- FEATURES
  - * **625mW POWER DISSIPATION**
  - * **I_C CONT 2A**
  - * 12A Peak Pulse Current
  - * Excellent H_{FE} Characteristics Up To 12A (pulsed)
  - * Extremely Low Saturation Voltage E.g. 8mV Typ.
  - * Extremely Low Equivalent On Resistance; **$R_{CE(sat)}$**

SOT-23

1: Base 2: Emitter 3: Collector

DEVICE TYPE	COMPLEMENT	PARTMARKING	$R_{CE(sat)}$
FMMT617	FMMT717	617	**50mΩ at 2A**
FMMT618	FMMT718	618	**50mΩ at 1.5A**
FMMT619	FMMT720	619	**75mΩ at 1.5A**
FMMT624	FMMT723	624	-
FMMT625	–	625	-

● ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMT 617	FMMT 618	FMMT 619	FMMT 624	FMMT 625	UNIT
Collector-Base Voltage	V_{CBO}	15	20	50	125	150	V
Collector-Emitter Voltage	V_{CEO}	15	20	50	125	150	V
Emitter-Base Voltage	V_{EBO}	5	5	5	5	5	V
Peak Pulse Current**	I_{CM}	12	6	6	3	3	A
Continuous Collector Current	**I_C**	**2**	**1.5**	**1.5**	**1**	**1**	**A**
Base Current	I_B	500					mA
Power Dissipation at T_{amb}=25°C*	**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%

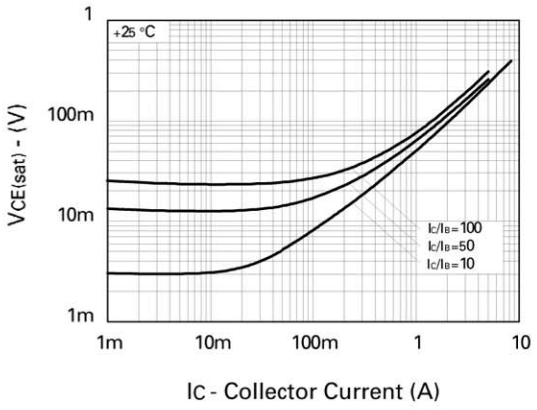
Spice parameter data is available upon request for these devices

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

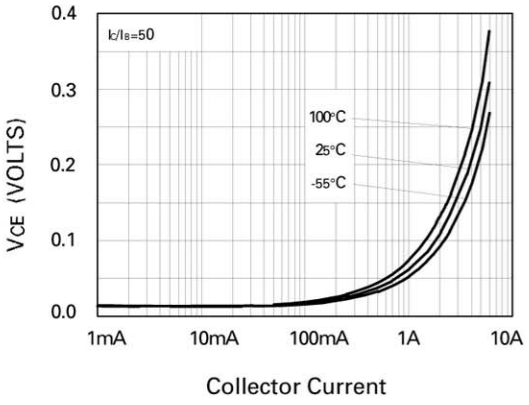
PARAMETER	SYMBOL	FMMT618			FMMT619			UNIT	CONDITIONS.
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	20	100		50	190		V	I_C=100μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	20	27		50	65		V	I_C=10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5	8.3		5	8.3		V	I_E=100μA
Collector Cut-Off Current	I_{CBO}			100			 100	nA nA	V_{CB}=16V V_{CB}=40V
Emitter Cut-Off Current	I_{EBO}			100			100	nA	V_{EB}=4V
Collector Emitter Cut-Off Current	I_{CES}			100			 100	nA nA	V_{CES}=16V V_{CES}=40V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		8 70 130	15 150 200		10 125 150	20 200 220	mV mV mV mV	I_C=0.1A, I_B=10mA* I_C=1A, I_B=10mA* I_C=2A, I_B=50mA* I_C=2.5A, I_B=50mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		 0.89	 1.0		0.87	1.0	V V	I_C=2A, I_B=50mA* I_C=2.5A, I_B=50mA*
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		 0.79	 1.0		0.80	1.0	V V	I_C=2A, V_{CE}=2V* I_C=2.5A, V_{CE}=2V*
Static Forward Current Transfer Ratio	h_{FE}	200 300 200 100	400 450 360 180		200 300 200 100	400 450 400 225 40			I_C=10mA, V_{CE}=2V* I_C=200mA, V_{CE}=2V* I_C=1A, V_{CE}=2V* I_C=2A, V_{CE}=2V* I_C=6A, V_{CE}=2V*
Transition Frequency	f_T	100	140		100	165		MHz	I_C=50mA, V_{CE}=10V f=100MHz
Output Capacitance	C_{obo}		23	30		12	20	pF	V_{CB}=10V, f=1MHz
Turn-On Time	$t_{(on)}$		170			170		ns	V_{CC}=10V, I_C=1A I_{B1}=-I_{B2}=10mA
Turn-Off Time	$t_{(off)}$		400			750		ns	

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

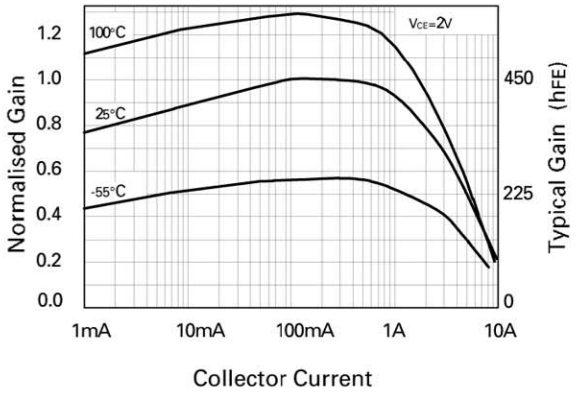
TYPICAL CHARACTERISTICS



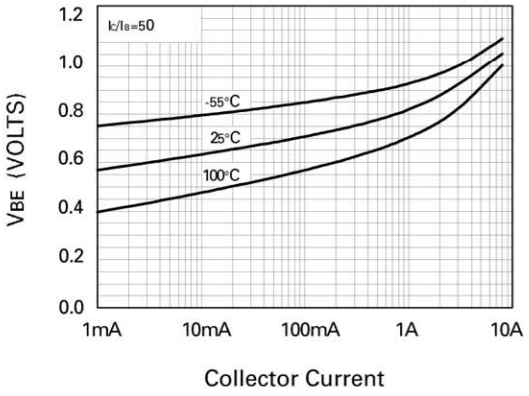
VCE(SAT) v IC



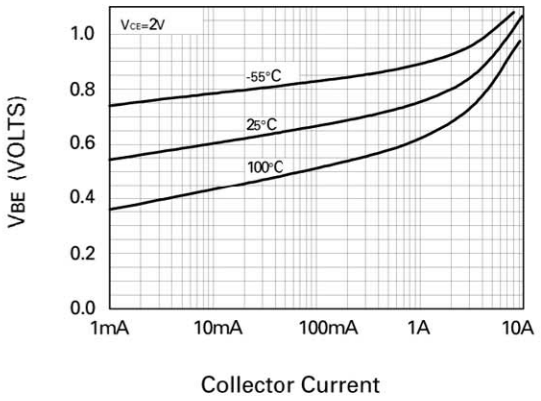
VCE(SAT) vs IC



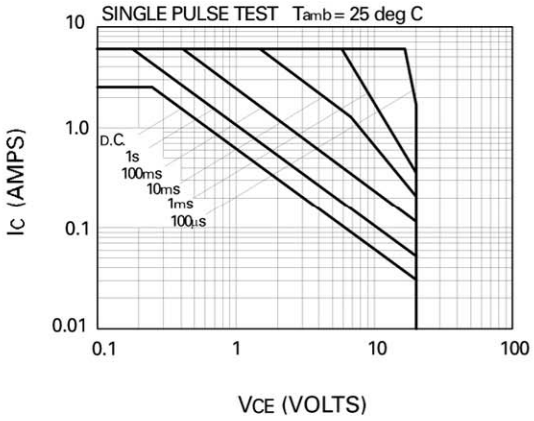
hFE vs IC



VBE(SAT) vs IC

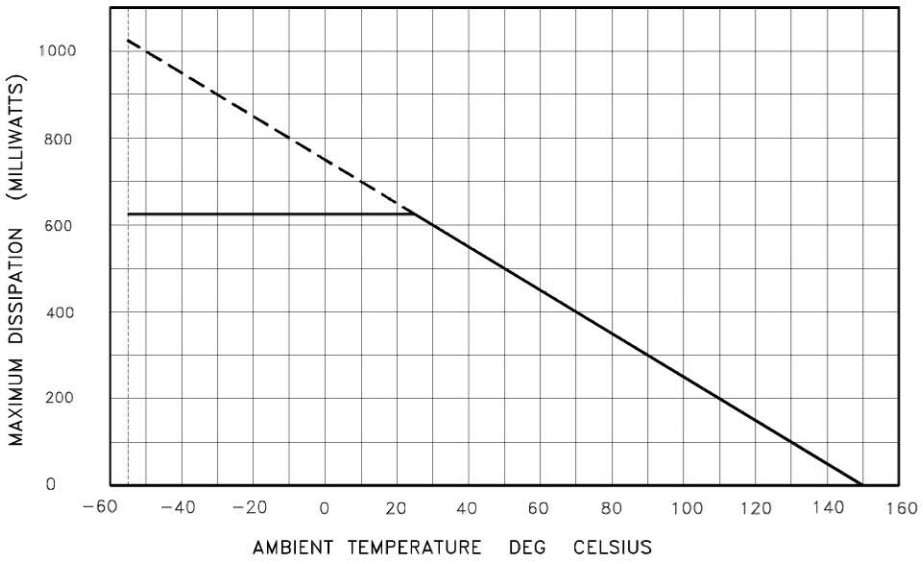


VBE(ON) vs IC

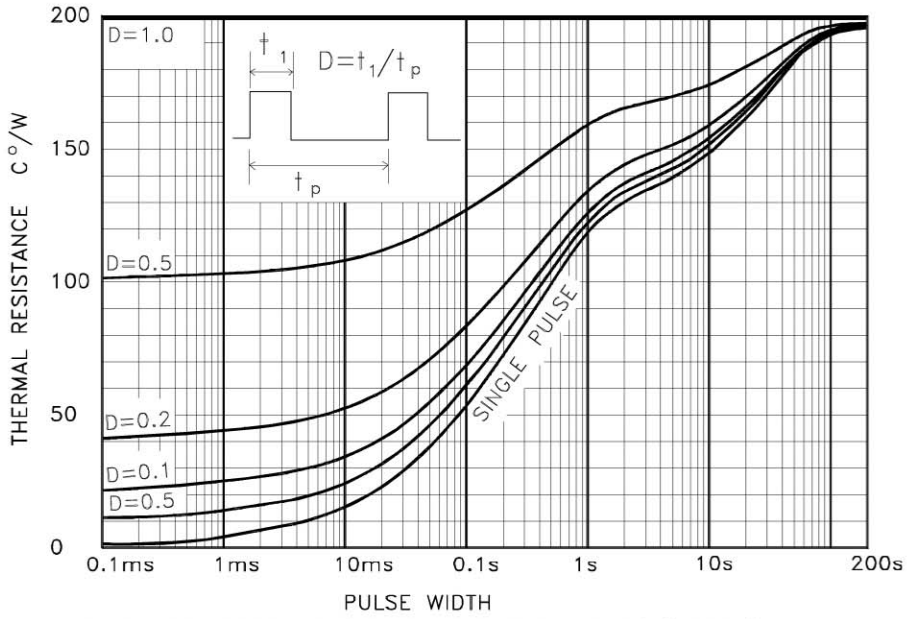


Safe Operating Area

THERMAL CHARACTERISTICS AND DERATING INFORMATION



DERATING CURVE



MAXIMUM TRANSIENT THERMAL RESISTANCE

* Reference above figures, Devices were mounted on a 15mmx15mm ceramic substrate

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