

Plastic-Encapsulate Transistors

TRANSISTOR(PNP)

Features

- ♦Extremely low saturation voltage
- ♦Complementary Type FMMT618

APPLICATION

- ♦Gage Driving MOSFETs and IGBTs
- ♦DC-DC converters
- ♦Charging circuit
- ♦Power switches

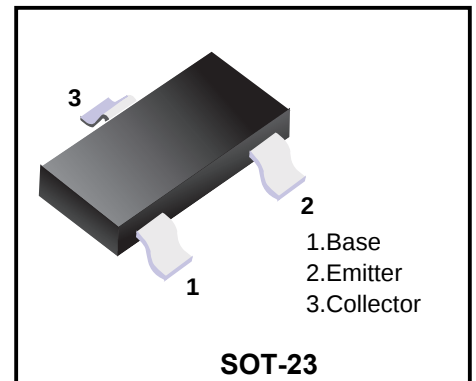
Mechanical Data

- ♦SOT-23 Small Outline Plastic Package
- ♦Epoxy UL: 94V-0
- ♦Mounting Position: Any

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameters	Symbols	Value	Units
Collector-Base Voltage	V_{CBO}	-20	V
Collector-Emitter Voltage	V_{CEO}	-20	V
Emitter -Base Voltage	V_{EBO}	-7	V
Base Current	I_B	-0.5	A
Collector Current-Continuous	I_C	-1.5	A
Collector Power Dissipation	P_C	350	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$	357	°C/W



Marking Code

FMMT718	718
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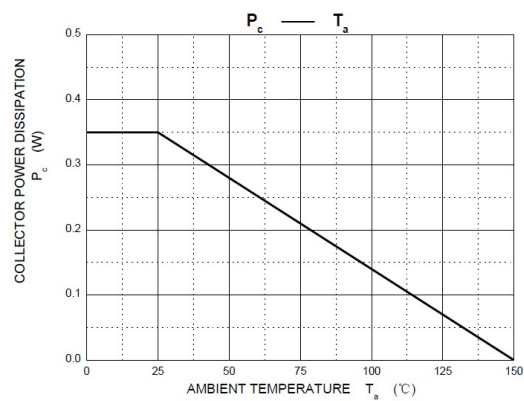
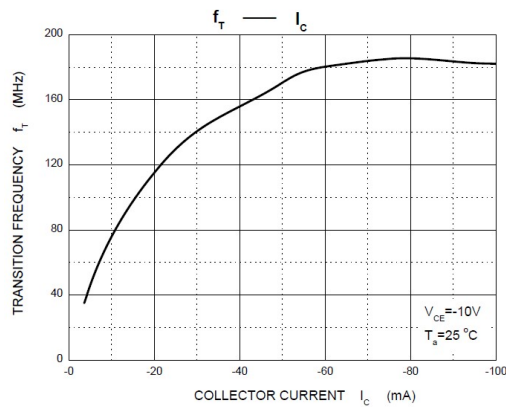
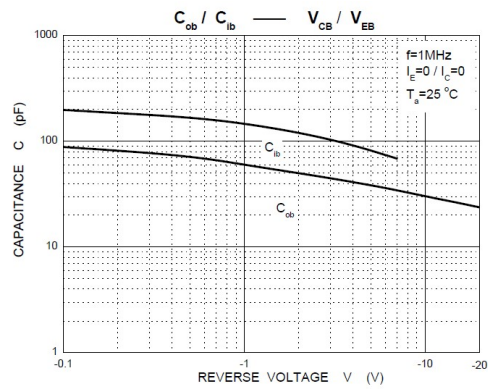
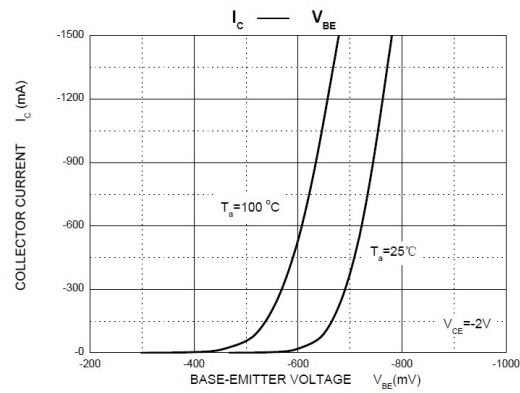
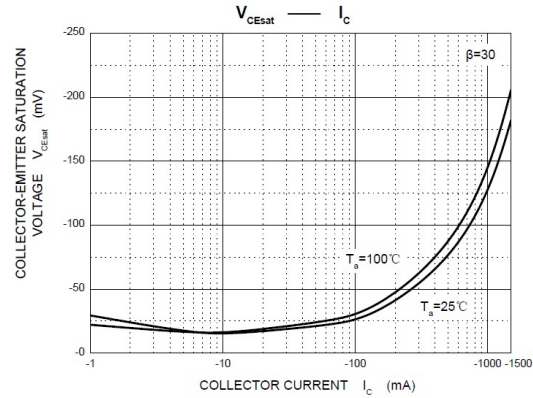
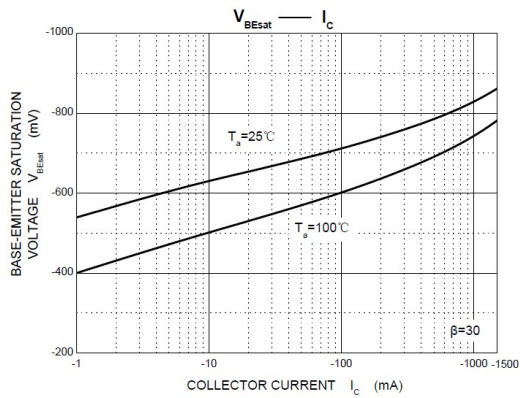
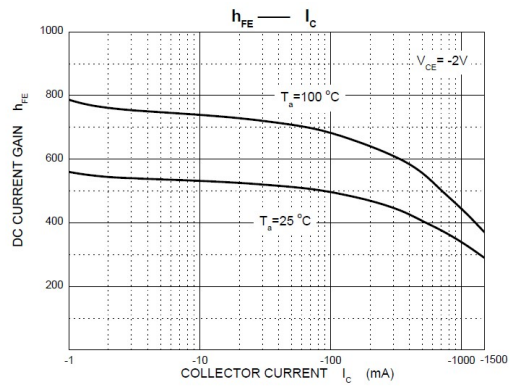
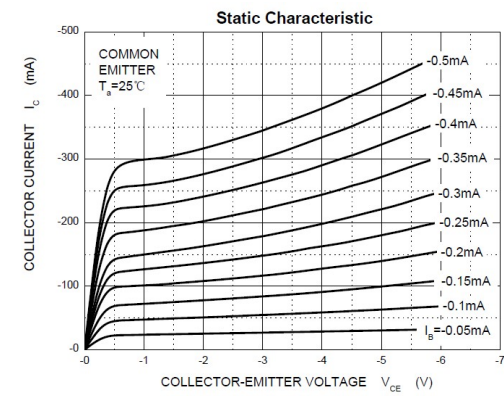
Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Test Condition	Symbols	Limits			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	$V_{(BR)CBO}$	-20			V
Collector-emitter breakdown voltage	$I_C = -10mA, I_B = 0$	$V_{(BR)CEO}^*$	-20			V
Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	$V_{(BR)EBO}$	-7			V
Collector cut-off current	$V_{CB} = -15V, I_E = 0$	I_{CBO}			-100	nA
Collector cut-off current	$V_{CES} = -15V, I_E = 0$	I_{CES}			-100	nA
Emitter cut-off current	$V_{EB} = -4V, I_C = 0$	I_{EBO}			-100	nA
DC current gain	$V_{CE} = -2V, I_C = -10mA$	$h_{FE(1)}$	300			
	$V_{CE} = -2V, I_C = -100mA$	$h_{FE(2)}^*$	300		600	
	$V_{CE} = -2V, I_C = -2A$	$h_{FE(3)}^*$	150			
	$V_{CE} = -2V, I_C = -4A$	$h_{FE(4)}^*$	35			
Collector-emitter saturation voltage	$I_C = -100mA, I_B = -10mA$	$V_{CE(sat)}^*$			-40	mV
	$I_C = -1A, I_B = -20mA$				-200	mV
	$I_C = -1.5A, I_B = -50mA$				-220	mV
Base-emitter saturation voltage	$I_C = -1.5A, I_B = -50mA$	$V_{BE(sat)}^*$			-1.0	V
Base-emitter on voltage	$V_{CE} = -2V, I_C = -2A$	$V_{BE(on)}^*$			-1.0	V
Transition frequency	$V_{CE} = -10V, I_C = -50mA, f = 100MHz$	f_T	150			MHz
Collector output capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$	C_{ob}			30	pF
Turn-on time	$V_{CC} = -10V, I_C = -1A, I_{B1} = I_{B2} = -20mA$	$t_{(on)}$		40		ns
Turn-off time		$t_{(off)}$		670		ns

* Measured under pulsed conditions, Pulse width=300us, Duty cycle≤2%

Typical characteristics



Ordering information

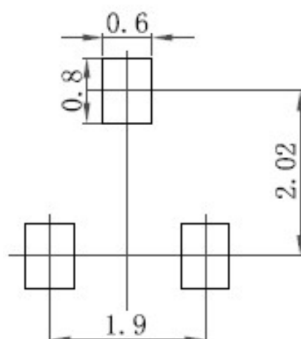
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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