

CMPTA42E NPN  
CMPTA92E PNP

**ENHANCED SPECIFICATION  
SURFACE MOUNT  
COMPLEMENTARY  
HIGH VOLTAGE  
SILICON TRANSISTORS**



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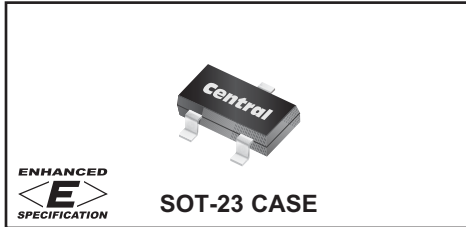
**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTA42E and CMPTA92E are Enhanced versions of the CMPTA42 and CMPTA92 complementary surface mount high voltage transistors.

**MARKING CODES: CMPTA42E: C1DE  
CMPTA92E: C2DE**

**FEATURED ENHANCED SPECIFICATIONS:**

- ◆  $BV_{CBO}$  from 300V min to 350V min.
- ◆  $BV_{CEO}$  from 300V min to 350V min.
- ◆  $h_{FE}$  from 25 min to 50 min.



**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**

SYMBOL	UNITS
$V_{CBO}$	350 V
$V_{CEO}$	350 V
$V_{EBO}$	6.0 V
$I_C$	500 mA
$P_D$	350 mW
$T_J, T_{stg}$	-65 to +150 $^\circ\text{C}$
$\theta_{JA}$	357 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	TYP			MAX	UNITS
		MIN	CMPTA42E	CMPTA92E		
$I_{CBO}$	$V_{CB}=200\text{V}$				250	nA
$I_{EBO}$	$V_{EB}=3.0\text{V}$				100	nA
◆ $BV_{CBO}$	$I_C=100\mu\text{A}$	350	590	500		V
◆ $BV_{CEO}$	$I_C=1.0\text{mA}$	350	475	450		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	6.0	8.7	9.6		V
◆ $V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		125	150	350	mV
$V_{BE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$				0.9	V
◆ $h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	50	110	105		
◆ $h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	50	110	105		
◆ $h_{FE}$	$V_{CE}=10\text{V}, I_C=30\text{mA}$	50	110	105		
$f_T$	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	50	75	75		MHz
$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$				6.0	pF

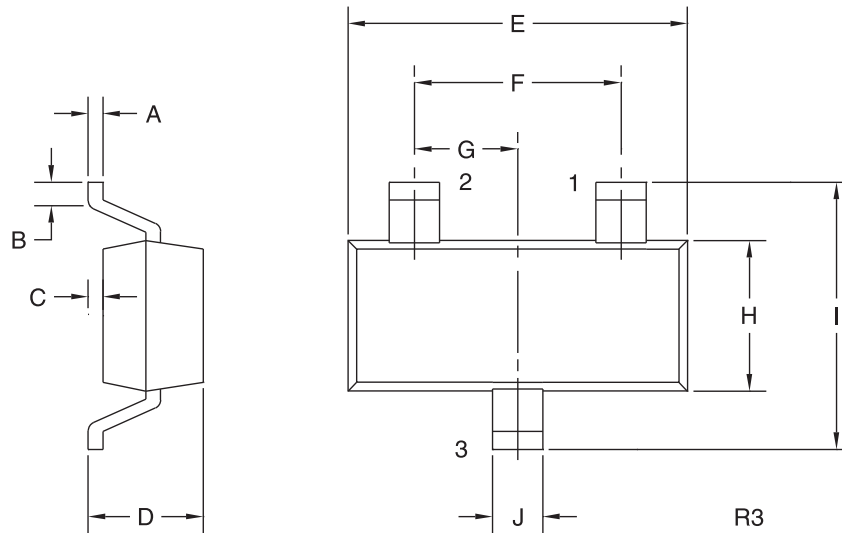
◆ Enhanced specification

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**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING CODES:**

CMPTA42E: C1DE  
 CMPTA92E: C2DE

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)

R3 (3-February 2010)

# Mouser Electronics

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