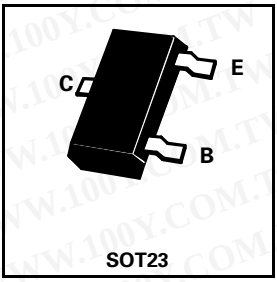
"SUPER SOT" SOT23 PNP SILICON POWER DARLINGTON TRANSISTOR

FMMT734

ISSUE 1 – AUGUST 1997

FEATURES

* **625mW POWER DISSIPATION**
* Very High h_{FE} at High Current (5A)
* Extremely Low $V_{CE(sat)}$ at High Current (1A)



COMPLEMENTARY TYPE – FMMT634

PARTMARKING DETAIL – 734

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-100	V
Emitter-Base Voltage	V_{EBO}	-12	V
Peak Pulse Current	I_{CM}	-5	A
Continuous Collector Current	I_C	-800	mA
Power Dissipation	**P_{tot}**	**625**	**mW**
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

* Maximum power dissipation is calculated assuming that the device is mounted on a ceramic substrate measuring 15x15x0.6mm

**Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤ 2%

勝 特 力 材 料 886-3-5753170
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Http://www.100y.com.tw

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ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-100	-130		V	I_C=-100µA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-100	-116		V	I_C=-5mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-12	-17		V	I_E=-100µA
Collector Cut-Off Current	I_{CBO}			-10	nA	V_{CB}=-80V
Emitter Cut-Off Current	I_{EBO}			-10	nA	V_{EB}=-7V
Collector Emitter Cut-Off Current	I_{CES}			-200	nA	V_{CES}=-80V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.68 -0.72 -0.78 -0.86 -0.72 -0.90	-0.75 -0.80 -0.86 -0.97 — -1.05	V V V V V V	I_C=-100mA, I_B=-1mA* I_C=-250mA,I_B=-1mA* I_C=-500mA, I_B=-5mA* I_C=-800mA, I_B=-5mA* I_C=-800mA, I_B=-5mA †* I_C=-1A, I_B=-5mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1.60	-1.75	V	I_C=-1A, I_B=-5mA*
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-1.30	-1.75	V	I_C=-1A, V_{CE}=-5V*
Static Forward Current Transfer Ratio	h_{FE}	 20K 15K 5K	60K 60K 50K 15K 150 20K			I_C=-10mA, V_{CE}=-5V* I_C=-100mA, V_{CE}=-5V* I_C=-1A, V_{CE}=-5V* I_C=-2A, V_{CE}=-5V* I_C=-5A, V_{CE}=-5V* I_C=-1A, V_{CE}=-2V*
Transition Frequency	f_T		140		MHz	I_C=-10mA, V_{CE}=-10V f=100MHz
Output Capacitance	C_{obo}		14	25	pF	V_{CB}=-10V, f=1MHz
Turn-On Time	$t_{(on)}$		460		ns	I_C=-500mA, V_{CC}=-20V I_B=±1mA
Turn-Off Time	$t_{(off)}$		1200		ns	

*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤ 2%

† T_{amb}=150°C

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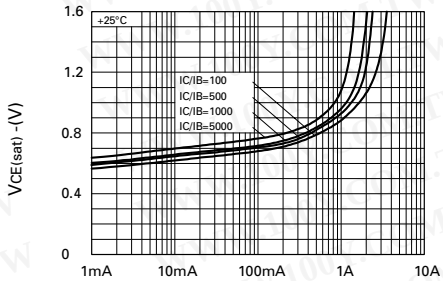
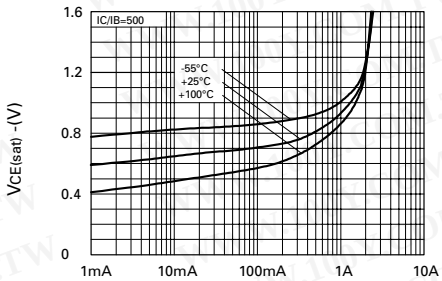
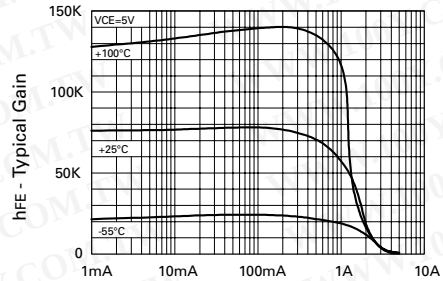
TYPICAL CHARACTERISTICS



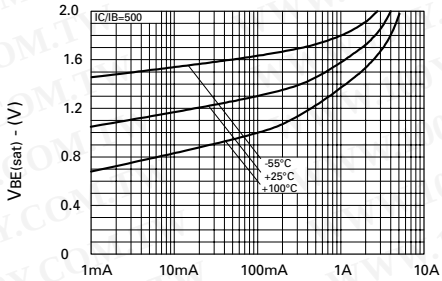
VCE(sat) v IC



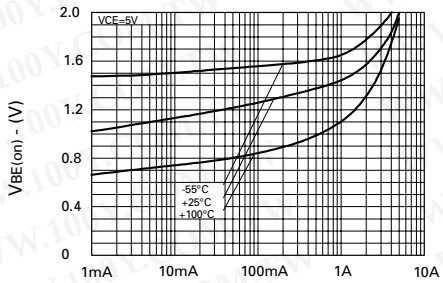
VCE(sat) v IC



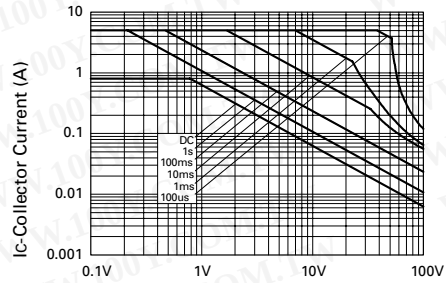
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area