



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

**SFT5553A  
Series**

**5 AMP  
100 Volts  
PNP Power Transistor**

**DESIGNER'S DATA SHEET**

**Part Number / Ordering Information <sup>1/</sup>**

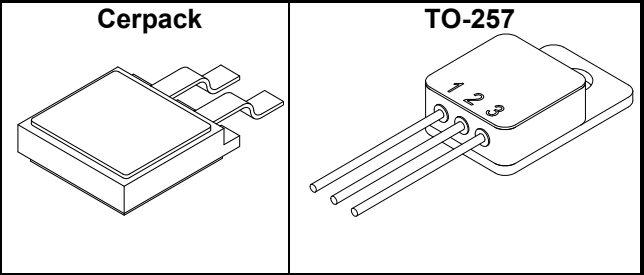
**SFT5553A**

┌ Screening <sup>2/</sup>  
 └ \_\_\_\_\_ = Not Screened  
     TX = TX Level  
     TXV = TXV Level  
     S = S Level  
 ┌ Polarity \_\_\_\_\_ = Normal  
   └ R = Reverse  
 ┌ Lead Bend Options  
   \_\_\_\_\_ = Normal  
   UB = Up Bend  
   DB = Down Bend  
   SB = S Bend  
 ┌ Package G = Cerpack  
           J = TO-257

- Features:**
- BV<sub>CEO</sub> 80V
  - Fast Switching
  - Very High Gain
  - Low Saturation Voltage
  - 200 °C Operating Temperature
  - Gold Eutectic Die Attach
  - TX, TXV, S-Level Screening Available

Maximum Ratings		Symbol	Value	Units
Collector – Base Voltage		BV <sub>CBO</sub>	100	Volts
Collector – Emitter Voltage		BV <sub>CEO</sub>	80	Volts
Emitter – Base Voltage		BV <sub>EBO</sub>	6.0	Volts
Continuous Collector Current		I <sub>C</sub>	5.0	Amps
Base Current		I <sub>B</sub>	2.0	Amps
Power Dissipation @ T <sub>c</sub> ≤ 100°C (Derate above 100°C)	Cerpack TO-257	P <sub>D</sub>	40 (0.4) 20 (0.2)	W (W/ °C)
Operating & Storage Temperature		Top & Tstg	-65 to +200	°C
Thermal Resistance, Junction to Case	Cerpack TO-257	R <sub>θJC</sub>	2.5 5	°C/W

**Notes:**  
 \* Pulse Test: Pulse Width = 300µsec, Duty Cycle = 2%  
 1/ For ordering information, price, and availability, contact factory.  
 2/ Screening based on MIL-PRF-19500. Screening flows available on request.  
 3/ Unless otherwise specified, all electrical characteristics @25°C.





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# SFT5553A Series

Electrical Characteristics <sup>3/</sup>		Sym	Min	Typ	Max	Units
Collector – Emitter Breakdown Voltage	$I_C = 100 \mu A_{DC}$	$BV_{CEO}$	80	200	—	Volts
Collector – Base Breakdown Voltage	$I_C = 100 \mu A_{DC}$	$BV_{CBO}$	100	280	—	Volts
Emitter – Base Breakdown Voltage	$I_E = 20 \mu A_{DC}$	$BV_{EBO}$	6	13	—	Volts
Emitter – Cutoff Current	$V_{EB} = 5 V_{DC}$	$I_{EBO}$	—	0.005	10	$\mu A$
Collector – Cutoff Current	$V_{CB} = 100 V_{DC}$	$I_{CBO}$	—	0.005	10	$\mu A$
Collector – Cutoff Current	$V_{CE} = 80 V_{DC}$	$I_{CEO}$	—	0.1	100	$\mu A$
DC Current Gain *	$V_{CE} = 1.1V_{DC}, I_C = 1.0A_{DC}$ $V_{CE} = 1.32V_{DC}, I_C = 2.5A_{DC}$ $V_{CE} = 2.2V_{DC}, I_C = 5.0A_{DC}$	$H_{FE}$	80 55 25	210 85 35	250 150 120	—
Collector – Emitter Saturation Voltage *	$I_C = 2.5A_{DC}, I_B = 0.2A_{DC}$	$V_{CE(SAT)}$	—	0.17	0.5	$V_{DC}$
Base – Emitter Saturation Voltage *	$I_C = 2.5A_{DC}, I_B = 0.2A_{DC}$	$V_{BE(SAT)}$	—	0.9	1.1	$V_{DC}$
Base – Emitter On Voltage *	$I_C = 2.5A_{DC}, V_{CE} = 1.3V_{DC}$	$V_{BE(ON)}$	—	0.85	0.95	$V_{DC}$
Current Gain Bandwidth Product	$I_C = 50mA_{DC}, V_{CE} = 10V_{DC}, f = 20MHz$	$f_T$	40	60	—	MHz
Output Capacitance	$V_{CB} = 30V_{DC}, I_E = 0A_{DC}, f = 1.0MHz$	$C_{ob}$	—	50	120	pF
Turn On Time	$V_{CC} = 20V_{DC}, I_C = 1.0A_{DC},$	$t_{(on)}$	—	30	100	nsec
Turn Off Time	$I_{B1} = I_{B2} = 100mA_{DC}, R_{B1} = R_{B2} = 40\Omega$	$t_{(off)}$	—	1500	1600	nsec

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

DATA SHEET #: TR0015H

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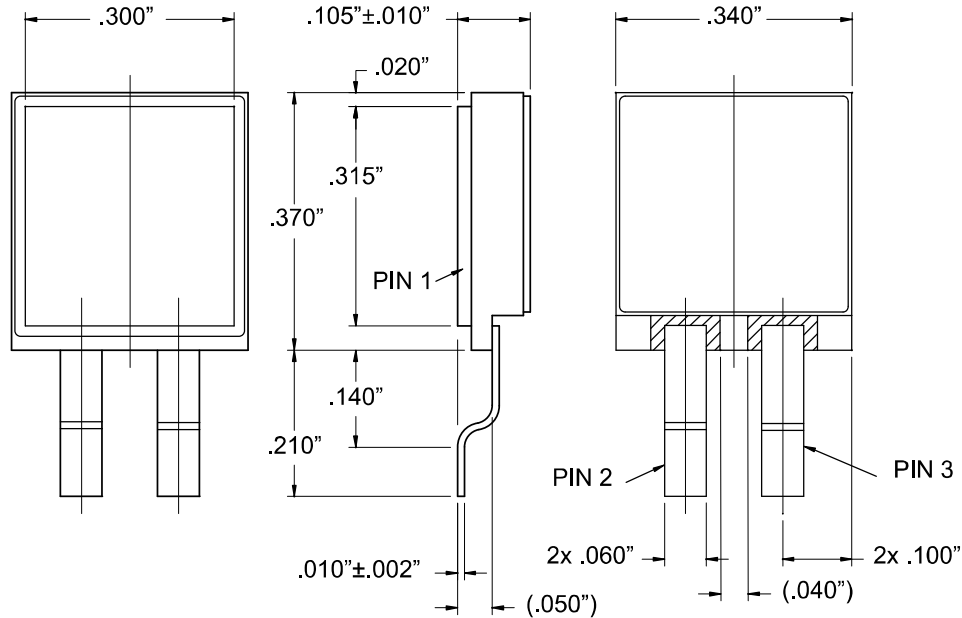


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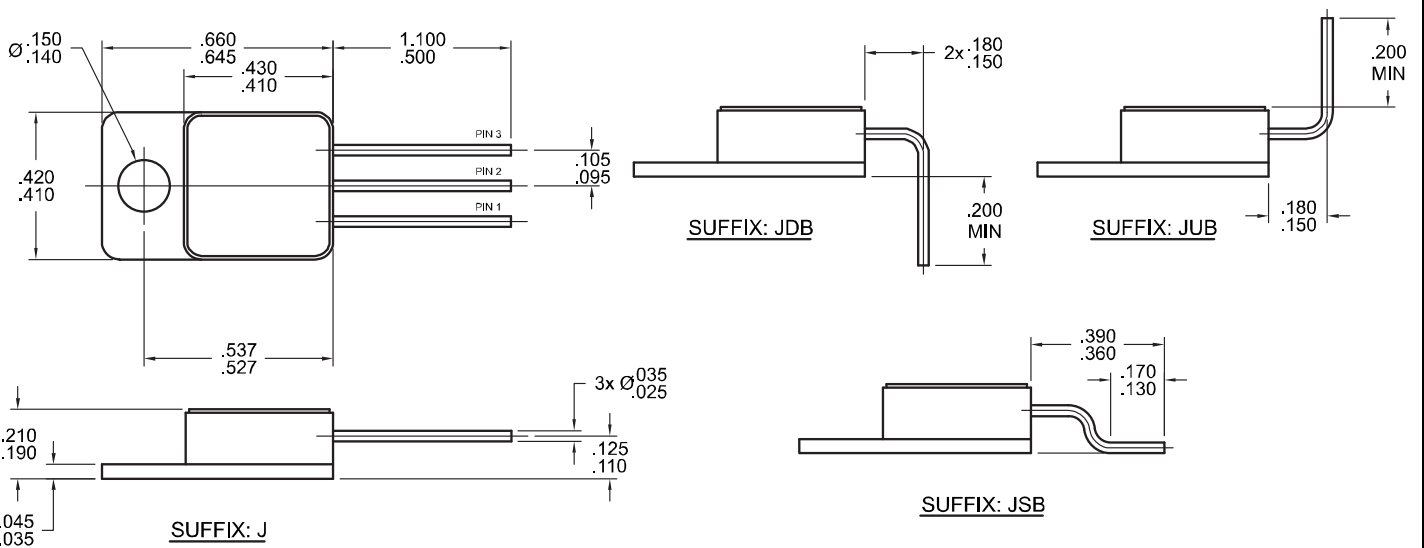
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# SFT5553A Series

## Case Outline: Cerpack



## Case Outline: TO-257



## Available Part Numbers:

SFT5553AG, SFT5553AJ, SFT5553AJUB, SFT5553AJDB,  
 SFT5553AJSB, SFT5553AJR, SFT5553AJUBR, SFT5553AJDBR,  
 SFT5553AJSBR

## PIN ASSIGNMENT (Standard)

Code	Function	Pin 1	PIN 2	PIN 3
---	Normal	Collector	Emitter	Base
R	Reverse	Collector	Base	Emitter

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