

1 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
S.A.

2N3879

Silicon N-P-N Planar Transistor

TELEPHONE: (201) 376-2

(212) 227-6

FAX: (201) 376-8

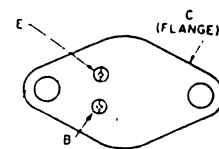
MAXIMUM RATINGS, Absolute-Maximum Values:

*COLLECTOR-TO-BASE VOLTAGE	V _{CB0}	120	V
COLLECTOR-TO-EMITTER SUSTAINING VOLTAGE: With external base-to-emitter resistance (R _{BE}) = 50 Ω. With base open.	V _{CE0(sus)} V _{CER(sus)}	90 75*	V V
*EMITTER-TO-BASE VOLTAGE	V _{EBO}	7	V
*CONTINUOUS COLLECTOR CURRENT	I _C	7	A
PEAK COLLECTOR CURRENT	I _{CM}	10	A
*CONTINUOUS BASE CURRENT	I _B	5	A
*TRANSISTOR DISSIPATION: At case temperature (T _C) = 25°C At case temperatures above 25°C	P _T	35	W
*TEMPERATURE RANGE: Storage & operating (Junction)		Derate linearly at 0.2 W/°C	
*PIN TEMPERATURE: 1/32 in. (0.8 mm) from seating plane for 10 s max.		-65 to 200	°C
		235	°C

ELECTRICAL CHARACTERISTICS, At Case Temperature (T_C) = 25°C unless otherwise specified:

CHARACTERISTIC	SYMBOL	TEST CONDITIONS				LIMITS		UNITS
		VOLTAGE V dc		CURRENT A dc		2N3879		
		V _{CE}	V _{BE}	I _C	I _B	Min.	Max.	
Collector Cutoff Current: With base-emitter junction reverse-biased	I _{CEV}	100	-1.5			-	-	mA
		110	0			-	-	
		120	-1.5			-	25	
With base-emitter junction reverse-biased and T _C = 150°C		100	-1.5			-	4	
		110	0			-	-	
With base open	I _{CEO}	40			0	-	5	mA
		70			0	-	-	
Emitter Cutoff Current	I _{EBO}		-6 -7			-	- 10	mA
Collector-to-Emitter Sustaining Voltage With base open	V _{CE0(sus)}			0.2	0	75*	-	
With external base-to-emitter resistance (R _{BE}) = 50 Ω	V _{CER(sus)}			0.2	0	90*	-	
DC Forward-Current Transfer Ratio	h _{FE}	1.2		4 ^b		-	-	..
		2		0.5 ^b		-	-	
		2		3 ^b		-	-	
		2		4 ^b		12*	100*	
		5		4 ^b		20	80	
		5		0.5 ^b		40	-	
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}			3 ^b 4 ^b	0.3 0.4	- -	- 1.2	V
Base-to-Emitter Voltage	V _{BE}	2		4 ^b	-	-	-	
Base-to-Emitter Saturation Voltage	V _{BE(sat)}			3 ^b 4 ^b	0.3 0.4	- -	- 2	V
Collector-to-Base Output Capacitance (f = 1 MHz, V _{CB} = 10 V)	C _{ob}					-	175	
Second Breakdown Collector Current: With base forward-biased and 1-s nonrepetitive pulse	I _{S/b}	40				500	-	mA
Magnitude of Common Emitter, Small-Signal, Short-Circuit, Forward-Current Transfer Ratio (f = 10 MHz)	h _{fe}	10		0.5		4	-	
Common-Emitter, Small-Signal, Short-Circuit, Forward-Current Transfer Ratio (f = 1 kHz)	h _{fe}	30		0.1		-	-	
Thermal Resistance Junction-to-case	R _{θJC}					-	5	°C/W

TERMINAL DESIGNATIONS



JEDEC TO-213AA

* CAUTION: Sustaining voltages V_{CE0(sus)} and V_{CER(sus)} MUST NOT be measured on a curve tracer.

^b Pulsed, pulse duration = 300 μs, duty factor < 2 %.

