

# SOT23 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

## FM M T555

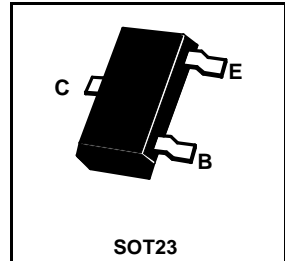
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### FEATURES

- \* 150 Volt  $V_{CEO}$
- \* 1 Amp continuous current

COMPLEMENTARY TYPE – FM M T455

PARTMARKING DETAIL – 555



### ABSOLUTE MAXIMUM RATINGS.

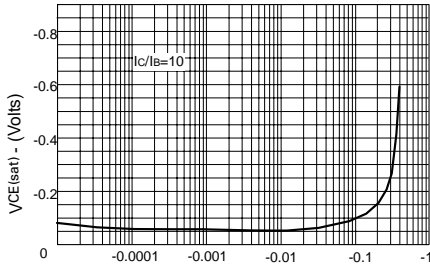
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-160	V
Collector-Emitter Voltage	$V_{CEO}$	-150	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Peak Pulse Current	$I_{CM}$	-2	A
Continuous Collector Current	$I_C$	-1	A
Base Current	$I_B$	-200	mA
Power Dissipation at $T_{amb} = 25^\circ\text{C}$	$P_{tot}$	500	mW
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-160		V	$I_C = -10\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-150		V	$I_C = -10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		V	$I_E = -10\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}$		-0.1 -10	$\mu\text{A}$ A	$V_{CB} = -140\text{V}$ $V_{CB} = -140\text{V}, T_{amb} = 100^\circ\text{C}$
Emitter Cut-Off Current	$I_{EBO}$		-0.1	$\mu\text{A}$	$V_{EB} = -4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.3	V	$I_C = -100\text{mA}, I_B = -10\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1	V	$I_C = -100\text{mA}, I_B = -10\text{mA}^*$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$		-1	V	$I_C = -100\text{mA}, V_{CE} = -10\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 50	300		$I_C = -10\text{mA}, V_{CE} = -10\text{V}^*$ $I_C = -300\text{mA}, V_{CE} = -10\text{V}^*$
Transition Frequency	$f_T$	100		MHz	$I_C = -50\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$
Output Capacitance	$C_{obo}$		10	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$

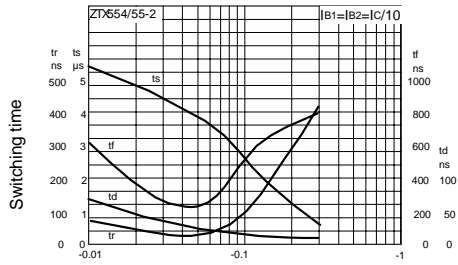
\* Measured under pulsed conditions. Pulse width =  $300\mu\text{s}$ . Duty cycle  $> 2\%$   
Spice parameter data is available upon request for this device

## TYPICAL CHARACTERISTICS



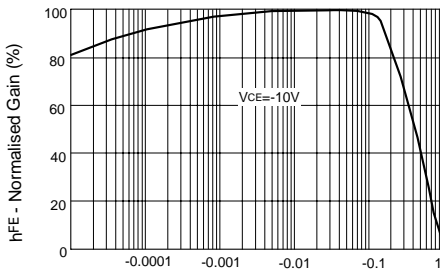
IC - Collector Current (Amps)

**VCE(sat) v IC**



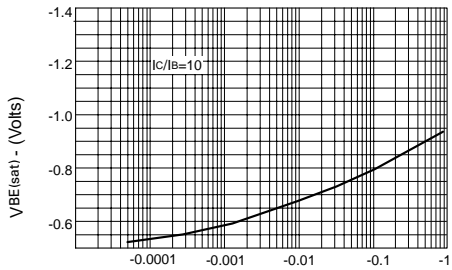
IC - Collector Current (Amps)

**Switching Speeds**



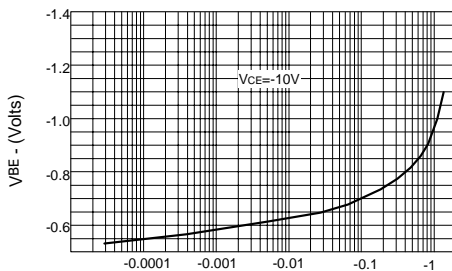
IC - Collector Current (Amps)

**hFE v IC**



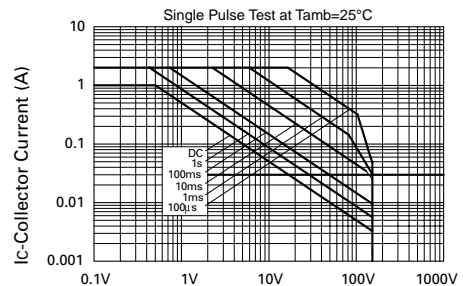
IC - Collector Current (Amps)

**VBE(sat) v IC**



IC - Collector Current (Amps)

**VBE(on) v IC**



VCE - Collector Emitter Voltage (V)

**Safe Operating Area**