

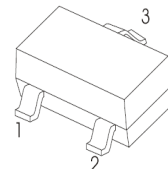
SOT-23 Plastic-Encapsulate Transistors

FEATURES

Switching transistor

MARKING : 2T

SOT-23



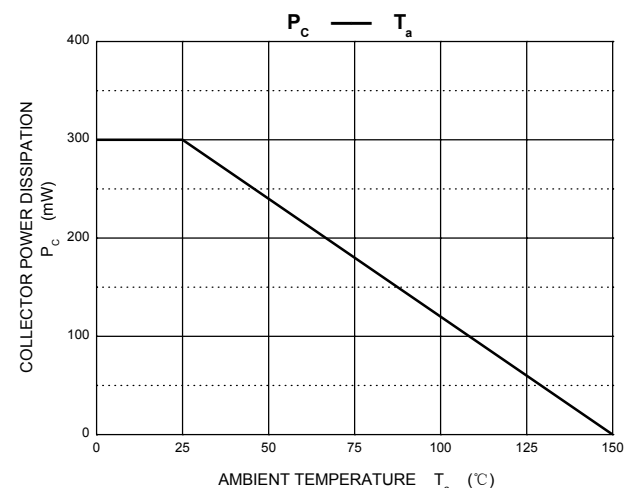
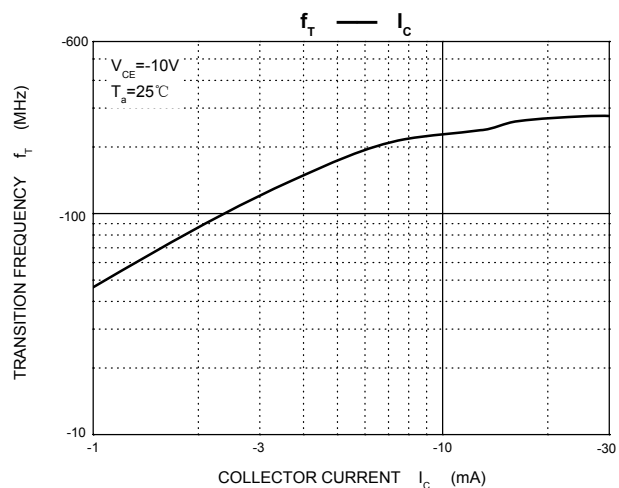
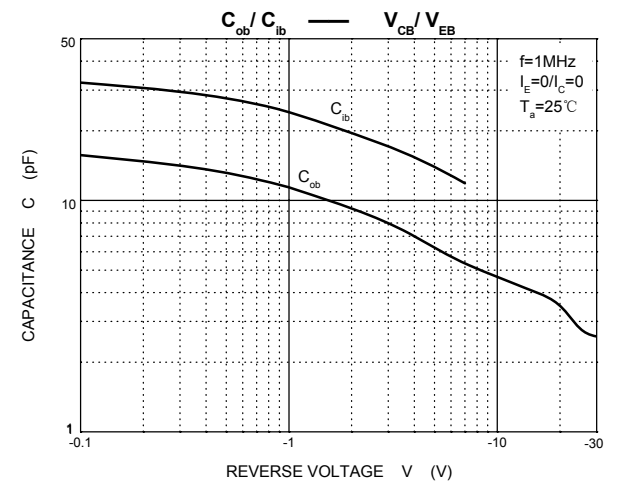
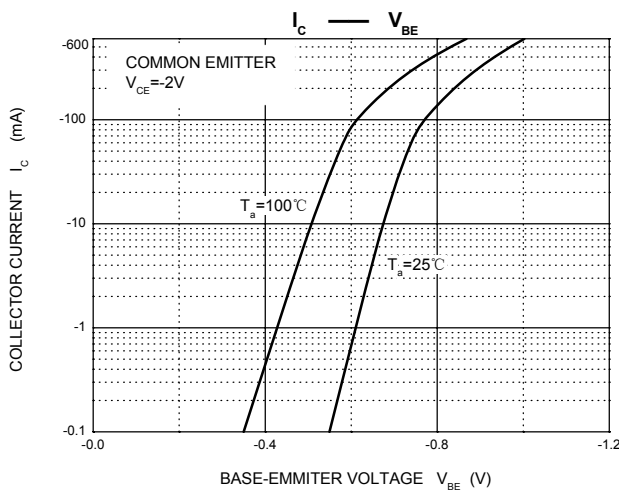
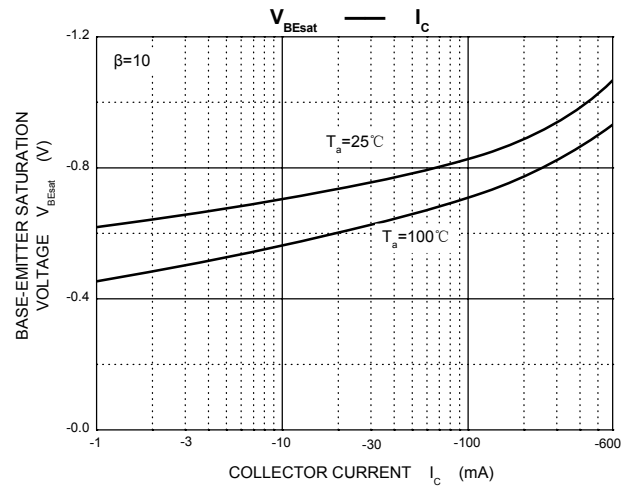
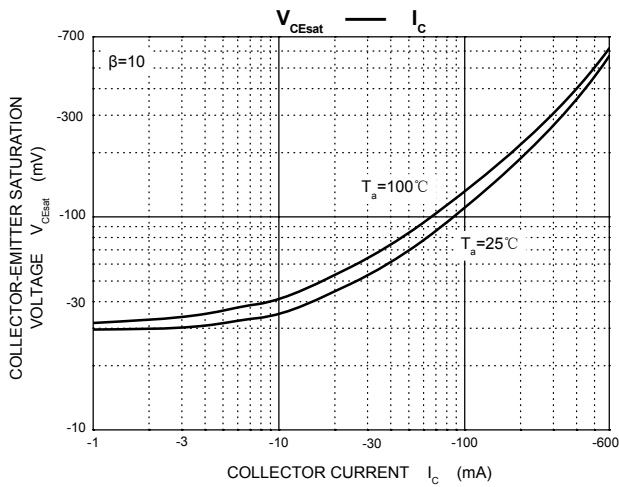
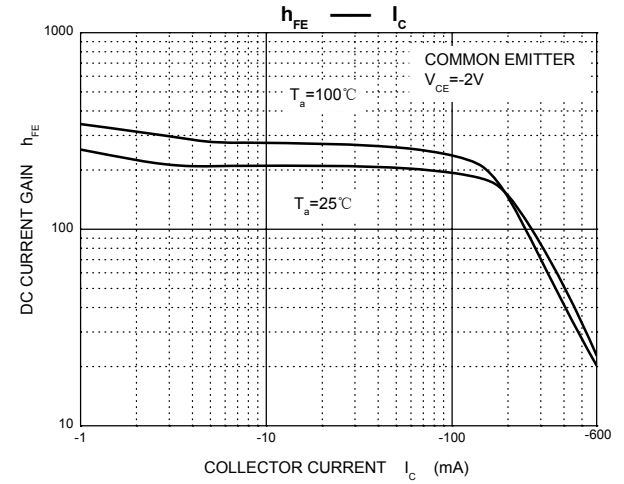
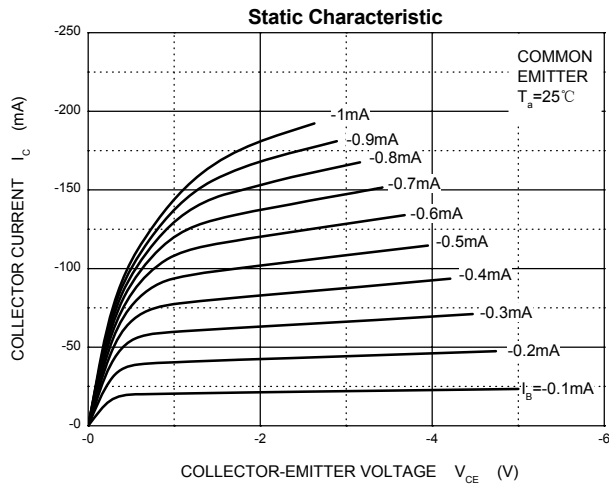
1. BASE
2. EMITTER
3. COLLECTOR

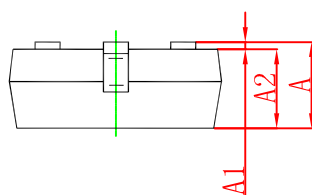
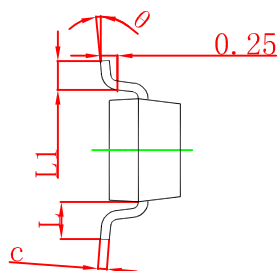
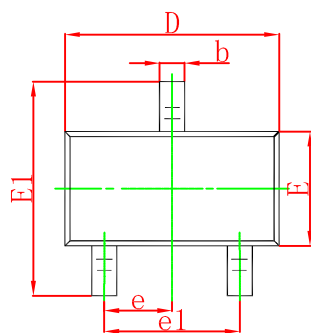
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-600	mA
P _C	Collector Power Dissipation	300	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	417	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

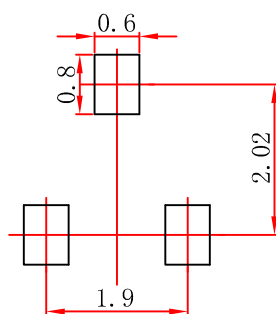
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100 μA, I _E =0	-40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100 μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-35V, I _E =0			-0.1	μA
Collector cut-off current	I _{CEX}	V _{CE} =-35V, V _{BE} =0.4V			-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-4V, I _C =0			-0.1	μA
DC current gain	h _{FE1}	V _{CE} =-1V, I _C =-0.1mA	30			
	h _{FE2}	V _{CE} =-1V, I _C =-1mA	60			
	h _{FE3}	V _{CE} =-1V, I _C =-10mA	100			
	h _{FE4}	V _{CE} =-2V, I _C =-150mA	100		300	
	h _{FE5}	V _{CE} =-2V, I _C =-500mA	20			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-150mA, I _B =-15mA			-0.4	V
		I _C =-500mA, I _B =-50mA			-0.75	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-150mA, I _B =-15mA			-0.95	V
		I _C =-500mA, I _B =-50mA			-1.3	V
Transition frequency	f _T	V _{CE} =-10V, I _C =-20mA, f=100MHz	200			MHz
Delay time	t _d	V _{CC} =-30V, V _{BE(off)} =-0.5V			15	ns
Rise time	t _r	I _C =-150mA, I _{B1} =-15mA			20	ns
Storage time	t _s	V _{CC} =-30V, I _C =-150mA			225	ns
Fall time	t _f	I _{B1} =I _{B2} =-15mA			60	ns





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.