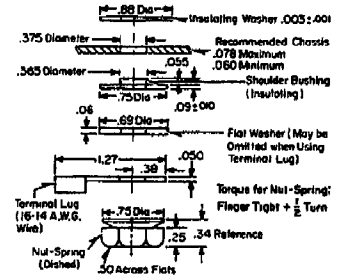
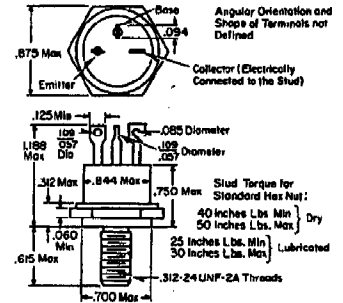


**Silicon Power Transistors
 JEDEC Types 2N2757-78+**

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

Dimensions in Inches



Maximum Ratings

Voltage		2N2757	2N2763	2N2769	2N2775	Units
Collector to emitter, V_{CE}	DC	2N2758	2N2764	2N2770	2N2776	100
Collector to base, V_{CB}	DC	2N2769	2N2765	2N2771	2N2777	150
Emitter to base, V_{EB}	DC	2N2760	2N2766	2N2772	2N2778	200
Collector to emitter, V_{CE}	Peak	2N2761				250
Emitter to base, V_{EB}	DC					15
Collector to base, V_{CB}	DC					equal to rated V_{CE}
Current						
Collector current, I_C	DC					30
Base current, I_B	DC					7.5
Temperature						
Junction temperature, T_J						+175
Storage temperature, T_{stg}	min.					-65
	max.					+175

⊕ 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 $a_m = 1$ curve in the sustaining region, $V_{CE(sus)}$. 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 $T_C = 25^\circ\text{C}$ unless otherwise specified

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

⊕ Pulsed dc test: pulse duration 300 μsec ; duty cycle $\leq 2\%$.

