

CMPTA42 NPN
CMPTA92 PNP

SURFACE MOUNT
COMPLEMENTARY
HIGH VOLTAGE
SILICON TRANSISTORS



SOT-23 CASE



www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPTA42 and CMPTA92 are complementary surface mount epoxy molded silicon planar epitaxial transistors designed for high voltage applications.

**MARKING CODES: CMPTA42: C1D
CMPTA92: C2D**

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	CMPTA42	CMPTA92	UNITS
V_{CBO}	300	300	V
V_{CEO}	300	300	V
V_{EBO}	6.0	5.0	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	CMPTA42		CMPTA92		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=200\text{V}$	-	100	-	250	nA
I_{EBO}	$V_{BE}=6.0\text{V}$	-	100	-	-	nA
I_{EBO}	$V_{BE}=3.0\text{V}$	-	-	-	100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	300	-	300	-	V
BV_{CEO}	$I_C=1.0\text{mA}$	300	-	300	-	V
BV_{EBO}	$I_E=100\mu\text{A}$	6.0	-	5.0	-	V
$V_{CE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$	-	0.5	-	0.5	V
$V_{BE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$	-	0.9	-	0.9	V
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	25	-	25	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	40	-	40	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=30\text{mA}$	40	-	25	-	
f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	50	-	50	-	MHz
C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$	-	6.0	-	6.0	pF

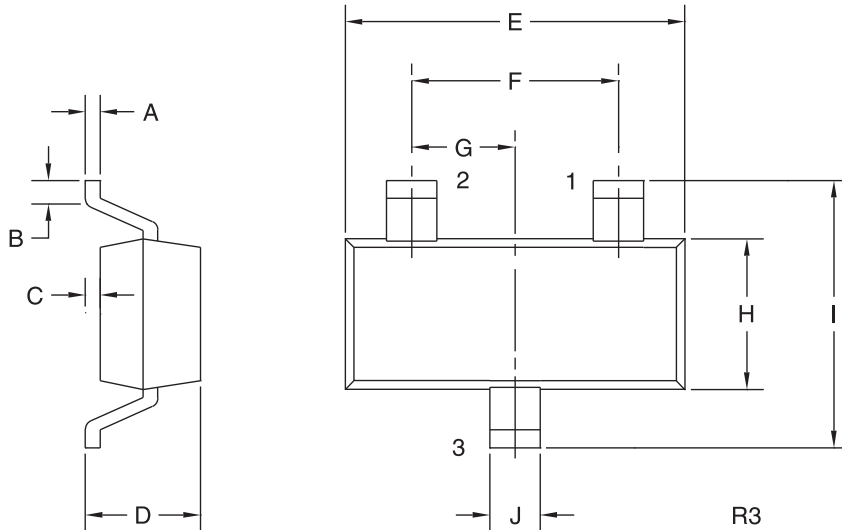
R6 (3-February 2010)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODES:

CMPTA42: C1D
CMPTA92: C2D

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)

R6 (3-February 2010)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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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