



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

4 AMP PNP Darlington Power Transistor 80 Volts

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

SFT6036

Screening^{2/}

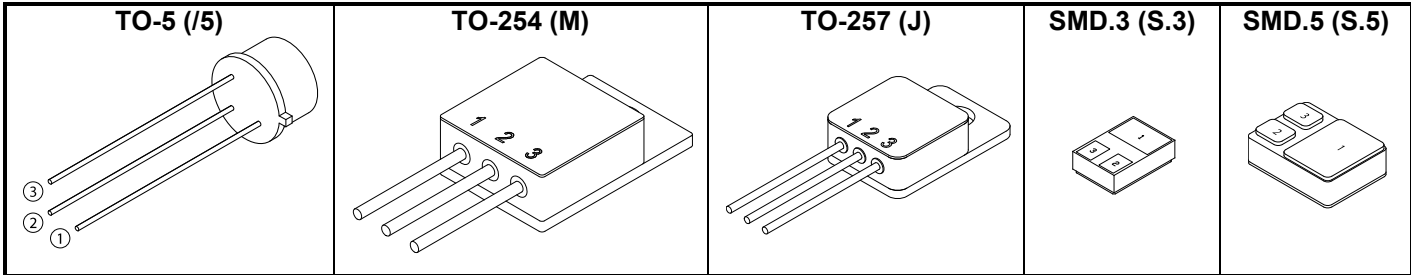
— = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Package

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

- Features:**
- V_{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	Values	Units	
Collector – Emitter Voltage	V_{CEO}	80	Volts	
Collector – Base Voltage	V_{CBO}	80	Volts	
Emitter – Base Voltage	V_{EBO}	5	Volts	
Collector Current	$I_{C\ cont}$ $I_{C\ pk}$	4 8	Amps	
Base Current	I_B	0.1	Amps	
Total Power Dissipation @ $T_c = 100^\circ C$	TO-5 TO-254 TO-257 SMD.3 SMD.5	- 20 20 28.5 31	Watts	
Operating & Storage Temperature	T_J & T_{STG}	-65 to 200	°C	
Thermal Resistance (Junction to Case)	TO-5 TO-254 TO-257 SMD.3 SMD.5	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JC}$ $R_{\theta JC}$ $R_{\theta JC}$	175 5 5 3.5 3.2	°C/W



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.



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

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

Electrical Characteristics ^{3/}	Symbol	Typical	Units
Delay Time $V_{CC} = -30V$	t_d	45	ns
Rise Time $I_C = 4A$	t_r	200	ns
Storage Time $I_{B1} = I_{B2} = 16mA$	t_s	600	ns
Fall Time	t_f	450	ns

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

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



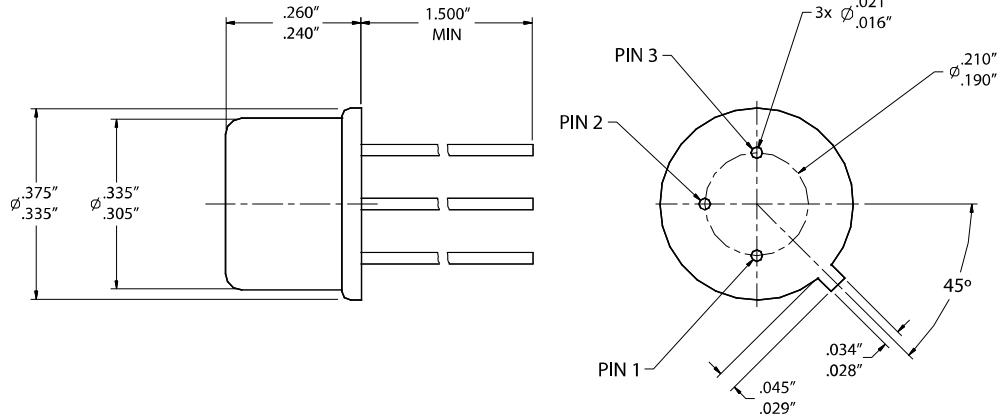
Solid State Devices, Inc.

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

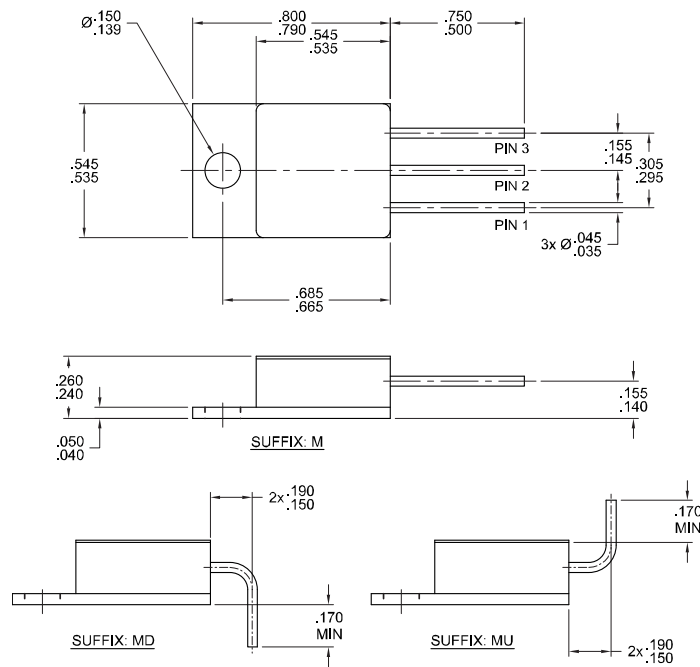
SFT6036

CASE OUTLINES

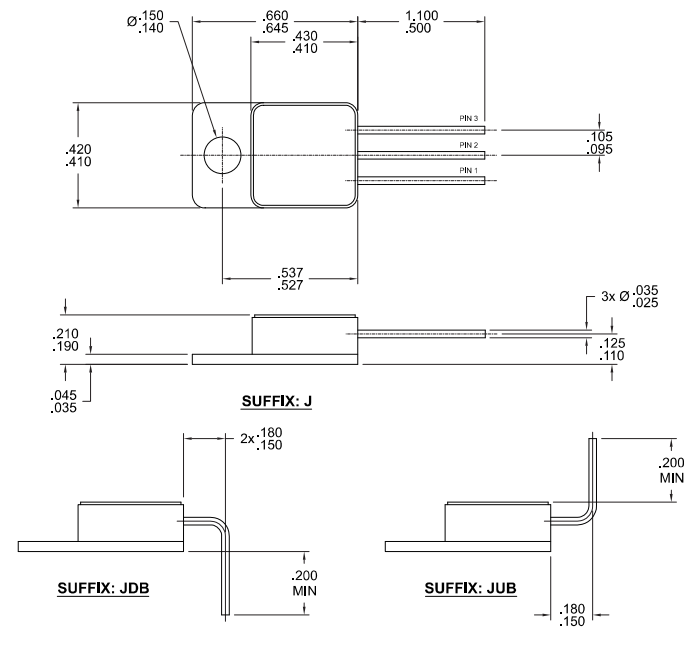
TO-5 (I5):



TO-254 (M):



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 #: TR0120A

DOC

