



PRELIMINARY

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638  
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**SFT700D-28Q**

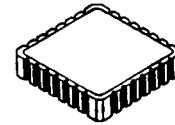
Dual 800mA, 75 V-NPN  
 and  
 Dual 600mA, 60 V-PNP  
 Transistor\*

**Designer's Data Sheet**

**FEATURES:**

- Eutectic Die Attach, Hermetic Package
- Electrical performance similar to 2N2222A and 2N2907A.
- Hermetically Sealed Surface Mount Package
- Fast Complimentary Switching
- TX, TXV and Space Level Screening Available

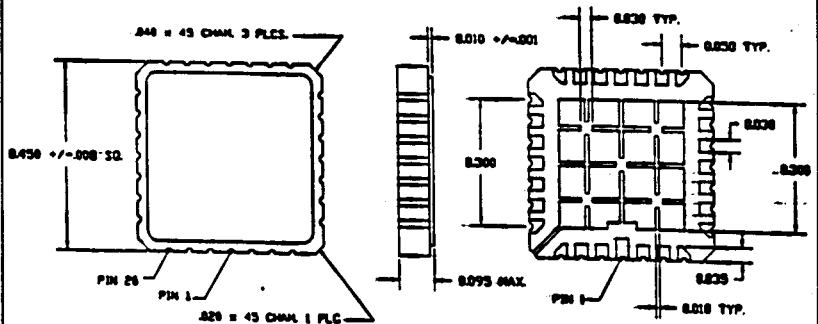
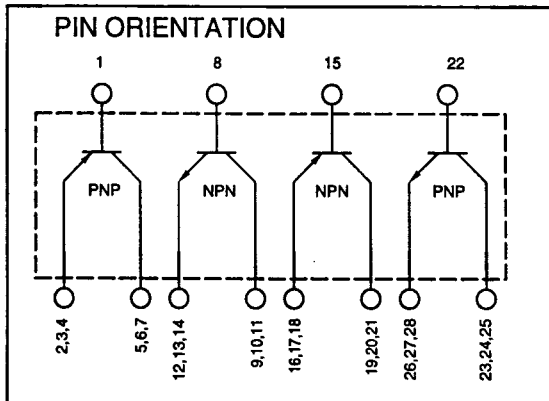
28 PIN CLCC



**MAXIMUM RATINGS (Per Transistor)**

CHARACTERISTIC	SYMBOL	NPN VALUE	PNP VALUE	UNIT
Collector-Emitter Voltage	V <sub>CEO</sub>	40	60	V
Collector-Base Voltage	V <sub>CBO</sub>	75	60	V
Emitter-Base Voltage	V <sub>EB0</sub>	6.0	5.0	V
Collector Current	I <sub>c</sub>	800	600	mA
NPN to PNP Isolation Voltage	I <sub>v</sub>	500		V
Total Device Dissipation @ TC= 25 °C (All four transistors)	P <sub>D</sub>	4.8		W
Operating and Storage Temperature	T <sub>j</sub> , T <sub>stj</sub>	-55 to +200		°C
Thermal Resistance, Junction to Case (All four transistors)	R <sub>θJC</sub>	20		°C/W

**PACKAGE OUTLINE: 28 PIN QUAD CLCC**



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

DATA SHEET: XN0035 A

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**SFT700D-28Q****SOLID STATE DEVICES, INC**14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424**ELECTRICAL CHARACTERISTICS (Per Transistor) @  $T_J=25^\circ\text{C}$  (Unless Otherwise Specified)**

RATING	SYMBOL	DUAL NPN		DUAL PNP		UNIT	
		MIN	MAX	MIN	MAX		
Collector-Emitter Breakdown Voltage ( $I_C=10.0\text{mA}$ , $I_B=0\text{A}$ )	<b>BV<sub>CEO</sub></b>	50	---	60	---	V	
Collector-Base Breakdown Voltage ( $I_C=10.0\mu\text{A}$ , $I_E=0\text{A}$ )	<b>BV<sub>CBO</sub></b>	75	---	60	---	V	
Emitter-Base Breakdown Voltage ( $I_E=10\mu\text{A}$ , $I_C=0\text{A}$ )	<b>BV<sub>EBO</sub></b>	6	---	5	---	V	
Collector Cutoff Current ( $V_{CE}=60\text{Vdc}$ ) ( $V_{CE}=50\text{Vdc}$ ) ( $V_{CE}=60\text{Vdc}$ , $150^\circ\text{C}$ ) ( $V_{CE}=50\text{Vdc}$ , $150^\circ\text{C}$ )	<b>I<sub>CBO</sub></b>	---	10	---	---	nA $\mu\text{A}$	
Collector Cutoff Current ( $V_{CE}=50\text{V}$ ) ( $V_{CE}=30\text{V}$ )	<b>I<sub>CES</sub></b>	---	50	---	---	nA	
Emitter Cutoff Current ( $V_{EB}=4\text{Vdc}$ for NPN, $V_{EB}=3.5\text{Vdc}$ for PNP)	<b>I<sub>EBO</sub></b>	---	10	---	50	nA	
DC Current Gain ( $I_C=100\mu\text{A}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=1.0\text{mA}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=10\text{mA}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=150\text{mA}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=500\text{mA}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=10\text{mA}$ , $V_{CE}=10\text{Vdc}$ , $-55^\circ\text{C}$ ) ( $I_C=1.0\text{mA}$ , $V_{CE}=10\text{Vdc}$ , $-55^\circ\text{C}$ )	<b>HFE</b>	50 75 100 100 30 35 ---	---	75 100 100 100 50 ---	---	450 ---	
Small Signal Current Gain ( $V_{CE}=10\text{Vdc}$ , $I_C=1\text{mA}$ , $f=1\text{kHz}$ )	<b>hfe</b>	50	---	100	---		
Collector-Emitter Saturation Voltage ( $I_C=150\text{mA}$ , $I_B=15\text{mA}$ ) ( $I_C=500\text{mA}$ , $I_B=50\text{mA}$ )	<b>V<sub>CE(SAT)</sub></b>	---	0.3 1.0	---	0.4 1.6	V	
Base-Emitter Saturation Voltage ( $I_C=150\text{mA}$ , $I_B=15\text{mA}$ ) ( $I_C=500\text{mA}$ , $I_B=50\text{mA}$ )	<b>V<sub>BE(SAT)</sub></b>	0.6 ---	1.2 2.0	---	1.3 2.6	V	
Magnitude of Small Signal Short Circuit Current Gain ( $I_C=20\text{mA}$ , $V_{CE}=20\text{Vdc}$ , $f=100\text{MHz}$ ) ( $I_C=50\text{mA}$ , $V_{CE}=20\text{Vdc}$ , $f=100\text{MHz}$ )	<b> h<sub>fe</sub>l</b>	2.5 ---	---	2	---		
Output Capacitance ( $V_{CB}=10\text{Vdc}$ , $I_E=0\text{A}$ , $f=1\text{MHz}$ )	<b>C<sub>ob</sub></b>	---	8	---	8	pF	
Input Capacitance ( $V_{BE}=0.5\text{Vdc}$ , $I_E=0\text{A}$ , $f=1\text{MHz}$ ) ( $V_{BE}=2.0\text{Vdc}$ , $I_E=0\text{A}$ , $f=1\text{MHz}$ )	<b>C<sub>ib</sub></b>	---	25 ---	---	---	pF	
Turn On Time Turn Off Time	<b>t<sub>on</sub></b> <b>t<sub>f</sub></b>	$V_{CC}=30\text{Vdc}$ $I_C=150\text{mA}$ $I_{B1}=I_{B2}=15\text{mA}$	---	35 300	---	45 300	nsec

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