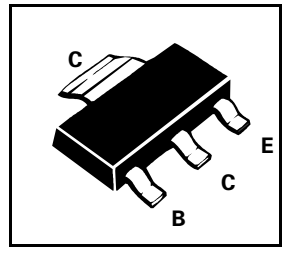
SOT223 NPN SILICON PLANAR HIGH CURRENT (HIGH PERFORMANCE)TRANSISTOR

FZT855

ISSUE 4 - NOVEMBER 2001 ✪

FEATURES

* Up to 5 Amps continuous collector current, up to 10 Amp peak
* Very low saturation voltage
* Excellent h_{FE} specified up to 10 Amps



PARTMARKING DETAIL - FZT855
COMPLEMENTARY TYPE - FZT955

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	250	V
Collector-Emitter Voltage	V_{CEO}	150	V
Emitter-Base Voltage	V_{EBO}	6	V
Peak Pulse Current	I_{CM}	10	A
Continuous Collector Current	I_C	**5**	**A**
Power Dissipation at T_{amb}=25°C	P_{tot}	**3**	**W**
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

*The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper equal to 4 inch square minimum

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FZT855

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	250	375		V	I_C=100μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CER}$	250	375		V	I_C=1μA, RB ≤1kΩ
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	150	180		V	I_C=10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6	8		V	I_E=100μA
Collector Cut-Off Current	I_{CBO}			50 1	nA μA	V_{CB}=200V V_{CB}=200V, T_{amb}=100°C
Collector Cut-Off Current	I_{CER} R ≤1kΩ			50 1	nA μA	V_{CB}=200V V_{CB}=200V, T_{amb}=100°C
Emitter Cut-Off Current	I_{EBO}			10	nA	V_{EB}=6V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		20 35 60 260	40 65 110 355	mV mV mV mV	I_C=100mA, I_B=5mA* I_C=500mA, I_B=50mA* I_C=1A, I_B=100mA* I_C=5A, I_B=500mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1250	mV	I_C=5A, I_B=500mA*
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.1	V	I_C=5A, V_{CE}=5V*
Static Forward Current Transfer Ratio	h_{FE}	100 100 15	200 200 30 10	300		I_C=10mA, V_{CE}=5V I_C=1A, V_{CE}=5V* I_C=5A, V_{CE}=5V* I_C=10A, V_{CE}=5V*
Transition Frequency	f_T		90		MHz	I_C==100mA, V_{CE}=10V f=50MHz
Output Capacitance	C_{obo}		22		pF	V_{CB}=10V, f=1MHz
Switching Times	t_{on} t_{off}		66 2130		ns ns	I_C=1A, I_{B1}=100mA I_{B2}=100mA, V_{CC}=50V

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤2%

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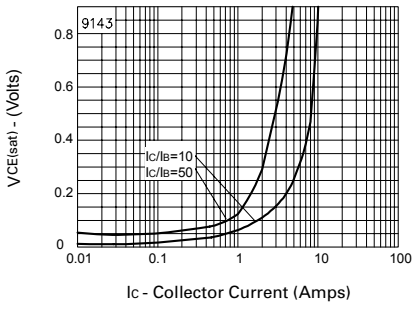
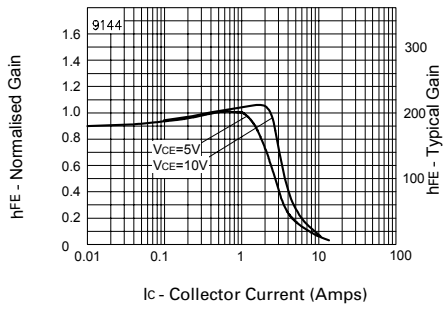
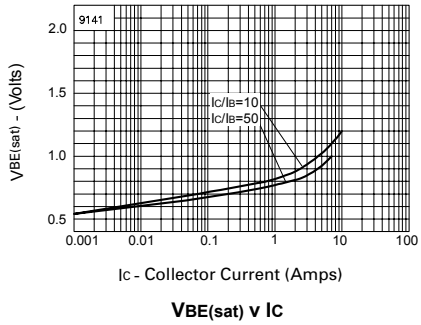
TYPICAL CHARACTERISTICS



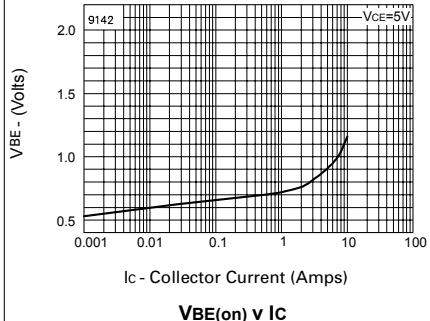
VCE(sat) v IC



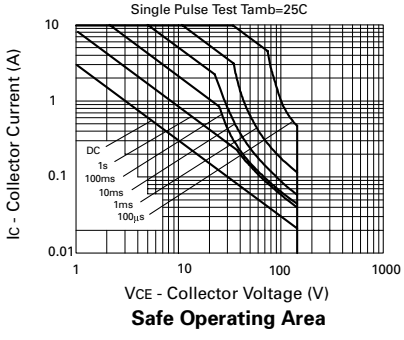
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area