

# SOT223 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

**FZT755**

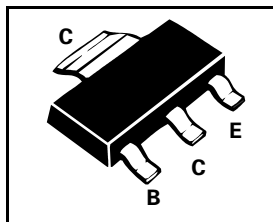
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## FEATURES

- \* 25 Volt  $V_{CE0}$
- \* Low saturation voltage
- \* Excellent  $h_{FE}$  specified up to 6A (pulsed).

COMPLEMENTARY TYPE – FZT655

PARTMARKING DETAIL – FZT755



## ABSOLUTE MAXIMUM RATINGS.

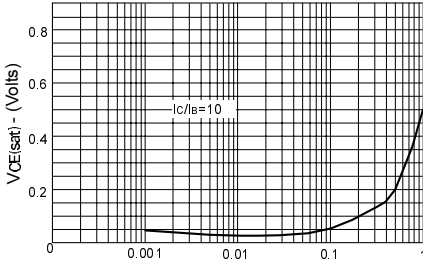
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-150	V
Collector-Emitter Voltage	$V_{CEO}$	-150	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Peak Pulse Current	$I_{CM}$	-2	A
Continuous Collector Current	$I_C$	-1	A
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	2	W
Operating and Storage Temperature 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.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-150			V	$I_C = -100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-150			V	$I_C = -10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu A$
Collector Cut-Off Current	$I_{CBO}$			-0.1	$\mu A$	$V_{CB} = -125V$
Emitter Cut-Off Current	$I_{EBO}$			-0.1	$\mu A$	$V_{EB} = -3V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.5 -0.5	V	$I_C = -500mA, I_B = -50mA^*$ $I_C = -1A, I_B = -200mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.1	V	$I_C = -500mA, I_B = -50mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			-1.0	V	$I_C = -500mA, V_{CE} = -5V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 50 20		300		$I_C = -10mA, V_{CE} = -5V^*$ $I_C = -500mA, V_{CE} = -5V^*$ $I_C = -1A, V_{CE} = -5V^*$
Transition Frequency	$f_T$	30			MHz	$I_C = -10mA, V_{CE} = -20V$ $f = 20MHz$
Output Capacitance	$C_{obo}$			20	pF	$V_{CB} = -10V, f = 1MHz$

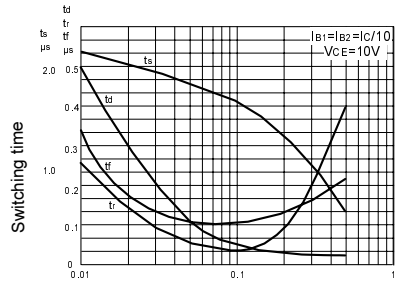
\*Measured under pulsed conditions. Pulse Width=300 $\mu s$ . Duty cycle  $\leq 2\%$

## TYPICAL CHARACTERISTICS



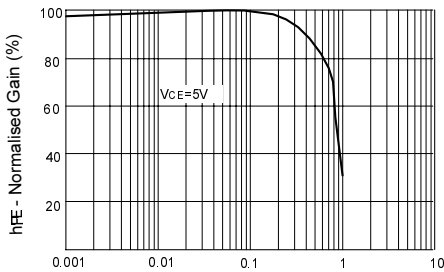
$I_C$  - Collector Current (Amps)

**$V_{CE(sat)}$  v  $I_C$**



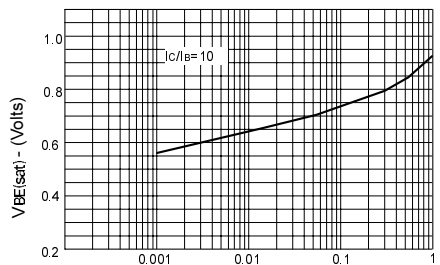
$I_C$  - Collector Current (Amps)

**Switching Speeds**



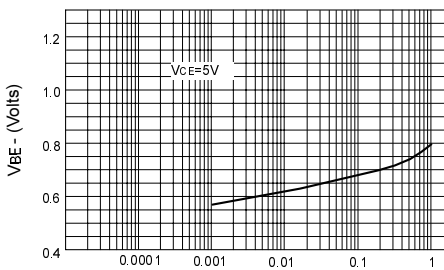
$I_C$  - Collector Current (Amps)

**$h_{FE}$  v  $I_C$**



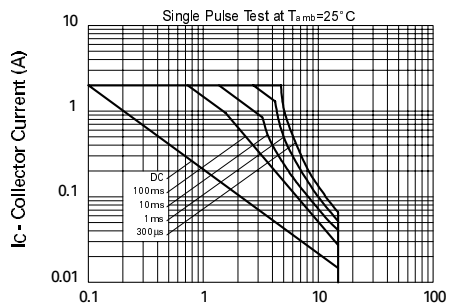
$I_C$  - Collector Current (Amps)

**$V_{BE(sat)}$  v  $I_C$**



$I_C$  - Collector Current (Amps)

**$V_{BE(on)}$  v  $I_C$**



$V_{CE}$  - Collector Emitter Voltage (V)

**Safe Operating Area**