

# SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

**FZT749**

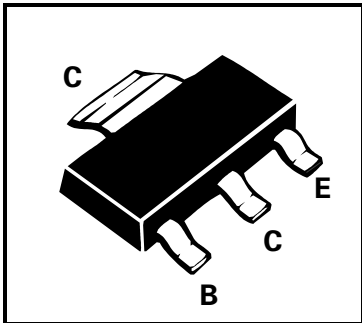
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## FEATURES

- \* 25 Volt  $V_{CEO}$
- \* 3 Amp continuous current
- \* Low saturation voltage
- \* Excellent  $h_{FE}$  specified up to 6A (pulsed).

COMPLEMENTARY TYPE – FZT649

PARTMARKING DETAIL – FZT749



## ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-35	V
Collector-Emitter Voltage	$V_{CEO}$	-25	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Peak Pulse Current	$I_{CM}$	-8	A
Continuous Collector Current	$I_C$	-3	A
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	2	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

## ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-35			V	$I_C = -100\mu A$
	$V_{(BR)CEO}$	-25			V	$I_C = -10mA^*$
	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu A$
Collector Cut-Off Currents	$I_{CBO}$			-0.1 -10	$\mu A$ $\mu A$	$V_{CB} = -30V$ $V_{CB} = -30V, T_{amb} = 100^{\circ}C$
	$I_{EBO}$			-0.1	$\mu A$	$V_{EB} = 4V$
Saturation Voltages	$V_{CE(sat)}$		-0.12 -0.40	-0.3 -0.6	V V	$I_C = -1A, I_B = -100mA^*$ $I_C = -3A, I_B = -300mA^*$
	$V_{BE(sat)}$		-0.9	-1.25	V	$I_C = -1A, I_B = -100mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.8	-1.0	V	$I_C = -1A, V_{CE} = -2V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	70 100 75 15	200 200 150 50	300		$I_C = -50mA, V_{CE} = -2V^*$ $I_C = -1A, V_{CE} = -2V^*$ $I_C = -2A, V_{CE} = -2V^*$ $I_C = -6A, V_{CE} = -2V^*$
Transition Frequency	$f_T$	100	160		MHz	$I_C = -100mA, V_{CE} = -5V$ $f = 100MHz$
Output Capacitance	$C_{obo}$		55	100	pF	$V_{CB} = -10V, f = 1MHz$
Switching Times	$t_{on}$		40		ns	$I_C = -500mA, V_{CC} = -10V$
	$t_{off}$		450		ns	$I_{B1} = I_{B2} = -50mA$

\*Measured under pulsed conditions. Pulse Width=300 $\mu s$ . Duty cycle  $\leq 2\%$   
Spice parameter data is available upon request for this device

# FZT749

## TYPICAL CHARACTERISTICS

