

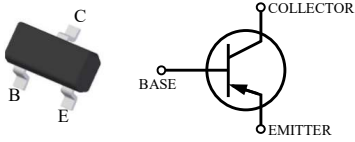


MMBTA56H

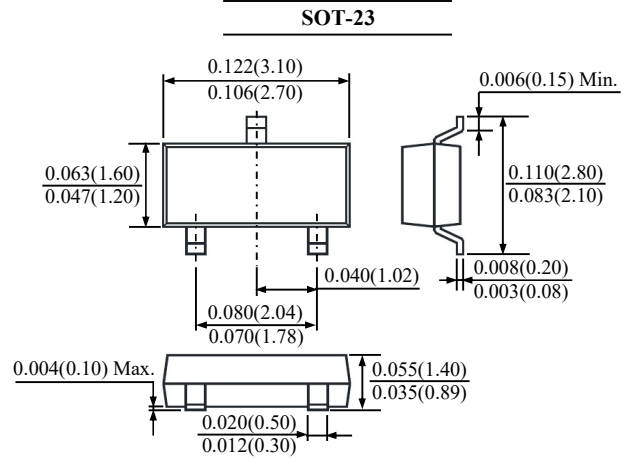
PNP TRANSISTOR

FEATURES

· Suffix "H" indicates Halogen-free parts, ex. MMBTA56H



B	Base
C	Collector
E	Emitter



Dimensions in inches and (millimeters)

Maximum Ratings ($T_A = 25^\circ\text{C}$ 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 Current	I_C	-500	mA
Power Dissipation	P_{tot}	200	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$



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Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min.	Max.	Unit
DC Current Gain	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	h_{FE}	100	-	-
	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$		100	-	-
Collector Base Cutoff Current	$V_{CB} = -80\text{V}$	I_{CBO}	-	-100	nA
Emitter Base Cutoff Current	$V_{CE} = -60\text{V}$	I_{CES}	-	-100	nA
Collector Emitter Breakdown Voltage	$I_C = -1\text{mA}$	$V_{(BR)CEO}$	-80	-	V
Collector Base Breakdown Voltage	$I_C = -100\mu\text{A}$	$V_{(BR)CBO}$	-80	-	V
Emitter Base Breakdown Voltage	$I_E = -100\mu\text{A}$	$V_{(BR)EBO}$	-4	-	V
Collector Emitter Saturation Voltage	$I_C = -100\text{mA}, I_B = -10\text{mA}$	$V_{CE(sat)}$	-	-0.25	V
Base Emitter On Voltage	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	$V_{BE(on)}$	-	-1.20	V
Gain Bandwidth Product	$V_{CE} = -1\text{V}, I_C = -100\text{mA}, f = 100\text{MHz}$	f_T	50	-	MHz



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RATINGS AND CHARACTERISTIC CURVES

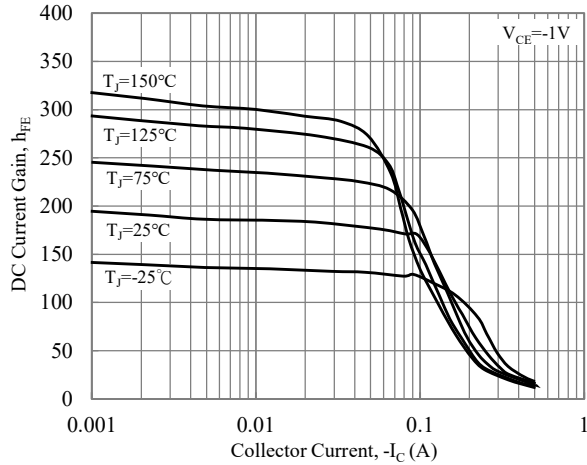


Fig. 1 Current Gain vs. Collector Current

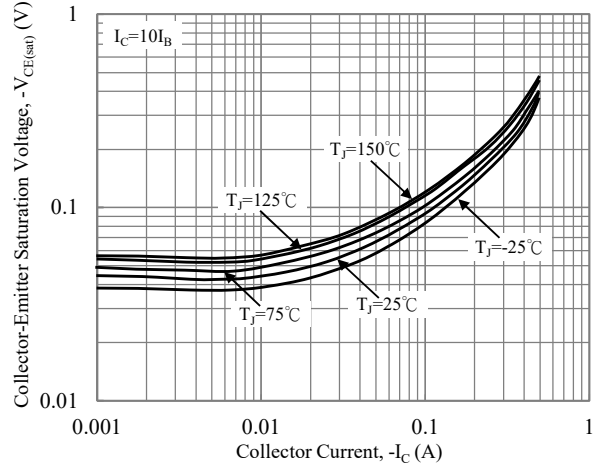


Fig. 2 Collector-Emitter Saturation Voltage vs. Collector Current

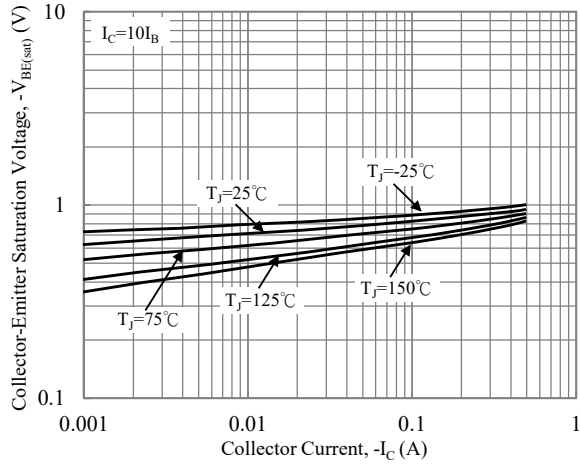


Fig. 3 Base-Emitter Saturation Voltage vs. Collector Current

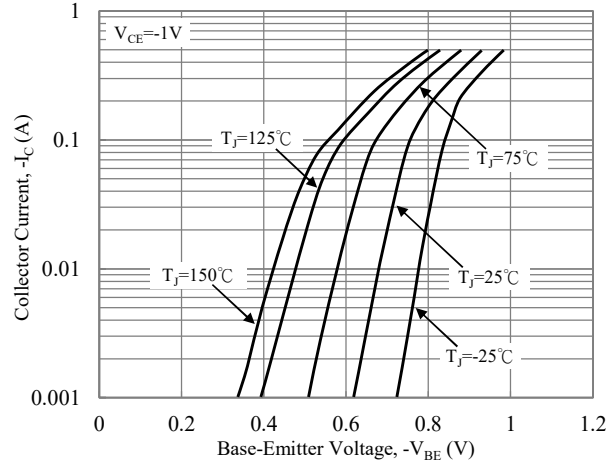


Fig. 4 Base-Emitter Voltage vs. Collector Current

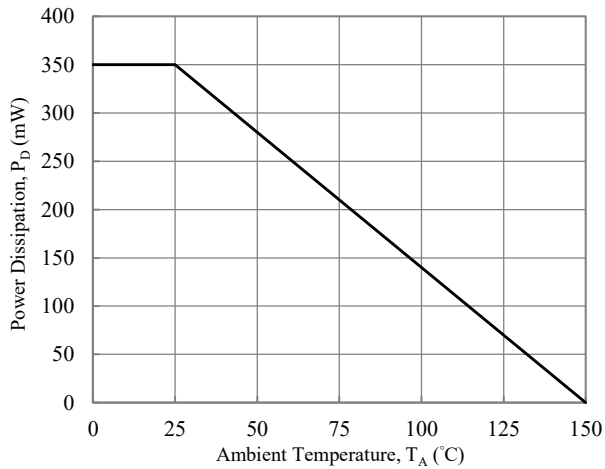


Fig. 5 Power Derating Curves

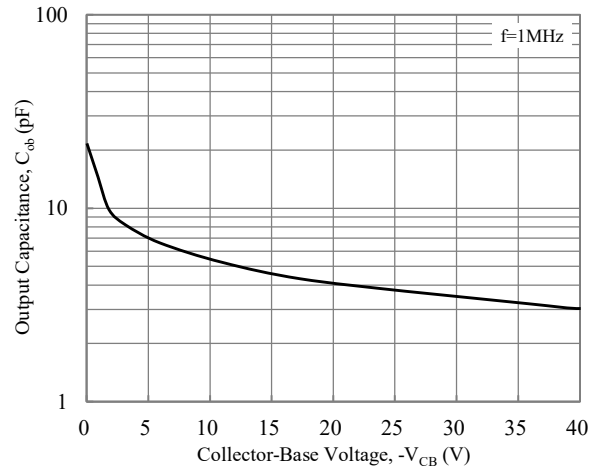


Fig. 6 Output Characteristics Curves



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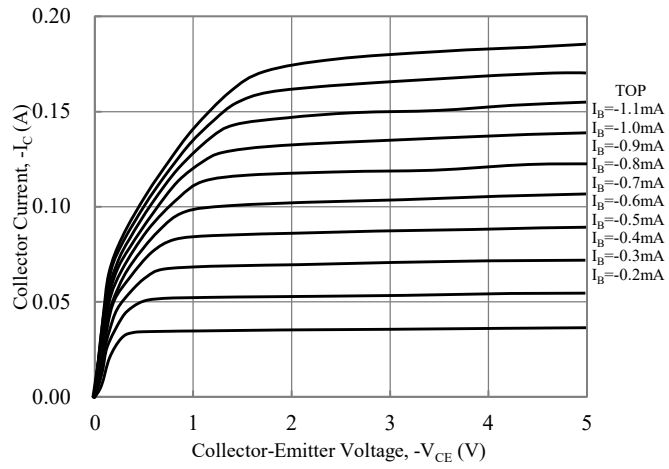


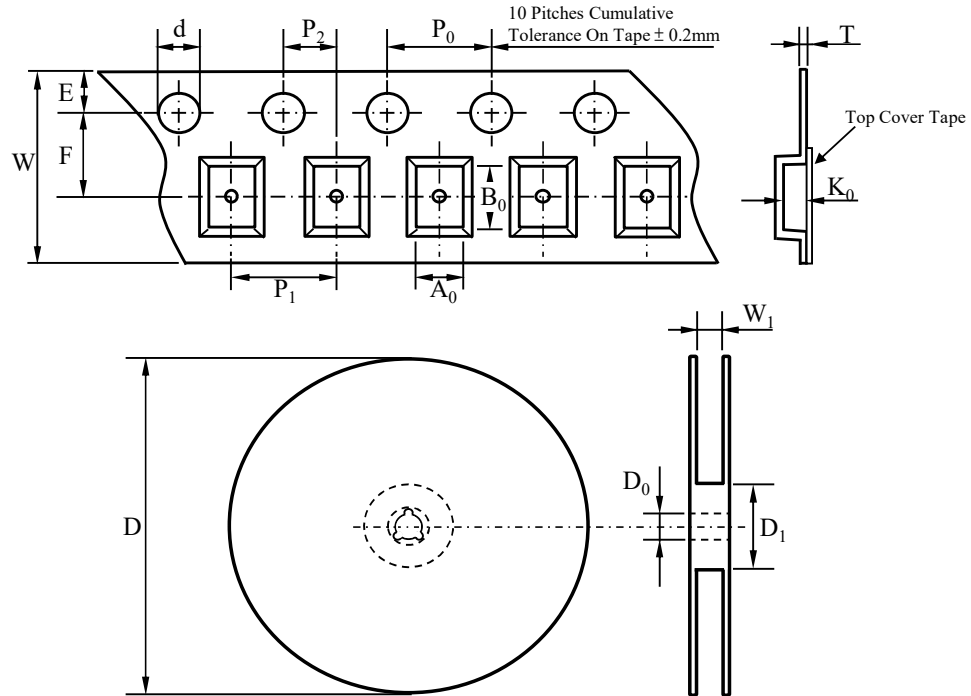
Fig. 7 Output Characteristics Curves



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TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A_0	*
Carrier length	B_0	
Carrier depth	K_0	
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.50
Reel inner diameter	D_1	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P_0	4.00 ± 0.10
Punch hole pitch	P_1	4.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W_1	MAX. 14.50

Note *: A_0 , B_0 , and K_0 are determined by component size. The clearance between the components and the cavity must be within 0.05 mm min. to 0.5 mm max.

ORDER INFORMATION

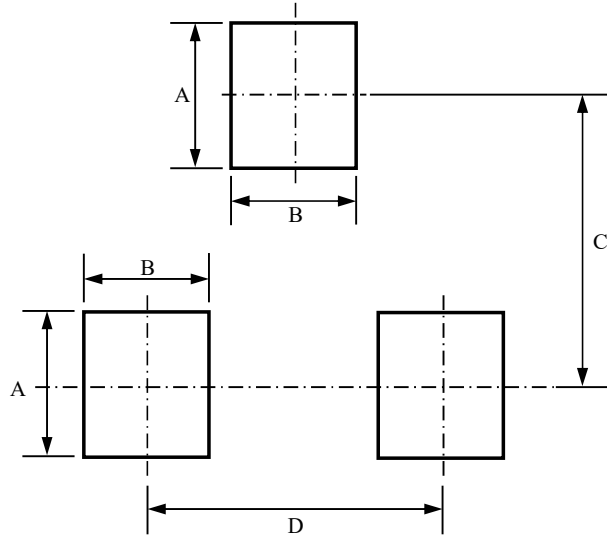
Part Number	Marking Code	Reel Size	Quantity
MMBTA56H	JB	7"	3,000



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SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOT-23	1.00	0.80	2.00	1.90