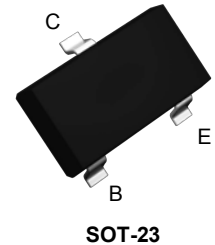


Features

- Low saturation voltage

Absolute Maximum Ratings (T_A = 25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current -Continuous	I _C	2	A
Collector Power Dissipation	P _C	0.35	W
Thermal Resistance from Junction to Ambient	R _{θJA}	357	°C/W
Maximum Power Dissipation ¹	P _{CM}	0.625	W
Thermal Resistance from Junction to Ambient ¹	R _{θJA}	200	°C/W
Junction & Storage Temperature	T _J T _{STG}	-55 to +150	°C



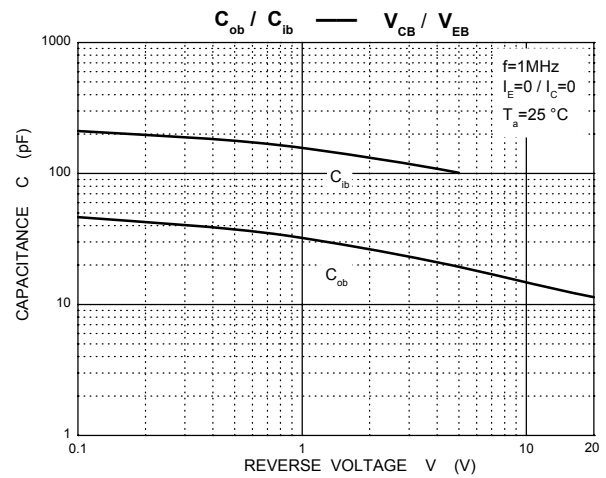
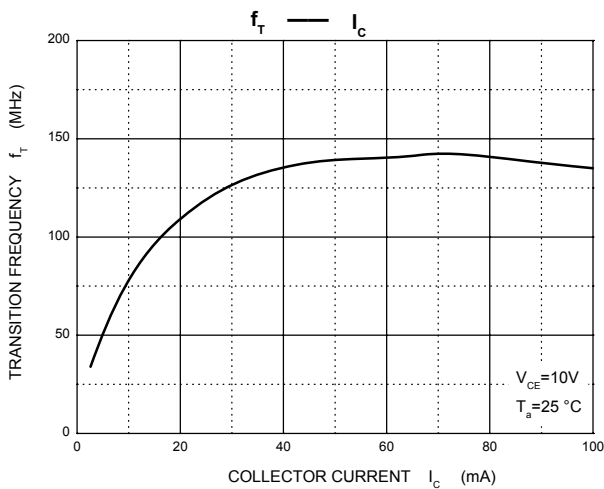
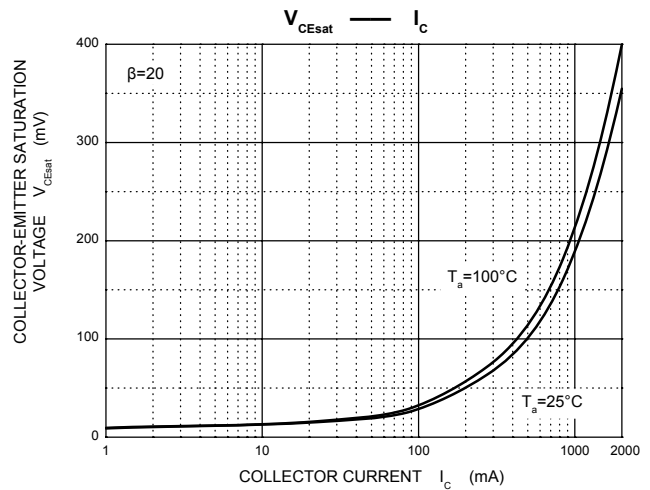
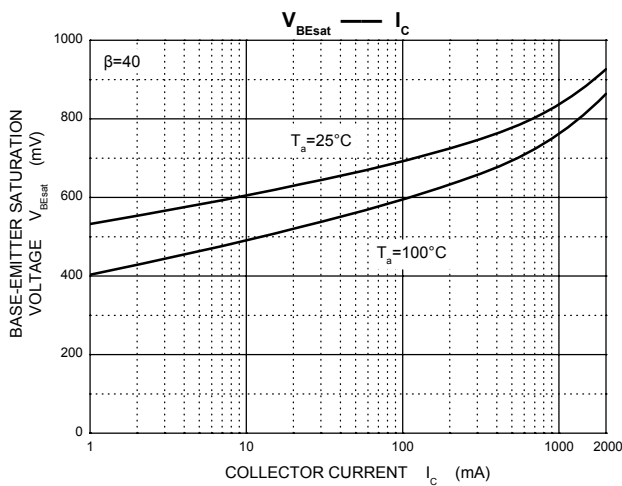
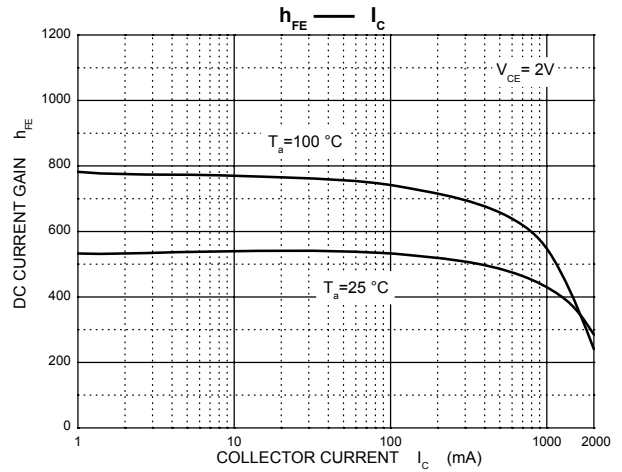
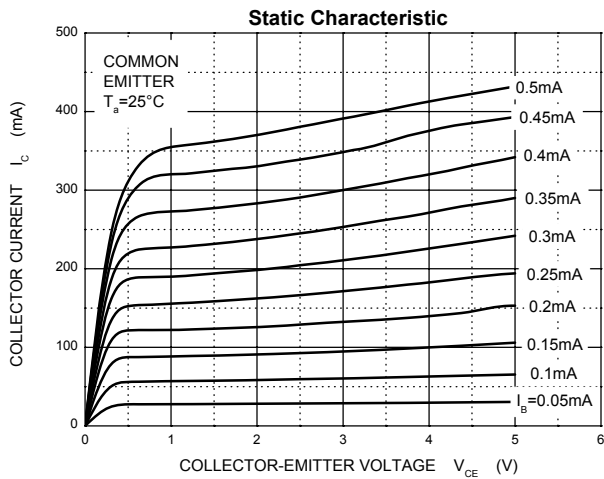
Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	50	-	-	V
Collector-Emitter Breakdown Voltage ²	V _{(BR)CEO}	I _C =10mA, I _B =0	50	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5	-	-	V
Collector Cut-Off Current	I _{CB0}	V _{CB} =40V, I _E =0	-	-	100	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =4V, I _C =0	-	-	100	nA
DC Current Gain ²	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 =1A	200	-	-	-
	h _{FE(4)}	V _{CE} =2V, I _C =2A	100	-	-	-
	h _{FE(5)}	V _{CE} =2V, I _C =6A	-	40	-	-
Collector-Emitter Saturation Voltage ²	V _{CE(sat)1}	I _C =0.1A, I _B =10mA	-	-	20	mV
	V _{CE(sat)2}	I _C =1A, I _B =10mA	-	-	200	mV
	V _{CE(sat)3}	I _C =2A, I _B =100mA	-	-	220	mV
Base-Emitter Saturation Voltage ²	V _{BE(sat)}	I _C =2A, I _B =50mA	-	-	1	V
Base-Emitter On Voltage ²	V _{BE(on)}	I _C =2A, V _{CE} =2V	-	-	1	V
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz	-	-	20	pF
Turn-On Time	t _(on)	V _{CC} =10V, I _C =1A, I _{B1} =-I _{B2} =10mA	-	170	-	nS
Turn-Off Time	t _(off)		-	750	-	nS
Transition Frequency	f _T	V _{CE} =10V, I _C =50mA, f=100MHz	100	-	-	MHz

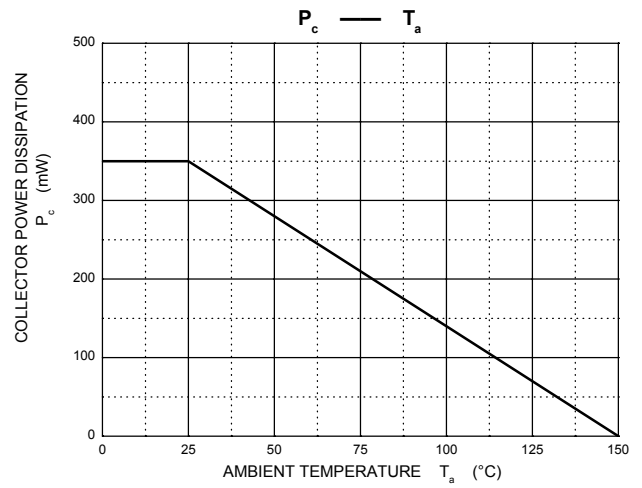
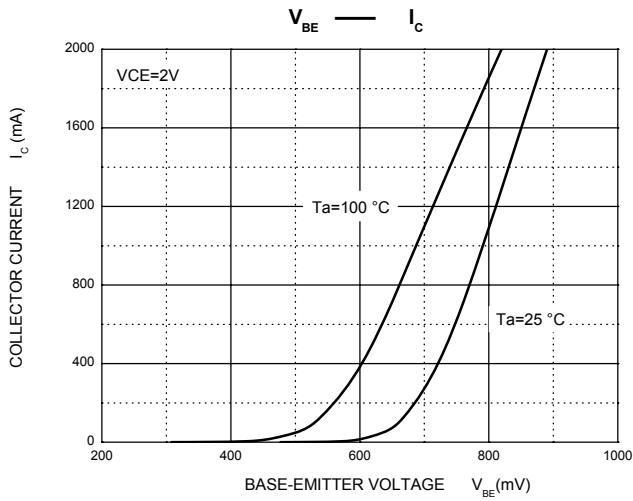
Notes:

1. Maximum power dissipation is calculated assuming that the device is mounted on a ceramic substrate measuring 15x15x0.6mm.
2. Pulse test: Pulse width≤300μS, duty cycle≤2.0%.

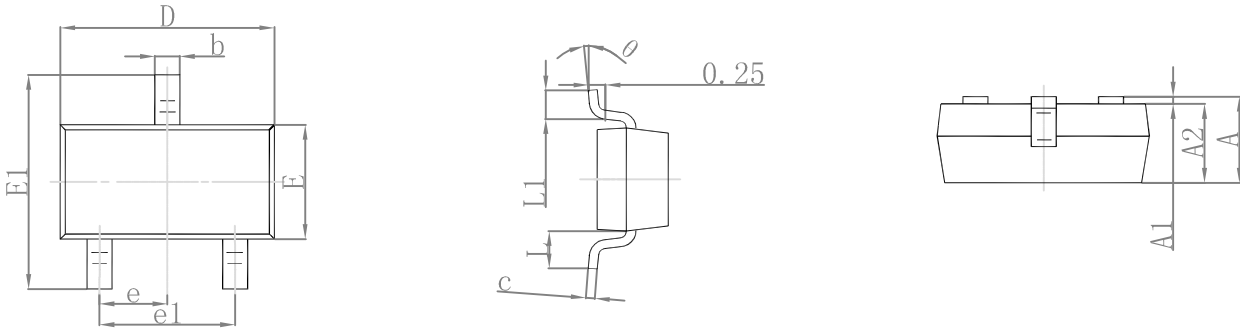
Typical Characteristic Curves



Typical Characteristic Curves

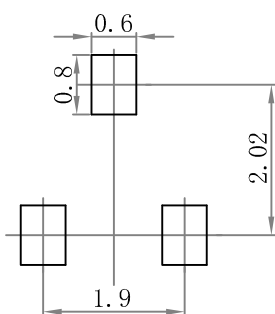


Package Outline Dimensions SOT-23



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°

Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

Marking and Ordering Information

Device	Package	Marking	Quantity	HSF Status
MMT619	SOT-23	619	3000pcs / Reel	RoHS Compliant