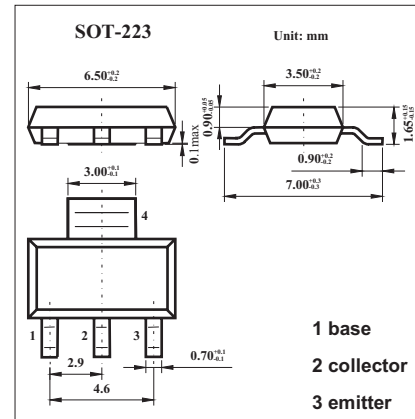


NPN Silicon Planar Medium Power Transistor FZT749

■ Features

- 25 Volt V_{CE0} .
- 3 Amp continuous current.
- Low saturation voltage.
- Excellent h_{FE} specified up to 6A .



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-35	V
Collector-emitter voltage	V_{CE0}	-25	V
Emitter-base voltage	V_{EB0}	-5	V
Continuous collector current	I_{CM}	-8	A
Peak pulse current	I_C	-3	A
Power dissipation	P_{tot}	2	W
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

FZT749■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Breakdown Voltages	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$	-35			V
Breakdown Voltages	$V_{(BR)CEO}$	$I_C = -10\text{mA}$	-25			V
Breakdown Voltages	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$	-5			V
Collector Cut-Off Currents	I_{CBO}	$V_{CB} = -30\text{V}$ $V_{CB} = -30\text{V}, T_a = 100^\circ\text{C}$			-0.1 -10	μA
Collector Cut-Off Currents	I_{EBO}	$V_{EB} = 4\text{V}$			-0.1	μA
Saturation Voltages *	$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -100\text{mA}$ $I_C = -3\text{A}, I_B = -300\text{mA}$		-0.12 -0.40	-0.3 -0.6	V
Saturation Voltages *	$V_{BE(sat)}$	$I_C = -1\text{A}, I_B = -100\text{mA}$		-0.9	-1.25	V
Base-emitter ON voltage *	$V_{BE(on)}$	$I_C = -1\text{A}, V_{CE} = -2\text{V}$		-0.8	-1.0	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C = -50\text{mA}, V_{CE} = -2\text{V}^*$	70	200		
		$I_C = -1\text{A}, V_{CE} = -2\text{V}^*$	100	200	300	
		$I_C = -2\text{A}, V_{CE} = -2\text{V}^*$	75	150		
		$I_C = -6\text{A}, V_{CE} = -2\text{V}^*$	15	50		
Transitional frequency	f_T	$I_C = -100\text{mA}, V_{CE} = -5\text{V}, f = 100\text{MHz}$	100	160		MHz
Output capacitance	C_{obo}	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		55	100	pF
Turn-on time	$t_{(on)}$	$I_C = -500\text{mA}, V_{CC} = -10\text{V}$		40		ns
Turn-off time	$t_{(off)}$	$I_{B1} = I_{B2} = -50\text{mA}$		450		ns

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

■ Marking

Marking	FZT749
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