

CXT491E
SURFACE MOUNT
NPN SILICON TRANSISTOR



SOT-89 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT491E type is an NPN silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high current, general purpose amplifier applications.

Marking Code: Full Part Number

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

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	1.0	A
Base Current	I_B	200	mA
Collector Current (Peak)	I_{CM}	2.0	A
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	$^\circ\text{C/W}$

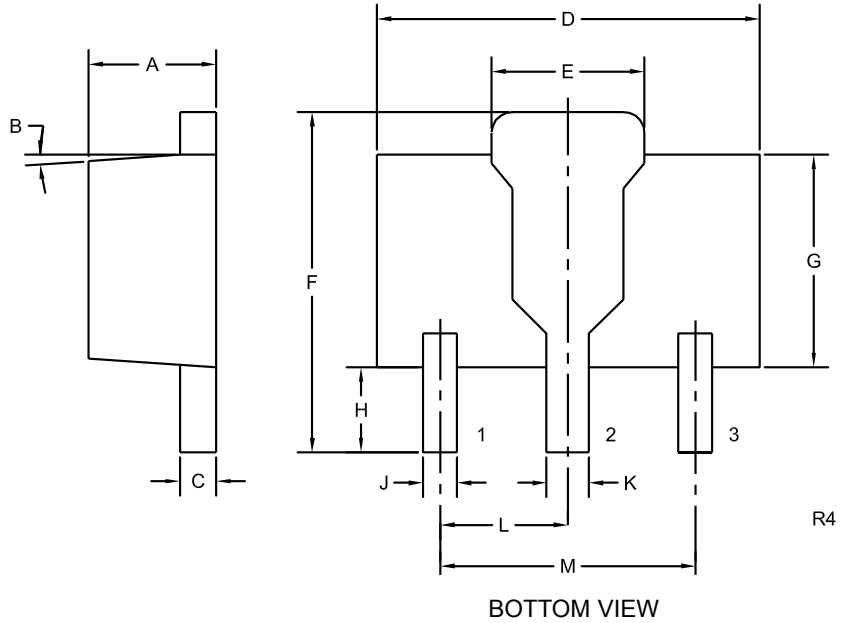
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=60\text{V}$		100	nA
I_{EBO}	$V_{EB}=4.0\text{V}$		100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	80		V
BV_{CEO}	$I_C=10\text{mA}$	60		V
BV_{EBO}	$I_E=100\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.20	V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		0.40	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		1.1	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$		1.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	200		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	200	600	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$	50		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{A}$	15		
f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	150		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		10	pF

R1 (20-May 2004)

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SOT-89 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Emitter
- 2) Collector
- 3) Base

MARKING CODE: Full Part Number

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)