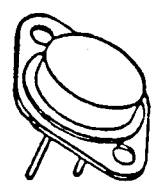


X00136 08

SFT1016 SFT1018 SFT1020	SSDI
100 AMP	
HIGH ENERGY NPN TRANSISTORS	14849 FIRESTONE BLVD. LA MIRADA, CA 90638 TEL: (213) 921-9660 FAX: (213) 921-2396
350 VOLTS	

CASE STYLE
T0-3



FEATURES

- ▶ BVCEO 160 - 200 VOLTS
- ▶ 300 WATTS POWER DISSIPATION
- ▶ EXCELLENT SOA CURVE
- ▶ Es/b OF 400mJ
- ▶ GAIN OF OVER 5 AT 100 AMPS
- ▶ HIGH-REL CONSTRUCTION INCLUDING GOLD EUTECTIC DIE MOUNTING. ALUMINUM WIRING
- ▶ PLANAR CHIP CONSTRUCTION WITH LOW LEAKAGE AND VERY FAST SWITCHING

MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage SFT1016 SFT1018 SFT1020	VCEO	160 180 200	Volts
Collector-Base Voltage	VCBO	350	Volts
Emitter-Base Voltage	VEBO	8	Volts
Collector Current	IC	100	Amps
Base Current	IB	35	Amps
Total Device Dissipation @ Tc = 50 °C Derate Above 50 °C	PD	300 2	Watts W/ °C
Operating and Storage Temperature	TJ, Tstg	-65 to +200	°C

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Thermal Resistance, Junction to Case	RθJC	0.5	°C/W

ELECTRICAL CHARACTERISTICS

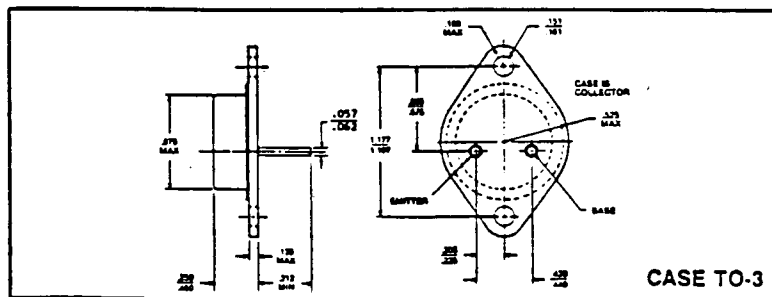
Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage* (IC = 200mAdc)	BVCEO	160 180 200		Volts
Collector-Base Breakdown Voltage (IC = 100uAdc)	BVCBO	350		Volts

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Emitter-Base Breakdown Voltage ($I_E = 100\mu\text{A}$)	BVEBO	8		Vdc
Collector Cutoff Current ($V_{CB} = 35\text{Vdc}$)	ICBO		10	μA
Emitter Cutoff Current ($V_{EB} = 7\text{Vdc}$)	IEBO		10	μA
DC Current Gain* ($I_C = 10\text{A}$, $V_{CE} = 2\text{V}$) ($I_C = 50\text{A}$, $V_{CE} = 5\text{V}$) ($I_C = 100\text{A}$, $V_{CE} = 5\text{V}$)	hFE	40 30 7		
Collector-Emitter Saturation Voltage* ($I_C = 50\text{A}$, $I_B = 5\text{A}$) ($I_C = 100\text{A}$, $I_B = 10\text{A}$)	VCE(SAT)		2 4	Vdc
Base-Emitter Saturation Voltage* ($I_C = 100\text{A}$, $I_B = 10\text{A}$)	VBE(SAT)		2.5	Vdc
Current Gain Bandwidth Product ($I_C = 1\text{A}$, $V_{CE} = 10\text{V}$, $f = 10\text{MHz}$)	fT	40		MHz
Output Capacitance ($V_{CB} = 10\text{V}$, $I_E = 0\text{A}$, $f = 1\text{MHz}$)	Cob		1200	pf
Energy, Secondary Breakdown ($I_B = 1\text{A}$, $R_{B1} = R_{B2} = 20\text{ohms}$) $V_{BE}(\text{off}) = 2.0\text{V}$, $L = 1.0\text{mH}$)	Es/b	400		mJ
Current, Secondary Breakdown ($V_{CE} = 20\text{V}$, $I_C = 15\text{A}$) ($V_{CE} = 100\text{V}$, $I_C = 0.4\text{A}$)	Is/b	1 1		sec
On Time	(VCC = 60Vdc, IC = 10A, IB1 = IB2 = 1.0A)	ton	800	ns
Storage Time		ts	1500	ns
Fall Time		tf	400	ns

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

PHYSICAL DIMENSIONS



SSDI

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SFT1016/18/20