

SOT223 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

ISSUE 3- FEBRUARY 1995

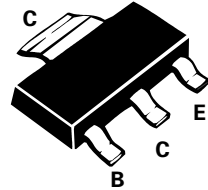
FEATURES

- * Low saturation voltage

COMPLEMENTARY TYPE - FZT757

PARTMARKING DETAIL - FZT657

FZT657



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_{CM}	1	A
Continuous Collector Current	I_C	0.5	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	$^{\circ}C$

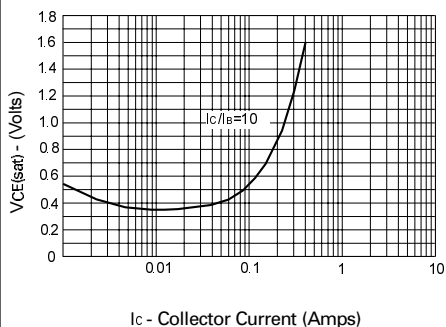
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	300			V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	300			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	μA	$V_{CB}=200V$
Emitter Cut-Off Current	I_{EBO}			0.1	μA	$V_{EB}=3V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C=100mA, I_B=10mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.0	V	$I_C=100mA, I_B=10mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.0	V	$I_C=100mA, V_{CE}=5V^*$
Static Forward Current Transfer Ratio	h_{FE}	40 50				$I_C=10mA, V_{CE}=5V^*$ $I_C=100mA, V_{CE}=5V^*$
Transition Frequency	f_T	30			MHz	$I_C=10mA, V_{CE}=20V$ $f=20MHz$
Output Capacitance	C_{obo}			20	pF	$V_{CB}=20V, f=1MHz$

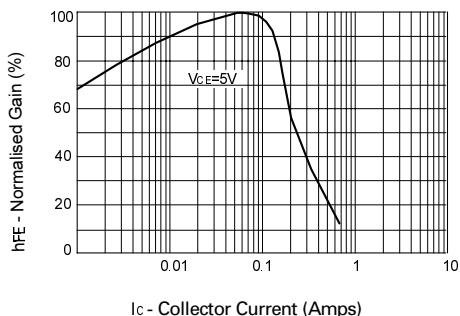
*Measured under pulsed conditions. Pulse Width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

FZT657

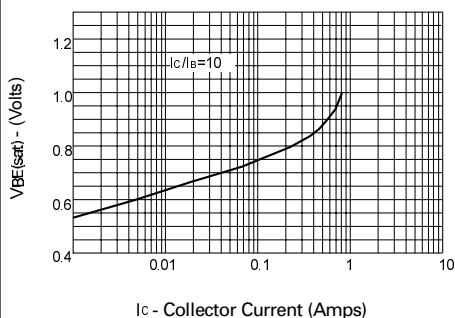
TYPICAL CHARACTERISTICS



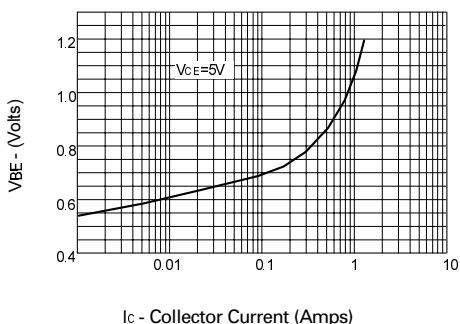
$V_{CE(sat)}$ v I_C



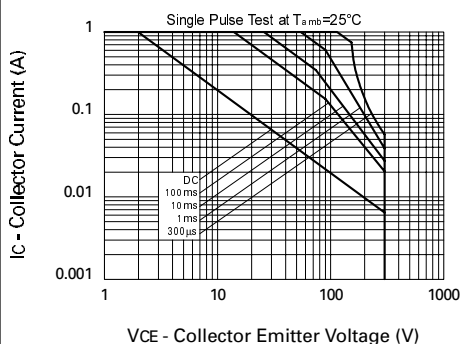
h_{FE} v I_C



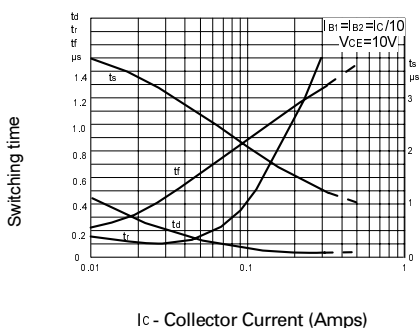
$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area



Switching Speeds