

CMPTA44

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



SOT-23 CASE



www.centra-semi.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
 θ_{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

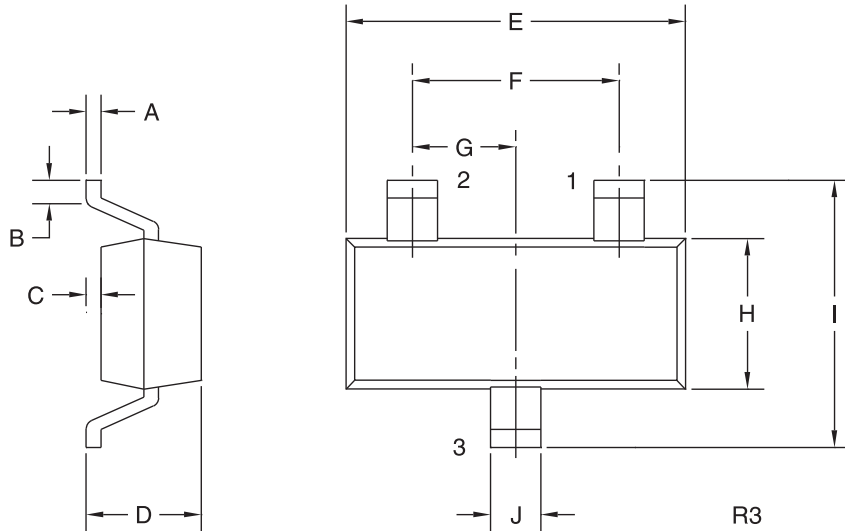
R5 (3-February 2010)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: C3Z

DIMENSIONS				
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)