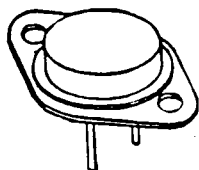


X00134

SFT815 HIGH ENERGY FAST SWITCHING NPN POWER TRANSISTOR 90 AMPS, 300 VOLT	SSDI 14849 FIRESTONE BLVD. LA MIRADA, CA. 90638 TEL (213) 921-9660 FAX (213) 921-2396
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CASE STYLE
JEDEC TO-3 WITH .060 PINS

FEATURES



- ▶ HIGH ENERGY
- ▶ FAST SWITCHING - t_r 300 nsec MAX
- ▶ SINGLE CHIP CONSTRUCTION
- ▶ VERY LOW SATURATION
- ▶ HIGH GAIN TO 90 AMPS
- ▶ SUPERIOR PERFORMANCE TO
SDT96301-SDT96303
- ▶ EUTECTIC DIE ATTACH
- ▶ HI-REL CONSTRUCTION

MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	VCEO	140	Volts
Collector-Base Voltage	VCBO	300	Volts
Emitter-Base Voltage	VEBO	10	Volts
Collector Current	IC	90	Amps
Base Current	IB	15	Amps
Total Device Dissipation @ $T_c = 50^\circ\text{C}$ Derate Above 50°C	PD	300 2	Watts W/ $^\circ\text{C}$
Operating and Storage Temperature	TJ, Tstg	-65 to +200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Thermal Resistance, Junction to Case	R θ JC	0.5	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

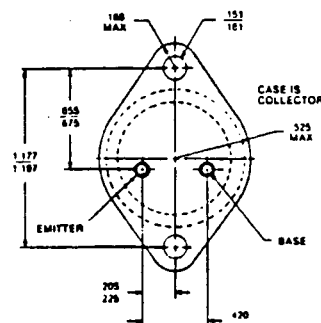
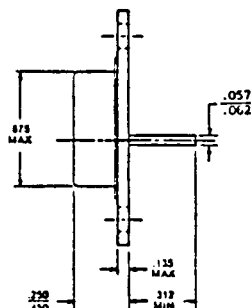
Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage* (IC = 200mA _{dc})	BVCEO	140		Volts
Collector-Base Breakdown Voltage (IC = 100uA _{dc})	BVCBO	300		Volts

ELECTRICAL CHARACTERISTICS

Characteristics		Symbol	Min	Max	Unit
Emitter-Base Breakdown Voltage ($I_E = 100 \mu A_{dc}$)		BVEBO	10	-	Vdc
Collector Cutoff Current ($V_{CB} = 200 V_{dc}$)		ICBO	-	10	μA_{dc}
Emitter Cutoff Current ($V_{EB} = 8 V_{dc}$)		IEBO	-	10	μA_{dc}
DC Current Gain*		hFE	35 25 15	- - -	
Collector-Emitter Saturation Voltage* ($I_C = 30 A_{dc}$, $I_B = 3 A_{dc}$) ($I_C = 50 A_{dc}$, $I_B = 5 A_{dc}$) ($I_C = 90 A_{dc}$, $I_B = 9 A_{dc}$)		VCE(SAT)	- - -	1.0 1.2 1.8	Vdc
Base-Emitter Saturation Voltage* ($I_C = 30 A_{dc}$, $I_B = 3 A_{dc}$) ($I_C = 50 A_{dc}$, $I_B = 5 A_{dc}$) ($I_C = 90 A_{dc}$, $I_B = 9 A_{dc}$)		VBE(SAT)	- - -	1.2 1.6 2.0	Vdc
Current Gain Bandwidth Product ($I_C = 1 A_{dc}$, $V_{CE} = 10 V_{dc}$, $f = 1 MHz$)		fT	10	-	MHz
Output Capacitance ($V_{CB} = 10 V_{dc}$, $I_E = 0 A_{dc}$, $f = 1 MHz$)		Cob	-	800	pf
Second Breakdown Collector Current ($t = 1 sec$, non repetitive, $V_{CE} = 30 V$)		IS/B	2		A _{dc}
Delay Time	VCC = 100V, IC = 50A IB1 = IB2 = 1A VBB = -5V	td	-	0.1	μs
Rise Time		tr	-	0.3	μs
Storage Time		ts	-	1.8	μs
Fall Time		tf	-	0.3	μs

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

PHYSICAL DIMENSIONS



SSDI

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