

# SOT23 PNP SILICON PLANAR HIGH GAIN MEDIUM POWER TRANSISTOR

## FMMTL717

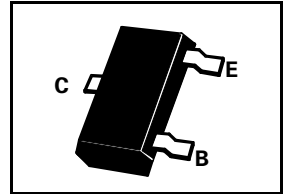
ISSUE 1 – DECEMBER 1997

### FEATURES

Very low equivalent on-resistance;  $R_{CE(sat)}=160m\Omega$  at 1.25A

COMPLEMENTARY TYPE – FMMTL617

PARTMARKING DETAIL – L77



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-12	V
Collector-Emitter Voltage	$V_{CEO}$	-12	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Continuous Collector Current	$I_C$	-1.25	A
Peak Pulse Current	$I_{CM}$	-4	A
Base Current	$I_B$	-200	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	-500	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

# FMMTL717

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-12	-35		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-12	-25		V	$I_C = -10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-8.5		V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}$			-10	nA	$V_{CB} = -10\text{V}$
Emitter Cut-Off Current	$I_{EBO}$			-10	nA	$V_{EB} = -4\text{V}$
Collector Cut-Off Current	$I_{CES}$			-10	nA	$V_{CE} = -10\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-24 -94 -160 -200	-40 -140 -240 -290	mV mV mV mV	$I_C = -100\text{mA}, I_B = -10\text{mA}^*$ $I_C = -500\text{mA}, I_B = -20\text{mA}^*$ $I_C = -1\text{A}, I_B = -50\text{mA}^*$ $I_C = -1.25\text{A}, I_B = -50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-970	-1100	mV	$I_C = -1.25\text{A}, I_B = -50\text{mA}^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$		-875	-1000	mV	$I_C = -1.25\text{A}, V_{CE} = -2\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	300 300 180 100 50	490 450 275 180 110			$I_C = -10\text{mA}, V_{CE} = -2\text{V}$ $I_C = -100\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -2\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -3\text{A}, V_{CE} = -2\text{V}^*$
Transition Frequency	$f_T$		205		MHz	$I_C = -50\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$
Collector-Base Breakdown Voltage	$C_{obo}$		15	20	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$
Switching times	$t_{on}$ $t_{off}$		76 149		ns ns	$I_C = -1\text{A}, V_{CC} = -10\text{V}$ $I_{B1} = I_{B2} = -10\text{mA}$

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

## TYPICAL CHARACTERISTICS

