

# SOT23 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

## FMMT6517

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### FEATURES

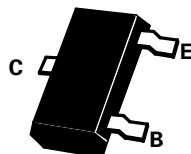
- \* 350 Volt  $V_{CE0}$
- \* Gain of 15 at  $I_C=100\text{mA}$

### APPLICATIONS

- \* SUITABLE FOR AMPLIFIER AND SWITCHING PRODUCTS

COMPLEMENTARY TYPE - FMMT6520

PARTMARKING DETAIL - 517



SOT23

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	350	V
Collector-Emitter Voltage	$V_{CEO}$	350	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Continuous Collector Current	$I_C$	500	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	330	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.
Breakdown Voltages	$V_{(BR)CBO}$	350		V	$I_C=100\mu\text{A}, I_E=0$
	$V_{(BR)CEO}$	350		V	$I_C=1\text{mA}, I_B=0^*$
	$V_{(BR)EBO}$	5		V	$I_E=10\mu\text{A}, I_C=0$
Cut-Off Currents	$I_{CBO}$		50	nA	$V_{CB}=250\text{V}, I_E=0$
	$I_{EBO}$		50	nA	$V_{EB}=5\text{V}, I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.3	V	$I_C=10\text{mA}, I_B=1\text{mA}^*$
			0.35	V	$I_C=20\text{mA}, I_B=2\text{mA}^*$
			0.5	V	$I_C=30\text{mA}, I_B=3\text{mA}^*$
			1.0	V	$I_C=50\text{mA}, I_B=5\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.80	V	$I_C=10\text{mA}, I_B=1\text{mA}^*$
			0.85	V	$I_C=20\text{mA}, I_B=2\text{mA}^*$
			0.90	V	$I_C=30\text{mA}, I_B=3\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		2.0	V	$I_C=100\text{mA}, V_{CE}=10\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	20			$I_C=1\text{mA}, V_{CE}=10\text{V}$
		30			$I_C=10\text{mA}, V_{CE}=10\text{V}^*$
		30	200		$I_C=30\text{mA}, V_{CE}=10\text{V}^*$
		20	200		$I_C=50\text{mA}, V_{CE}=10\text{V}^*$
		15			$I_C=100\text{mA}, V_{CE}=10\text{V}^*$
Output Capacitance	$C_{obo}$		6	pF	$V_{CB}=20\text{V}, f=1\text{MHz}$
Transition Frequency	$f_T$	50		MHz	$I_C=10\text{mA}, V_{CE}=20\text{V}, f=20\text{MHz}$

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