

SMD Type

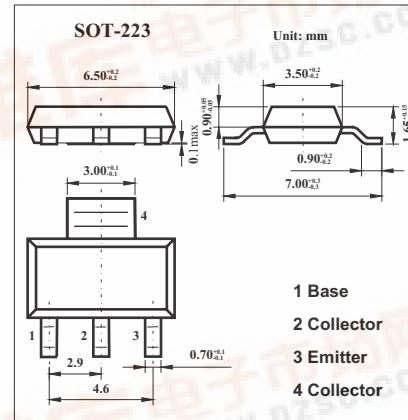
Transistors

NPN Silicon Planar High Voltage Transistor

FZT658

■ Features

- 400 Volt V_{CBO}
- Low saturation voltage



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CBO}	400	V
Collector-Emitter Voltage	V _{CCEO}	400	V
Emitter-Base Voltage	V _{EBO}	5	V
Peak Pulse Current	I _{CM}	1	A
Continuous Collector Current	I _C	0.5	A
Power Dissipation at T _{amb} =25°C	P _{tot}	2	W
Operating and Storage Temperature Range	T _j :T _{stg}	-55 to +150	°C

FZT658■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ.	Max	Unit
Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$	400			V
Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}^*$	400			V
Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$	5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=320\text{V}$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4\text{V}$			100	nA
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$	$I_C=20\text{mA}, I_B=1\text{mA}^*$		0.3		V
		$I_C=50\text{mA}, I_B=5\text{mA}^*$			0.25	V
		$I_C=100\text{mA}, I_B=10\text{mA}$			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(\text{sat})}$	$I_C=100\text{mA}, I_B=10\text{mA}^*$			0.9	V
Base-Emitter Turn-On Voltage	$V_{BE(\text{on})}$	$I_C=100\text{mA}, V_{CE}=5\text{V}^*$			1.0	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C=1\text{mA}, V_{CE}=5\text{V}^*$	50			
		$I_C=100\text{mA}, V_{CE}=5\text{V}^*$	50			
		$I_C=200\text{mA}, V_{CE}=10\text{V}^*$	40			
Transition Frequency	f_T	$I_C=10\text{mA}, V_{CE}=20\text{V}, f=20\text{MHz}$	50			MHz
Output Capacitance	C_{obo}	$V_{CB}=20\text{V}, f=1\text{MHz}$			10	pF
Switching Times	t_{on}	$I_C=100\text{mA}, V_{CC}=100\text{V}$			130	ns
	t_{off}	$I_B1=10\text{mA}, I_B2=-20\text{mA}$			3300	ns

* Measured under pulsed conditions. Pulse Width=300μs. Duty cycle≤2%

■ Marking

Marking	FZT658
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