PRELIMINARY

SFT4374

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

1.5 AMP
PNP Transistor
60 Volts

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

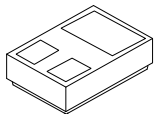
SFT4374 __ __
- __ Screening[2/]
  - __ = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- Package S.22 = SMD.22

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/]

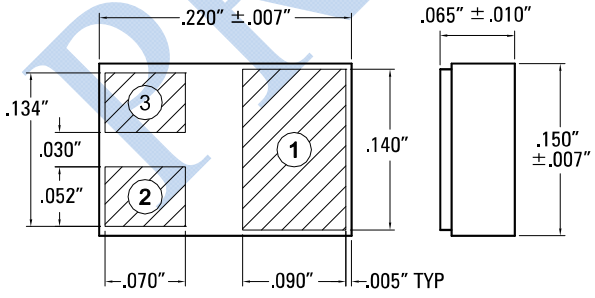
Maximum Ratings[3/]		Symbol	Values	Units
Collector – Emitter Voltage		V_{CEO}	80	Volts
Collector – Base Voltage		V_{CBO}	120	Volts
Emitter – Base Voltage		V_{EBO}	6.5	Volts
Collector Current	Continuous Pulsed (2% Duty Cycle)	I_C	1.5 2.4	Amps
Base Current		I_B	0.6	Amps
Total Device Dissipation T_C = 100ºC 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

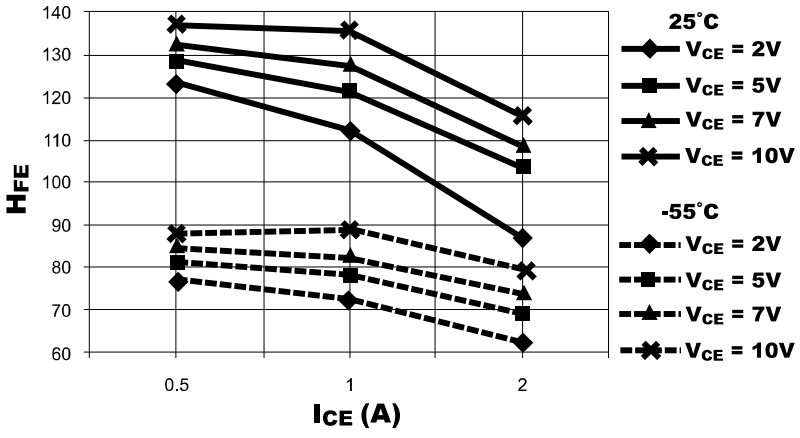
NOTES:
1/ For ordering information, price, operating curves, and availability - contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.
3/ Unless otherwise specified, maximum ratings/electrical characteristics at 25°C.

SMD.22 (S.22)



CASE OUTLINE: SMD.22





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

SFT4374

Electrical Characteristics[3/]		Symbol	Min		Max	Units
Collector – Emitter Breakdown Voltage	I_C = 10mA	BV_{CEO}	80	110	-	Volts
Collector – Base Breakdown Voltage	I_C = 100µA	BV_{CBO}	120	150	-	Volts
Emitter – Base Breakdown Voltage	I_E = 200µA	BV_{EBO}	6.5	7.3	-	Volts
Collector – Base Cutoff Current	V_{CB} = 60V, T_C = 25ºC V_{CB} = 60V, T_C = 125ºC	I_{CBO}	- -	0.001 0.15	0.1 1	µA
Collector – Emitter Cutoff Current	V_{CE} = 30V, T_C = 25ºC V_{CE} = 30V, T_C = 125ºC	I_{CEO}	- -	0.005 20	0.1 50	µA
Emitter Cutoff Current	V_{BE} = 5V	I_{EBO}	-	0.002	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}	80 70 50 - - - 90 90 75	123 112.5 87 128.5 121.5 103.5 137 136 115	-	
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}	55 50 40 - - - 65 65 55	77 72 62 81 78 69 88 88 79		
Collector-Emitter Saturation Voltage*	I_C = 1A, I_B = 100mA I_C = 2.4A, I_B = 0.48A	$V_{CE\ (SAT)}$	- -	0.14 0.28	0.25 1	V
Base-Emitter Saturation Voltage	I_C = 1.0A, I_B = 0.10A	$V_{BE\ (SAT)}$	-	0.84	1.2	V
Current Gain Bandwidth Product	I_C = 1.0A, V_{CE} = 5V, f = 10MHz	**fT**	120	150	-	MHz
Output Capacitance	V_{CB} = 10V, I_E = 0A, f = 1.0MHz	C_{ob}	-	52	60	pF
Input Capacitance	V_{BE} = -0.5V, I_C = 0A, f = 1.0MHz	C_{ib}	-	430	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 ($t_s + t_f$)		$t_{(off)}$	-	350	500	nsec

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
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 #: TR0123A | **DOC**