



浩畅半导体
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S9014 TRANSISTOR (NPN)

SOT-23 Plastic-Encapsulate Transistors

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客户确认：

公司签章：

部门

工程部

品保部

采购部

签名

日期



SOT-23 Plastic-Encapsulate Transistors

S9014 TRANSISTOR (NPN)

FEATURES

- Complementary to S9015

MARKING: J6

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



Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	45	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	0.1	A
P _C	Collector Power Dissipation	0.2	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

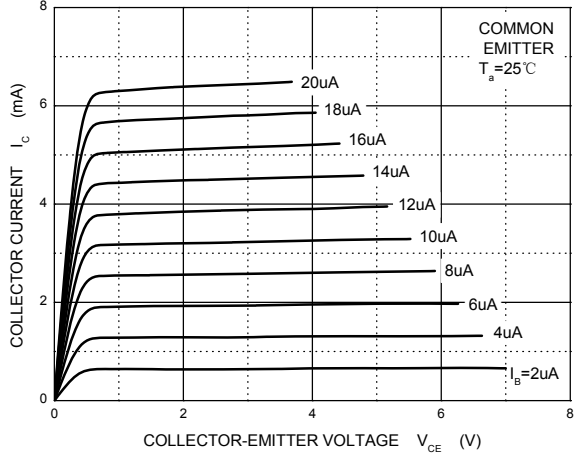
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 100μA, I _E =0	50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 0.1mA, I _B =0	45			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =50 V, I _E =0			0.1	μ A
Collector cut-off current	I _{CEO}	V _{CE} =35V, I _B =0			0.1	μ A
Emitter cut-off current	I _{EBO}	V _{EB} = 3V, I _C =0			0.1	μ A
DC current gain	h _{FE}	V _{CE} =5V, I _C = 1mA	200		1000	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100 mA, I _B = 5mA			0.3	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =100 mA, I _B = 5mA			1	V
Transition frequency	f _T	V _{CE} =5V, I _C = 10mA f=30MHz	150			MHz

CLASSIFICATION OF h_{FE}

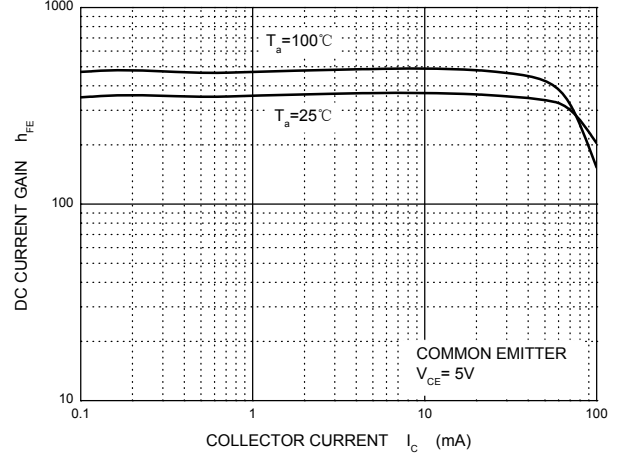
Rank	L	H
Range	200-450	450-1000

Typical Characteristics

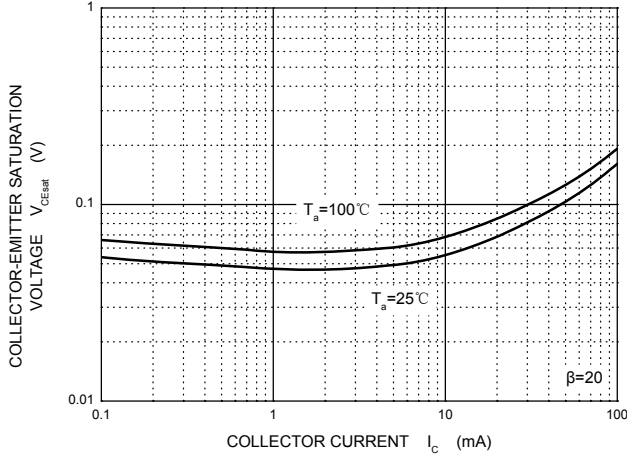
Static Characteristic



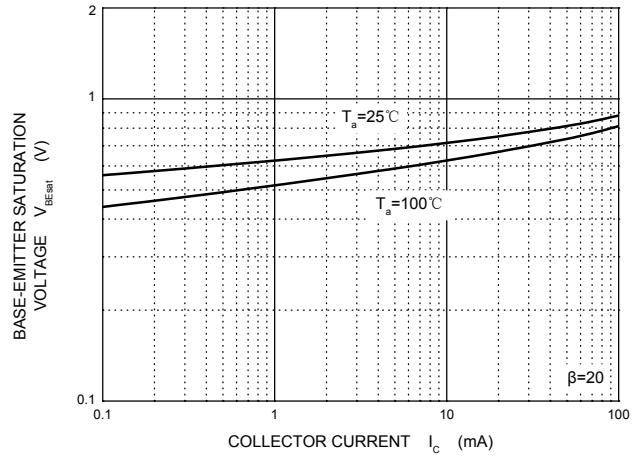
h_{FE} — I_c



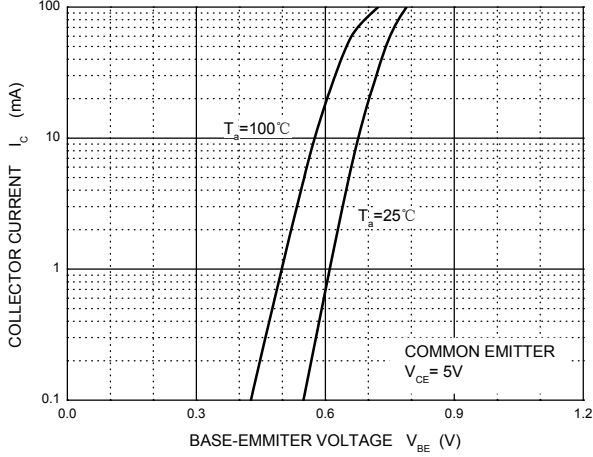
V_{CEsat} — I_c



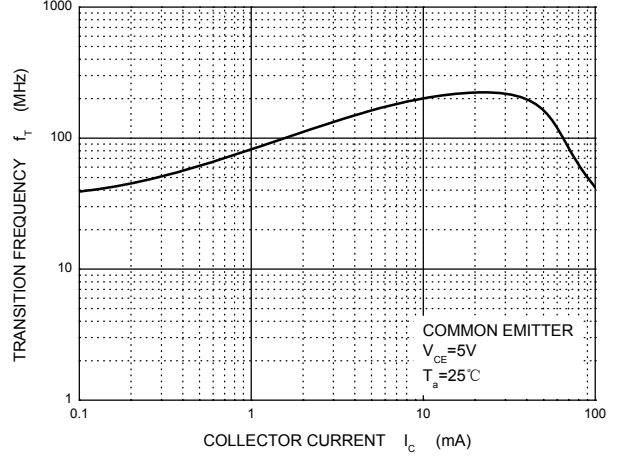
V_{BEsat} — I_c



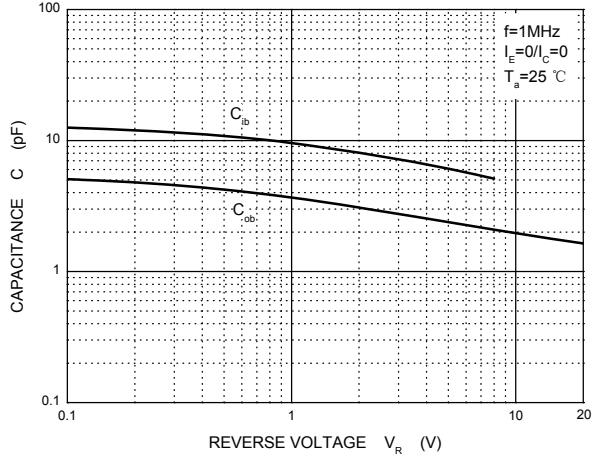
I_c — V_{BE}



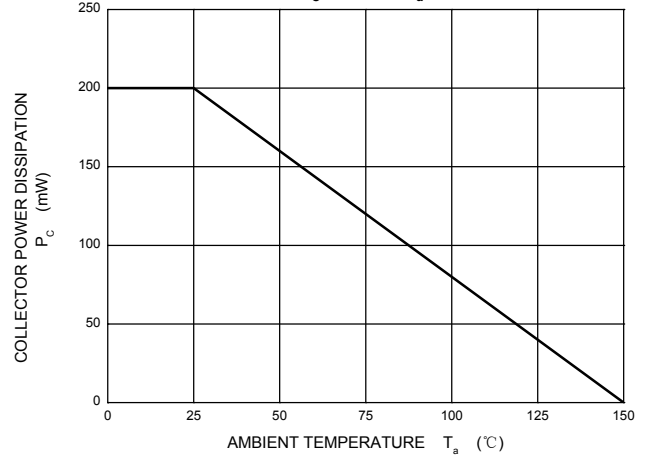
f_T — I_c



C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_c — T_a

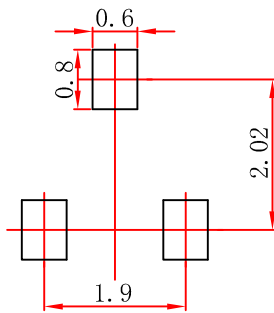


SOT-23 Package Outline Dimensions



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: ± 0.05 mm.
3. The pad layout is for reference purposes only.