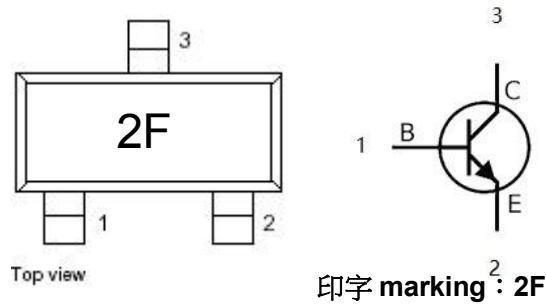


一、Features 产品特性

MAXIMUM RATINGS(T_a=25°C) 最大额定值

CHARACTERISTIC 特性参数	Symbol 符号	Rating 额定值	Unit 单位
Collector-Emitter Voltage 集电极-发射极电压	V _{CEO}	-60	Vdc
Collector-Base Voltage 集电极-基极电压	V _{CBO}	-65	Vdc
Emitter-Base Voltage 发射极-基极电压	V _{EBO}	-5	Vdc
Collector Current—Continuous 集电极电流-连续	I _C	-600	mAdc

THERMAL CHARACTERISTICS 热特性

CHARACTERISTIC 特性参数	Symbol 符号	Max 最大值	Unit 单位
Total Device Dissipation 总耗散功率 FR-5 Board(1) (T _A =25°C 环境温度=25°C)	P _D	225	mW
Derate above 25°C 超过 25°C 递减		1.8	mW/°C
Thermal Resistance Junction to Ambient 热阻	R _{J A}	556	°C/W
Total Device Dissipation Alumina Substrate,(2) T _A =25°C 总耗散功率 氧化铝衬底	P _D	300	mW
Derate above 25°C 超过 25°C 递减		2.4	mW/°C
Thermal Resistance Junction to Ambient 热阻	R _{J A}	417	°C/W
Junction and Storage Temperature 结温和储存温度	T _j , T _{stg}	150, -55 to +150	°C

ELECTRICAL CHARACTERISTICS 电特性

 (T_A=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

Characteristic 特性参数	Symbol 符号	Test Condition 测试条件	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector Cutoff Current 集电极截止电流	I _{CBO}	V _{CB} =-50Vdc	—	—	-0.01	μAdc
		V _{CB} =-50Vdc, I _E =0, T _A =125°C	—	—	-10	
Collector Cutoff Current	I _{CEX}	V _{CE} =-30Vdc,	—	—	-50	nAdc

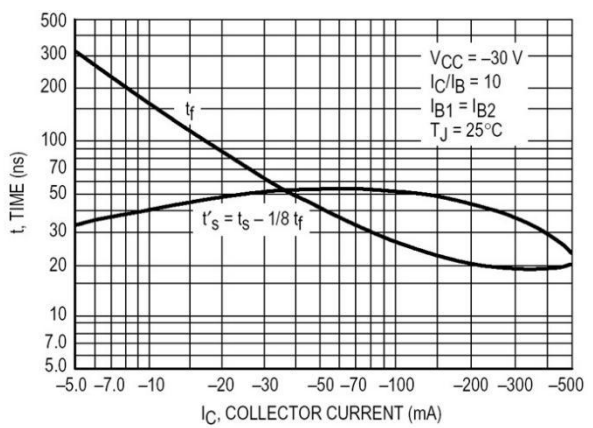
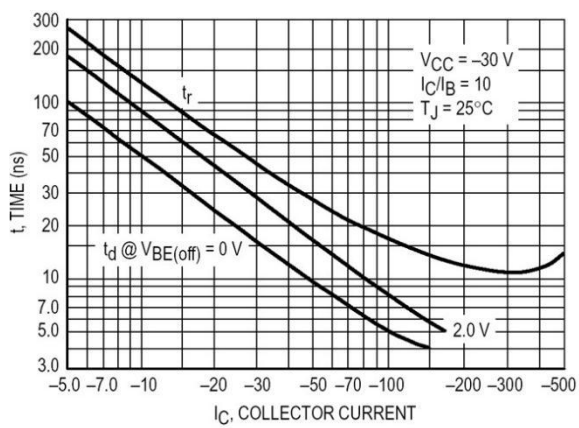
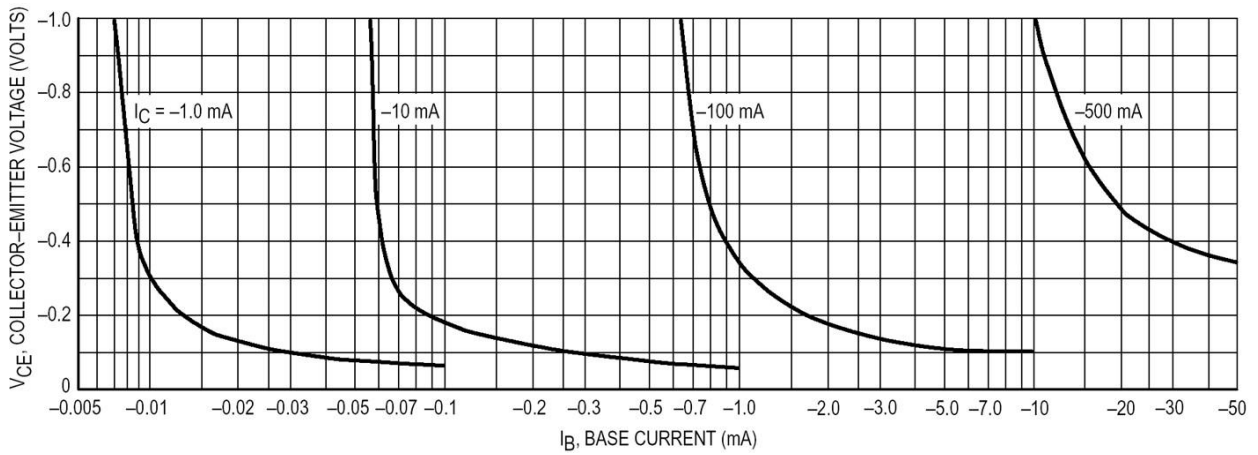
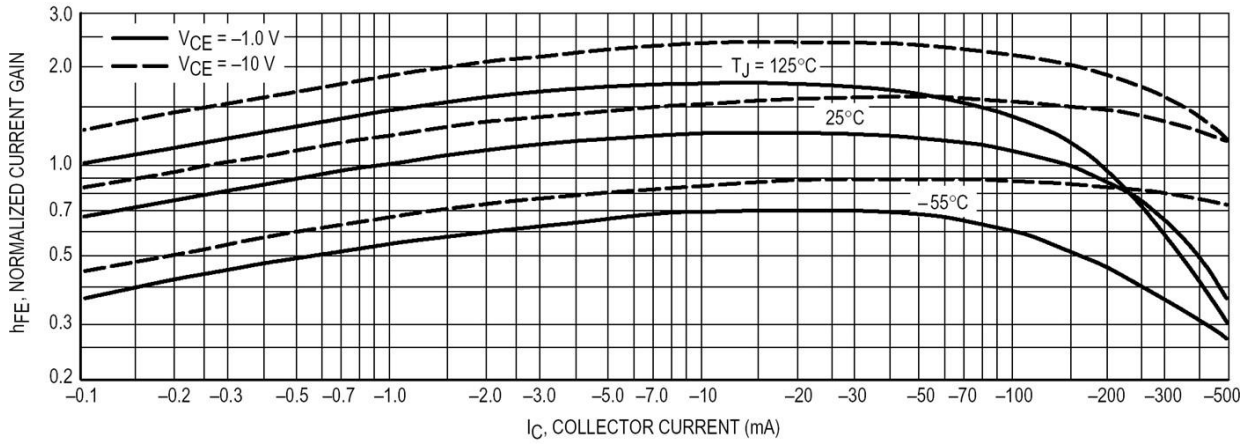
集电极截止电流		$I_{EB}=-0.5Vdc$				
Collector-Emitter Breakdown Voltage(3) 集电极-发射极击穿电压	$V_{(BR)CEO}$	$I_C=-10mA_{dc}, I_B=0$	-60	—	—	Vdc
Collector-Base Breakdown Voltage集电极-基极击穿电压	$V_{(BR)CBO}$	$I_C=-10\mu A_{dc}, I_E=0$	-60	—	—	Vdc
Emitter-Base Breakdown Voltage 发射极-基极击穿电压	$V_{(BR)EBO}$	$I_E=-10\mu A_{dc}, I_C=0$	-5.0	—	—	Vdc
DC Current Gain 直流电流增益	h_{FE}	$I_C=-0.1mA_{dc}, V_{CE}=-10Vdc$	75	—	—	—
		$I_C=-1mA_{dc}, V_{CE}=-10Vdc$	100	—	—	
		$I_C=-10mA_{dc}, V_{CE}=-10Vdc$	100	—	—	
		$I_C=-150mA_{dc}, V_{CE}=-10Vdc$	100	—	300	
		$I_C=-500mA_{dc}, V_{CE}=-10Vdc$	50	—	—	
Collector-Emitter Saturation Voltage(3)集电极-发射极饱和压降	$V_{CE(sat)}$	$I_C=-150mA_{dc}, I_B=-15mA_{dc}$	—	—	-0.4	Vdc
		$I_C=-500mA_{dc}, I_B=-50mA_{dc}$	—	—	-2.6	
Base-Emitter Saturation Voltage 基极-发射极饱和压降	$V_{BE(sat)}$	$I_C=-150mA_{dc}, I_B=-15mA_{dc}$	—	—	-1.3	Vdc
		$I_C=-500mA_{dc}, I_B=-50mA_{dc}$	—	—	-2.6	
Current-Gain-Bandwidth Product 电流增益-带宽乘积	f_T	$I_C=-50mA_{dc}, V_{CE}=-20Vdc, f=100MHz$	200	—	—	MHz
Output Capacitance 输出电容	C_{obo}	$V_{CB}=-10Vdc, I_E=0, f=1.0MHz$	—	—	8.0	pF
Input Capacitance 输入电容	C_{ibo}	$V_{EB}=-2.0Vdc, I_C=0, f=1.0MHz$	—	—	30	pF

SWITCHING CHARACTERISTICS 开关特性

Turn-On Time 开启时间	t_{on}	$V_{CC}=-30Vdc, I_C=-150mA_{dc}, I_{B1}=-15mA_{dc}$	—	—	45	nS
Delay Time 延迟时间	t_d		—	—	10	
Rise Time 上升时间	t_r		—	—	40	
Storage Time 储存时间	t_s	$V_{CC}=-6.0Vdc, I_C=-150mA_{dc}, I_{B1}=I_{B2}=-15mA_{dc}$	—	—	80	nS
Fall Time 下降时间	t_f		—	—	30	
Turn-Off Time 关断时间	t_{off}		—	—	100	

- FR-5=1.0×0.75×0.062in.
- Alumina=0.4×0.3×0.024in, 99.5%alumina.
- Pulse Width≤300μS;Duty Cycle≤2.0%.

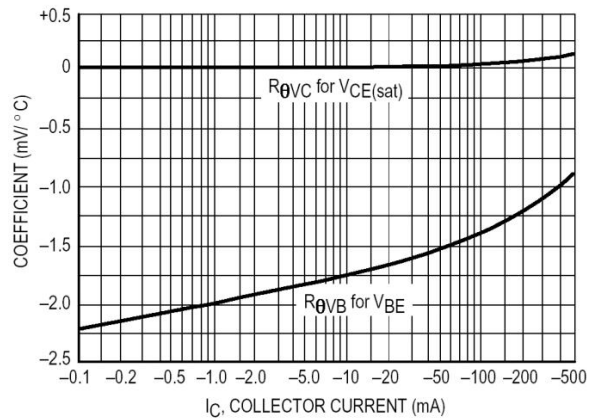
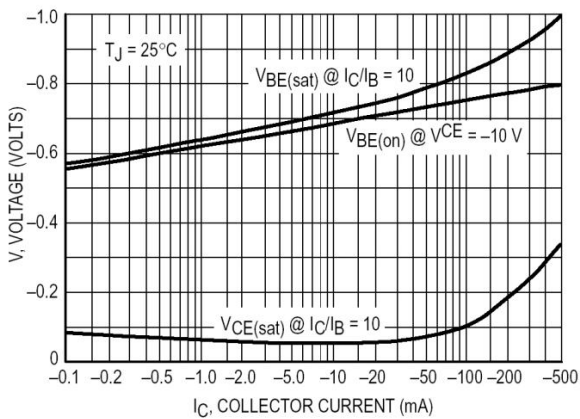
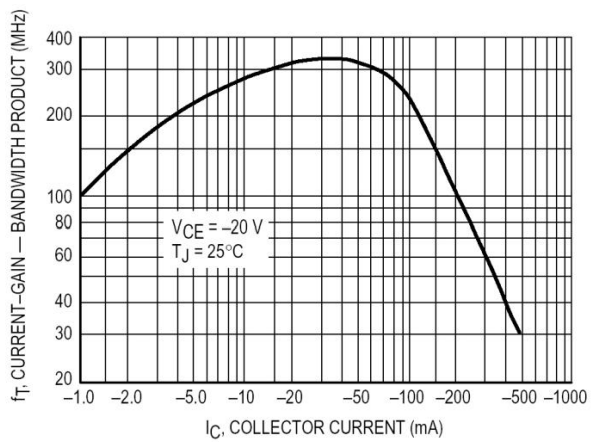
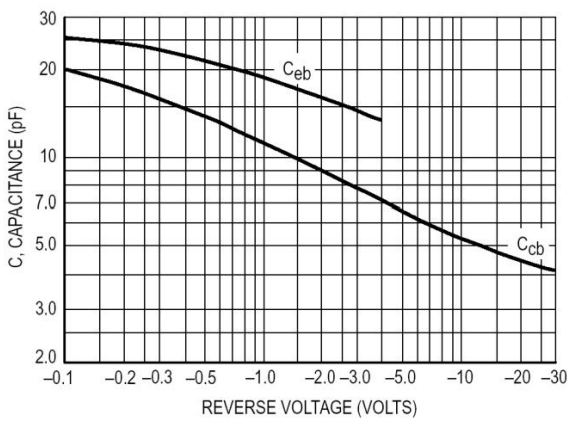
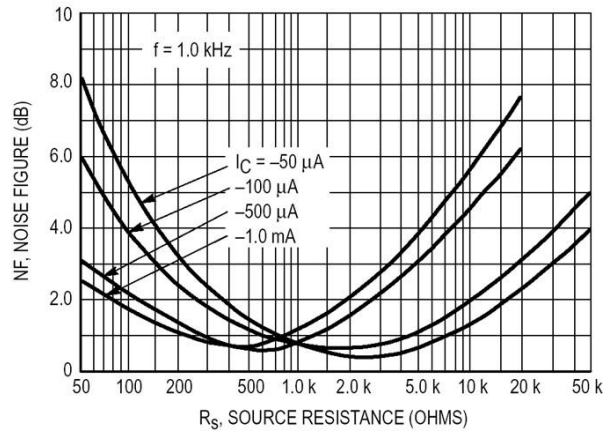
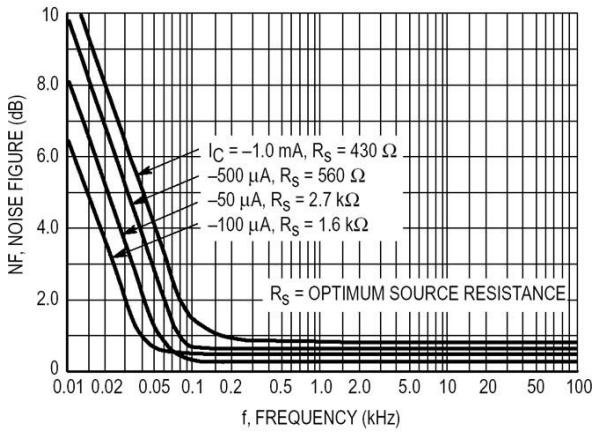
Typical Characteristics



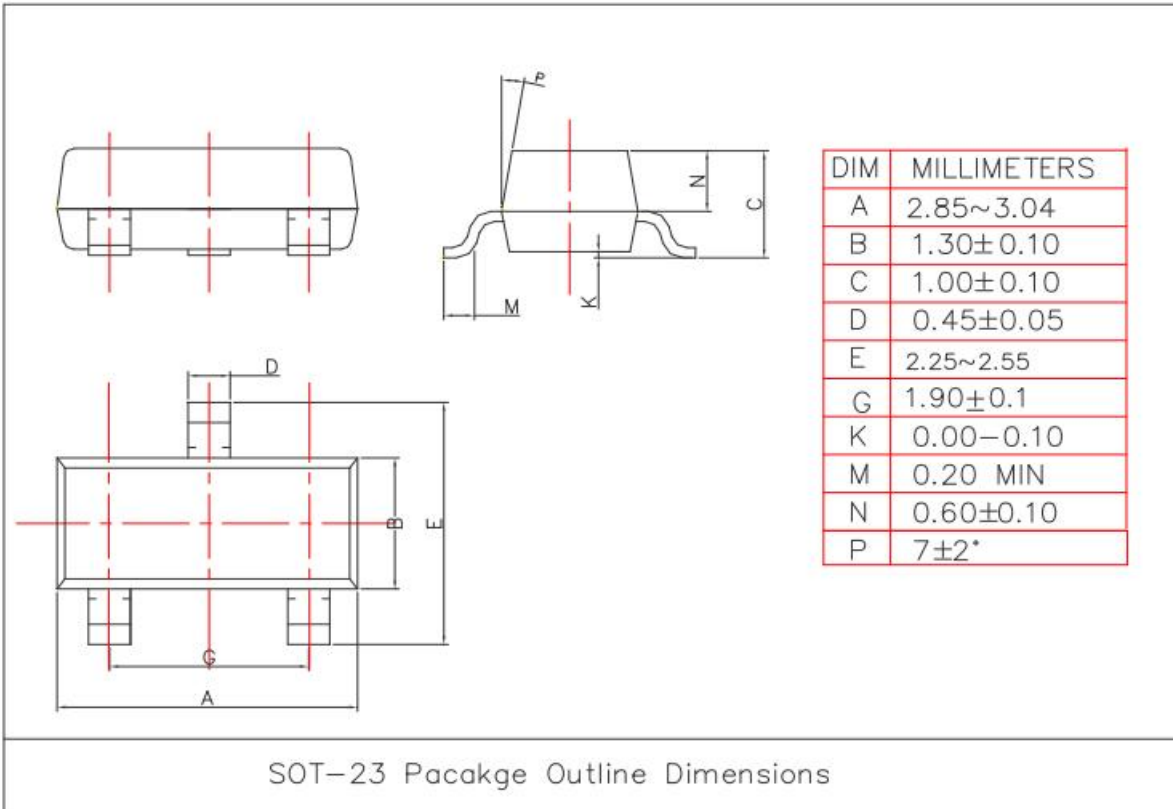
TYPICAL SMALL-SIGNAL CHARACTERISTICS

NOISE FIGURE

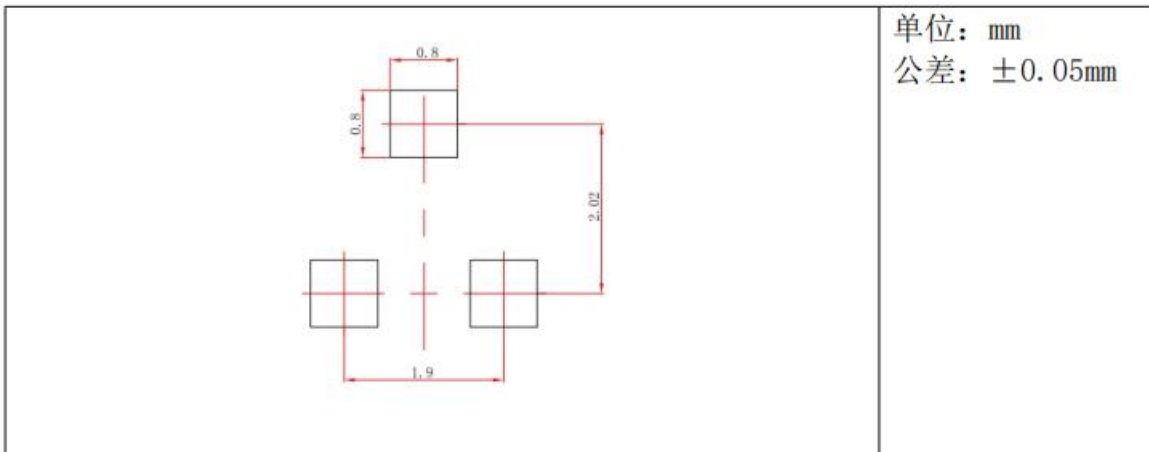
$V_{CE} = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$



二、SOT-23 外形尺寸 (SOT-23 DIMENSION)

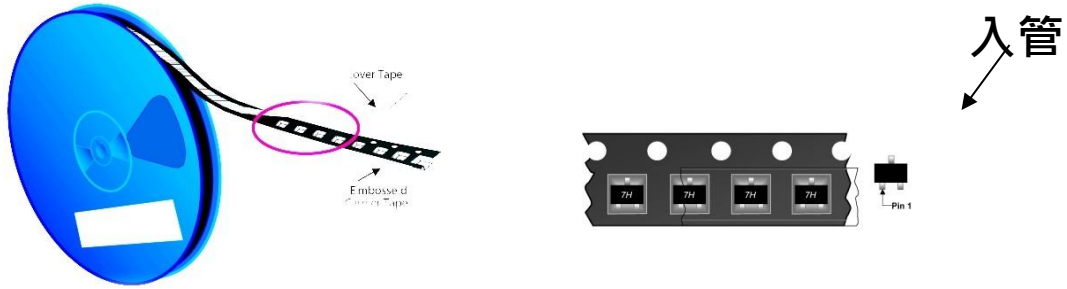


三、焊盘尺寸设计 SOT-23 Suggested Layout

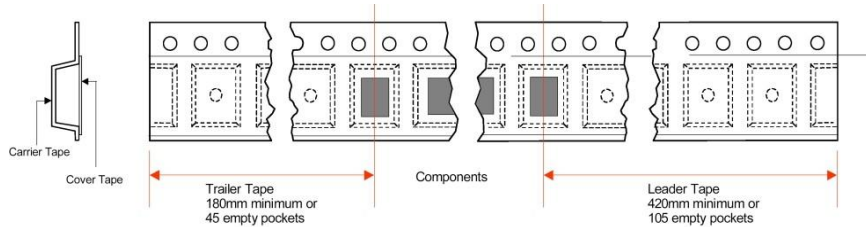


四、包装方式 Packings

封装形式	卷盘尺寸	只/卷	内盒尺寸	卷盘/内盒	只/内盒	外箱尺寸	内盒/外箱	只/外箱
SOT-23	7"	3000	190X190X135mm	10	30000	430 X 400 X 215mm	6	180K
			203X203X195mm	15	45000	440 X 440 X 230mm	4	180K



SOT-23 产品编带、包装图



SOT-23 带尾、带头空封数

