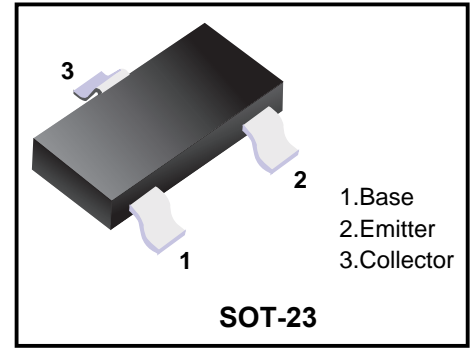


Plastic-Encapsulate Transistors

NPN TRANSISTOR

FEATURES

◆Driver transistor



Marking Code

MMBTA05	1H
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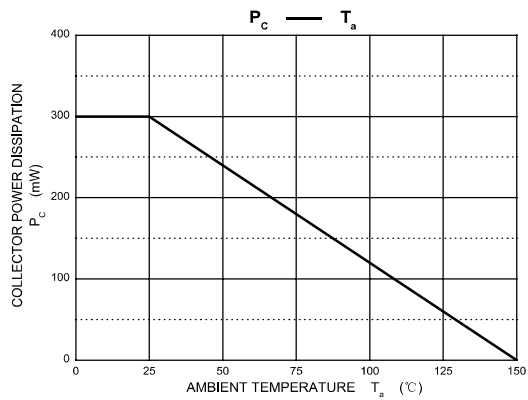
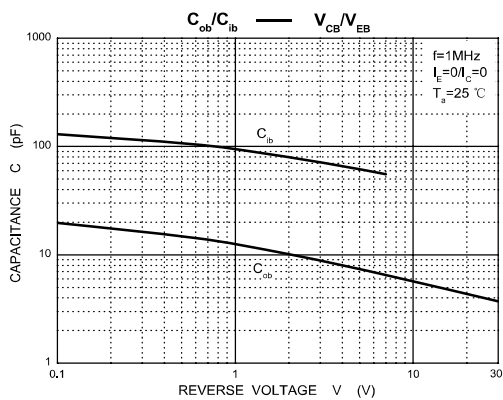
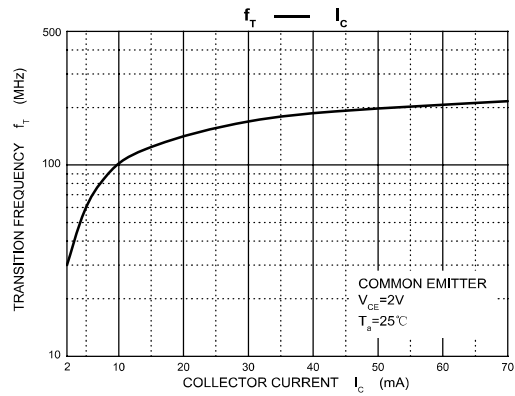
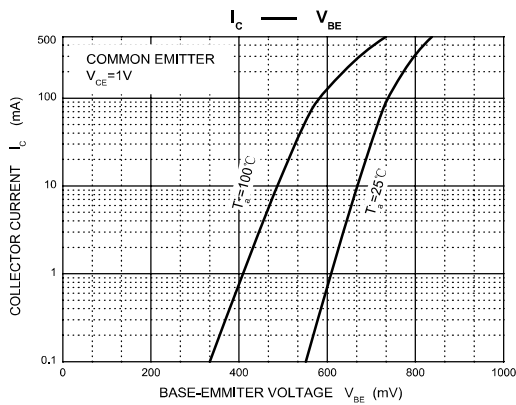
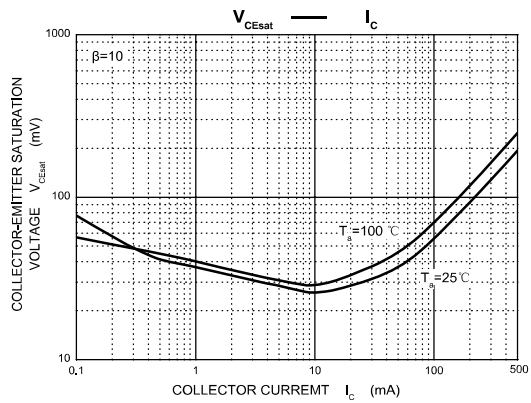
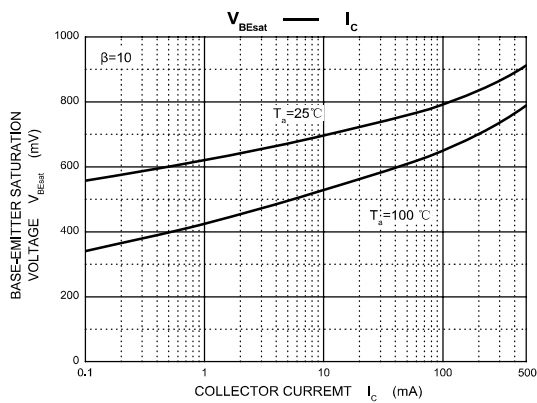
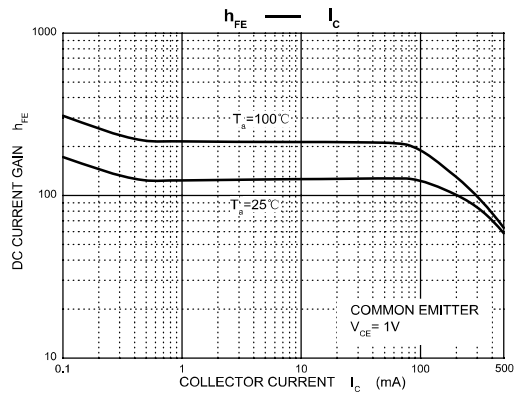
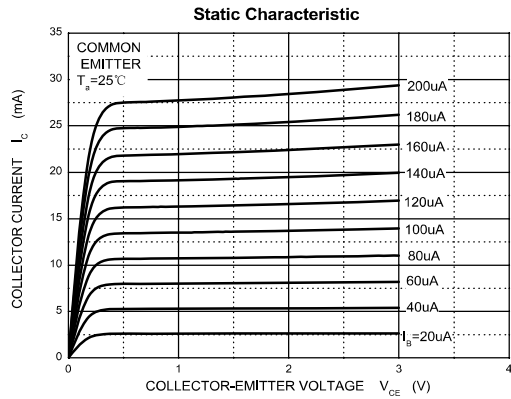
MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CE0}	60	V
Emitter-Base Voltage	V_{EB0}	4	V
Collector Current -Continuous	I_C	0.5	A
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55-150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CB0}$	$I_C=100\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_C=1mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EB0}$	$I_E=100\mu A, I_C=0$	4			V
Collector cut-off current	I_{CB0}	$V_{CB}=60V, I_E=0$			0.1	μA
Collector cut-off current	I_{CE0}	$V_{CE}=60V, I_B=0$			0.1	μA
Collector cut-off current	I_{EB0}	$V_{EB}=3V, I_C=0$			0.1	μA
DC current gain	h_{FE1}	$V_{CE}=1V, I_C=10mA$	100		400	
	h_{FE2}	$V_{CE}=1V, I_C=100mA$	100			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$			0.25	V
Base-emitter voltage	V_{BE}	$V_{CE}=1V, I_C=100mA$			1.2	V
Transition frequency	f_T	$V_{CE}=2V, I_C=10mA$ $f=100MHz$	100			MHz

Ratings and Characteristic Curves



Ordering information

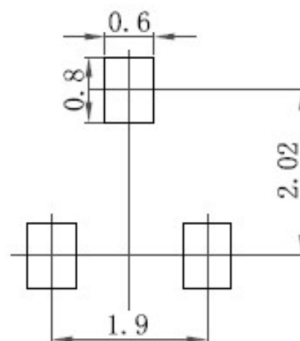
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

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



Disclaimer

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