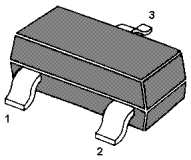
MMBTA06 TRANSISTOR

NPN Silicon Epitaxial Planar Transistor

For switching and amplifier applications



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

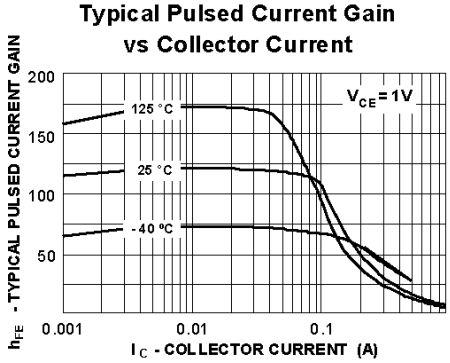
Absolute Maximum Ratings (T_a = 25 °C)

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}	350	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	357	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

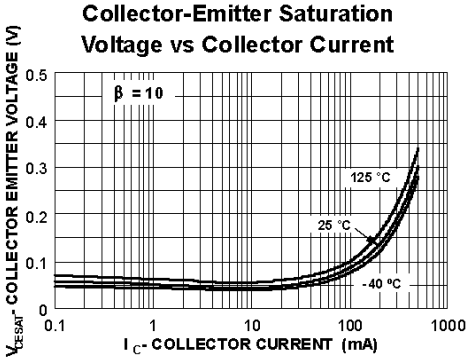
Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 1 V, I_C = 10 mA at V_{CE} = 1 V, I_C = 100 mA	 h_{FE} h_{FE}	 100 100	 - -	 - -
Collector Base Cutoff Current at V_{CB} = 80 V	I_{CBO}	-	100	nA
Collector Emitter Cutoff Current at V_{CE} = 60 V	I_{CES}	-	100	nA
Collector Base Breakdown Voltage at I_C = 100 µA	$V_{(BR)CBO}$	80	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	80	-	V
Emitter Base Breakdown Voltage at I_E = 100 µA	$V_{(BR)EBO}$	4	-	V
Collector Emitter Saturation Voltage at I_C = 100 mA, I_B = 10 mA	$V_{CE(sat)}$	-	0.25	V
Base Emitter On Voltage at V_{CE} = 1 V, I_C = 100 mA	$V_{BE(on)}$	-	1.2	V
Gain Bandwidth Product at I_C = 10 mA, V_{CE} = 2 V, f = 100 MHz	f_T	100	-	MHz

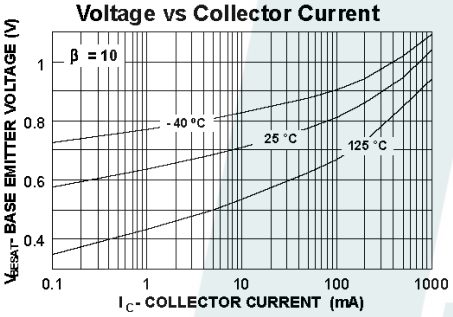
Typical Pulsed Current Gain vs Collector Current



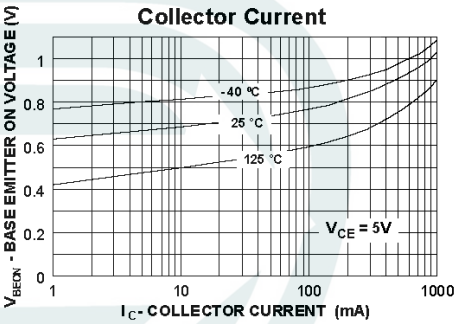
Collector-Emitter Saturation Voltage vs Collector Current



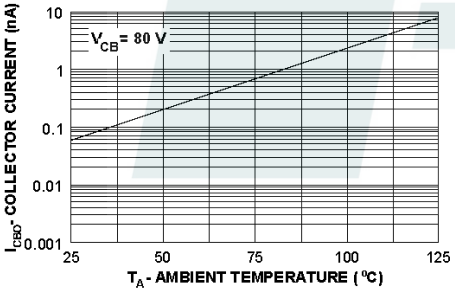
Base-Emitter Saturation Voltage vs Collector Current



Base Emitter ON Voltage vs Collector Current



Collector-Cutoff Current vs. Ambient Temperature



Collector Saturation Region