FMMT718

SOT23 PNP SILICON POWER (SWITCHING) TRANSISTOR

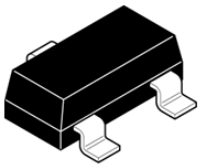
Features

- 625mW POWER DISSIPATION
- I_C CONT = 2.5A
- I_C Up to 10A Peak Pulse Current
- Excellent h_{FE} Characteristics Up To 10A (pulsed)
- Low Saturation Voltage E.g. 10mV Typ.
- Low equivalent on-resistance $R_{CE(sat)}$=97mΩ at 1.5A
- Complementary part number FMMT618

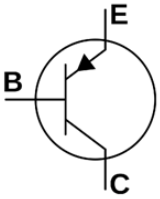
Mechanical Data

- Case: SOT-23
- UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish
- Weight: 0.008 grams (approximate)

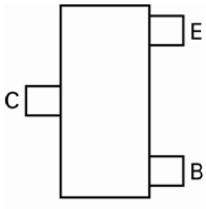
SOT-23



Top View



Device symbol

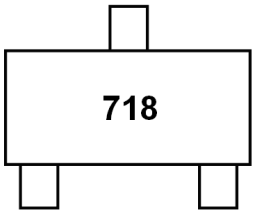


Pin Configuration

Ordering Information

Product	Marking	Reel size (inches)	Tape width (mm)	Quantity per reel
FMMT718TA	718	7	8	3000
FMMT718TC	718	13	8	10000

Marking Information



718 = Product type Marking Code

Maximum Ratings @T_A = 25°C unless otherwise specified

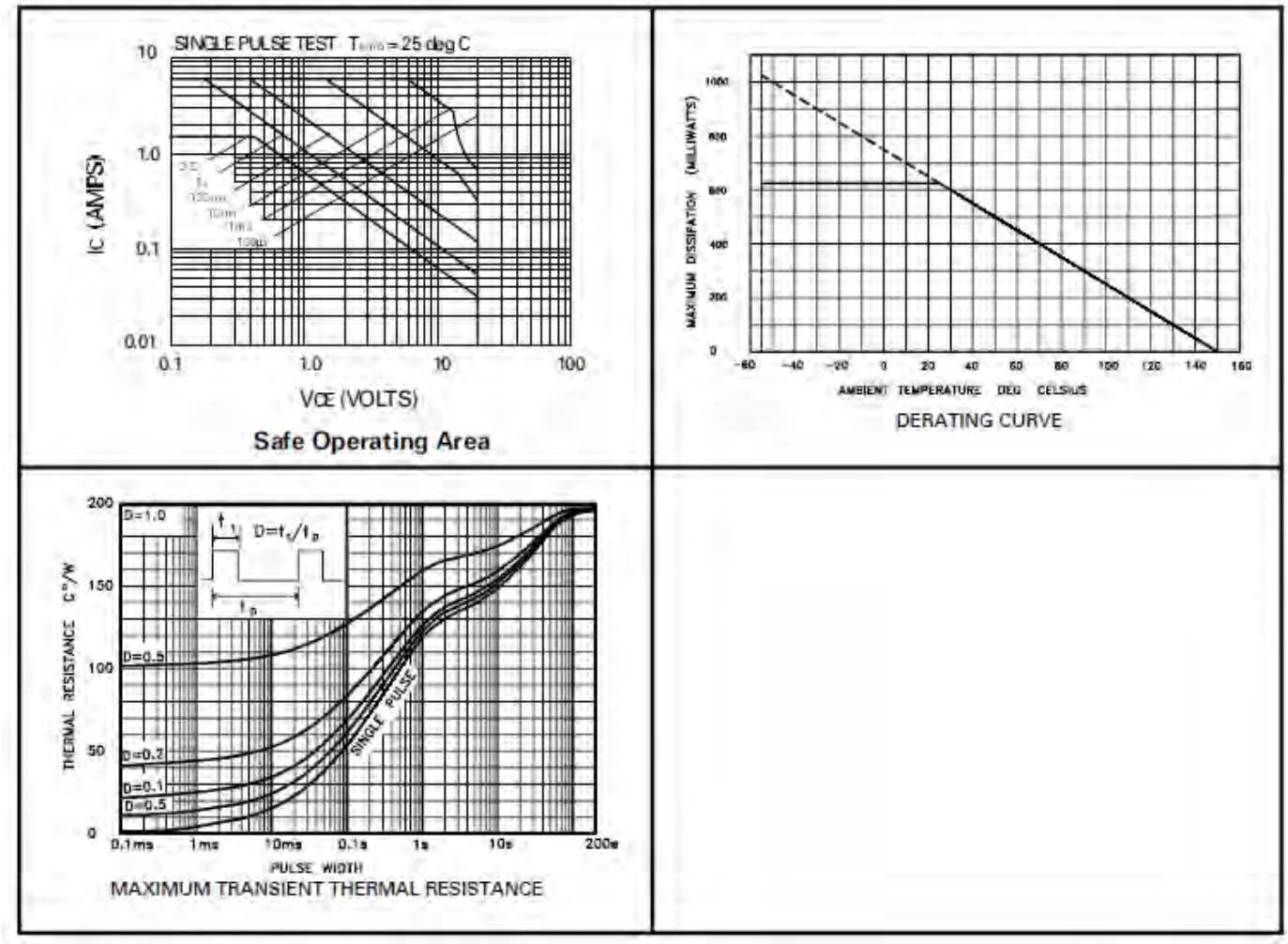
Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-20	V
Collector-Emitter Voltage	V_{CEO}	-20	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-1.5	A
Peak Pulse Current (Note 1)	I_{CM}	-6	A
Base Current	I_B	-500	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation at T_A = 25°C (Note 2)	P_{tot}	625	mW
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Notes: 1. Measured under pulse conditions. Pulse width = 300µs. Duty cycle ≤2%
2. For a device surface mounted on 15mm X 15mm X 1.6mm FR4 PCB with high coverage of single sided 1 oz copper, in still air conditions

Thermal Characteristics and Derating information



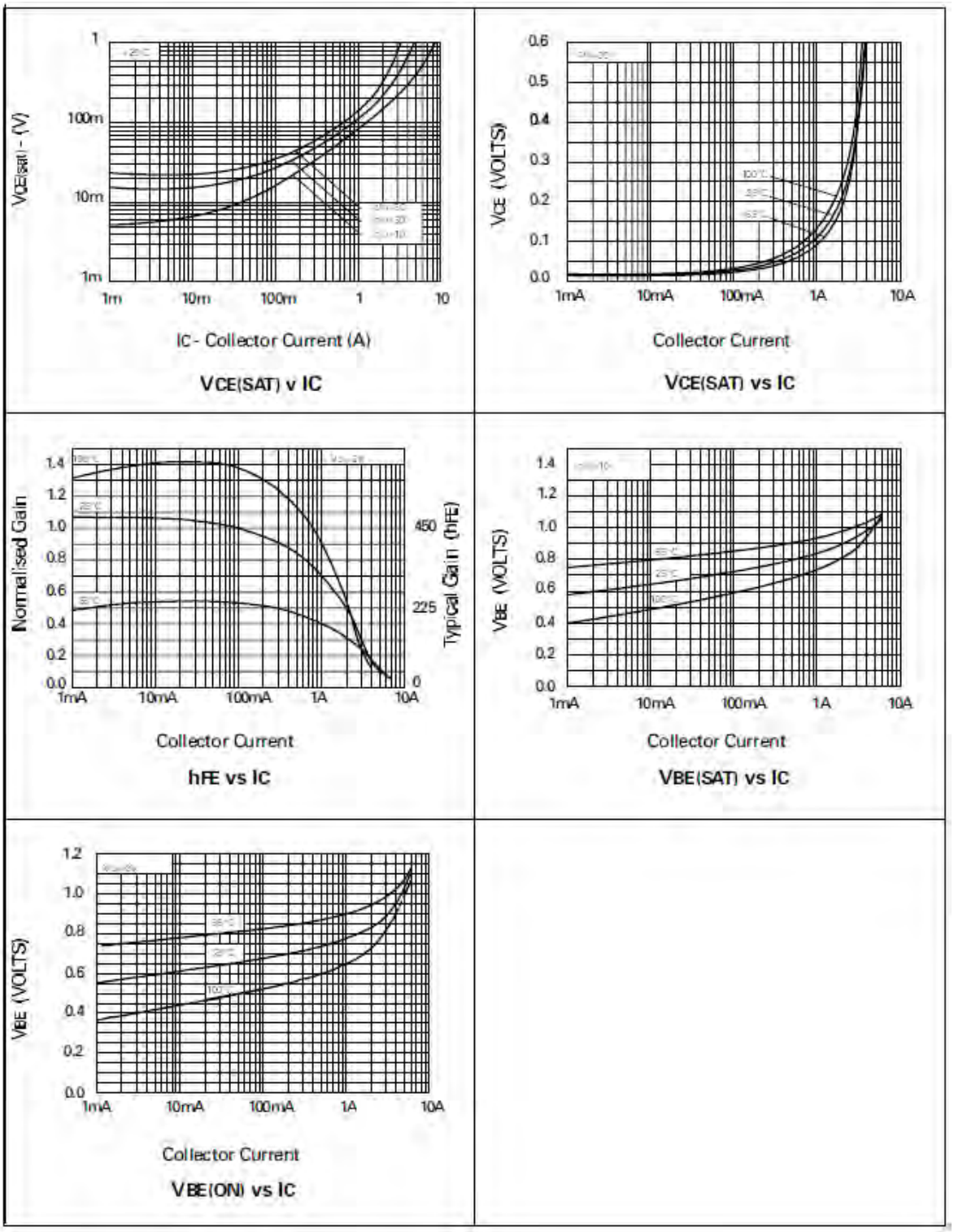
Note: Reference above figures, Devices were mounted on 15mm X 15mm X 1.6mm FR4 PCB with high coverage of single sided 1 oz copper, in still air conditions

Electrical Characteristics @T_A = 25°C unless otherwise specified

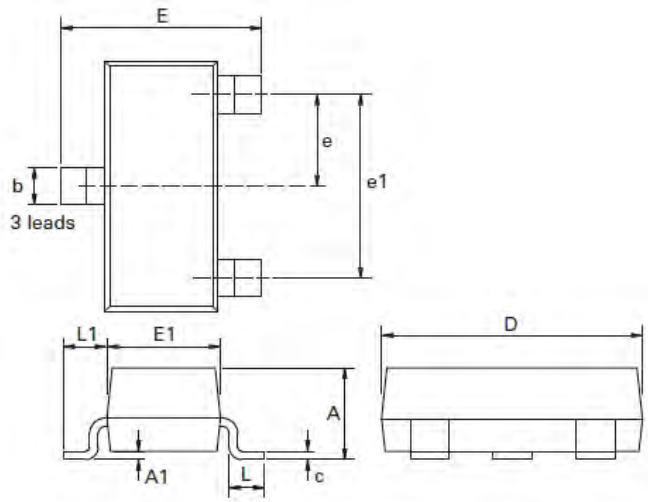
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-20	-65		V	I_C = -100 µA
Collector-Emitter Breakdown Voltage (Note 3)	$V_{(BR)CEO}$	-20	-55		V	I_C = -10 mA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-8.8		V	I_E = -100 µA
Collector Cutoff Current	I_{CBO}			-100	nA	V_{CB} = -15V
Emitter Cutoff Current	I_{EBO}			-100	nA	V_{EB} = -4V
Collector Emitter Cutoff Current	I_{CES}			-100	nA	V_{CE}= -15V
Static Forward Current Transfer Ratio (Note 3)	h_{FE}	300 300 150 35 15	475 450 230 70 30			I_C = -10mA, V_{CE} = -2V I_C = -100mA, V_{CE} = -2V I_C = -2A, V_{CE} = -2V I_C = -4A, V_{CE} = -2V I_C = -6A, V_{CE} = -2V
Collector-Emitter Saturation Voltage (Note 3)	$V_{CE(sat)}$		-16 -130 -145	-40 -200 -220	mV mV mV	I_C =- 0.1A, I_B = -10mA I_C = -1A, I_B = -20mA I_C = -1.5A, I_B = -50mA
Base-Emitter Turn-On Voltage(Note 3)	$V_{BE(on)}$		-0.81	-1.0	V	I_C = -2A, V_{CE} = -2V
Base-Emitter Saturation Voltage(Note 3)	$V_{BE(sat)}$		-0.87	-1.0	V	I_C = -1.5A, I_B = -50mA
Output Capacitance	C_{obo}		21	30	pF	V_{CB} = -10V. f = 1MHz
Transition Frequency	f_T	150	180		MHz	V_{CE} = -10V, I_C = -50mA, f = 100MHz
Turn-On Time	t_{on}		40		ns	V_{CC}=-10V, I_C =-1A I_{B1} = I_{B2} = -20mA
Turn-Off Time	t_{off}		670		ns	

Notes: 3. Measured under pulsed conditions. Pulse width ≤ 300 µs. Duty cycle ≤ 2%

Typical Characteristics



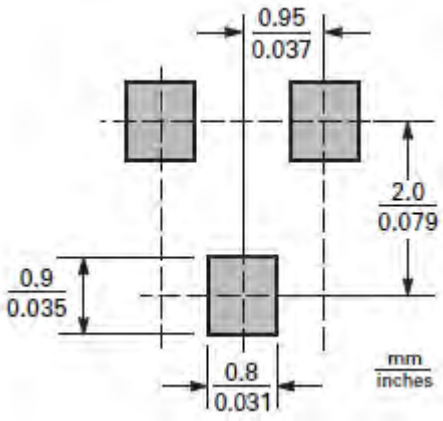
Package Outline Dimensions



Dim.	Millimeters		Inches		Dim.	Millimeters		Inches	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	-	1.12	-	0.044	e1	1.90 NOM		0.075 NOM	
A1	0.01	0.10	0.0004	0.004	E	2.10	2.64	0.083	0.104
b	0.30	0.50	0.012	0.020	E1	1.20	1.40	0.047	0.055
c	0.085	0.20	0.003	0.008	L	0.25	0.60	0.0098	0.0236
D	2.80	3.04	0.110	0.120	L1	0.45	0.62	0.018	0.024
e	0.95 NOM		0.037 NOM		-	-	-	-	-

Note: Controlling dimensions are in millimeters. Approximate dimensions are provided in inches

Suggested Pad Layout



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