



CXT5401E

ENHANCED SPECIFICATION  
SURFACE MOUNT  
PNP 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	$V_{EBO}$	7.0	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	$\theta_{JA}$	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	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=3.0\text{V}$		50	nA
◆ $BV_{CBO}$	$I_C=100\mu\text{A}$	250		V
◆ $BV_{CEO}$	$I_C=1.0\text{mA}$	220		V
◆ $BV_{EBO}$	$I_E=10\mu\text{A}$	7.0		V
◆ $V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		100	mV
◆ $V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		150	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

# Central<sup>TM</sup>

Semiconductor Corp.

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CXT5401E is a PNP 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 150mV Max @ 50mA
- Complementary Device CXT5551E
- SOT-89 Surface Mount Package

R0 (10-May 2006)

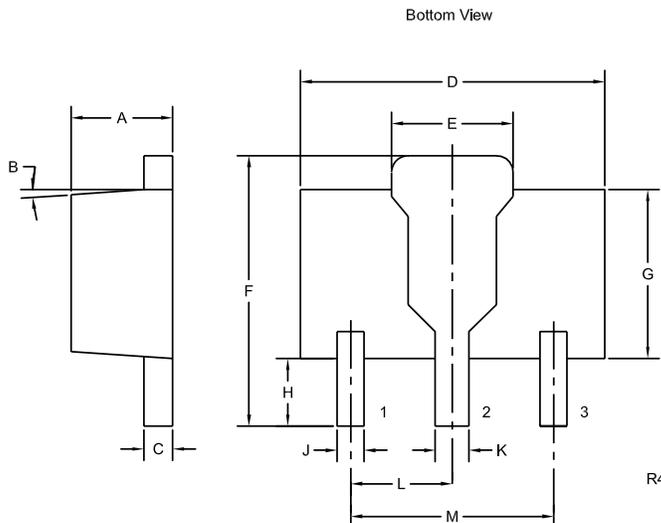
**ENHANCED SPECIFICATION  
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**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
◆ $h_{FE}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	100		
◆ $h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	100	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
$h_{fe}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	40	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

◆ Enhanced Specification

**SOT-89 CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	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)