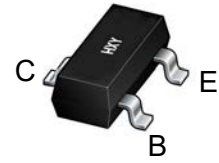




### FEATURES

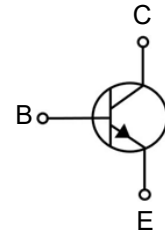
Extremely low saturation voltage  
Complementary PNU type: FMMT18



### Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
FMMT618	SOT-23	618	3000

### SOT-23



### MAXIMUM RATINGS (Ta=25 unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	20	V
V <sub>CEO</sub>	Collector-Emitter Voltage	20	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current	2.5	A
I <sub>B</sub>	Collector Current	2	A
P <sub>C</sub>	Collector Power Dissipation	350	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	500	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction And Storage Temperature Range	-55~+150	°C

### ELECTRICAL CHARACTERISTICS(Ta=25 unless otherwise noted)

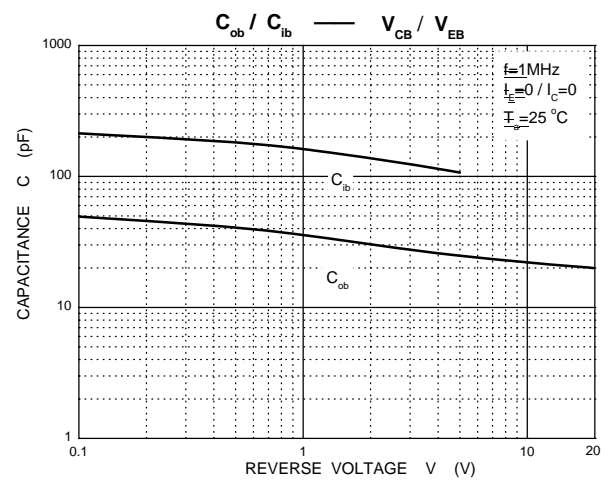
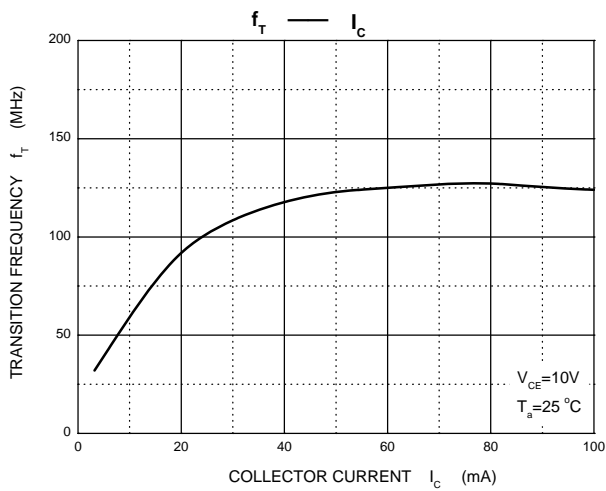
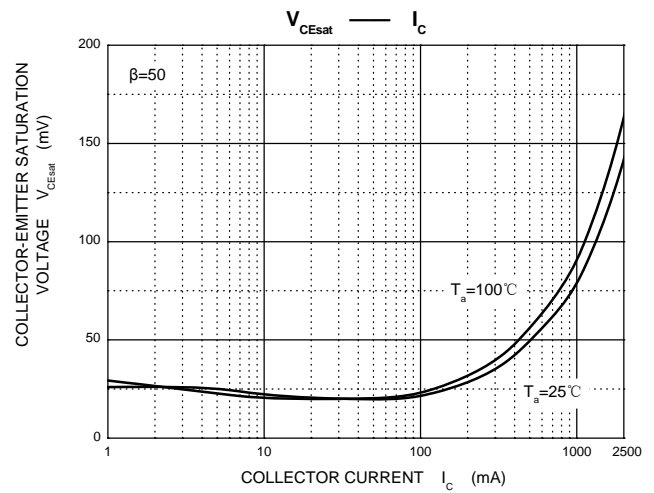
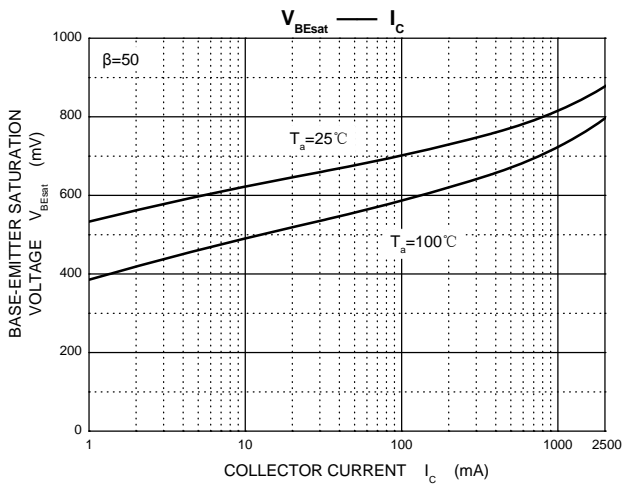
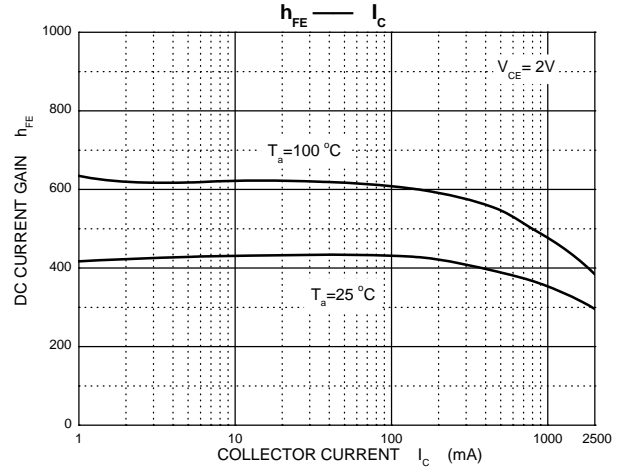
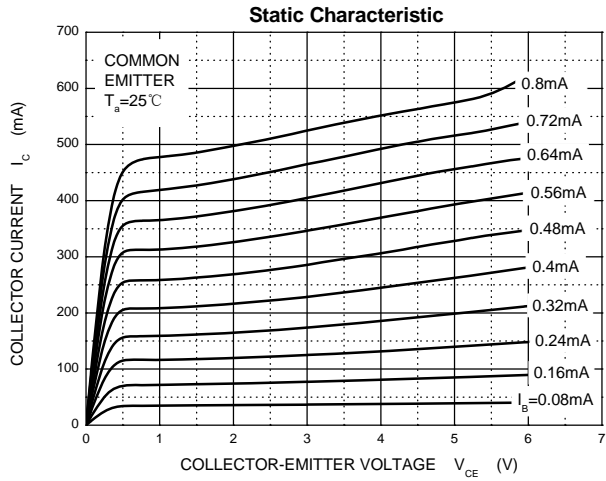
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	20			V
Collector-emitter breakdown voltage (note 1)	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	20			V
Emitter-base breakdown voltage	V <sub>(BR)EBO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

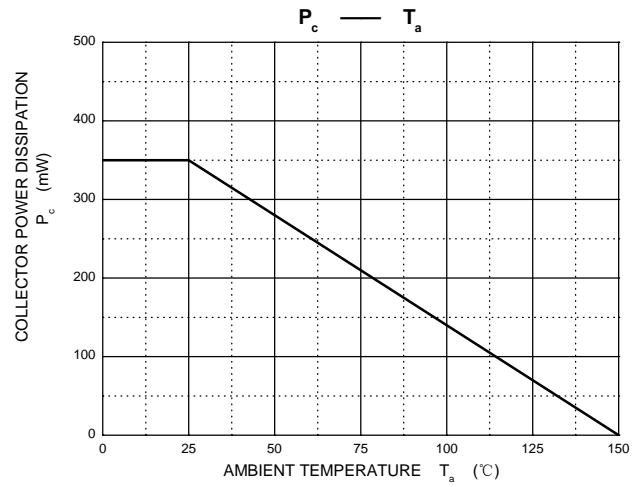
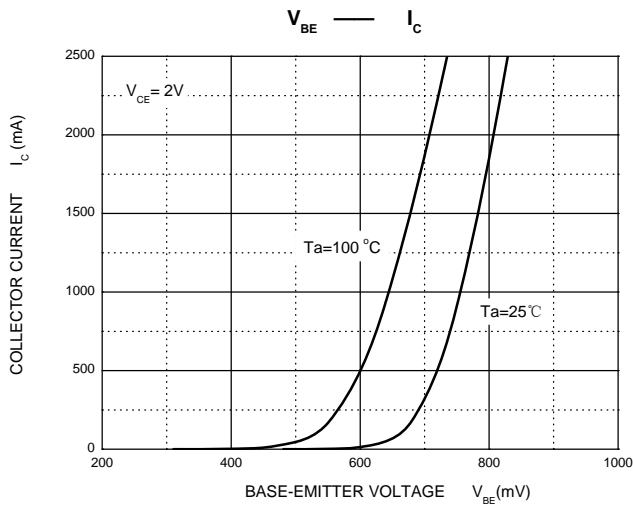
#### Notes :

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

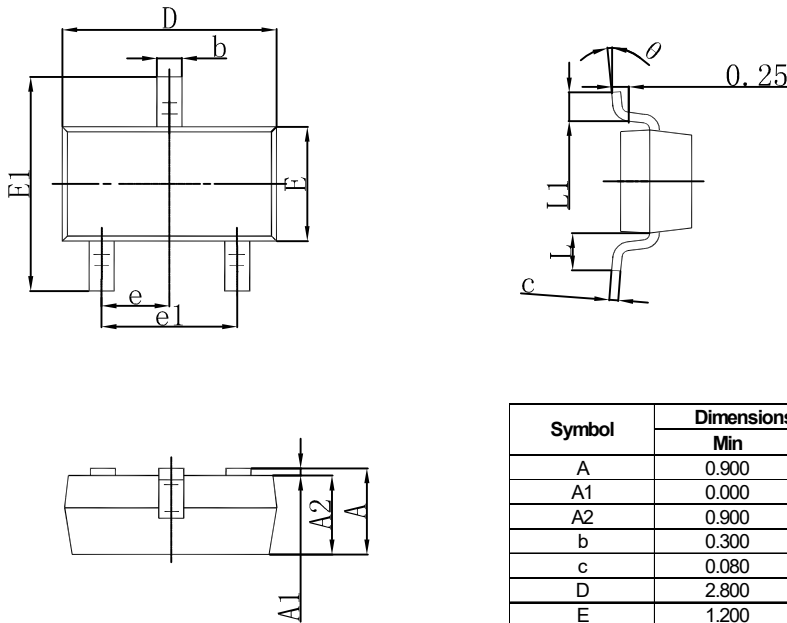


### Typical Characteristics





### SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		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	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°



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