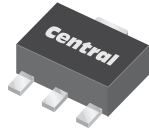


CXT5401E

**ENHANCED SPECIFICATION
SURFACE MOUNT
PNP SILICON TRANSISTOR**



www.centrasemi.com



SOT-89 CASE

APPLICATIONS:

- General purpose switching and amplification
- Telephone applications

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: 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

MAXIMUM RATINGS: (T_A=25°C)

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

SYMBOL		UNITS
V _{CBO}	250	V
V _{CEO}	220	V
V _{EBO}	7.0	V
I _C	600	mA
P _D	1.2	W
T _J , T _{stg}	-65 to +150	°C
θ _{JA}	104	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CBO}	V _{CB} =120V		50	nA
I _{CBO}	V _{CB} =120V, T _A =100°C		50	µA
I _{EBO}	V _{EB} =3.0V		50	nA
◆ BV _{CBO}	I _C =100µA	250		V
◆ BV _{CEO}	I _C =1.0mA	220		V
◆ BV _{EBO}	I _E =10µA	7.0		V
◆ V _{CE(SAT)}	I _C =10mA, I _B =1.0mA		100	mV
◆ V _{CE(SAT)}	I _C =50mA, I _B =5.0mA		150	mV
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA		1.00	V
V _{BE(SAT)}	I _C =50mA, I _B =5.0mA		1.00	V

◆ Enhanced specification

R1 (23-February 2010)

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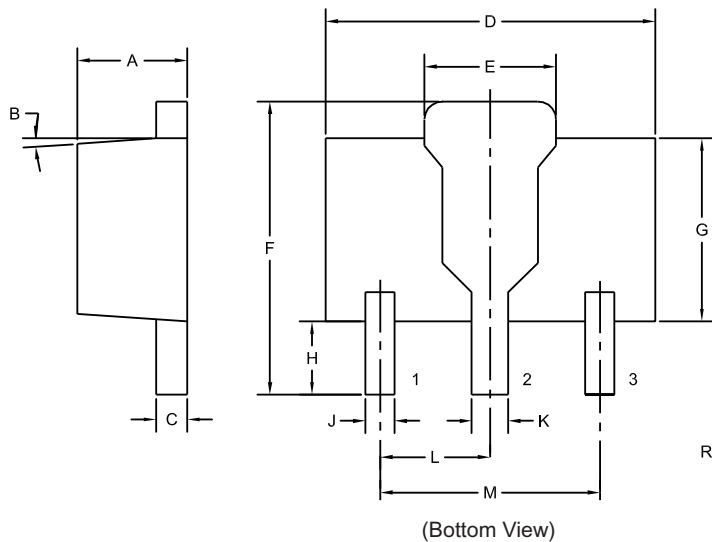


ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

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	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:

FULL PART NUMBER

R1 (23-February 2010)