

NPN General Purpose Transistor

MMBTA05/MMBTA06

FEATURES

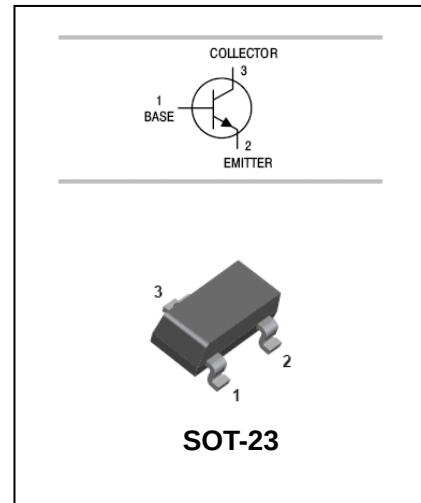
- Epitaxial planar die construction.
- Complementary PNP type available (MMBTA55/MMBTA56).
- Also available in lead free version.



Lead-free

APPLICATIONS

- Ideal for medium power amplification and switching



ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTA05	1H	SOT-23
MMBTA06	1GM	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	UNIT	
V _{CBO}	collector-base voltage	MMBTA05 MMBTA06	60 80	V
	collector-emitter voltage	MMBTA05 MMBTA06	60 80	
V _{CEO}	emitter-base voltage		4	V
V _{EBO}	collector current (DC)		0.5	A
I _C	Collector dissipation		0.35	W
P _C	Thermal Resistance, Junction to Ambient		357	°C/W
R _{θJA}	junction and storage temperature		-55-150	°C
T _j , T _{stg}				

NPN General Purpose Transistor

MMBTA05/MMBTA06

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage MMBTA05 MMBTA06	$I_C=100\mu A, I_E=0$	60 80		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage MMBTA05 MMBTA06	$I_C=1.0mA, I_B=0$	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 MMBTA05 MMBTA06	$I_E = 0; V_{CB} = 60V$ $I_E = 0; V_{CB} = 80V$	-	0.1	μA
I_{CEO}	collector cut-off current MMBTA05 MMBTA06	$I_E = 0; V_{CE} = 60V$ $I_E = 0; V_{CE} = 80V$	-	0.1	μA
h_{FE}	DC current gain	$V_{CE} = 1V; I_C = 10mA$ $V_{CE} = 1V; I_C = 100mA$	100	-	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = 100mA; I_B = 10mA$	-	0.25	V
f_T	transition frequency	$I_C = 10mA; V_{CE} = 2.0V;$ $f = 100MHz$	100	-	MHz

PACKAGE OUTLINE

Plastic surface mounted package

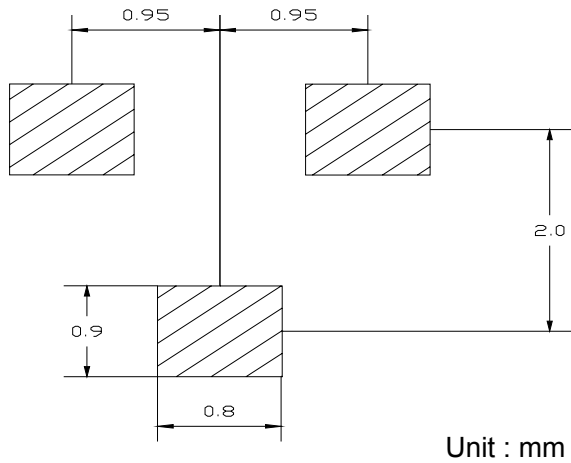
SOT-23

Top view and side view of the SOT-23 package. Dimension A is the width, B is the height, and D is the lead width. The side view shows the total height K.

Bottom view of the SOT-23 package. Dimension G is the lead pitch, H is the lead thickness, and C is the lead height.

Front view of the SOT-23 package. Dimension E is the lead width and J is the lead pitch.

SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

NPN General Purpose Transistor**MMBTA05/MMBTA06****SOLDERING FOOTPRINT**

Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBTA05/MMBTA06	SOT-23	3000/Tape&Reel

www.s-manuals.com