

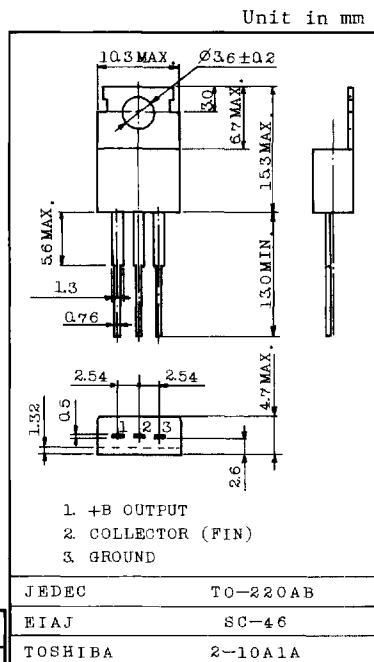
S1854 IS A REGULATOR DRIVER FOR LINE OPERATED TV, WHICH ARE BUILT UP OF ERROR AMPLIFIER TRANSISTOR, STANDARD VOLTAGE ZENER DIODE AND POLY-SILICON RESISTORS ON MONOLITHIC CHIP.

FEATURES:

- . Possible to Eliminate the Output Voltage Adjustment of Regulator Stage In Line Operated TV, Combined with the Usual Power Transistors.
- . High Voltage ($V_{CGO} \geq 150V$)
- . Excellent Temperature Characteristics of Regulated Output Voltage.

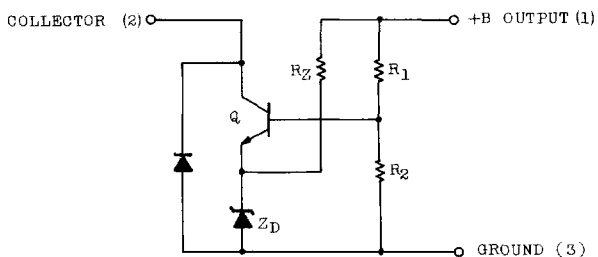
MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector to Ground Voltage	V_{CGO}	150	V
Collector to +B Output Voltage	V_{CBO}	150	V
+B Output to Ground Voltage	V_{BGO}	120	V
Collector Current	I_C	50	mA
Power Dissipation	P_D	1.5	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 ~ 150	$^\circ C$
Operating Temperature Range	T_{opr}	-25 ~ 75	$^\circ C$



Weight : 1.9g

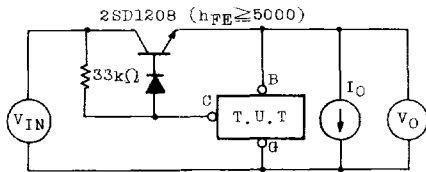
EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTICS (Unless otherwise specified, $T_c=25^{\circ}C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector to Ground Breakdown Voltage	$V_{(BR)CGO}$	$I_C=1mA, I_B=0$	150	-	-	V
Collector Cut-off Current	I_{CGO}	$V_{CG}=120V, V_{BG}=0$	-	-	1.0	μA
Regulated Output Voltage	V_O	$V_{IN}=150V$ $I_O=10mA$, (Note 1)	112.5	-	117.5	V
Temperature Coefficient of Regulated Output Voltage	rV_O	$V_{IN}=120V, I_O=10mA$ $T_c=25^{\circ}C, 75^{\circ}C$ (Note 2)	-	-	± 100	PPM/ $^{\circ}C$
Regulation	ΔV_O	$V_{IN}=120V, 150V$ $I_O=10mA$ (Note 3)	-	-	1.5	V
Zener Voltage (Reference Inly)	V_Z	$I_Z=1mA$	-	6.0	-	V
Resistance of R_1 (Reference Only)	R_1	$I_{R1}=1mA$	-	36	-	$k\Omega$
Resistance of R_2 (Reference Only)	R_2	$I_{R2}=1mA$	-	2.2	-	$k\Omega$
Resistance of R_Z (Reference Only)	R_Z	$I_{RZ}=1mA$	-	40	-	$k\Omega$
DC Current Gain of Q (Reference Only)	h_{FE}	$V_{CE}=80V, I_C=2mA$	-	200	-	-
Transition Frequency of Q	f_T	$V_{CE}=10V, I_C=10mA$	-	120	-	MHz

Note 1 : TEST METHOD



Note 2 : $rV_O = \frac{V_O(75^{\circ}C) - V_O(25^{\circ}C)}{V_O(25^{\circ}C) \times 50} \times 10^6$ (PPM/ $^{\circ}C$) where $V_O(75^{\circ}C)$; V_O at $T_c=75^{\circ}C$
 $V_O(25^{\circ}C)$; V_O at $T_c=25^{\circ}C$

Note 3 : $\Delta V_O(150V) - V_O(120V)$ where $V_O(120V)$; V_O at $V_{IN}=120V$
 $V_O(150V)$; V_O at $V_{IN}=150V$

APPLICATION CIRCUIT

