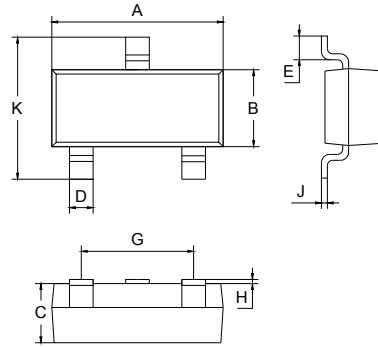


1. BASE
2. EMITTER
3. COLLECTOR

### FEATURES

- Epitaxial planar die construction.
- Complementary NPN types available (MMBTA05/MMBTA06).



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

### APPLICATIONS

- Ideal for medium NPN amplification and switching.

### ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTA55	2H	SOT-23
MMBTA56	2GM	SOT-23

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	MMBTA55	MMBTA56	UNIT
$V_{CBO}$	collector-base voltage	-60	-80	V
$V_{CEO}$	collector-emitter voltage	-60	-80	V
$V_{EBO}$	emitter-base voltage	-4		V
$I_C$	collector current (DC)	-0.5		A
$P_C$	Collector dissipation	0.3		W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	417		°C/W
$T_J, T_{stg}$	junction and storage temperature	-55 to +150		°C



## ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage MMBTA55 MMBTA56	$I_C = -100\mu A, I_E = 0$	-60 -80		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage MMBTA55 MMBTA56	$I_C = -1.0mA, I_B = 0$	-60 -80		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	-4		V
$I_{CBO}$	Collector cut-off current MMBTA55 MMBTA56	$I_E = 0; V_{CB} = -60V$ $I_E = 0; V_{CB} = -80V$	-	-0.1	$\mu A$
$I_{CEO}$	Collector cut-off current MMBTA55 MMBTA56	$I_B = 0; V_{CB} = -60V$ $I_B = 0; V_{CB} = -80V$	-	-0.1	$\mu A$
$h_{FE}$	DC current gain	$V_{CE} = -1V; I_C = -10mA$ $V_{CE} = -1V; I_C = -100mA$	100 100	400 -	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -100mA; I_B = -10mA$	-	-0.25	V
$V_{BE(on)}$	Base-emitter saturation voltage	$I_C = -100mA; V_{CE} = -1.0V$	-	-1.2	V
$f_T$	transition frequency	$I_C = -100mA; V_{CE} = -1V;$ $f = 100MHz$	50	-	MHz

### Ratings and Characteristics Curve(T<sub>A</sub>=25°C unless otherwise noted)

Fig. 1 - Static Characteristics

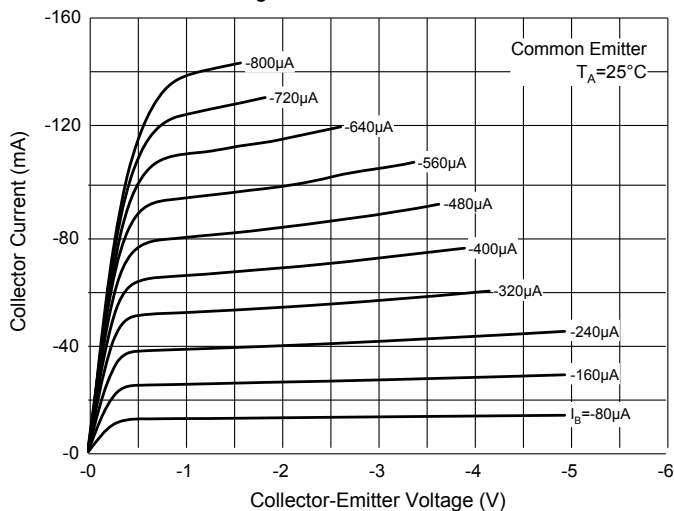


Fig. 2 - DC Current Gain Characteristics

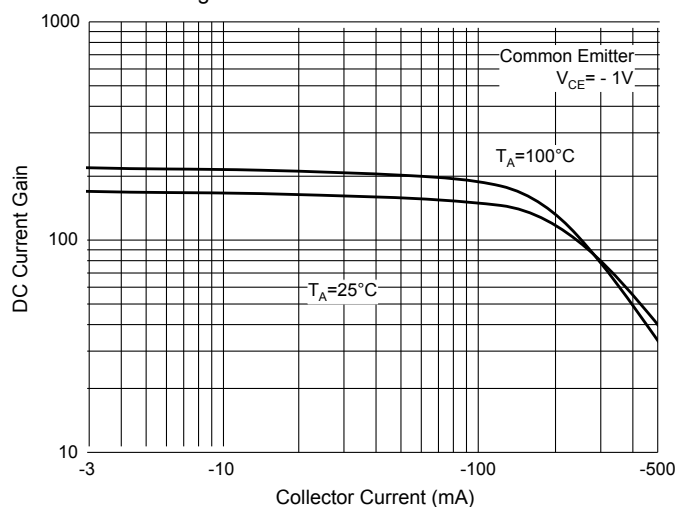


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

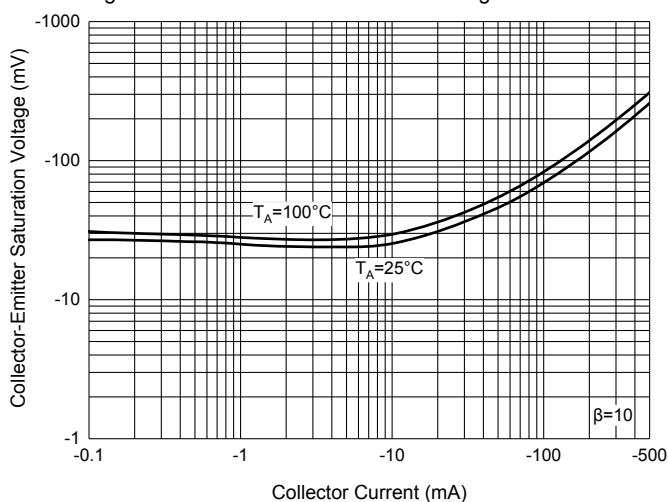


Fig. 4 - Base-Emitter Voltage Characteristics

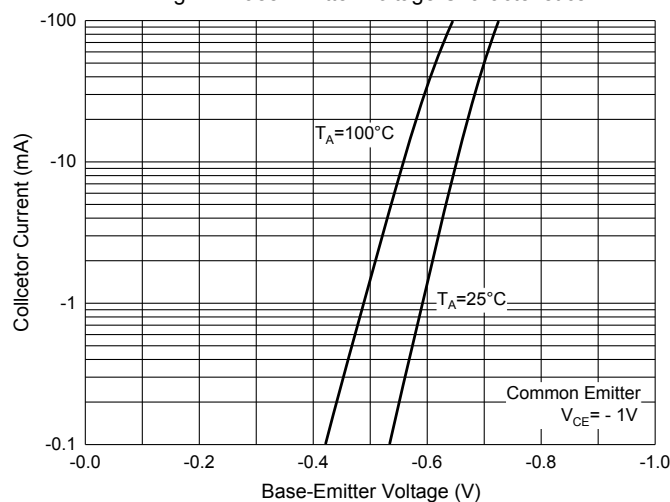
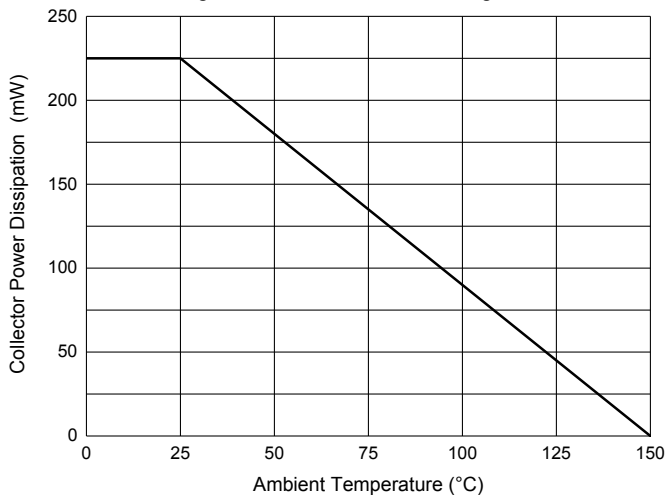


Fig. 5 - Collector Power Derating Curve



Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT-23	3000pcs	7inch	45,000pcs	203×203×195	180,000pcs	438×438×220