Solid State Devices, Inc.
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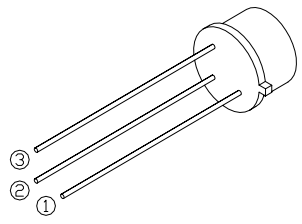
SFT8600

1 AMP
1000 Volts
NPN Transistor

DESIGNER'S DATA SHEET

FEATURES:

- BVCEO to 400 volts
- Very Low Saturation Voltage
- Very Low Leakage
- High Gain from 20 mA to 250 mA
- 200° C Operating, Gold Eutectic Die Attach
- Superior Performance over JEDEC 2N5010-15 Series
- High Speed Switching tf = 0.4µS TYP

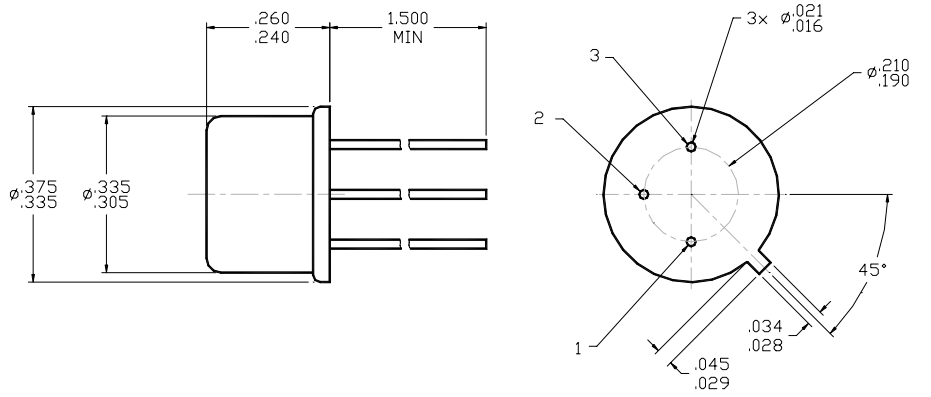


Maximum Ratings	Symbol	Value	Units
Collector – Emitter Voltage **(RBE = 1KΩ)**	V_{CEO} V_{CER}	400 1000	V
Collector – Base Voltage	V_{CBO}	1000	V
Emitter – Base Voltage	V_{EBO}	6	V
Collector Current	I_C	1	A
Base Current	I_B	100	A
Total Device Dissipation @ TC = 100º C Derate above 25º C	P_D	2.0 2.0	W mW/ºC
Operating and Storage Temperature	Tj, Tstg	-65 to +200	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	30	ºC/W

CASE OUTLINE: TO-5

FIGURE 1

OUTLINE AND DIMENSIONS



All dimensions are in inches
Tolerances:
(unless otherwise specified)
XX: ±0.01"
XXX: ±0.005"

Pin 1: Emitter
Pin 2: Base
Pin 3: Collector
Case: Collector

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SFT8600

Electrical Characteristic		Symbol	Min	Max	Units
Collector – Emitter Breakdown Voltage (IC= 10mAdc) (IC= 20μAdc, RBE = 1KΩ)		**BV_{CEO}** **BV_{CER}**	400 1000	—	V
Collector–Base Breakdown Voltage (IC= 20μAdc)		**BV_{CBO}**	1000	—	V
Emitter–Base Breakdown Voltage (IE= 20μAdc)		**BV_{EBO}**	6	—	V
Collector Cutoff Current (VCB= 800V) (VCB= 800V @ TC= 150°)		**I_{CBO}**	—	10 500	μAdc
Collector Cutoff Current (VCE= 400 Vdc)		**I_{CEO}**	—	10	μAdc
Emitter Cutoff Current (VEB= 4V)		**I_{EBO}**	—	1	μAdc
DC Current Gain* (IC= 100mAdc, VCE= 5Vdc, TC= -55°) (IC= 5mAdc, VCE= 5Vdc) (IC= 10mAdc, VCE= 5Vdc) (IC= 100mAdc, VCE= 5Vdc) (IC= 250mAdc, VCE= 5Vdc)		**$_hFE$**	10 30 40 20 15	200	—
Collector – Emitter Saturation Voltage* (IC= 20mAdc, IB= 2mAdc) (IC= 100mAdc, IB=10mAdc)		**$V_{CE(Sat)}$**	— —	0.3 0.5	Vdc
Base – Emitter Saturation Voltage * (IC= 20mAdc, IB= 2mAdc) (IC=100mAdc, IB=10mAdc)		**$V_{BE(Sat)}$**	— —	0.8 1.0	Vdc
Current Gain Bandwidth Product (IC= 100mAdc, VCE= 10Vdc, f= 10MHz)		**$_fT$**	8.0	—	MHz
Output Capacitance (VCB= 20Vdc, IE= 0 Adc, f= 1.0MHz)		**Cob**	—	15	pF
Delay Time Rise Time Storage Time Fall Time	(VCC = 125Vdc, IC = 100 mAdc, IB1 = 20 mAdc, IB2 = 40 mAdc)	**td** **tr** **ts** **tf**	--- ---	50 150 3 800	nsec nsec μsec nsec

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

For thermal derating curves and other characteristic curves please contact SSDI Marketing Department.