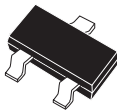


CMPT3640

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_A=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V _{CBO}	12	V
Collector-Emitter Voltage	V _{CEO}	12	V
Emitter-Base Voltage	V _{EBO}	4.0	V
Collector Current	I _C	80	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} =6.0V		10	nA
I _{CES}	V _{CE} =6.0V, T _A =65°C		10	μA
I _B	V _{CE} =6.0V, V _{EB} =0		10	nA
BV _{CBO}	I _C =100μA	12		V
BV _{CEO}	I _C =10mA	12		V
BV _{EBO}	I _E =100μA	4.0		V
V _{CE} (SAT)	I _C =10mA, I _B =1.0mA		0.20	V
V _{CE} (SAT)	I _C =50mA, I _B =5.0mA		0.60	V
V _{CE} (SAT)	I _C =10mA, I _B =1.0mA, T _A =65°C		0.25	V
V _{BE} (SAT)	I _C =10mA, I _B =0.5mA	0.75	0.95	V
V _{BE} (SAT)	I _C =10mA, I _B =1.0mA	0.80	1.00	V
V _{BE} (SAT)	I _C =50mA, I _B =5.0mA		1.50	V
h _{FE}	V _{CE} =0.3V, I _C =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).

