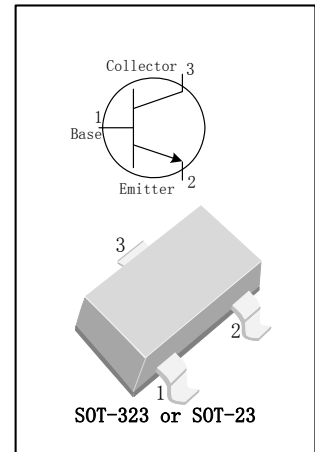


**2SC3838NPN TRANSISTOR (NPN)
MICROWAVE LOW NOISE AMPLIFIER
NPN SILICON EPITAXIAL TRANSISTOR**
简述:

- 本芯片采用硅外延工艺制造;
- 具有高功率增益放大以及低噪声特性, 大动态范围, 理想的电流线性;
- 主要应用于 VHF、UHF 和 CATV 高频宽带低噪声放大器, 参数性能优于国外同型号产品, 可以替代;
- 封装形式: SOT-323 或者 SOT-23;
- 集电极-基极击穿电压: $BV_{CBO}=20V$, 集电极电流: $I_C=50mA$; 集电极功率: $P_C=200mW$, 特征频率: $f_T=3.2GHz$ 。


极限参数 (Tamb=25℃):

参数名称	符号	额定值	单位
集电极-基极击穿电压	BV_{CBO}	20	V
集电极-发射极击穿电压	BV_{CEO}	11	V
发射极-基极击穿电压	BV_{EBO}	3	V
集电极电流	I_C	50	mA
耗散功率	P_C	200	mW
最高结温	T_J	150	℃
储存温度	T_{stg}	-55~+150	℃

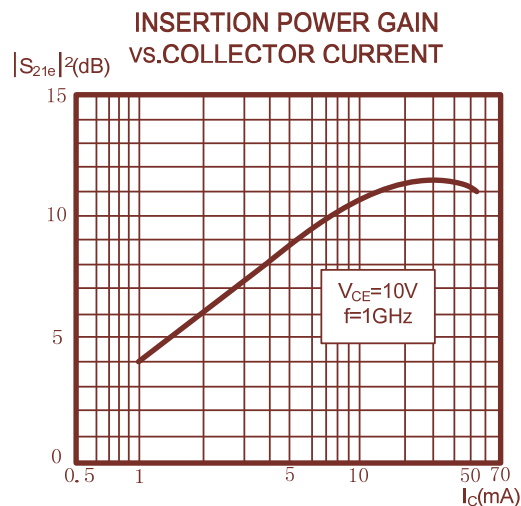
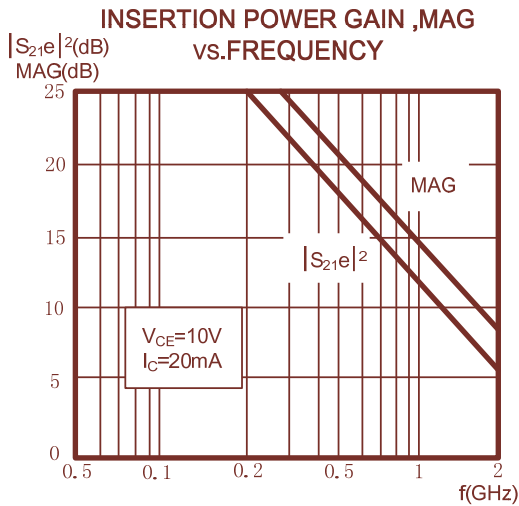
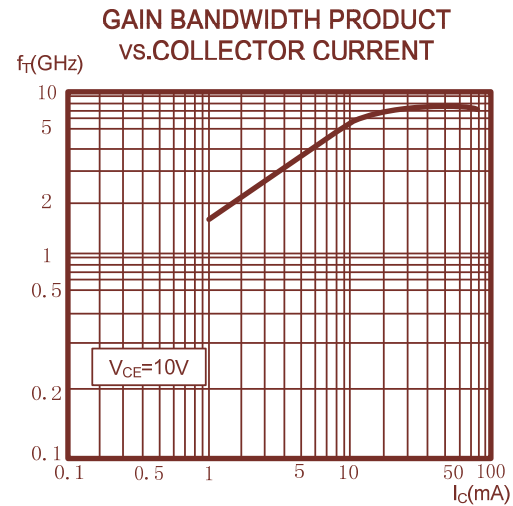
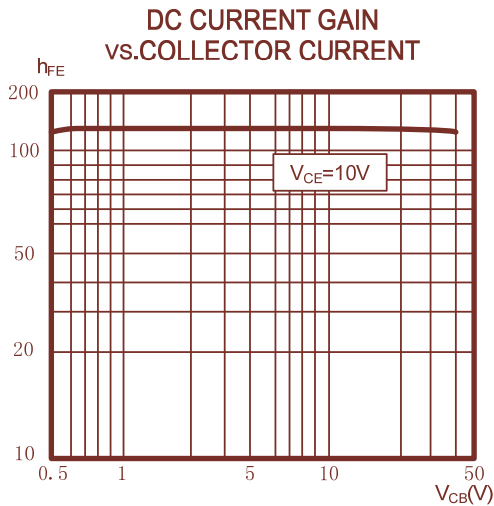
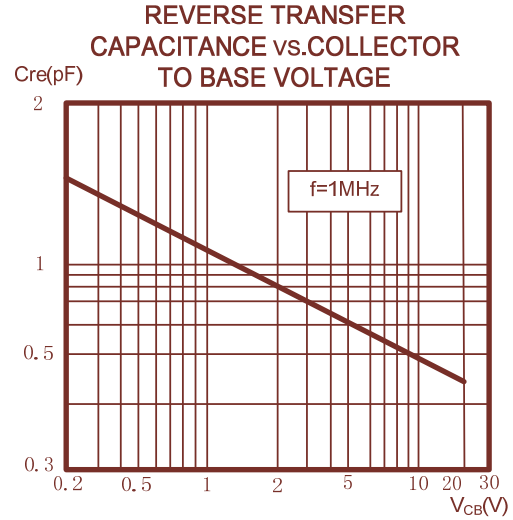
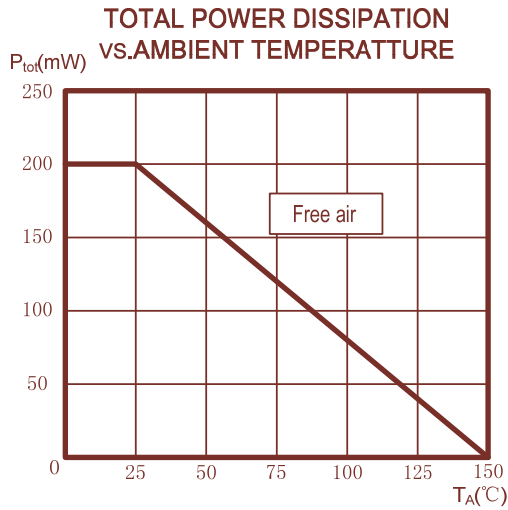
电参数及规格 (Tamb=25℃):

参数名称	符号	测试条件	额定值			单位
			最小值	典型值	最大值	
集电极截止电流	I_{CBO}	$V_{CB}=10V, I_E=0$	-	-	0.5	μA
发射极截止电流	I_{EBO}	$V_{EB}=1.0V, I_C=0$	-	-	0.5	μA
直流电流放大系数	h_{FE}	$V_{CE}=10V, I_C=20mA$	56	-	300	
集电极-发射极饱和压降	$V_{CE(sat)}$	$I_C=10mA, I_B=5mA$	--	-	0.5	V
特征频率	f_T	$V_{CE}=10V, I_C=20mA$	3.2	4.5		GHz
输出电容	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	0.8	1.5	pF
噪声系数	NF	$V_{CE}=6V, I_C=2mA, f=500MHz$	-	3.5	-	dB

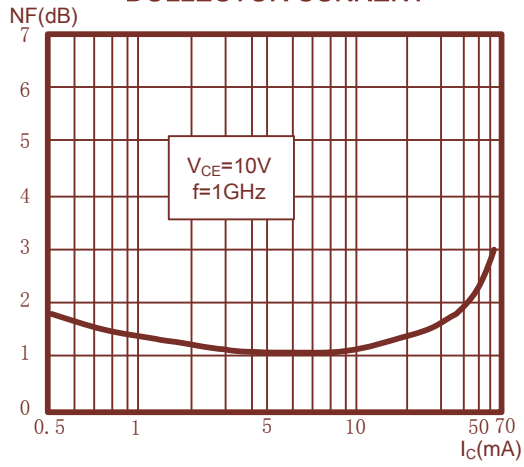
CLASSIFICATION OF h_{FE}

RANK	N	P
RANGE	56~120	82~180
MARKING	HADN	HADP

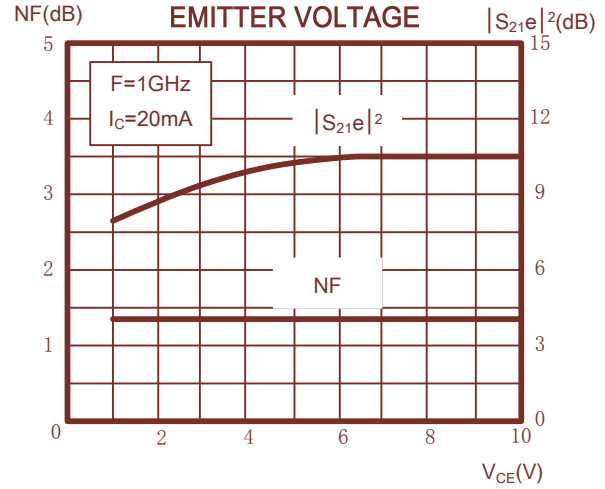
TYPICAL CHARACTERISTICS
($T_A=25^\circ\text{C}$, unless otherwise specified)



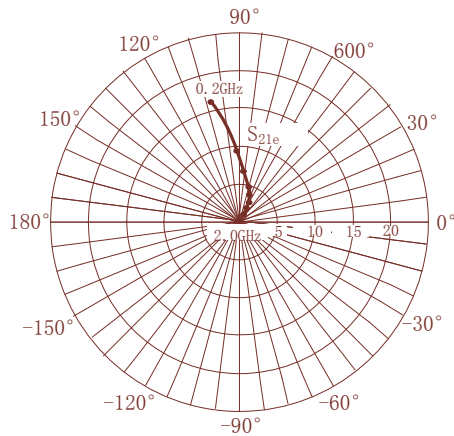
NOISE FIGURE vs. COLLECTOR CURRENT



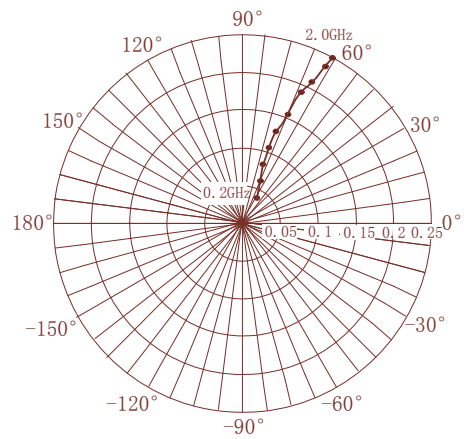
NOISE FIGURE, INSERTION POWER GAIN vs. COLLECTOR TO EMITTER VOLTAGE



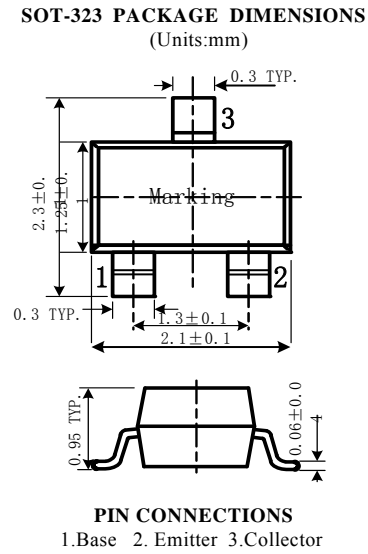
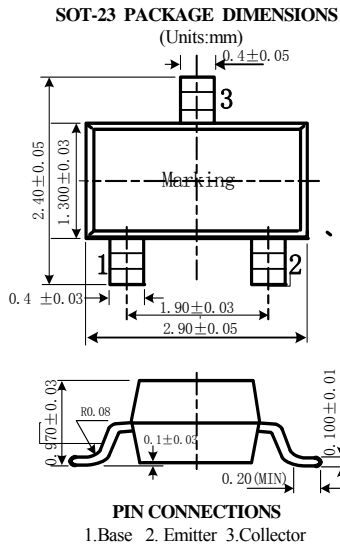
S_{21e} -FREQUENCY
CONDITION: $V_{CE}=10V, I_C=20mA$



S_{12e} -FREQUENCY
CONDITION: $V_{CE}=10V, I_C=20mA$



封装形式以及外形尺寸



包装信息 PACKAGE INFORMATION

Package	Shipping	Inner Box	Carton
SOT-23	3000pcs/Tape&Reel	10 Tape&Reel	6 Inner Box
SOT-323	3000pcs/Tape&Reel	5Tape&Reel	12 Inner Box