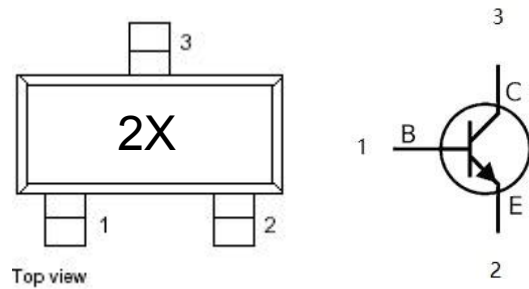


**一、Features 产品特性**


印字 marking : 2X

**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>	60	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>CEX</sub>	V <sub>CE</sub> =35Vdc, V <sub>EB</sub> =0.4Vdc	—	—	100	nAdc
Base Cutoff Current 基极截止电流	I <sub>BEX</sub>	V <sub>CE</sub> =35Vdc, V <sub>EB</sub> =0.4Vdc	—	—	100	nAdc

Collector-Emitter Breakdown Voltage (3)集电极-发射极击穿电压	$V_{(BR)CEO}$	$I_C=1.0\text{mA}, I_B=0$	40	—	—	Vdc
Collector-Base Breakdown Voltage 集电极-基极击穿电压	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	60	—	—	Vdc
Emitter-Base Breakdown Voltage 发射极-基极击穿电压	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	6	—	—	Vdc
DC Current Gain 直流电流增益	$h_{FE}$	$I_C=0.1\text{mA}, V_{CE}=1.0\text{Vdc}$	20	—	—	—
		$I_C=1.0\text{mA}, V_{CE}=1.0\text{Vdc}$	40	—	—	
		$I_C=10\text{mA}, V_{CE}=1.0\text{Vdc}$	80	—	—	
		$I_C=150\text{mA}, V_{CE}=2.0\text{Vdc}$	100	—	300	
		$I_C=500\text{mA}, V_{CE}=2.0\text{Vdc}$	40	—	—	
Collector-Emitter Saturation Voltage(3)集电极-发射极饱和压降	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	—	—	0.4	Vdc
		$I_C=500\text{mA}, I_B=50\text{mA}$	—	—	0.75	
Base-Emitter Saturation Voltage 基极-发射极饱和压降	$V_{BE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	0.75	—	0.95	Vdc
		$I_C=500\text{mA}, I_B=50\text{mA}$	—	—	1.2	
Current-Gain-Bandwidth Product 电流增益-带宽乘积	$f_T$	$I_C=20\text{mA}, V_{CE}=10\text{Vdc}, f=100\text{MHz}$	250	—	—	MHz
Output Capacitance 输出电容	$C_{obo}$	$V_{CB}=5.0\text{Vdc}, I_E=0, f=1.0\text{MHz}$	—	—	6.5	pF
Input Capacitance 输入电容	$C_{ibo}$	$V_{EB}=0.5\text{Vdc}, I_C=0, f=1.0\text{MHz}$	—	—	30	pF
Input Impedance 输入阻抗	$h_{ie}$	$V_{CE}=10\text{Vdc}, I_C=1.0\text{mA}, f=1.0\text{KHz}$	1.0	—	15	kΩ
Voltage Feedback Ratio 电压反馈系数	$h_{re}$	$V_{CE}=10\text{Vdc}, I_C=1.0\text{mA}, f=1.0\text{KHz}$	0.5	—	8.0	$\times 10^{-4}$
Small-Signal Current Gain 小信号电流增益	$h_{fe}$	$V_{CE}=10\text{Vdc}, I_C=1.0\text{mA}, f=1.0\text{KHz}$	100	—	500	—
Output Admittance 输出导纳	$h_{oe}$	$V_{CE}=10\text{Vdc}, I_C=1.0\text{mA}, f=1.0\text{KHz}$	1.0	—	100	$\mu\text{mhos}$

**SWITCHING CHARACTERISTICS 开关特性**

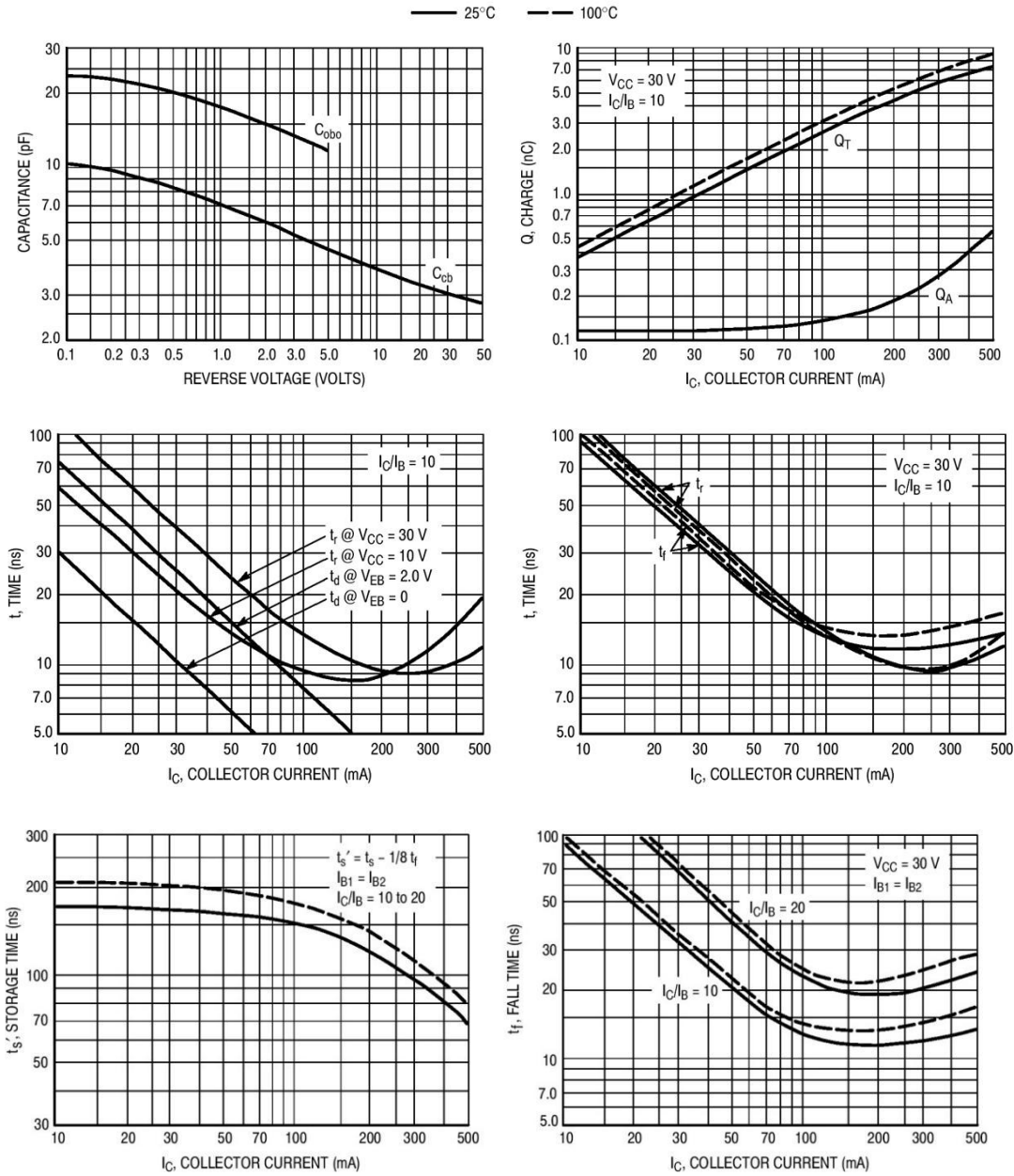
Delay Time 延迟时间	$t_d$	$V_{CC}=30\text{Vdc}, V_{BE}=2.0\text{Vdc}, I_C=150\text{mA}, I_{B1}=15\text{mA}$	—	—	15	nS
Rise Time 上升时间	$t_r$		—	—	20	
Storage Time 储存时间	$t_s$	$V_{CC}=30\text{Vdc}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$	—	—	225	nS
Fall Time 下降时间	$t_f$		—	—	30	

1. FR-5=1.0×0.75×0.062in.

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

Typical Characteristics

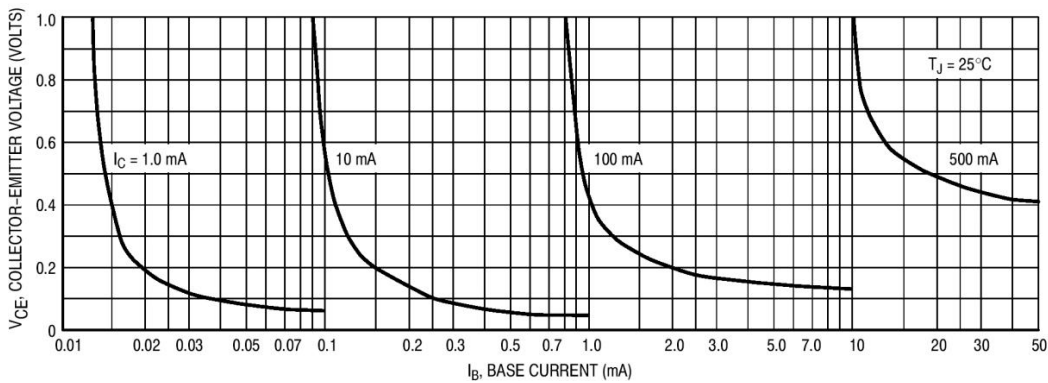
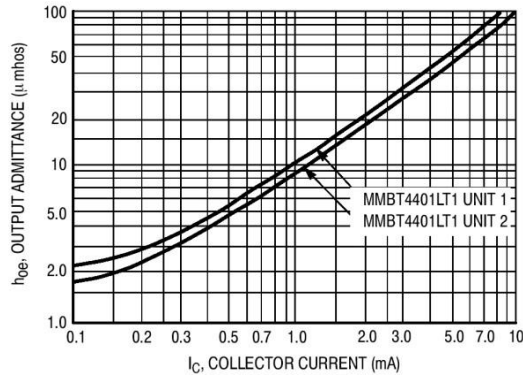
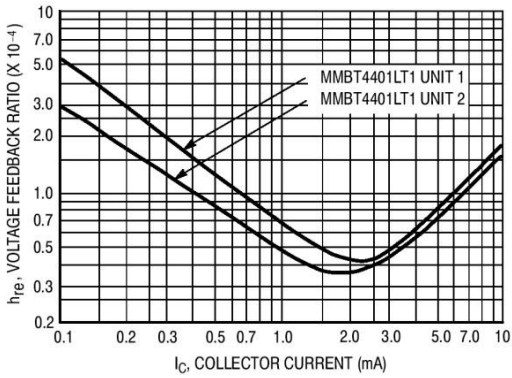
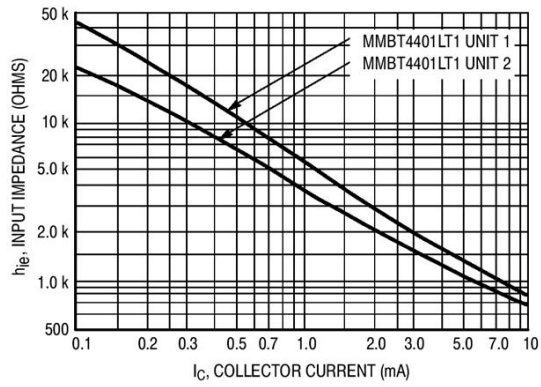
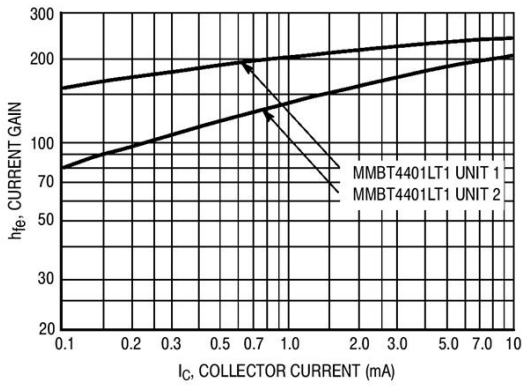
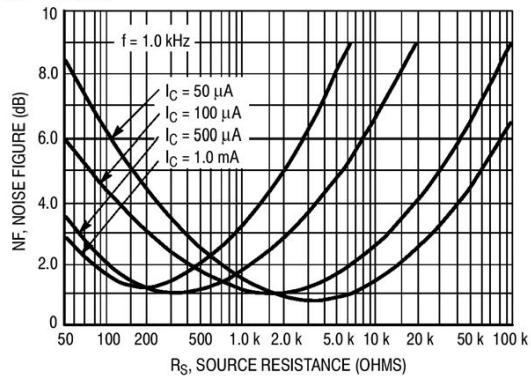
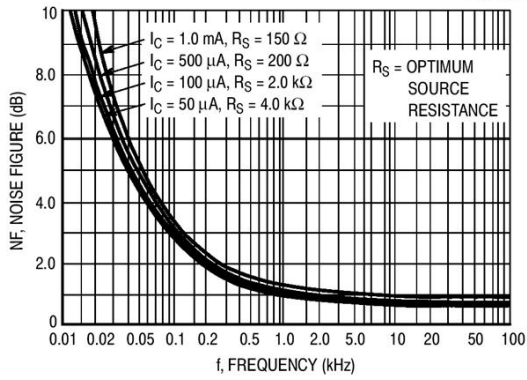
TRANSIENT CHARACTERISTICS

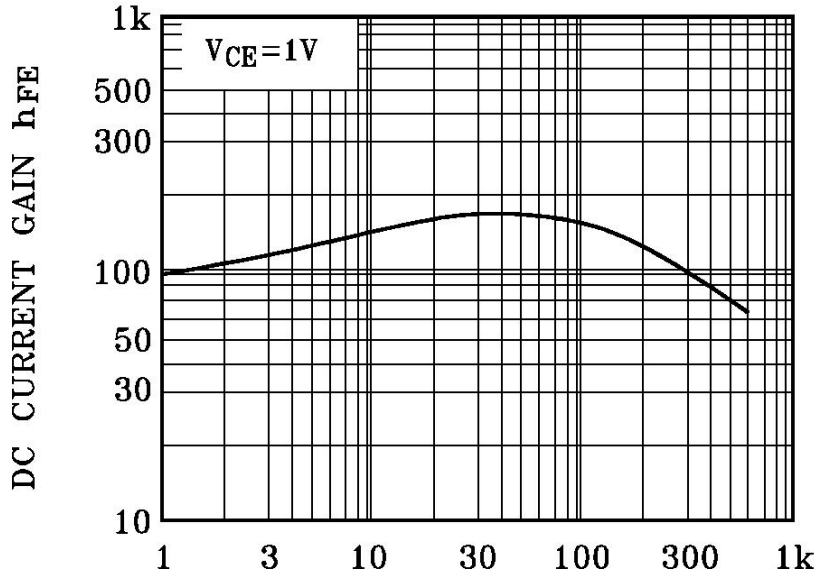
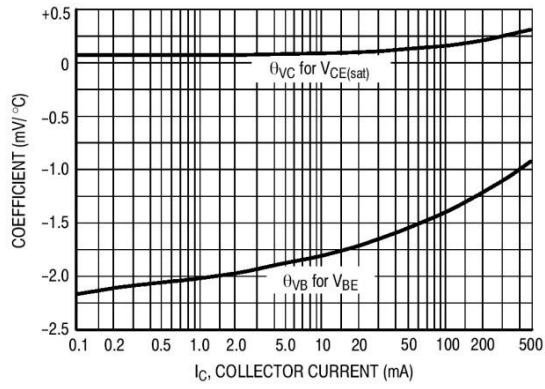
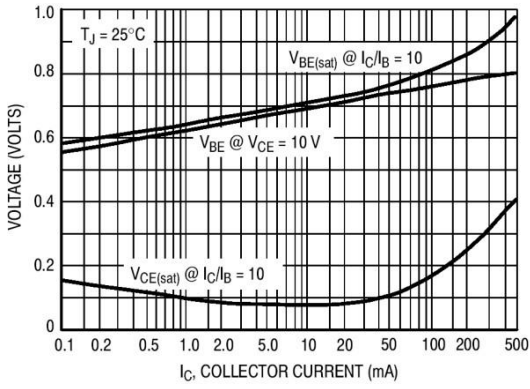


SMALL-SIGNAL CHARACTERISTICS

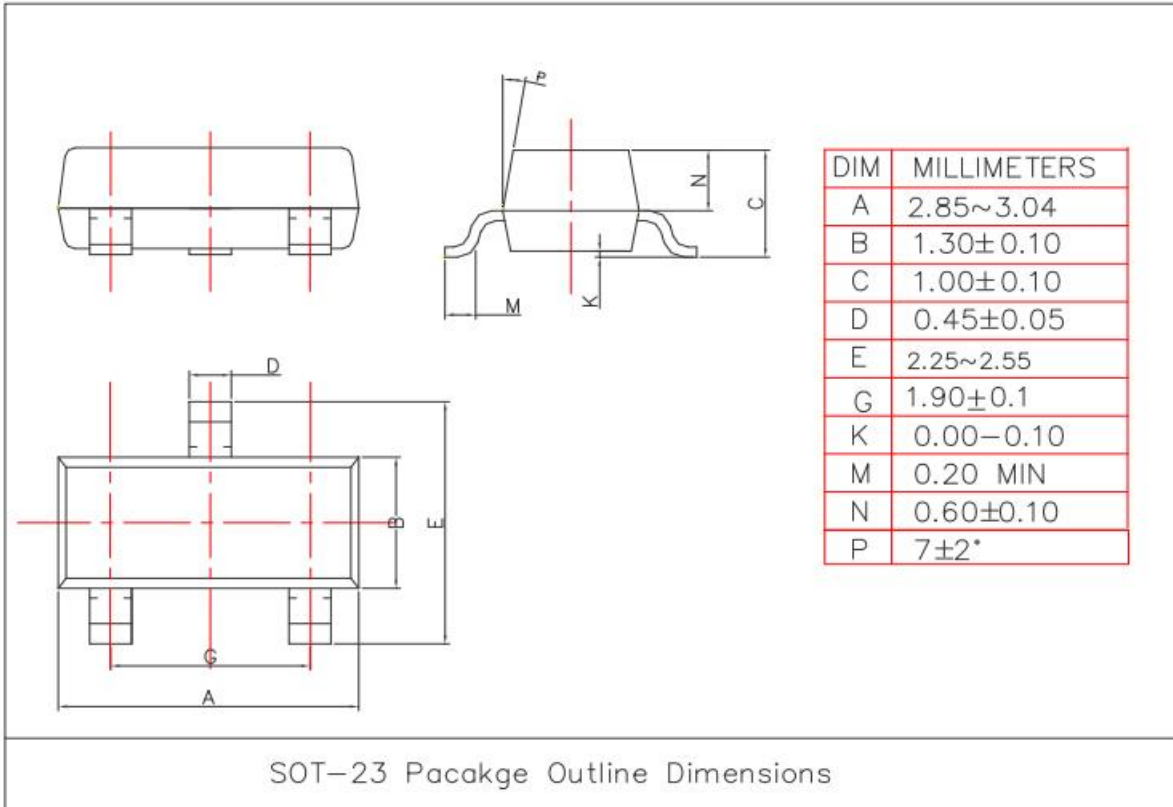
NOISE FIGURE

$V_{CE} = 10 \text{ Vdc}$ ,  $T_A = 25^\circ\text{C}$   
Bandwidth = 1.0 Hz

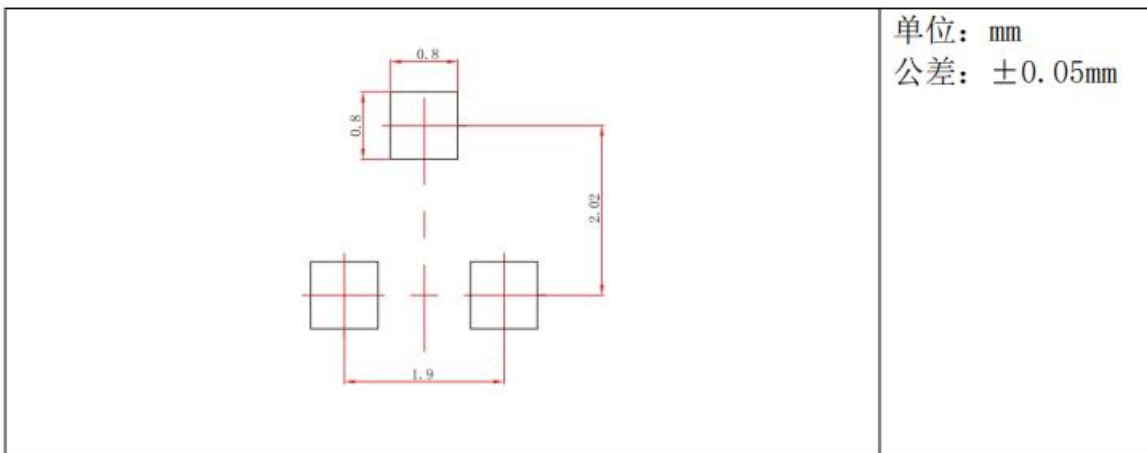




二、SOT-23 外形尺寸 (SOT-23 DIMENSION)



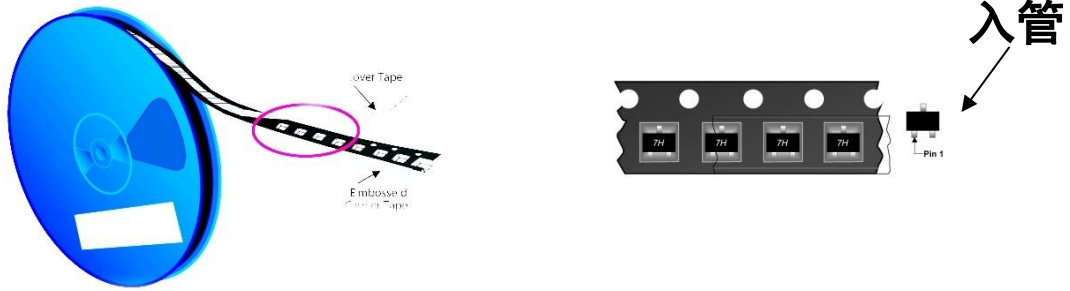
三、焊盘尺寸设计 SOT-23 Suggested Layout



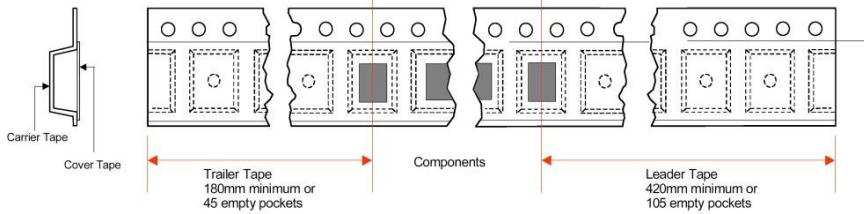


四、包装方式 Packings

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	190X190X135 mm	10	30000	430 X 400 X 215 mm	6	180K
			203X203X195 mm	15	45000	440 X 440 X 230 mm	4	180K



SOT-23 产品编带、包装图



SOT-23 带尾、带头空封数

