PRELIMINARY

SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

SFT5553A/E SERIES

DESIGNER'S DATA SHEET

5 AMP 100 VOLTS PNP POWER TRANSISTOR

Part Number /Ordering Information [1/]

SFT5553A/ E HB TX

- **Screening** [2/]: _ = Not Screened, TX = TX Level, TXV = TXV Level, S = Space Level
- **Lead Bend:** [3/] _ = Not Applicable, L = Straight, HB = Hoop Bend
- **Package:** [3/] E = Milpack I (.624 x .450 x .150), EI = Milpack I, Isolated

FEATURES

- **BV_{CEO} 100V.**
- **Fast Switching.**
- **Very High Gain.**
- **Low Saturation Voltage.**
- **200°C Operating, Gold Eutectic Die Attach.**
- **Designed for Low Loss Pass Regulation.**

MAXIMUM RATINGS	SYMBOL	VALUE		UNITS
Collector-Base Voltage	V_{CBO}	100		Volts
Collector-Emitter Voltage	V_{CEO}	80		Volts
Emitter-Base Voltage	V_{EBO}	6.0		Volts
Continuous Collector Current	I_C	5.0		Amps
Base Current	I_B	2.0		Amps
Operating and Storage Temperature	T_J, T_{STG}	-65 to +200		°C
Total Device Dissipation @ $T_C \leq 100°C$ [4/] Derate above 100°C [4/]	P_D	50 0.5	30 0.3	W W/°C
Thermal Resistance, Junction to Case [4/]	$R_{\theta JC}$	1.2	2.6	°C/W

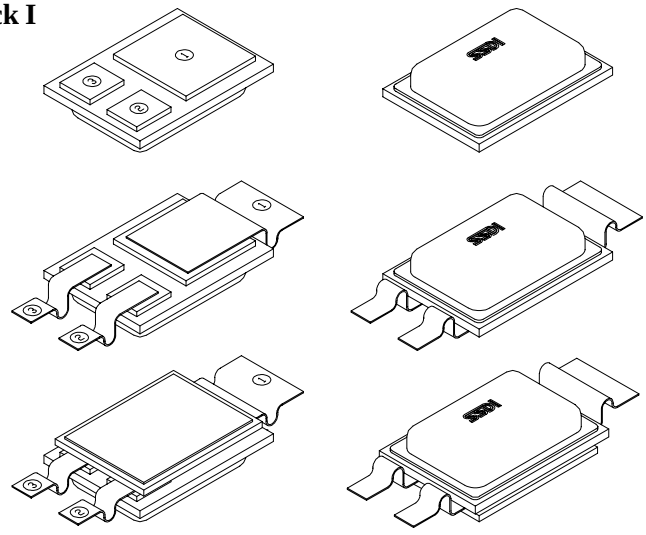
Available Part Numbers:

SFT5553A/E
SFT5553A/EL
SFT5553A/EHB
SFT5553A/EIL
SFT5553A/EIHB

PIN ASSIGNMENT

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

MilPack I



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

DATA SHEET #: TR0013A

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ELECTRICAL CHARACTERISTICS		SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage (I_C = 100μA_{DC})		BV_{CEO}	80	-	V
Collector-Base Breakdown Voltage (I_C = 100uA_{DC})		BV_{CBO}	100	-	V
Emitter-Base Breakdown Voltage (I_E = 20uA_{DC})		BV_{EBO}	6	-	V
Collector Cutoff Current (V_{CB} = 100V_{DC})		I_{CBO}	-	10	μA
Collector Cutoff Current (V_{CE} = 80V_{DC})		I_{CEO}	-	100	nA
Emitter Cutoff Current (V_{EB} = 5V_{DC})		I_{EBO}	-	10	nA
DC Current Gain*	(V_{CE} = 1V_{DC}, I_C = 1.0A_{DC}) (V_{CE} = 1.3V_{DC}, I_C = 3.8A_{DC}) (V_{CE} = 2V_{DC}, I_C = 5.0A_{DC})	H_{FE}	80 70 60	160 120 120	
Collector-Emitter Saturation Voltage* (I_C = 3.8A_{DC}, I_B = 200mA_{DC})		$V_{CE(SAT)}$	-	0.28	V_{DC}
Base-Emitter Saturation Voltage* (I_C = 3.8A_{DC}, I_B = 200mA_{DC})		$V_{BE\ (SAT)}$	-	0.92	V_{DC}
Base-Emitter ON Voltage* (I_C = 3.8A_{DC}, V_{CE} = 1.3V_{DC})		$V_{BE\ (ON)}$	-	0.87	V_{DC}
Current Gain Bandwidth Product (I_C = 50mA_{DC}, V_{CE} = 10V_{DC}, f = 20MHz)		fT	70	-	MHz
Output Capacitance (V_{CB}= 30V_{DC}, I_E = 0A_{DC}, f = 2.0MHz)		C_{ob}	-	75	pf
Turn On Time	(V_{CC} = 20V_{DC}, I_C = 1A_{DC}, I_{B1} = I_{B2} = 100mA_{DC} R_{B1} = R_{B2} = 40Ω, R_L = 20Ω)	$t_{(on)}$	-	200	ns
Turn Off Time		$t_{(off)}$	-	500	ns

NOTES:

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

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Screening per MIL-PRF-19500.

3/ For Package Outlines Contact Factory.

4/ Hot Case | Isolated Case.