

SOT-23 Plastic-Encapsulate Transistors

Features

- For Switching and Amplifier Applications
- Complementary to MMBTA56
- 300 mW Power Dissipation of 300mW
- High Stability and High Reliability

Mechanical Data

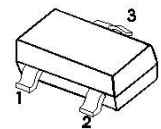
- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any



Marking: 1GM

SOT-23

Pin definition



1. BASE
2. EMITTER
3. COLLECTOR

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	80	V
Collector-Emitter Voltage	V _{CEO}	80	V
Emitter -Base Voltage	V _{EBO}	4	V
Collector Current-Continuous	I _C	500	mA
Collector Power Dissipation	P _C	300	mW
Operating junction temperature range	T _J	150	°C
Storage temperature range	T _{STG}	-55-+150	°C
Thermal Resistance from Junction to Ambient	R _{θJA}	416	°C/W

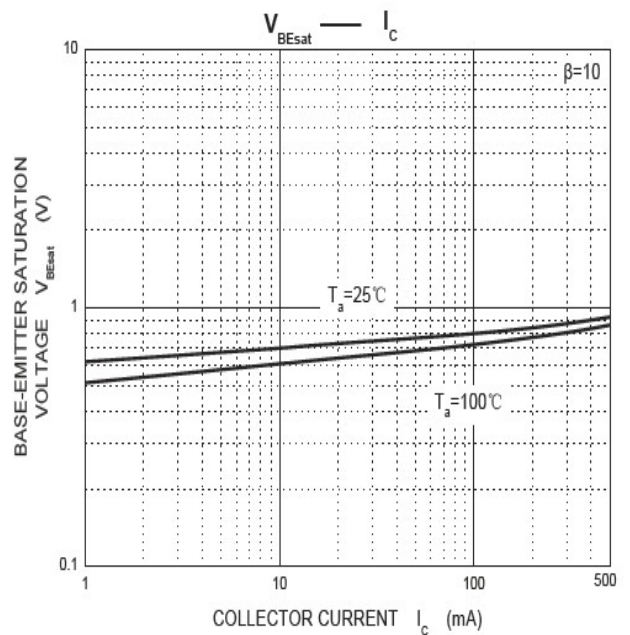
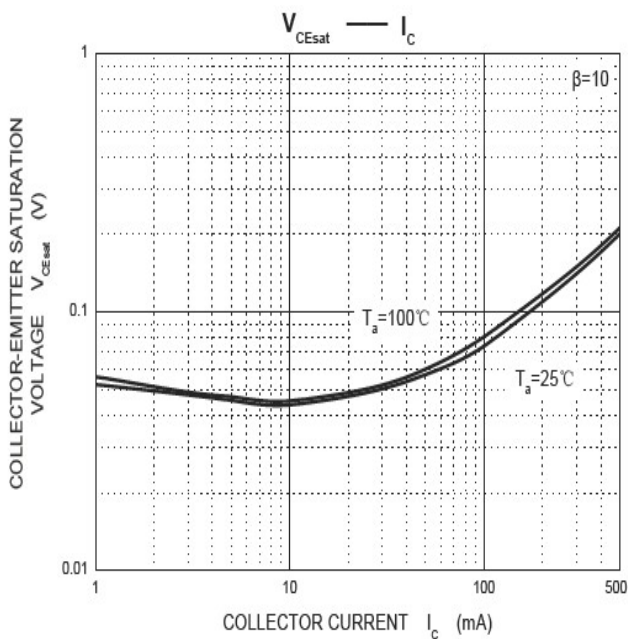
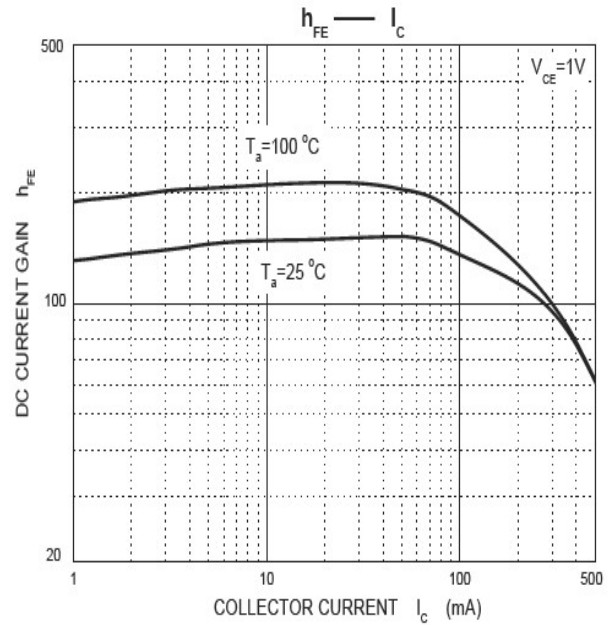
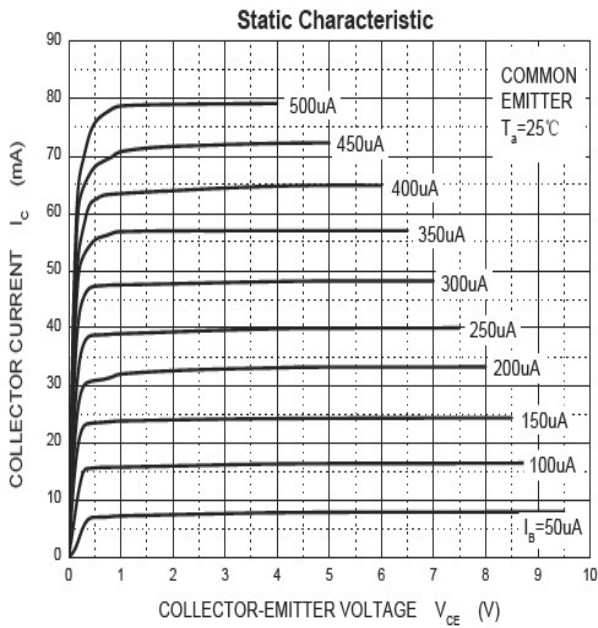
Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100uA, I _E =0	80		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	80		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100uA, I _C =0	4		
Collector cut-off current	I _{CBO}	V _{CB} =80V, I _E =0		100	nA
Collector cut-off current	I _{CEO}	V _{CE} =60V, I _B =0		1.0	uA
Emitter cut-off current	I _{EBO}	V _{EB} =3V, I _C =0		100	nA
DC current gain	h _{FE}	V _{CE} =1V, I _C =10mA	100	400	
		V _{CE} =1V, I _C =100mA	100		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100mA, I _B =10mA		0.25	V
Base -emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B =10mA		1.20	
Transition frequency	f _T	V _{CE} =2V, I _C =10mA, f=100MHz	300		MHz

*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%

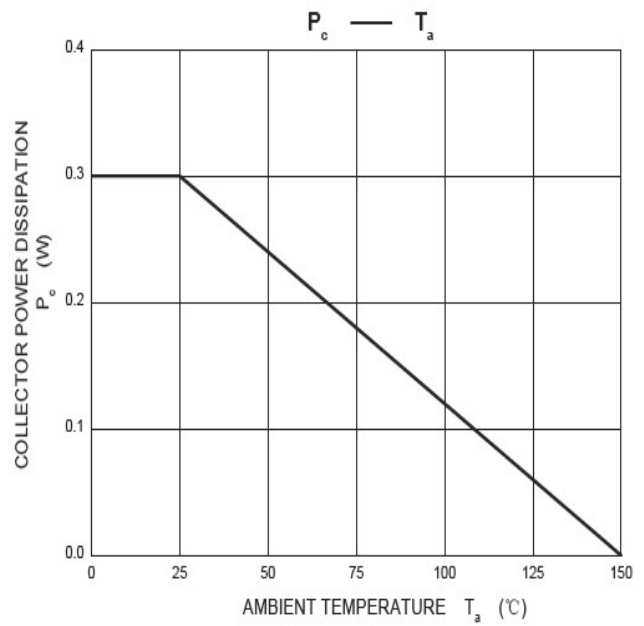
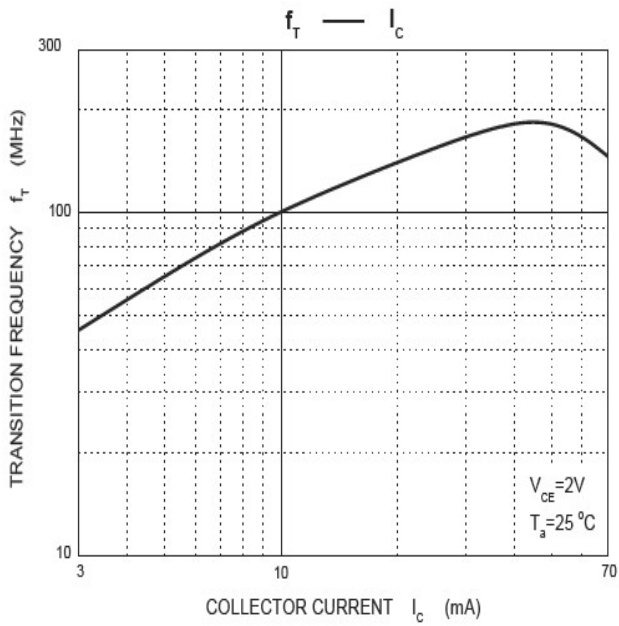
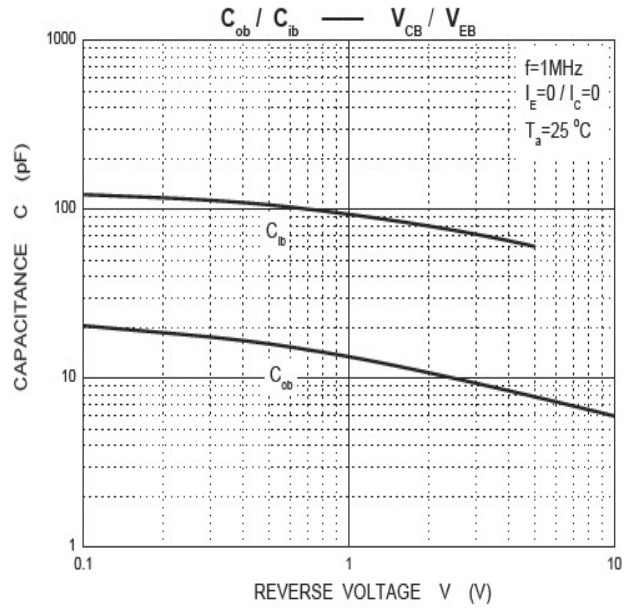
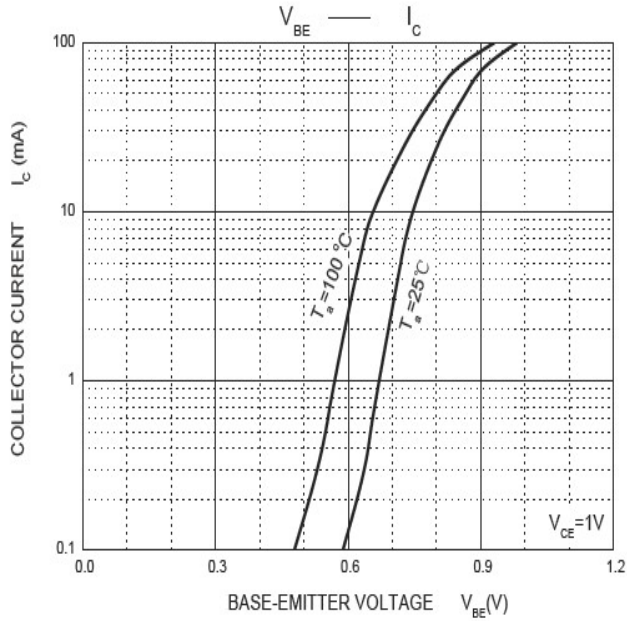
Ratings and Characteristics Curves

($T_a = 25^\circ\text{C}$ unless otherwise noted)



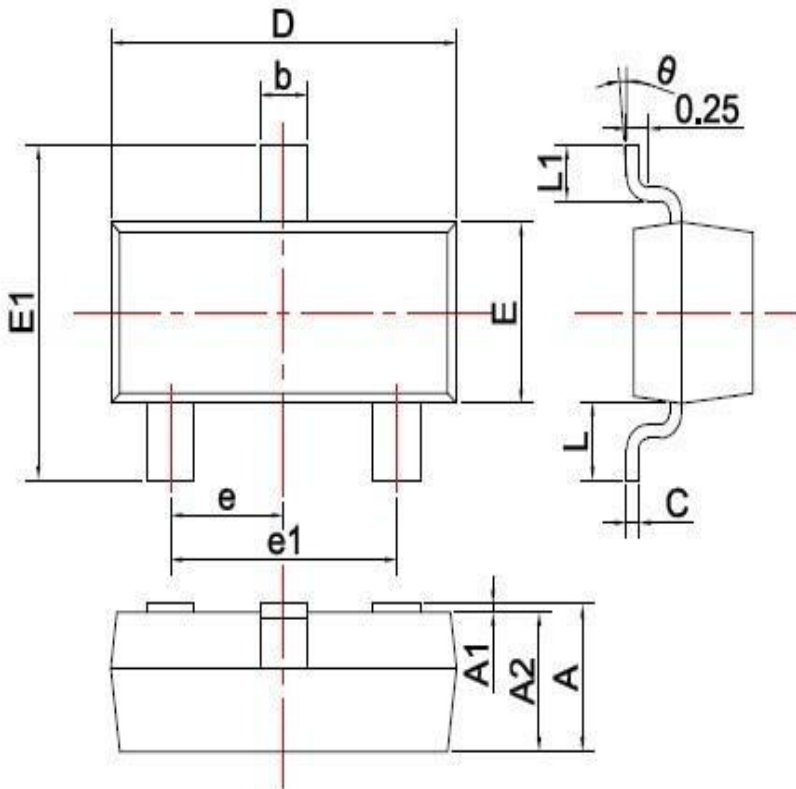
Ratings and Characteristics Curves

($T_a = 25^\circ\text{C}$ unless otherwise noted)



Package Outline Dimensions

millimeters



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Revision History

Document Version	Date of release	Description of changes
Rev.A	2017.09.20	First issue

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