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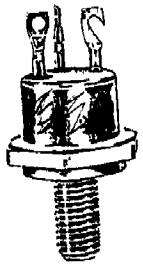
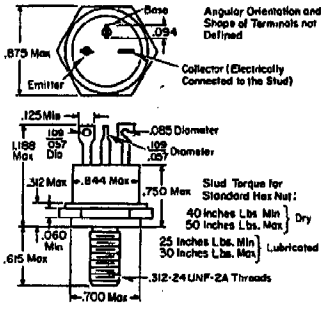
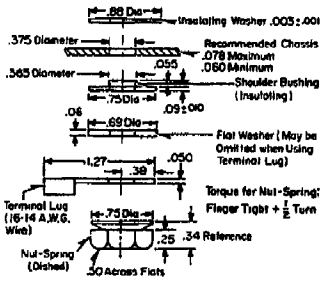
Silicon Power Transistors
JEDEC Types 2N2757-78+

30 Amperes, 200 Watts
Collector-to-Emitter Voltage 50 to 250 Volts



Dimensions in Inches





Maximum Ratings

Voltage

Collector to emitter, V_{CE},② Vdc	2N2757	2N2763	2N2769	2N2775..... 50
	2N2758	2N2764	2N2770	2N2776.....100
	2N2759	2N2765	2N2771	2N2777.....150
	2N2760	2N2766	2N2772	2N2778.....200
	2N2761			250

Emitter to base, V_{EB}, Vdc..... 15
Collector to base, V_{CB}, Vdc.....equal to rated V_{CE}

Current

Collector current, I_C, Adc.....30
Base current, I_B, Adc.....7.5

Temperature

Junction temperature, T_J, °C.....+175
Storage temperature, T_{stg}, °C min.....– 65
max.....+175

② The maximum collector to emitter voltage rating is guaranteed up to the maximum rated power dissipation of the transistor with the base emitter forward biased.

The maximum collector to emitter voltage rating is below the various "break-down" voltages, BV_{CEX}, BV_{CES}, BV_{CER} and the am = 1 curve in the sustaining region, V_{CEO} (sus). Each transistor is power tested within its maximum limits of V_{CE}, P_D and I_C, (e.g. figure 20).

Electrical Characteristics, 2N2757-61 Series

T_C=25°C unless otherwise specified

	Symbol	Minimum	Typical	Max.	Units
Min. collector-emitter sustaining voltage at I_C=200 ma, I_B=0②	$V_{CEO(SUS)}$	Refer voltage ratings, page 5			
Collector current at V_{CEX}=V_{CE} (Ref. voltage ratings), T_C=175°C, V_{BE}=–1.5 Vdc.	I_{CEX}	..	8	30	mAdc
Emitter current at V_{BE}=–15 Vdc, I_C=0, T_C=175°C	I_{EBO}	..	4	25	mAdc
Saturation voltage at I_C=10 Adc, I_B=2 Adc②	V_{CE} (sat)	..	0.4	1.5	Vdc
Dc current gain at V_{CE}=4 Vdc, I_C=10 Adc②	h_{FE}	10	14.0	....	....
Base voltage, at I_C=10 Adc, I_B=2 Adc②	V_{BE}(sat)	..	1.35	2.5	Vdc
Beta cut-off frequency at V_{CE}=12 Vdc, I_C=2.5 Adc	f_{hfe}	..	14.0	....	kHz
Turn-on time at I_C=10 Adc, $I_{B\,on}$=3 Adc, V_{CE}=12 Vdc	t_d+t_r	..	3.0	....	μsec
Turn-off time at I_C=10 Adc, $I_{B\,off}$=–3 Adc, V_{CE}=12 Vdc, $V_{BE\,off}$=–15 Vdc	t_s+t_f	..	9.0	....	μsec

② Pulsed dc test: pulse duration 300 μsec; duty cycle ≤ 2%.

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