

**CMPTA44****SURFACE MOUNT  
EXTREMELY HIGH VOLTAGE  
NPN SILICON TRANSISTOR****SOT-23 CASE**[www.centrasemi.com](http://www.centrasemi.com)**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTA44 type is a surface mount epoxy molded silicon planar epitaxial transistor designed for extremely high voltage applications.

**MARKING CODE: C3Z****MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

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

**SYMBOL**

$V_{CBO}$  450  
 $V_{CEO}$  400  
 $V_{EBO}$  6.0  
 $I_C$  300  
 $P_D$  350  
 $T_J, T_{stg}$  -65 to +150  
 $\theta_{JA}$  357

**UNITS**

V  
V  
V  
mA  
mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=400\text{V}$		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
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	40		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	50	200	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=50\text{mA}$	45		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=100\text{mA}$	20		
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=10\text{MHz}$	20		MHz
$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		7.0	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		130	pF

R5 (3-February 2010)

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**NPN SILICON TRANSISTOR**



**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING CODE: C3Z**

<b>DIMENSIONS</b>				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R5 (3-February 2010)