

# Single Bipolar Transistor multcomp<sup>PRO</sup>

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	$^\circ\text{C/W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to +150	

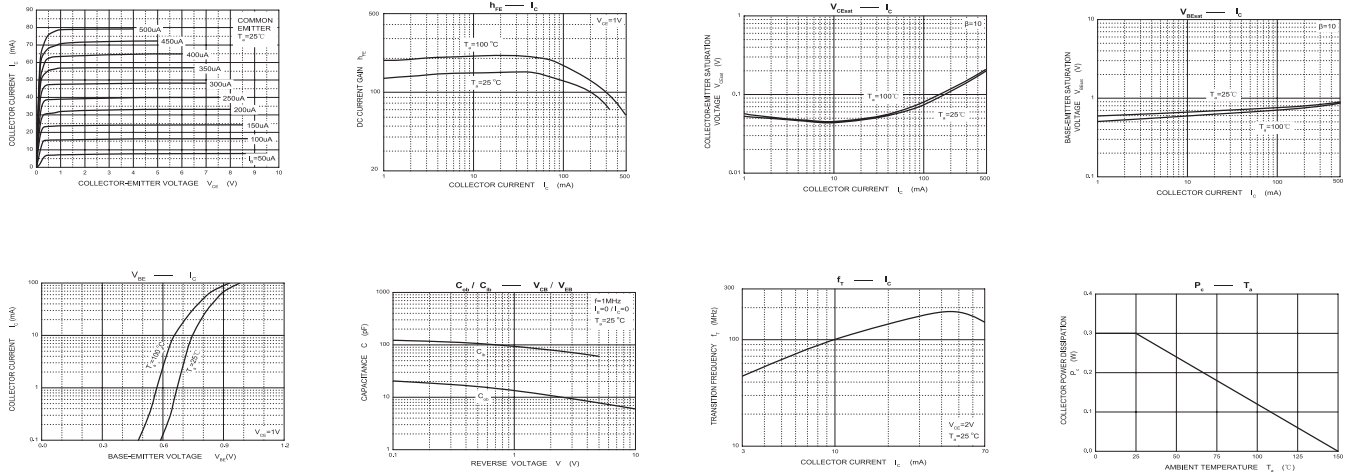
## Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

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	$f_T$	$V_{CE}= 2\text{V}$ , $I_C= 10\text{mA}$ , $f=100\text{MHz}$			

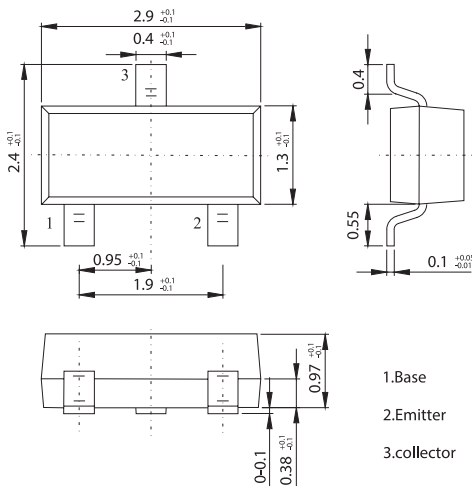
\* pulse test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

# Single Bipolar Transistor multicomp<sup>PRO</sup>

## 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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