

# SOT23 PNP SILICON PLANAR MEDIUM POWER HIGH PERFORMANCE TRANSISTOR

## FMMT589

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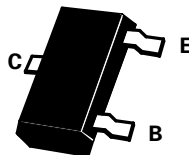


### FEATURES

\* Low equivalent on-resistance;  $R_{CE(sat)}$  250m $\Omega$  at 1A

PARTMARKING DETAILS - 589

COMPLEMENTARY TYPE - FMMT489



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-50	V
Collector-Emitter Voltage	$V_{CEO}$	-30	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 $T_{amb} = 25^\circ\text{C}$ ).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-50		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-30		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	$I_{CBO}$		-100	nA	$V_{CB} = -30\text{V}$
Collector -Emitter Cut-Off Current	$I_{CES}$		-100	nA	$V_{CES} = -30\text{V}$
Emitter Cut-Off Current	$I_{EBO}$		-100	nA	$V_{EB} = -4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.25 -0.35 -0.65	V	$I_C = -0.5\text{A}, I_B = -50\text{mA}^*$ $I_C = -1\text{A}, I_B = -100\text{mA}^*$ $I_C = -2\text{A}, I_B = -200\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1.2	V	$I_C = -1\text{A}, I_B = -100\text{mA}^*$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$		-1.1	V	$I_C = -1\text{A}, V_{CE} = -2\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	100 100 80 40	300		$I_C = -1\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = -500\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -2\text{A}, V_{CE} = -2\text{V}^*$
Transition Frequency	$f_T$	100		MHz	$I_C = -100\text{mA}, V_{CE} = -5\text{V}$ $f = 100\text{MHz}$
Output Capacitance	$C_{obo}$		15	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$

\*Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$

For typical Characteristics graphs see FMMT549 datasheet