

CMPTA42E NPN  
CMPTA92E PNP

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



**SOT-23 CASE**



www.centrasemi.com

**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 °C
$\theta_{JA}$	357 °C/W

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

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

◆ Enhanced specification

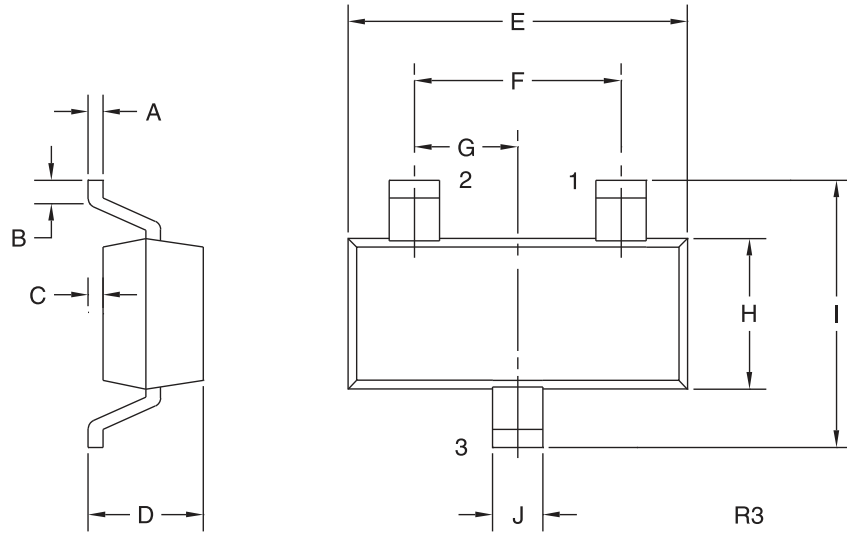
R3 (3-February 2010)

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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)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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