

Single Bipolar Transistor multicom^{PRO}

RoHS
Compliant



Feature

- For Switching and Amplifier Applications

Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	80	V
Collector-Emitter Voltage	V_{CEO}		
Emitter - Base Voltage	V_{EBO}	4	
Collector Current - Continuous	I_C	500	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	416	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +150	

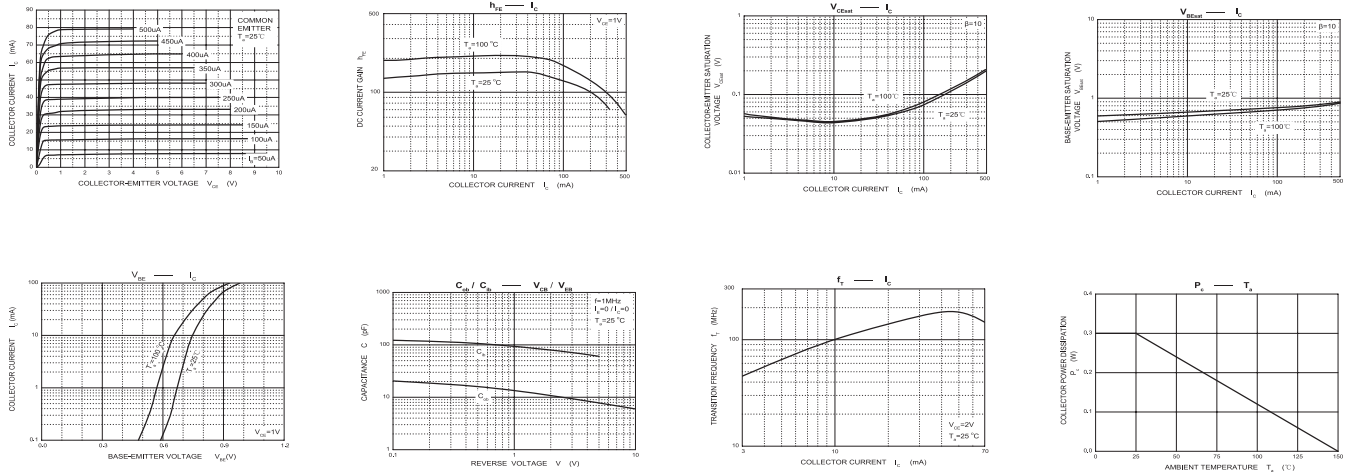
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	V_{CB0}	$I_C = 100\ \mu\text{A}$, $I_E = 0$	80		V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C = 1\text{mA}$, $I_B = 0$			
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E = 100\ \mu\text{A}$, $I_C = 0$	4		
Collector-base cut-off current	I_{CBO}	$V_{CB} = 80\text{V}$, $I_E = 0$		100	nA
Collector- emitter cut-off current	I_{CES}	$V_{CE} = 60\text{V}$, $I_E = 0$			
Emitter cut-off current	I_{EBO}	$V_{EB} = 3\text{V}$, $I_C = 0$			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}$, $I_B = 10\text{mA}$		0.25	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 100\text{mA}$; $I_B = 10\text{mA}$		1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\text{V}$, $I_C = 10\text{mA}$	100	400	
	$h_{FE(2)}$	$V_{CE} = 1\text{V}$, $I_C = 100\text{mA}$			
Transition frequency	f_T	$V_{CE} = 2\text{V}$, $I_C = 10\text{mA}$, $f = 100\text{MHz}$			

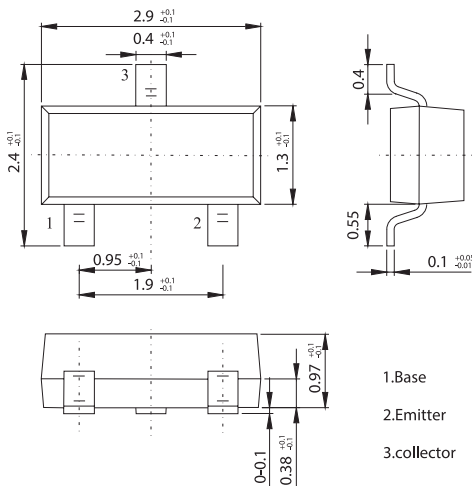
* pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

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Typical Characteristics



Diagram



Marking: FS

Part Number Table

Description	Part Number
Single Bipolar Transistor, NPN, 0.5A, 80V, SOT 23	MMBTA06

Dimensions : Millimetres

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