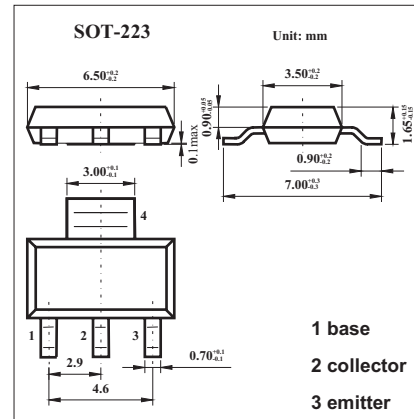


**FZT1051A**

■ Features

- $V_{CE0} = 40V$ .
- 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	$V_{CBO}$	150	V
Collector-emitter voltage	$V_{CEO}$	40	V
Emitter-base voltage	$V_{EBO}$	5	V
Peak pulse current	$I_C$	5	A
Continuous collector current	$I_{CM}$	10	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	$^\circ C$

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA	150	190		V
Collector-emitter breakdown voltage *	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA	40	60		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA	5	9		V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =120V		0.3	10	nA
Collector-emitter cut-off current	I <sub>CES</sub>	V <sub>CE</sub> =120V		0.3	10	nA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V		0.3	10	nA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =0.2A, I <sub>B</sub> =10mA I <sub>C</sub> =1A, I <sub>B</sub> =10mA I <sub>C</sub> =2A, I <sub>B</sub> =20mA I <sub>C</sub> =5A, I <sub>B</sub> =100mA		17 85 140 250	25 120 180 340	mV
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =100mA		980	1100	mV
Base-emitter ON voltage *	V <sub>BE(on)</sub>	I <sub>C</sub> =5A, V <sub>CE</sub> =2V		915	1000	mV
Static Forward Current Transfer Ratio	h <sub>FE</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =2V*	290	440		
		I <sub>C</sub> =1A, V <sub>CE</sub> =2V*	270	450	1200	
		I <sub>C</sub> =5A, V <sub>CE</sub> =2V*	130	220		
		I <sub>C</sub> =10A, V <sub>CE</sub> =2V*	40	55		
Transitional frequency	f <sub>T</sub>	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V f=100MHz		155		MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =10V, f=1MHz		27	40	pF
Turn-on time	t <sub>(on)</sub>	I <sub>C</sub> =3A, V <sub>CC</sub> =10V		220		ns
Turn-off time	t <sub>(off)</sub>	I <sub>B1</sub> =I <sub>B2</sub> =30mA		540		ns

\* Pulse test: t<sub>p</sub> = 300 μs; d ≤ 0.02.