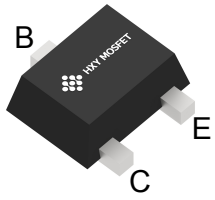
MMBT3906M

PNP Plastic-Encapsulate Transistors

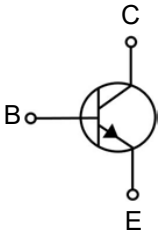
Features

Complementary to MMBT3904M

Small Package



SOT-723



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MMBT3906M	SOT-723	3N	8000

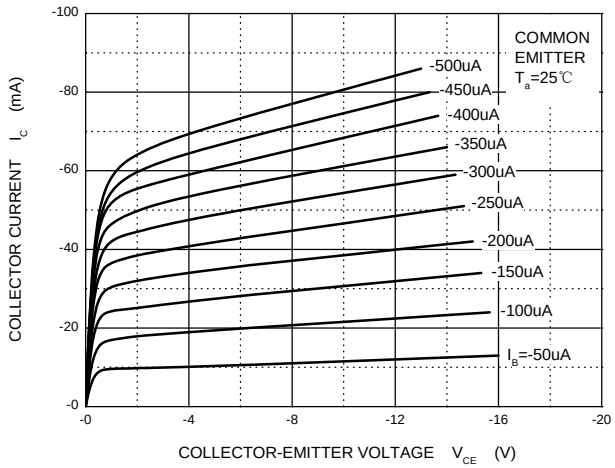
Maximum Ratings (Ta=25℃unless otherwise noted)

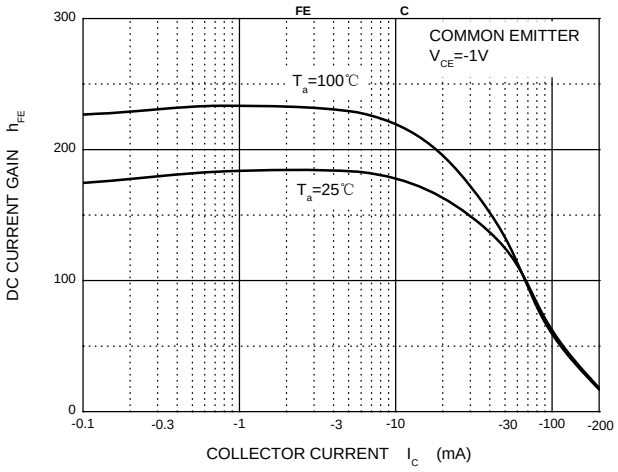
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.2	A
P_C	Collector Power Dissipation	100	mW
$R_{\Theta JA}$	Thermal Resistance from Junction to Ambient	1250	℃/W
T_J ,T_{stg}	Operation Junction And Storage Temperature Range	-55～+150	℃

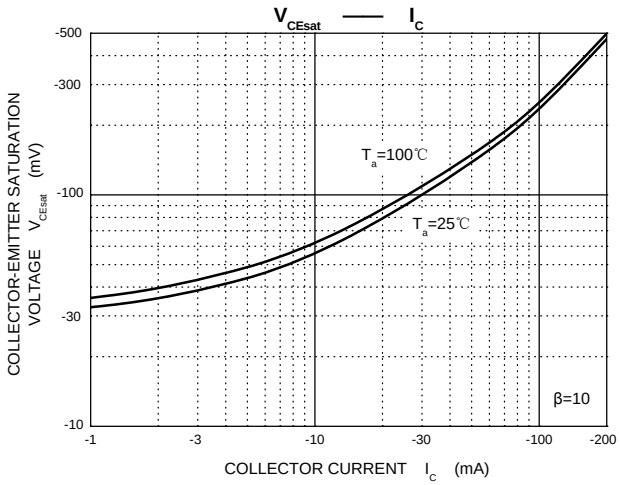
Electrical Characteristics (Ta=25℃unless otherwise specified)

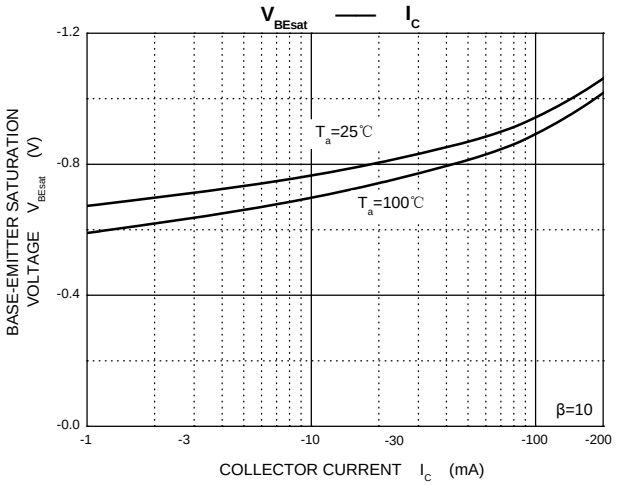
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA,I_E=0	-40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,I_B=0	-40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-5		V
Collector cut-off current	I_{CBO}	V_{CB}=-40V,I_E=0		-100	nA
Collector cut-off current	I_{CEX}	V_{CE}=-30V,$V_{EB(off)}$=-3V		-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V,I_C=0		-100	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-1V,I_C=-10mA	100	300	
	$h_{FE(2)}$	V_{CE}=-1V,I_C=-50mA	60		
	$h_{FE(3)}$	V_{CE}=-2V,I_C=-100mA	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-50mA,I_B=-5mA		-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-50mA,I_B=-5mA		-0.95	V
Transition frequency	f_T	V_{CE}=-20V,I_C=-10mA,f=100MHz	300		MHz
Delay time	t_d	V_{CC}=-3V,$V_{BE(off)}$=-0.5V, I_C=-10mA, I_{B1}=I_{B2}=-1mA		35	ns
Rise time	t_r			35	ns
Storage time	t_s	V_{CC}=-3V,I_C=-10mA I_{B1}=I_{B2}=-1mA		225	ns
Fall time	t_f			75	ns

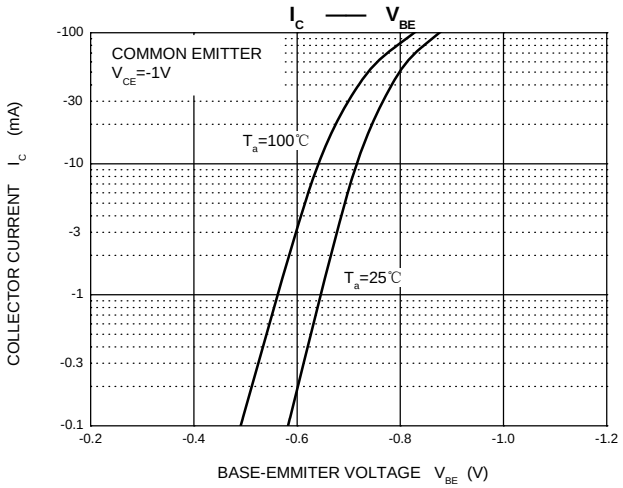
Typical Characteristics

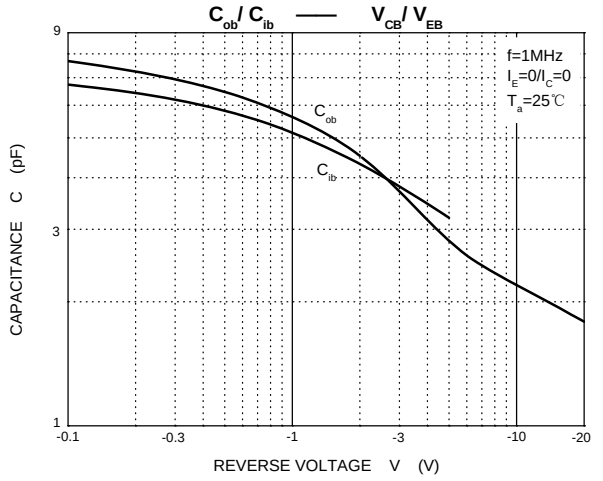


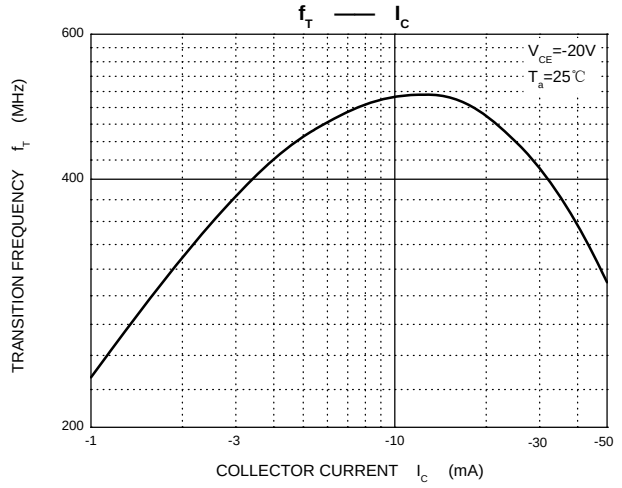


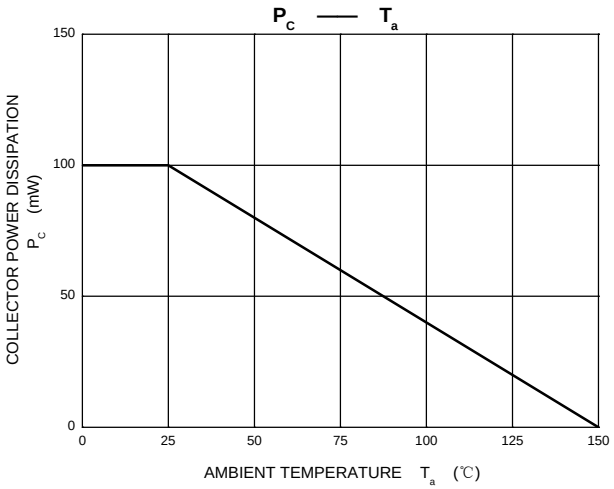




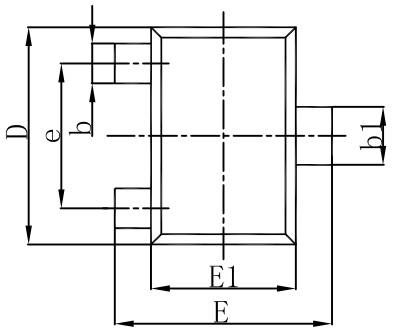


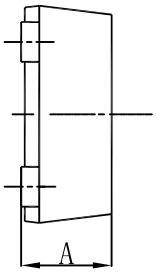


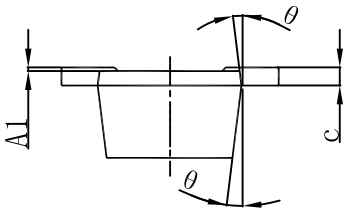




SOT-□23 Package Outline Dimensions







Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

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