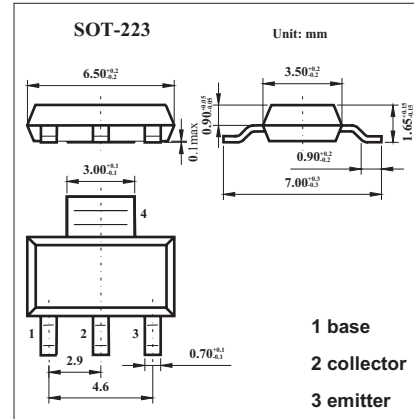


FZT1053A

■ Features

- $V_{CE0} = 75V$.
- 4.5 Amp continuous current.
- 10 Amp pulse current.
- Low saturation voltage.
- High gain.
- Extremely low equivalent on-resistance; $R_{CE(sat)} = 78m\Omega$ at 4.5A.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	150	V
Collector-emitter voltage	V_{CEO}	75	V
Emitter-base voltage	V_{EBO}	7.5	V
Peak pulse current	I_C	4.5	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	$^\circ C$

FZT1053A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	Ic=100µA	150	250		V
Collector-emitter breakdown voltage *	V(BR)CEO	Ic=10mA	75	100		V
Emitter-base breakdown voltage	V(BR)EBO	Ie=100µA	7.5	8.8		V
Collector-base cut-off current	IcBO	Vcb=120V		0.9	10	nA
Collector-emitter cut-off current	IcES	Vce=120V		1.5	10	nA
Emitter Cut-Off Current	IeBO	VEB=4V		0.3	10	nA
Collector-emitter saturation voltage *	VCE(sat)	Ic=0.2A, Ib=20mA Ic=0.5A, Ib=20mA Ic=1A, Ib=10mA Ic=2A, Ib=100mA Ic=4.5A, Ib=200mA		21 55 150 160 350	30 75 200 210 440	mV
Base-emitter saturation voltage *	VBE(sat)	Ic=3A, Ib=100mA		900	1000	mV
Base-emitter ON voltage *	VBE(on)	Ic=3A, Vce=2V		825	950	mV
Static Forward Current Transfer Ratio	hFE	Ic=10mA, Vce=2V*	270	440		
		Ic=0.5A, Vce=2V*	300	450	1200	
		Ic=1A, Vce=2V*	300	450		
		Ic=4.5A, Vce=2V*	40	60		
		Ic=10A, Vce=2V*		20		
Transitional frequency	fT	Ic=50mA, Vce=10V f=100MHz		140		MHz
Output capacitance	Cobo	Vcb=10V, f=1MHz		21	30	pF
Turn-on time	t(on)	Ic=2A, Vcc=50V		162		ns
Turn-off time	t(off)	Ib1=Ib2=20mA		900		ns

* Pulse test: tp = 300 µs; d ≤ 0.02.