

SOT-23 Plastic- Encapsulate Transistors

Features

- Complementary to MMBTA42
- Power Dissipation of 300mW
- High Stability and High Reliability.



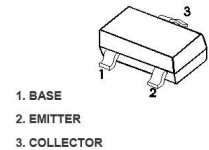
Mechanical Data

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

Marking : 2D

SOT-23

Pin definition



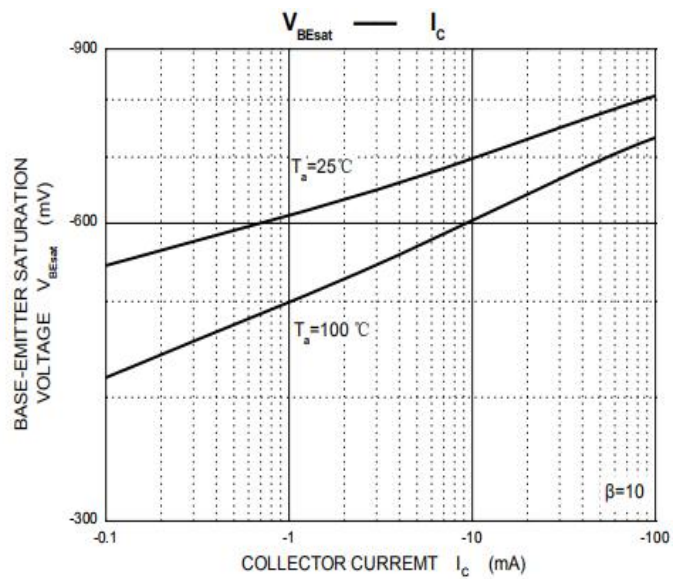
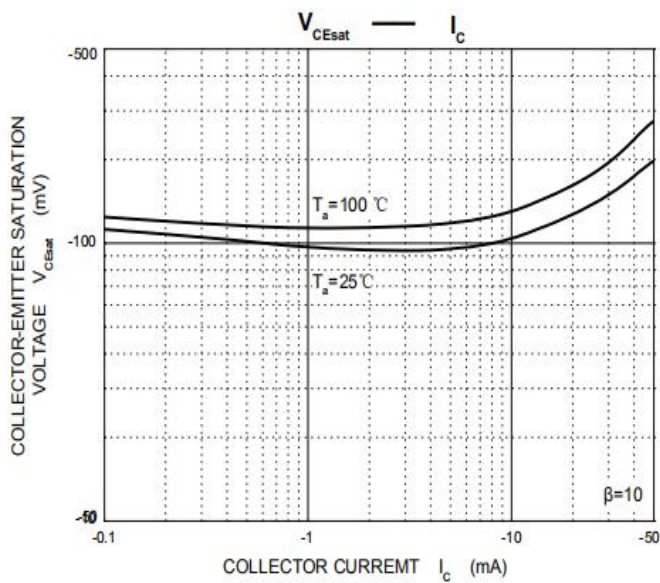
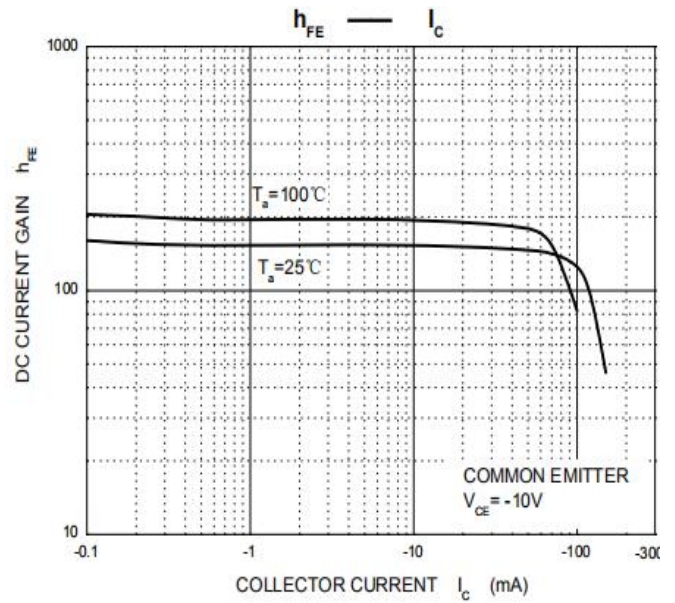
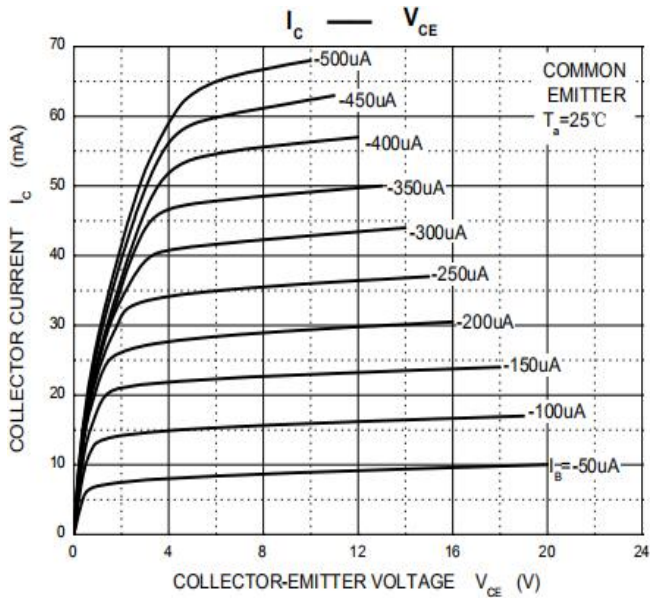
Maximum Ratings & Thermal Characteristics (T _A =25°C unless otherwise noted)			
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-300	V
Collector-Emitter Volta	V _{CEO}	-300	V
Emitter -Base Voltage	V _{EBO}	-5	V
Collector Current-Continuous	I _C	-200	mA
Collector Power Dissipation	P _C	300	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	417	°C/W

Electrical Characteristics (T _A =25°C unless otherwise noted)					
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I _C =-100μA, I _E =0	-300		V
Collector -emitter breakdown voltage	V(BR)CEO	I _C =-1mA, I _B =0	-300		V
Emitter-base breakdown voltage	V(BR)EBO	I _E =-100μA, I _C =0	-5		V
Collector cut -off current	I _{CBO}	V _{CB} =-200V, I _E =0		-250	nA
Emitter cut -off current	I _{EBO}	V _{EB} =-5V, I _C =0		-100	nA
DC current gain	hFE(1) *	V _{CE} =-10V, I _C =-1mA	60		
	hFE(2) *	V _{CE} =-10V, I _C =-10mA	100	200	
	hFE(3) *	V _{CE} =-10V, I _C =-30mA	65		
Collector -emitter saturation voltage	V _{CE(sat)}	I _C =-20mA, I _B =-2mA		-0.20	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C =-20mA, I _B =-2mA		-0.90	V
Transition frequency	f _T	V _{CE} =-20V, I _C =-10mA; f=30MHz	50		MHz

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

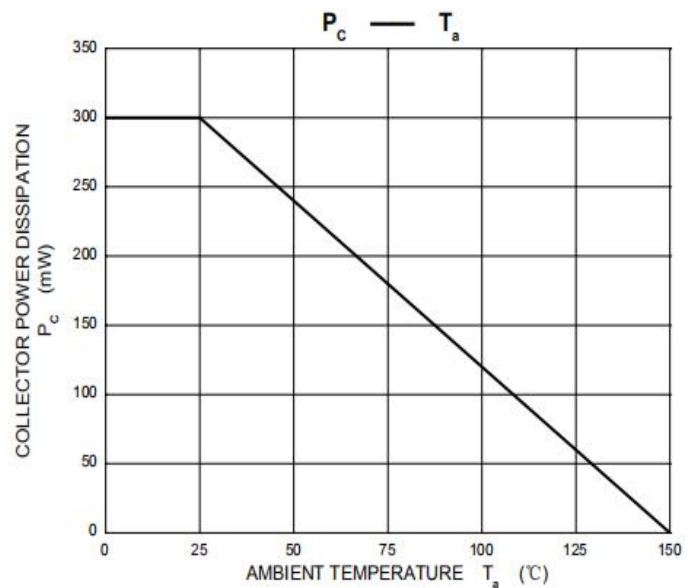
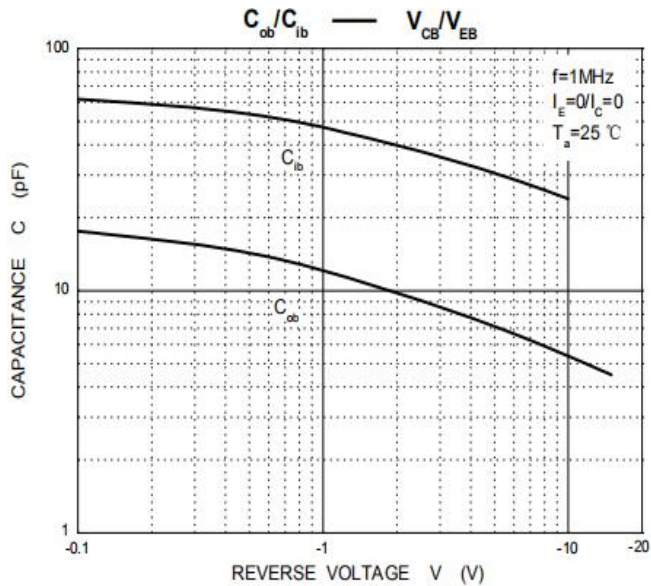
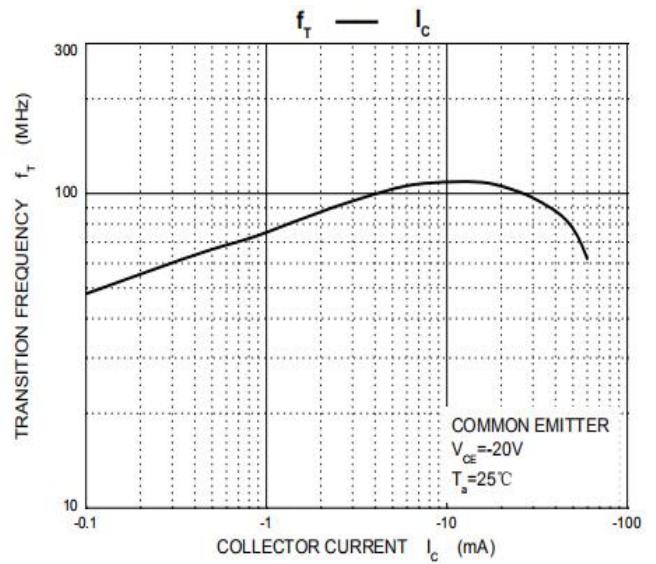
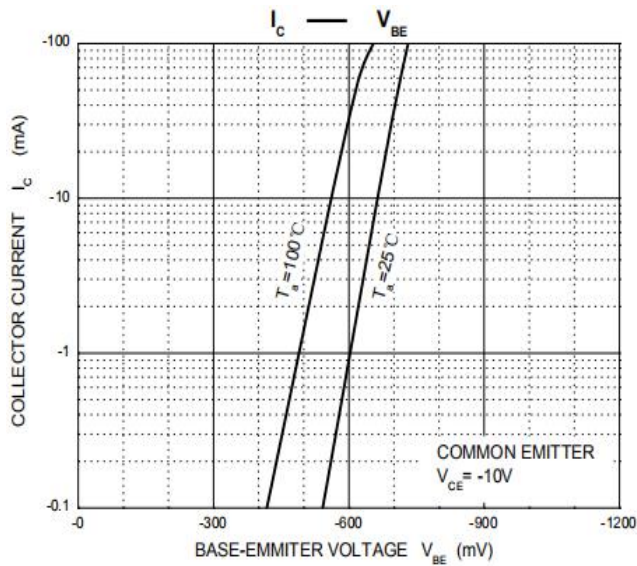
Ratings and Characteristics Curves

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



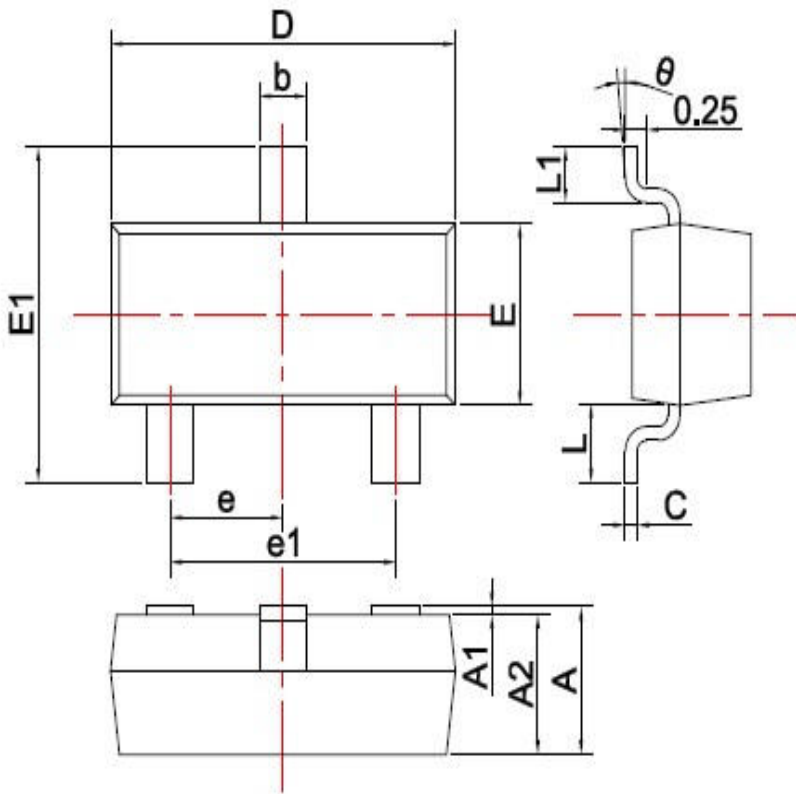
Ratings and Characteristics Curves

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

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