

MMBTA06W

NPN High Voltage Transistor

Voltage **80V** **Power** **225mW**

Features

- NPN silicon, planar design
- Collector current $I_C = 500\text{mA}$
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std. (Halogen Free)

Mechanical Data

- Case: SOT-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00018 ounces, 0.005 grams
- Marking: B06

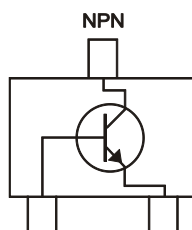
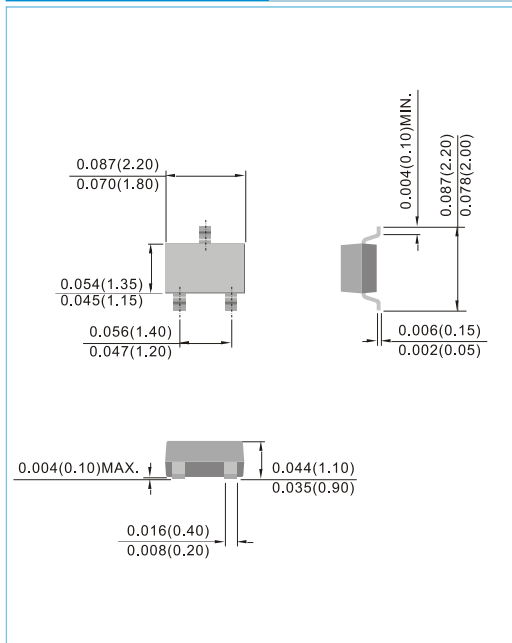


Fig.34(TOP VIEW)

SOT-323

Unit : inch(mm)



Maximum Ratings and Thermal Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
Collector-Emitter Voltage	V_{CE0}	80	V
Collector-Base Voltage	V_{CBO}	80	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current-Continuous	I_C	500	mA
Maximum Power Dissipation (Note 1)	P_D	225	mW
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$
Typical Junction-to Ambient Thermal Resistance (Note 1)	$R_{\theta JA}$	550	$^{\circ}\text{C/W}$

Note : 1. Mounted on a FR4 PCB, single-sided copper, mini pad.

MMBTA06W

Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
OFF Characteristics						
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = 1mA, I _B = 0	80	-	-	V
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C = 100μA, I _E = 0	80	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E = 100μA, I _C = 0	4	-	-	V
Collector Cutoff Current	I _{CBO}	V _{CB} = 80V, I _E = 0	-	-	100	nA
Collector Cutoff Current	I _{CES}	V _{CE} = 60V, I _B = 0	-	-	100	nA
ON characteristics						
DC Current Gain	h _{FE}	V _{CE} = 1V, I _C = 10mA	100	-	-	-
		V _{CE} = 1V, I _C = 100mA	100	-	-	
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =100mA, I _B = 10mA	-	-	0.25	V
Base-Emitter Turn-on voltage	V _{BE(on)}	I _C =100mA, V _{CE} = 1V	-	-	1.2	V
Current-Gain-Bandwidth Product	f _T	I _C =10mA, V _{CE} = 2V f=100MHz	100	-	-	MHz

MMBTA06W

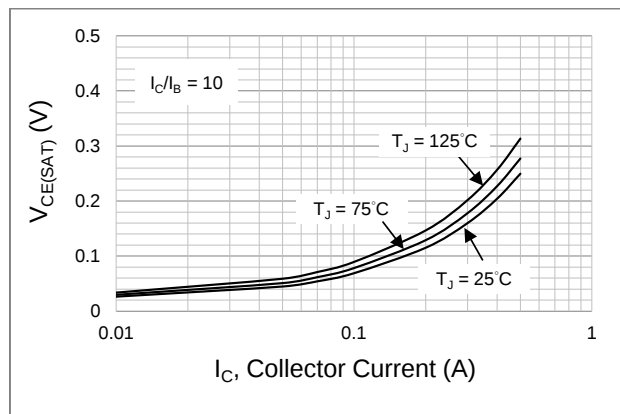


Fig.1 Typical Collector-Emitter Saturation Voltage

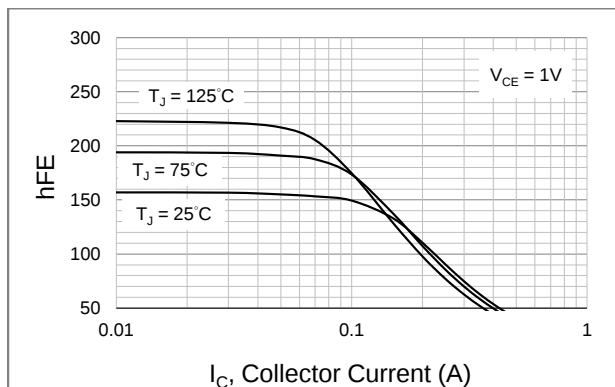


Fig.2 Typical DC Current Gain vs Collector Current

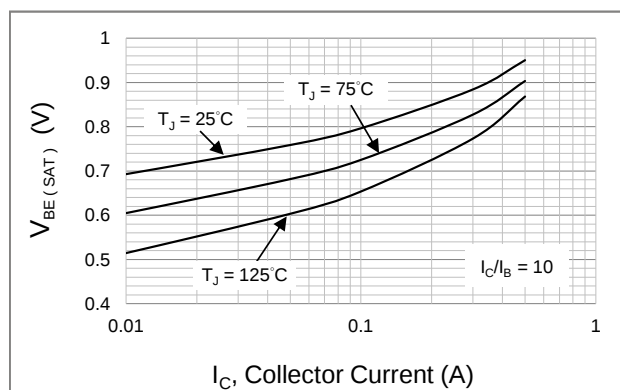


Fig.3 Typical Base-Emitter Saturation Voltage

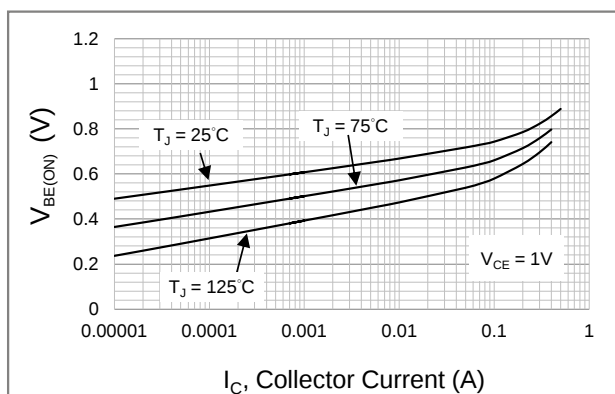


Fig.4 Typical Base - Emitter Voltage vs Collector Current

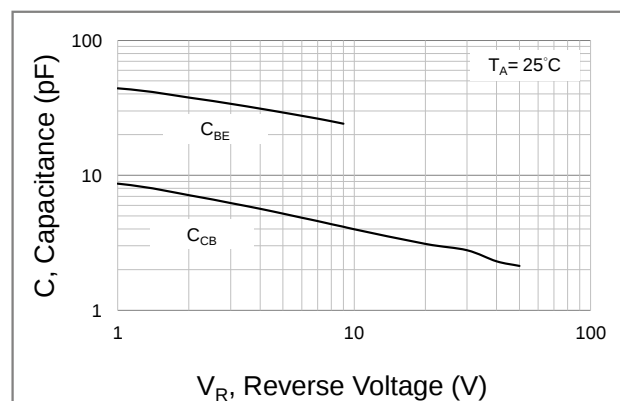


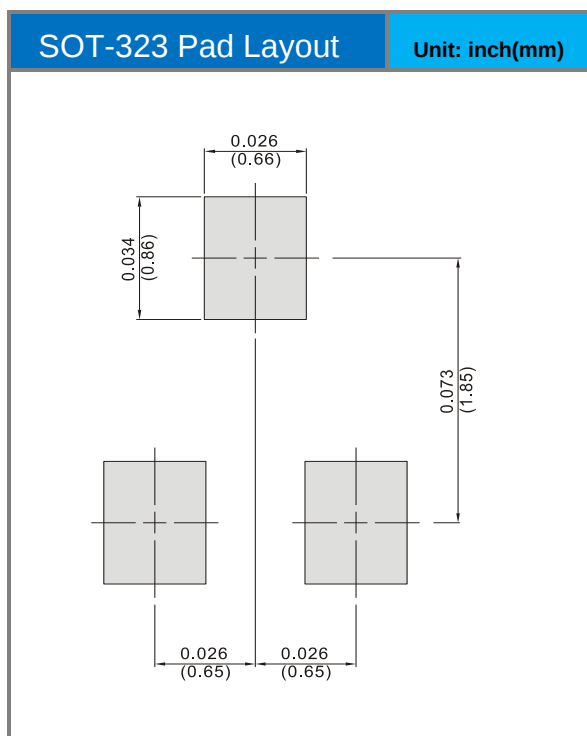
Fig.5 Typical Capacitance

MMBTA06W

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MMBTA06W	SOT-323	3K pcs / 7" reel	B06
MMBTA06W	SOT-323	12K pcs / 13" reel	B06

Mounting Pad Layout



MMBTA06W

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from PANJIT International Inc..
- PANJIT International Inc. reserves the rights to make changes of the content herein the document follow PCN procedure. Please refer to our website for the latest document.
- PANJIT International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- PANJIT International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. PANJIT International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed or authorized for equipment relating to human life, life-saving or life-sustaining applications, such as medical instruments, transportation equipment, aerospace machinery, or for other applications intended to cause personal injury. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify PANJIT International Inc. for any damages resulting from such improper use or sale. For additional terms and conditions regarding the use of PANJIT products, please refer to the Terms of Use available on the PANJIT website.
- Since PANJIT uses lot number as the tracking base, please provide the lot number for tracking when complaining.