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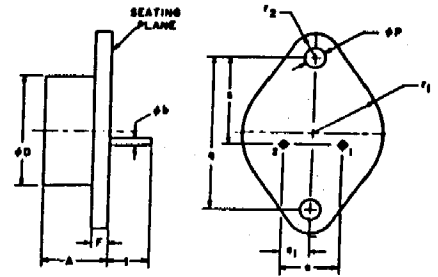
2N5578

High-Current, High-Power, Silicon N-P-N Transistor

MAXIMUM RATINGS, Absolute-Maximum Values:

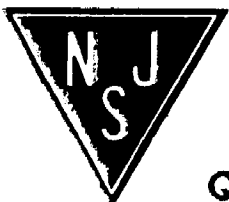
		2N5578	
COLLECTOR-TO-BASE VOLTAGE	V _{CB0}	90	V
COLLECTOR-TO-EMITTER VOLTAGE:			
With base open, sustaining	V _{CEO(sus)}	70	V
With external base-to-emitter resistance (R _{BE}) = 10 Ω & V _{BE} = -1.5 V	V _{CEx}	90	V
EMITTER-TO-BASE VOLTAGE	V _{EBO}	8	V
COLLECTOR CURRENT (Continuous)	I _C	80	A
COLLECTOR CURRENT (Peak)	I _C	80	A
BASE CURRENT (Continuous)	I _B	15	A
TRANSISTOR DISSIPATION:	P _T		
At case temperatures up to 25°C and V _{CE} up to 25 V		300	W
At case temperatures of 100°C and V _{CE} of 25 V		150	W

TO-3



ELECTRICAL CHARACTERISTICS, At Case Temperature (T_C) = 25°C Unless Otherwise Specified

CHARACTERISTIC	SYMBOL	TEST CONDITIONS				LIMITS		UNITS
		Voltage V _{dc}		Current A _{dc}		2N5578		
		V _{CE}	V _{BE}	I _C	I _B	Min.	Max.	
Collector Cutoff Current:	I _{CEV}	60	-1.5			-	-	mA
With base-emitter junction reverse-biased		80	-1.5			-	10	
With external base-emitter resistance (R _{BE}) = 10 Ω	I _{CER}	50				-	10	mA
With base-emitter junction reverse-biased	I _{CEV} (T _C = 150°C)	60	-1.5			-	20	
Emitter Cutoff Current	I _{EBO}		-8			-	10	mA
Collector-to-Emitter Breakdown Voltage	V _{BRICEO}			0.2	0	70	-	V
DC Forward Current Transfer Ratio	h _{FE} ^a	3		40 ^b		10	40	
		4		80 ^b		-	-	
Collector-to-Emitter Sustaining Voltage:	V _{CEO(sus)}							V
(See Figs. 5 and 6) With base open				0.2		70 ^b	-	
With base-emitter junction reverse-biased, R _{BE} = 10 Ω	V _{CEx(sus)}		-1.5	0.2		90 ^b	-	V
Base-to-Emitter Voltage	V _{BE} ^a	4		40 ^b		-	2.5	V
		4		80 ^b		-	-	
Collector-to-Emitter Saturation Voltage	V _{CE(sat)} ^a			40 ^b	4	-	1.5	V
				80 ^b	8	-	-	
Base-to-Emitter Saturation Voltage	V _{BE(sat)} ^a			40 ^b	4	-	2.5	V
				80 ^b	8	-	-	
Output Capacitance (V _{CE} = 10 V)	C _{ob}					-	2000	pF
Input Capacitance	C _{ib}		-0.5	0		-	4000	pF
Magnitude of Common-Emitter, Small-Signal, Short-Circuit Forward Current Transfer Ratio (f = 0.2 MHz)	h _{fe}	4		10		2	-	



NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors