



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

SFT2222A Series

800 mA 75 Volts NPN High Speed Transistor

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

SFT2222A

┌ Screening^{2/} ___ = Commercial
 TX= TX Level
 TXV= TXV Level
 S= S Level

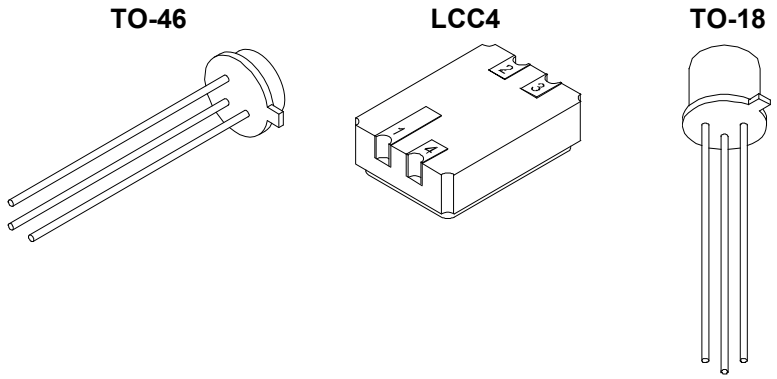
└ Package
 -4 = LCC4
 /18 = TO-18
 /46 = TO-46

- Features:**
- High Speed Switching Transistor
 - Multiple Devices Reduce Board Space
 - High Power Dissipation: Up to 500 mW
 - Replacement for 2N2222A and 2N2222AUA
 - TX, TXV, S-Level Screening Available^{2/}
 - PNP Complimentary Parts Available (SFT2907A)

Maximum Ratings ^{3/}	Symbol	Value	Units
Collector – Emitter Voltage	V _{CEO}	50	Volts
Collector – Base Voltage	V _{CBO}	75	Volts
Emitter – Base Voltage	V _{EBO}	6	Volts
Continuous Collector Current	I _C	800	mA
Power Dissipation @ T _A = 25°C	P _D	500	mW
Operating & Storage Temperature	T _{OP} & T _{stg}	-65 to +200	°C
Maximum Thermal Resistance (Junction to PCB)	R _{θJA}	325	°C/W

Notes:

- 1/ For ordering information, price, and availability contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ Unless otherwise specified, all electrical characteristics @ 25°C.
- 4/ Pulse test: pulse width= 300µsec, duty cycle= 2%



Available Part Numbers:

SFT2222A-4
 SFT2222A/18
 SFT2222A/46

PIN ASSIGNMENT				
Package	Function	Collector	Emitter	Base
-4	Normal	Pin 1	Pin 2	Pin 3
/18	Normal	Pin 1	Pin 2	Pin 3
/46	Normal	Pin 1	Pin 2	Pin 3

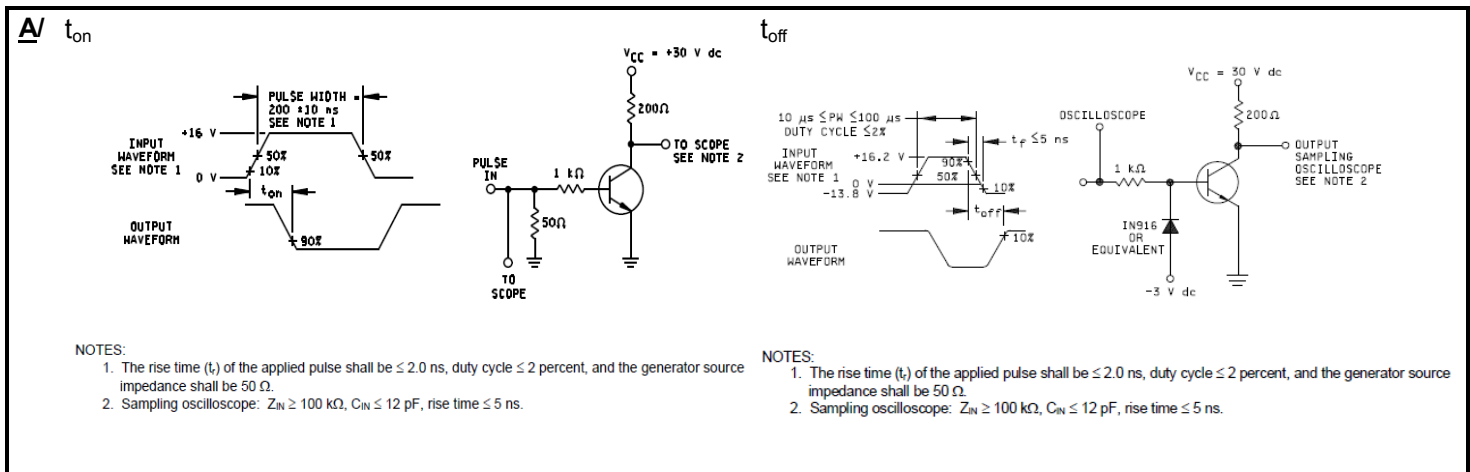


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Electrical Characteristic ^{3/}		Symbol	Min	Max	Units
Collector – Emitter Sustaining Voltage	I _C = 10 mA	BV _{CEO}	50	—	Volts
Collector Cutoff Current	V _{CE} = 50 V	I _{CES}	—	50	nA
Collector Cutoff Current	V _{CB} = 60 V V _{CB} = 75 V V _{CB} = 60 V, T _A = 150°C	I _{CBO}	—	0.01 10 10	μA
Emitter Cutoff Current	V _{EB} = 4.0 V V _{EB} = 6.0 V	I _{EBO}	—	0.01 10	μA
DC Forward Current Transfer Ratio ^{4/}	V _{CE} = 10 V, I _C = 0.1 mA V _{CE} = 10 V, I _C = 1.0 mA V _{CE} = 10 V, I _C = 10 mA V _{CE} = 10 V, I _C = 150 mA V _{CE} = 10 V, I _C = 500 mA V _{CE} = 10 V, I _C = 10 mA, T _A = -55°C	H _{FE}	50 75 100 100 30 35	— 325 — 300 — —	
Small-signal Forward Current Transfer Ratio	V _{CE} = 10 V, I _C = 1.0 mA, f= 1 kHz	h _{fe}	50	—	
Collector – Emitter Saturation Voltage ^{4/}	I _C = 150 mA, I _B = 15 mA I _C = 500 mA, I _B = 50 mA	V _{CE(Sat)}	—	0.3 1.0	Volts
Base – Emitter Saturation Voltage ^{4/}	I _C = 150 mA, I _B = 15 mA I _C = 500 mA, I _B = 50 mA	V _{BE(Sat)}	0.6 —	1.2 2.0	Volts
Frequency Transition	V _{CE} = 20 V, I _C = 20 mA, f= 100 MHz	f _T	250	—	MHz
Switching Times ^{4/}	V _{CC} = 30 V, I _C = 150 mA, I _{B1} = 15 mA V _{CC} = 30 V, I _C = 150 mA, I _{B1} = I _{B2} = 15 mA, V _{BE(off)} = 3 V	t _{on} t _{off}	— —	35 300	ns
Output Capacitance	V _{CB} = 10 V, f= 1MHz	C _{ob}	—	8.0	pF
Input Capacitance	V _{EB} = 0.5 V, f= 1MHz	C _{ib}	—	25	pF



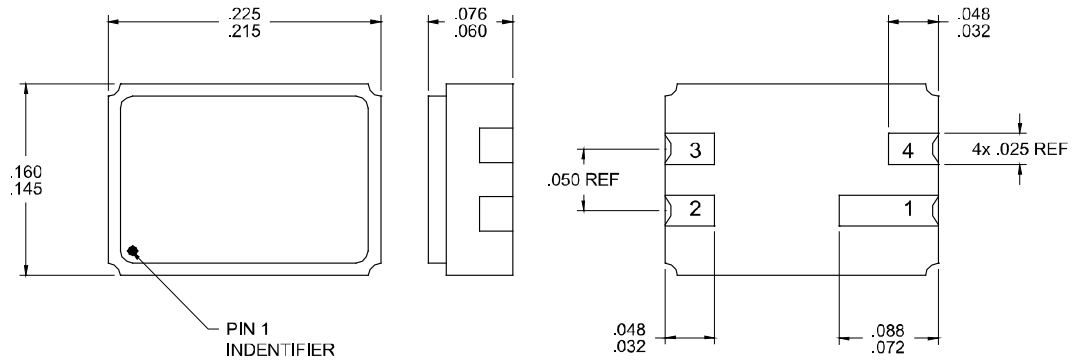


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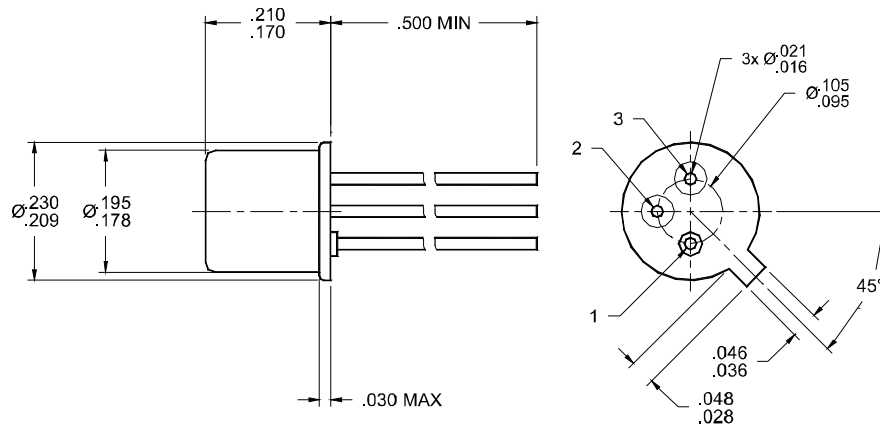
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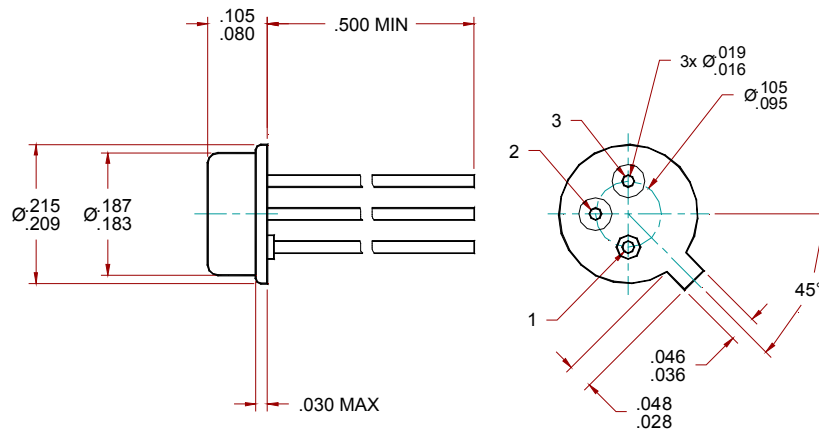
LCC4 (-4)



TO-18 (/18)



TO-46 (/46)



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

DATA SHEET #: TR0116C

DOC