



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 ^{1/}

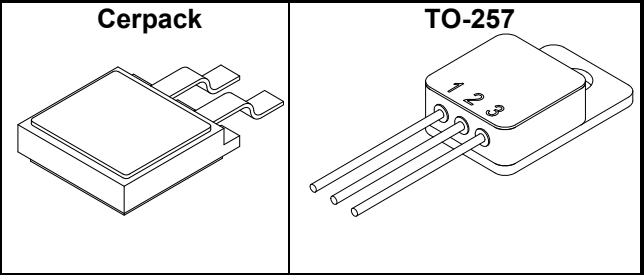
SFT5553A

\perp **Screening ^{2/}**
 ___ = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level
 \perp **Polarity** ___ = Normal
 R = Reverse
 \perp **Lead Bend Options**
 ___ = Normal
 UB = Up Bend
 DB = Down Bend
 SB = S Bend
 \perp **Package** G = Cerpack
 J = TO-257

- Features:**
- BV_{CEO} 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_{CBO}	100	Volts
Collector – Emitter Voltage		BV_{CEO}	80	Volts
Emitter – Base Voltage		BV_{EBO}	6.0	Volts
Continuous Collector Current		I_C	5.0	Amps
Base Current		I_B	2.0	Amps
Power Dissipation @ $T_c \leq 100^\circ C$ (Derate above 100°C)	Cerpack TO-257	P_D	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	$R_{\theta JC}$	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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Electrical Characteristics ^{3/}		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	μA
Collector – Cutoff Current	$V_{CB} = 100 V_{DC}$	I_{CBO}	—	0.005	10	μA
Collector – Cutoff Current	$V_{CE} = 80 V_{DC}$	I_{CEO}	—	0.1	100	μA
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.

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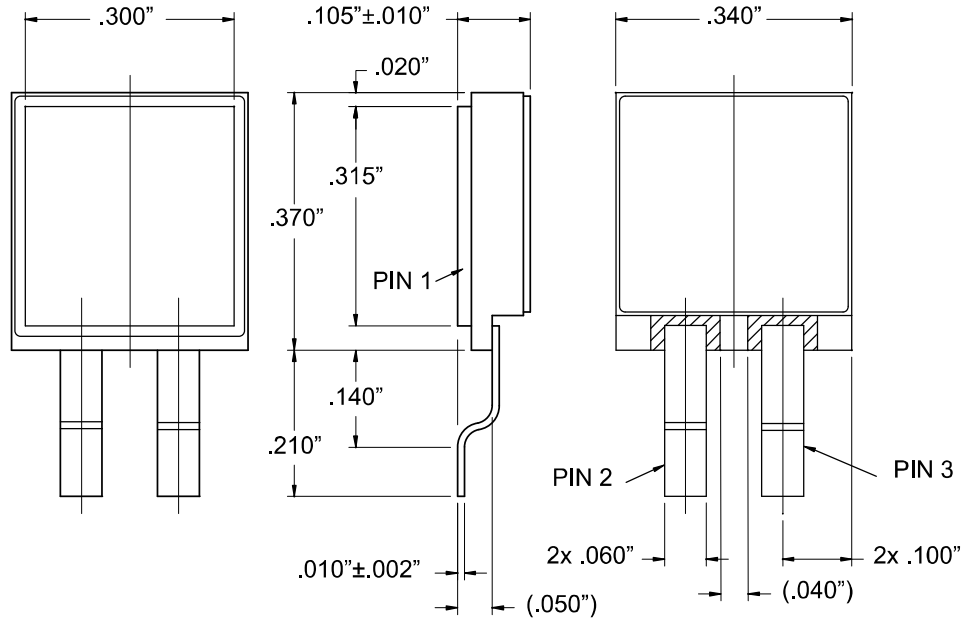


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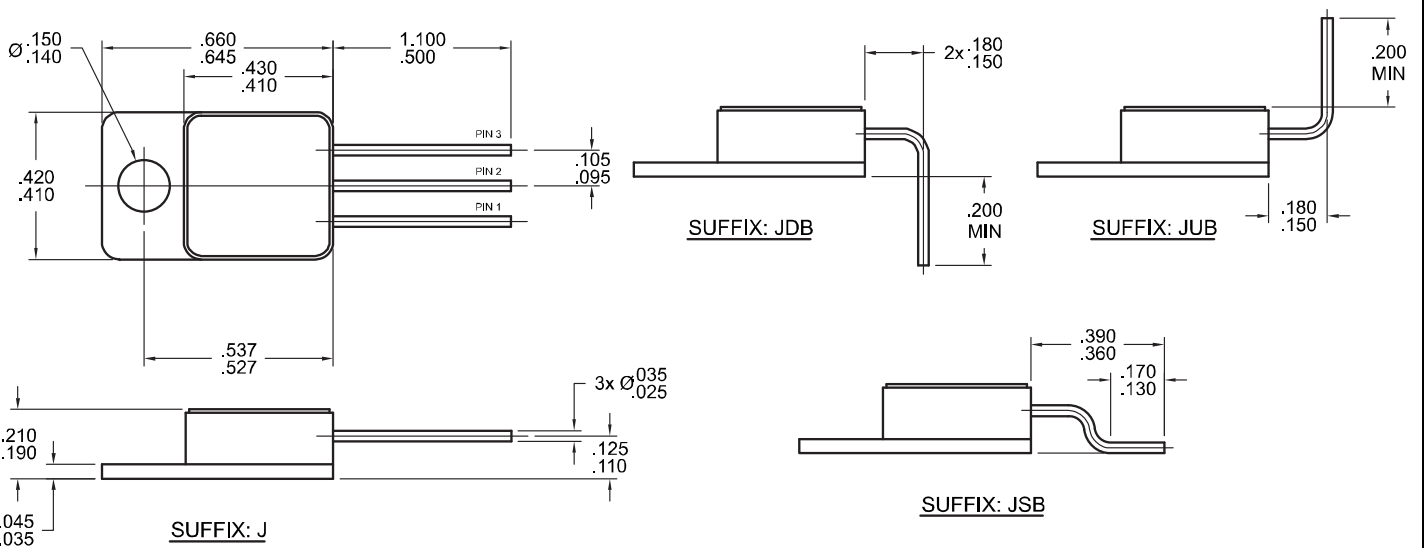
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SFT5553A Series

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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