Solid State Devices, Inc.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

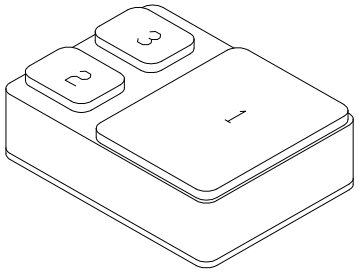
SFT8600S.5

DESIGNER'S DATA SHEET

1 AMP
1000 Volts
NPN Transistor

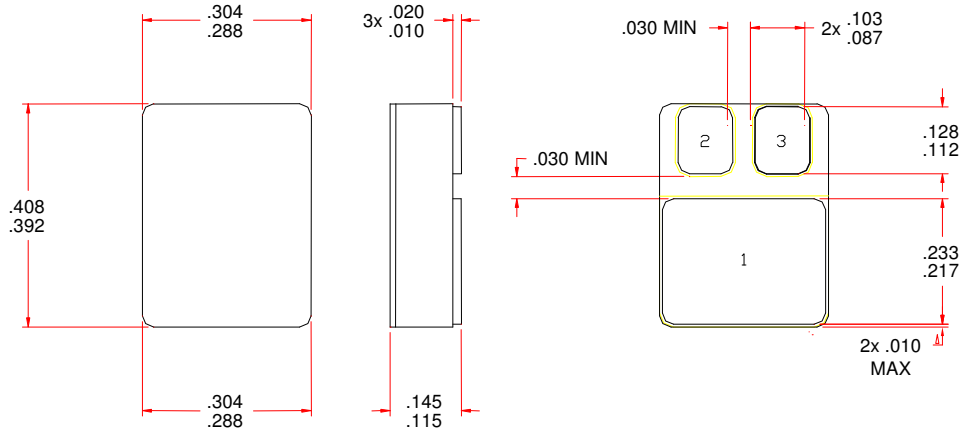
FEATURES:

- BVCEO minimum 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	mA
Total Device Dissipation @ TC = 25° C Derate above 175° C	P_D	5.0 200	W mW/°C
Operating and Storage Temperature	Tj, Tstg	-65 to +200	°C
Thermal Resistance, Junction to Case	$R_{?JC}$	5	°C/W

CASE OUTLINE: SMD.5



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

PACKAGE OUTLINE:
SMD.5
PINOUT:
PIN 1: COLLECTOR
PIN 2: EMITTER
PIN 3: BASE

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

DATA SHEET #: TR0083A | **DOC**

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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)		**H_{FE}**	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)		**f_T**	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.