

CMPTA42 NPN  
CMPTA92 PNP

**SURFACE MOUNT  
COMPLEMENTARY  
HIGH VOLTAGE  
SILICON TRANSISTORS**



**SOT-23 CASE**



[www.centrasemi.com](http://www.centrasemi.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
$V_{CB0}$	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	$^\circ\text{C}$
$\theta_{JA}$		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	
$I_{CB0}$	$V_{CB}=200\text{V}$	-	100	-	250	nA
$I_{EBO}$	$V_{BE}=6.0\text{V}$	-	100	-	-	nA
$I_{EBO}$	$V_{BE}=3.0\text{V}$	-	-	-	100	nA
$BV_{CB0}$	$I_C=100\mu\text{A}$	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

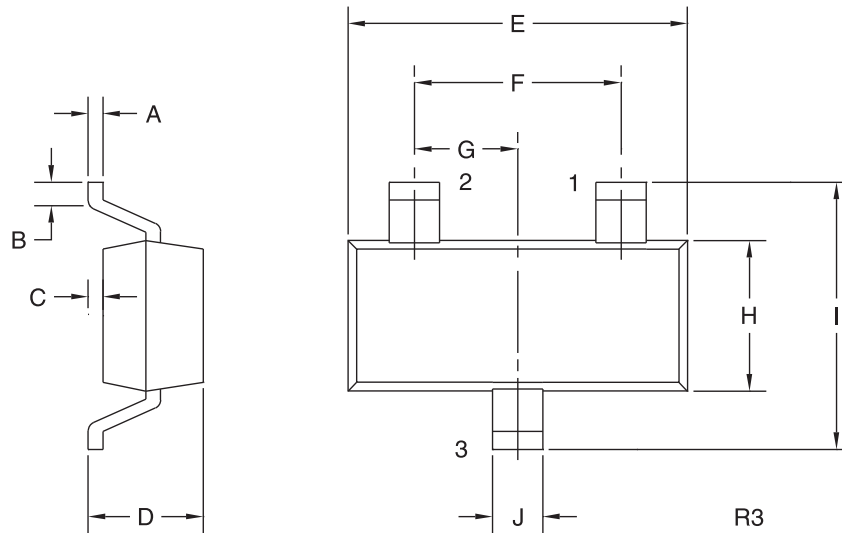
R6 (3-February 2010)

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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)