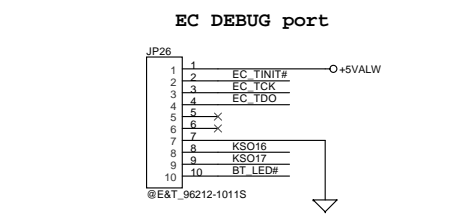
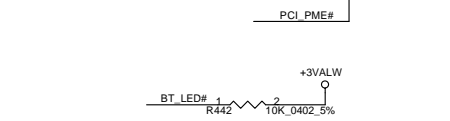
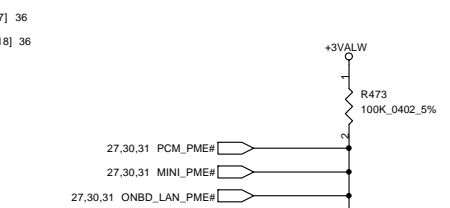
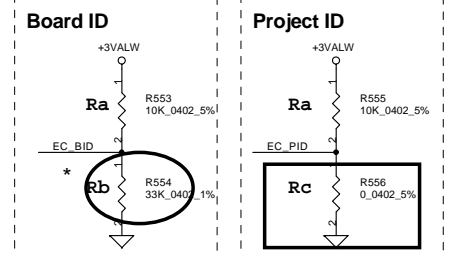


I/O Address	Data
BADDR1-0	Index
0 0	2F
0 1	4E
1 0	{HCFGBAH, HCFGBAL} {HCFGBAH, HCFGBAL}+1
1 1	Reserved

ENVO	ENV1	TRIS
IRE	0	0
* OBD	0	1
DEV	1	0
PROG	1	1

SHBM=1: Enable shared memory with host BIOS
 TRIS=1: While in IRE and OBD, float all the signals for clip-on ISE use

Project ID	R556
D2(M11)	0
D3(M11)	8.2K
D4	18K
D3(M9)	33K



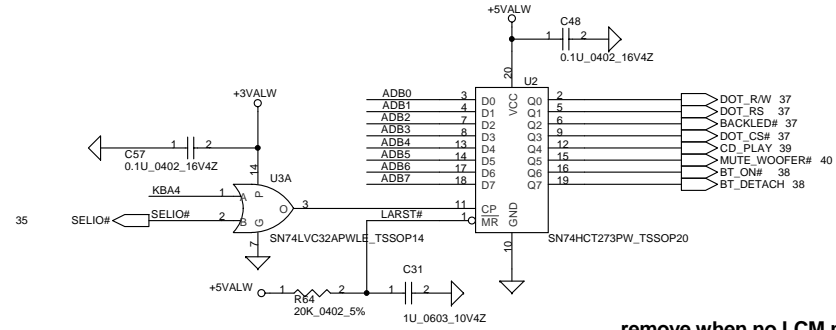
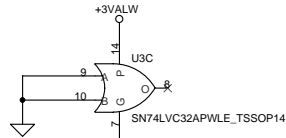
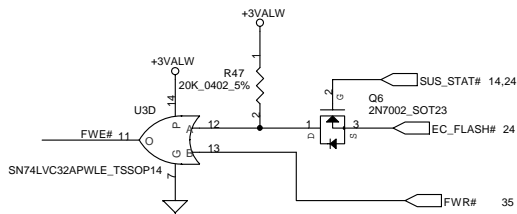
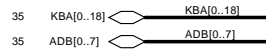
Compal Electronics, Inc.

Title: **SCHEMATIC M/B LA-2242**

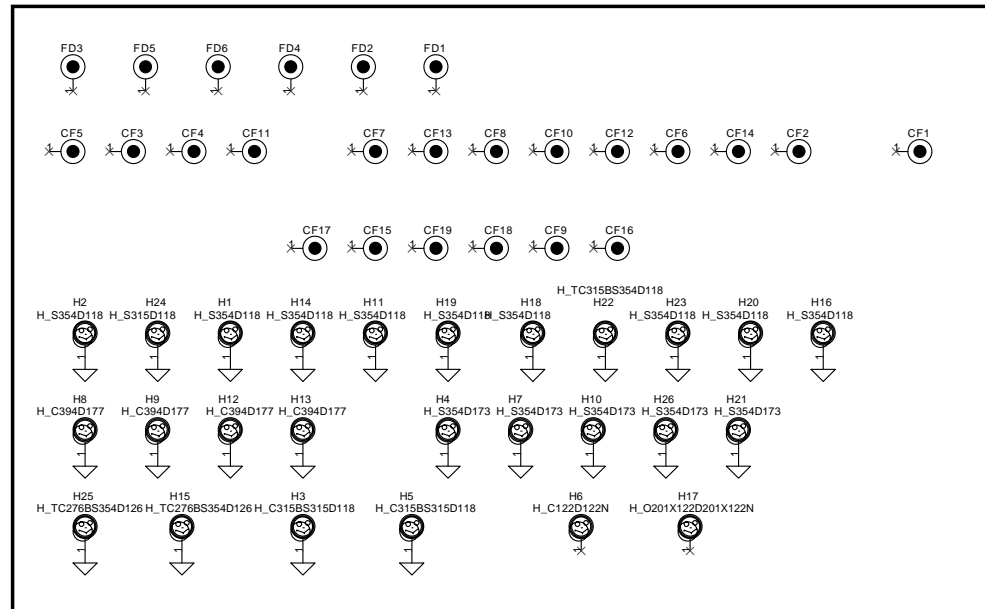
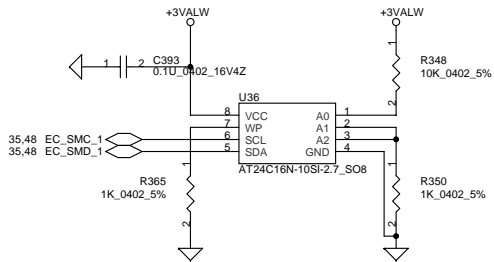
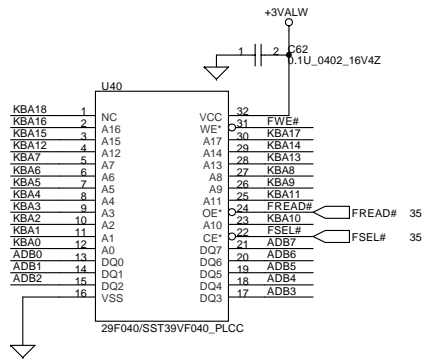
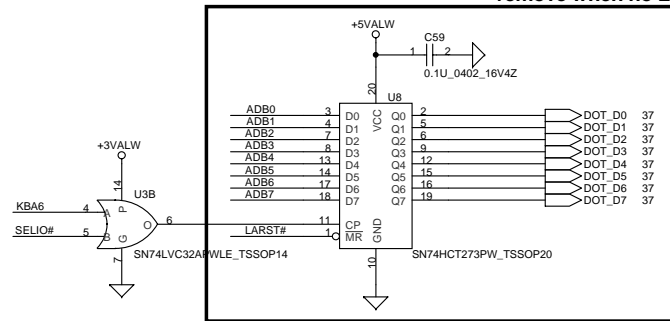
Size	Document Number	Rev
Customer	401289	2A
Date	星期二, 四月 19, 2004	Sheet 85 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

High: LAN Low Power
Low: Normal Power
 (If use this signal, must drive High, after the LAN chip powered up for 40ms)



remove when no LCM module



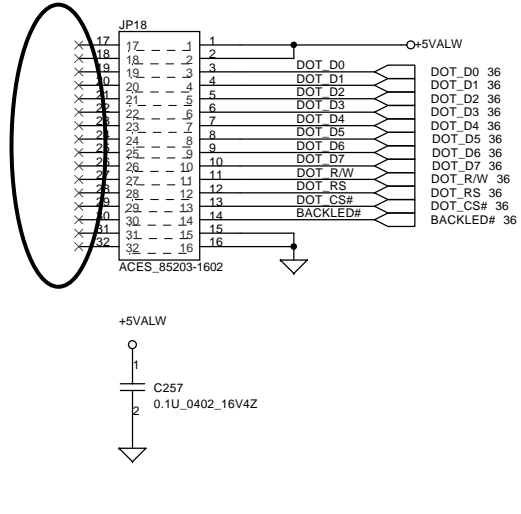
Compal Electronics, Inc.

Title		SCHEMATIC M/B LA-2242	
Size	Document Number	401289	
Date:	日期: 四月 19, 2004	Sheet	86 of 101

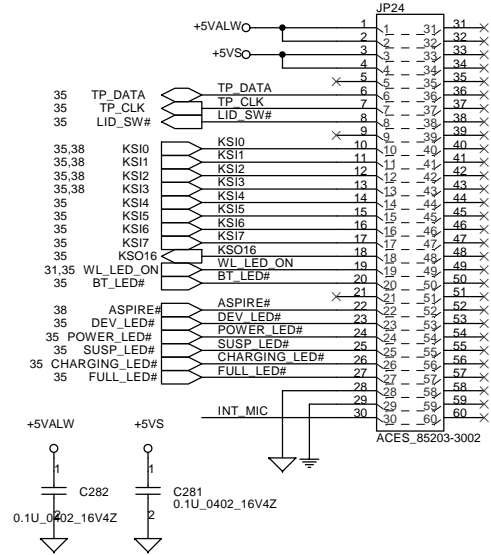
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Rev 2A

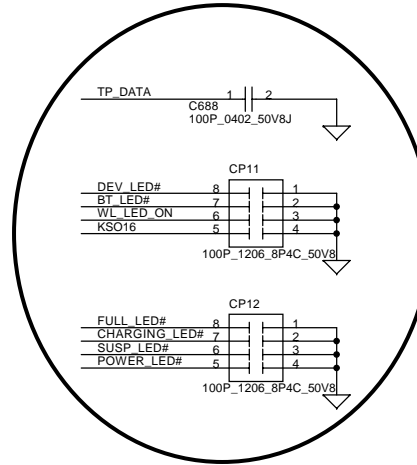
To LCM Board



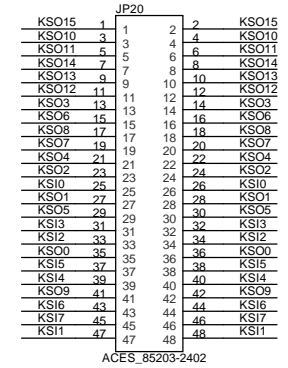
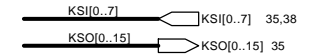
To T/P Board



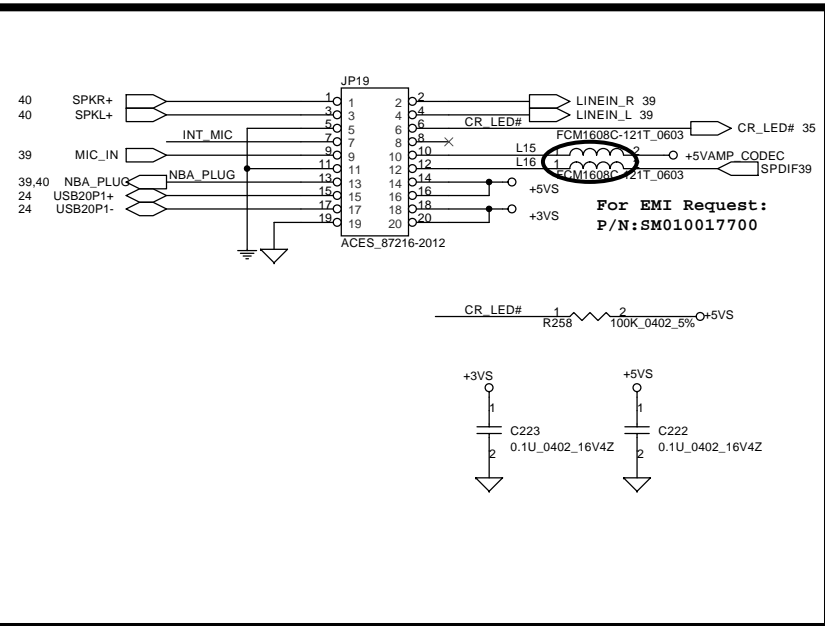
Add CP11,CP12,C688



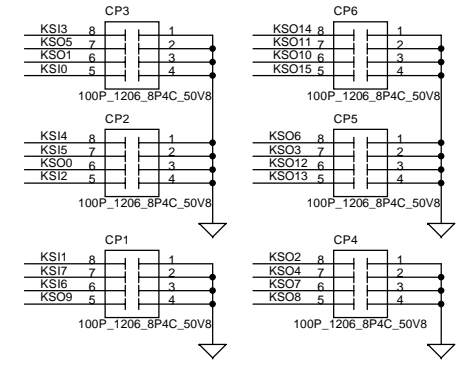
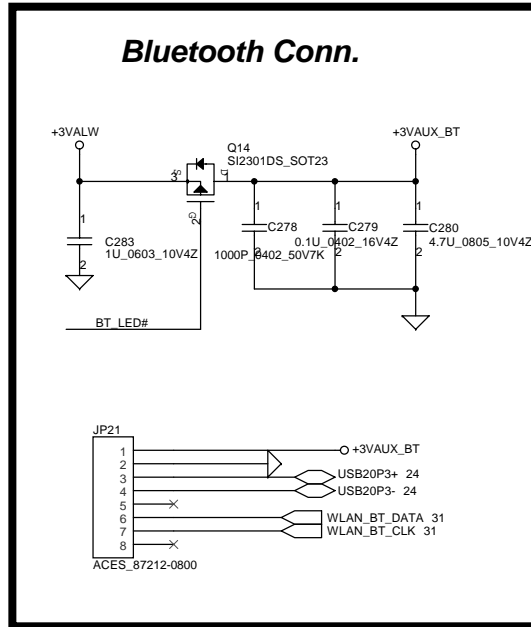
INT_KBD CONN.



To Card Reader Board



Bluetooth Conn.



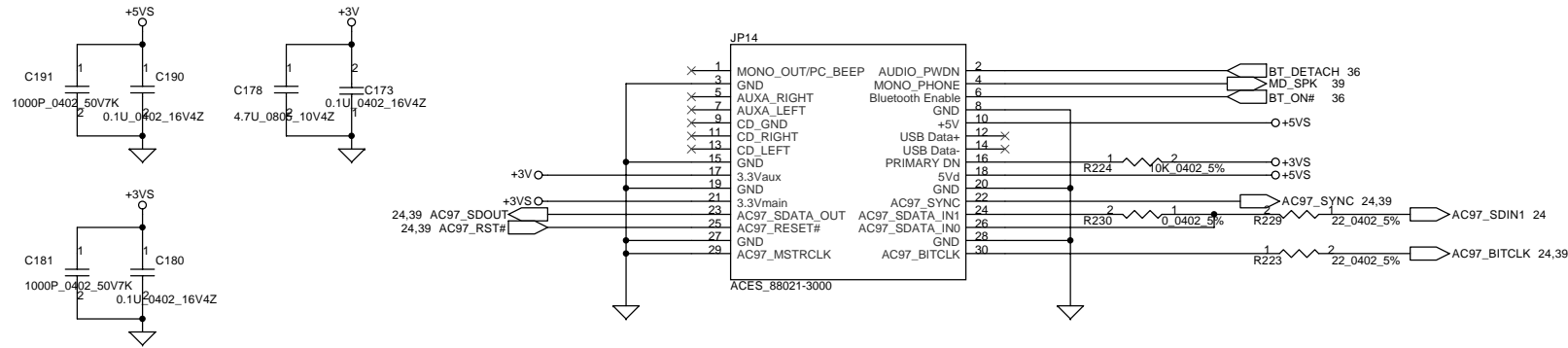
Compal Electronics, Inc.

Schematic M/B LA-2242

Title	Document Number		Rev
Size	401289		2A
Date:	星期一, 四月 19, 2004	Sheet	87 of 101

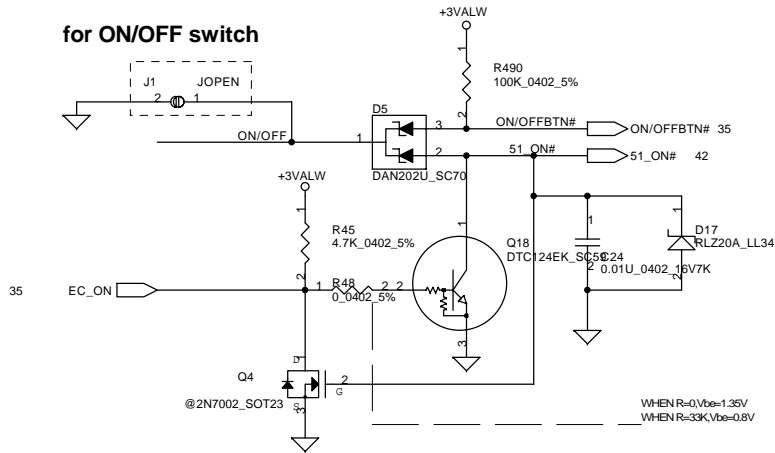
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

MDC Conn.

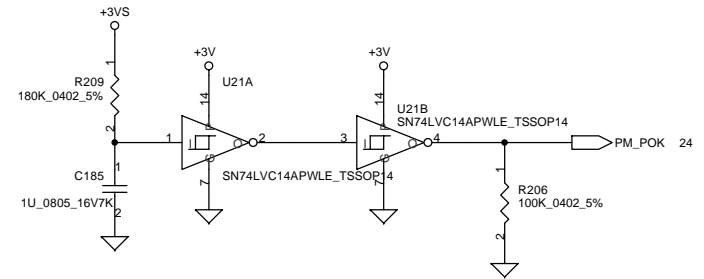


ON/OFF BUTTON

for ON/OFF switch

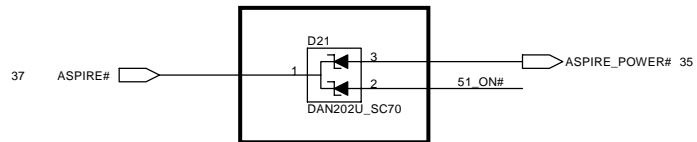


Power OK Circuit

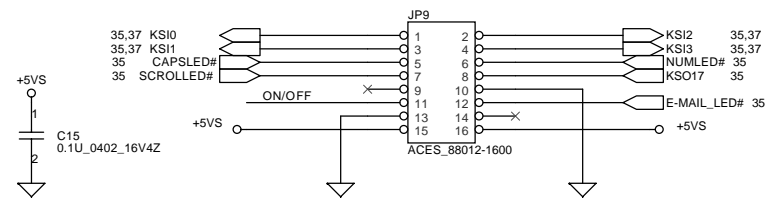


ASPIRE POWER

remove when no MEDIA/B



POWER/B CONN



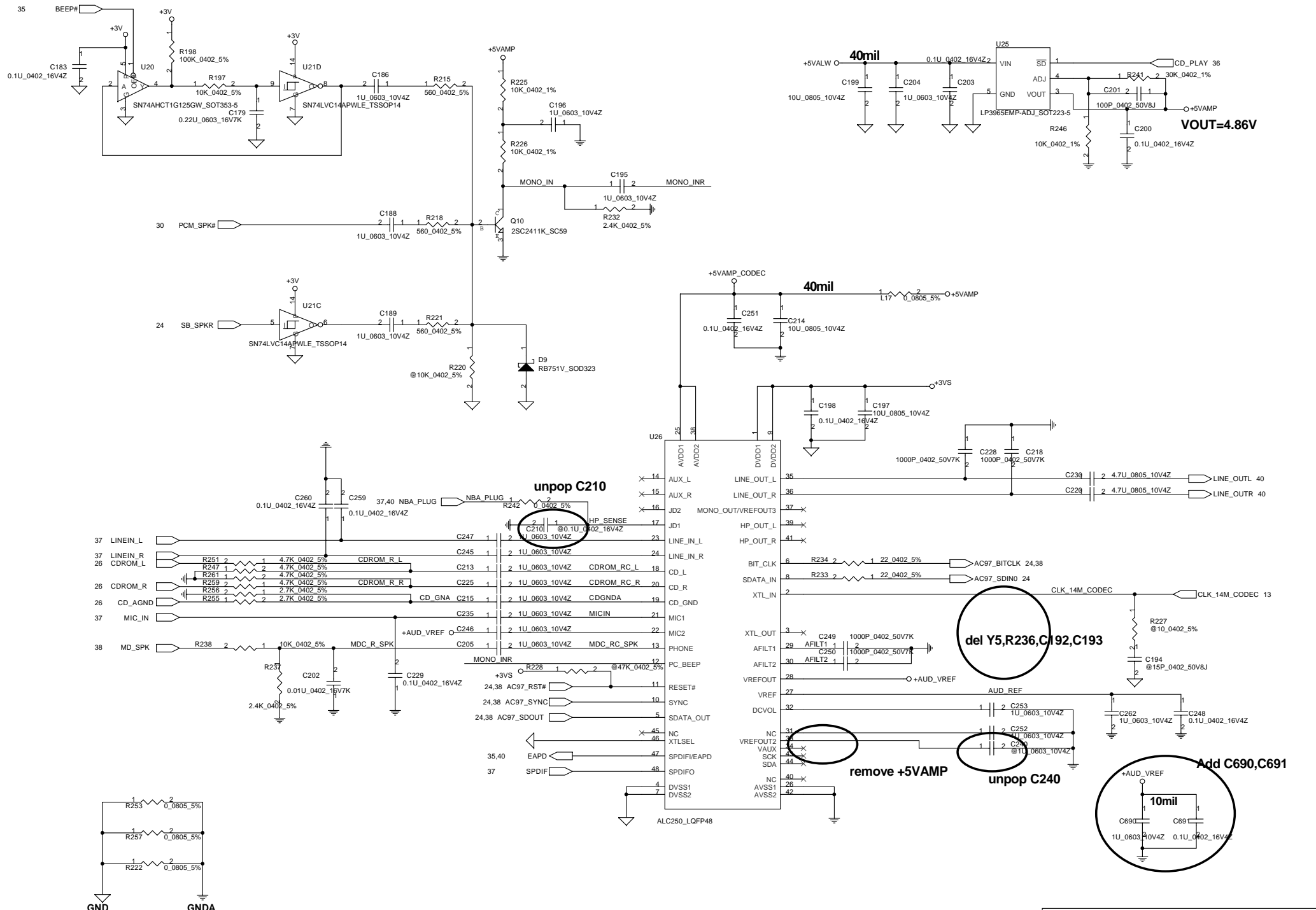
Compal Electronics, Inc.

Title SCHEMATIC M/B LA-2242

Size Document Number 401289 Rev 2A

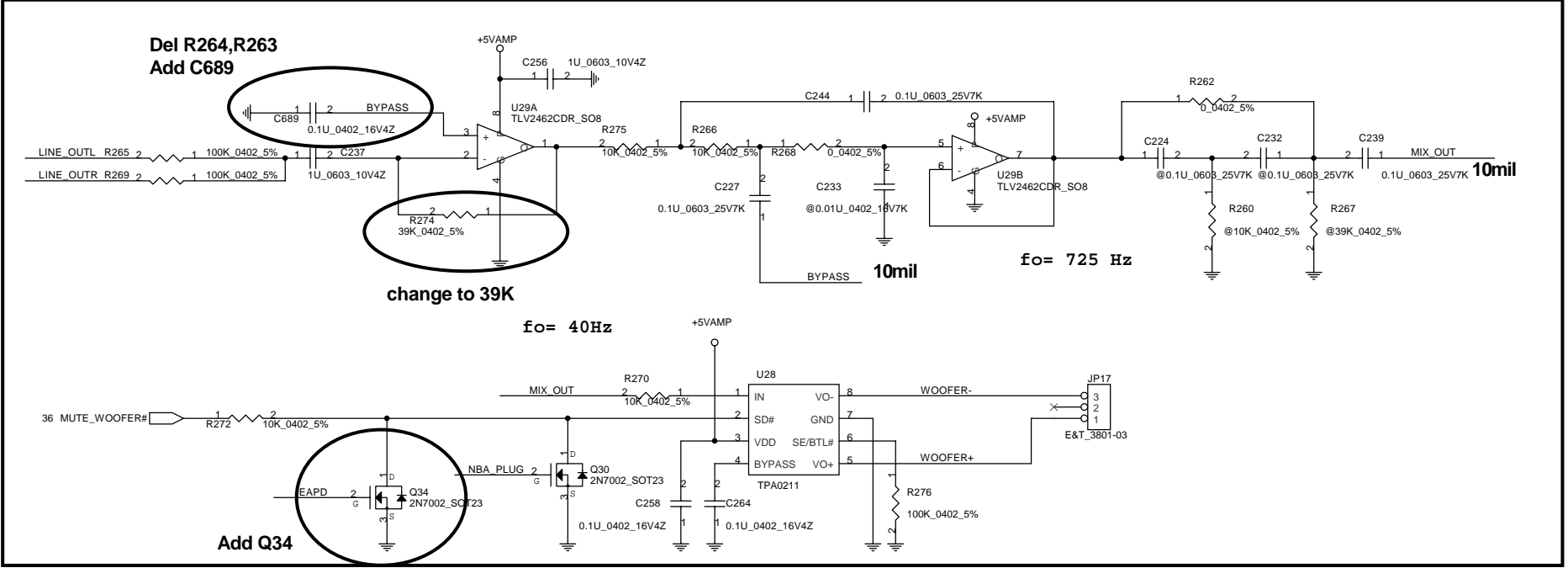
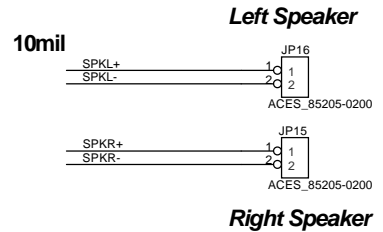
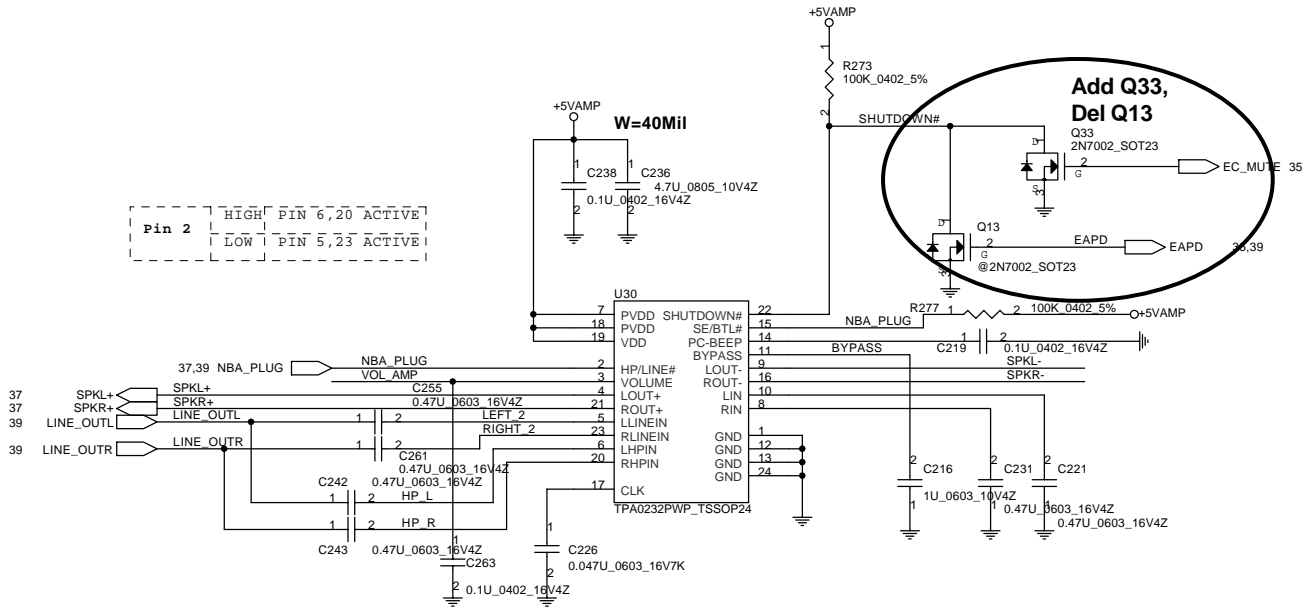
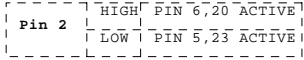
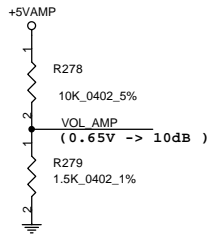
Date: 星期一, 四月 19, 2004 Sheet 88 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
	401289	2A
Custom		
Date:	星期一, 四月 19, 2004	Sheet 89 of 101

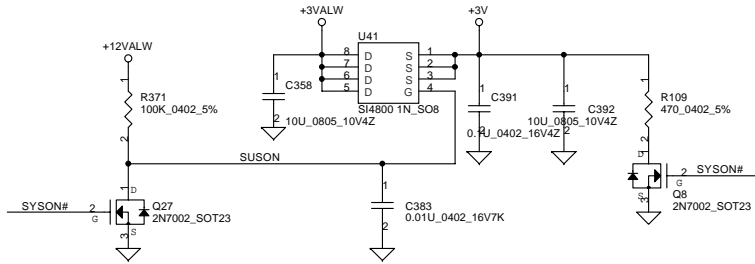
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



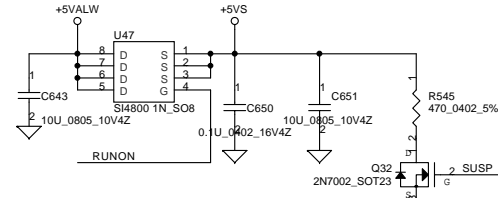
Compal Electronics, Inc.		
Title SCHEMATIC MB LA-2242		
Size	Document Number 401289	Rev 2A
Date:	星期一, 四月 19, 2004	Sheet 90 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

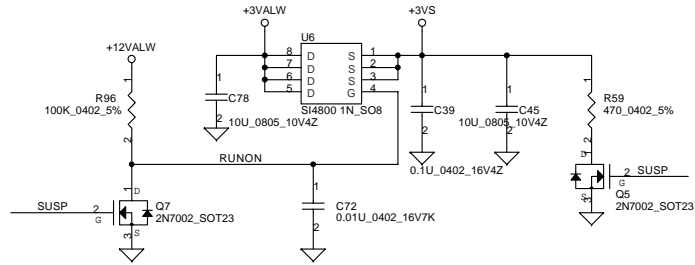
+3VALW to +3V Transfer



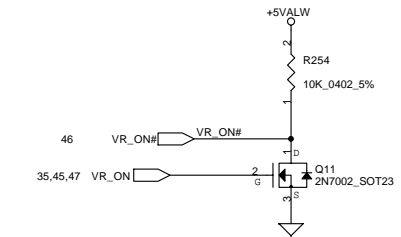
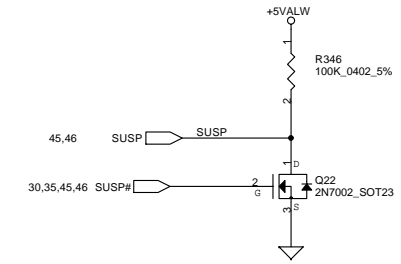
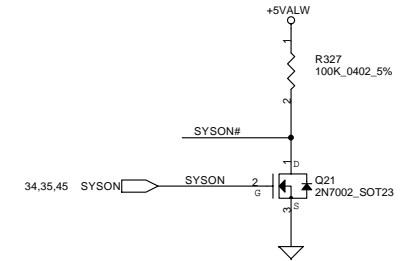
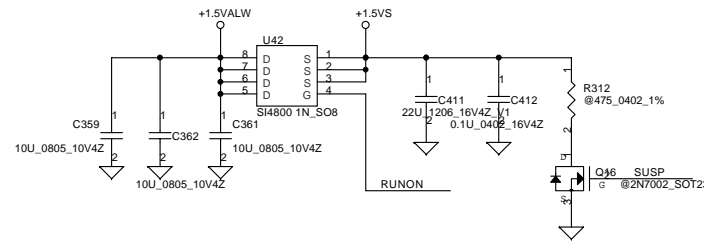
+5VALW to +5VS Transfer



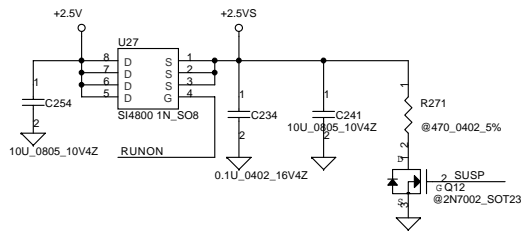
+3VALW to +3VS Transfer



+1.5VALW to +1.5VS Transfer



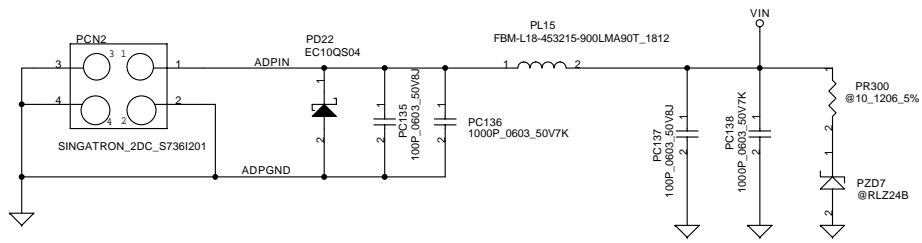
+2.5V to +2.5VS Transfer



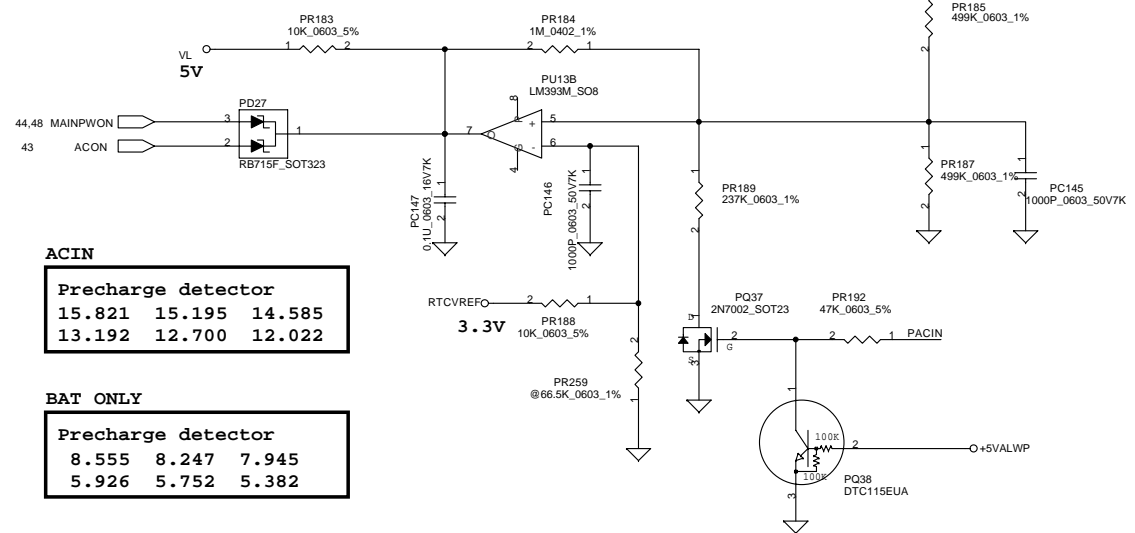
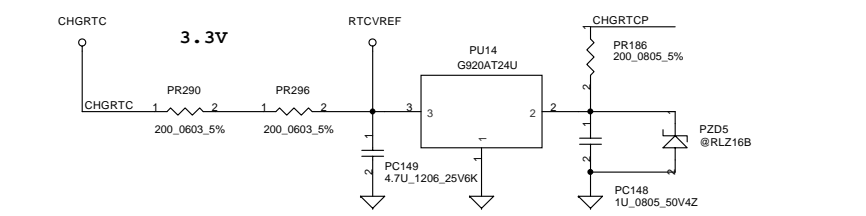
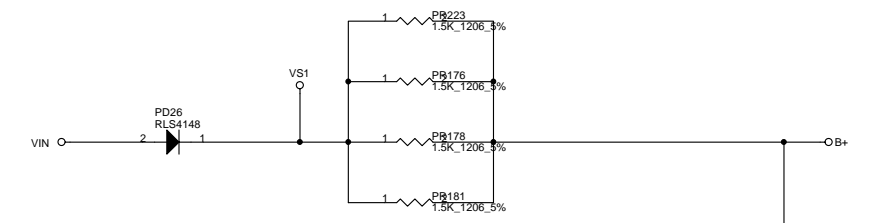
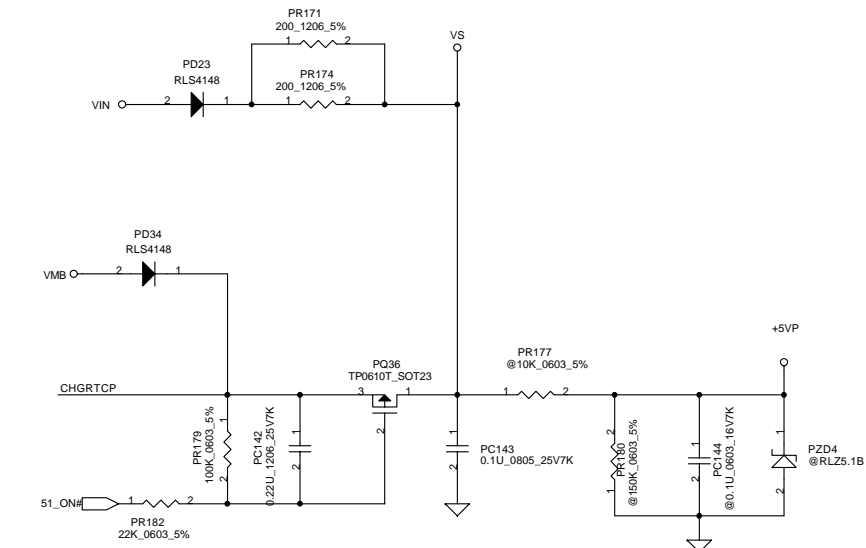
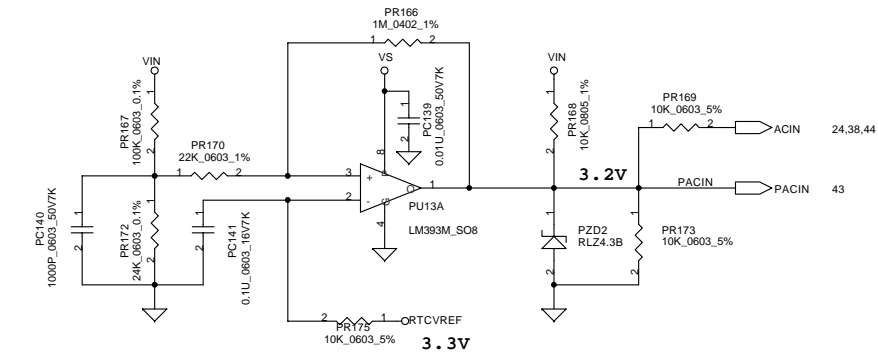
remove on Drongo4

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 91 of 101

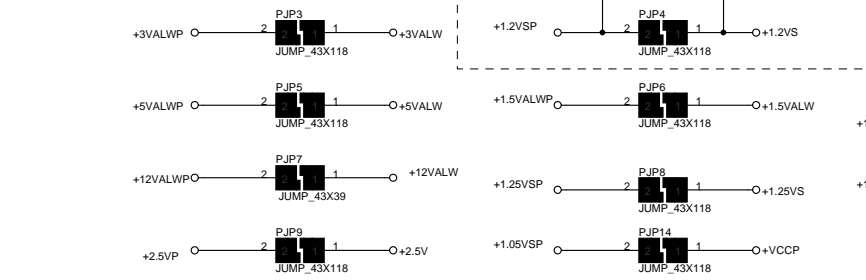
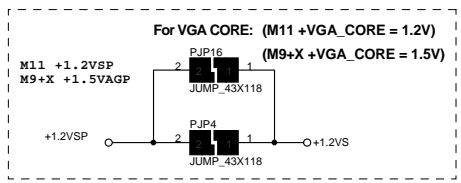


VIN detector		
18.239	17.755	17.273
17.545	17.071	16.587



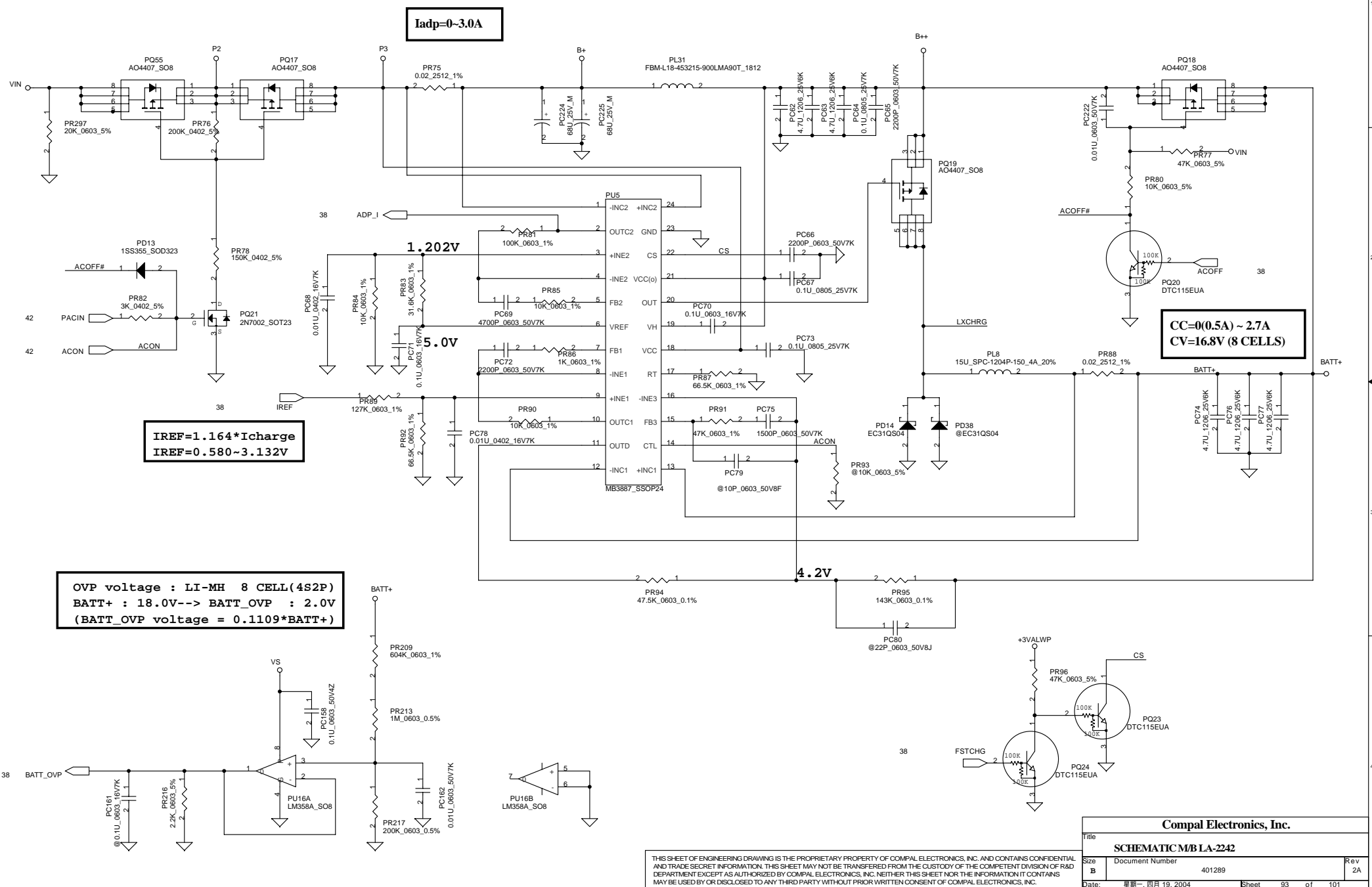
Precharge detector		
15.821	15.195	14.585
13.192	12.700	12.022

Precharge detector		
8.555	8.247	7.945
5.926	5.752	5.382



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
file			
SCHEMATIC MBLA-2242			
Size	Document Number	Rev	
B	401289	2A	
Date:	日期	Sheet	of
星期二, 四月 19, 2004		92	101



Iadp=0-3.0A

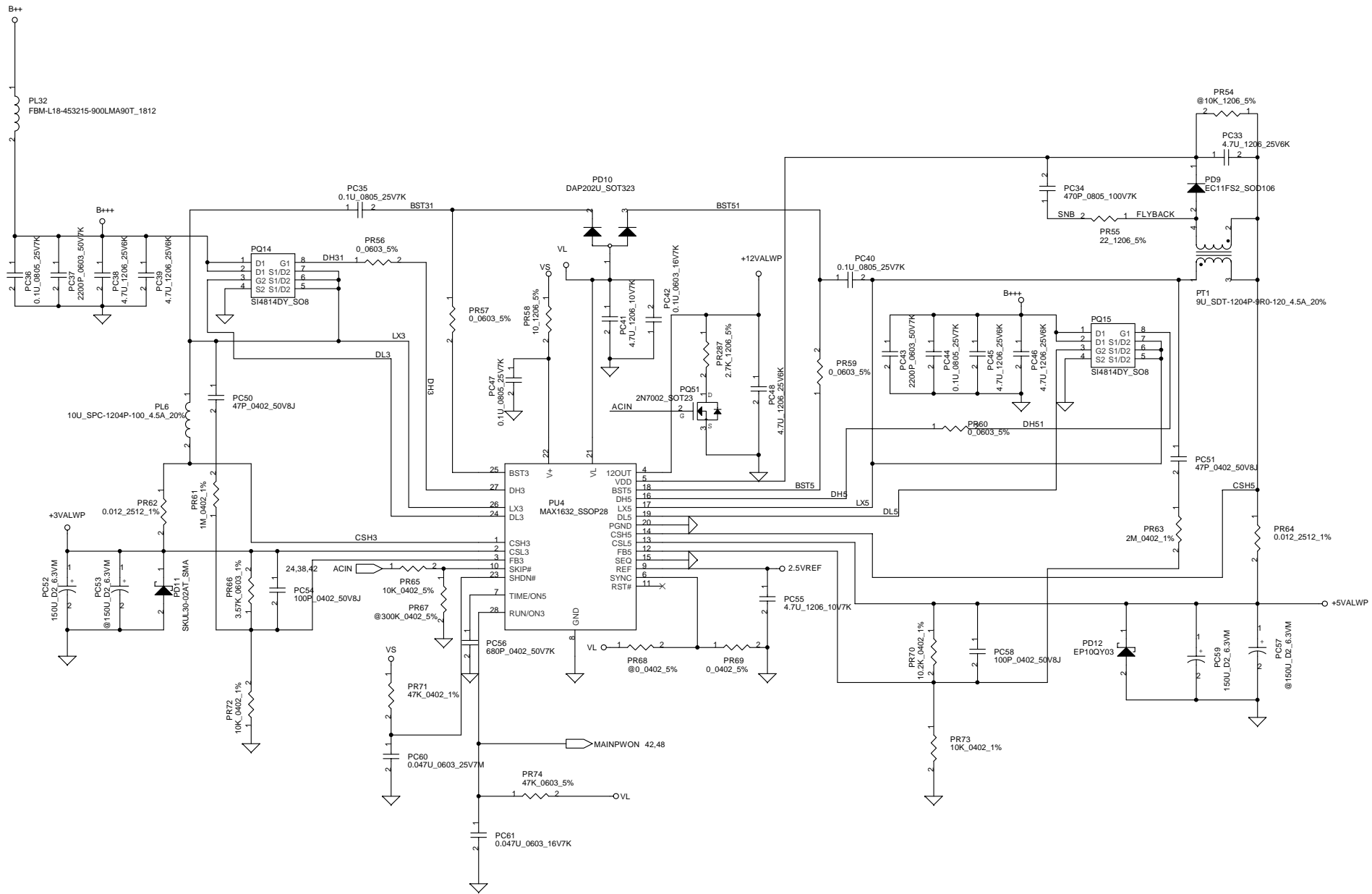
**IREF=1.164*Icharge
IREF=0.580-3.132V**

**OVP voltage : LI-MH 8 CELL(4S2P)
BATT+ : 18.0V--> BATT_OVP : 2.0V
(BATT_OVP voltage = 0.1109*BATT+)**

**CC=(0.05A) ~ 2.7A
CV=16.8V (8 CELLS)**

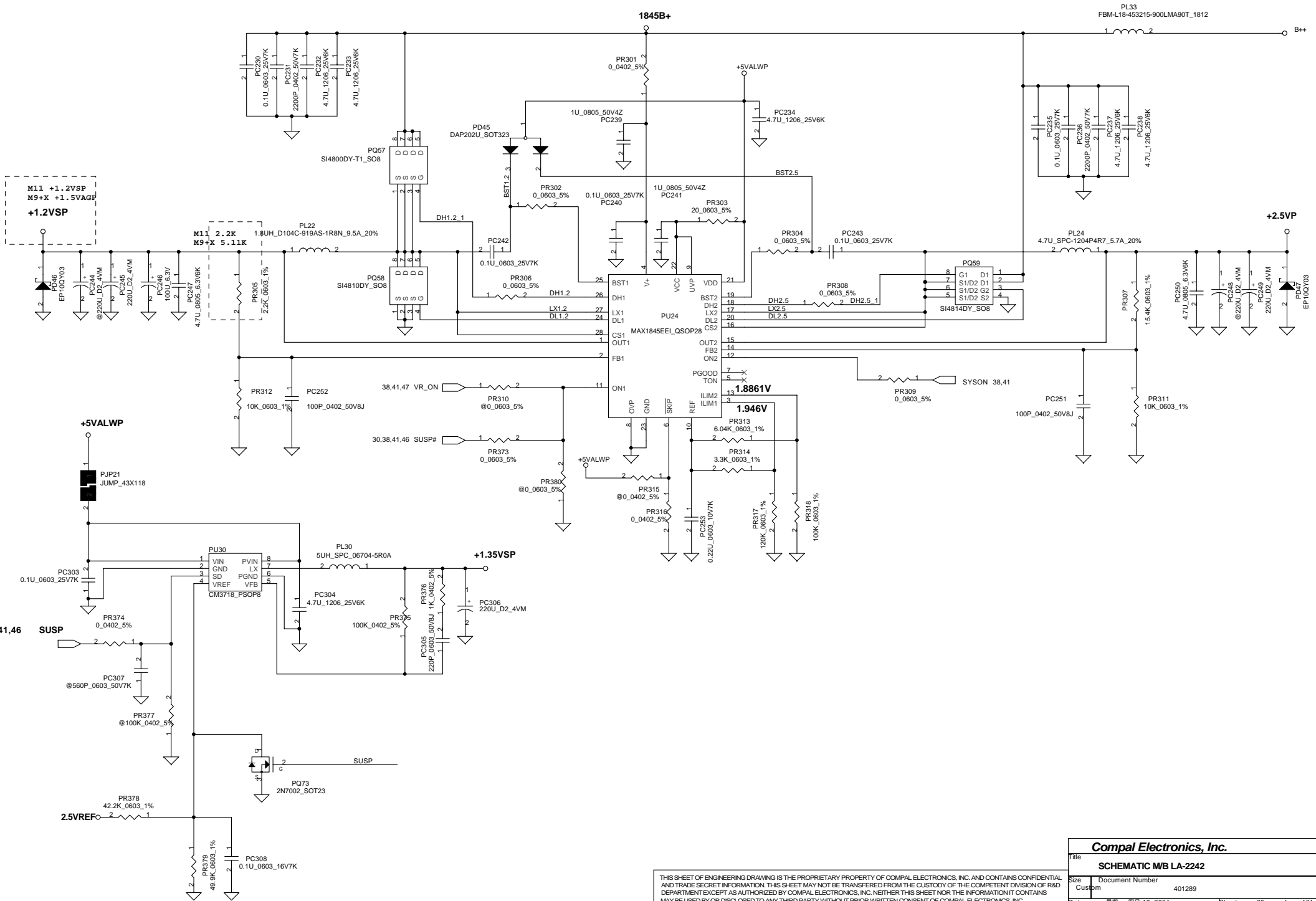
Compal Electronics, Inc.		
Title SCHEMATIC M/B LA-2242		
Size B	Document Number 401289	Rev 2A
Date: 星期一, 四月 19, 2004	Sheet 93	of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

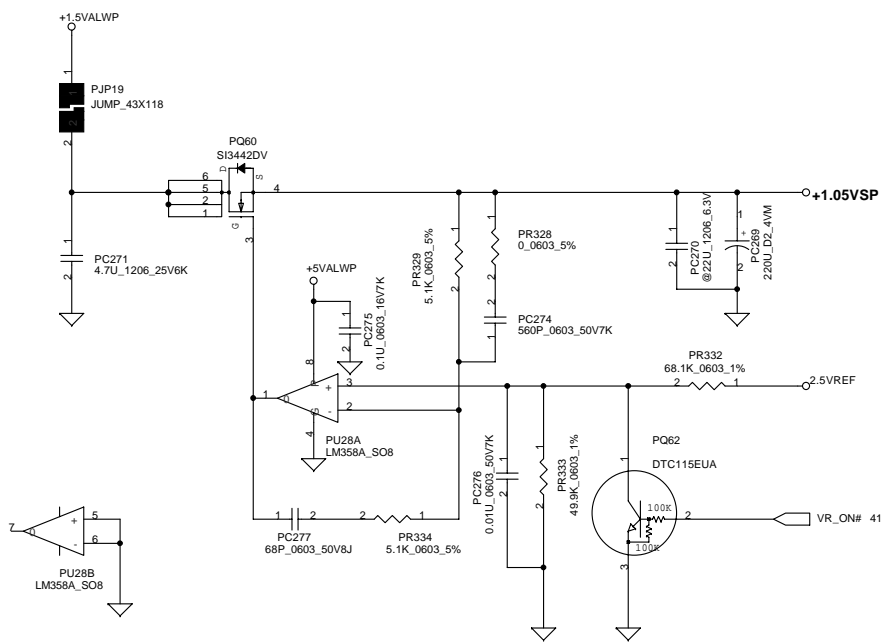
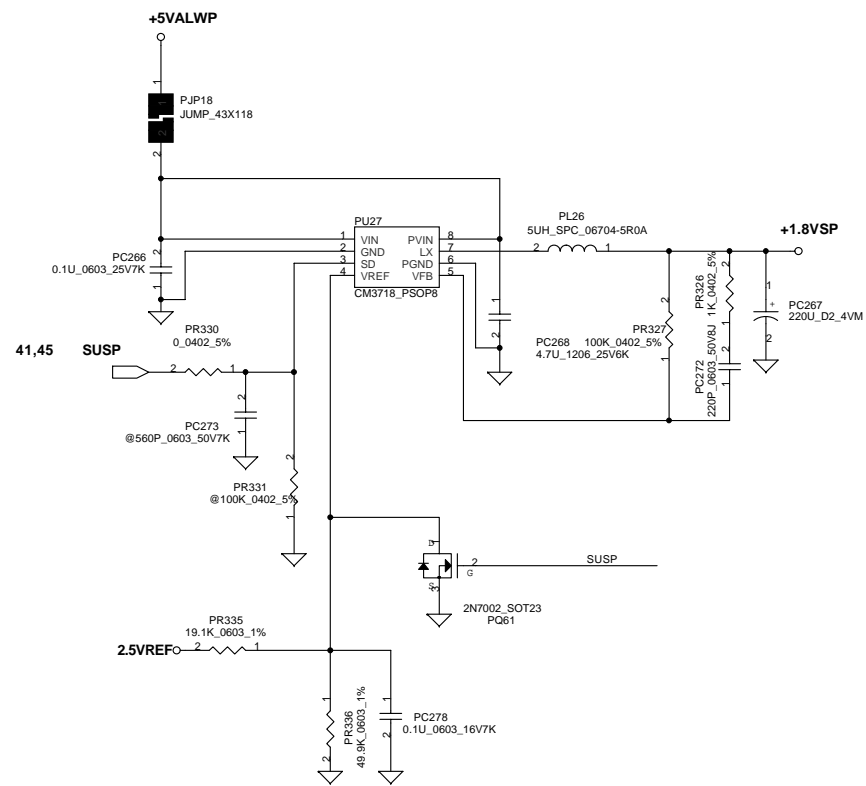
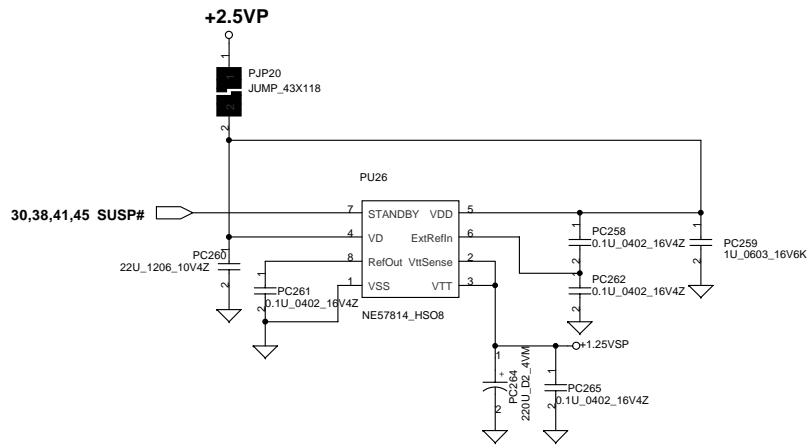
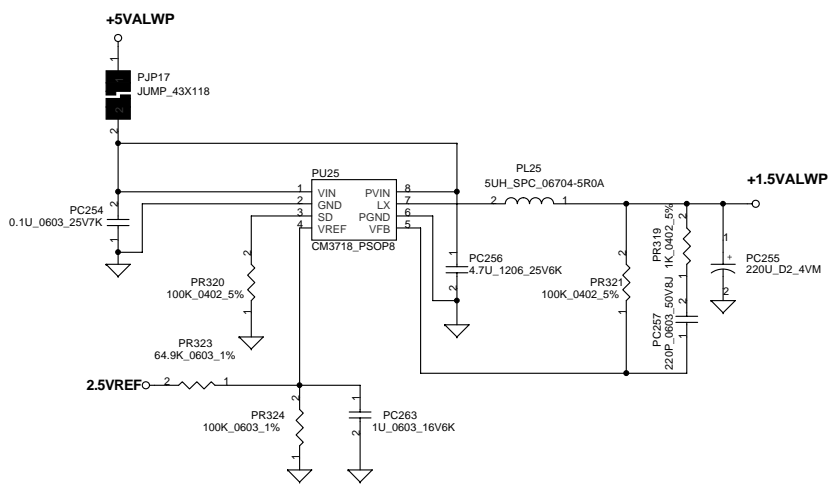
Compal Electronics, Inc.		
Title		
SCHEMATIC/M/BLA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 94 of 101



Compal Electronics, Inc.			
SCHEMATIC M/B LA-2242			
File	Document Number	Rev	
Size	401289	2A	
Custom			
Date:	星期一, 四月 19, 2004	Sheet	95 of 101

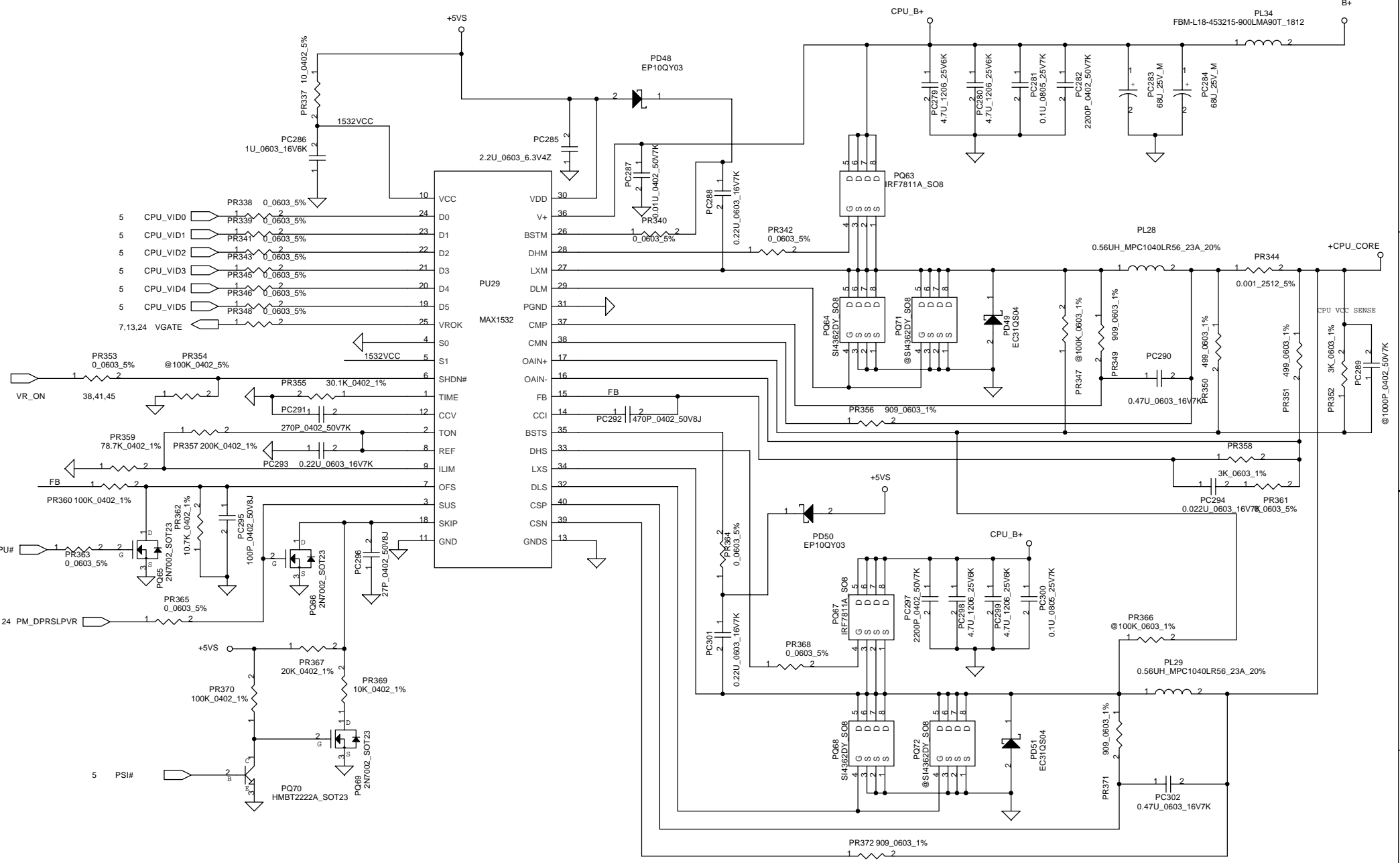
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

+1.5VALWP/+1.8VSP/+1.25VSP/+1.05VSP



Compal Electronics, Inc.			
Title			
SCHEMATIC /WB LA-2242			
Size	Document Number	Rev	
Custom	401289	2A	
Date:	星期一, 四月 19, 2004	Sheet	96 of 101

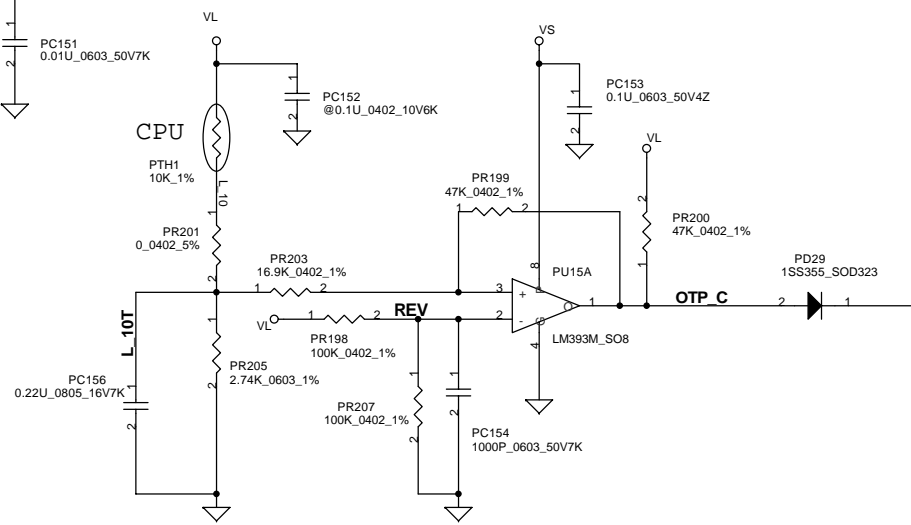
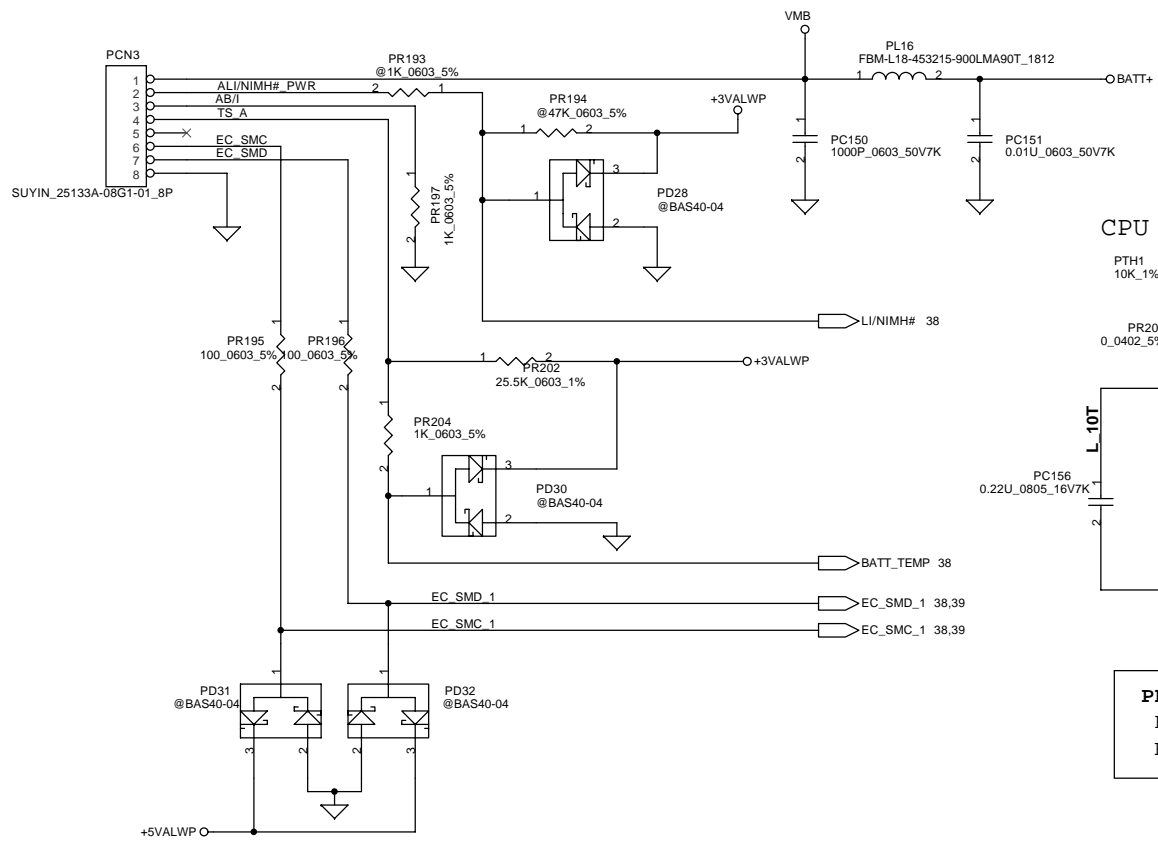
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS



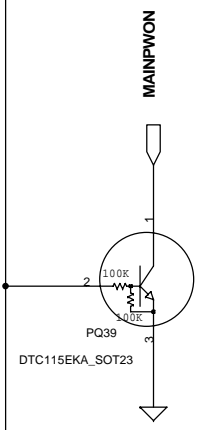
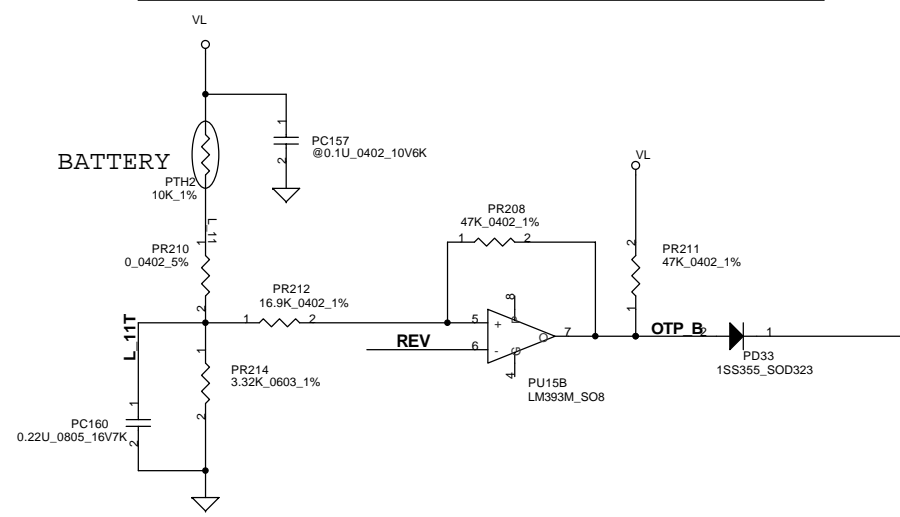
Compal Electronics, Inc.		
SCHEMATIC M/B LA-2242		
Title	Document Number	Rev
Size	401289	2A
Custom		
Date:	星期一 四月 19, 2004	Sheet 97 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

PH1 under CPU bottom side :
 CPU thermal protection at 90 +/-3 degree C
 Recovery at 50 +/-3 degree C



PH2 near main Battery CONN :
 BAT. thermal protection at 84 +/-3 degree C
 Recovery at 45 +/-3 degree C



42.44

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 98 of 101

Version change list (P.I.R. List)

Power section

Item	Reason for change	PG#	Modify List	Date	B.Ver#
1	1.05V oscillate	46	Delete PC270 and add PC269 (220u D2).	2004.02.07	
2	The single "SUSP" will be pull down to 2.2V	45 46	Delete PR331 and PR377.	2004.02.07	
3	To reduce the response time, when charger into CP mode.	43	Change PR81 from 22K to 100K.	2004.02.07	
4	For EMI request	43;44;45;47	Delete PL5,PL7,PL23,PL27 Change PQ63 and PQ67 to IRF7821 Change PR340 and PR364 to 2.2 ohm	2004.02.11	
5	To speed up 1.8V, 1.35V and 1.05V	45 46	Change PR336, PR333 and PR379 to 49.9K Change PC278 and PC308 to 0.1uF Change PR335 to 19.1K Change PR332 to 68.1K Change PR378 to 42.2K	2004.02.12	
6	To reduce +3VALWP power plane negative voltage	44	Change PD11 to SKUL30-02AT	2004.03.01	
7	For EMI request	43;44;45;47	Add PL31,PL32,PL33,PL34 Change PR342 and PR368 to 2.2 ohm Change PR340 and PR364 to 0 ohm	2004.03.01	
8	For EMI request	47	Change PR342 and PR368 to 0 ohm Change PQ63 and PQ67 to IRF7811A Change PQ64 and PQ68 to SI4362	2004.03.16	
9	Adjust Vin detector	42	Change PR167 to 100K_0603_0.1% Change PR172 to 24K_0603_0.1% Change PR170 to 22K_0603_1% Change PR166 to 1M_0402_1%	2004.03.16	

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title		
SCHEMATIC M/B LA-2242		
Size	Document Number	Rev
B	401289	2A
Date:	星期一, 四月 19, 2004	Sheet 99 of 101

Item	Reason for change	PG#	Modify List	Date	
1	PCI_AD[31..0],PCI_CBE#[0..3] reserved	P.27	Correct PCI_AD[31..0],PCI_CBE#[0..3]	2/4	EVT(Rev02)
2	VR_ON# pull up resistor	P.41	Change R254 from 100K to 10K	2/4	EVT(Rev02)
3	AGP Isolating circuit	P.7	Mount U39, unmount R372,R377,R388,R414	2/4	EVT(Rev02)
4	Change Codec to ALC250	P.39	Change U26 to ACL250, mount R242	2/4	EVT(Rev02)
5	Modify VGA strap pin	P.14	Mount R479,R489; unmount R437, R441,R443,R448	2/4	EVT(Rev02)
6	Enter Windows "Beep" noise	P.39	Del C209 and let U26 pin14,15,16 no connect	2/6	DVT(Rev03)
7	For LS-1993 NBA_PLUG signal	P.37	Del R541,Q31	2/6	DVT(Rev03)
8	For DFX	P.24,36,38	Change J1,J2,H22 footprint	2/6	DVT(Rev03)
9	Change USB Power Switch to RT9701CBL	P.34	Change U34,U35, Del R291,R292,R313,R322,R329 Add R557,R558,R559,R560,R562,C685,C686	2/8	DVT(Rev03)
10	Change LAN LED circuit	P.27	Add R562	2/8	DVT(Rev03)
11	For EMI	P.13,16,17, ,23,35,37	Del L15,L16,L31,L28,L23,R542,R543,R283,R284,R471	2/11	DVT(Rev03)
12	Unpoped 0.1UF capacitor for EMI request	P.12,16,17, 26,27,29,30	Del some 0.1UF capacitor for EMI request	2/12	DVT(Rev03)
13	For +LVDDR25 ripple	P.16	Unpoped C518 for LDO issue	3/4	PVT(Rev04)
14	Duplicate AGP_BUSY pill-up	P.24	Del R103	3/4	PVT(Rev04)
15	For BCM5788 +3V_LAN 0.2V leakage issue	P.27	Change VESD[1..3] to +3V_LAN(system power)	3/4	PVT(Rev04)
16	For BCM5788/BCM4401 difference	P.27,28	Del R369 and change T1 to 24ST0023-3 when use BCM4401	3/4	PVT(Rev04)
17	Vishay FIR issue(Nokia 61XX series)	P.32,33	Change U31 to TDFU6102; Poped R97 and change to 10K	3/4	PVT(Rev04)
18	For audio issue	P.35,40	Add Q33,Q34 and EC_MUTE to U17 pin.69 Connect BYPASS from U30 to U29, change R274 to 39K Connect EAPD to EC pin.29	3/4	PVT(Rev04)
19	To simplify Codec circuit	P.36	Unpoped C210,C252, Del Y5,R236,C192,C193 Add C690,C691	3/4	PVT(Rev04)
20	For EMI	P.37	Add C688,CP11,CP12	3/4	PVT(Rev04)

Compal Electronics, Inc.

Title		SCHEMATIC M/B LA-2242	
Size	Document Number	Rev	
B	401289	2A	
Date:	星期一, 四月 19, 2004	Sheet	100 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Item	Reason for change	PG#	Modify List	Date	
1	Add NC solution for M9+X Ball D19/R4	P.16	Add R103,R236	4/13	MP(Rev2.0)
2	Switch +1.5VS(M11) & +1.8VS (M9+X)	P.16	Add R283,R284	4/13	MP(Rev2.0)
3	Switch +VDDR25(M11)& +VDD_PNLIO1.8(M9+X)	P.16	Add R313	4/13	MP(Rev2.0)
4	Add ENBKL inverse ckt for M9+X	P.35	Add R263,R264,Q31	4/13	MP(Rev2.0)
5	For EMI	P.37	Add L15,L16	4/13	MP(Rev2.0)
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Compal Electronics, Inc.

Title		SCHEMATIC M/B LA-2242	
Size	Document Number	Rev	
B	401289	2A	
Date:	星期一, 四月 19, 2004	Sheet	101 of 101

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.