PRELIMINARY

SFT4373

Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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1.5 AMP
NPN Transistor
60 Volts

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

SFT4373 ___ ___

___ **Screening**[2/]
= Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

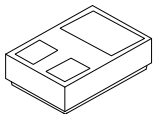
Package S.22 = SMD.22

Features:
- Radiation tolerant
- Fast switching
- High frequency
- Low saturation voltage
- 200°C operating temperature
- Gold eutectic die attach
- TX, TXV, and S Level Screening Available[2/]

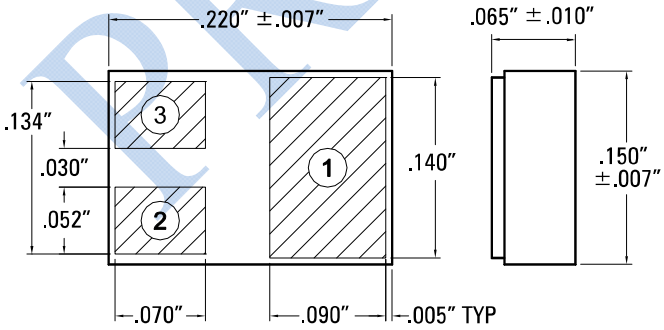
Maximum Ratings[3/]	Symbol	Values	Units
Collector – Emitter Voltage	V_{CEO}	80	**Volts**
Collector – Base Voltage	V_{CBO}	160	**Volts**
Emitter – Base Voltage	V_{EBO}	7.5	**Volts**
Collector Current Continuous Pulsed (2% Duty Cycle)	I_C	1.5 2.4	**Amps**
Base Current	I_B	0.6	**Amps**
Total Device Dissipation T_C = 100ºC **Derate above T_C = 100ºC**	P_D	6.6 66	**Watts** **mW/ºC**
Operating & Storage Temperature	T_J & T_{STG}	-65 to +200	**ºC**
Thermal Resistance	$R_{\theta JC}$	5.5	**ºC/W**

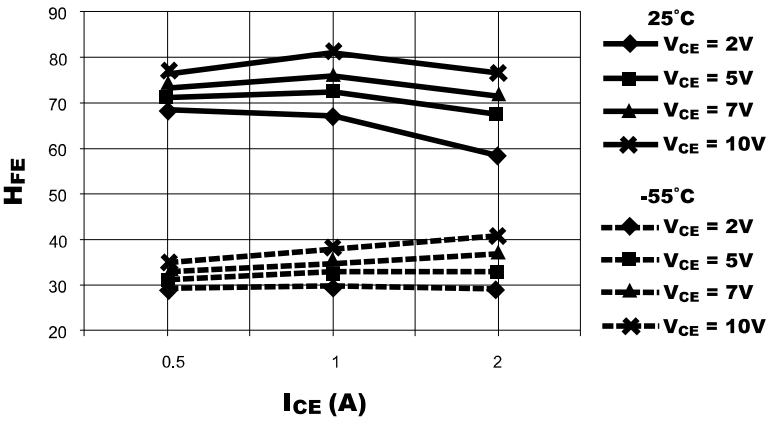
NOTES:
1/ For ordering information, price, operating curves, and availability - contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.
3/ Unless otherwise specified, maximum ratings/electrical characteristics at 25°C.

SMD.22 (S.22)



CASE OUTLINE: SMD.22





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Electrical Characteristics[3/]		Symbol	Min	Typ	Max	Units
Collector – Emitter Breakdown Voltage	I_C = 10mA	**BV_{CEO}**	80	100	-	Volts
Collector – Base Breakdown Voltage	I_C = 100µA	**BV_{CBO}**	160	230	-	Volts
Emitter – Base Breakdown Voltage	I_E = 200µA	**BV_{EBO}**	7.5	8.8	-	Volts
Collector – Base Cutoff Current	V_{CB} = 60V, T_C = 25ºC V_{CB} = 60V, T_C = 125ºC	**I_{CBO}**	- -	0.001 0.25	0.1 10	µA
Collector – Emitter Cutoff Current	V_{CE} = 30V, T_C = 25ºC V_{CE} = 30V, T_C = 125ºC	**I_{CEO}**	- -	0.002 6.6	0.1 50	µA
Emitter Cutoff Current	V_{BE} = 5V	**I_{EBO}**	-	0.001	1	µA
DC Current Gain*	I_C = 0.5A, V_{CE} = 2V I_C = 1.0A, V_{CE} = 2V I_C = 2.0A, V_{CE} = 2V I_C = 0.5A, V_{CE} = 5V I_C = 1.0A, V_{CE} = 5V I_C = 2.0A, V_{CE} = 5V I_C = 0.5A, V_{CE} = 10V I_C = 1.0A, V_{CE} = 10V I_C = 2.0A, V_{CE} = 10V	**H_{FE}**	35 35 30 35 35 35 40 40 35	68.4 67.4 58.4 71.3 72.5 67.8 76.7 80.8 76.6	-	
DC Current Gain*	I_C = 0.5A, V_{CE} = 2V, T_C = -55ºC I_C = 1.0A, V_{CE} = 2V, T_C = -55ºC I_C = 2.0A, V_{CE} = 2V, T_C = -55ºC I_C = 0.5A, V_{CE} = 5V, T_C = -55ºC I_C = 1.0A, V_{CE} = 5V, T_C = -55ºC I_C = 2.0A, V_{CE} = 5V, T_C = -55ºC I_C = 0.5A, V_{CE} = 10V, T_C = -55ºC I_C = 1.0A, V_{CE} = 10V, T_C = -55ºC I_C = 2.0A, V_{CE} = 10V, T_C = -55ºC	**H_{FE}**	15 - 15 - - - 18 - 20	29.5 30 29 31.5 32.5 33 35 37.5 41		
Collector-Emitter Saturation Voltage*	I_C = 1.0A, I_B = 100mA I_C = 2.4A, I_B = 480mA	**$V_{CE\ (SAT)}$**	- -	0.15 0.25	0.25 0.5	V
Base-Emitter Saturation Voltage	I_C = 1.0A, I_B = 0.1A	**$V_{BE\ (SAT)}$**	-	0.82	1.2	V
Current Gain Bandwidth Product	I_C = 0.1A, V_{CE} = 5V, f = 10MHz	**fT**	80	100	-	MHz
Output Capacitance	V_{CB} = 10V, I_E = 0A, f = 1.0MHz	**C_{ob}**	-	40	50	pF
Input Capacitance	V_{BE} = -0.5V, I_C = 0A, f = 1.0MHz	**C_{ib}**	-	400	500	pF
Turn On Time ($t_d + t_r$)	V_{CC} = 20V, I_C = 1.0A, $V_{BE\ (off)}$ = 3.7V $I_{B1} = I_{B2}$ = 100mA	**$t_{(on)}$**	-	60	120	nsec
Turn Off Time ($t_s + t_f$)		**$t_{(off)}$**	-	320	500	nsec

Notes: * Pulse Test: Pulse Width = 300 µs. Duty Cycle = 2%.
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PIN ASSIGNMENT (Standard)

Package	Collector	Emitter	Base
SMD.22 (S.22)	1	2	3

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

DATA SHEET #: TR0122A **DOC**