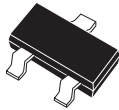


CMPT3646

NPN SILICON TRANSISTOR



SOT-23 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT3646 type is an NPN Silicon Transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high current, ultra high speed switching applications.

Marking code is C2R.

MAXIMUM RATINGS (T_A=25°C)

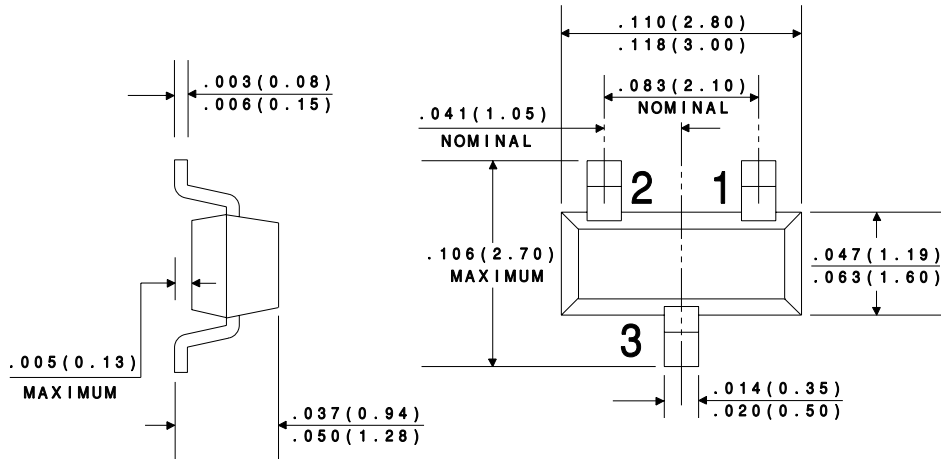
	SYMBOL		UNITS
Collector-Base Voltage	V _{CB0}	40	V
Collector-Emitter Voltage	V _{CES}	40	V
Collector-Emitter Voltage	V _{CEO}	15	V
Emitter-Base Voltage	V _{EBO}	5.0	V
Collector Current	I _C	200	mA
Power Dissipation	P _D	350	mW
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 to +150	°C
Thermal Resistance	θ _{JA}	357	°C/W

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CES}	V _{CE} =20V		0.5	μA
I _{CES}	V _{CE} =20V, T _A =65°C		3.0	μA
BV _{CB0}	I _C =100μA	40		V
BV _{CES}	I _C =10μA	40		V
BV _{CEO}	I _C =10mA	15		V
BV _{EBO}	I _E =100μA	5.0		V
V _{CE(SAT)}	I _C =30mA, I _B =3.0mA		0.20	V
V _{CE(SAT)}	I _C =30mA, I _B =3.0mA, T _A =65°C		0.30	V
V _{CE(SAT)}	I _C =100mA, I _B =10mA		0.28	V
V _{CE(SAT)}	I _C =300mA, I _B =30mA		0.50	V
V _{BE(SAT)}	I _C =30mA, I _B =3.0mA	0.75	0.95	V
V _{BE(SAT)}	I _C =100mA, I _B =10mA		1.20	V
V _{BE(SAT)}	I _C =300mA, I _B =30mA		1.70	V
h _{FE}	V _{CE} =0.4V, I _C =30mA	30	120	
h _{FE}	V _{CE} =0.5V, I _C =100mA	25		

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
h_{FE}	$V_{CE}=1.0V, I_C=300mA$	15		
f_T	$V_{CE}=10V, I_C=30mA, f=100MHz$	350		MHz
C_{ob}	$V_{CB}=5.0V, I_E=0, f=1.0MHz$		5.0	pF
C_{ib}	$V_{BE}=0.5V, I_C=0, f=1.0MHz$		8.0	pF
t_{on}	$V_{CC}=10V, I_C=300mA, I_{B1}=30mA$		18	ns
t_{off}	$V_{CC}=10V, I_C=300mA, I_{B1}=I_{B2}=30mA$		28	ns
t_S	$V_{CC}=10V, I_C=I_{B1}=I_{B2}=10mA$		18	ns

All dimensions in inches (mm).



LEAD CODE:

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