NPN高频低噪声晶体管

描述

2SC3356 是超高频低噪声晶体管，采用平面 NPN 硅外延双极型工艺。
具有高功率增益、低噪声系数、大动态范围和理想的电流特性，采用 SOT-23 贴片式封装，主要应用于 VHF，UHF 和 CATV 高频宽带低噪声放大器。

主要特性

高增益: $\|S_{21e}\|^2$ 典型值为 12dB	@ V_{CE}=10V，I_C=20mA，f=1GHz
低噪声: NF 典型值为 1.5dB	@ V_{CE}=10V，I_C=7mA， f=1GHz
增益带宽乘积: f_T 典型值为 7GHz	@ V_{CE}=10V，I_C=20mA，f=1GHz

极限工作条件范围 (TA=25℃)

参数	符号	极值	单位
集电极基极击穿电压	VCBO	20	V
集电极发射极击穿电压	VCEO	12	V
发射极基极击穿电压	VEBO	3	V
集电极电流	IC	100	mA
功耗	PC	200	mW
结温度	Tj	150	℃
存储温度	Tstg	-65 ~ +150	℃

HFE 档位

分档	B	C	D
标号	R25		
HFE	80-140	120-180	170-260

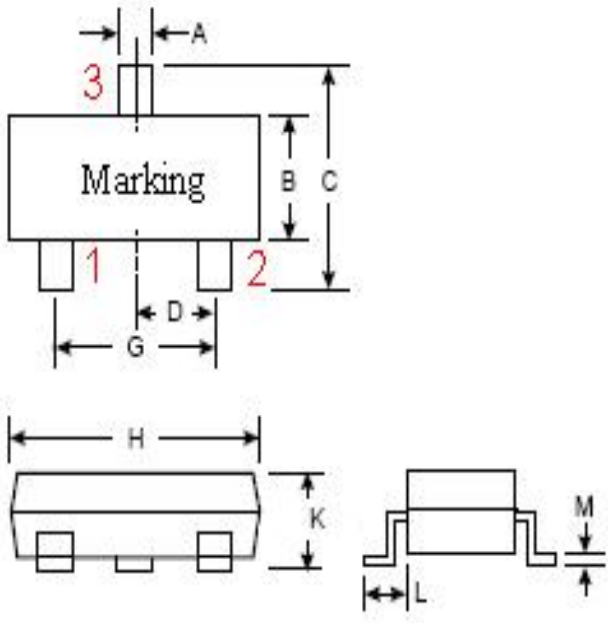
电学特性 (TA=25℃)

参数	符号	最小	典型	最大	单位	测试条件
集电极基极击穿电压	VCBO	20			V	IC=1.0μA
集电极基极漏电流	ICBO			0.1	μA	VCB=10V
发射极基极漏电流	IEBO			0.1	μA	VEB=1V
增益带宽乘积	f_T	5.5	7		GHz	VCE=10V,IC=20mA
输出反馈电容	Cre		0.65		pF	VCB=10V,IE=0mA,f=1MHz
功率增益	$\|S21e\|^2$		12		dB	VCE=10V,IC=20mA,f=1GHz
噪声因子	NF		1.5		dB	VCE=10V,IC=7mA,f=1GHz

封装形式

SOT-23

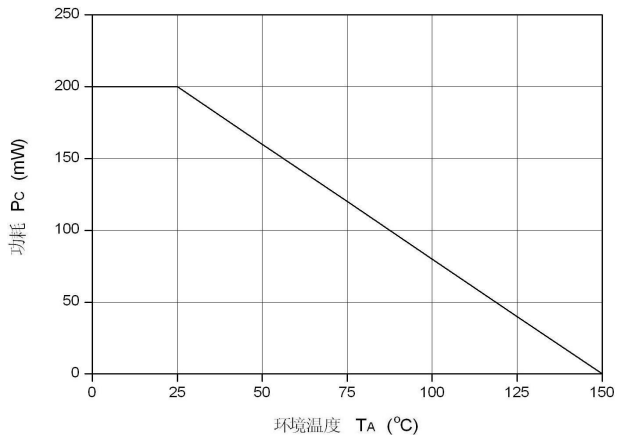
管脚定义：1：基极（Base） 2：发射极（Emitter） 3：集电极（Collector）



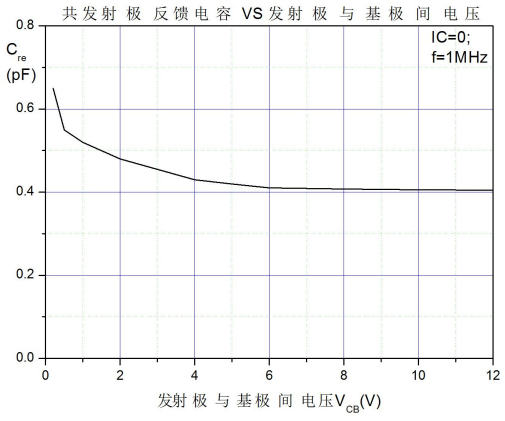
	SOT-23	
符号	最小值（mm）	最大值（mm）
A	0.3	0.5
B	1.2	1.4
C	2.25	2.55
D	0.95	
G	1.8	2
H	2.8	3
K	0.9	1.15
L	0.55	
M	0.08	0.15

典型特性曲线（TA =25ºC）

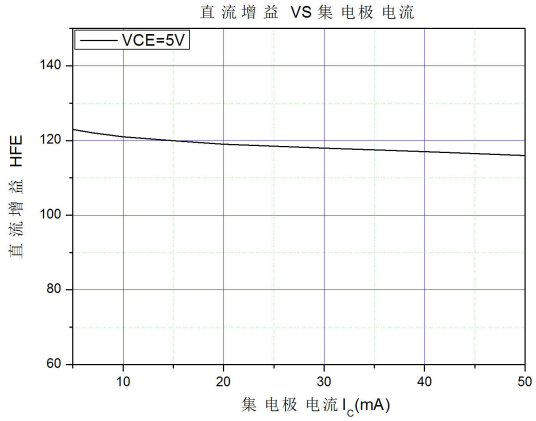
功耗 vs. 环境温度



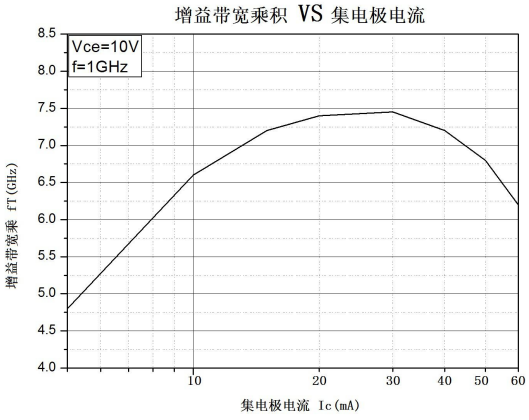
共发射极反馈电容 VS 发射极与基极间电压



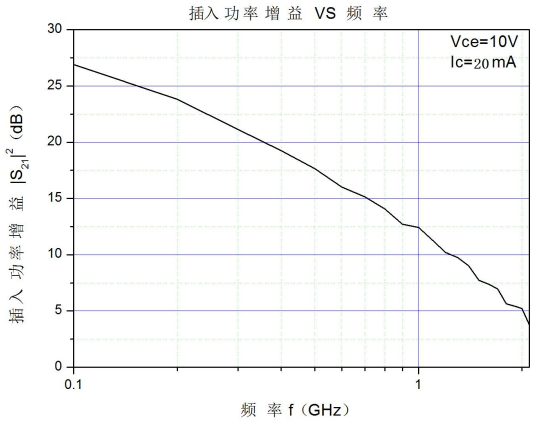
直流增益 VS 集电极电流



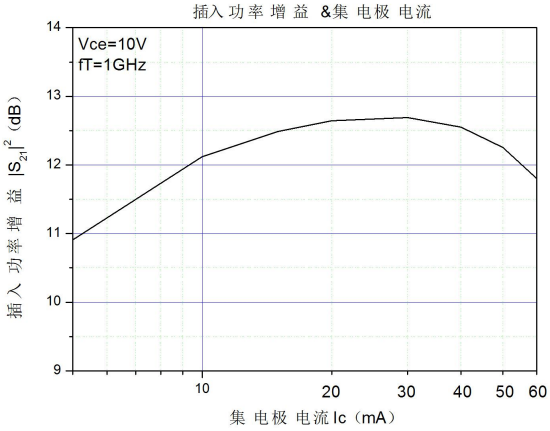
增益带宽乘积 VS 集电极电流

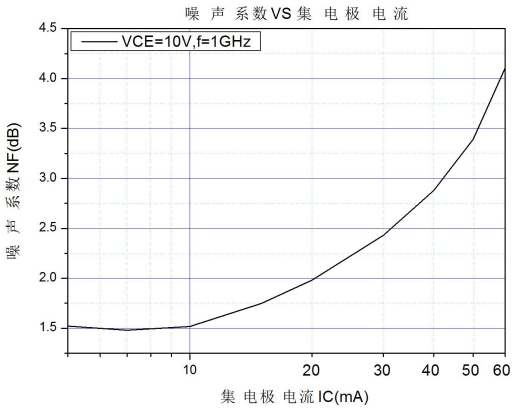


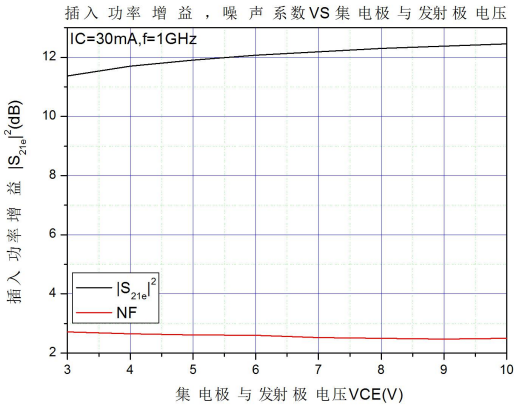
插入功率增益 VS 频率



插入功率增益 &集电极电流



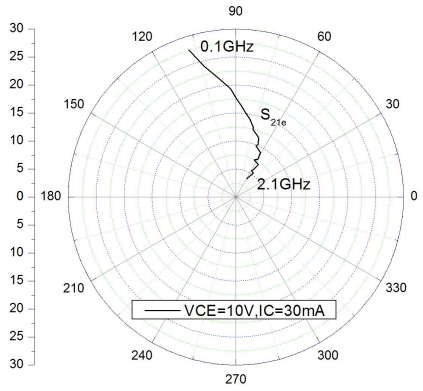




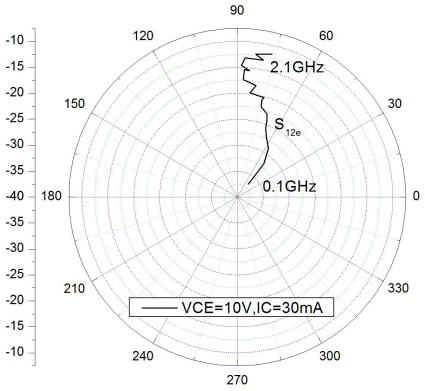
SMITH 图

测试条件：V_{CE}=10V, I_C=20mA

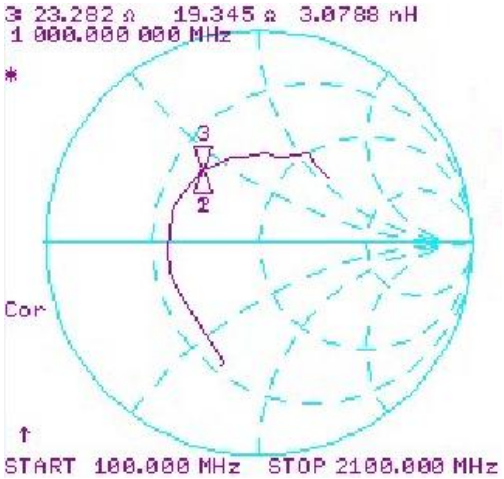
S_{21e} -FREQUENCY



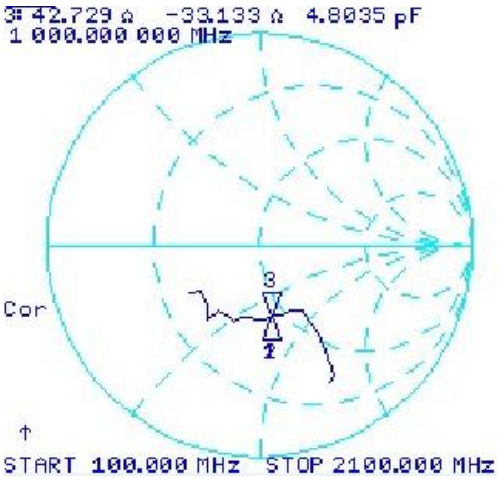
S_{12e} -FREQUENCY



S_{11e} -FREQUENCY



S_{22e} -FREQUENCY



散射参数 （S-PARAMETER)

测试条件：V_{CE}=10V, I_C=20mA, Z_O=50Ω

测试频率	S_{11}		S_{21}		S_{12}		S_{22}	
GHz	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
0.1	-4.4887	-107.42	27.586	107.71	-36.76	49.128	-2.9397	-62.468
0.2	-6.7891	-140.98	24.2	103.81	-31.8	51.684	-6.0189	-57.342
0.3	-7.2322	-163.11	21.338	98.039	-28.868	57.605	-7.9522	-56.709
0.4	-7.1858	-176.01	19.392	92.782	-26.985	64.917	-8.6659	-57.373
0.5	-7.4501	172.11	17.747	90.058	-25.557	67.75	-8.9477	-59.875
0.6	-7.3244	160.46	16.1	86.005	-24.173	68.77	-9.3303	-64.141
0.7	-7.2467	153.42	15.174	83.595	-22.96	70.383	-9.3035	-68.472
0.8	-7.5163	144.71	14.099	79.671	-22.02	75.134	-9.169	-72.808
0.9	-7.3334	135.33	12.767	75.789	-20.838	75.774	-9.3152	-77.445
1	-7.2486	129.3	12.445	75.699	-20.221	75.086	-9.2763	-82.417
1.1	-7.6324	120.87	11.337	68.982	-19.773	83.079	-9.0412	-89.48
1.2	-7.5426	112.22	10.248	67.1	-18.25	80.563	-9.0646	-93.193
1.3	-7.4681	106.23	9.8065	68.457	-17.795	83.598	-9.1476	-98.654
1.4	-7.7615	99.036	9.069	60.986	-17.352	87.012	-9.0139	-105.22
1.5	-7.7131	93.069	7.8139	59.825	-15.394	86.83	-8.4818	-107.7
1.6	-7.418	84.714	7.4217	64.124	-15.545	84.385	-8.6765	-112.92
1.7	-7.7491	79.21	7.0271	55.497	-14.625	88.168	-8.7946	-120.51
1.8	-7.5523	73.983	5.7067	57.787	-13.122	86.822	-7.5139	-125.48
1.9	-6.427	62.268	5.4719	59.598	-13.185	79.194	-8.4837	-131.5
2	-6.8626	54.527	5.2739	53.898	-12.216	82.641	-9.2253	-140.88
2.1	-7.0205	44.405	3.8021	59.296	-11.669	76.371	-7.9545	-145.67

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Bipolar Transistors - BJT ***category:***

Click to view products by SLKORMICRO ***manufacturer:***

Other Similar products are found below :

619691C MCH4017-TL-H MJ15024/WS MJ15025/WS BC546/116 BC556/FSC BC557/116 BSW67A HN7G01FU-A(T5L,F,T NJVMJD148T4G NSVMMBT6520LT1G NTE187A NTE195A NTE2302 NTE2330 NTE2353 NTE316 IMX9T110 NTE63 NTE65 C4460 SBC846BLT3G 2SA1419T-TD-H 2SA1721-O(TE85L,F) 2SA1727TLP 2SA2126-E 2SB1202T-TL-E 2SB1204S-TL-E 2SC5488A-TL-H 2SD2150T100R SP000011176 FMC5AT148 2N2369ADCSM 2SB1202S-TL-E 2SC2412KT146S 2SC4618TLN 2SC5490A-TL-H 2SD1816S-TL-E 2SD1816T-TL-E CMXT2207 TR CPH6501-TL-E MCH4021-TL-E BC557B TTC012(Q) BULD128DT4 JANTX2N3810 Jantx2N5416 US6T6TR KSF350 068071B