

FMMT718

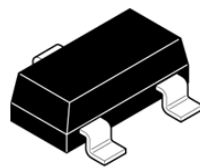
SOT23 PNP SILICON POWER (SWITCHING) TRANSISTOR

Features

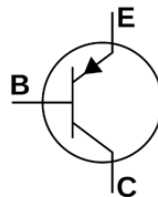
- 625mW POWER DISSIPATION
- I_C CONT = 2.5A
- I_C Up to 10A Peak Pulse Current
- Excellent h_{FE} Characteristics Up To 10A (pulsed)
- Low Saturation Voltage E.g. 10mV Typ.
- Low equivalent on-resistance $R_{CE(sat)}=97m\Omega$ at 1.5A
- Complementary part number FMMT618

Mechanical Data

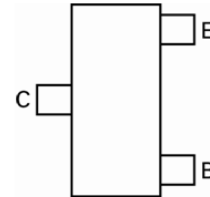
- Case: SOT-23
- UL Flammability Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish
- Weight: 0.008 grams (approximate)



Top View



Device symbol

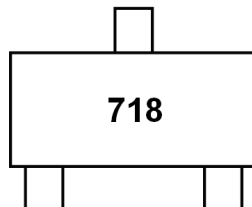


Pin Configuration

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

FMMT718

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Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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 $T_A = 25^\circ\text{C}$ (Note 2)	P_{tot}	625	mW
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

- Notes:
1. Measured under pulse conditions. Pulse width = 300 μs . Duty cycle $\leq 2\%$
 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

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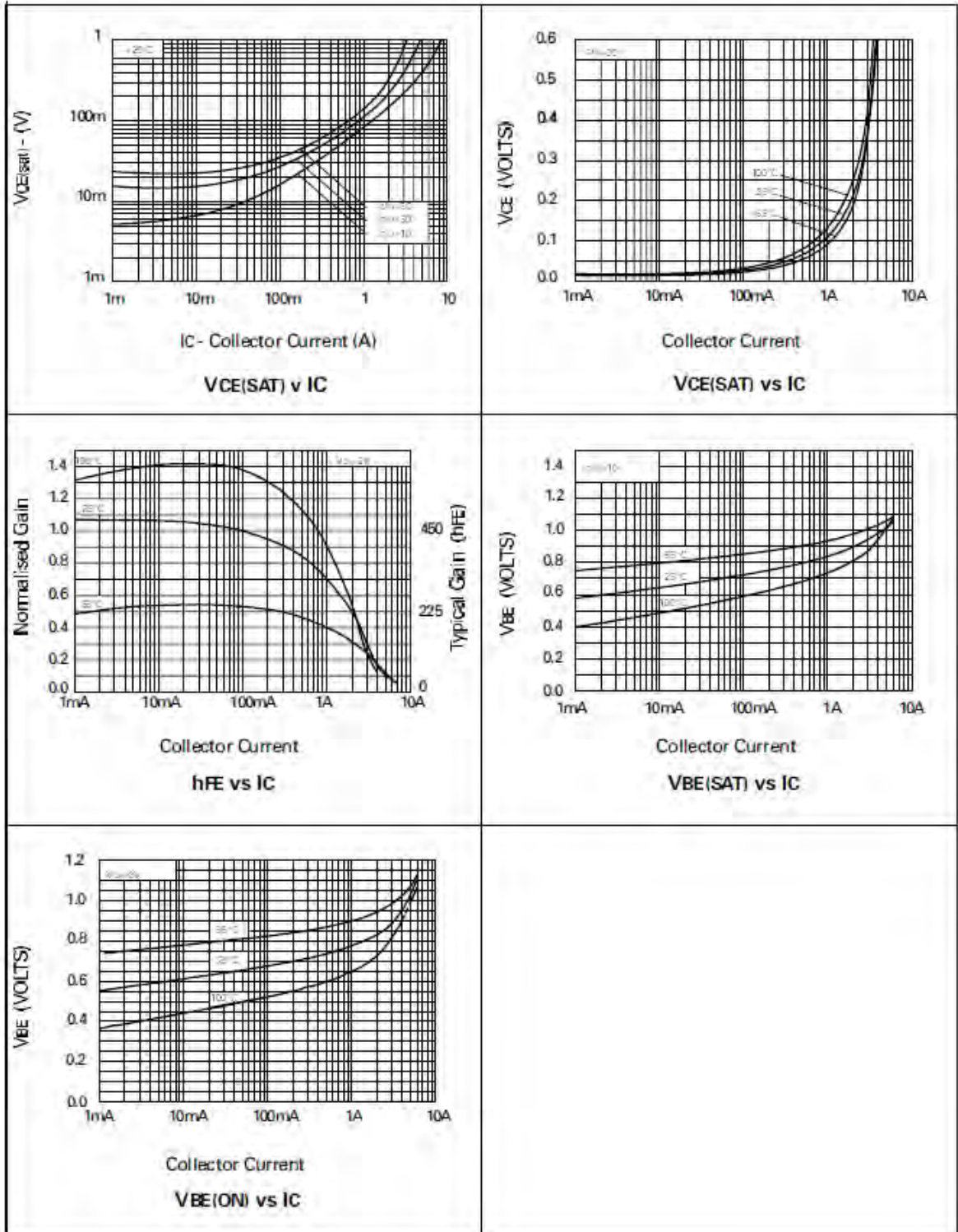
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Notes: 3. Measured under pulsed conditions. Pulse width $\leq 300 \mu\text{s}$. Duty cycle $\leq 2\%$

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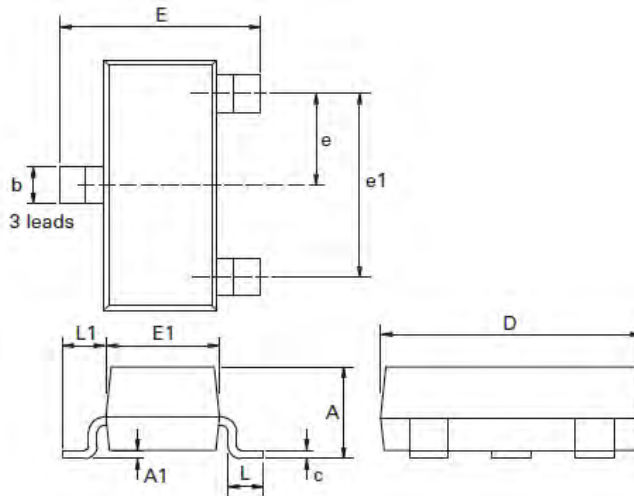
Typical Characteristics



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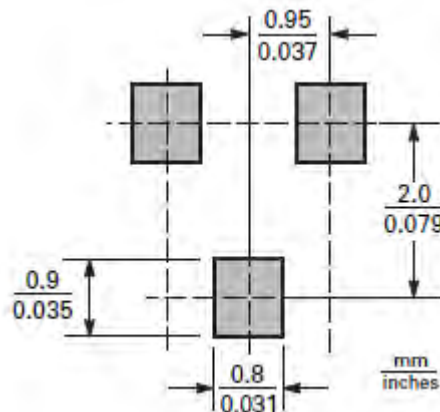
Package Outline Dimensions



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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