

**CXTA44**  
**SURFACE MOUNT**  
**NPN SILICON**  
**HIGH VOLTAGE TRANSISTOR**



**SOT-89 CASE**

# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CXTA44 type is a surface mount epoxy molded silicon planar epitaxial transistors designed for extremely high voltage applications.

**MARKING CODE: FULL PART NUMBER**

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

	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	450	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	6.0	V
Collector Current	$I_C$	300	mA
Power Dissipation	$P_D$	1.2	W
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +175	$^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	125	$^\circ\text{C/W}$

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

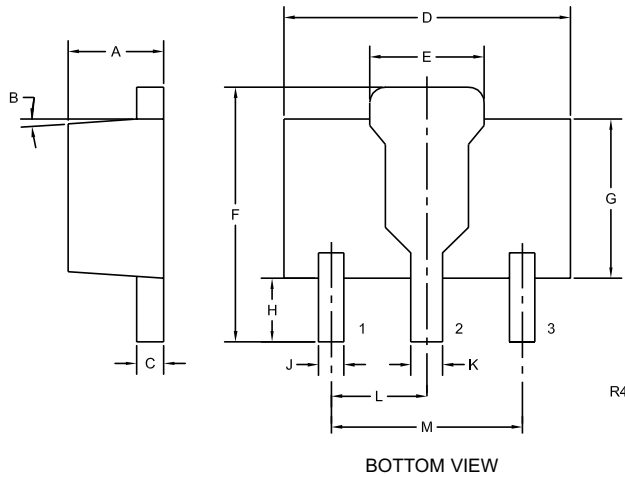
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CBO}$	$V_{CB}=400\text{V}$		100	nA
$I_{CES}$	$V_{CE}=400\text{V}$		500	nA
$I_{EBO}$	$V_{BE}=4.0\text{V}$		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	450		V
$BV_{CES}$	$I_C=100\mu\text{A}$	450		V
$BV_{CEO}$	$I_C=1.0\text{mA}$	400		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C=1.0\text{mA}, I_B=0.1\text{mA}$		0.40	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.50	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.75	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.75	V

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**ELECTRICAL CHARACTERISTICS:** Continued

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$h_{FE}$	$V_{CE}=10V, I_C=1.0mA$	40		
$h_{FE}$	$V_{CE}=10V, I_C=10mA$	50	200	
$h_{FE}$	$V_{CE}=10V, I_C=50mA$	45		
$h_{FE}$	$V_{CE}=10V, I_C=100mA$	20		
$f_T$	$V_{CE}=10V, I_C=10mA, f=10MHz$	20		MHz
$C_{ob}$	$V_{CB}=20V, I_E=0, f=1.0MHz$		7.0	pF
$C_{ib}$	$V_{EB}=0.5V, I_C=0, f=1.0MHz$		130	pF

**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**