



Solid State Devices, Inc.

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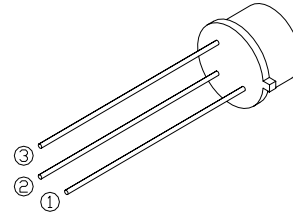
DESIGNER'S DATA SHEET

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 $t_f = 0.4\mu s$ TYP

SFT8600

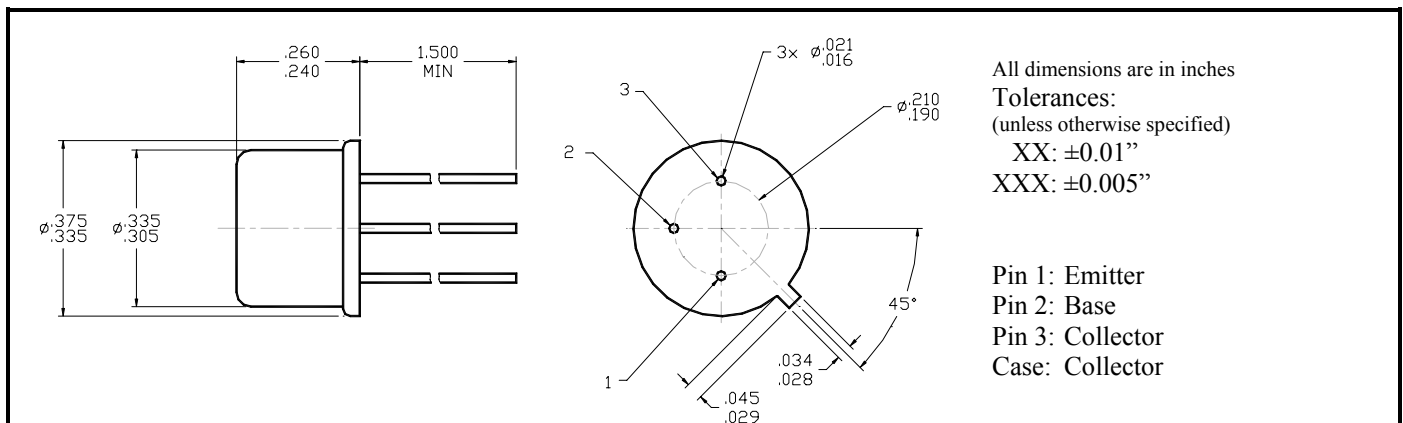
**1 AMP
1000 Volts
NPN Transistor**



Maximum Ratings	Symbol	Value	Units
Collector – Emitter Voltage (RBE = 1K Ω)	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 = 100° C Derate above 25° C	P_D	2.0 2.0	W mW/°C
Operating and Storage Temperature	T_j, T_{stg}	-65 to +200	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	30	°C/W

CASE OUTLINE: TO-5

FIGURE 1 OUTLINE AND DIMENSIONS



NOTE: All specifications are subject to change without notification.
SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: XN0033 G

DOC



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Electrical Characteristic		Symbol	Min	Max	Units
Collector – Emitter Breakdown Voltage (IC= 10mA _{dc}) (IC= 20μA _{dc} , RBE = 1KΩ)		BV_{CEO} BV_{CER}	400 1000	—	V
Collector–Base Breakdown Voltage (IC= 20μA _{dc})		BV_{CBO}	1000	—	V
Emitter–Base Breakdown Voltage (IE= 20μA _{dc})		BV_{EBO}	6	—	V
Collector Cutoff Current (VCB= 800V) (VCB= 800V @ TC= 150°)		I_{CBO}	—	10 500	μA _{dc}
Collector Cutoff Current (VCE= 400 Vdc)		I_{CEO}	—	10	μA _{dc}
Emitter Cutoff Current (VEB= 4V)		I_{EBO}	—	1	μA _{dc}
DC Current Gain* (IC= 100mA _{dc} , VCE= 5Vdc, TC= -55°) (IC= 5mA _{dc} , VCE= 5Vdc) (IC= 10mA _{dc} , VCE= 5Vdc) (IC= 100mA _{dc} , VCE= 5Vdc) (IC= 250mA _{dc} , VCE= 5Vdc)		h_{FE}	10 30 40 20 15	200	—
Collector – Emitter Saturation Voltage* (IC= 20mA _{dc} , IB= 2mA _{dc}) (IC= 100mA _{dc} , IB=10mA _{dc})		V_{CE(Sat)}	— —	0.3 0.5	Vdc
Base – Emitter Saturation Voltage * (IC= 20mA _{dc} , IB= 2mA _{dc}) (IC=100mA _{dc} , IB=10mA _{dc})		V_{BE(Sat)}	— —	0.8 1.0	Vdc
Current Gain Bandwidth Product (IC= 100mA _{dc} , VCE= 10Vdc, f= 10MHz)		f_T	8.0	—	MHz
Output Capacitance (VCB= 20Vdc, IE= 0 A _{dc} , f= 1.0MHz)		Cob	—	15	pF
Delay Time Rise Time Storage Time Fall Time	(VCC = 125Vdc, IC = 100 mA _{dc} , IB1 = 20 mA _{dc} , IB2 = 40 mA _{dc})	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.