



Micro Commercial Components



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MMBTA05 THRU MMBTA06

Features

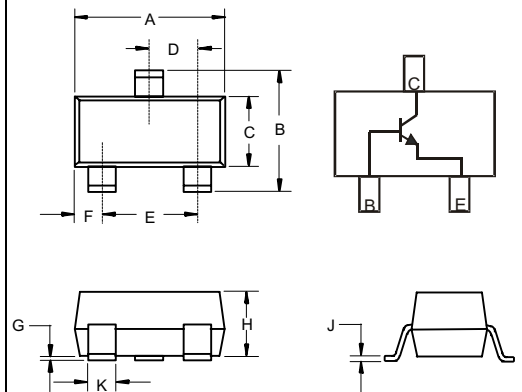
- Halogen free available upon request by adding suffix "-HF"
- Epitaxial Planar Die Construction
- Complementary PNP Types Available (MMBTA55/MMBTA56)
- Ideal for Medium Power Amplification and Switching.
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: MMBTA05:1H/K1H
MMBTA06:1GM/K1G

Maximum Ratings

Symbol	Rating	Rating	Unit
V _{CEO}	Collector-Emitter Voltage MMBTA05 MMBTA06	60 80	V
V _{CBO}	Collector-Base Voltage MMBTA05 MMBTA06	60 80	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Collector Current-Continuous	500	mA
P _D	Power Dissipation*	300	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	417	°C/W
T _J	Operating Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

NPN Small Signal General Purpose Amplifier Transistors

SOT-23

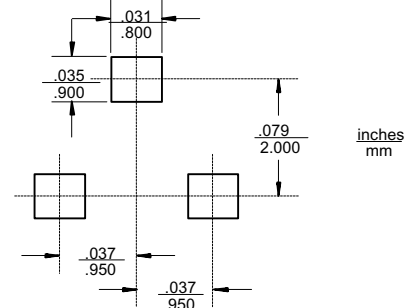


Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =1.0mA, I _B =0)	60 80	---	Vdc
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =0.1mA, I _E =0)	60 80	---	Vdc
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _E =100μA, I _C =0)	4.0	---	Vdc
I _{CBO}	Collector Cutoff Current (V _{CB} =60Vdc, I _E =0) MMBTA05 (V _{CB} =80Vdc, I _E =0) MMBTA06	---	0.1	μAdc
I _{CEO}	Collector Cutoff Current (V _{CE} =60Vdc, I _B =0)	---	1.0	μAdc
I _{EBO}	Emitter Cutoff Current (V _{EB} =3Vdc, I _C =0)	---	0.1	μAdc
h _{FE}	DC Current Gain (V _{CE} =1.0Vdc, I _C =10mA) (V _{CE} =1.0Vdc, I _C =100mA)	100 100	400 ---	
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =100mA, I _B =10mA)	---	0.25	Vdc
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =100mA, I _B =10mA)	---	1.2	Vdc
f _T	Transition frequency (I _C =10mA, V _{CE} =2.0Vdc, f=100MHz)	100	---	MHz

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

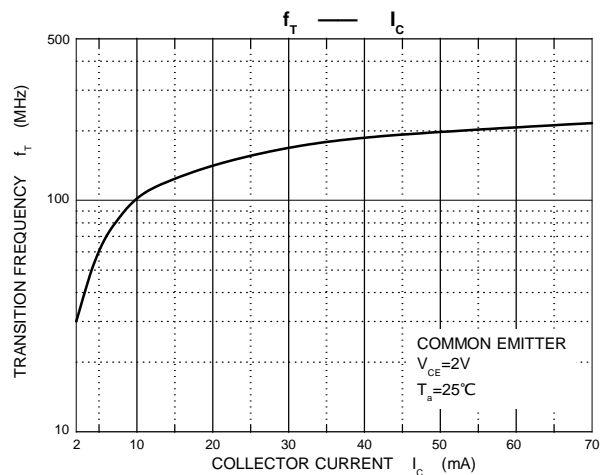
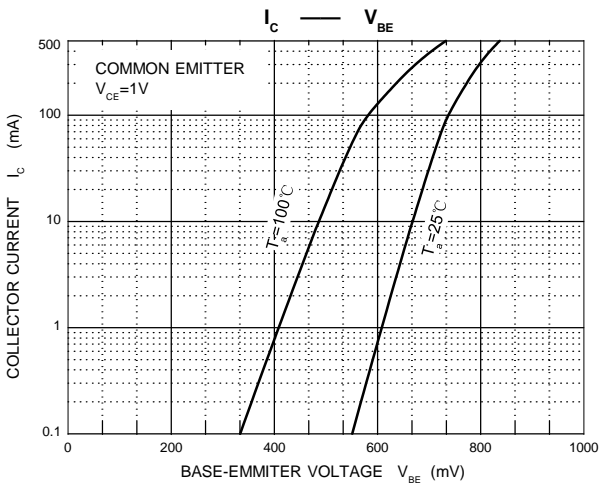
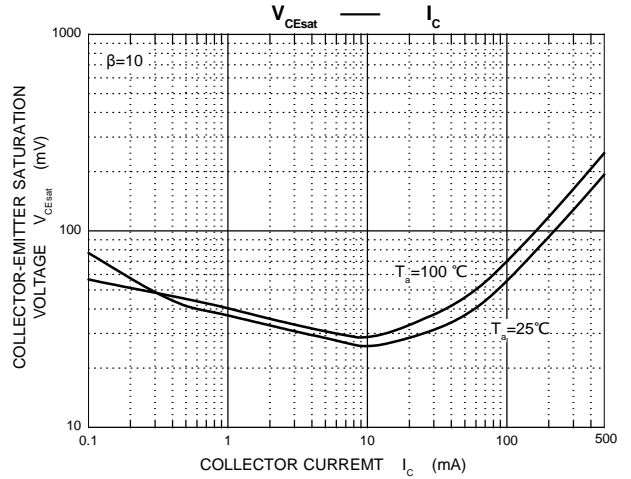
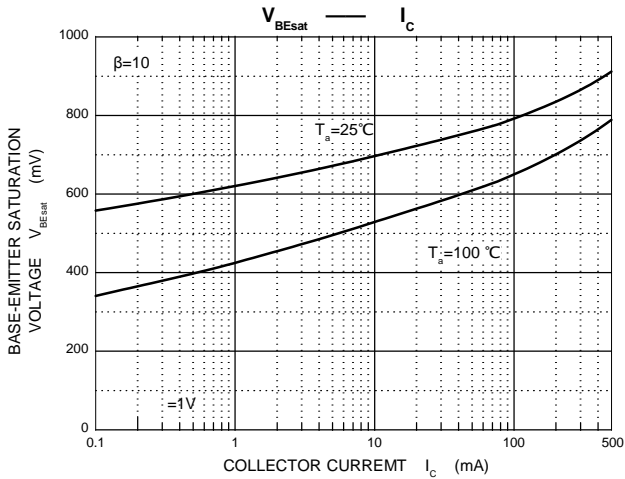
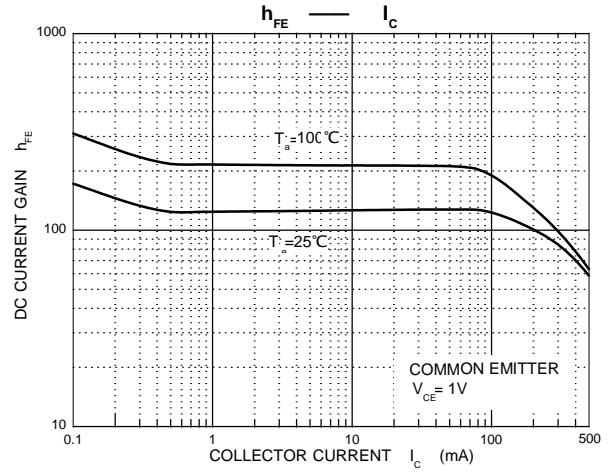
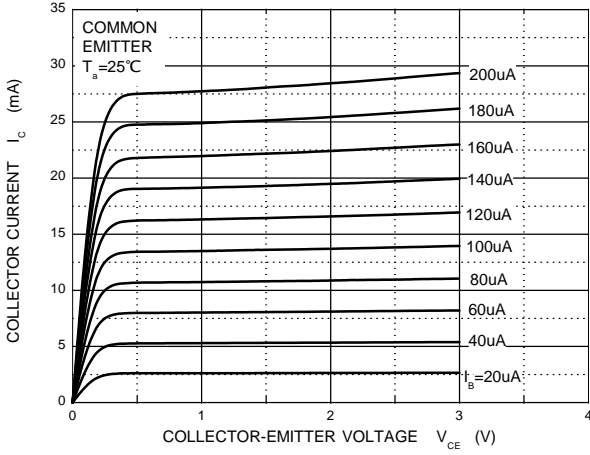
Suggested Solder Pad Layout



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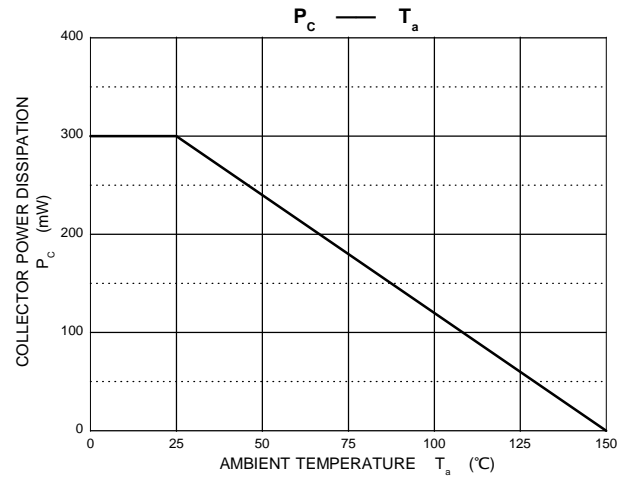
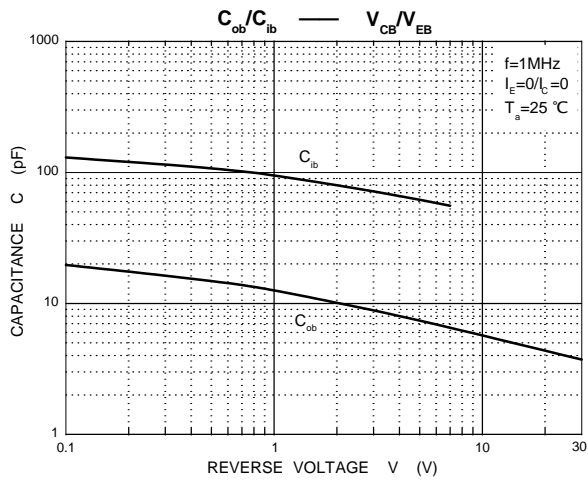
Typical Characteristics

Static Characteristic



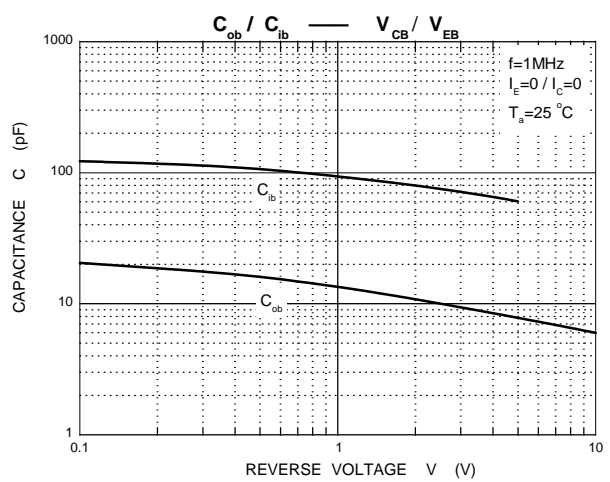
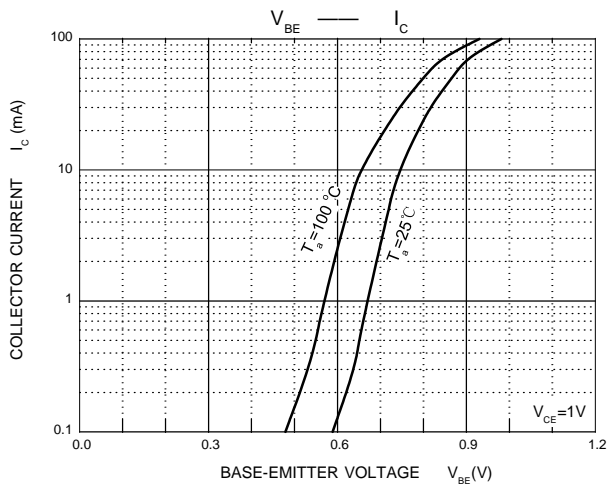
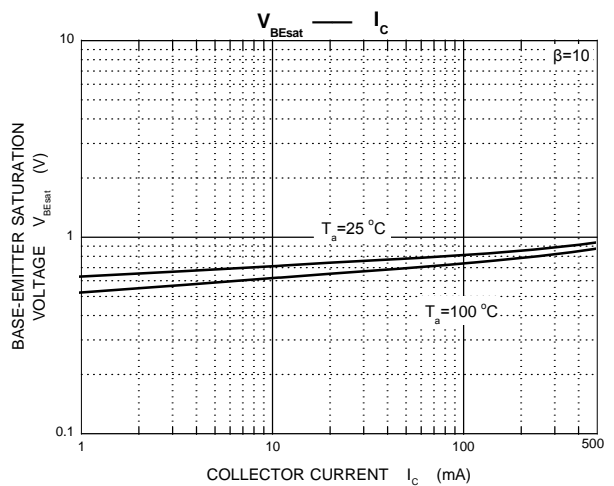
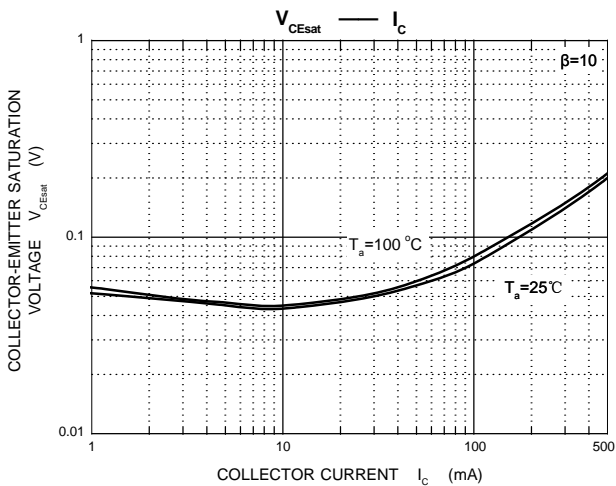
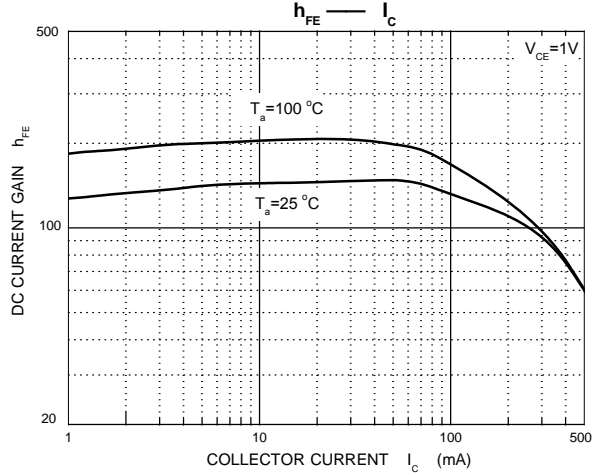
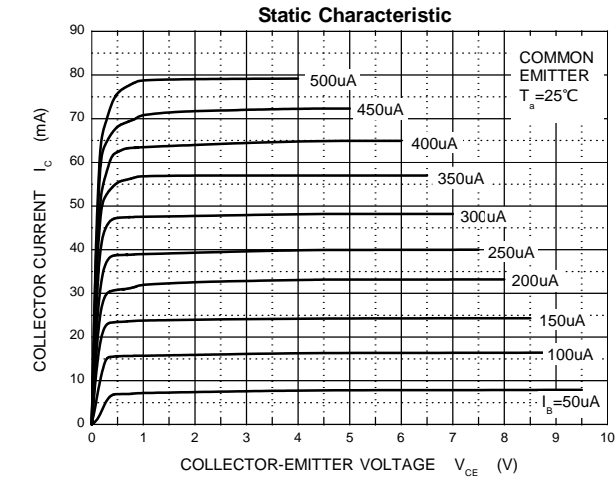
MMBTA05

Typical Characteristics



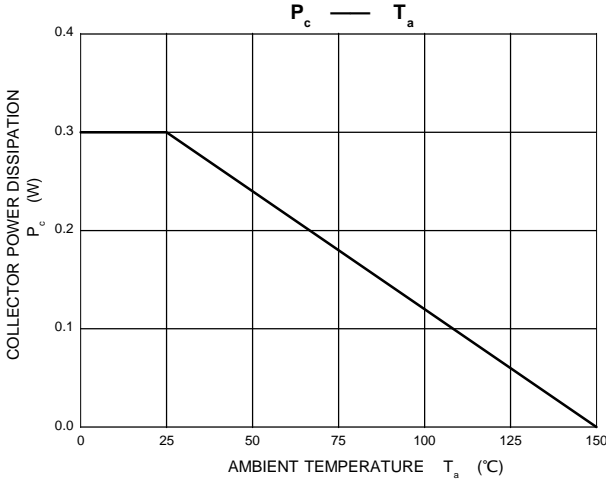
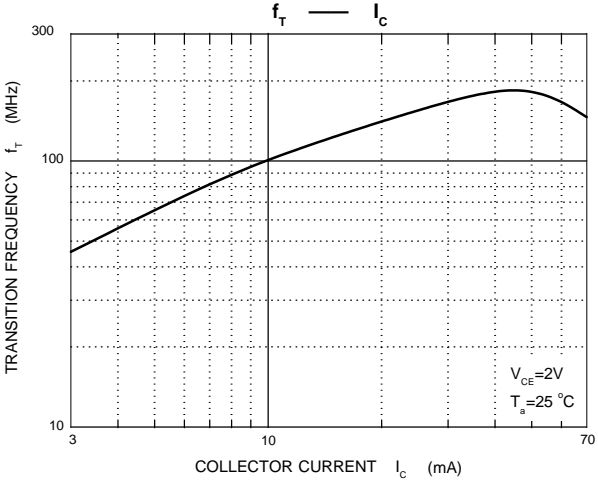
MMBTA06

Typical characteristics



MMBTA06

Typical characteristics





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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