

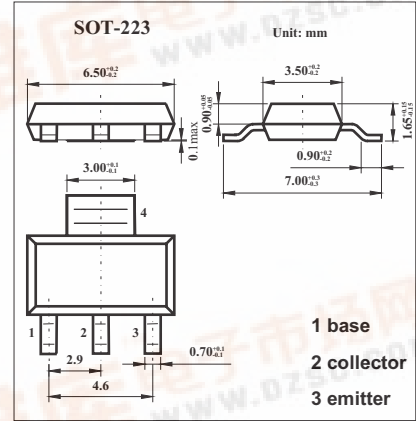
SMD Type Transistors

NPN Silicon Planar
Medium Power High Gain Transistor

FZT1049A

■ Features

- $V_{CE0} = 30V$.
- 5 Amp continuous current.
- 20 Amp pulse current.
- Low saturation voltage.
- High gain.
- Extremely low equivalent on-resistance; $R_{CE(sat)} = 50m\Omega$ at 5A.



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	5	V
Peak pulse current	I_c	5	A
Continuous collector current	I_{CM}	20	A
Base current	I_B	500	mA
Power dissipation	P_{tot}	2.5	W
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ C$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$	80	130		V
Collector-emitter breakdown voltage *	$V_{(BR)CEO}$	$I_C=10mA$	30	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$	5	9		V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=35V$		0.3	10	nA
Collector-emitter cut-off current	I_{CES}	$V_{CE}=35V$		0.3	10	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4V$		0.3	10	nA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=0.5A, I_B=10mA$ $I_C=1A, I_B=10mA$ $I_C=3A, I_B=30mA$ $I_C=5A, I_B=50mA$		35 70 180 250	60 100 250 330	mV
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=5A, I_B=50mA$		950	1050	mV
Base-emitter ON voltage *	$V_{BE(on)}$	$I_C=5A, V_{CE}=2V$		900	1000	mV
Static Forward Current Transfer Ratio	h_{FE}	$I_C=10mA, V_{CE}=2V^*$	280	440		
		$I_C=0.5A, V_{CE}=2V^*$	300	450		
		$I_C=1A, V_{CE}=2V^*$	300	450	1200	
		$I_C=5A, V_{CE}=2V^*$	180	280		
		$I_C=20A, V_{CE}=2V^*$	40	80		
Transitional frequency	f_T	$I_C=50mA, V_{CE}=10V, f=100MHz$		180		MHz
Output capacitance	C_{obo}	$V_{CB}=10V, f=1MHz$		45	60	pF
Turn-on time	$t_{(on)}$	$I_C=4A, V_{CC}=10V$		125		ns
Turn-off time	$t_{(off)}$	$I_{B1}=I_{B2}=40mA$		380		ns

* Pulse test: $t_p = 300 \mu s$; $d \leq 0.02$.