SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

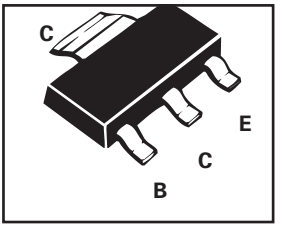
FZT591A

ISSUE 1 - DECEMBER 2001

FEATURES

Low equivalent on resistance $R_{CE(sat)}$ = 350m at 1A

PART MARKING DETAIL - FZT591A
COMPLEMENTARY TYPE - FZT491A



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-2	A
Continuous Collector Current	I_C	-1	A
Base Current	I_B	-200	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	2	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40		V	I_C=-100µA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40		V	I_C=-10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		V	I_E=-100µA
Collector Cut-Off Current	I_{CBO}		-100	nA	V_{CB}=-30V
Emitter Cut-Off Current	I_{EBO}		-100	nA	V_{EB}=-4V
Collector-Emitter Cut-Off Current	I_{CES}		-100	nA	V_{CES}=-30V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.2 -0.35 -0.5	V V V	I_C=-100mA,I_B=-1mA* I_C=-500mA,I_B=-20mA* I_C=-1A, I_B=-100mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1.1	V	I_C=-1A, I_B=-50mA*
Base-Emitter Turn-on Voltage	$V_{BE(on)}$		-1.0	V	I_C=-1A, V_{CE}=-5V*
Static Forward Current Transfer Ratio	h_{FE}	300 300 250 160 30	800		I_C=-1mA, I_C=-100mA*, I_C=-500mA*, V_{CE}=-5V I_C=-1A*, I_C=-2A*,
Transition Frequency	f_T	150		MHz	I_C=-50mA, V_{CE}=-10V f=100MHz
Output Capacitance	C_{obo}		10	pF	V_{CB}=-10V, f=1MHz

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

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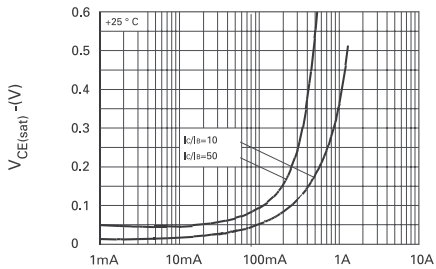
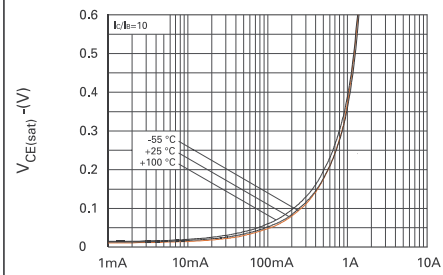
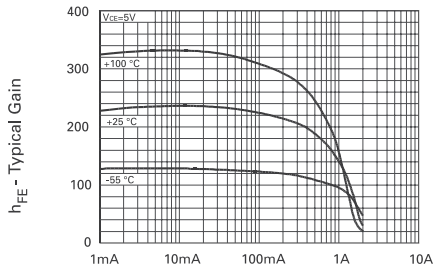
TYPICAL CHARACTERISTICS



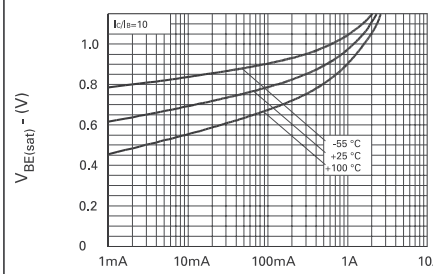
$V_{CE(sat)}$ v I_C



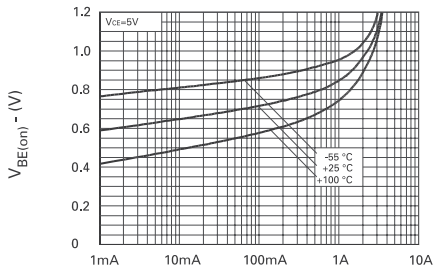
$V_{CE(sat)}$ v I_C



h_{FE} V I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C

SOA to be prepared