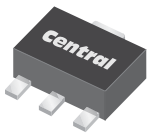
CXT5551E

ENHANCED SPECIFICATION
SURFACE MOUNT
NPN SILICON TRANSISTOR



ENHANCED E SPECIFICATION

SOT-89 CASE

Central Semiconductor Corp.

www.centralsemi.com

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: FULL PART NUMBER

APPLICATIONS:

- General purpose switching and amplification
- Telephone applications

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

MAXIMUM RATINGS: (T_A=25°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
Continuous 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	°C
Thermal Resistance	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}=4.0V		50	nA
♦ **BV_{CBO}**	**I_C=100µA**	**250**		**V**
♦ **BV_{CEO}**	**I_C=1.0mA**	**220**		**V**
BV_{EBO}	I_E=10µA	6.0		V
♦ **$V_{CE(SAT)}$**	**I_C=10mA, I_B=1.0mA**		**75**	**mV**
♦ **$V_{CE(SAT)}$**	**I_C=50mA, I_B=5.0mA**		**100**	**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)

CXT5551E

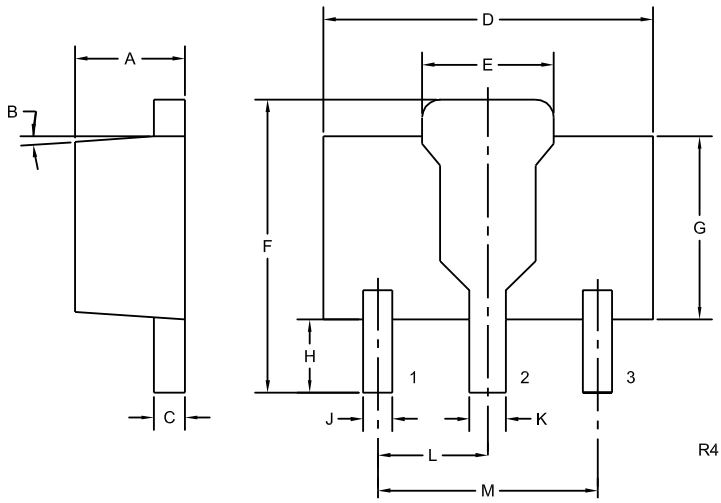
ENHANCED SPECIFICATION
SURFACE MOUNT
NPN SILICON TRANSISTOR

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

	SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
♦	**h_{FE}**	**V_{CE}=5.0V, I_C=1.0mA**	**120**		
♦	**h_{FE}**	**V_{CE}=5.0V, I_C=10mA**	**120**	**300**	
♦	**h_{FE}**	**V_{CE}=5.0V, I_C=50mA**	**75**		
♦	**h_{FE}**	**V_{CE}=10V, I_C=150mA**	**25**		
	f_T	V_{CE}=10V, I_C=10mA, f=100MHz	100	300	MHz
	C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		6.0	pF
	C_{ib}	V_{EB}=0.5V, I_C=0, f=1.0MHz		20	pF
	h_{fe}	V_{CE}=10V, I_C=1.0mA, f=1.0kHz	50	200	
	NF	V_{CE}=5.0V, I_C=200μA, R_S=10Ω, f=10Hz to 15.7kHz		8.0	dB

♦ Enhanced specification

SOT-89 CASE - MECHANICAL OUTLINE



(Bottom View)

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)