



CXT5551E

**ENHANCED SPECIFICATION
SURFACE MOUNT
NPN SILICON TRANSISTOR**

**ENHANCED
E
SPECIFICATION**



SOT-89 CASE

APPLICATIONS:

- General purpose switching and amplification
- Telephone applications

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

	SYMBOL		UNITS
◆ Collector-Base Voltage	V_{CBO}	250	V
◆ Collector-Emitter Voltage	V_{CEO}	220	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}	$V_{CB}=120\text{V}$		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}	$I_C=100\mu\text{A}$	250		V
◆ BV_{CEO}	$I_C=1.0\text{mA}$	220		V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0		V
◆ $V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		75	mV
◆ $V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		100	mV
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		1.00	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.00	V

◆ Enhanced Specification

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT5551E is an NPN Silicon Transistor, packaged in an SOT-89 case, designed for general purpose amplifier applications requiring high breakdown voltage.

MARKING CODE: FULL PART NUMBER

FEATURES:

- High Collector Breakdown Voltage 250V
- Low Leakage Current 50nA Max
- Low Saturation Voltage 100mV Max @ 50mA
- Complementary Device CXT5401E
- SOT-89 Surface Mount Package

R0 (10-May 2006)

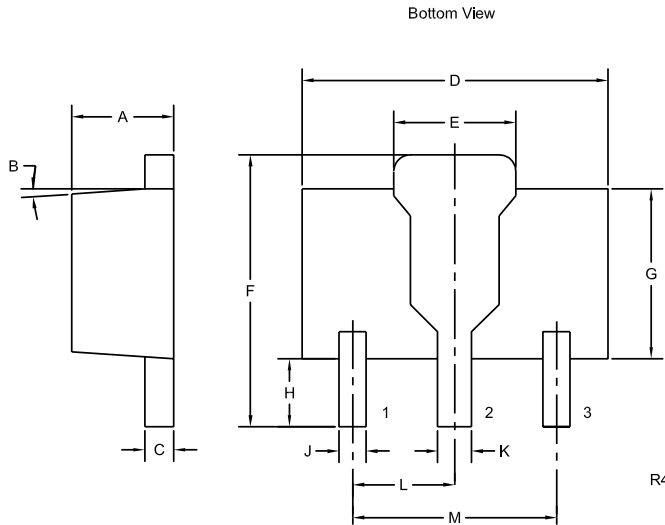
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ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
◆ h_{FE}	$V_{CE}=5.0\text{V}$, $I_C=1.0\text{mA}$	120		
◆ h_{FE}	$V_{CE}=5.0\text{V}$, $I_C=10\text{mA}$	120	300	
◆ h_{FE}	$V_{CE}=5.0\text{V}$, $I_C=50\text{mA}$	75		
◆ h_{FE}	$V_{CE}=10\text{V}$, $I_C=150\text{mA}$	25		
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
C_{ib}	$V_{EB}=0.5\text{V}$, $I_C=0$, $f=1.0\text{MHz}$		20	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 15.7kHz		8.0	dB

◆ Enhanced Specification

SOT-89 CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.014	0.018	0.35	0.46
D	0.173	0.185	4.40	4.70
E	0.064	0.074	1.62	1.87
F	0.146	0.177	3.70	4.50
G	0.090	0.106	2.29	2.70
H	0.028	0.051	0.70	1.30
J	0.014	0.019	0.36	0.48
K	0.017	0.023	0.44	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R4)

LEAD CODE:

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

MARKING CODE:

FULL PART NUMBER

R0 (10-May 2006)