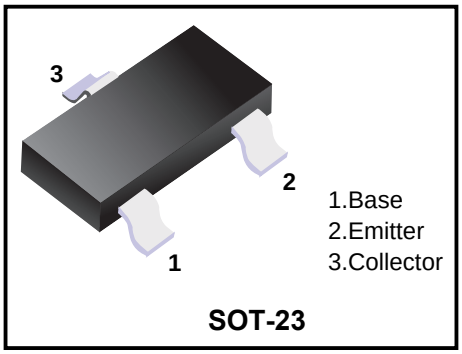
TRANSISTOR (NPN)



FEATURES

- For Switching and Amplifier Applications
- Complementary Type PNP Transistor MMBTA56

Marking Code	
MMBTA06	1GM

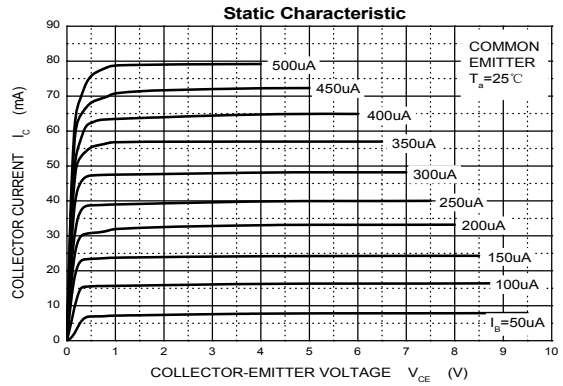
MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

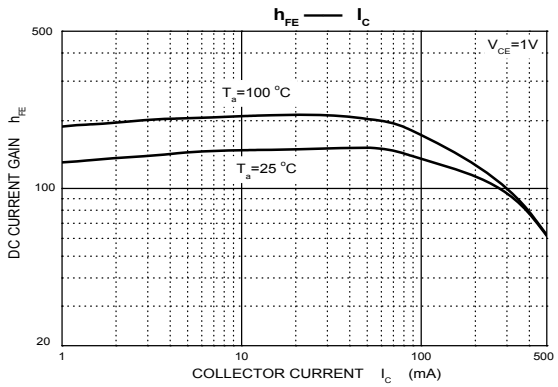
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Curre nt	I_C	500	mA
Collector Power Dissipatio n	P_C	300	mW
Thermal Resista nee From Jun ctio n To Am bie nt	$R_{\Theta JA}$	416	°C/W
Jun cti on Temperature	T_j	150	°C
Storage Tem perature	T_{stg}	-55∽+150	°C

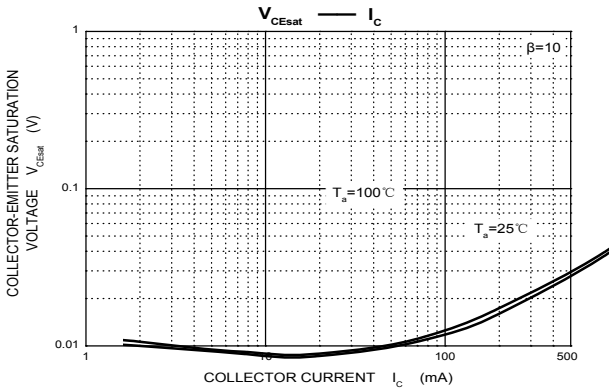
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

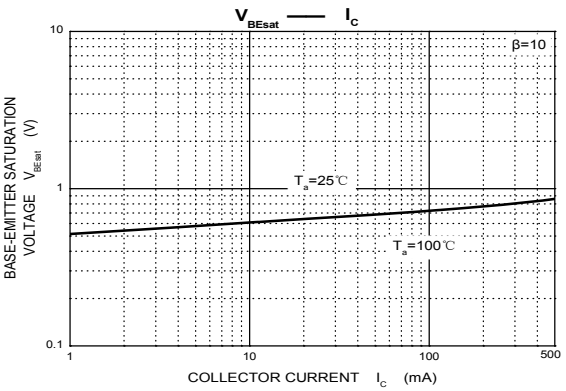
Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Collector-base breakdown voltage	I_C=0.1mA, I_E=0	$V_{(BR)CBO}$	80			V
Collector-emitter breakdown voltage	I_C=1mA, I_B=0	$V_{(BR)CEO}$	80			V
Emitter-base breakdown voltage	I_E=0.1mA, I_C=0	$V_{(BR)EBO}$	4			V
Collector cut-off current	V_{CB} =80V, I_E=0	I_{CBO}			0.1	μA
Collector cut-off current	V_{CE} =60V I_B=0	I_{CES}			0.1	μA
Emitter cut-off current	V_{EB} =3V I_C=0	I_{EBO}			0.1	μA
DC current gain	V_{CE} =1V, I_C=10mA	$h_{FE(1)}$	100		400	
	V_{CE} =1V,, I_C=100mA	$h_{FE(2)}$	100			
Collector-emitter saturation voltage	V_{CE} =1V, I_B=10mA	$V_{CE(sat)}$			0.25	V
Base-emitter saturation voltage	I_C =100mA I_B=10mA	$V_{BE(sat)}$			1.2	V
Transition frequency	V_{CE} =2V, I_C=10mA, f=100MHz	f_T	100			MHz

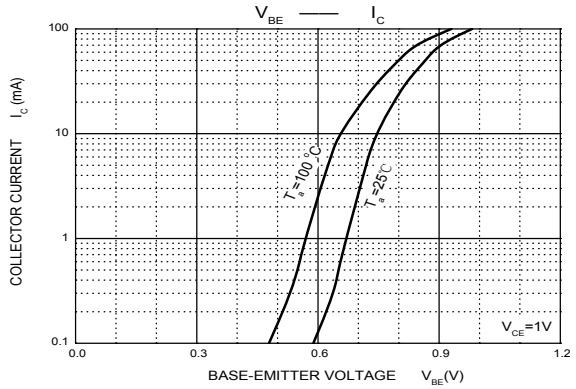
Typical Characterisitics

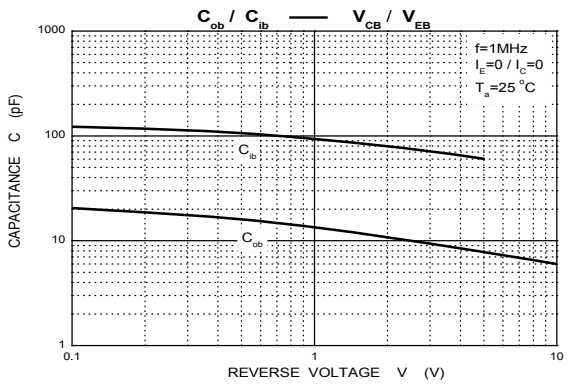


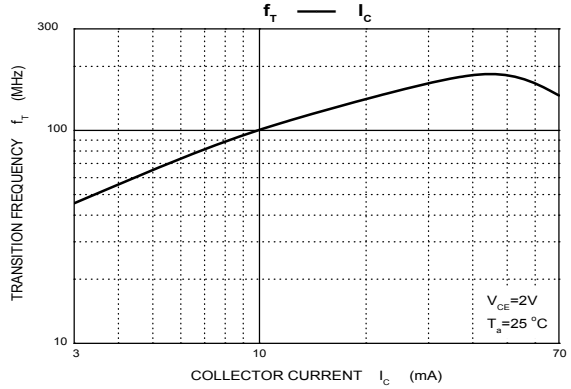


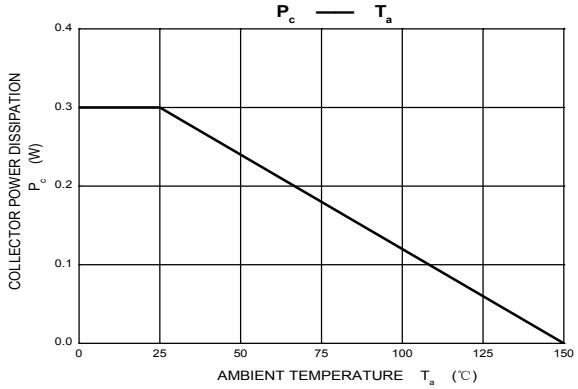










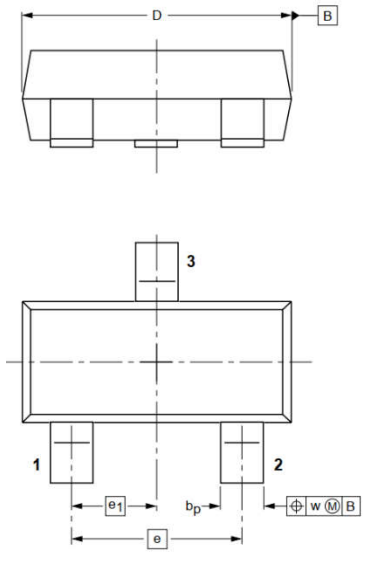


Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

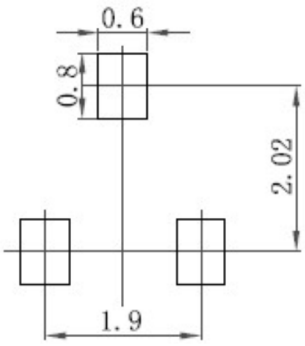
Package Dimensions

SOT-23



Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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