



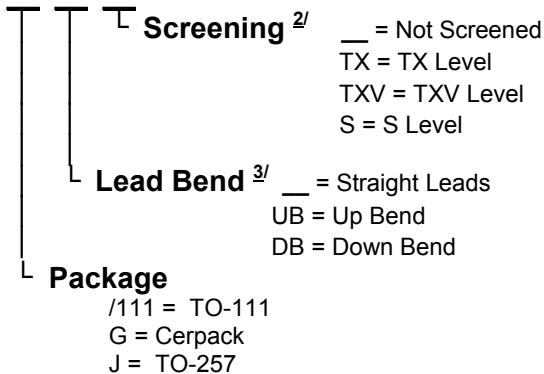
Solid State Devices, Inc.

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

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFT3303



SFT3303 Series

5 AMP PNP HIGH SPEED POWER TRANSISTOR 120 VOLTS

Features:

- V_{CEO} 250V typical
- Fast Switching
- High Frequency
- High Linear Gain, Low Saturation Voltage
- 200°C Operating Temperature
- High Current, High Voltage Version of the SFT3303
- TX, TXV, S-Level Screening Available - Consult Factory.

Maximum Ratings	Symbol	Value	Units
Collector – Base Voltage	V_{CBO}	150	Volts
Collector – Emitter Voltage	V_{CEO}	120	Volts
Emitter – Base Voltage	V_{EBO}	6.0	Volts
Continuous Collector Current	I_C	5	Amps
Base Current	I_B	1	Amps
Total Device Dissipation @ $T_C = 25^\circ C$ Derate Above 25°C	P_D	50 0.33	Watts W/°C
Operating & Storage Temperature	T_J & T_{STG}	-65 to +200	°C
Maximum Thermal Resistance (Junction to Case)	$R_{\theta JC}$	3.0	°C/W

NOTES:

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

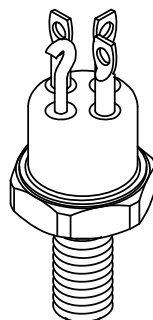
^{1/} For ordering information, price, and availability, contact factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

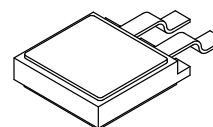
^{3/} Up and down bend configurations are available for 'J' (TO-257) packages only.

^{4/} Unless otherwise specified, all electrical characteristics @25°C.

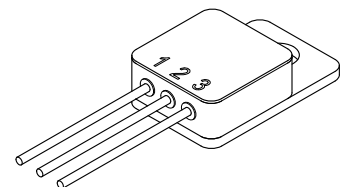
TO-111 (/111)



Cerpack (G)



TO-257 (J)



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

DATA SHEET #: TR0131A

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SFT3303 series

Electrical Characteristics ^{4/}		Symbol	Min	Typ	Max	Units
Collector – Emitter Blocking Voltage	(I _C = 10mA)	BV _{CEO}	120	250	—	Volts
Collector – Base Sustaining Voltage	(I _C = 200μA)	BV _{CBO}	150	300	—	Volts
Emitter – Base Sustaining Voltage	(I _E = 200μA)	BV _{EBO}	6	13	—	Volts
Collector Cutoff Current	(V _{CE} = 80V, T _C = 150°C)	I _{CE01}	—	0.05	1	μA
		I _{CE02}	—	0.5	10	mA
Collector Cutoff Current	(V _{CB} = 80V, T _C = 150°C)	I _{CBO1}	—	0.005	0.5	μA
		I _{CBO2}	—	1	25	μA
Emitter Cutoff Current	(V _{EB} = 6V, T _C = 150°C)	I _{EBO1}	—	0.001	1.0	μA
		I _{EBO2}	—	—	1.0	mA
DC Current Gain *	(I _C = 2A, V _{CE} = 5V)	h _{FE}	40	100	-	
	(I _C = 200mA, V _{CE} = 5V)		-	85	-	
Collector-Emitter Saturation Voltage *	(I _C = 2A, I _B = 200mA)	V _{CE(SAT)}	—	0.36	0.75	Volts
	(I _C = 5A, I _B = 500mA)		—	1.6	-	
Base-Emitter Saturation Voltage *	(I _C = 2A, I _B = 200mA)	V _{BE(SAT)}	—	0.98	-	Volts
	(I _C = 5.0 A, I _B = 500mA)		—	1.27	-	
Current Gain – Bandwidth Product	V _{CE} = 5V, I _C = 0.5A, f = 10MHz	f _T	30	80	—	MHz
Output Capacitance	V _{CB} = 10V, I _E = 0, f = 1.0MHz	C _{ob}	—	85	150	pF
On Time	(V _{CC} = 30 V, I _C = 5.0 A, V _{BE(off)} = 3.7 V, I _{B1} = I _{B2} = 500 mA, R _L = 6Ω)	t _(on)	—	40	-	ns
Off Time		t _(off)	—	900	-	ns

NOTES:

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3/ Up and down bend configurations are available for 'J' (TO-257) packages only.

4/ Unless otherwise specified, all electrical characteristics @25°C.

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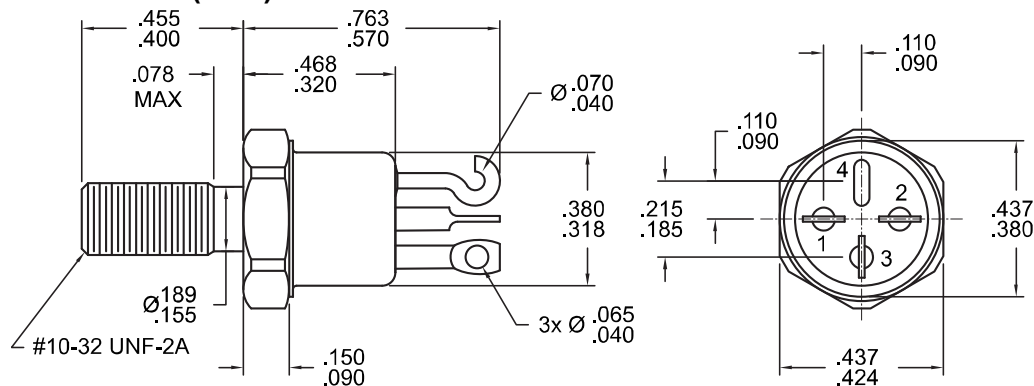
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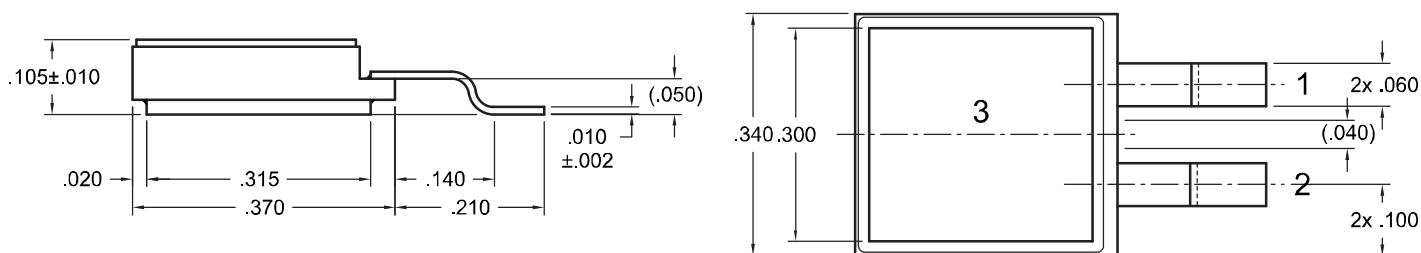
SFT3303 series

CASE OUTLINE: TO-111 (/111)

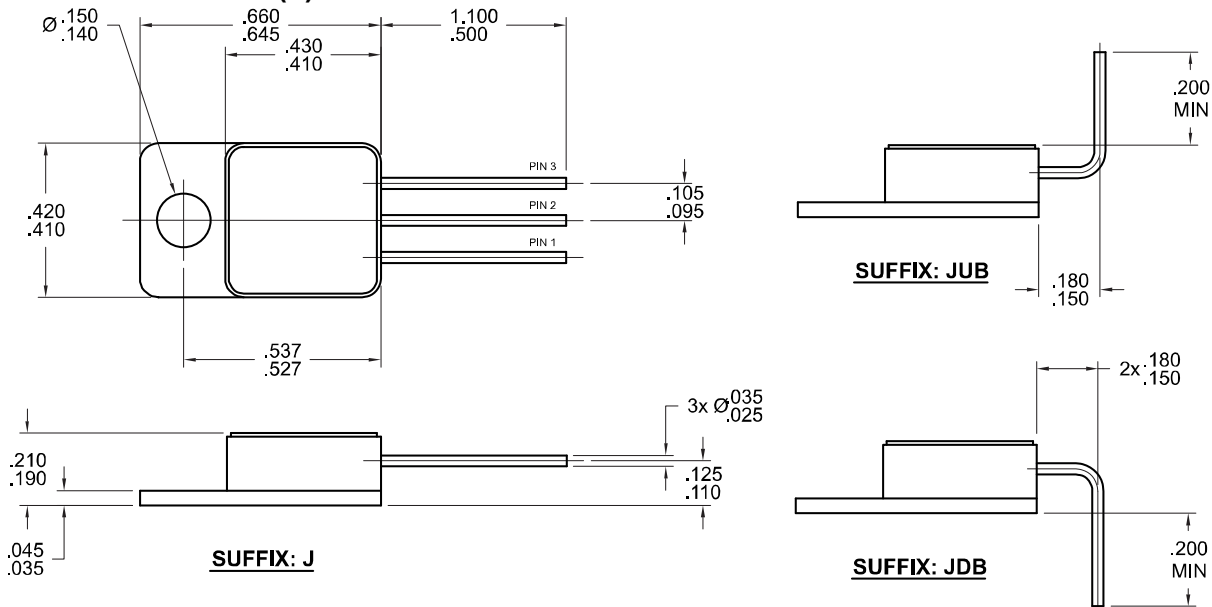


NOTE: PIN 4 Case (GND)

CASE OUTLINE: Cerpack (G)



CASE OUTLINE: TO-257 (J)

**Available Part Numbers:**

SFT3303/111
SFT3303G
SFT3303J, SFT3303JUB, SFT3303JDB

PIN ASSIGNMENT

CODE	FUNCTION	PIN 1	PIN 2	PIN 3
-	Normal	Collector	Emitter	Base

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