

CMPTA42 NPN
CMPTA92 PNP

SILICON COMPLEMENTARY
HIGH VOLTAGE TRANSISTOR



SOT-23 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

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

**Marking Codes are C1D, C2D
Respectively.**

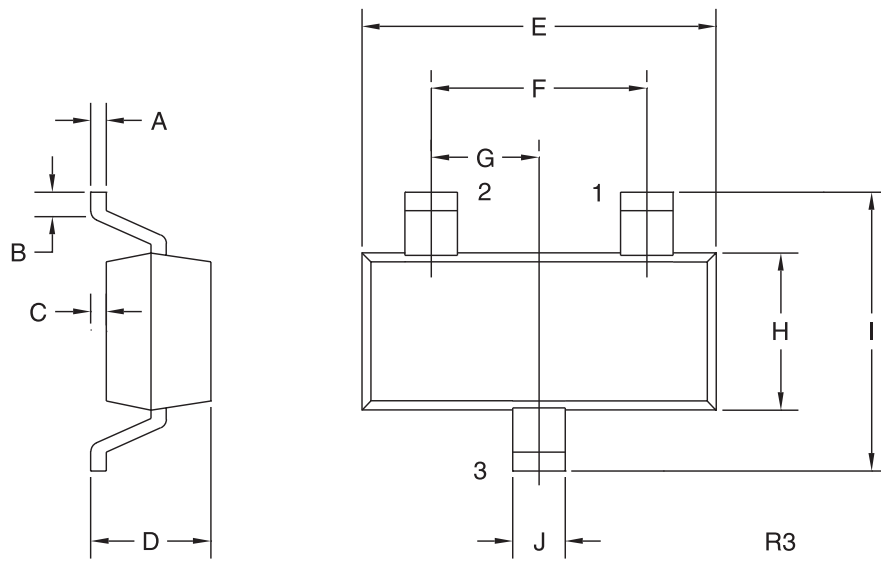
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

	SYMBOL	CMPTA42	CMPTA92	UNITS
Collector-Base Voltage	V_{CBO}	300	300	V
Collector-Emitter Voltage	V_{CEO}	300	300	V
Emitter-Base Voltage	V_{EBO}	6.0	5.0	V
Collector Current	I_C		500	mA
Power Dissipation	P_D		350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150		$^{\circ}\text{C}$
Thermal Resistance	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}	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		3.0		6.0	pF

SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

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 (28-Mar 2001)