



Micro Commercial Components



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MMBTA55 THRU MMBTA56

PNP General Purpose Amplifier

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- This device is designed for general purpose amplifier applications at collector current to 300mA
- Markin : MMBTA55=2H/B55, MMBTA56=2GM/B56
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

Symbol	Rating	Rating	Unit
V _{CEO}	Collector-Emitter Voltage	MMBTA55	60
		MMBTA56	80
V _{CBO}	Collector-Base Voltage	MMBTA55	60
		MMBTA56	80
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Collector Current, Continuous	500	mA
T _J	Operating Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Thermal Characteristics

Symbol	Rating	Max	Unit
P _D	Total Device Dissipation* Derate above 25°C	225	mW
		1.8	mW/°C
R _{JA}	Thermal Resistance, Junction to Ambient	556	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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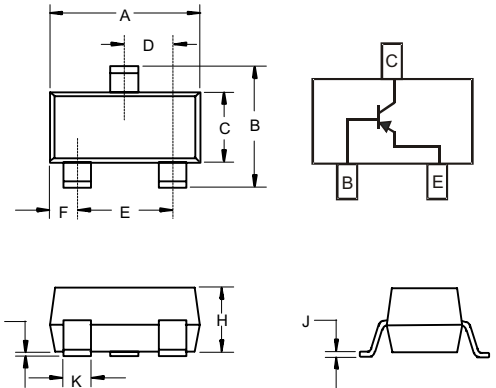
OFF CHARACTERISTICS

V _{(BR)CEO}	Collector-Emitter Breakdown Voltage ⁽¹⁾ (I _C =1.0mA, I _B =0)	MMBTA55	60	---	Vdc
		MMBTA56	80	---	
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _E =100mA, I _C =0)	4.0	---	---	Vdc
I _{CBO}	Collector Cutoff Current (V _{CB} =60Vdc, I _E =0)	MMBTA55	---	0.1	uAdc
		MMBTA56	---	0.1	uAdc
I _{CES}	Emitter Cutoff Current (V _{CE} =60Vdc, I _B =0)	---	0.1	uAdc	

ON CHARACTERISTICS

h _{FE}	DC Current Gain (V _{CE} =1.0Vdc, I _C =10mA) (V _{CE} =1.0Vdc, I _C =100mA)	100	---	---
		100	---	
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =100mA, I _B =10mA)	---	0.25	Vdc
V _{BE(on)}	Base-Emitter On Voltage (I _C =100mA, V _{CE} =1.0Vdc)	---	1.2	Vdc
f _T	Current-Gain—Bandwidth Product ⁽²⁾ (I _C =100mA, V _{CE} =1.0Vdc, f=100MHz)	50	---	MHz

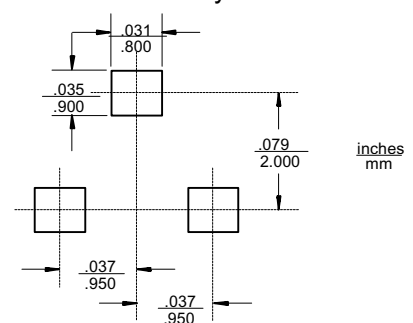
SOT-23



DIMENSIONS

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



MMBTA55 thru MMBTA56

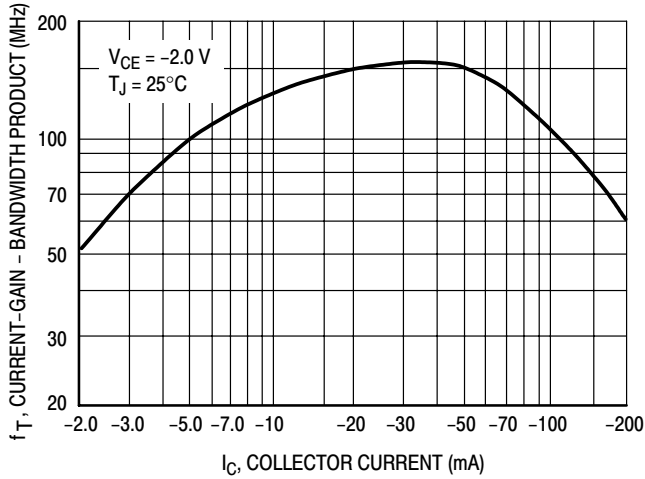


Figure 2. Current-Gain — Bandwidth Product

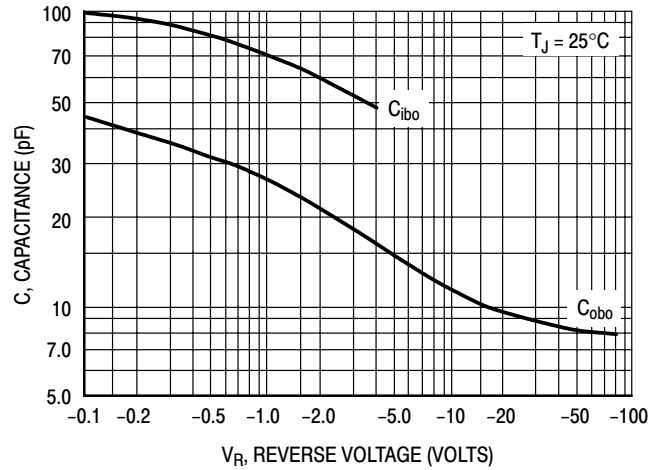


Figure 3. Capacitance

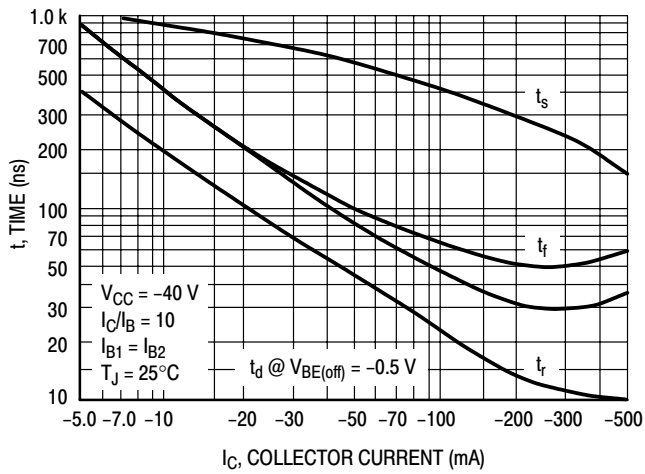


Figure 4. Switching Time

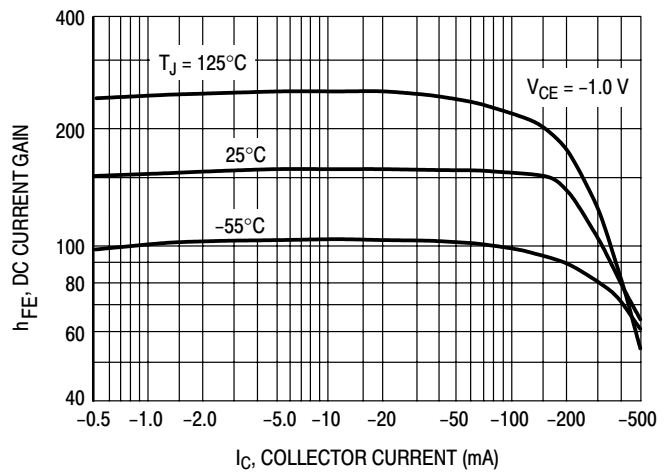


Figure 5. DC Current Gain

MMBTA55 thru MMBTA56

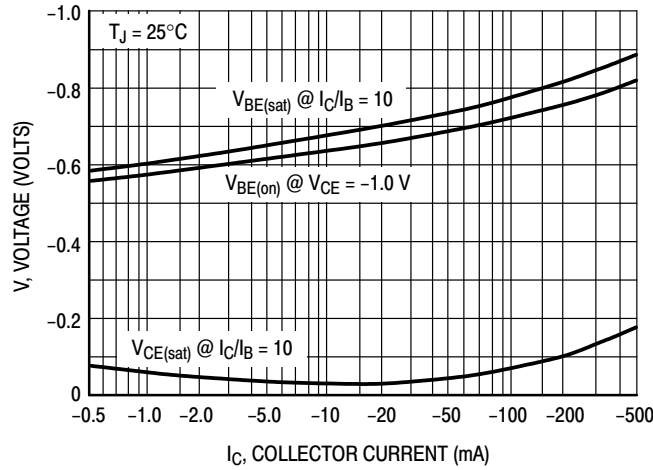


Figure 6. "ON" Voltages

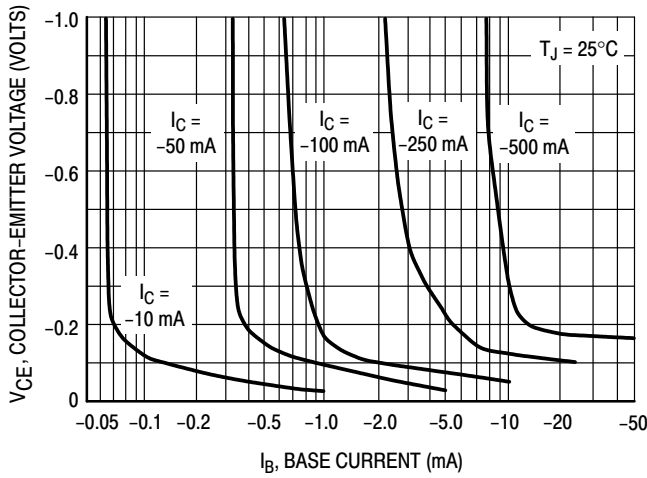


Figure 7. Collector Saturation Region

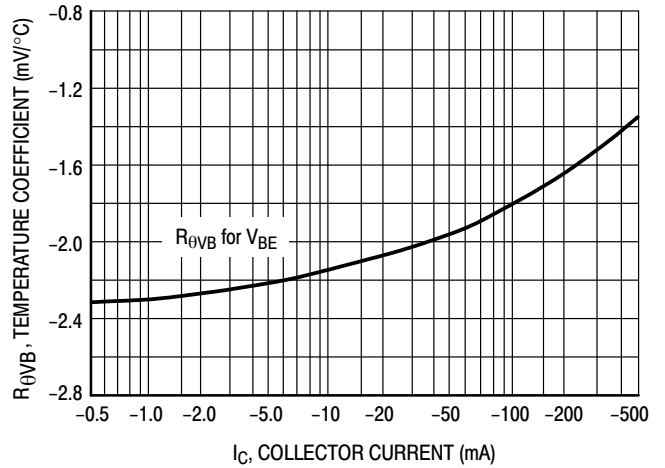


Figure 8. Base-Emitter Temperature Coefficient



TM

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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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