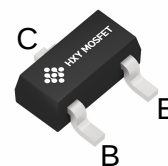




Features

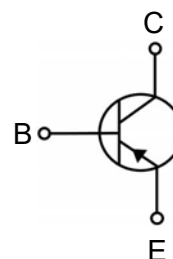
- Collector Current: $I_C=0.2A$
- Power Dissipation of 250mW



**SOT-23
(TO-236)**

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
PMBT3906,215	SOT-23(TO-236)	2A	3000



Maximum Ratings($T_a=25^{\circ}C$ unless otherwise noted)

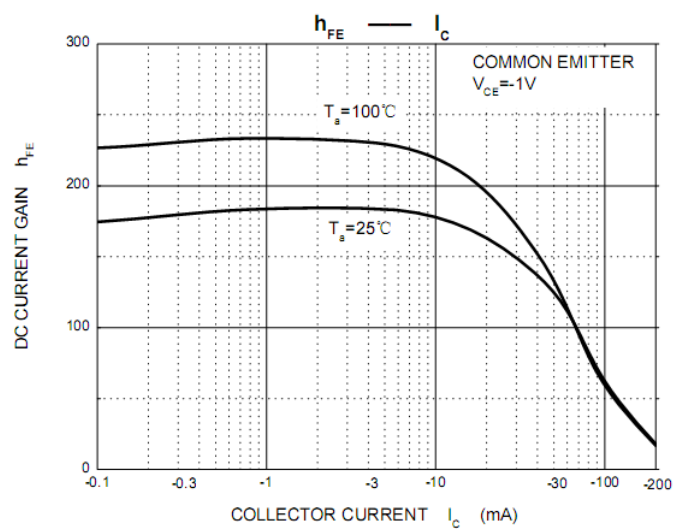
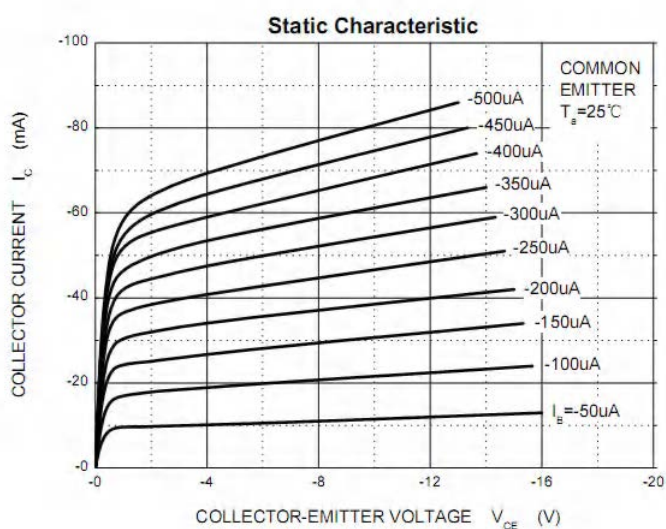
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-200	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	625	$^{\circ}C/W$
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55~+150	$^{\circ}C$

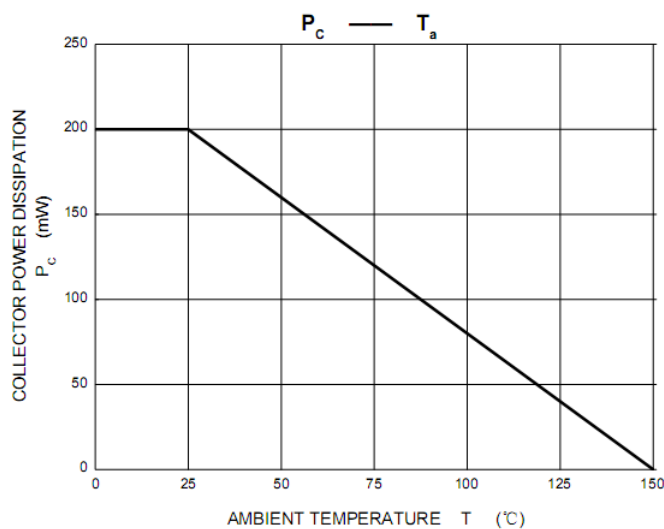
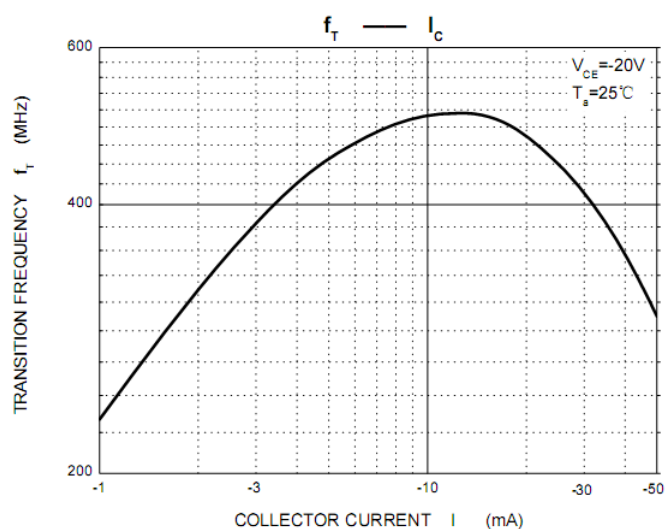
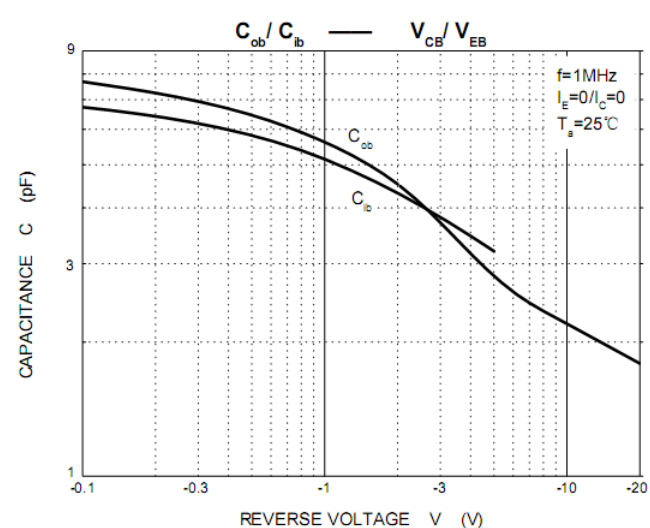
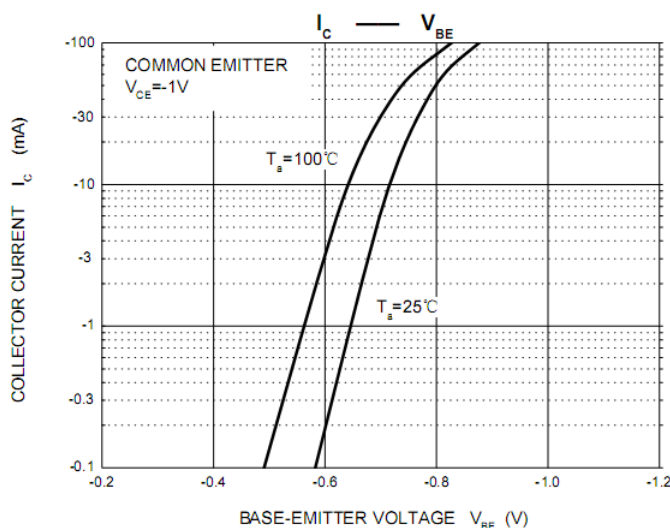
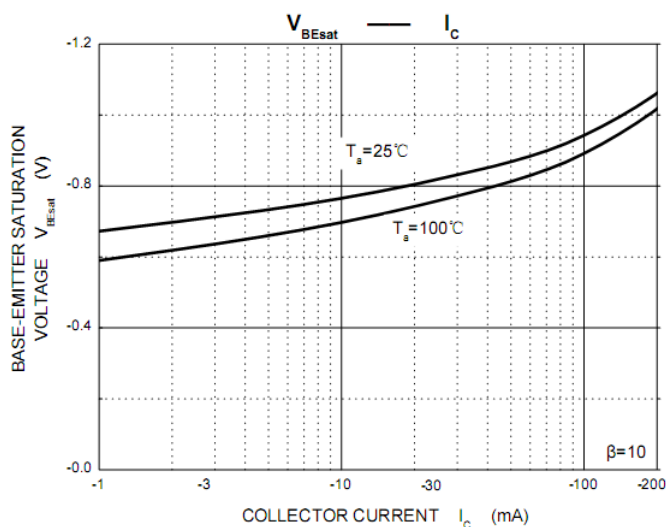
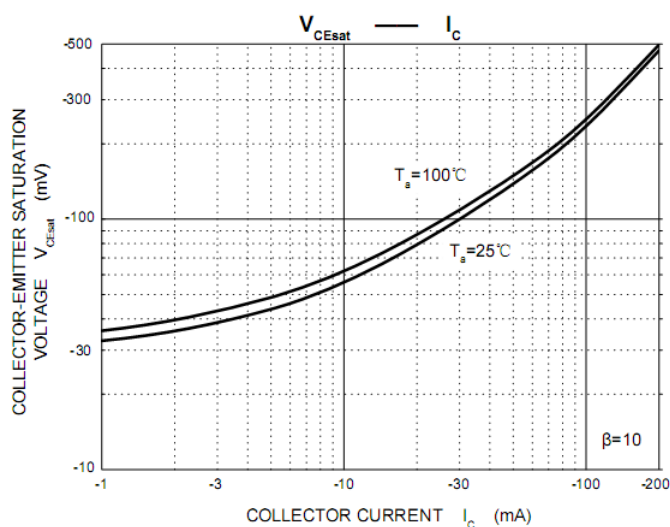


Electrical Characteristics (T_a=25°C unless otherwise specified)

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} = -40 V, I _E =0		-100	nA
Collector cut-off current	I _{CEX}	V _{CE} =-30V, V _{BE(off)} =-3V		-50	nA
Emitter cut-off current	I _{EBO}	V _{EB} = -5V, I _C =0		-100	nA
DC current gain	h _{FE1}	V _{CE} =-1V, I _C = -10mA	100	300	
	h _{FE2}	V _{CE} = -1V, I _C =-50mA	60		
	h _{FE3}	V _{CE} = -2V, I _C =-100mA	30		
Collector-emitter saturation voltage	V _{CE(sat)1}	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} =-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(TO-236) 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°

SOT-23(TO-236) Suggested Pad Layout



Note:
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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