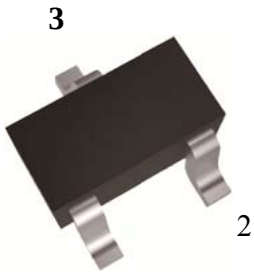
2SC3356K

NPN SILICON RF TRANSISTOR



SC-59

1：Base 2：Emitter 3：Collector

- 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.

Feature

High gain: $|S_{21e}|^2$ 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℃ 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	℃
Storage Temperature	T_{stg}	-65～+150 ℃	T_{stg}

hFE Classification (@VCE=10V,IC=20mA)

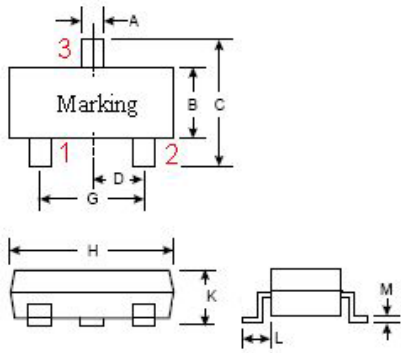
Classification	B	C	D
Marking	R24	R25	
hFE	90-140	130-180	170-250

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

PARAMETER	SYMBLE	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Collector-base breakdown voltage	V_{CBO}	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	Cre		0.65		pF	VCB=10V,IE=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

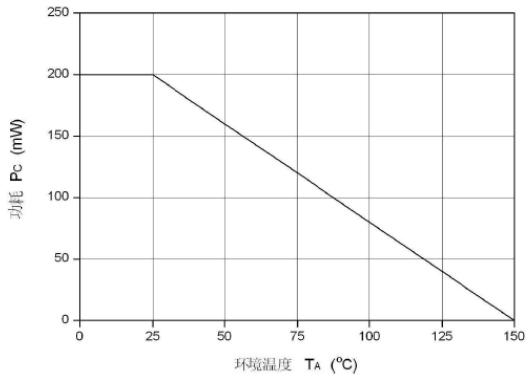
1:（Base） 2:（Emitter） 3:（Collector）



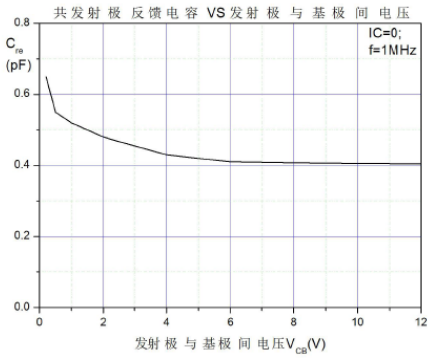
SC-59		
SYMBLE	MIN (mm)	MAX (mm)
A	0.35	0.5
B	1.4	1.7
C	2.7	3.1
D	0.95	
G	1.7	2.1
H	2.7	3.1
K	1	1.3
L	0.5	0.85
M	0.1	0.35

Typical characteristic curves (TA =25℃)

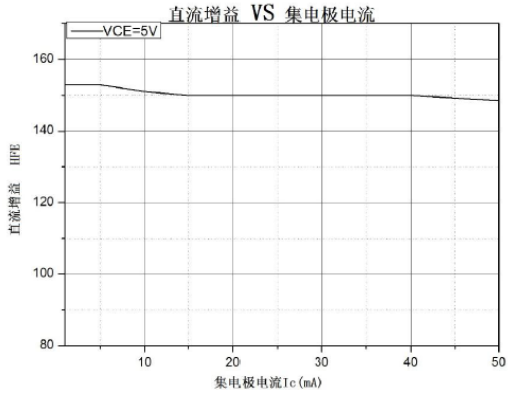
功耗 vs. 环境温度



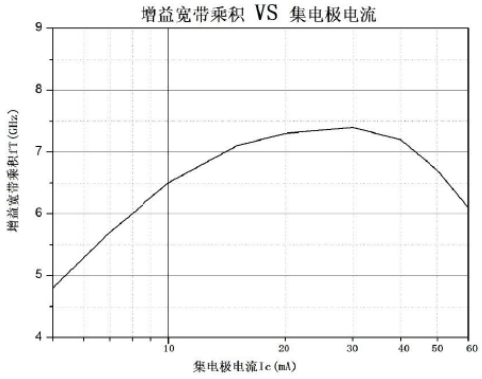
共发射极反馈电容 VS 发射极与基极间电压



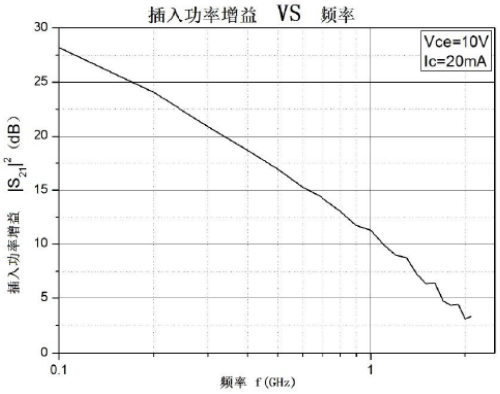
直流增益 VS 集电极电流



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