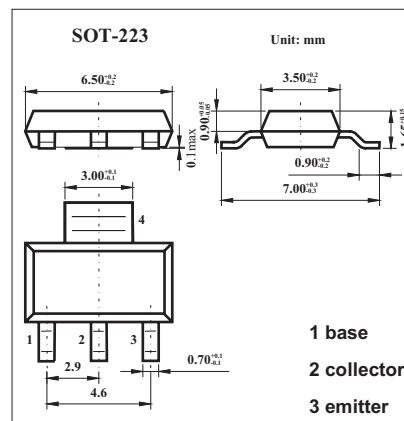


NPN Silicon Planar Medium Power High Gain Transistor

FZT1048A

■ Features

- $V_{CEO} = 17.5V$.
- 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}	50	V
Collector-emitter voltage	V_{CEO}	17.5	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	$^\circ C$

FZT1048A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC=100μA	50	85		V
Collector-emitter breakdown voltage *	V(BR)CEO	IC=10mA	17.5	24		V
Emitter-base breakdown voltage	V(BR)EBO	IE=100μA	5	8.7		V
Collector Cut-Off Current	ICBO	VCE=35V		0.3	10	nA
Collector-emitter cut-off current	ICES	VCE=35V		0.3	10	nA
Emitter Cut-Off Current	IEBO	VEB=4V		0.3	10	nA
Collector-emitter saturation voltage *	VCE(sat)	IC=0.5A, IB=10mA IC=1A, IB=10mA IC=3A, IB=15mA IC=5A, IB=25mA		27 55 155 250	45 75 210 350	mV
Base-emitter saturation voltage *	VBE(sat)	IC=5A, IB=25mA		920	1000	mV
Base-emitter ON voltage *	VBE(on)	IC=5A, VCE=2V		880	970	mV
Static Forward Current Transfer Ratio	hFE	IC=10mA, VCE=2V*	280	440		
		IC=0.5A, VCE=2V*	300	450		
		IC=1A, VCE=2V*	300	450	1200	
		IC=5A, VCE=2V*	180	300		
		IC=20A, VCE=2V*	50	80		
Transitional frequency	fT	IC=50mA, VCE=10V f=50MHz		150		MHz
Output capacitance	Cobo	VCB=10V, f=1MHz		60	80	pF
Turn-on time	t(on)	IC=4A, VCC=10V		120		ns
Turn-off time	t(off)	IB1=IB2=40mA		310		ns

* Pulse test: tp = 300 μs; d ≤ 0.02.