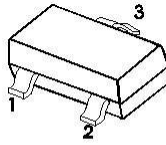


**SOT-23****SOT-23贴片塑封三极管****SOT-23 Plastic-Encapsulate Transistors**

1. BASE  
2. EMITTER  
3. COLLECTOR

**特征 Features**

- 低噪声, 高增益; Low Noise and High Gain
- 高功率增益; High Power Gain
- 高稳定性和可靠性; High Stability and High Reliability

**机械数据 Mechanical Data**

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package
- 环氧树脂UL 易燃等级Epoxy UL: 94V-0
- 安装位置: 任意 Mounting Position: Any

Marking: According to hFE

极限值和温度特性(TA = 25°C 除非另有规定)

**Maximum Ratings & Thermal Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
集-基击穿电压 Collector-Base Voltage	V <sub>CB0</sub>	20	V
集-射击穿电压 Collector-Emitter Voltage	V <sub>CEO</sub>	12	V
射-基击穿电压 Emitter-Base Voltage	V <sub>EB0</sub>	3	V
集电极连续电流 Collector Current-Continuous	I <sub>C</sub>	100	mA
功耗 Collector Power Dissipation	P <sub>C</sub>	200	mW
结温 Junction Temperature	T <sub>J</sub>	150	°C
储存温度 Storage Temperature	T <sub>stg</sub>	-55-+150	°C
结环热阻 Thermal resistance From junction to ambient	R <sub>θJA</sub>	625	°C/W

电特性 (TA = 25°C 除非另有规定)

**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

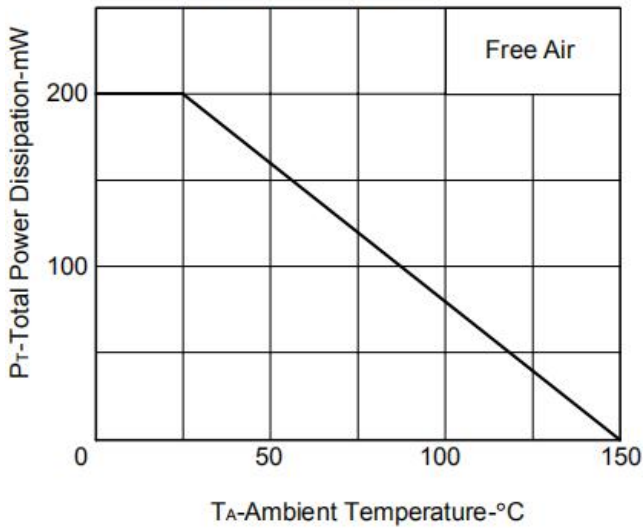
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
集-基击穿电压 Collector-base breakdown voltage	V(BR)CBO	I <sub>C</sub> =100μA, I <sub>E</sub> =0	20			V
集-射击穿电压 Collector-emitter breakdown voltage	V(BR)CEO	I <sub>C</sub> =1mA, I <sub>B</sub> =0	12			V
射-基击穿电压 Emitter-base breakdown voltage	V(BR)EBO	I <sub>E</sub> =100μA, I <sub>C</sub> =0	3			V
集电极截止电流 Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0			1	μA
发射极截止电流 Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =1V, I <sub>C</sub> =0			1	μA
直流增益 DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA	50		250	
集-射饱和电压 Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			0.3	V
基-射饱和电压 Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			1.15	V
特征频率 Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA		7		GHz
集电极输出电容 Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		0.8	1	pF
噪声因数 Noise figure	N <sub>F</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =7mA, R <sub>g</sub> =10kΩ, f=1GHz		1.65	2	dB

放大倍数分档 CLASSIFICATION OF H<sub>FE(1)</sub>

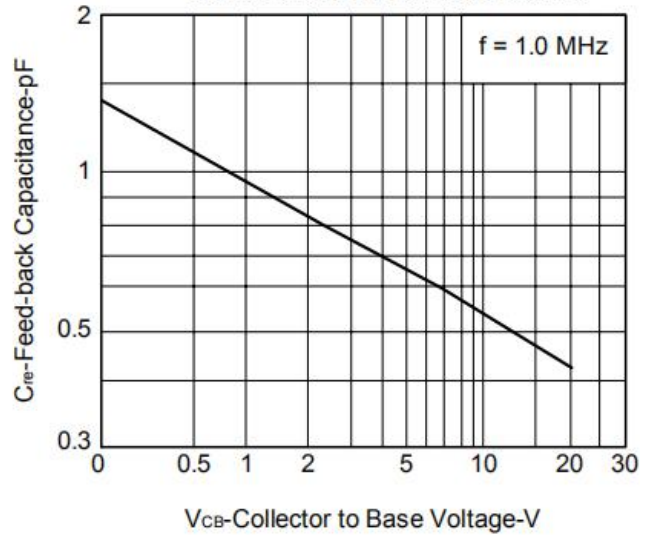
RANGE	50-100	80-160	125-250
MARKING	R23	R24	R25

典型典型特性 Typical Characteristics

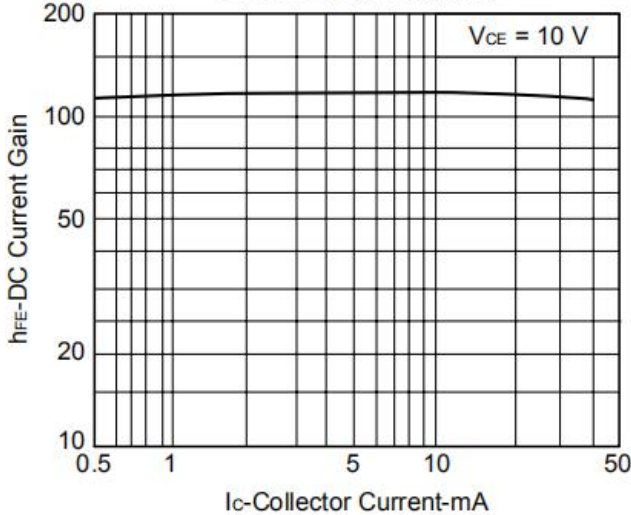
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



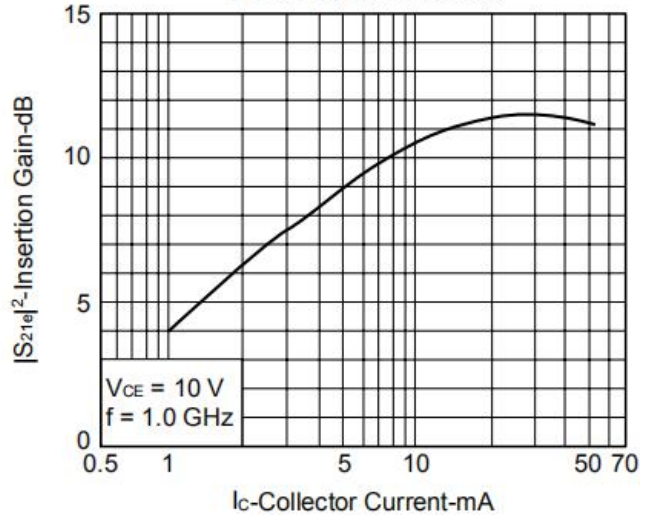
FEED-BACK CAPACITANCE vs. COLLECTOR TO BASE VOLTAGE



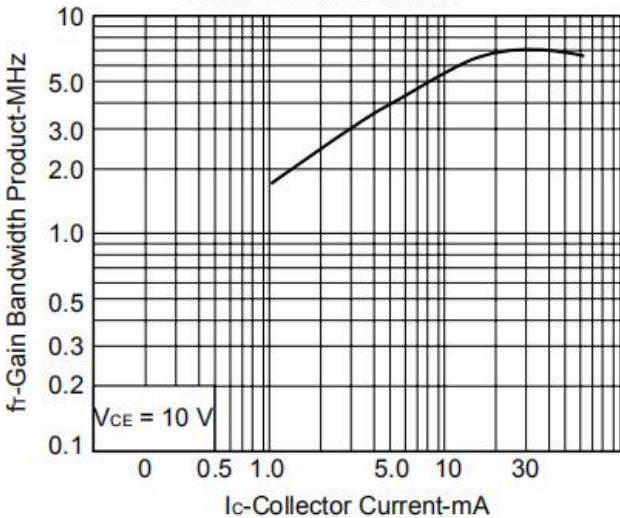
DC CURRENT GAIN vs. COLLECTOR CURRENT



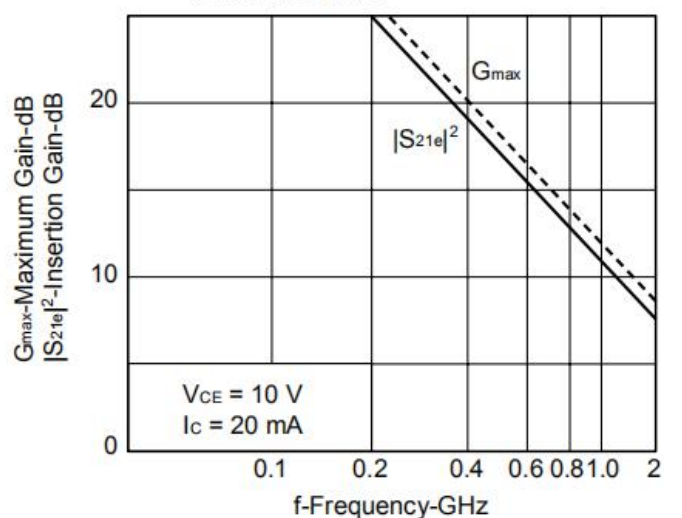
INSERTION GAIN vs. COLLECTOR CURRENT



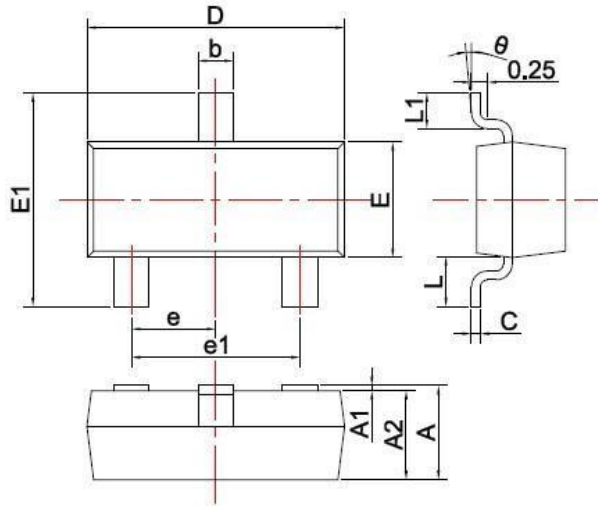
GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT



INSERTION GAIN, MAXIMUM GAIN vs. FREQUENCY



**SOT-23 PACKAGE OUTLINE** Plastic surface mounted package

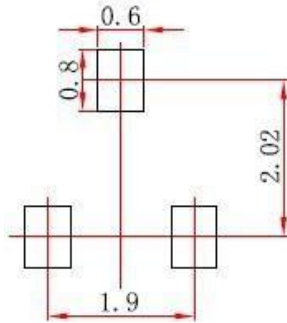


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

**焊盘设计参考** **Precautions:** PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



**Note:**

1. Controlling dimension: In millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.