

CMPTA42E NPN
CMPTA92E PNP

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



SOT-23 CASE



www.centra-semi.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

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	$^\circ\text{C}$
θ_{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

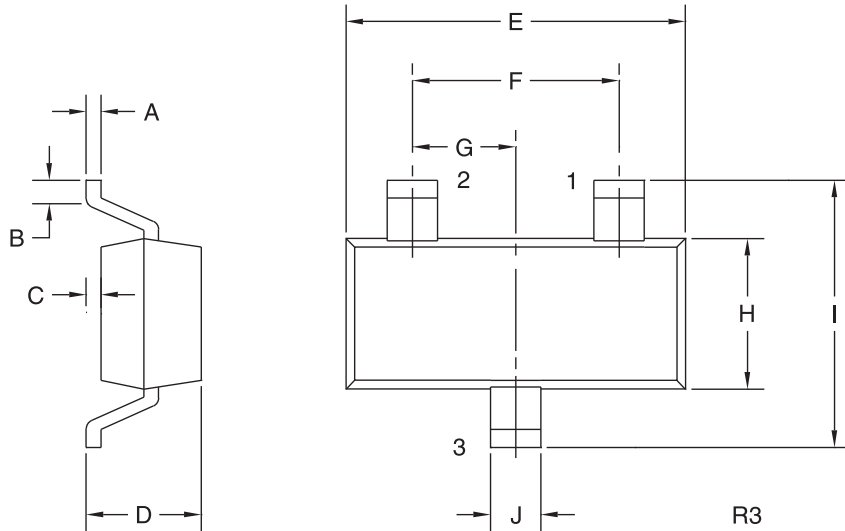
R3 (3-February 2010)

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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)