

Product Catalog > [Transistors](#) > [Small Signal Bipolar Transistors](#) >

Part Number	MMBTA06
product family	SOT-23 Plastic-Encapsulate Bipolar Transistors
Product Polarity	NPN
SMD/ThroHole	SMD
VCEO	80V
VCBO	80V
VEBO	4.0V
Ic	500mA
PC	350mW
HFE(min)	100
@Ic	10mA
@VCE	1.0V
ICBO	0.1µA
IEBO	
VCE(sat)	0.25V
VBE(sat)	1.2V
ft	100MHZ
nf	
TON_max	
Package Qty	Tape: 3K/Reel , 120K/Ctn;

Green/Pb Free/RoHS/REACH

- [FAQ](#)
 - [Soldering Profile](#)
 - [Tin Whisker Evaluation](#)
 - [Moisture Sensitivity Level](#)
 - [RoHS Test Report](#)
 - [PFOS&PFOA Test Report](#)
 - [Ordering Information](#)
 - [Certification of REACH Compliance](#)
 - [Certification of RoHS Compliance](#)
 - [Deca certification\(DecaBDE\)](#)
 - [MCC's EU RoHS and Green \(Halogen & Antimony Free\)](#)
 - [Parts List](#)
 - [REACH SVHC Test Report](#)
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Micro Commercial Components

MMBTA05 THRU MMBTA06

Features

- Epitaxial Planar Die Construction
- Complementary PNP Types Available (MMBTA55/MMBTA56)
- Ideal for Medium Power Amplification and Switching.
- Case Material: Molded Plastic. UL Flammability Classification Rating 94-0 and MSL Rating 1
- Marking: MMBTA05:1H/K1H
MMBTA06:1GM/K1G

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CE0}	Collector-Emitter Voltage	60	V
	MMBTA05	80	
V_{CBO}	Collector-Base Voltage	60	V
	MMBTA05	80	
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Collector Current-Continuous	500	mA
P_D	Power Dissipation*	300	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	K/W
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

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			
	($I_C=1.0\text{mA}$, $I_B=0$)	60	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage			
	($I_E=100\mu\text{A}$, $I_C=0$)	4.0	---	Vdc
I_{CBO}	Collector Cutoff Current			
	($V_{CB}=60\text{Vdc}$, $I_E=0$) MMBTA05	---	0.1	μA
I_{CES}	Emitter Cutoff Current			
	($V_{CE}=60\text{Vdc}$, $I_B=0$) MMBTA05	---	0.1	μA
	($V_{CE}=80\text{Vdc}$, $I_B=0$) MMBTA06	---	0.1	μA

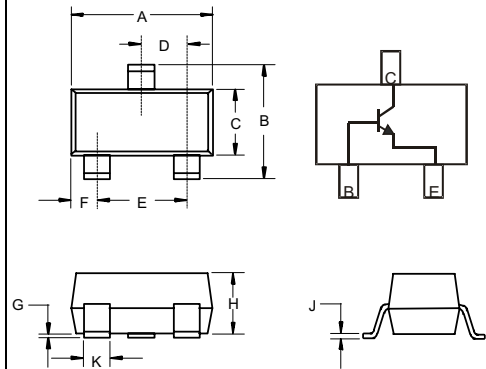
ON CHARACTERISTICS

h_{FE}	DC Current Gain			
	($V_{CE}=1.0\text{Vdc}$, $I_C=10\text{mA}$)	100	---	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	($I_C=100\text{mA}$, $I_B=10\text{mA}$)	---	0.25	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage			
f_T	Current-Gain—Bandwidth Product	100	---	MHz

* Valid provided that terminals are kept at ambient temperature..

NPN Small Signal General Purpose Amplifier Transistors

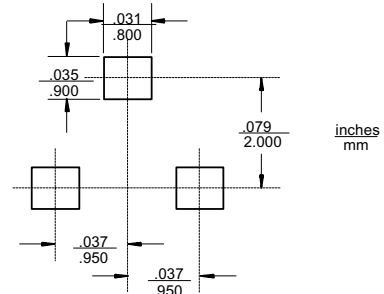
SOT-23



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	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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Ordering Information

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