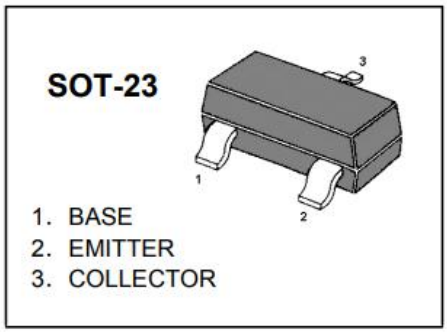
NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

FEATURES

* 400 Volt V_{CEO}

• COMPLEMENTARY TYPE – FMMT558

• **Marking :458**



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
Continuous Collector Current	I_C	225	mA
Peak Pulse Current	I_{CM}	1	A
Base Current	I_B	200	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	500	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

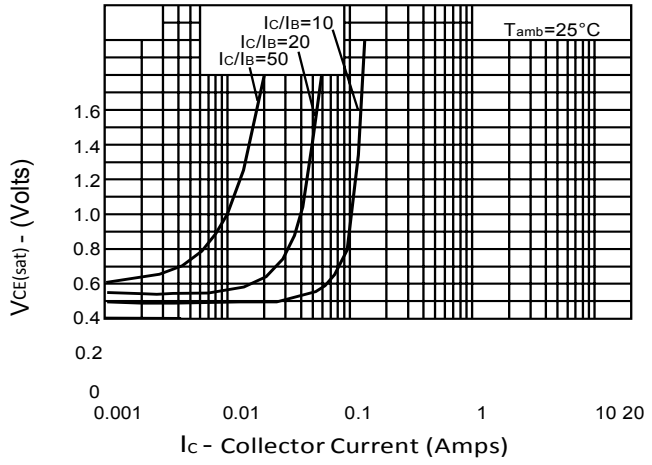
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C).

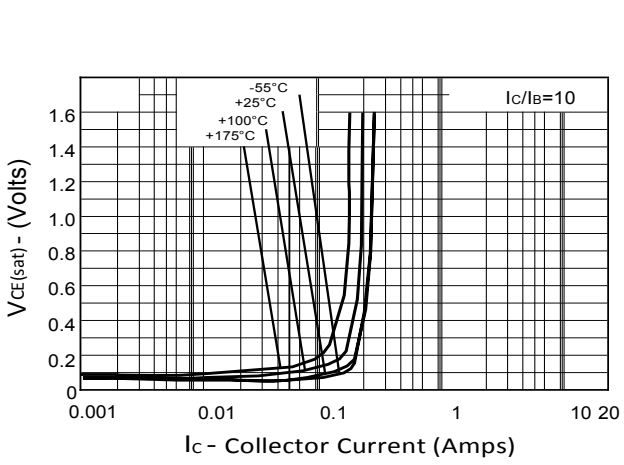
PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	400		V	I_C=100µA
Collector-Emitter Breakdown Voltage	$V_{CEO(sus)}$	400		V	I_C=10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	I_E=100µA
Collector Cut-Off Current	I_{CBO}		100	nA	V_{CB}=320V
Collector Cut-Off Current	I_{CES}		100	nA	V_{CE}=320V
Emitter Cut-Off Current	I_{EBO}		100	nA	V_{EB}=4V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.2 0.5	V V	I_C=20mA, I_B=2mA* I_C=50mA, I_B=6mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.9	V	I_C=50mA, I_B=5mA*
Base-Emitter Turn On Voltage	$V_{BE(on)}$		0.9	V	I_C=50mA, V_{CE}=10V*
Static Forward Current Transfer Ratio	h_{FE}	100 100 15	300		I_C=1mA, V_{CE}=10V I_C=50mA, V_{CE}=10V* I_C=100mA, V_{CE}=10V*
Transition Frequency	f_T	50		MHz	I_C=10mA, V_{CE}=20V f=20MHz
Output Capacitance	C_{obo}		5	pF	V_{CB}=20V, f=1MHz
Switching times	t_{on} t_{off}	135 Typical 2260 Typical		ns ns	I_C=50mA, V_{CC}=100V I_{B1}=5mA, I_{B2}=-10mA

*Measured under pulsed conditions.

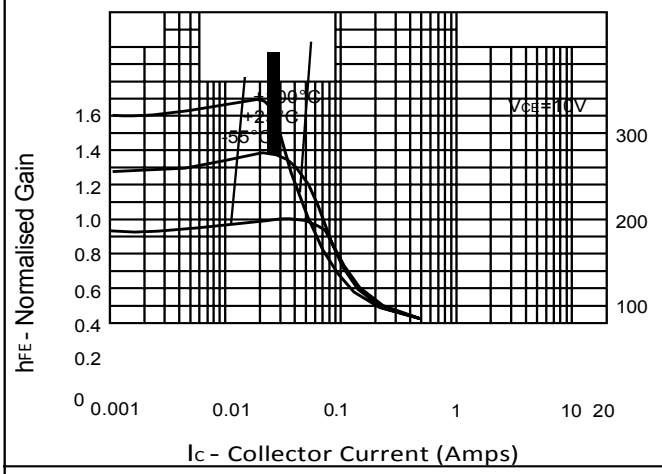
Spice parameter data is available upon request for this device

TYPICAL CHARACTERISTICS

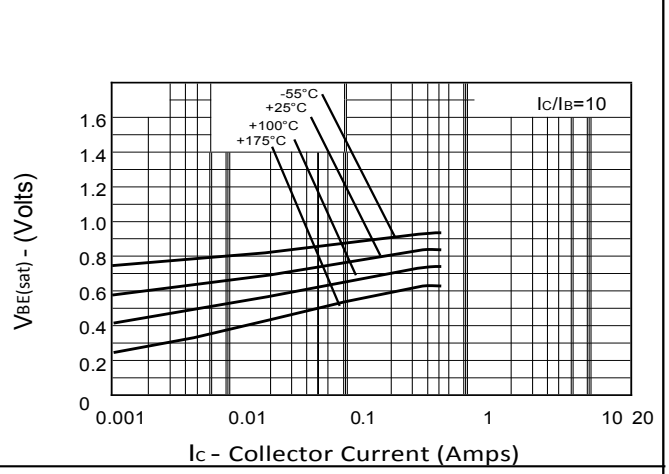




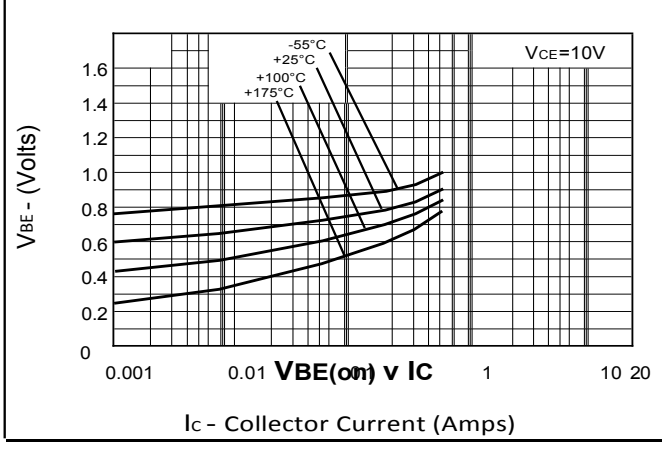
VCE(sat) v IC



VCE(sat) v IC

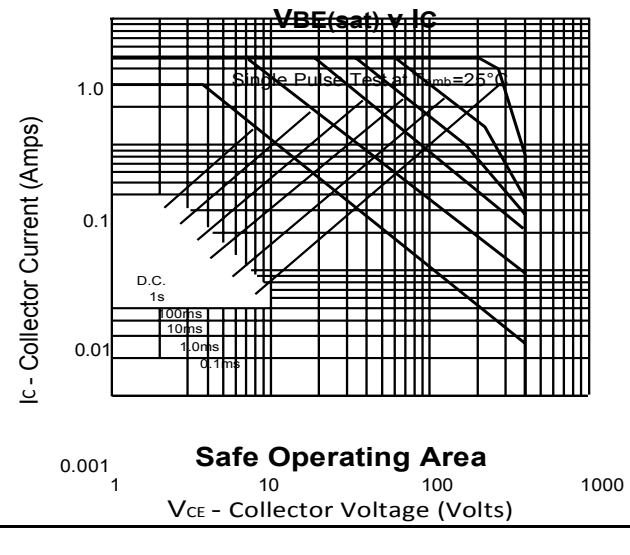


hFE v IC



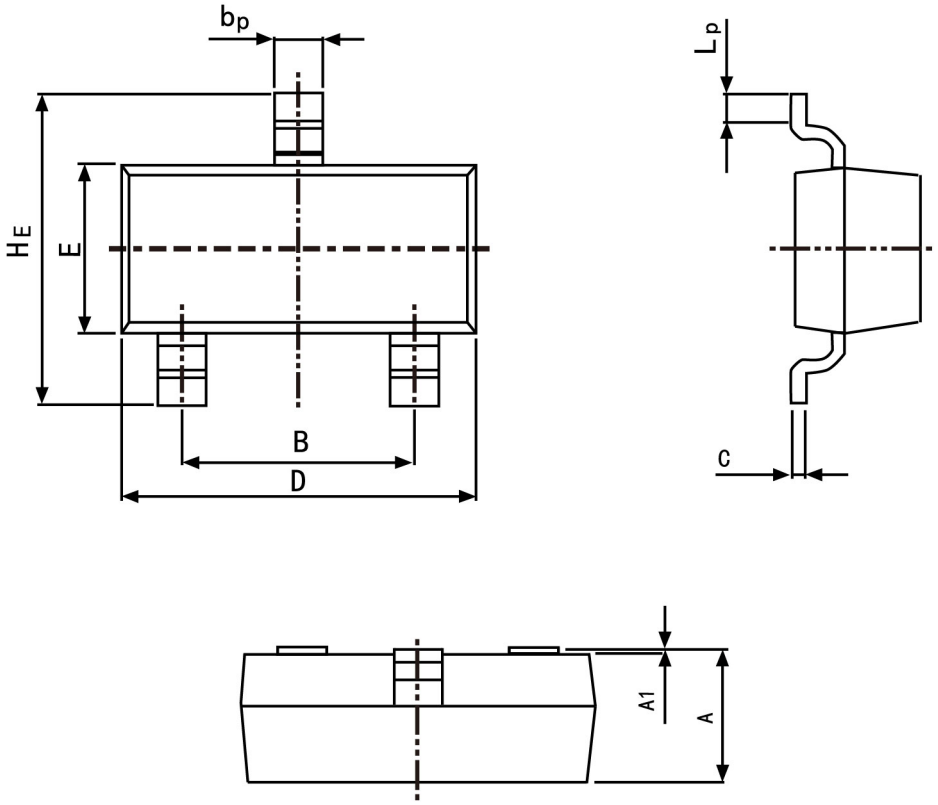
VBE(on) v IC

VBE(sat) v IC



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**



Symbol	Dimension in Millimeters	
	Min	Max
A	0.95	1.40
B	1.78	2.04
bp	0.35	0.50
C	0.08	0.19
D	2.70	3.10
E	1.20	1.65
HE	2.20	3.00
A1	0.100	0.013
Lp	0.20	0.50