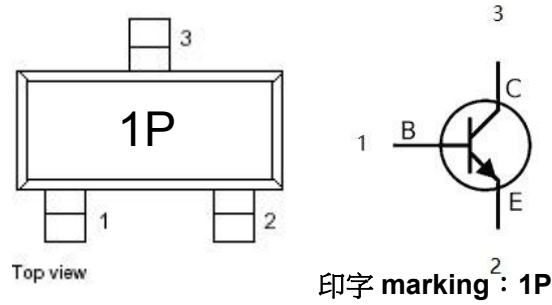


**一、Features 产品特性**

**MAXIMUM RATINGS(T<sub>a</sub>=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 <sub>CEO</sub>	40	Vdc
Collector-Base Voltage 集电极-基极电压	V <sub>CBO</sub>	75	Vdc
Emitter-Base Voltage 发射极-基极电压	V <sub>EBO</sub>	6	Vdc
Collector Current—Continuous 集电极电流-连续	I <sub>C</sub>	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 <sub>A</sub> =25°C 环境温度=25°C)	P <sub>D</sub>	225	mW
Derate above 25°C 超过 25°C 递减		1.8	mW/°C
Thermal Resistance Junction to Ambient 热阻	R <sub>JA</sub>	556	°C/W
Total Device Dissipation Alumina Substrate,(2) T <sub>A</sub> =25°C 总耗散功率 氧化铝衬底	P <sub>D</sub>	300	mW
Derate above 25°C 超过 25°C 递减		2.4	mW/°C
Thermal Resistance Junction to Ambient 热阻	R <sub>JA</sub>	417	°C/W
Junction and Storage Temperature 结温和储存温度	T <sub>j</sub> , T <sub>stg</sub>	150, -55 to +150	°C

**ELECTRICAL CHARACTERISTICS 电特性**
**(T<sub>A</sub>=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 <sub>CBO</sub>	V <sub>CB</sub> =60Vdc	—	—	0.01	μAdc
		V <sub>CB</sub> =60Vdc, I <sub>E</sub> =0, T <sub>A</sub> =125°C	—	—	10	
Emitter-Cutoff Current 发射极截止电流	I <sub>EBO</sub>	V <sub>EB</sub> =3.0Vdc, I <sub>C</sub> =0	—	—	100	nAdc

Collector Cutoff Current 集电极截止电流	$I_{CEX}$	$V_{CE}=60Vdc,$ $I_{EB(off)}=3.0 Vdc$	—	—	10	nAdc
Base Cutoff Current 基极截止电流	$I_{BEX}$	$V_{CE}=60Vdc,$ $V_{EB}=3.0 Vdc$	—	—	20	nAdc
Collector-Emitter Breakdown Voltage(3) 集电极-发射极击穿电压	$V_{(BR)CEO}$	$I_C=10mAdc,$ $I_B=0$	40	—	—	Vdc
Collector-Base Breakdown Voltage集电极-基极击穿电压	$V_{(BR)CBO}$	$I_C=10\mu Adc,$ $I_E=0$	75	—	—	Vdc
Emitter-Base Breakdown Voltage 发射极-基极击穿电压	$V_{(BR)EBO}$	$I_E=10\mu Adc,$ $I_C=0$	6	—	—	Vdc
DC Current Gain 直流电流增益	$h_{FE}$	$I_C=0.1mAdc,$ $V_{CE}=10Vdc$	35	—	—	—
		$I_C=1mAdc,$ $V_{CE}=10Vdc$	50	—	—	
		$I_C=10mAdc,$ $V_{CE}=10Vdc$	75	—	—	
		$I_C=1mAdc,$ $V_{CE}=10Vdc$ $T_A=-55^\circ C$	35	—	—	
		$I_C=150mAdc,$ $V_{CE}=10Vdc$	100	—	300	
		$I_C=500mAdc,$ $V_{CE}=10Vdc$	40	—	—	
Collector-Emitter Saturation Voltage(3) 集电极发射极饱和压降	$V_{CE(sat)}$	$I_C=150mAdc,$ $I_B=15mAdc$	—	—	0.3	Vdc
		$I_C=500mAdc,$ $I_B=50mAdc$	—	—	1.0	
Base-Emitter Saturation Voltage 基极-发射极饱和压降	$V_{BE(sat)}$	$I_C=150mAdc,$ $I_B=15mAdc$	0.6	—	1.2	Vdc
		$I_C=500mAdc,$ $I_B=50mAdc$	—	—	2.0	
Current-Gain-Bandwidth Product 电流增益-带宽乘积	$f_T$	$I_C=10mAdc,$ $V_{CE}=20Vdc,$ $f=100 MHz$	300	—	—	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	$C_{ibo}$	$V_{EB}=0.5Vdc,$ $I_C=0, f=1.0MHz$	—	—	25	pF

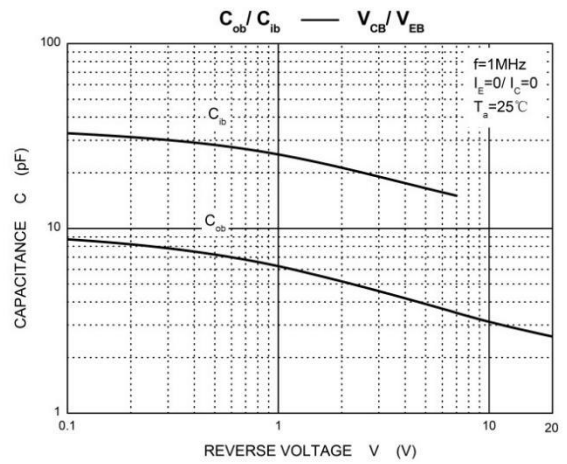
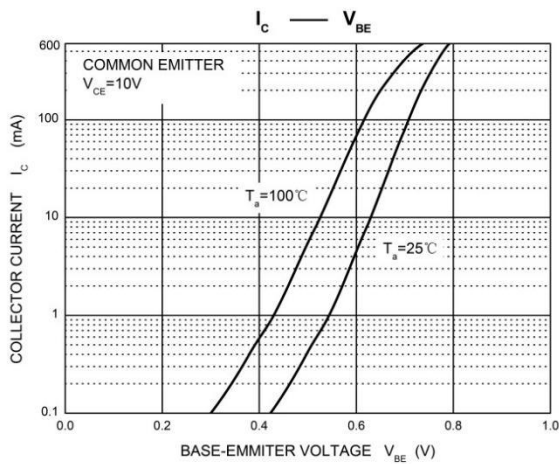
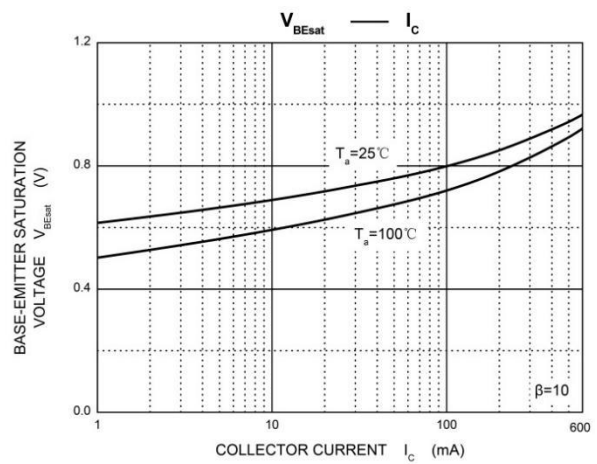
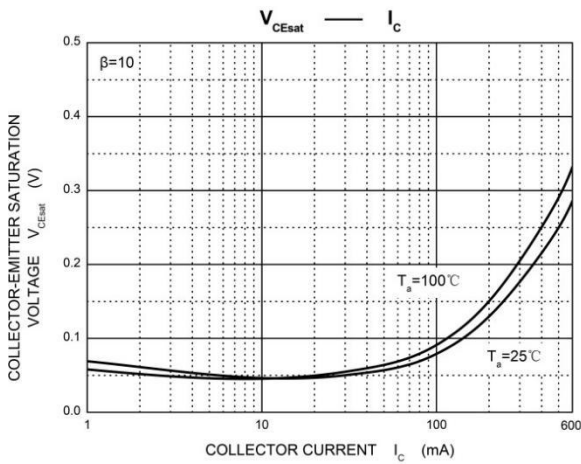
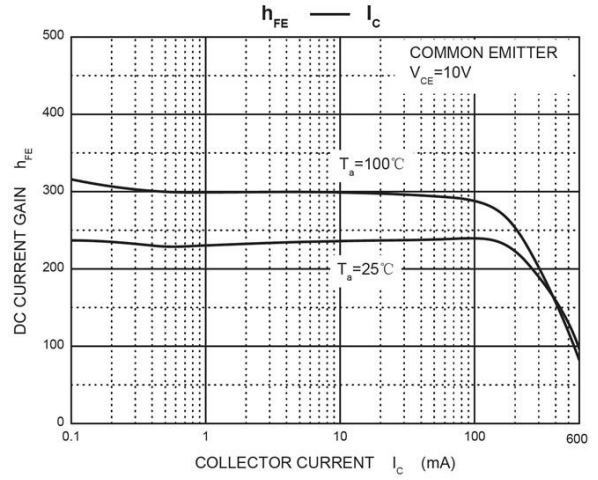
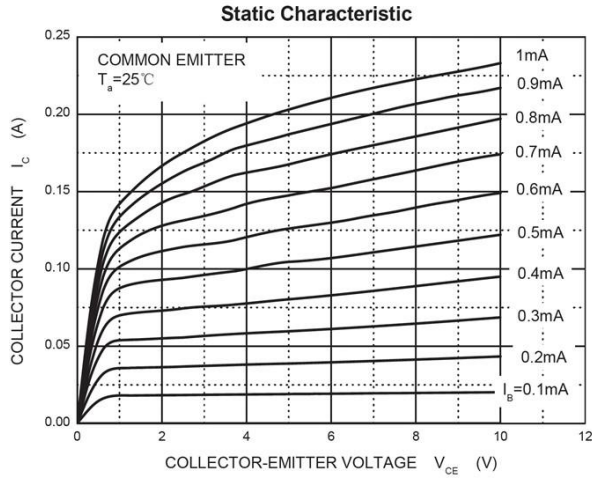
**SWITCHING CHARACTERISTICS 开关特性**

Delay Time 延迟时间	$t_d$	$V_{CC}=30Vdc, V_{BE}=-0.5Vdc,$ $I_C=150mAdc, I_{B1}=15mAdc$	—	—	10	nS
Rise Time 上升时间	$t_r$		—	—	25	
Storage Time 储存时间	$t_s$	$V_{CC}=30Vdc, I_C=150mAdc,$ $I_{B1}=I_{B2}=15mAdc$	—	—	225	nS
Fall Time 下降时间	$t_f$		—	—	60	

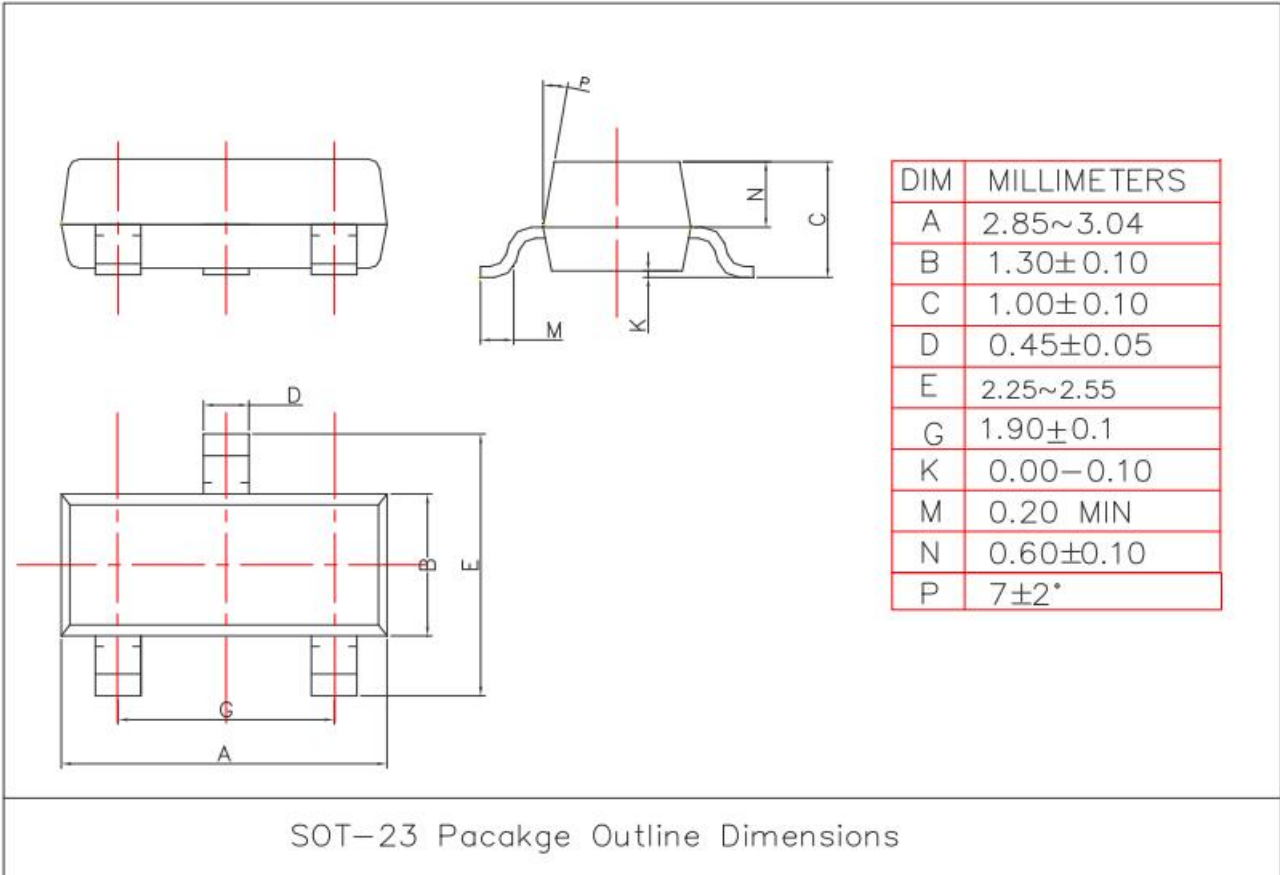
1. FR-5=1.0×0.75×0.062in.

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

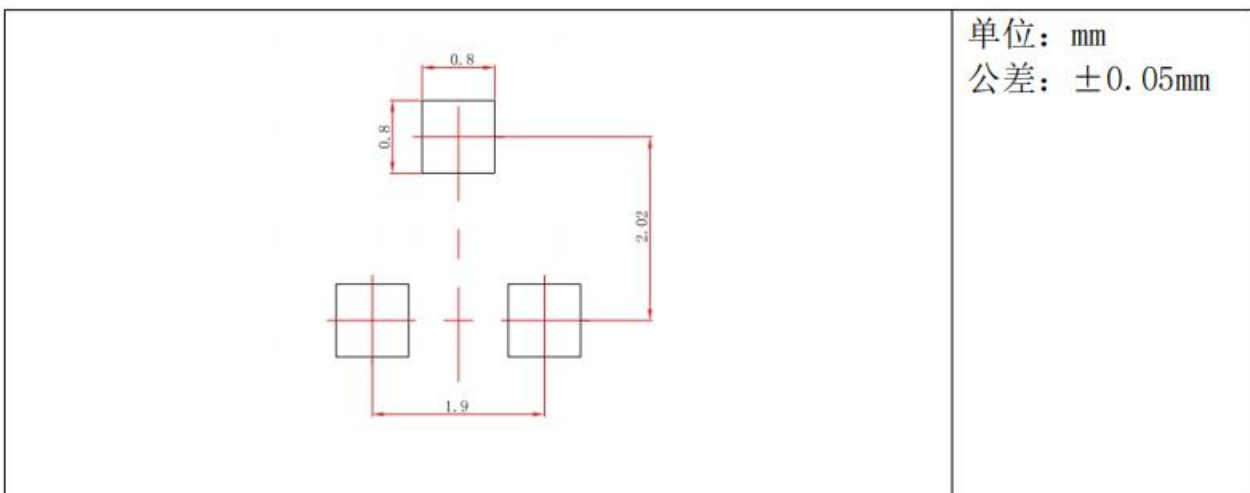
Typical Characteristics



二、SOT-23 外形尺寸 (SOT-23 DIMENSION)



三、焊盘尺寸设计 SOT-23 Suggested Layout

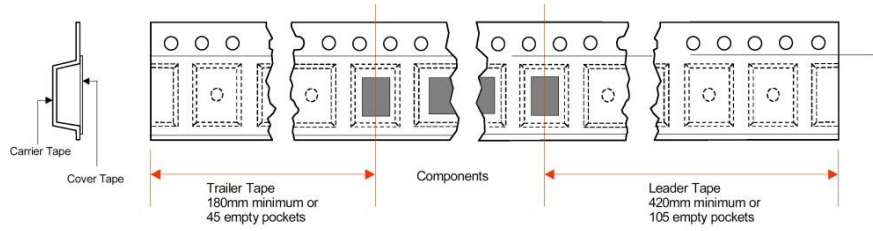


四、包装方式 Packings

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

