SOT223 PNP SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

FZT705

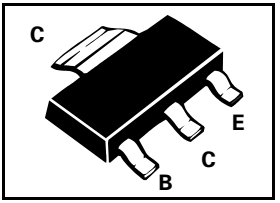
ISSUE 2 - OCTOBER 1995

FEATURES

* 2A CONTINUOUS CURRENT
* FAST SWITCHING
* GUARANTEED HFE SPECIFIED UP TO 2A

COMPLEMENTARY TYPE – FZT 605

PART MARKING DETAIL – FZT705



ABSOLUTE MAXIMUM RATINGS.

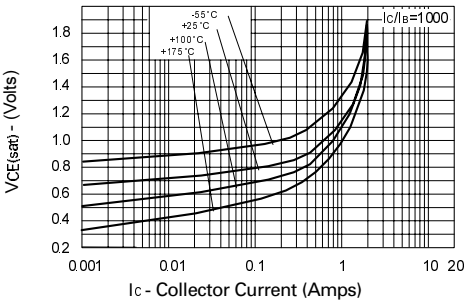
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-140	V
Collector-Emitter Voltage	V_{CEO}	-120	V
Emitter-Base Voltage	V_{EBO}	-10	V
Peak Pulse Current	I_{CM}	-4	A
Continuous Collector Current	I_C	-2	A
Power Dissipation	P_{TOT}	2	W
Operating and Storage Temperature Range	tj:tstg	-55 to +150	°C

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

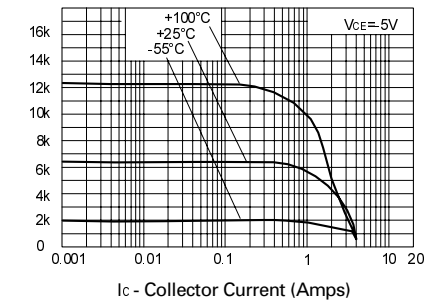
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-140			V	I_C=-100mA
	$V_{(BR)CEO}$	-120			V	I_C=-10mA*
	$V_{(BR)EBO}$	-10			V	I_E=-100μA
Collector Cut-Off Current	I_{CBO}			-0.1 -10	μA μA	V_{CB}=-120V V_{CB}=-120V, T_{amb}=100°C
	I_{CES}			-10	μA	V_{CES}=-80V
Emitter Cut-Off Current	I_{EBO}			-0.1	μA	V_{EB}=-8V
SaturationVoltages	$V_{CE(sat)}$			-1.3 -2.5	V V	I_C=-1A, I_B=-1mA I_C=-2A, I_B=-2mA
	$V_{BE(sat)}$			-1.8	V	I_C=-1A, I_B=-10mA
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			-1.7	V	I_C=-1A, V_{CE}=-5V
Static Forward Current Transfer	h_{FE}	3000 3000 3000 2000		 30000		I_C=-10mA, V_{CE}=-5V I_C=-100mA, V_{CE}=-5V I_C=-1A, V_{CE}=-5V I_C=-2A, V_{CE}=-5V
Transitional Frequency	f_T		160		MHz	I_C=-100mA, V_{CE}=-10V f=20MHz
Output Capacitance	C_{obo}		15		pF	V_{EB}=-10V, f=1MHz
Switching Times	T_{on}		0.6		μs	I_C=-0.5A, V_{CE}=-10V I_{B1}=I_{B2}=0.5mA
	T_{off}		0.8		μs	

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

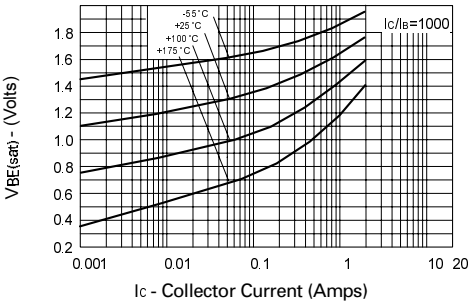
TYPICAL CHARACTERISTICS



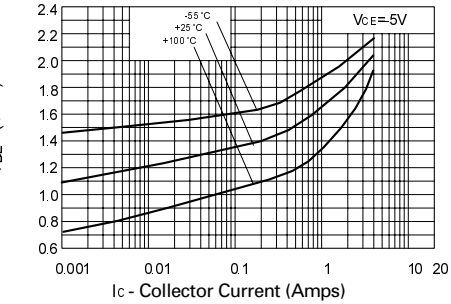
VCE(sat) v IC



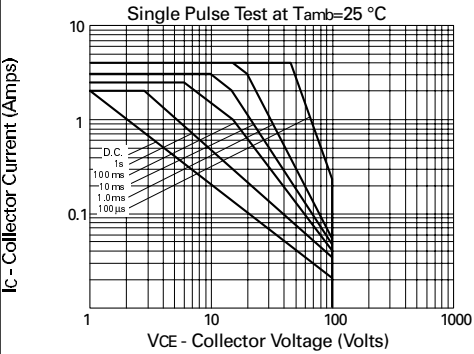
hFE v IC



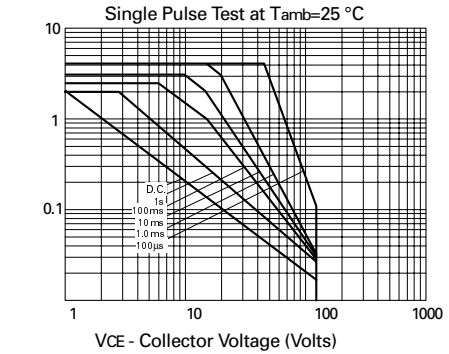
VBE(sat) v IC



VBE(on) v IC



Safe Operating Area FZT704



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