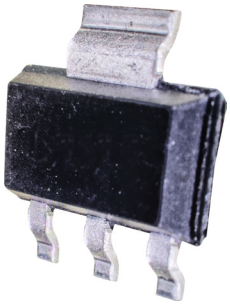
Single Bipolar Transistor



RoHS Compliant

Features

- Low saturation voltage

Absolute Maximum Ratings Ta = 25°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 Tamb=25°C	P_{tot}	2	W
Operating and storage temperature range	T_J, T_{stg}	-55 to +150	°C

Electrical Characteristics (Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{(BR)CBO}$	I_C= 100µA	120			V
Collector- emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 10mA	100			
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E= 100µA	5			
Collector cutoff current	I_{CBO}	V_{CB}=100V,			0.1	µA
		V_{CEB}= 100V, T_{amb} = 100°C			10	
Emitter cut-off current	I_{EBO}	V_{EB}=4V			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1A, I_B=100mA*		0.13	0.3	V
		I_C=2A, I_B=200mA*		0.23	0.5	
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C= 1A, I_B= 100mA*		0.9	1.25	
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	I_C= 1A V_{CE}=2V*		0.8	1	
Static Forward Current Transfer Ratio	h_{FE}	I_C= 50mA, V_{CE}= 2V*	70	200		
		I_C= 500mA, V_{CE}= 2V*	100	200	300	
		I_C= 1A, V_{CE}= 2V*	55	110		
		I_C= 2A V_{CE}= 2V*	25	55		
Transitional frequency	f_T	Ic=10mA, V_{CE}= 5V, f=100MHz	140	175		MHz
Output capacitance	C_{obo}	V_{CB}= 10V, f=1MHz			30	pF
Switching times	t_{on}	I_C=500mA, V_{CC}=10V, I_{B1}=I_{B2}=50mA		80		nS
	t_{off}			1200		

Measured under pulsed conditions. Pulse Width=300ìs. Duty cycle≤2

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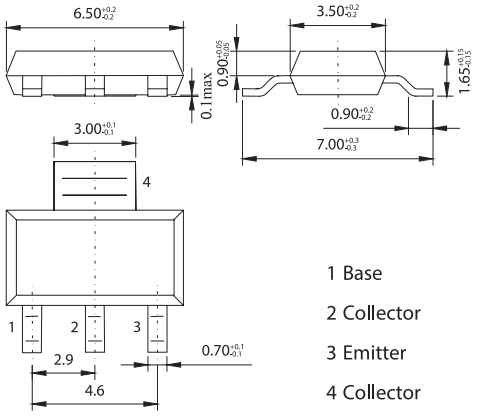
Diagram



Dimensions : Millimetres

Part Number Table

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

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