

FZT658

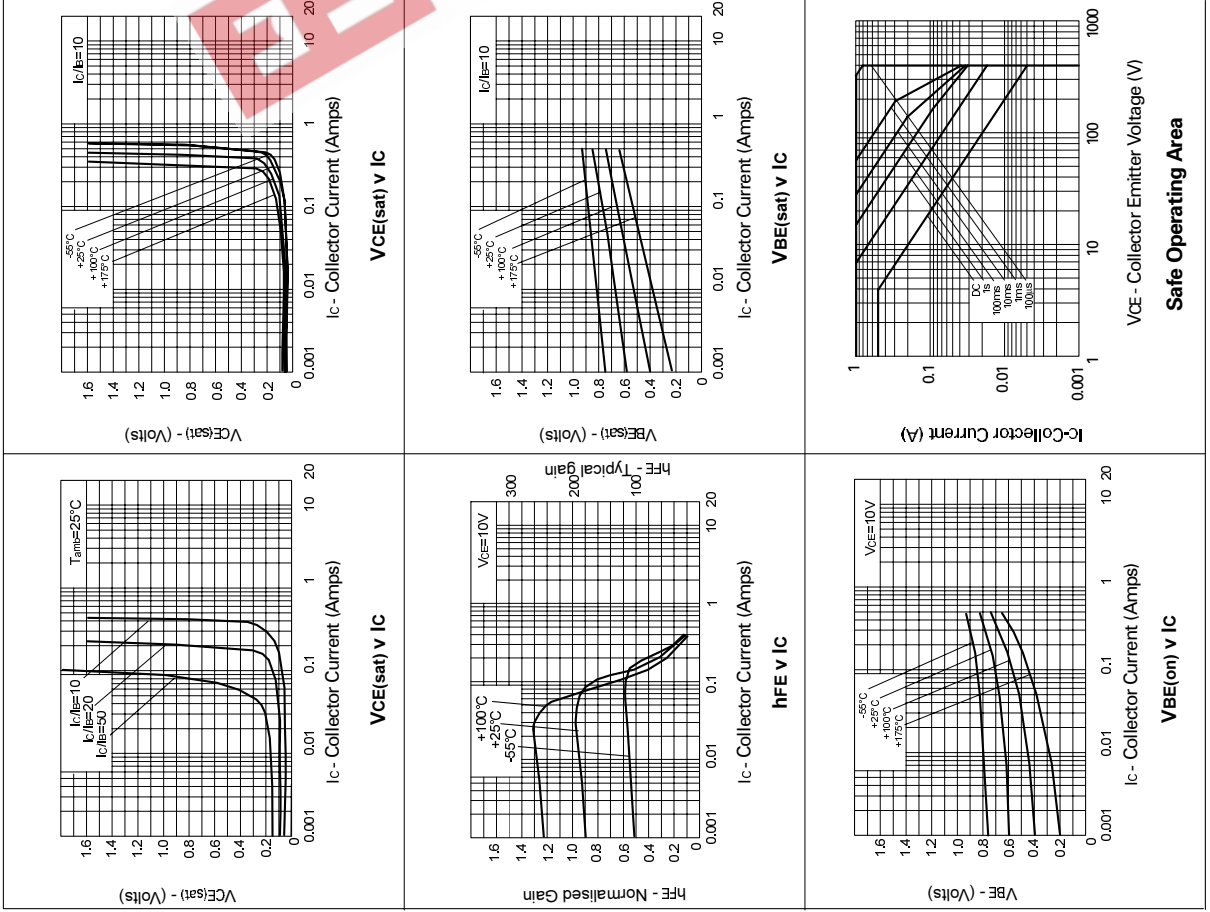
SOT223 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

ISSUE 4 - OCTOBER 1995

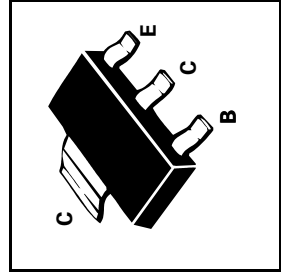
FEATURES

- * 400 Volt V_{CE0}
- * Low saturation voltage

TYPICAL CHARACTERISTICS



FZT658



COMPLEMENTARY TYPE - FZT758
PARTMARKING DETAIL - FZT658

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	400	V
Collector-Emitter Voltage	V_{CEO}	400	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.	MAX.	UNIT	CONDITIONS.
Breakdown Voltage	$V_{(BR)CBO}$	400		V	$I_C=100\mu A$
	$V_{(BR)CEO}$	400		V	$I_C=10mA^*$
	$V_{(BR)EBO}$	5		V	$I_E=100\mu A$
Collector Cut-Off Current	I_{CBO}		100	nA	$V_{CB}=320V$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	0.3		V	$I_C=20mA, I_B=1mA^*$
		0.25		V	$I_C=50mA, I_B=5mA^*$
		0.5		V	$I_C=100mA, I_B=10mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.9	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 Transfer Ratio	h_{FE}	50			$I_C=1mA, V_{CE}=5V^*$
		50			$I_C=100mA, V_{CE}=5V^*$
		40			$I_C=200mA, V_{CE}=10V^*$
Transition Frequency	f_T		50	MHz	$I_C=10mA, V_{CE}=20V$ $f=20MHz$
Output Capacitance	C_{obo}		10	pF	$V_{CB}=20V, f=1MHz$
Switching Times	t_{on}		130	ns	$I_C=100mA, V_{CC}=100V$
	t_{off}		3300	ns	$I_{B1}=10mA, I_{B2}=20mA$

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

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SOT223 NPN SILICON PLANAR
HIGH VOLTAGE TRANSISTOR

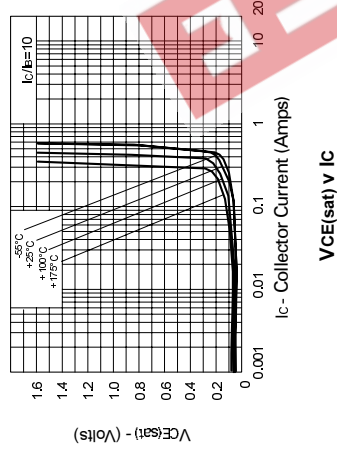
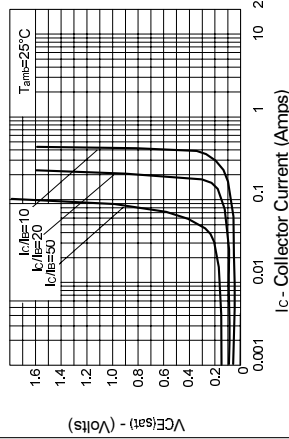
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FEATURES

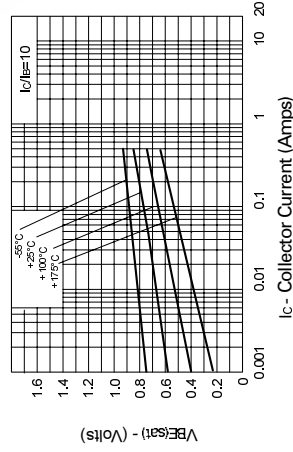
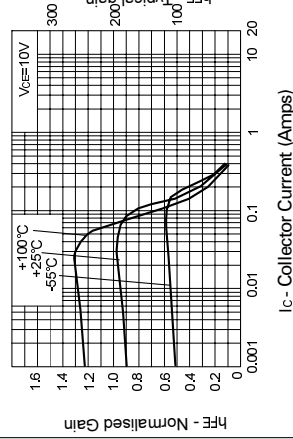
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- * Low saturation voltage

TYPICAL CHARACTERISTICS



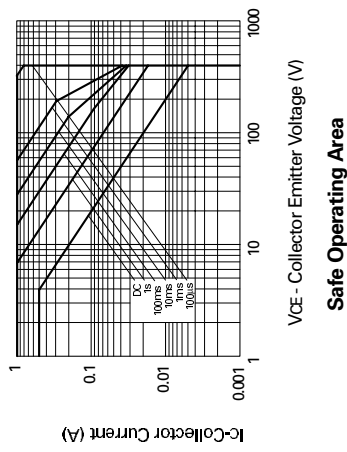
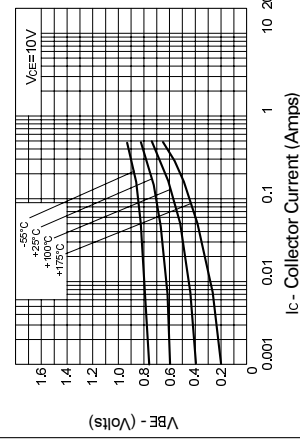
$V_{CE(sat)}$ v I_C

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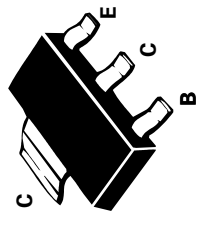
h_{FE} v I_C

$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C

Safe Operating Area



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PARTMARKING DETAIL - FZT658

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