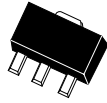


CXT2222A
SURFACE MOUNT
NPN SILICON TRANSISTOR



SOT-89 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT2222A type is an NPN silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose and switching applications.

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	600	mA
Power Dissipation	P_D	1.2	W
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$
Thermal Resistance	θ_{JA}	104	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

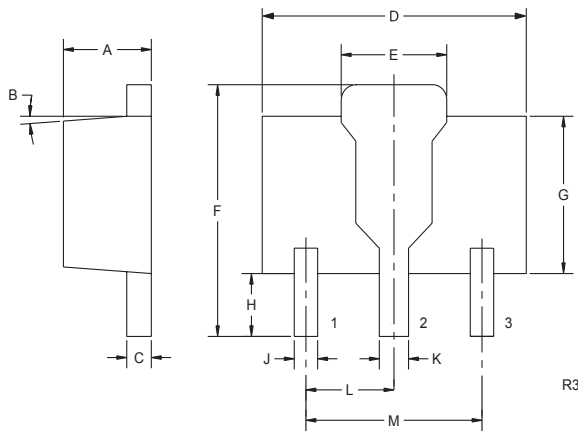
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=60\text{V}$		10	nA
I_{CBO}	$V_{CB}=60\text{V}, T_A=125^{\circ}\text{C}$		10	μA
I_{EBO}	$V_{EB}=3.0\text{V}$		10	nA
I_{CEV}	$V_{CE}=60\text{V}, V_{EB}=3.0\text{V}$		10	nA
BV_{CBO}	$I_C=10\mu\text{A}$	75		V
BV_{CEO}	$I_C=10\text{mA}$	40		V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.3	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.0	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	0.6	1.2	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		2.0	V
h_{FE}	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	35		
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	50		
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	75		
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=150\text{mA}$	50		
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40		
f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	300		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		8.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		25	pF

**SURFACE MOUNT
NPN SILICON TRANSISTOR**

ELECTRICAL CHARACTERISTICS (Continued)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
h_{ie}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$	2.0	8.0	$k\Omega$
h_{ie}	$V_{CE}=10V, I_C=10mA, f=1.0kHz$	0.25	1.25	$k\Omega$
h_{re}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$		8.0	$\times 10^{-4}$
h_{re}	$V_{CE}=10V, I_C=10mA, f=1.0kHz$		4.0	$\times 10^{-4}$
h_{fe}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$	50	300	
h_{fe}	$V_{CE}=10V, I_C=10mA, f=1.0kHz$	75	375	
h_{oe}	$V_{CE}=10V, I_C=1.0mA, f=1.0kHz$	5.0	35	$\mu mhos$
h_{oe}	$V_{CE}=10V, I_C=10mA, f=1.0kHz$	25	200	$\mu mhos$
$r_b' C_c$	$V_{CB}=10V, I_E=20mA, f=31.8MHz$		150	ps
NF	$V_{CE}=10V, I_C=100\mu A, R_S=1.0k\Omega, f=1.0kHz$		4.0	dB
t_d	$V_{CC}=30V, V_{BE}=0.5, I_C=150mA, I_{B1}=15mA$		10	ns
t_r	$V_{CC}=30V, V_{BE}=0.5, I_C=150mA, I_{B1}=15mA$		25	ns
t_s	$V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA$		225	ns
t_f	$V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA$		60	ns

SOT-89 CASE - MECHANICAL OUTLINE



BOTTOM VIEW

LEAD CODE:

- 1) EMITTER
- 2) COLLECTOR
- 3) BASE

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.016	0.018	0.40	0.46
D	0.173	0.185	4.40	4.70
E	0.070	0.074	1.79	1.87
F	0.146	0.177	3.70	4.50
G	0.094	0.106	2.40	2.70
H	0.028	0.051	0.70	1.30
J	0.015	0.019	0.38	0.48
K	0.019	0.023	0.48	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R3)



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.