Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SFT2845/18

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

SFT2845 __ __

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

Package
/18 = TO-18

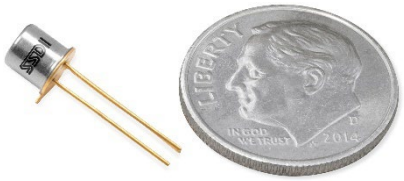
0.5 AMP
NPN TRANSISTOR
30 VOLTS

Features:
- Fast Switching
- High Frequency
- Low Saturation Voltage
- Replacement for 2N2845
- TX, TXV, and S Level Screening Available[2/]

Maximum Ratings[3/]		Symbol	Value	Unit
Collector – Emitter Voltage		V_{CEO}	30	**V**
Collector – Base Voltage		V_{CBO}	60	**V**
Emitter – Base Voltage		V_{EBO}	5.0	**V**
Collector Current		I_C	0.5	**A**
Total Device Dissipation	T_A = 25°C	P_{D1}	0.36	**W**
	T_C = 25°C	P_{D2}	1.2	**W**
Derate above	T_A = 25°C		2.06	**mW/°C**
Operating & Storage Temperature		T_J & T_{STG}	-65 to +175	**°C**
Thermal Resistance		$R_{\theta JA}$ $R_{\theta JC}$	416 125	**°C/W**

NOTES: *Pulsed per MIL-STD-750.
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.

TO-18 (/18)



(dime used for size reference)

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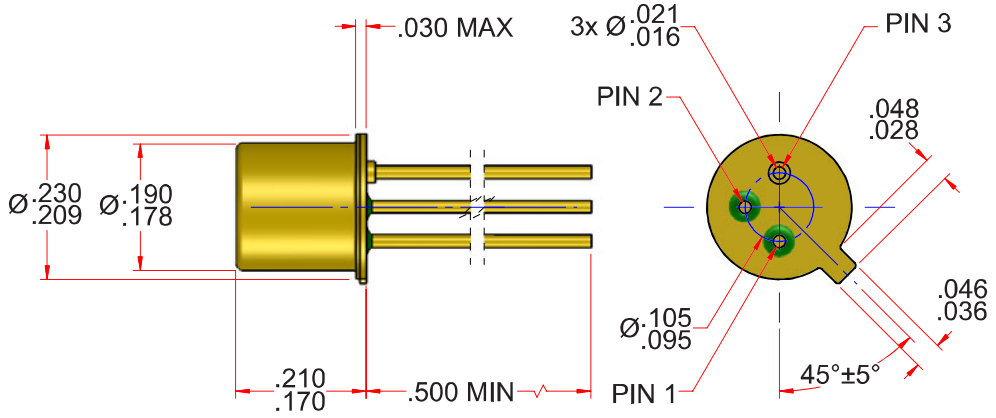
Electrical Characteristics[3/]		Symbol	Min	Typ	Max	Unit
Collector – Emitter Breakdown Voltage	I_C = 30 mA	$BV_{CEO(sus)}$	30	50	-	**V**
Collector – Base Breakdown Voltage	I_C = 100 µA	BV_{CBO}	60	100	-	**V**
Emitter – Base Breakdown Voltage	I_E = 100 µA	BV_{EBO}	5	7	-	**V**
Collector – Base Cutoff Current	V_{CB} = 30 V, T_C = 150°C	I_{CBO}	-	1	200	**µA**
Collector – Emitter Cutoff Current	V_{CE} = 30 V, T_C = 25°C	I_{CES}	-	35	200	**nA**
DC Current Gain*	I_C = 150 mA, V_{CE} = 10 V I_C = 500 mA, V_{CE} = 10 V I_C = 500 mA, V_{CE} = 1 V	h_{FE}	30 20 10	80 60 30	120 - -	
Collector – Emitter Saturation Voltage*	I_C = 150 mA, I_B = 15 mA I_C = 500 mA, I_B = 50 mA	$V_{CE(SAT)}$	- -	0.1 0.6	0.4 1.0	**V**
Base – Emitter Saturation Voltage	I_C = 150 mA, I_B = 15 mA I_C = 500 mA, I_B = 50 mA	$V_{BE(SAT)}$	- -	0.88 1.1	1.2 1.6	**V**
Current Gain Bandwidth	V_{CE} = 10 V, I_C = 50 mA, f = 100 MHz	f_T	200	250	-	
Output Capacitance	V_{CB} = 10 V, I_E = 0 A, f = 100 kHz	C_{obo}	-	7	8	**pF**
Turn On Time (t_d + t_r)	V_{CC} = 10 V, I_C = 150 mA, I_{B1} = I_{B2} = 15 mA	$t_{(on)}$	-	35	40	**nsec**
Turn Off Time (t_s + t_f)		$t_{(off)}$	-	115	200	**nsec**

CASE OUTLINE: TO-18

Pin Assignment (Standard)
Pin 1: Emitter
Pin 2: Base
Pin 3: Collector
Case: Collector



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