



PRELIMINARY

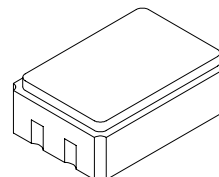
SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638

Phone: (562) 404-7855 * Fax: (562) 404-1773

DESIGNER'S DATA SHEET**FEATURES:**

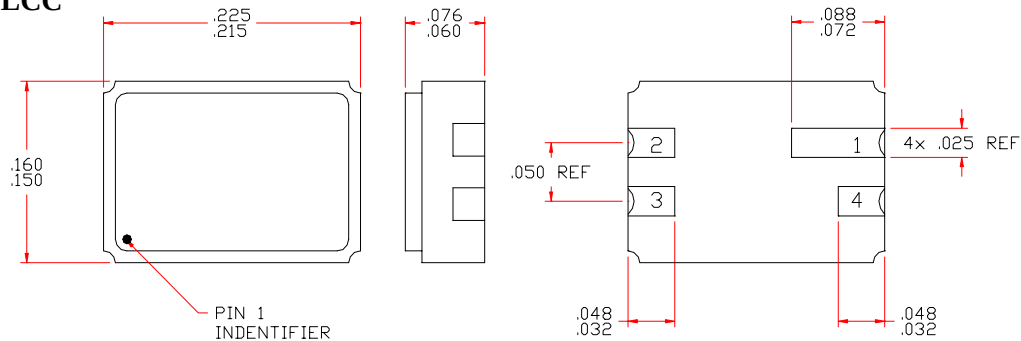
- Low Profile Surface Mount Package
- 200°C Operating Eutectic Die Attach
- BVCEr and BVCBO to 1000V
- Low Leakage at High Temperature
- High Gain, Low Saturation
- TX, TXV and Space Level screening available
- Designed for Complimentary Use with SFT5094

**SFT5013/4
thru
SFT5015/4****0.5 AMP
800 - 1000 VOLTS
NPN TRANSISTOR****4 PIN CLCC**

MAXIMUM RATINGS		SYMBOL	VALUE	UNIT
Collector - Emitter Voltage ($R_{BE} = 1k\Omega$)	SFT5013/4	V_{CEO}	400	V
	SFT5014/4	V_{CER}	800	
	SFT5015/4		900	
	SFT5015/4		1000	
Collector - Base Voltage	SFT5013/4	V_{CBO}	800	V
	SFT5014/4		900	
	SFT5015/4		1000	
Emitter - Base Voltage		V_{EBO}	5	V
Collector Current		I_C	0.5	A
Base Current		I_B	0.25	A
Total Device Dissipation Derate above $T_C = 25^\circ\text{C}$	$T_C = 25^\circ\text{C}$	P_D	1.0	W
	$T_A = 25^\circ\text{C}$		0.4	
			5.7	
Operating and Storage Temperature		$T_{OP} \& T_{STG}$	-55 to +200	$^\circ\text{C}$
Thermal Resistance, Junction to Case		$R_{\theta JC}$	175	$^\circ\text{C/W}$
Thermal Resistance, Junction to Ambient		$R_{\theta JA}$	440	

PACKAGE OUTLINE: 4 PIN CLCC

PIN 1: COLLECTOR
PIN 2: EMITTER
PIN 3: BASE
PIN 4: N/C



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

DATA SHEET #: XN0031C

**SFT5013/4
thru
SFT5015/4**

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ELECTRICAL CHARACTERISTICS

RATING		SYMBOL	MIN	MAX	UNIT
Collector - Emitter Breakdown Voltage * ($I_C = 200\mu A$, $R_{BE} = 1k\Omega$)	($I_C = 1mA$)	BV_{CEO}	400	-	V
	SFT5013/4		800	-	
	SFT5014/4	BV_{CER}	900	-	V
	SFT5015/4		1000	-	
Collector - Base Breakdown Voltage ($I_C = 200\mu A$)	SFT5013/4	BV_{CBO}	800	-	V
	SFT5014/4		900	-	
	SFT5015/4		1000	-	
Emitter - Base Breakdown Voltage ($I_E = 50\mu A$)		BV_{EBO}	6	-	V
Collector Cutoff Current ($V_{CB} = 650/700/760V$)	$T_A = 25^\circ C$	I_{CBO}	-	12	μA
	$T_A = 100^\circ C$		-	50	
Emitter Cutoff Current ($V_{EB} = 4V$)		I_{EBO}	-	20	μA
DC Current Gain *	$I_C = 1mA$; $V_{CE} = 10V$	HFE	20	250	
	$I_C = 25mA$; $V_{CE} = 10V$		40	300	
	$I_C = 100mA$; $V_{CE} = 10V$		20	250	
Collector - Emitter Saturation Voltage * ($I_C = 25mA$; $I_B = 2.5mA$)		$V_{CE(SAT)}$	-	500	mV
Base - Emitter Saturation Voltage ($I_C = 25mA$; $I_B = 2.5mA$)		$V_{BE(SAT)}$	-	1.0	V
Current Gain Bandwidth Product * $I_C = 10mA$; $V_{CE} = 10V$; $f = 10MHz$		f_T	25	-	MHz
Output Capacitance $V_{CB} = 20V$; $I_E = 0A$; $f = 1MHz$		C_{ob}	-	10	pF
Turn on Delay Time	$V_{CC} = 100V$ $I_C = 100mA$ $I_{B1} = I_{B2} = 10mA$	t_d	-	200	nsec
Rise Time		t_r	-	1200	nsec
Storage Time		t_s	-	2	μsec
Fall Time		t_f	-	700	nsec

NOTES:

*Pulse Test: Pulse Width = 300 μs , Duty Cycle = 2%

For thermal derating curves and other characteristic curves please contact SSDI Marketing Department.