



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

SFT6036 Series

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

SFT6036

└─ Screening ^{2/}	___ = Not Screened
	TX = TX Level
	TXV = TXV Level
	S = S Level
└─ Package	/5 = TO-5
	M = TO-254
	J = TO-257
	S.3 = SMD.3
	S.5 = SMD.5

4 AMP
PNP Darlington Power Transistor
80 Volts

Features:

- BV_{CEO} to 80 Volts
- Low Saturation Voltage
- Very Low Leakage
- 200°C Operating Temperature
- Gold Eutectic Die Attach
- Complement for SFT6039
- Available with TO-5, TO-254, TO-257, SMD.3 and SMD.5 Cases
- TX, TXV, and S Level Screening Available^{2/}

Maximum Ratings^{3/}

	Symbol	Value	Unit
Collector – Emitter Voltage	V _{CEO}	80	V
Collector – Base Voltage	V _{CBO}	80	V
Emitter – Base Voltage	V _{EBO}	5	V
Collector Current	I _{C cont}	4	A
	I _{C pk}	8	A
Base Current	I _B	0.1	A
Total Power Dissipation @ T _C = 100°C	TO-5	-	W
	TO-254	20	
	TO-257	20	
	SMD.3	28.5	
	SMD.5	31	
Operating & Storage Temperature	T _J & T _{STG}	-65 to 200	°C
Thermal Resistance (Junction to Case)	TO-5	R _{θJA}	°C/W
	TO-254	R _{θJC}	
	TO-257	R _{θJC}	
	SMD.3	R _{θJC}	
	SMD.5	R _{θJC}	

TO-5 (/5)	TO-254 (M)	TO-257 (J)	SMD.3 (S.3)	SMD.5 (S.5)

NOTES:

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

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

^{3/} Unless otherwise specified, maximum ratings/electrical characteristics at 25°C.

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

DATA SHEET #: TR0120B

DOCX



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Electrical Characteristics ^{3/}	Symbol	Min	Typ	Max	Unit
Collector – Emitter Breakdown Voltage* $I_C = 100 \text{ mA}$	BV_{CEO}	80	95	-	V
Collector – Emitter Cutoff Current $V_{CE} = 80 \text{ V}, I_B = 0$	I_{CEO}	-	0.05	100	μA
Collector – Emitter Cutoff Current $V_{CE} = 80 \text{ V}, V_{BE(\text{off})} = 1.5 \text{ V}, T_C = 125^\circ\text{C}$	I_{CEX}	-	0.05 12.5	100 500	μA
Collector Cutoff Current $V_{CB} = 80 \text{ V}$	I_{CBO}	-	0.05	500	μA
Emitter Cutoff Current $(V_{BE} = 5 \text{ V})$	I_{EBO}	-	0.65	2	mA
DC Current Gain* $(I_C = 0.5 \text{ A}, V_{CE} = 3 \text{ V})$ $(I_C = 2 \text{ A}, V_{CE} = 3 \text{ V})$ $(I_C = 4 \text{ A}, V_{CE} = 3 \text{ V})$	H_{FE}	500 750 100	4,000 3,800 900	- 15,000 -	
Collector-Emitter Saturation Voltage* $I_C = 2 \text{ A}, I_B = 8 \text{ mA}$ $I_C = 4 \text{ A}, I_B = 40 \text{ mA}$	$V_{CE(\text{SAT})1}$ $V_{CE(\text{SAT})2}$	- -	1.1 1.6	2 3	V
Base – Emitter Saturation Voltage* $I_C = 4 \text{ A}, I_B = 40 \text{ mA}$	$V_{BE(\text{SAT})}$	-	2.25	4	V
Base – Emitter Voltage $I_C = 2 \text{ A}, V_{CE} = 3 \text{ V}$	$V_{BE(\text{ON})}$	-	1.65	2.8	V
Small Signal Current Gain $I_C = 0.75 \text{ A}, V_{CE} = 10 \text{ V}, f = 1 \text{ MHz}$	h_{fe}	25	1400	-	
Output Capacitance $V_{CB} = 15 \text{ V}, I_E = 0 \text{ A}, f = 2.0 \text{ MHz}$	C_{ob}	-	40	200	pF
Electrical Characteristics ^{3/}	Symbol	Typical			Unit
Delay Time $V_{CC} = -30 \text{ V}$	t_d	45			ns
Rise Time $I_C = 4 \text{ A}$	t_r	200			ns
Storage Time $I_{B1} = I_{B2} = 16 \text{ mA}$	t_s	600			ns
Fall Time	t_f	450			ns

Notes: * Pulse Test: Pulse Width = 300 μs . Duty Cycle = 2%.

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^{3/} Unless otherwise specified, maximum ratings/electrical characteristics at 25°C.

PIN ASSIGNMENT (Standard)

Package	Collector	Emitter	Base
TO-5 (I5)	3	1	2
TO-254(M)	1	2	3
TO-257(J)	1	2	3
SMD.3 (S.3)	1	2	3
SMD.5 (S.5)	1	2	3

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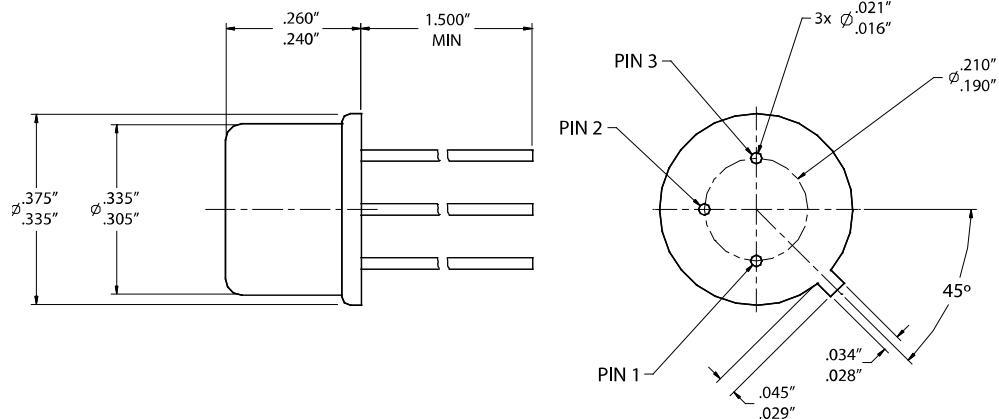
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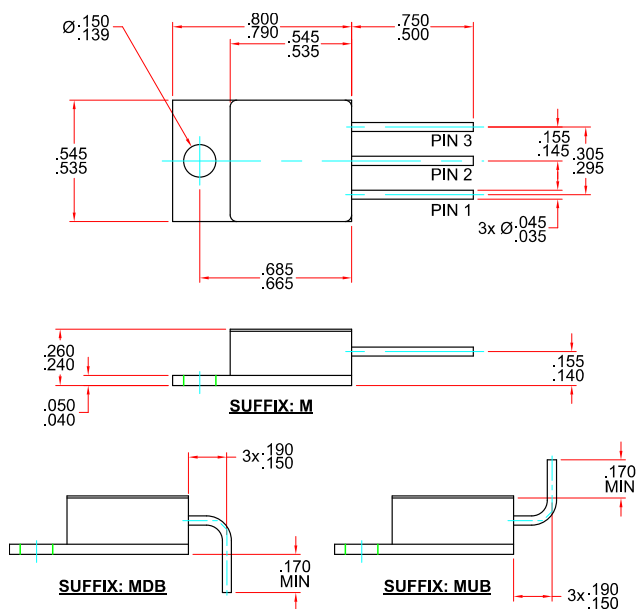
SFT6036 Series

CASE OUTLINES

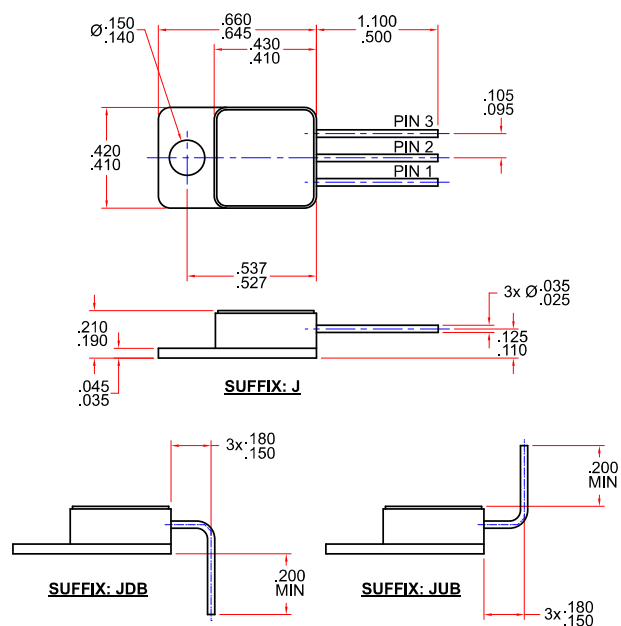
TO-5 (/5):



TO-254 (M):



TO-257 (J):



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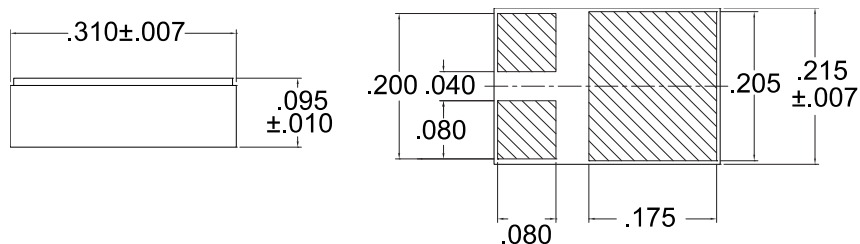
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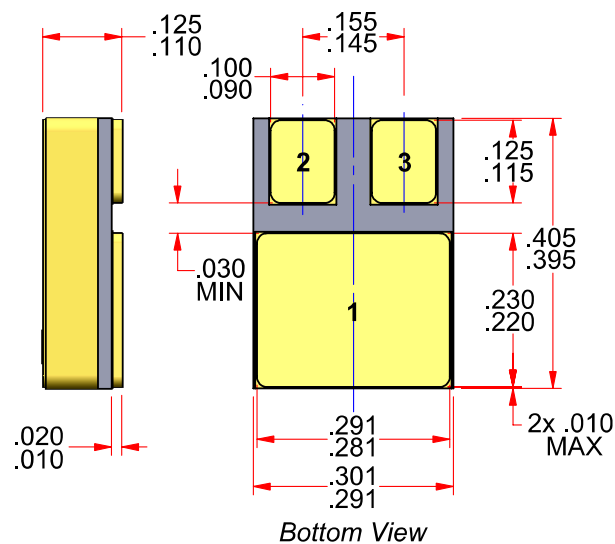
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CASE OUTLINES

SMD.3 (S.3):



SMD.5 (S.5):



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