

SOT-23 Plastic-Encapsulate Transistors

Features

- Complementary to MMBTA94
- 350 mW Power Dissipation of 350mW
- High Stability and High Reliability

Mechanical Data

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

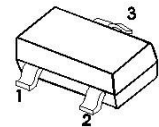


RoHS
COMPLIANT



Marking: 3D SOT-23

Pin definition



1. BASE
2. EMITTER
3. COLLECTOR

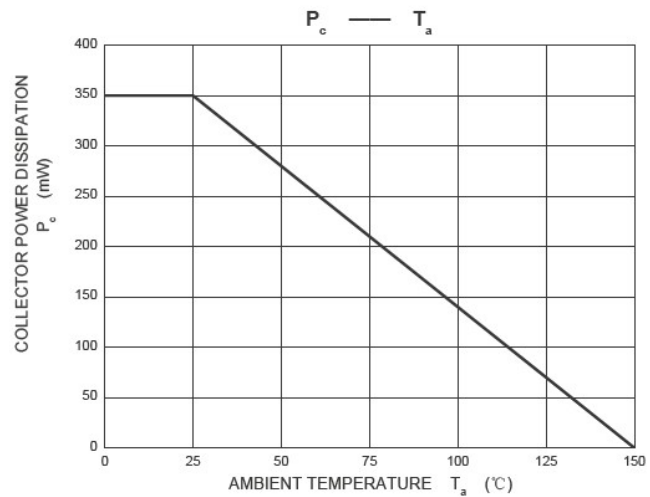
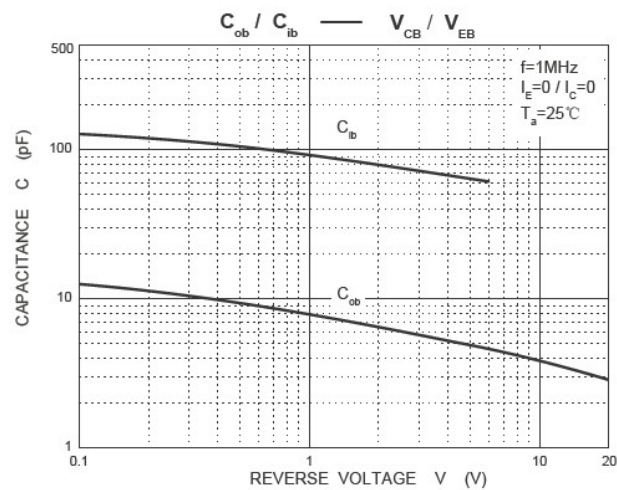
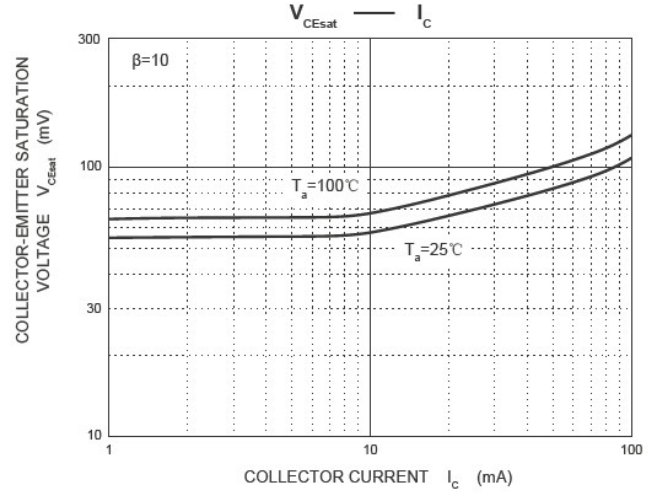
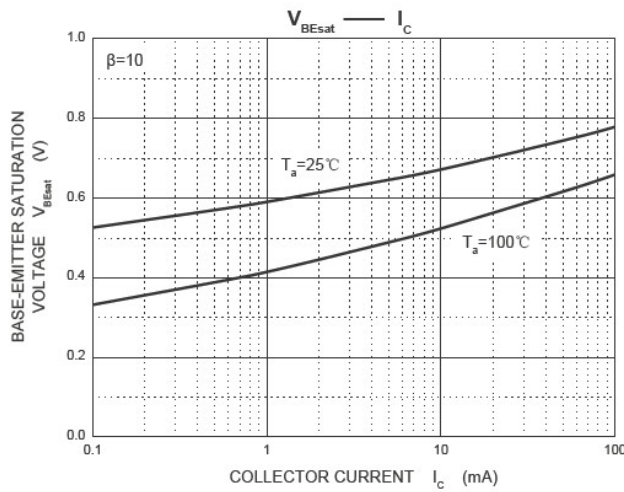
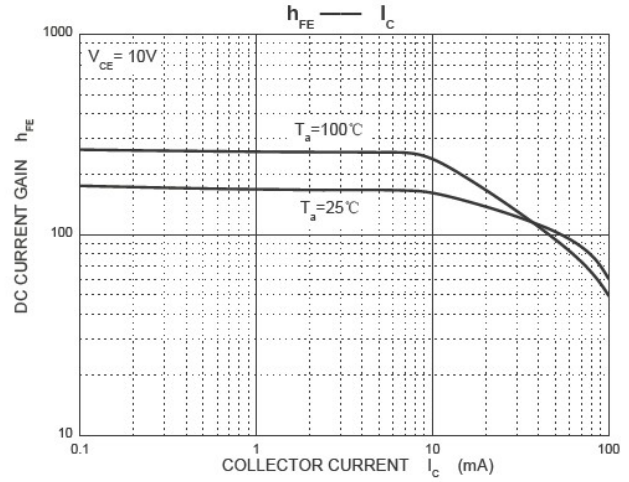
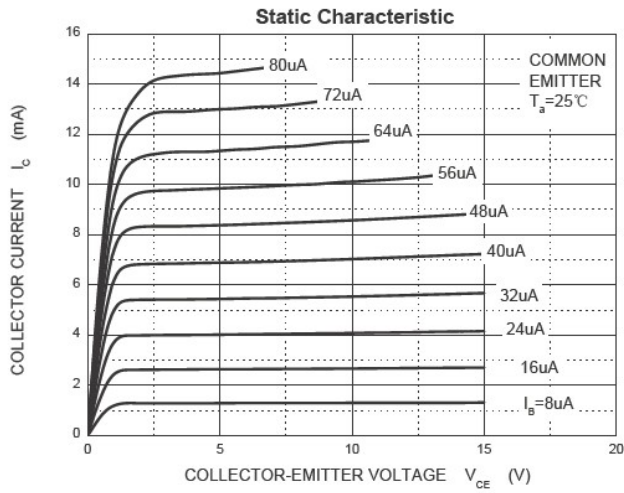
Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	400	V
Collector-Emitter Voltage	V _{CEO}	400	V
Emitter -Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _C	200	mA
Collector Power Dissipation	P _C	350	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}	357	°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 =100μA, I _E =0	400		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	400		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	6		
Collector cut-off current	I _{CBO}	V _{CB} =400V, I _E =0		100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0		100	
DC current gain	hFE(1)*	V _{CE} =10V, I _C =1mA	40		
	hFE(2)*	V _{CE} =10V, I _C =10mA	50		
	hFE(3)*	V _{CE} =10V, I _C =50mA	45		
	hFE(4)*	V _{CE} =10V, I _C =100mA	40		
Collector-emitter saturation voltage	V _{CE(sat)1} *	I _C =1mA, I _B =0.1mA		0.40	V
Collector-emitter saturation voltage	V _{CE(sat)2} *	I _C =10mA, I _B =1mA		0.50	
Collector-emitter saturation voltage	V _{CE(sat)3} *	I _C =50mA, I _B =5mA		0.75	
Base -emitter saturation voltage	V _{BE(sat)} *	I _C =10mA, I _B =1mA		0.75	
Collector output capacitance	C _{ob}	V _{CB} =20V, I _E =0; f=1MHz		7	pF
Emitter input capacitance	C _{ib}	V _{eB} =0.5V, I _C =0; f=1MHz		130	

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

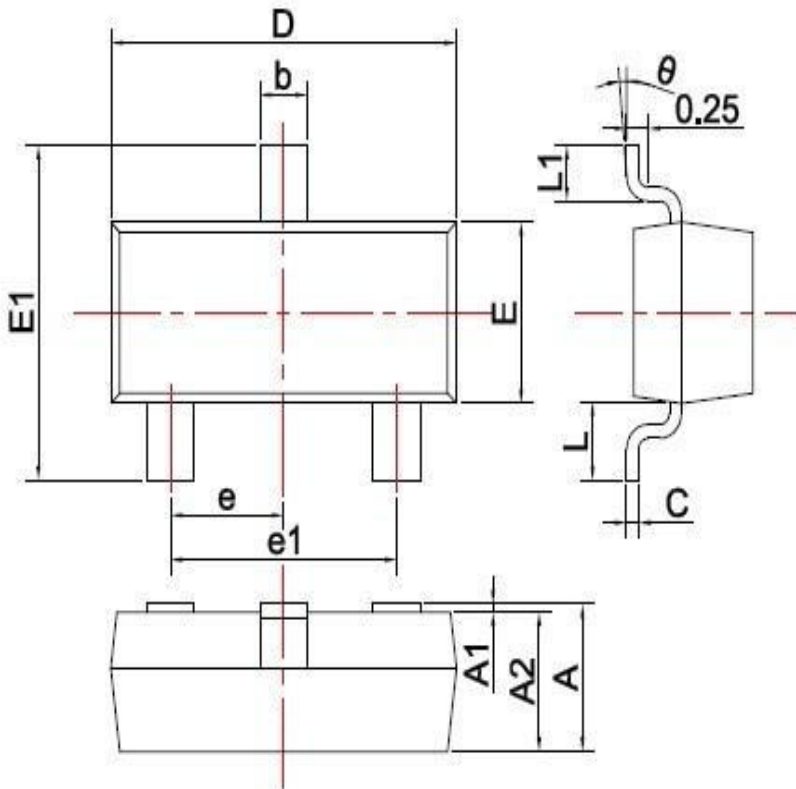
Ratings and Characteristics Curves

($T_a = 25^\circ\text{C}$ 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	2017.06.13	First issue

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