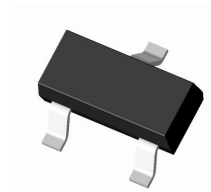


SOT-23 Plastic-Encapsulate Switching Transistors

Features

- 300mW; Power Dissipation of 300mW
- High Stability and High Reliability



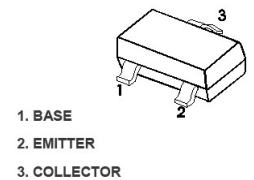
Mechanical Data

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

Marking: 2X

SOT-23

Pin definition



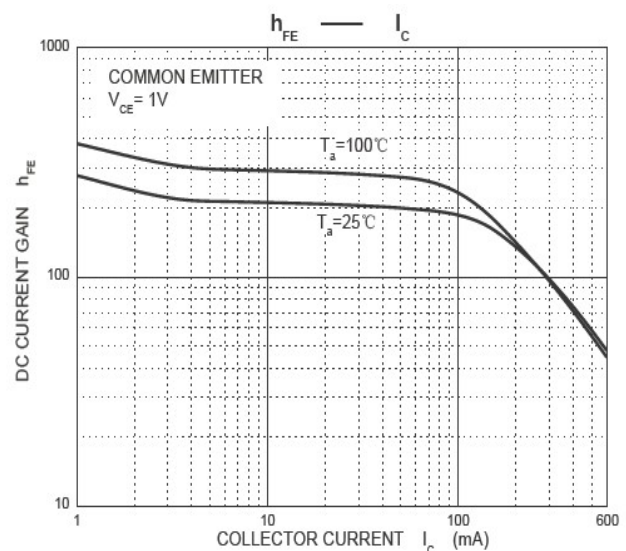
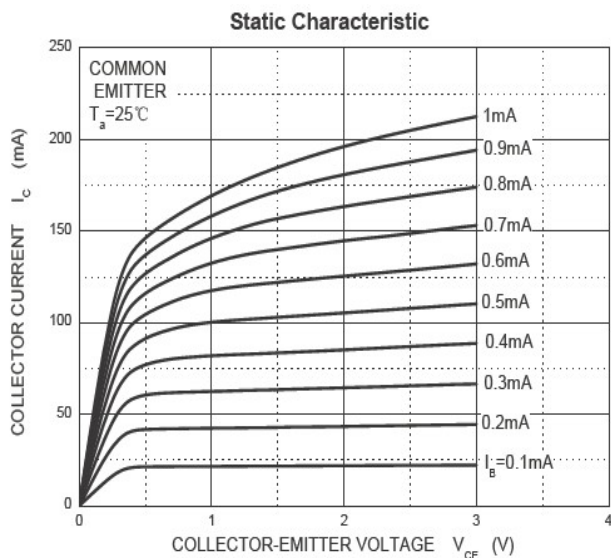
Maximum Ratings & Thermal Characteristics (T _A =25°C unless otherwise noted)			
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter -Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _C	600	mA
Collector Power Dissipation	P _C	300	mW
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 Specifications (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	60		V
Collector -emitter breakdown voltage	V(BR)CEO *	I _C = 1mA, I _B =0	40		V
Emitter -base breakdown voltage	V(BR)EBO	I _E =100μA, I _C =0	6		V
Collector cut -off current	I _{CBO}	V _{CB} = 50V, I _E =0		100	nA
Emitter cut -off current	I _{EBO}	V _{EB} = 5V, I _C =0		100	nA
Collector cut -off current	I _{CEX}	V _{CE} = 35V, V _{BE(off)} = 0.4V		100	nA
DC current gain	h _{FE} (1) *	V _{CE} = 1V, I _C = 0.1mA	20		
	h _{FE} (2) *	V _{CE} = 1V, I _C = 1mA	40		
	h _{FE} (3) *	V _{CE} = 1V, I _C = 10mA	80		
	h _{FE} (4) *	V _{CE} = 1V, I _C = 150mA	100	300	
	h _{FE} (5) *	V _{CE} = 1V, I _C = 500mA	40		
Collector -emitter saturation voltage	V _{CE(sat)1} *	I _C = 150mA, I _B = 15mA		0.40	V
	V _{CE(sat)2} *	I _C = 500mA, I _B = 50mA		0.75	V
Base -emitter saturation voltage	V _{BE(sat)1} *	I _C = 150mA, I _B = 15mA		0.95	V
	V _{BE(sat)2} *	I _C = 500mA, I _B = 50mA		1.20	V
Transition frequency	f _T	V _{CE} = 10V, I _C = 20mA, f=100MHz	250		MHz
Delay time	t _d	V _{CE} = 30V, I _C = 150mA, I _{B1} = 15mA		15	nS
Rise time	t _r			20	nS
Storage time	t _s	V _{CE} =30V, I _C = 150mA, I _{B1} =I _{B2} = 15mA		225	nS
Fall time	t _f			60	nS

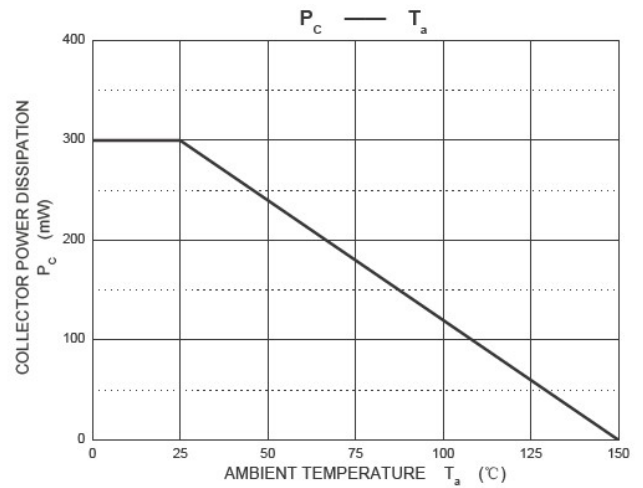
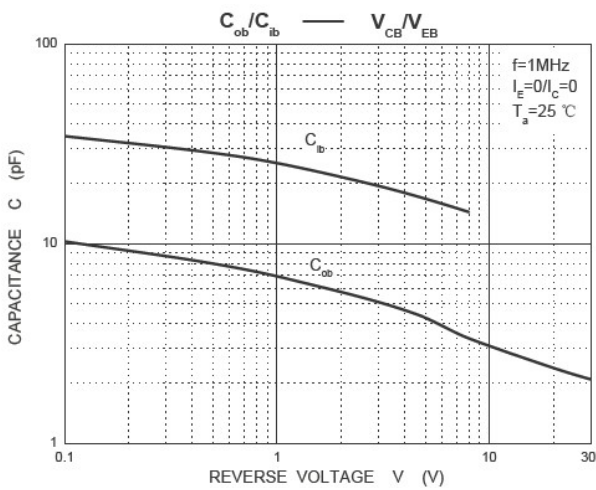
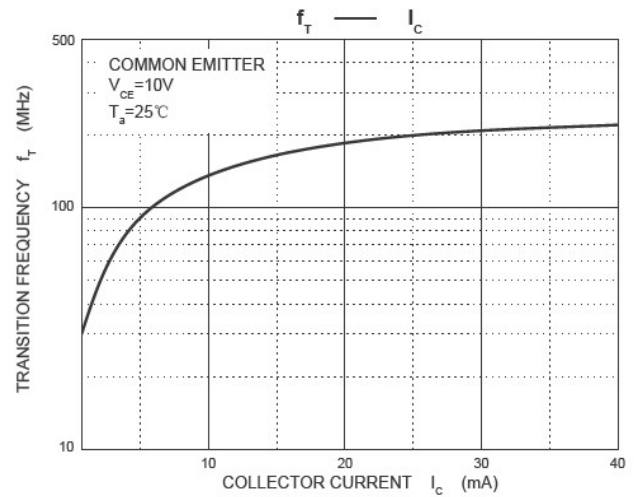
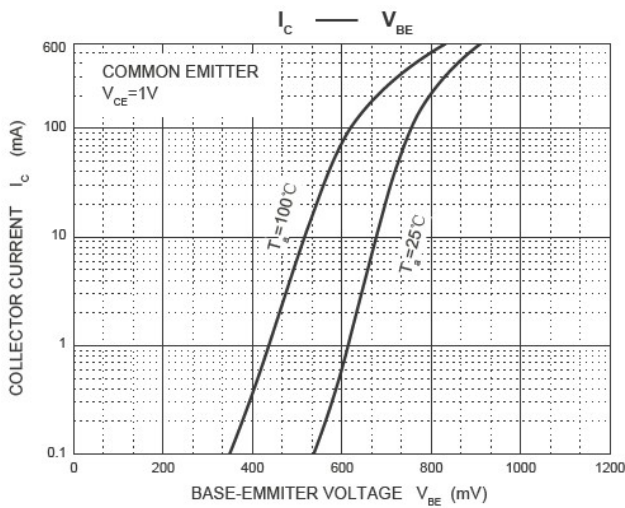
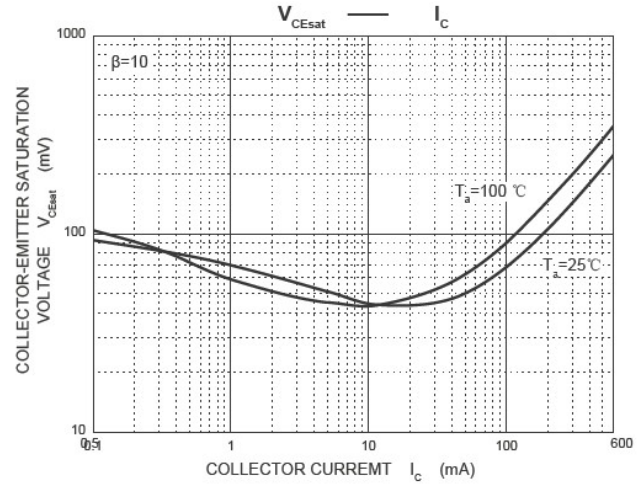
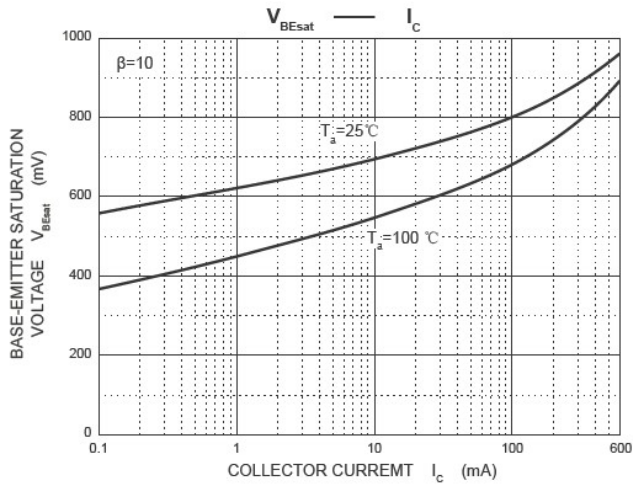
Ratings and Characteristics Curves

(T_A = 25°C unless otherwise noted)



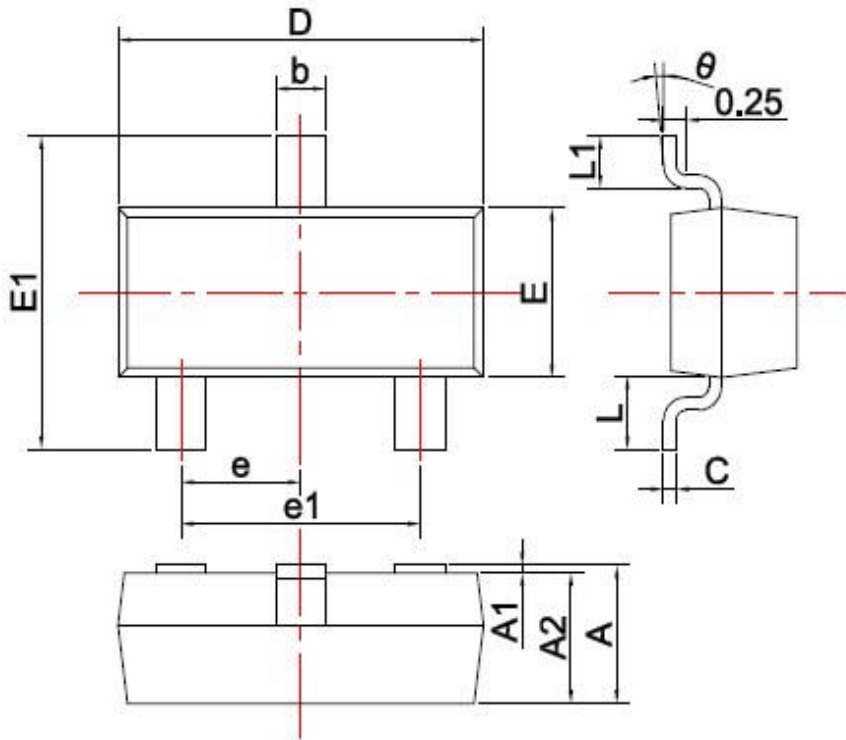
Ratings and Characteristics Curves

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