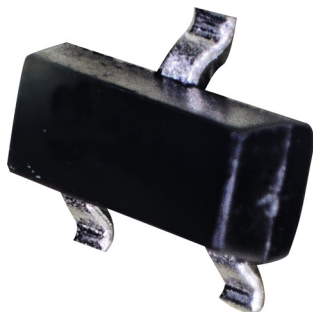


Single Bipolar Transistor multicomp^{PRO}

RoHS
Compliant



Features

- Very Low Equivalent Resistance,
- SOT23 NPN Silicon planar

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}		
Emitter - Base Voltage	V_{EBO}	5	A
Peak collector current	I_{CM}	1	
Collector current	I_C	2	mW
Power Dissipation	P_{tot}	500	
Operating and storage temperature range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu\text{A}$	40			V
Collector- emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C = 10 \text{ mA}$				
Emitter - base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu\text{A}$	5			
Collector cutoff current	I_{CBO}	$V_{CB} = 30\text{V}, V_{CE} = 30$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}$				
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$ $I_C = 1 \text{ A}, I_B = 100 \text{ mA}$			0.3 0.5	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 1 \text{ A}, I_B = 100 \text{ mA}$			1.1	
Base-emitter voltage *	$V_{BE(on)}$	$I_C = 1 \text{ A}, V_{CE} = 5\text{V}$			1	
Static Forward Current Transfer Ratio *	h_{FE}	$I_C = 1 \text{ mA}, V_{CE} = 5\text{V}$	300			
		$I_C = 500 \text{ mA}, V_{CE} = 5\text{V}$			900	
		$I_C = 1 \text{ A}, V_{CE} = 5\text{V}$	200			
		$I_C = 2 \text{ A}, V_{CE} = 5\text{V}$	35			
Current-gain-bandwidth product	f_T	$I_C = 50 \text{ mA}, V_{CE} = 10\text{V}, f = 100 \text{ MHz}$	150			MHz
Output capacitance	C_{obo}	$V_{CB} = 10\text{V}, f = 1 \text{ MHz}$			10	pF

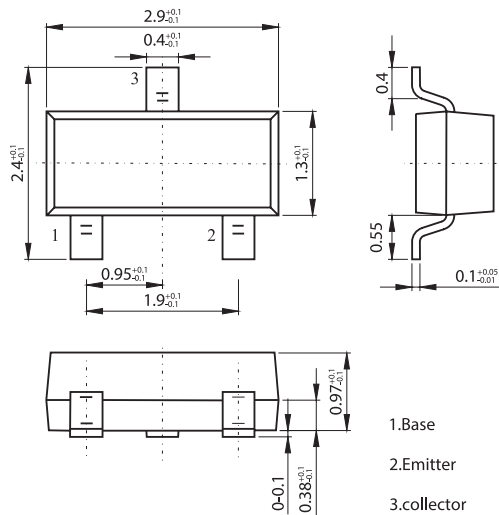
* Pulse test: $t_p \leq 300 \mu\text{s}$; $d \leq 0.02$

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Single Bipolar Transistor multcomp^{PRO}

Diagram



Part Number Table

Description	Part Number
Single Bipolar Transistor, Medium Power, 2A, 40V, SOT 23	FMMT491A

Dimensions : Millimetres

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