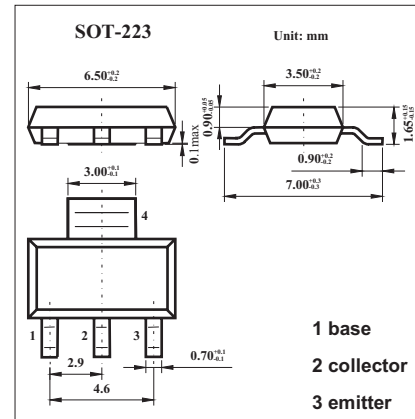


## NPN Silicon Planar High Performance Transistors FZT651

### ■ Features

- 60 Volt  $V_{CE0}$ .
- 3 Amp continuous current.
- Low saturation voltage.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	80	V
Collector-emitter voltage	$V_{CEO}$	60	V
Emitter-base voltage	$V_{EBO}$	5	V
Peak pulse current	$I_C$	3	A
Continuous collector current	$I_{CM}$	6	A
Power dissipation	$P_{tot}$	2	W
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

**FZT651**

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC=100μA	80			V
Collector-emitter breakdown voltage *	V(BR)CEO	IC=10mA	60			V
Emitter-base breakdown voltage	V(BR)EBO	IE=100μA	5			V
Collector Cut-Off Current	ICBO	V <sub>CB</sub> =60V V <sub>CB</sub> =60V, Ta = 100°C			0.1 10	μA
Emitter Cut-Off Current	IEBO	VEB=4V			0.1	μA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	IC=1A, IB=100mA IC=3A, IB=300mA		0.12 0.43	0.3 0.6	V
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	IC=1A, IB=100mA		0.9	1.25	V
Base-Emitter Turn-On Voltage *	V <sub>BE(on)</sub>	IC=1A, V <sub>CE</sub> =2V		0.8	1	V
Static Forward Current Transfer Ratio	h <sub>FE</sub>	IC=50mA, V <sub>CE</sub> =2V*	70	200		
		IC=500mA, V <sub>CE</sub> =2V*	100	200	300	
		IC=1A, V <sub>CE</sub> =2V*	80	170		
		IC=2A, V <sub>CE</sub> =2V*	40	80		
Transitional frequency	f <sub>T</sub>	IC=100mA, V <sub>CE</sub> =5V f=100MHz	140	175		MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =10V, f=1MHz			30	pF
Switching times	t <sub>on</sub>	IC=500mA, V <sub>CC</sub> =10V, IB1=IB2=50mA		45		ns
	t <sub>off</sub>			800		ns

\* Pulse test: tp = 300 μs; d ≤ 0.02.

## ■ Marking

Marking	FZT651
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