

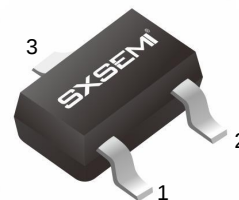
FEATURES

- Complementary to MMST3904

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	-200	mA
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55 ~ +150	°C

SOT -323



1. BASE
2. EMITTER
3. COLLECTOR

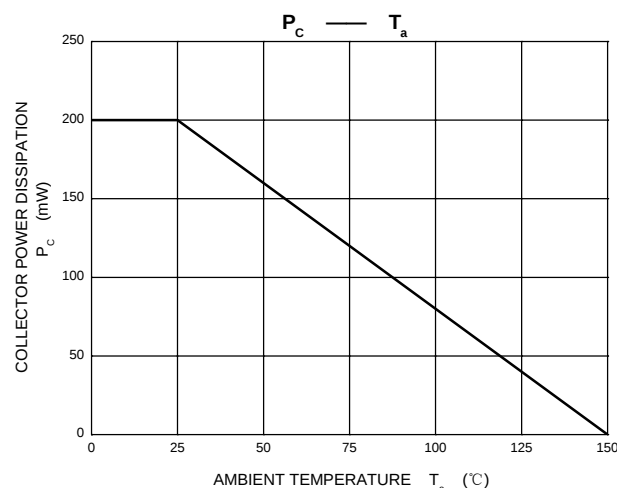
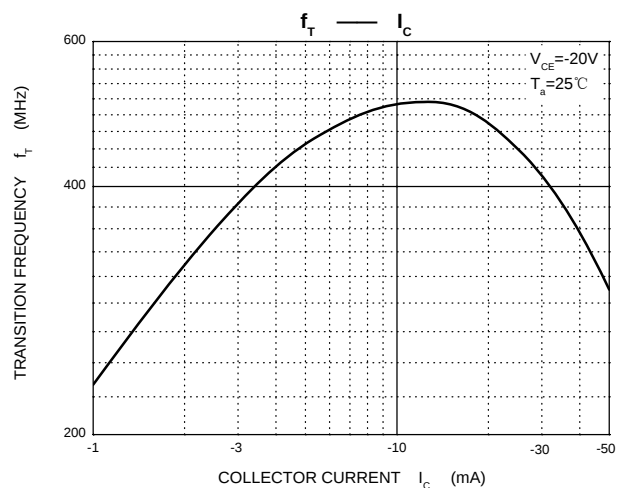
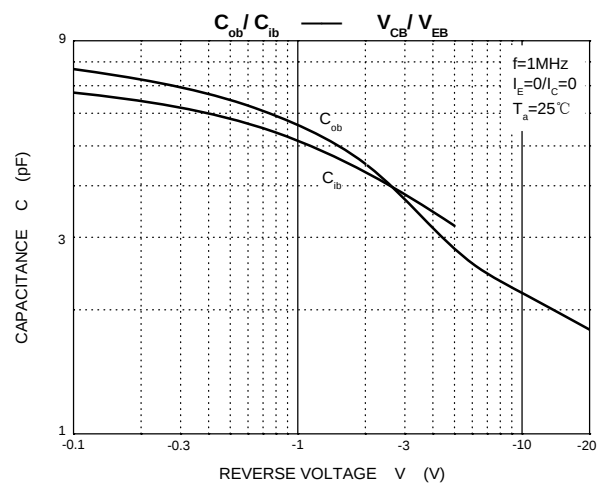
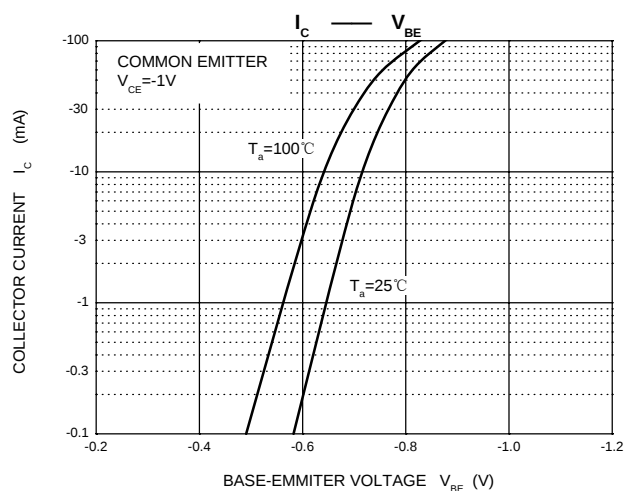
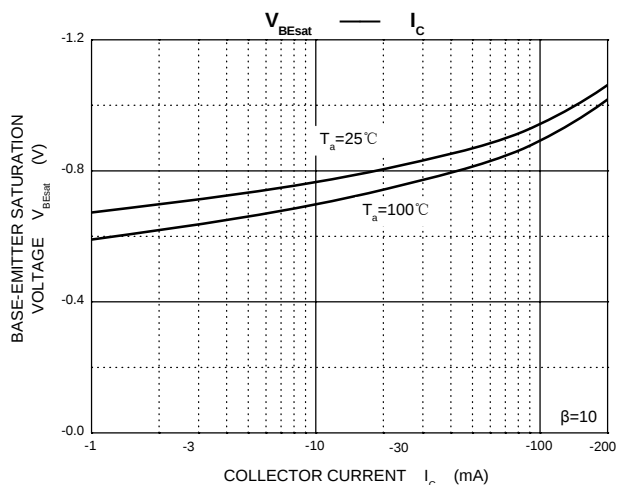
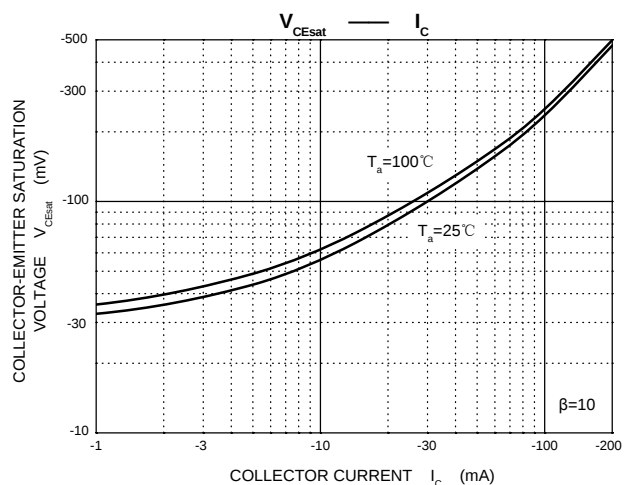
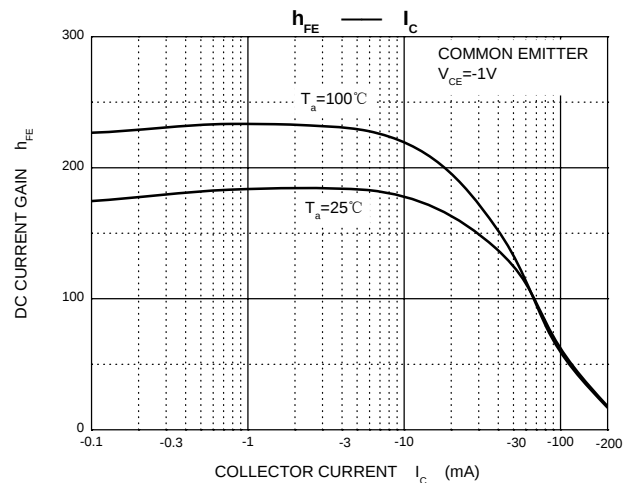
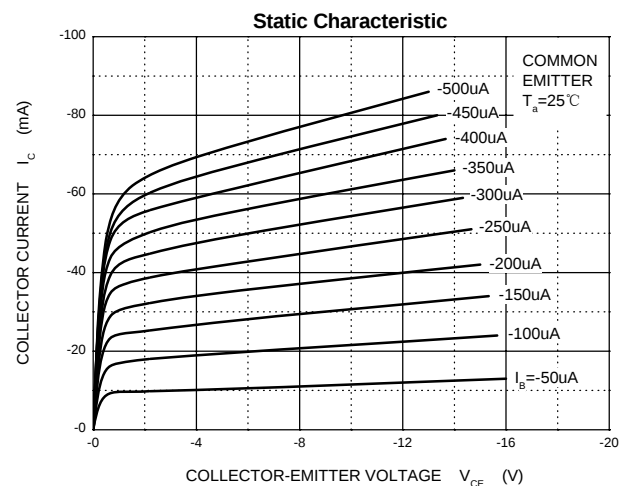
MARKING:K5N

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

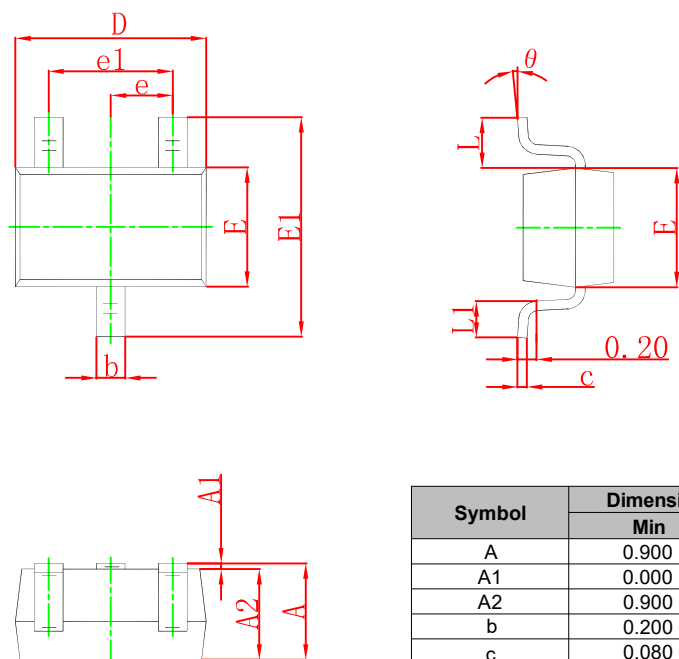
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO} *	I _C =-10μA, I _E =0	-40			V
Collector-emitter breakdown voltage	V _{(BR)CEO} *	I _C =-1mA, I _B =0	-40			V
Emitter-base breakdown voltage	V _{(BR)EBO} *	I _E =-10μA, I _C =0	-5			V
Base cut-off current	I _{BL} *	V _{CE} =-30V, V _{EB(off)} =-3V			-50	nA
Collector cut-off current	I _{CEX} *	V _{CE} =-30V, V _{EB(off)} =-3V			-50	nA
DC current gain	h _{FE} *	V _{CE} =-1V, I _C =-100μA	60			
		V _{CE} =-1V, I _C =-1mA	80			
		V _{CE} =-1V, I _C =-10mA	100		300	
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =-10mA, I _B =-1mA			-0.2	V
		I _C =-50mA, I _B =-5mA			-0.3	V
Base-emitter saturation voltage	V _{BE(sat)} *	I _C =-10mA, I _B =-1mA	-0.65		-0.85	V
		I _C =-50mA, I _B =-5mA			-0.95	V
Transition frequency	f _T	V _{CE} =-20V, I _C =-10mA, f=100MHz	250			MHz
Collector output capacitance	C _{ob}	V _{CB} =-5V, I _E =0, f=1MHz			4.5	pF
Collector output capacitance	C _{ib}	V _{EB} =-0.5V, I _E =0, f=1MHz			10	pF
Delay time	t _d	V _{CC} =-3V, V _{BE(off)} =-0.5V, I _C =-10mA, I _{B1} =-1mA			35	ns
Rise time	t _r				35	ns
Storage time	t _s	V _{CC} =3V, I _C =-10mA, I _{B1} = I _{B2} =-1mA			225	ns
Fall time	t _f				75	ns

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

Typical Characteristics

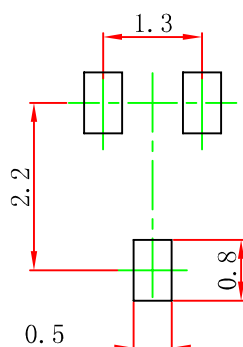


SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-323 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.