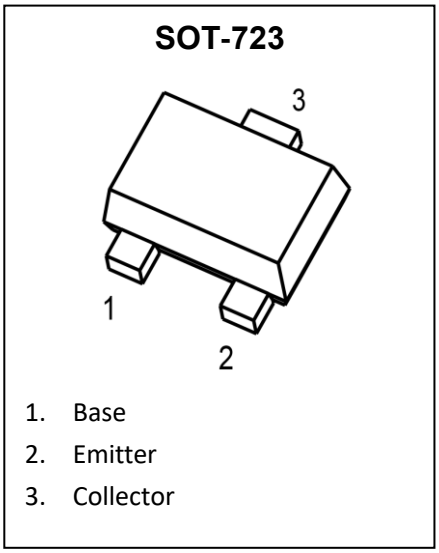
MMBT2222AM Transistor(NPN)



Features:

- Epitaxial Planar Die Construction

Marking：1P

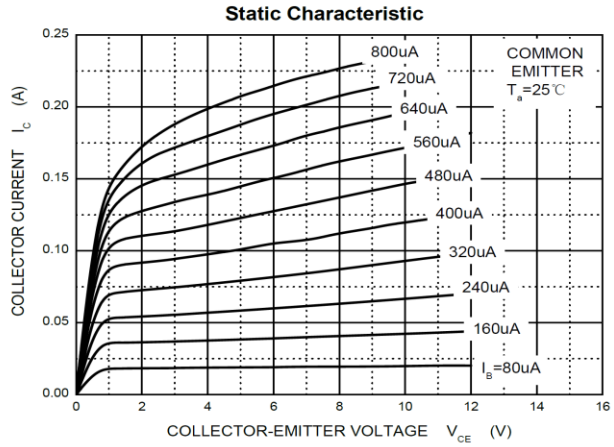
MAXIMUM RATINGS (T_A = 25℃ unless otherwise noted)

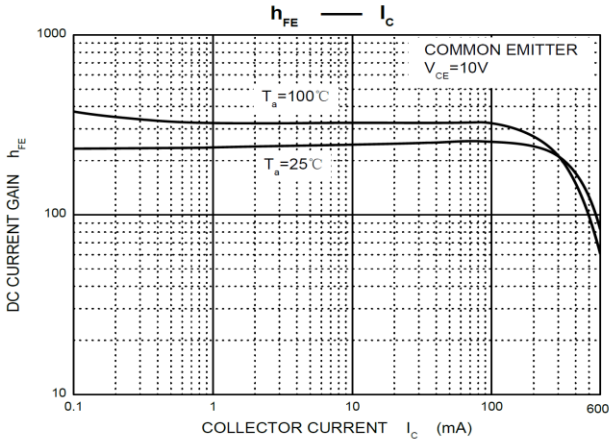
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	0.5	A
Power Dissipation	P_d	0.1	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

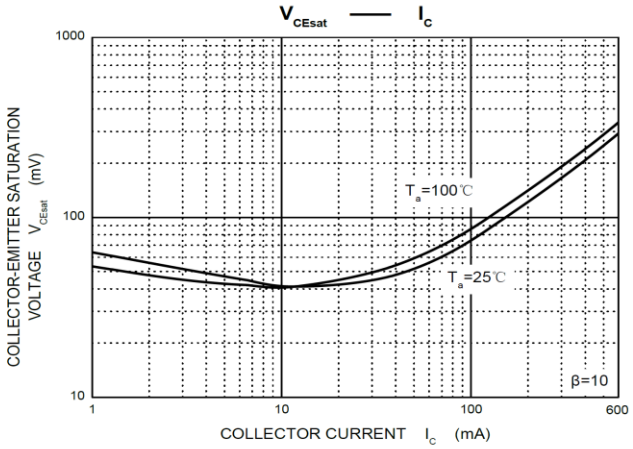
ELECTRICAL CHARACTERISTICS(T_A = 25℃ unless otherwise noted)

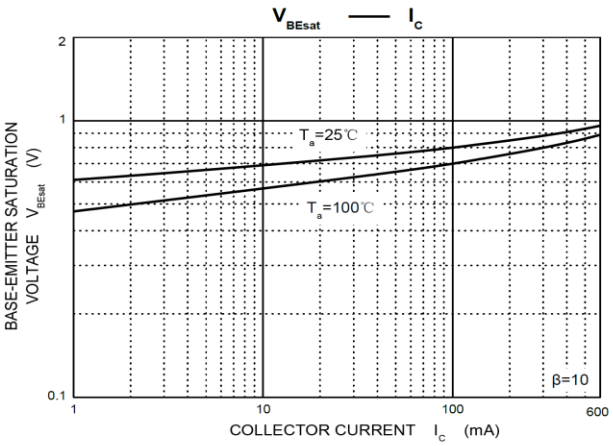
Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 10μA ,I_E = 0	75		V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10mA , I_B = 0	40		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10μA,I_C = 0	6		V
Collector Cut-Off Current	I_{CBO}	V_{CB} = 60V, I_E = 0		10	nA
Collector Cut-Off Current	I_{CEX}	V_{CE} = 60V, $V_{EB(off)}$ = 3V		10	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB} = 3V, I_C = 0		10	nA
DC Current Gain	h_{FE1}	V_{CE} = 10V, I_C = 0.1mA	40		
	h_{FE2}	V_{CE} = 10V, I_C = 150mA	100	300	
	h_{FE3}	V_{CE} = 10V, I_C = 500mA	42		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 150mA, I_B = 15mA		0.3	V
		I_C = 500mA, I_B = 50mA		1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 150mA, I_B = 15mA		1.2	V
		I_C = 500mA, I_B = 50mA		2	V
Transition Frequency	f_T	V_{CE} = 20V, I_C = 20mA, f = 100MHz	300		MHZ
Delay Time	t_d	V_{CC} = 30V, I_C = 150mA, $V_{BE(off)}$ = -0.5V, I_{B1} = 15mA		10	ns
Rise Time	t_r			25	ns
Storage Time	t_s	V_{CC} = 30V, I_C = 150mA, I_{B1} = I_{B2} = 15mA		225	ns
Fall Time	t_f			60	ns

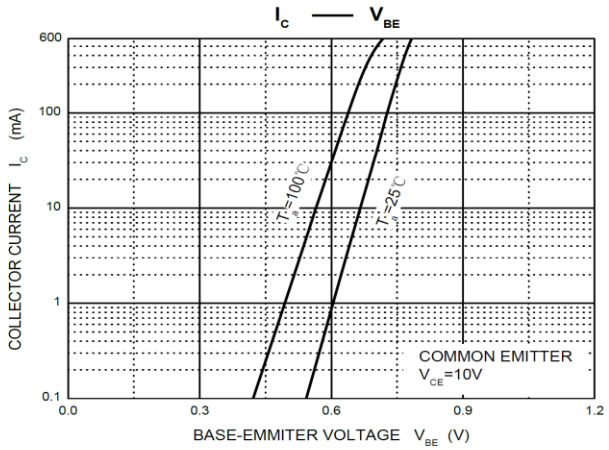
Typical Characteristics

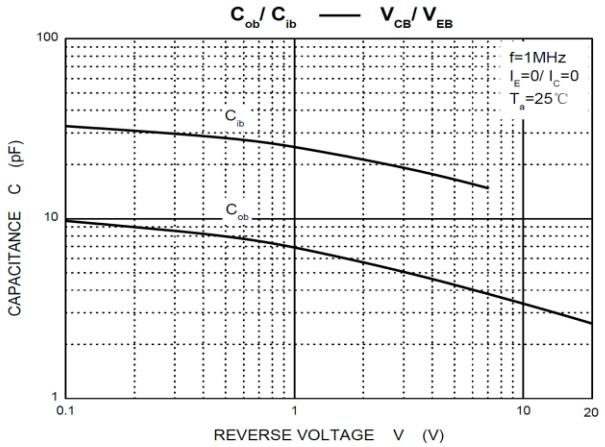


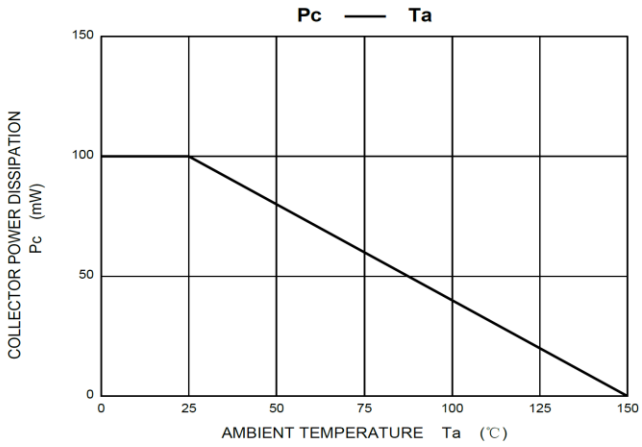




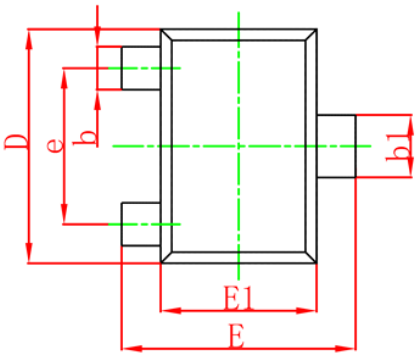


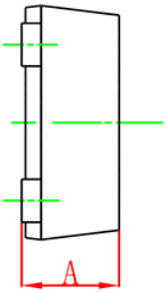


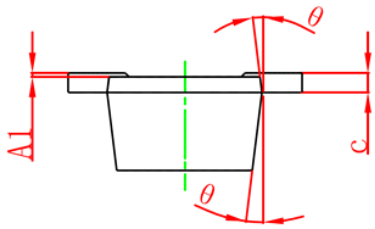




SOT-723 Package Information







Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.340	0.500	0.013	0.020
A1	0.000	0.050	0.000	0.002
b	0.150	0.270	0.006	0.011
b1	0.200	0.370	0.008	0.015
c	0.060	0.160	0.002	0.006
D	1.100	1.300	0.043	0.051
E	1.100	1.300	0.043	0.051
E1	0.700	0.900	0.028	0.035
e	0.8TYP		0.031TYP	
θ	8°REF		8°REF	

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