SFT6200
10 AMP
RADIATION TOLLERANT NPN TRANSISTOR
150 VOLTS

SSDI

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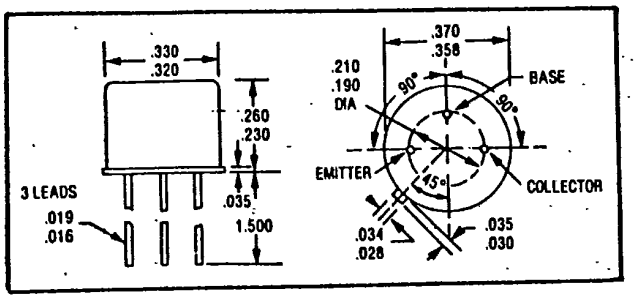
CASE STYLE W
JEDEC TO-5



FEATURES

- MIN hFE OF 10 AT 1A, 10V AFTER 1×10^{14} FAST NEUTRONS/CM^2
- 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}	150	
Collector - Base Voltage	V_{CBO}	150	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	Tj, Tstg	-65 to 200	°C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	RθJC	15	°C/W

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Collector - Emitter Breakdown Voltage* (I_C = 10mAdc)	BV_{CEO}*	80		Vdc
(I_C = 20uAdc, R_{BE} = 1Kohm)	BV_{CER}*	150		
Collector - Base Breakdown Voltage (I_C = 20uAdc)	BV_{CBO}	150		Vdc
Emitter - Base Breakdown Voltage (I_E = 20uAdc)	BV_{EBO}	6		Vdc

NOTE: All specifications subject to change without notice.

ELECTRICAL CHARACTERISTICS

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

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

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