

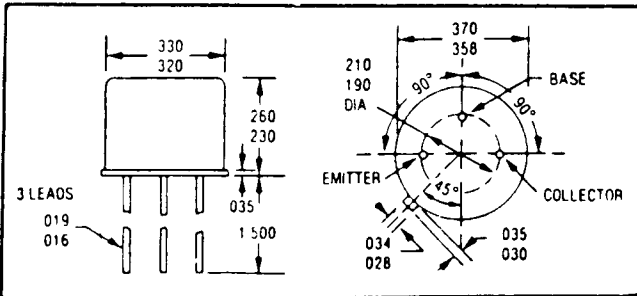
X00155



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SFT8200 10 AMP RADIATION TOLERANT PNP TRANSISTOR 100 VOLTS

**CASE STYLE W
 JEDEC TO-5**



FEATURES

- MIN hFE OF 10 AT 1A, 10V AFTER 1×10^{14} FAST NEUTRONS/CM²
- HIGH FREQUENCY, 150MHz TYPICAL
- ULTRA FAST, 150ns TYPICAL t_{on}
- BVCEO 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 @ TC = 25 °C	P _D	10	Watts
Derate above 25 °C		66.6	mW/°C
Operating and Storage Temperature	T _J Tstg	-65 to 200	°C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	R _{θJC}	15	°C/W

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Collector - Emitter Breakdown Voltage* (I _C = 10mA dc)	BV _{CEO}	80		Vdc
(I _C = 20uA dc, R _{BE} = 1Kohm)	BV _{CER}	100		
Collector - Base Breakdown Voltage (I _C = 20uA dc)	BV _{CBO}	100		Vdc
Emitter - Base Breakdown Voltage (I _E = 20uA dc)	BV _{EBO}	6		Vdc

ELECTRICAL CHARACTERISTICS

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

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

SSDI SOLID STATE DEVICES, INC.