

X00155

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SFT8200

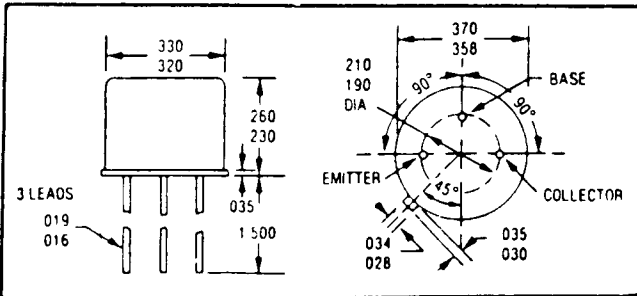
10 AMP

RADIATION TOLERANT PNP TRANSISTOR

100 VOLTS

CASE STYLE W

JEDEC TO-5



FEATURES

- MIN h_{FE} OF 10 AT 1A, 10V AFTER 1×10^{14} FAST NEUTRONS/ CM^2
- HIGH FREQUENCY, 150MHz TYPICAL
- ULTRA FAST, 150ns TYPICAL t_{on}
- V_{CEO} 80 VOLTS MIN
- HIGH LINEAR GAIN, VERY LOW SATURATION
- 200°C OPERATING TEMPERATURE
- GOLD EUTECTIC DIE ATTACH

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector - Emitter Voltage	V_{CEO}	80	Volts
R_{BE} 1K Ohms	V_{CER}	100	
Collector - Base Voltage	V_{CBO}	100	Volts
Emitter - Base Voltage	V_{EBO}	6	Volts
Collector Current	I_C	10	Amps
Base Current	I_B	2	Amps
Total Device Dissipation @ $T_C = 25^\circ C$	P_D	10	Watts
Derate above $25^\circ C$		66.6	mW/ $^\circ C$
Operating and Storage Temperature	T_J, T_{stg}	-65 to 200	$^\circ C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	15	$^\circ C/W$

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Collector - Emitter Breakdown Voltage*				
($I_C = 10mA_{dc}$)	BV_{CEO}	80		Vdc
($I_C = 20\mu A_{dc}$, $R_{BE} = 1Kohm$)	BV_{CER}	100		
Collector - Base Breakdown Voltage				
($I_C = 20\mu A_{dc}$)	BV_{CBO}	100		Vdc
Emitter - Base Breakdown Voltage				
($I_E = 20\mu A_{dc}$)	BV_{EBO}	6		Vdc

ELECTRICAL CHARACTERISTICS

Characteristics		Symbol	Min.	Max.	Unit
Collector Cutoff Current ($V_{CE} = 40 \text{ Vdc}$)		I_{CEO}		10	$\mu\text{A dc}$
Collector Cutoff Current ($V_{CB} = 80 \text{ Vdc}$)		I_{CBO}		10	$\mu\text{A dc}$
Emitter Cutoff Current ($V_{EB} = 4 \text{ Vdc}$)		I_{EBO}		1.0	$\mu\text{A dc}$
DC Current Gain* ($I_C = 500 \text{ mA dc}$, $V_{CE} = 10 \text{ Vdc}$) ($I_C = 1.0 \text{ A dc}$, $V_{CE} = 10 \text{ Vdc}$) ($I_C = 5.0 \text{ A dc}$, $V_{CE} = 5 \text{ Vdc}$)		h_{FE}	50 50 50	200	
Collector - Emitter Saturation Voltage* ($I_C = 5.0 \text{ A dc}$, $I_B = 500 \text{ mA dc}$)		$V_{CE(SAT)}$		0.5	Vdc
Base - Emitter Saturation Voltage* ($I_C = 5.0 \text{ A dc}$, $I_B = 500 \text{ mA dc}$)		$V_{BE(SAT)}$		1.2	Vdc
Current - Gain - Bandwidth Product: ($I_C = 500 \text{ mA dc}$, $V_{CE} = 10 \text{ Vdc}$, $f = 1 \text{ MHz}$)		f_T	100		MHz
Output Capacitance ($V_{CB} = 10 \text{ Vdc}$, $f = 1 \text{ MHz}$)		C_{ob}		300	pf
Post Irradiation DC Current Gain* ($I_C = 1 \text{ A dc}$, $V_{CE} = 10 \text{ Vdc}$, $1 \times 10^{14} \text{ n/cm}^2$) (Fast Neutrons (n) at E = 10KeV Reactor Spectrum)		h_{FE}	10		
On Time	(V _{CC} = 30 Vdc, I _C = 5.0 A dc) (I _{B1} = I _{B2} = 500 mA dc)	t_{on}		300	ns
Off Time		t_{off}		800	

*Pulse Test: Pulse width = 300 μs , DutyCycle = 2%

SSDI SOLID STATE DEVICES, INC.