



**THE DATASHEET OF
FMMTL720TA**



SOT23 PNP SILICON PLANAR HIGH GAIN MEDIUM POWER TRANSISTOR

FMRTL720

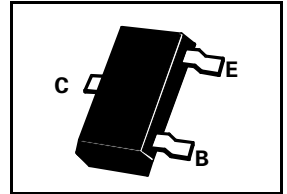
ISSUE 1 – DECEMBER 1997

FEATURES

Very low equivalent on-resistance; $R_{CE(sat)}=210m\Omega$ at 1.5A

COMPLEMENTARY TYPE – FMRTL619

PARTMARKING DETAIL – L70



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-1	A
Peak Pulse Current	I_{CM}	-1.5	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	$^{\circ}C$

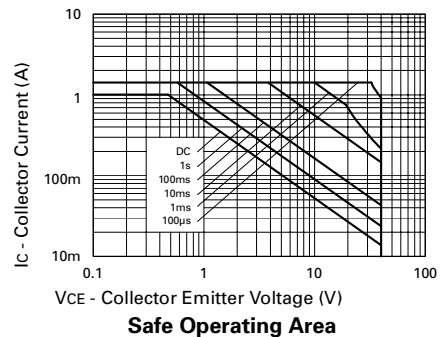
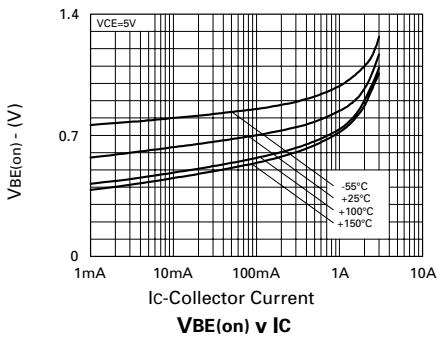
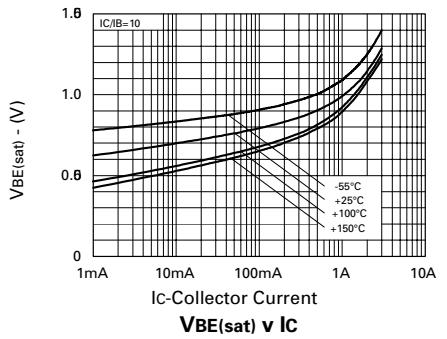
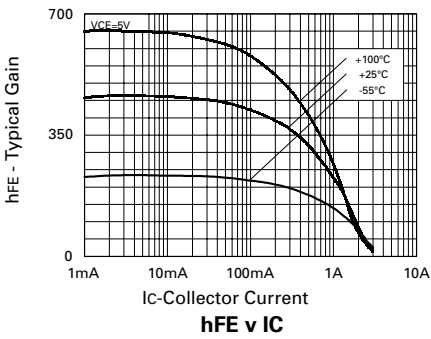
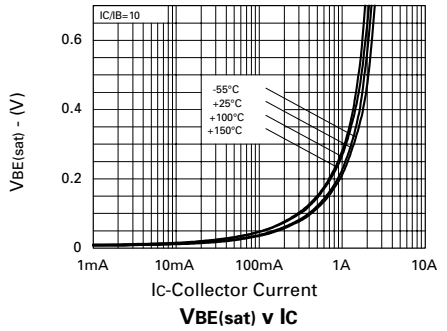
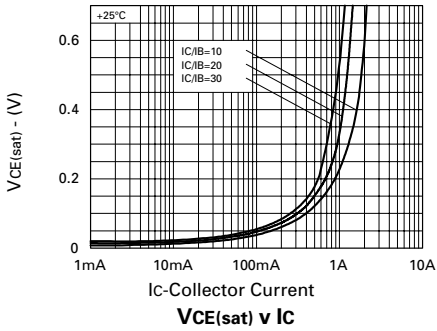
FMMTL720

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40	-95		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40	-70		V	$I_C = -10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-8.8		V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			-10	nA	$V_{CB} = -35\text{V}$
Emitter Cut-Off Current	I_{EBO}			-10	nA	$V_{EB} = -4\text{V}$
Collector Cut-Off Current	I_{CES}			-10	nA	$V_{CE} = -35\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-40 -150 -225	-50 -200 -300	mV mV mV	$I_C = -100\text{mA}, I_B = -10\text{mA}^*$ $I_C = -500\text{mA}, I_B = -20\text{mA}^*$ $I_C = -1\text{A}, I_B = -100\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-985	-1100	mV	$I_C = -1\text{A}, I_B = -100\text{mA}^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$		-825	-1000	mV	$I_C = -1\text{A}, V_{CE} = -5\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	300 300 200 150 75	490 450 340 250 150			$I_C = -10\text{mA}, V_{CE} = -5\text{V}$ $I_C = -100\text{mA}, V_{CE} = -5\text{V}^*$ $I_C = -0.5\text{A}, V_{CE} = -5\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -5\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -2\text{V}^*$
Transition Frequency	f_T				MHz	$I_C = -50\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$
Collector-Base Breakdown Voltage	C_{obo}				pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$
Switching times	t_{on} t_{off}		61 61		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 μs . Duty cycle $\leq 2\%$

TYPICAL CHARACTERISTICS









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