

# SOT23 PNP SILICON PLANAR HIGH VOLTAGE TRANSISTOR

## FM558

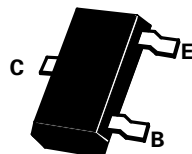
ISSUE 3 – JANUARY 1996

### FEATURES

- \* Excellent  $h_{FE}$  characteristics at  $I_C=100\text{mA}$
- \* Low saturation voltages

COMPLEMENTARY TYPE – FM558

PARTMARKING DETAIL – 558



### 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
Peak Pulse Current	$I_{CM}$	-500	mA
Continuous Collector Current	$I_C$	-150	mA
Base Current	$I_B$	-200	mA
Power Dissipation	$P_{tot}$	500	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	°C

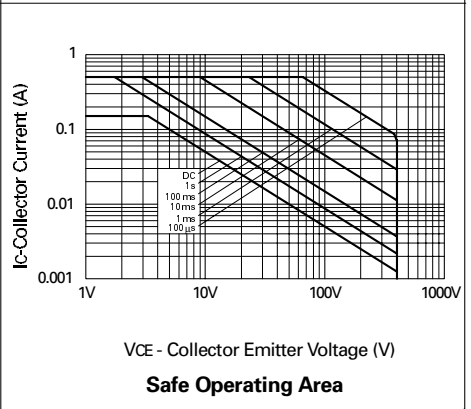
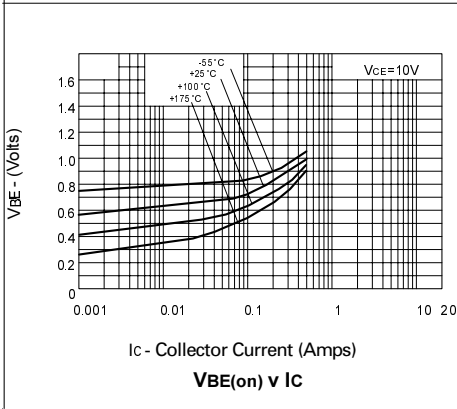
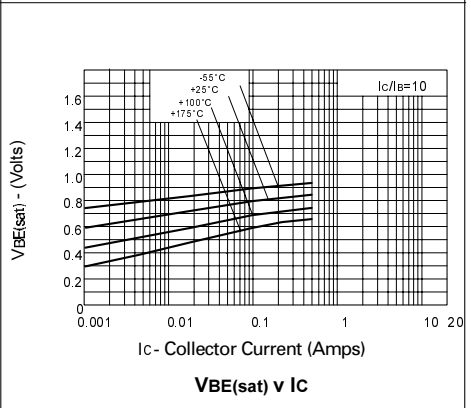
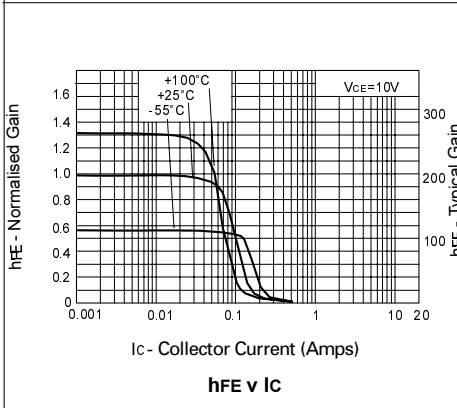
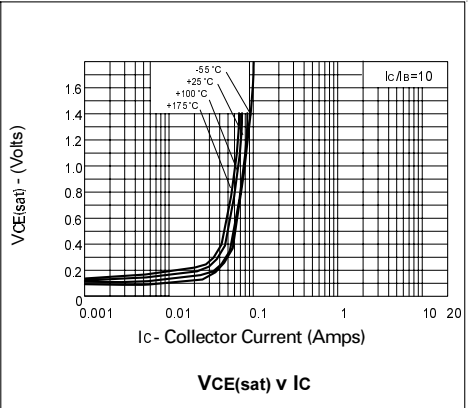
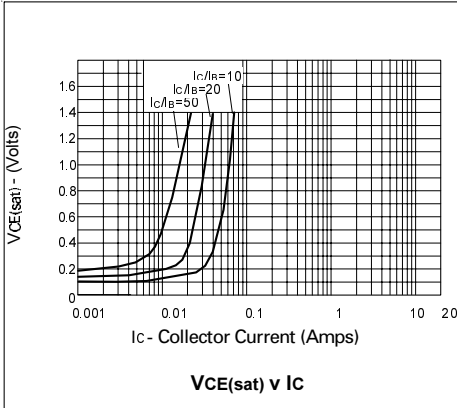
### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ ).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-400		V	$I_C=-100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{BR(CEO)}$	-400		V	$I_C=-10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		V	$I_E=-100\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}; I_{CES}$		-100	nA	$V_{CB}=-320\text{V}; V_{CE}=320\text{V}$
Emitter Cut-Off Current	$I_{EBO}$		-100	nA	$V_{EB}=-4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.2 -0.5	V V	$I_C=-20\text{mA}, I_B=-2\text{mA}^*$ $I_C=-50\text{mA}, I_B=-6\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9	V	$I_C=-50\text{mA}, I_B=-5\text{mA}^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$		-0.9	V	$I_C=-50\text{mA}, V_{CE}=-10\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	100 100 15	300		$I_C=-1\text{mA}, V_{CE}=-10\text{V}$ $I_C=-50\text{mA}, V_{CE}=-10\text{V}^*$ $I_C=-100\text{mA}, V_{CE}=-10\text{V}^*$
Transition Frequency	$f_T$	50		MHz	$I_C=-10\text{mA}, V_{CE}=-20\text{V}$ $f=20\text{MHz}$
Collector-Base Breakdown Voltage	$C_{obo}$		5	pF	$V_{CB}=-20\text{V}, f=1\text{MHz}$
Switching times	$t_{on}$ $t_{off}$		95 1600	ns ns	$I_C=-50\text{mA}, V_{CE}=-100\text{V}$ $I_{B1}=5\text{mA}, I_{B2}=-10\text{mA}$

\* Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$   
Spice parameter data is available upon request for this device

# FMMT558

## TYPICAL CHARACTERISTICS





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