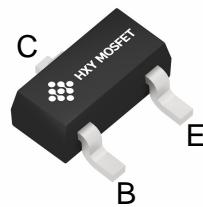


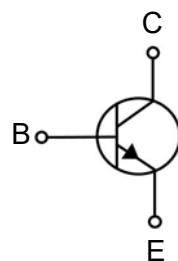


Features

BVCEO > 60V.
IC = 1A Continuous Collector Current.
ICM = 2A Peak Pulse Current.
500mW Power Dissipation.
h_{FE} Characterized up to 2A for High Current Gain Hold Up.



SOT-23



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
CMPT3820	SOT-23	491	3000

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	80	V
V _{CEO}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	1	A
I _{CM}	Peak Pulse Current	2	A
P _C	Collector Power Dissipation	250	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	500	°C/W
T _J , T _{stg}	Operation Junction And Storage Temperature Range	-55~+150	°C

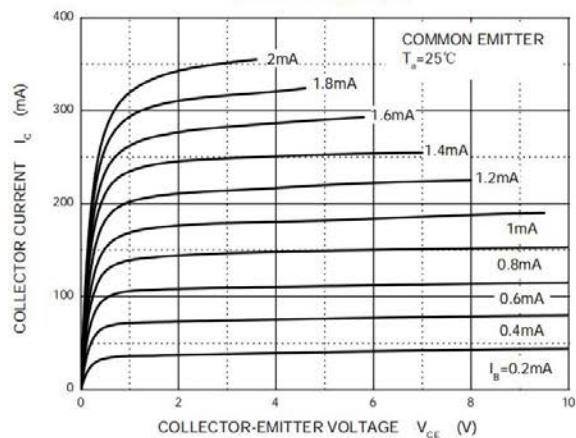
Electrcal Charcteristics (Ta=25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =100μA, I _E =0	80			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA, I _B =0	60			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =100μA, I _C =0	5			V
I _{CBO}	Collector cut-off current	V _{CB} =60V, I _E =0			100	nA
I _{EBO}	Emitter cut-off current	V _{EB} =4V, I _C =0			100	nA
h _{FE(1)}	DC current gain(1)	V _{CE} =5V, I _C =1mA	100			
h _{FE(2)}	DC current gain(2)	V _{CE} =5V, I _C =500mA	100		300	
h _{FE(3)}	DC current gain(3)	V _{CE} =5V, I _C =1A	80			
h _{FE(4)}	DC current gain(4)	V _{CE} =5V, I _C =2A	30			
V _{CE(sat)1}	Collector-emitter saturation voltage	I _C =500mA, I _B =50mA			0.25	V
V _{CE(sat)2}	Collector-emitter saturation voltage	I _C =1A, I _B =100mA			0.5	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =1A, I _B =100mA			1.1	V
V _{BE}	Base-emitter voltage	V _{CE} =5V, I _C =1A			1	V
f _T	Transition frequency	V _{CE} =10V, I _C =50mA, f=100MHz	150			MHz
C _{ob}	Collector output capacitance	V _{CB} =10V, f=1MHz			10	pF

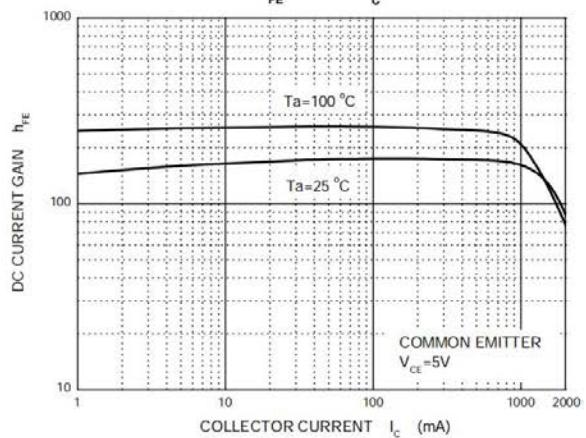


Typical Characteristics

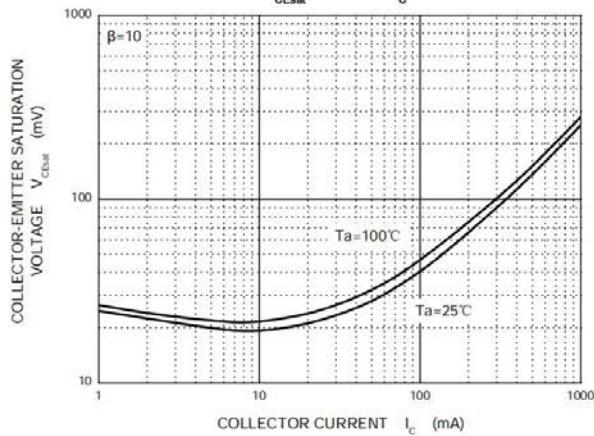
Static Characteristic



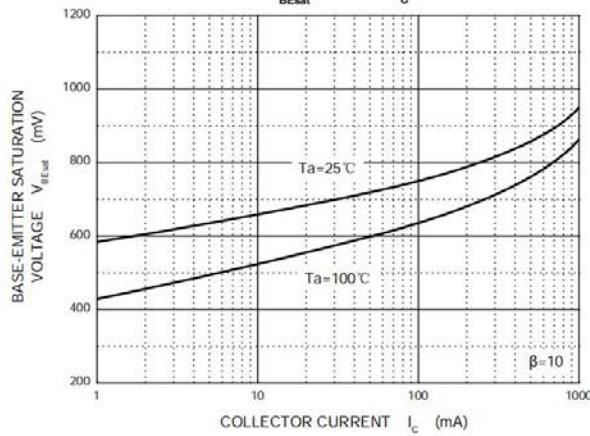
h_{FE} — I_c



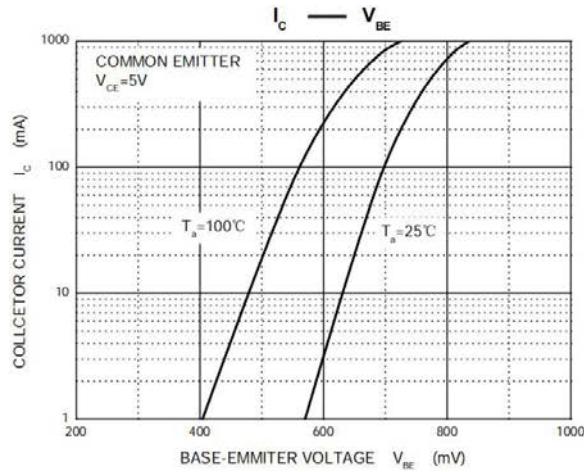
V_{CEsat} — I_c



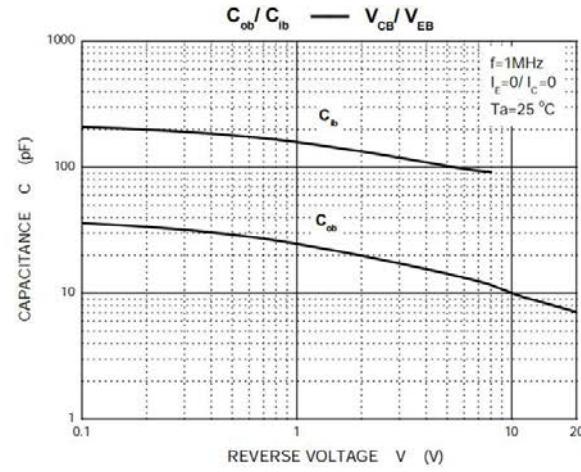
V_{BEsat} — I_c

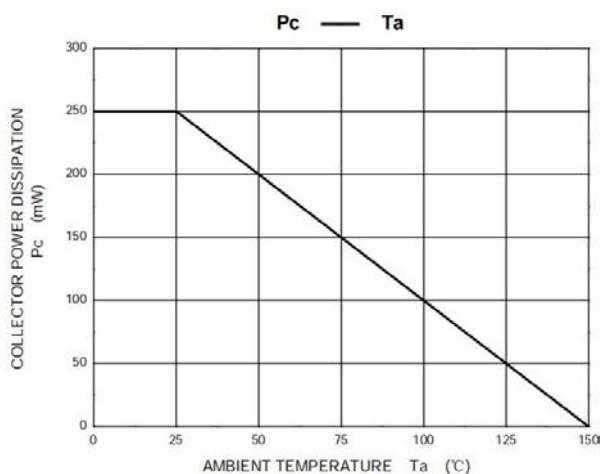
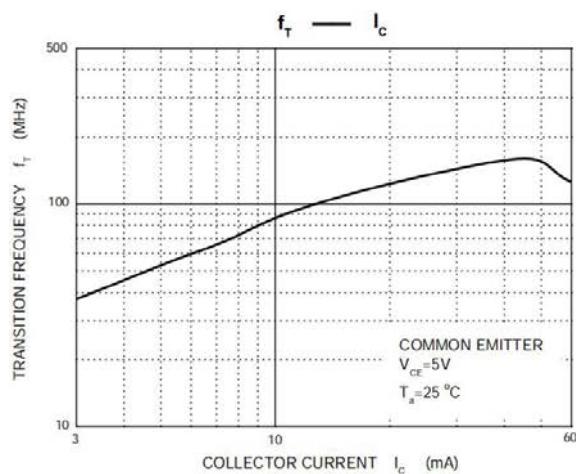


I_c — V_{BE}

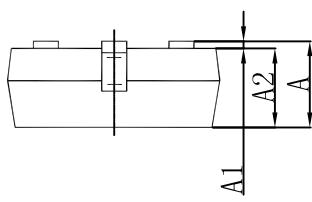
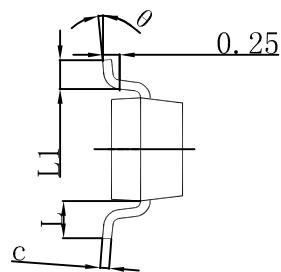
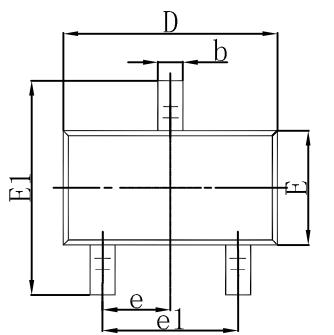


C_{ob}/C_{lb} — V_{CB}/V_{EB}





SOT-23 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°



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