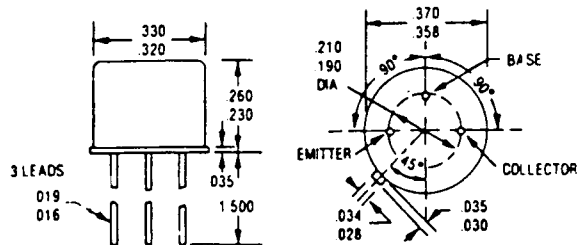


X00116

SFT3507**3 AMP****ULTRA FAST NPN TRANSISTOR****150 VOLTS****SSDII**

14830 Valley View Avenue
La Mirada, California 90638
(213) 921-9660
TWX 910-583-4807
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CASE STYLE TO-5**FEATURES**

- ▶ ULTRA FAST SWITCHING, t_{on} 60ns MAX.
- ▶ RADIATION TOLERANT
- ▶ HIGH FREQUENCY, 60MHz MIN.
- ▶ BVCEO 80 VOLTS MIN.
- ▶ 200 °C OPERATING TEMPERATURE, GOLD EUTECTIC DIE ATTACH

MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	VCEO	80	Volts
Collector-Base Voltage	VCBO	150	Volts
Emitter-Base Voltage	VEBO	8	Volts
Collector Current	IC	3	Amps
Base Current	IB	1	Amps
Total Device Dissipation @ Tc = 25 °C Derate Above 25 °C	PD	5 28.6	Watts mW/ °C
Operating and Storage Temperature	TJ, Tstg	-65 to +200	°C

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Thermal Resistance, Junction to Case Junction to Ambient	RθJC RθJA	0.175 35	°C/mW °C/W

ELECTRICAL CHARACTERISTICS

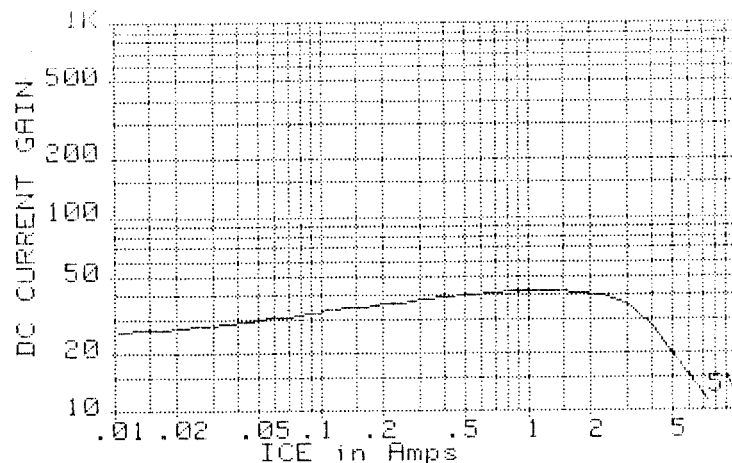
Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage* (IC = 10mA _{dc})	BVCEO	80		Volts
Collector-Base Breakdown Voltage (IC = 100μA _{dc})	BVCBO	150		Volts

ELECTRICAL CHARACTERISTICS

Characteristics		Symbol	Min	Max	Unit
Emitter-Base Breakdown Voltage ($I_E = 10\mu\text{A}$, $V_{CE} = 5\text{V}$)		BVEBO	8		Vdc
Collector Cutoff Current ($V_{CB} = 100\text{Vdc}$)		ICBO		1	μA
Emitter Cutoff Current ($V_{EB} = 5\text{Vdc}$)		IEBO		1	μA
DC Current Gain* ($I_C = 500\text{mA}$, $V_{CE} = 1\text{V}$) ($I_C = 1.5\text{A}$, $V_{CE} = 2\text{V}$) ($I_C = 3\text{A}$, $V_{CE} = 5\text{V}$)		hFE	30 30 25		
Collector-Emitter Saturation Voltage* ($I_C = 500\text{mA}$, $I_B = 50\text{mA}$) ($I_C = 2.5\text{A}$, $I_B = 250\text{mA}$)		VCE(SAT)		0.5 1.5	Vdc
Base-Emitter Saturation Voltage* ($I_C = 500\text{mA}$, $I_B = 50\text{mA}$) ($I_C = 2.5\text{A}$, $I_B = 250\text{mA}$)		VBE(SAT)		1.0 1.5	Vdc
Current Gain Bandwidth Product ($I_C = 100\text{mA}$, $V_{CE} = 5\text{Vdc}$, $f = 10\text{MHz}$)		fT	60		MHz
Output Capacitance ($V_{CB} = 10\text{Vdc}$, $I_E = 0\text{A}$, $f = 100\text{kHz}$)		Cob		40	pf
Input Capacitance ($V_{BE} = 3\text{Vdc}$, $I_C = 0$, $f = 100\text{kHz}$)		Cib		300	pf
Turn On Time	(VCC = 30Vdc, $I_C = 1.5\text{A}$, $I_{B1} = I_{B2} = 150\text{mA}$)	t(on)		60	ns
Turn Off Time		t(off)		120	ns

*Pulse Test: Pulse Width = 300 μs , Duty Cycle = 2%

TYPICAL OPERATING CURVES



SOLID STATE DEVICES, INC.