

FEATURE

- Extremely low saturation voltage
- Complementary PNP type: FMMT718

APPLICATION

- Gate Driving MOSFETs and IGBTs
- DC-DC converters
- Charging circuit
- Power switches


SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	20	V
V _{CE0}	Collector-Emitter Voltage	20	V
V _{EB0}	Emitter-Base Voltage	5	V
I _B	Base Current	0.5	A
I _C	Collector Current -Continuous	2.5	A
P _C	Total Collector Dissipation	350	mW
R _{θJA}	Thermal Resistance from Junction to Ambient	357	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

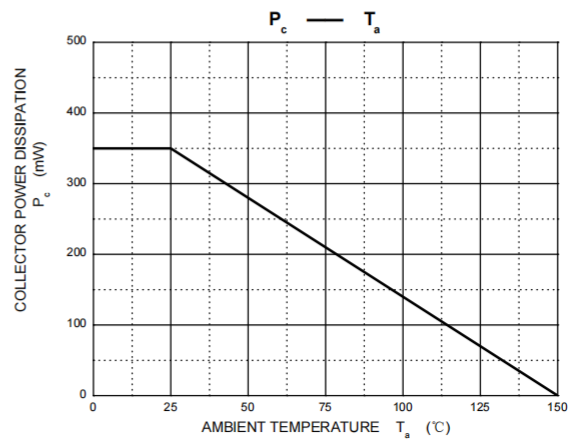
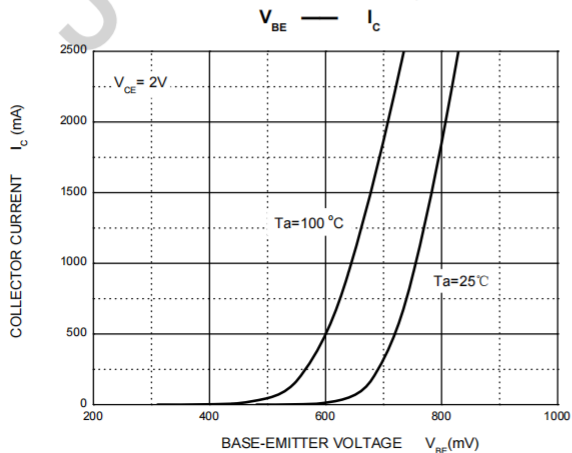
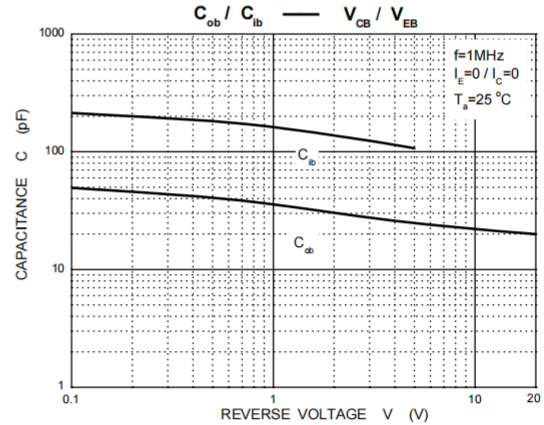
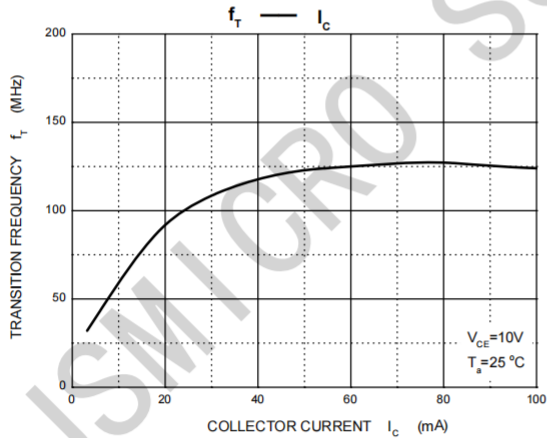
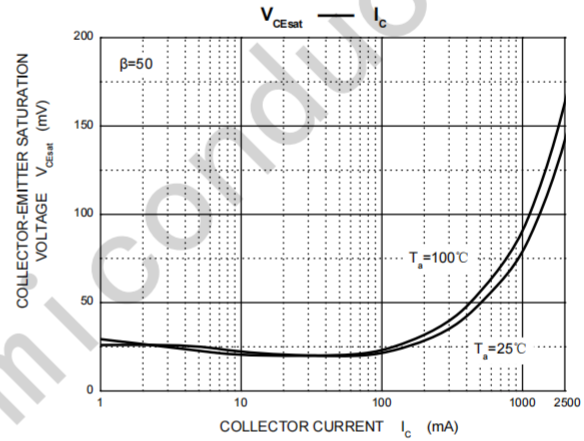
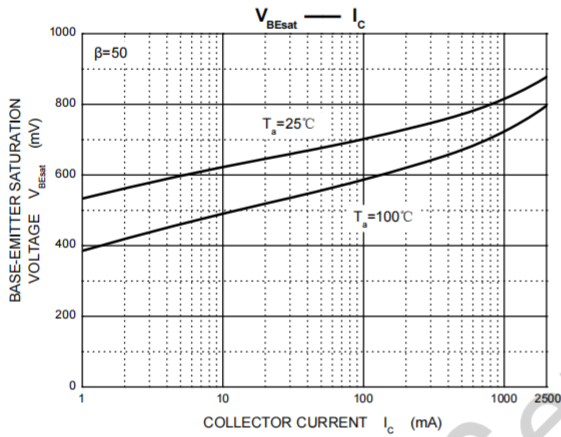
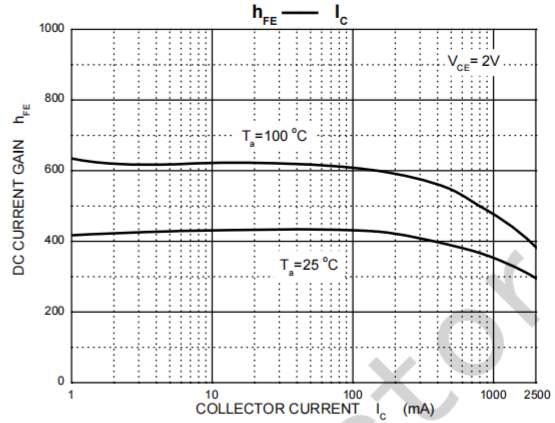
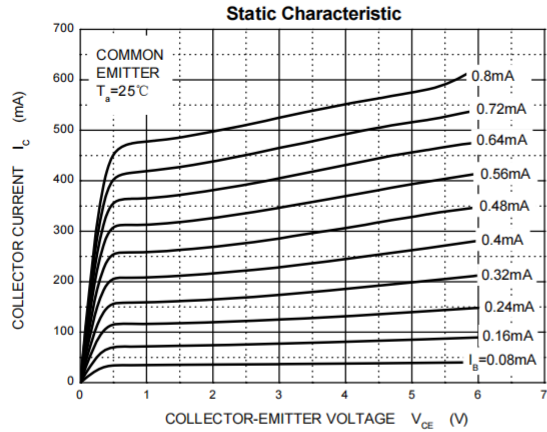
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	20			V
Collector-emitter breakdown voltage (note 1)	V _{(BR)CEO}	I _C =10mA, I _B =0	20			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CE} =16V, I _E =0			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			100	nA
DC current gain (note 1)	h _{FE(1)}	V _{CE} =2V, I _C =10mA	200			
	h _{FE(2)}	V _{CE} =2V, I _C =0.2A	300			
	h _{FE(3)}	V _{CE} =2V, I _C =2A	200			
	h _{FE(4)}	V _{CE} =2V, I _C =4A	100			
Collector-emitter saturation voltage (note 1)	V _{CE(sat)1}	I _C =0.1A, I _B =10mA			15	mV
	V _{CE(sat)2}	I _C =1A, I _B =10mA			150	mV
	V _{CE(sat)3}	I _C =2.5A, I _B =50mA			200	mV
Base-emitter saturation voltage (note 1)	V _{BE(sat)}	I _C =2.5A, I _B =50mA			1	V
Base-emitter on voltage (note 1)	V _{BE(on)}	I _C =2.5A, V _{CE} =2V			1	V
Output capacitance	C _{ob}	V _{CB} =10V, f=1MHz			30	pF
Turn-on time	t _(on)	V _{CC} =10V, I _C =1A, I _{B1} =-I _{B2} =10mA		170		ns
Turn-off time	t _(off)			400		ns
Transition frequency	f _T	V _{CE} =10V, I _C =50mA, f=100MHz	100			MHz

Notes :

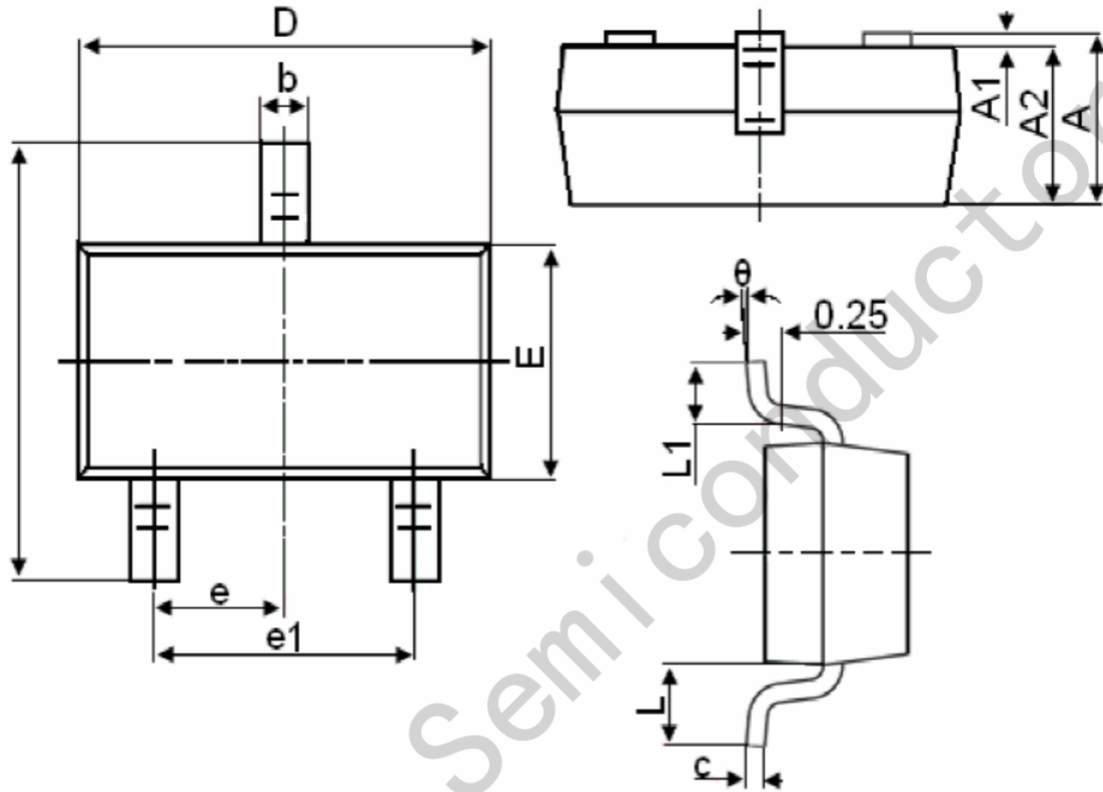
1. Pulse test: Pulse width≤300μs, duty cycle≤2.0%.

Typical Characteristics



Package Information

SOT-23



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
theta	0°	8°	0°	8°

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