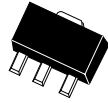


CXT5551

SURFACE MOUNT
NPN SILICON TRANSISTORS



SOT-89 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT5551 type is an NPN silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high voltage amplifier applications.

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

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Collector Current
Power Dissipation
Operating and Storage
Junction Temperature
Thermal Resistance

SYMBOL

V_{CBO} 180
 V_{CEO} 160
 V_{EBO} 6.0
 I_C 600
 P_D 1.2

UNITS

V
V
V
mA
W

 $^{\circ}\text{C}$
 $^{\circ}\text{C/W}$

T_J, T_{stg} -65 to +150
 Θ_{JA} 104

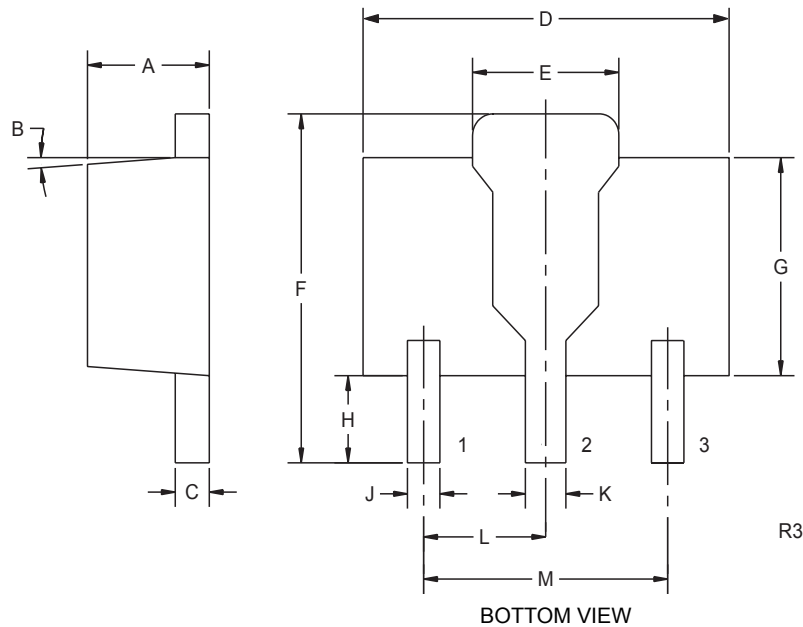
ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=120\text{V}$		50	nA
I_{CBO}	$V_{CB}=120\text{V}, T_A=100^{\circ}\text{C}$		50	μA
I_{EBO}	$V_{EB}=4.0\text{V}$		50	nA
BV_{CBO}	$I_C=100\mu\text{A}$	180		V
BV_{CEO}	$I_C=1.0\text{mA}$	160		V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.15	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.20	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		1.00	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.00	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	80		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	80	250	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	30		
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100	300	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		6.0	pF
h_{fe}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	50	200	
NF	$V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_S=10\Omega$ $f=10\text{Hz to } 15.7\text{kHz}$		8.0	dB

R3 (20-December 2001)

**SURFACE MOUNT
NPN SILICON TRANSISTORS**

SOT-89 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

SYMBOL	DIMENSIONS		INCHES		MILLIMETERS	
	MIN	MAX	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)

R3 (20-December 2001)