



PRELIMINARY

SOLID STATE DEVICES, INC.14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773**DESIGNER'S DATA SHEET****Part Number /Ordering Information ^{1/}**SFT501 / G _ TX
SFT503 / G _ TX**Screening ^{2/}:** _ = Not Screened

TX = TX Level

TXV = TXV Level

S = Space Level

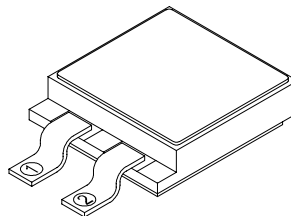
Polarity: _ = Normal

R = Reverse

Package: ^{3/} G = Cerpack**SFT501/G and SFT503/G
SERIES****5 AMP
200 VOLTS
PNP HIGH SPEED
POWER TRANSISTOR****FEATURES**

- BV_{CEO} 150V Min.
- Fast Switching.
- High Frequency, 80MHz Typ.
- High Linear Gain (SFT503/G).
- Low Saturation Voltage and Leackage.
- 200°C Operating, Gold Eutectic Die Attach.
- Designed for Complimentary Use with SFT502/G and SFT504/G.

MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Collector-Base Voltage	V_{CBO}	200	Volts
Collector-Emitter Voltage	V_{CEO}	150	Volts
Emitter-Base Voltage	V_{EBO}	7.0	Volts
Continuous Collector Current	I_C	5.0	Amps
Base Current	I_B	1.0	Amps
Operating and Storage Temperature	T_J, T_{STG}	-65 to +200	°C
Total Device Dissipation @ $T_C \leq 100^\circ C$ Derate above 100°C	P_D	10 0.10	W W/°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.8	°C/W

Available Part Numbers:SFT501/G
SFT503/G
SFT501/GR
SFT503/GR**Cerpack****PIN ASSIGNMENT**

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

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

DATA SHEET #: TR0018A

SFT501/G and SFT503/G SERIES

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ELECTRICAL CHARACTERISTICS ^{4/}		SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage ($I_C = 100\mu A_{DC}$)		BV_{CEO}	150	-	V
Collector-Base Breakdown Voltage ($I_C = 100\mu A_{DC}$)		BV_{CBO}	200	-	V
Emitter-Base Breakdown Voltage ($I_E = 20\mu A_{DC}$)		BV_{EBO}	7	-	V
Collector Cutoff Current ($V_{CB} = 100V_{DC}$)		I_{CBO}	-	500	nA
Collector Cutoff Current ($V_{CE} = 100V_{DC}$)		I_{CEO}	-	1	μA
Emitter Cutoff Current ($V_{EB} = 6V_{DC}$)		I_{EBO}	-	500	nA
DC Current Gain* ($V_{CE} = 5.0V_{DC}$) (SFT501) (SFT503)	($I_C = 50mA_{DC}$)	h_{FE}	20	-	
	($I_C = 2.5A_{DC}$)		30	-	
	($I_C = 5.0A_{DC}$)		20	-	
	($I_C = 50mA_{DC}$)		50	-	
	($I_C = 2.5A_{DC}$)		50	-	
	($I_C = 5.0A_{DC}$)		40	-	
Collector-Emitter Saturation Voltage* ($I_C = 2.5A_{DC}, I_B = 250mA_{DC}$) ($I_C = 5.0A_{DC}, I_B = 500mA_{DC}$)		$V_{CE(SAT)}$	-	0.75 1.5	V_{DC}
Base-Emitter Saturation Voltage* ($I_C = 2.5A_{DC}, I_B = 250mA_{DC}$) ($I_C = 5.0A_{DC}, I_B = 500mA_{DC}$)		$V_{BE(SAT)}$	-	1.3 1.5	V_{DC}
Current Gain Bandwidth Product ($I_C = 500mA_{DC}, V_{CE} = 5V_{DC}, f = 10MHz$)		f_T	80	-	MHz
Output Capacitance ($V_{CB} = 10V_{DC}, I_E = 0A_{DC}, f = 1.0MHz$)		C_{ob}	-	225	pf
Input Capacitance ($V_{BE} = 10V_{DC}, I_C = 0A_{DC}, f = 1.0MHz$)		C_{ib}	-	600	pf
Delay Time	(V _{CC} = 50V _{DC} , I _C = 5A _{DC} , I _{B1} = I _{B2} = 500mA _{DC})	t_d	-	50	ns
Rise Time		t_r	-	250	ns
Storage Time		t_s	-	900	ns
Fall Time		t_f	-	300	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/ All Electrical Characteristics @25°C, Unless Otherwise Specified.