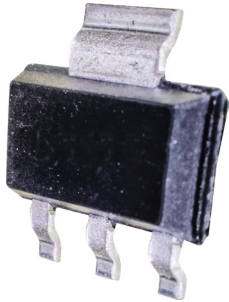


Single Bipolar Transistor multicomp^{PRO}



RoHS
Compliant

Features

- Low saturation voltage

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	120	V
Collector-emitter voltage	V_{CEO}	100	
Emitter - Base Voltage	V_{EBO}	5	
Peak pulse current	I_{CM}	6	A
Continuous collector current	I_C	2	
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	2	W
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	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}$	120			V
Collector- emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}$	100			
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}$	5			
Collector cutoff current	I_{CBO}	$V_{CB} = 100\text{V},$			0.1	μA
		$V_{CEB} = 100\text{V}, T_{amb} = 100^\circ\text{C}$			10	
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 100\text{mA}^*$		0.13	0.3	V
		$I_C = 2\text{A}, I_B = 200\text{mA}^*$		0.23	0.5	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1\text{A}, I_B = 100\text{mA}^*$		0.9	1.25	
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	$I_C = 1\text{A}, V_{CE} = 2\text{V}^*$		0.8	1	
Static Forward Current Transfer Ratio	h_{FE}	$I_C = 50\text{mA}, V_{CE} = 2\text{V}^*$	70	200		
		$I_C = 500\text{mA}, V_{CE} = 2\text{V}^*$	100	200	300	
		$I_C = 1\text{A}, V_{CE} = 2\text{V}^*$	55	110		
		$I_C = 2\text{A}, V_{CE} = 2\text{V}^*$	25	55		
Transitional frequency	f_T	$I_C = 10\text{mA}, V_{CE} = 5\text{V}, f = 100\text{MHz}$	140	175		MHz
Output capacitance	C_{obo}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$			30	pF
Switching times	t_{on}	$I_C = 500\text{mA}, V_{CC} = 10\text{V}, I_{B1} = I_{B2} = 50\text{mA}$		80		nS
	t_{off}			1200		

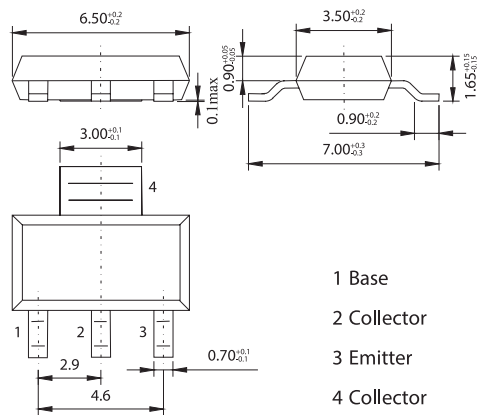
Measured under pulsed conditions. Pulse Width=300 μs . Duty cycles ≤ 2

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
sg.element14.com/b/multicomp-pro

multicomp^{PRO}

Single Bipolar Transistor multicom^{PRO}

Diagram



Part Number Table

Description	Part Number
Single Bipolar Transistor, NPN, 2A, 100V, SOT 223	FZT653

Dimensions : Millimetres

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicom Pro is the registered trademark of Premier Farnell Limited 2019.

Newark.com/multicom-pro
Farnell.com/multicom-pro
sg.element14.com/b/multicom-pro

multicom^{PRO}