

CMPTA42E NPN
CMPTA92E PNP

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



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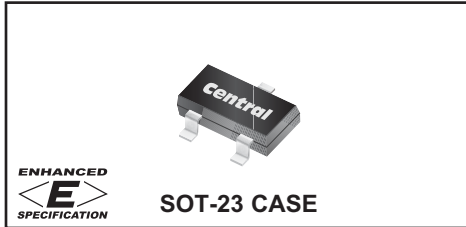
DESCRIPTION:

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 °C
θ_{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

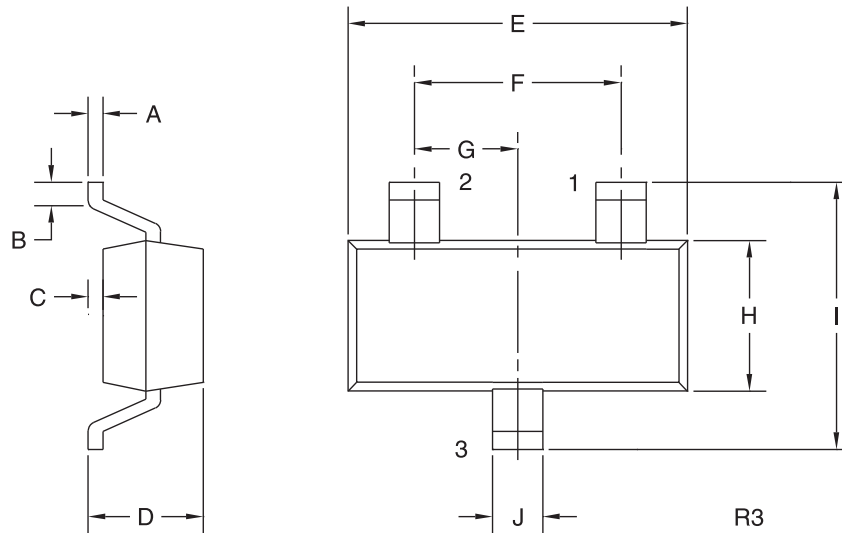
◆ Enhanced specification

CMPTA42E NPN
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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)