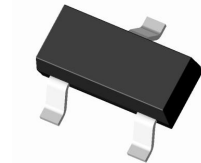


SOT-23 Plastic-Encapsulate Transistors

Features

- Complementary to MMBT3906
- 200mW; Power Dissipation of 200mW
- High Stability and High Reliability



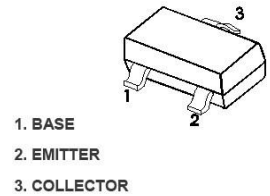
Marking: 1AM

SOT-23

Mechanical Data

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

Pin definition



Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter -Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _C	200	mA
Collector Power Dissipation	P _C	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	625	°C/W

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

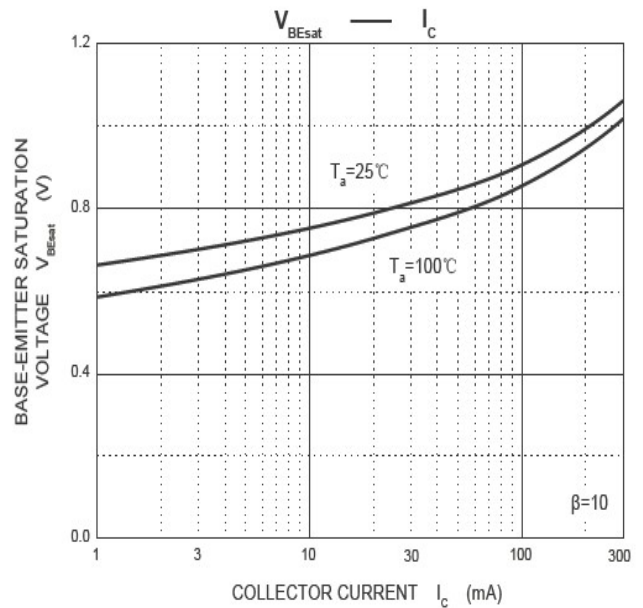
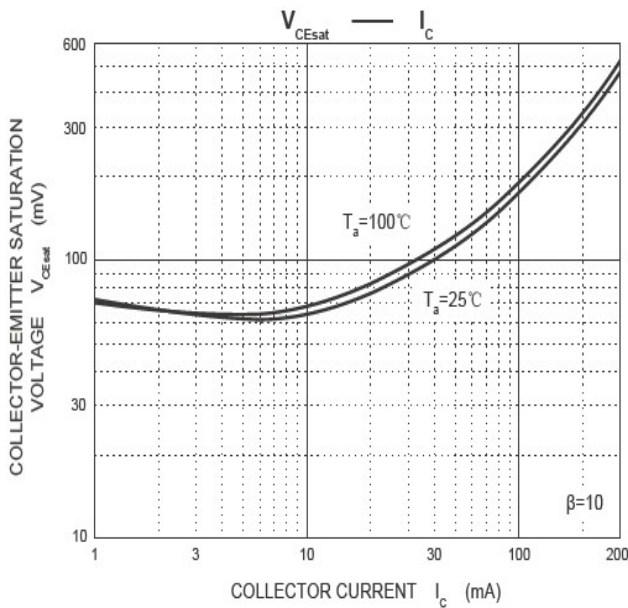
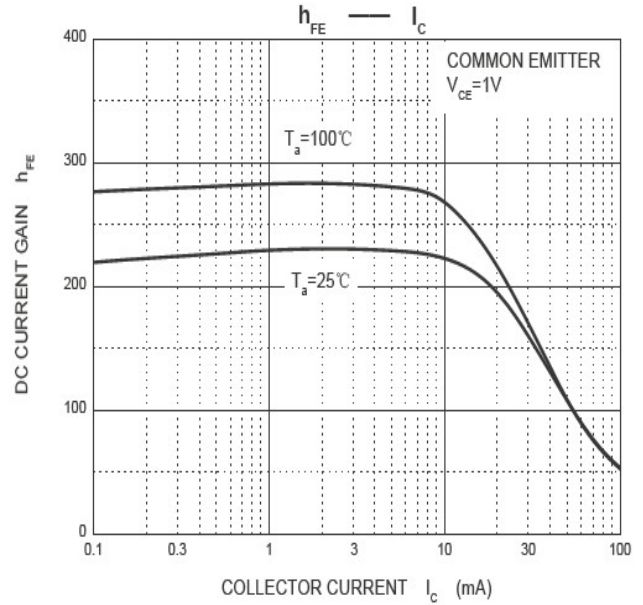
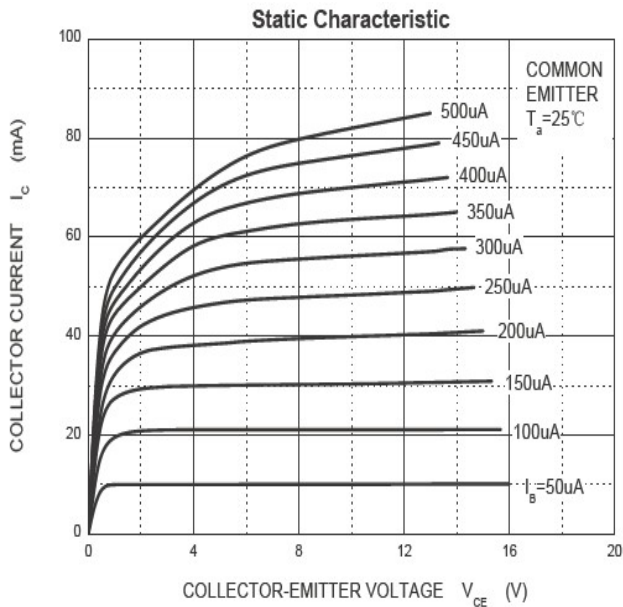
Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-basebreakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	60		V
Collector-emitterbreakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6		V
Collector cut-off current	I_{CEX}	$V_{CE}=30\text{V}, V_{EB(off)}=3\text{V}$		50	nA
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$		100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		100	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=10\text{mA}$	100	300	
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=50\text{mA}$	60		
	$h_{FE(3)}$	$V_{CE}=1\text{V}, I_C=100\text{mA}$	30		
Collector-emittersaturation voltage	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$		0.30	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$		0.95	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	300		MHz
Delay time	t_d	$V_{CC}=3\text{V}, V_{BE(off)}=-0.5\text{V}, I_C=10\text{mA}, I_{B1}=1\text{mA}$		35	nS
Rise time	t_r	$V_{CC}=3\text{V}, V_{BE(off)}=-0.5\text{V}, I_C=10\text{mA}, I_{B1}=1\text{mA}$		35	nS
Storage time	t_s	$V_{CC}=3\text{V}, I_C=10\text{mA}, I_{B1}=I_{B2}=1\text{mA}$		200	nS
Fall time	t_f	$V_{CC}=3\text{V}, I_C=10\text{mA}, I_{B1}=I_{B2}=1\text{mA}$		50	nS

Classification OF $h_{FE(2)}$

HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

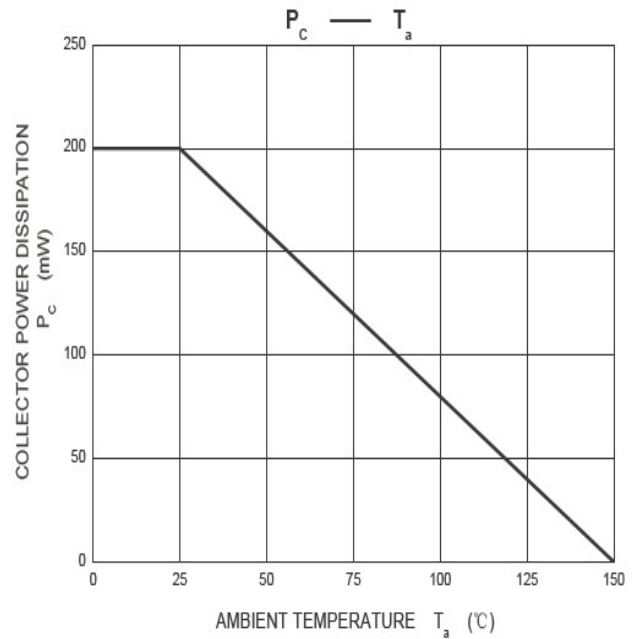
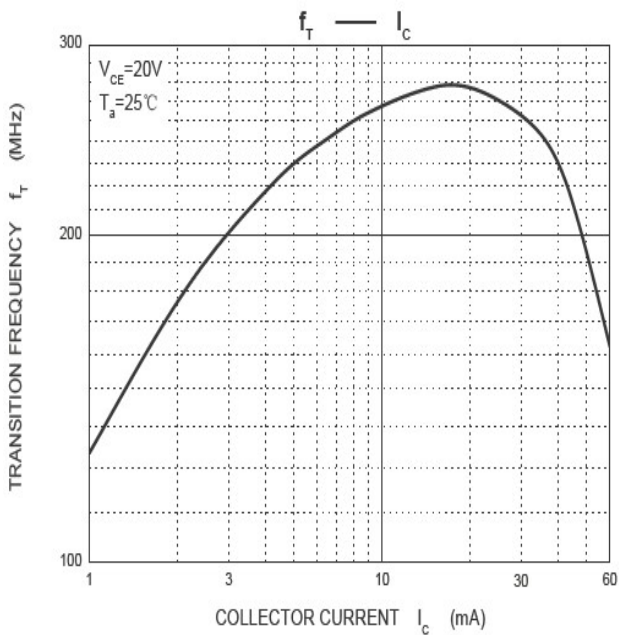
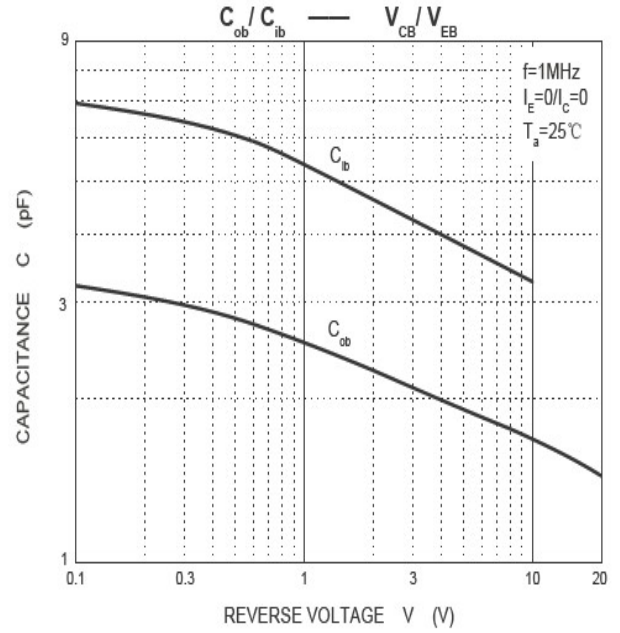
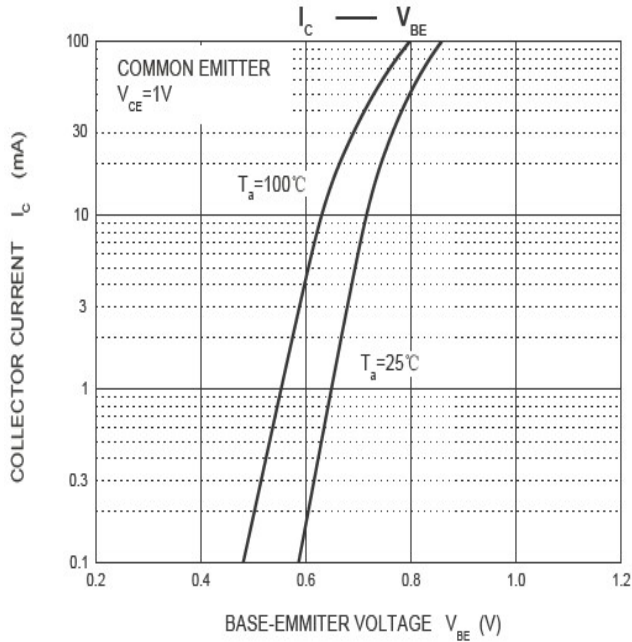
Ratings and Characteristics Curves

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



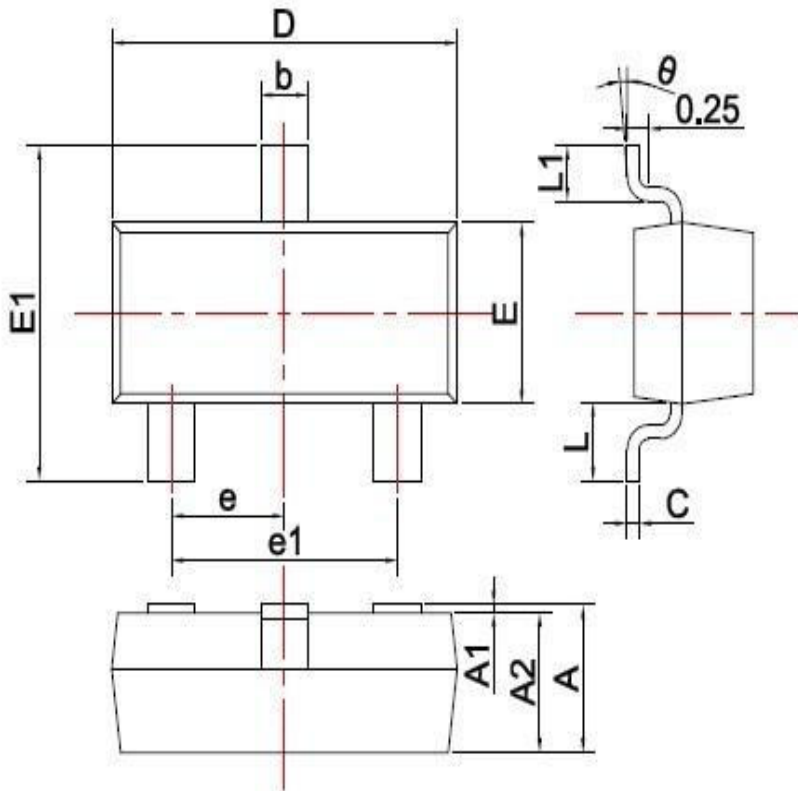
Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ 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	2017.02.16	First issue

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