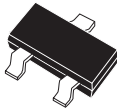


## CMPT3640

### PNP SILICON TRANSISTOR



**SOT-23 CASE**

### DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT3640 type is an PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for saturated switching applications.

**Marking code is C2J.**

### MAXIMUM RATINGS (T<sub>A</sub>=25°C)

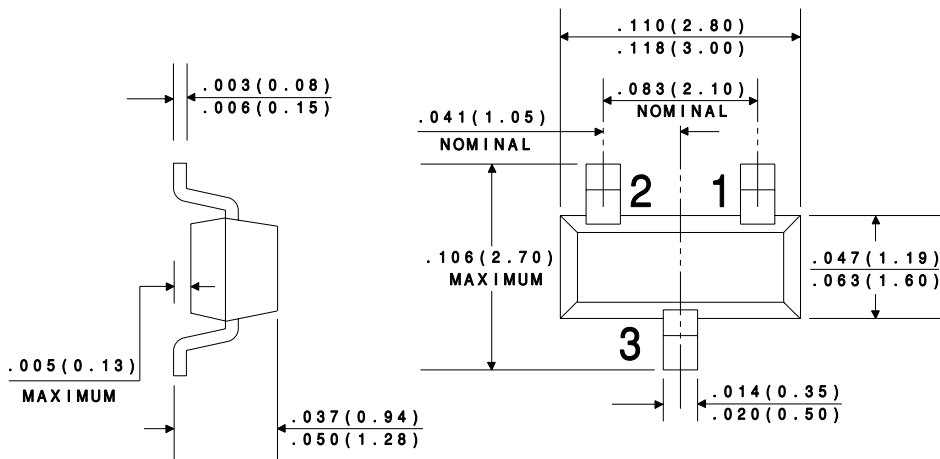
	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CB0</sub>	12	V
Collector-Emitter Voltage	V <sub>CEO</sub>	12	V
Emitter-Base Voltage	V <sub>EBO</sub>	4.0	V
Collector Current	I <sub>C</sub>	80	mA
Power Dissipation	P <sub>D</sub>	350	mW
Operating and Storage			
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	θ <sub>JA</sub>	357	°C/W

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CES</sub>	V <sub>CE</sub> =6.0V		10	nA
I <sub>CES</sub>	V <sub>CE</sub> =6.0V, T <sub>A</sub> =65°C		10	μA
I <sub>B</sub>	V <sub>CE</sub> =6.0V, V <sub>EB</sub> =0		10	nA
BV <sub>CB0</sub>	I <sub>C</sub> =100μA	12		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA	12		V
BV <sub>EBO</sub>	I <sub>E</sub> =100μA	4.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA		0.20	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		0.60	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA, T <sub>A</sub> =65°C		0.25	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA	0.75	0.95	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	0.80	1.00	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA		1.50	V
h <sub>FE</sub>	V <sub>CE</sub> =0.3V, I <sub>C</sub> =10mA	30	120	

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$h_{FE}$	$V_{CE}=1.0V, I_C=50mA$	20		
$f_T$	$V_{CE}=5.0V, I_C=10mA, f=100MHz$	500		MHz
$C_{ob}$	$V_{CB}=5.0V, I_E=0, f=1.0MHz$		3.5	pF
$C_{ib}$	$V_{BE}=0.5V, I_C=0, f=1.0MHz$		3.5	pF
$t_d$	$V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA$		10	ns
$t_r$	$V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA$		30	ns
$t_s$	$V_{CC}=6.0V, I_C=50mA, I_{B1}=I_{B2}=5.0mA$		20	ns
$t_f$	$V_{CC}=6.0V, I_C=50mA, I_{B1}=I_{B2}=5.0mA$		12	ns
$t_{on}$	$V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA$		25	ns
$t_{on}$	$V_{CC}=1.5V, I_C=10mA, I_{B1}=0.5mA$		60	ns
$t_{off}$	$V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA$		35	ns
$t_{off}$	$V_{CC}=1.5V, I_C=10mA, I_{B1}=I_{B2}=0.5mA$		75	ns

All dimensions in inches (mm).



LEAD CODE:

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