SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

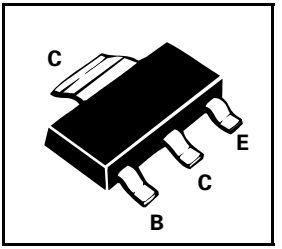
FZT749

ISSUE 4 - NOVEMBER 1995

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.

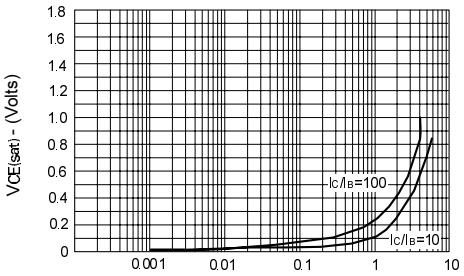
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-35	V
Collector-Emitter Voltage	V_{CEO}	-25	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-8	A
Continuous Collector Current	I_C	-3	A
Power Dissipation at T_{amb}=25°C	P_{tot}	2	W
Operating and Storage Temperature Range	T_j:T_{stg}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

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

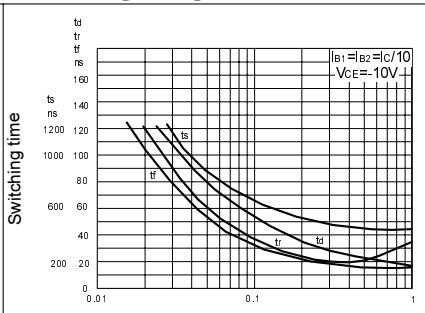
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-35			V	I_C=-100μA
	$V_{(BR)CEO}$	-25			V	I_C=-10mA*
	$V_{(BR)EBO}$	-5			V	I_E=-100μA
Collector Cut-Off Currents	I_{CBO}			-0.1 -10	μA μA	V_{CB}=-30V V_{CB}=-30V,T_{amb}=100°C
	I_{EBO}			-0.1	μA	V_{EB}=4V
Saturation Voltages	$V_{CE(sat)}$		-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 I_{B1}=I_{B2}=-50mA
	t_{off}		450		ns	

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

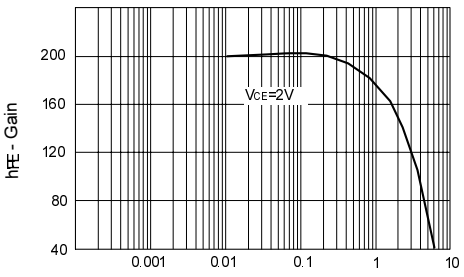
TYPICAL CHARACTERISTICS



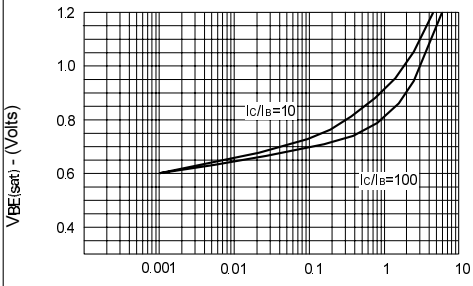
VCE(sat) v IC



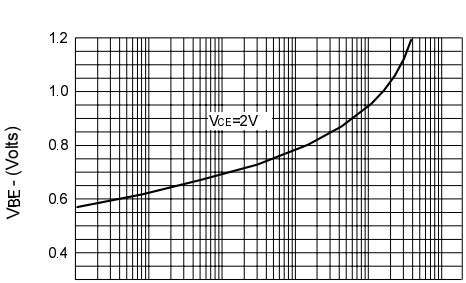
Switching Speeds



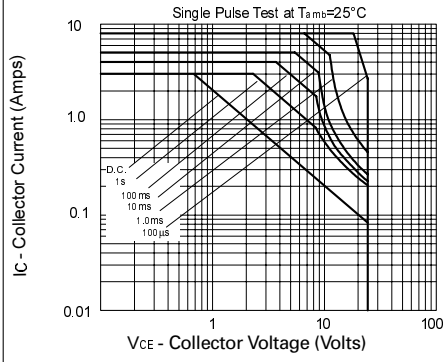
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area