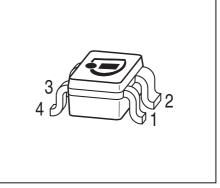


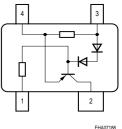
BCR402W

LED Driver

- Supplies stable bias current even at low battery voltage
- Suitable for PWM control up to 100kHz
- Ideal for stabilizing bias current of LEDs
- Negative temperature coefficient protects LEDs against thermal overload
- Pb-free (RoHS compliant) package¹⁾
- Qualified according AEC Q101







Туре	Marking	Pin Configuration				Package	
BCR402W	W6s	1 = GND	2 = I _{out}	3 = V _S	$4 = R_{ext}$	SOT343	

Maximum Ratings

Parameter	Symbol	Value	Unit	
Source voltage	V _S	18	V	
Output current	I _{out}	60	mA	
Output voltage	V _{out}	16	V	
Reverse voltage between all terminals	V _R	0.5		
Total power dissipation, $T_{S} \le 95 \text{ °C}$	P _{tot}	500	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T _{stg}	-65 150		

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ²⁾	R _{thJS}	≤ 110	K/W

¹Pb-containing package may be available upon special request

 $^2 \rm For}$ calculation of ${\it R}_{\rm thJA}$ please refer to Application Note Thermal Resistance



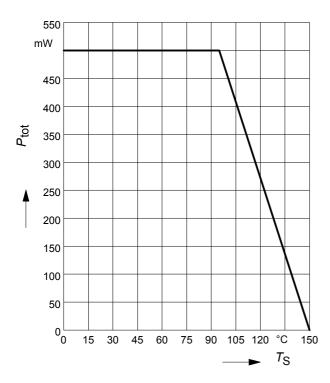
Parameter	Symbol	Values			Unit
		min.	typ.	max.	.
Characteristics	·				-
Supply current	I _S	350	440	540	μA
V _S = 10 V					
Output current	I _{out}	18	20	22	mA
V _S = 10 V, V _{out} = 7.6 V					
DC Characteristics with stabilized LED load	I				
Lowest sufficient battery voltage overhead	V _{Smin}	-	1.4	-	V
l _{out} > 18mA					
Voltage drop (V _S - V _{CE})	V _{drop}	-	0.75	-	
I _{out} = 20 mA					
Output current change versus <i>T</i> _A	Δ /out//out	-	-0.3	-	%/K
V _S = 10 V					
Output current change versus V_{S}	Δ /out//out	-	2	-	%/V
V _S = 10 V					

Electrical Characteristics at T_{Δ} =25°C, unless otherwise specified



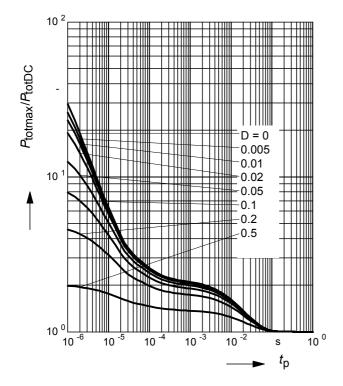
Total power dissipation $P_{tot} = f(T_S)$

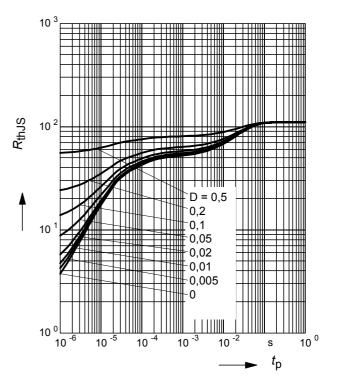
Permissible Pulse Load $R_{thJS} = f(t_p)$



Permissible Pulse Load

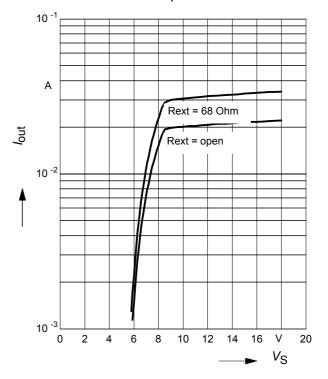
 $P_{\text{totmax}} / P_{\text{totDC}} = f(t_p)$





Output current versus supply voltage

 $I_{out} = f(V_S)$; R_{ext} = Parameter Load: two LEDs with V_F = 3.8V in series



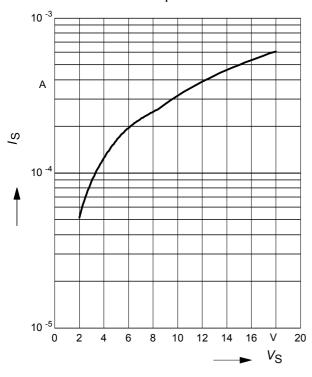


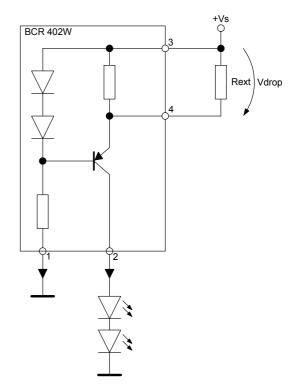
Supply current versus supply voltage

Application Circuit:

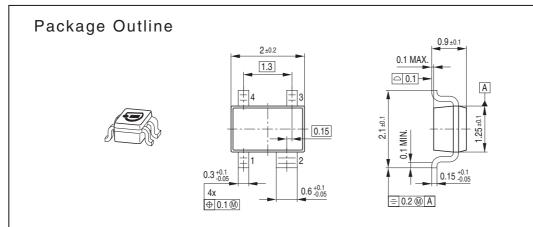
 $I_{\rm S} = f(V_{\rm S})$

Load: two LEDs with $V_{\rm F}$ = 3.8V in series

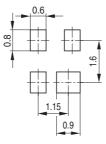




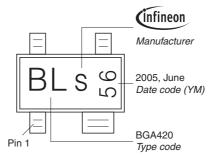




Foot Print

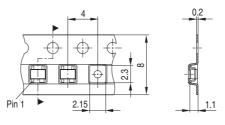


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel Reel ø330 mm = 10.000 Pieces/Reel





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