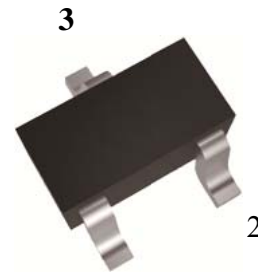


NPN SILICON RF TRANSISTOR

- Ultra high frequency low noise transistor
- Silicon epitaxial bipolar process.
- High power gain, low noise figure,
- high dynamic range and ideal current characteristics,
- SC-59 chip package, mainly used in VHF, UHF and CATV
- high frequency wideband low noise amplifier.



1
SC-59

1: Base 2: Emitter 3: Collector

Feature

High gain: $|S_{21e}|$ TYP. Value is 11dB @ $V_{CE}=10V$, $I_C=20mA$, $f=1GHz$
 Low noise: NF TYP. Value is 1.5dB @ $V_{CE}=10V$, $I_C=7mA$, $f=1GHz$
 f_T (TYP.): TYP. Value is 7GHz @ $V_{CE}=10V$, $I_C=20mA$, $f=1GHz$

Absolute Maximum Ratings $T_A=25^\circ C$ Unless Otherwise noted

PARAMETER	SYMBLE	MAXIMUM VALUE	UNIT
Collector-base breakdown voltage	V_{CBO}	20	V
Collector-emitter breakdown voltage	V_{CEO}	12	V
Emitter-base breakdown voltage	V_{EBO}	3	V
Collector current	I_C	100	mA
Collector Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-65 ~ +150 $^\circ C$	T_{stg}

hFE Classification (@ $V_{CE}=10V, I_C=20mA$)

Classification	B	C	D
Marking	R24	R25	
hFE	90-140	130-180	170-250

SHIKE MAKE CONSCIOUS PRODUCT

CONSCIOUS PRODUCTS BEGIN WITH CONSCIOUS PEOPLE

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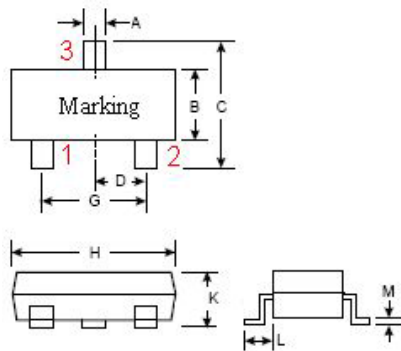
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ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

PARAMETER	SYMBLE	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Collector-base breakdown voltage	V _{CB0}	20			v	I _C =1.0μA
Collector cut-off current	I _{CBO}			0.1	μA	V _{CB} =10V
Emitter cut-off current	I _{EBO}			0.1	μA	V _{EB} =1V
Transit frequency	f _t	5	7		GHz	V _{CE} =10V, I _C =20mA
Output feedback capacitor	C _{re}		0.65		pF	V _{CB} =10V, I _E =0mA, f=1MHz
Power gain	S _{21e} ₂		11		dB	V _{CE} =10V, I _C =20mA, f=1GHz
Noise factor	NF		1.5		dB	V _{CE} =10V, I _C =7mA, f=1GHz

PACKAGE: SC-59

1: (Base) 2: (Emitter) 3: (Collector)



SC-59		
SYMBLE	MIN (mm)	MAX (mm)
A	0.35	0.5
B	1.4	1.7
C	2.7	3.1
D	0.95	
G	1.7	2.1
H	2.7	3.1
K	1	1.3
L	0.5	0.85
M	0.1	0.35

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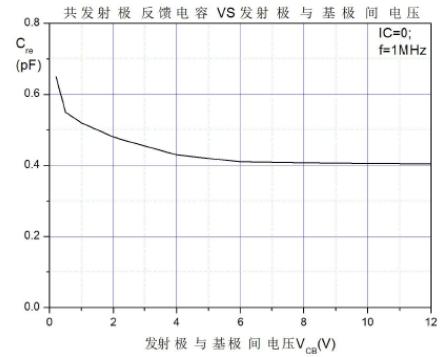
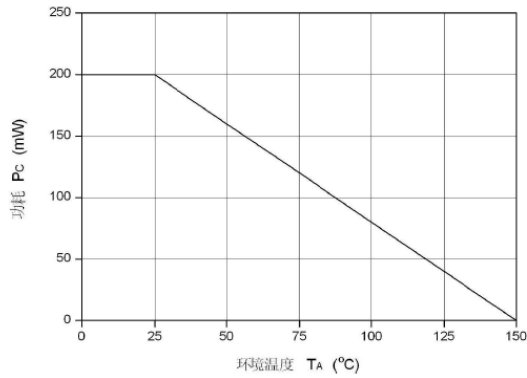
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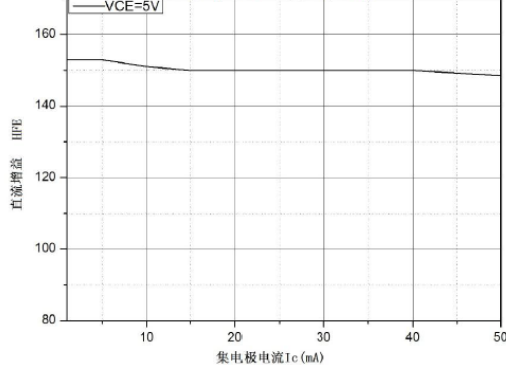
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Typical characteristic curves (TA = 25°C)

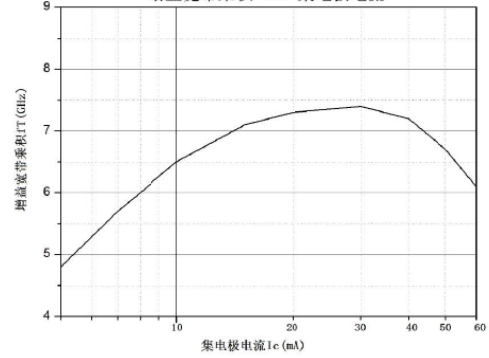
功耗 vs. 环境温度



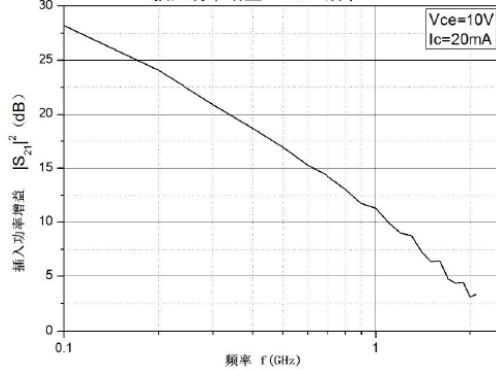
直流增益 VS 集电极电流



增益宽带乘积 VS 集电极电流



插入功率增益 VS 频率



插入功率增益 VS 集电极电流

