

NPN型 小功率 贴片高压三极管 NPN High Voltage Transistor SMD	SS8050 NPN, BEC General Purpose Transistors 对应其他工业型号
■ Transistor Polarity: NPN ■ Transistor pinout: BEC ■ SOT-23 Package ■ Marking Code: Y1 ■ hFE: 100~200, 200~300 ■ Ideal for Medium Power Amplification and Switching	

Inner circuit SOT-23 内部结构	SS8050 SOT-23 管脚排列	元件标识 (打印) DEVICE MARKING: Y1
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■ CLASSIFICATION OF hFE

RANK	L	H
RANGE	100~200	200~300

■ MAXIMUM RATINGS 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}	25	V
Collector-Base Voltage 集电极-基极电压		V_{CBO}	40	
Emitter-Base Voltage 发射极-基极电压		V_{EBO}	6	
Collector Current-Continuous 集电极电流-连续		I_C	1500	mA
Total Device Dissipation 总耗散功率	FR-5 Board (1)	P_D	225	mW
	Derate above 25°C 超过 25°C 递减		1.8	mW/°C
	Alumina Substrate 氧化铝衬底 (2) $T_A=25^\circ\text{C}$		300	mW
	Derate above 25°C 超过 25°C 递减		2.4	mW/°C
Thermal Resistance Junction to Ambient 热阻		$R_{\theta JA}$	556	°C/W
Junction Temperature 结温		T_J	150	°C
Storage Temperature Range 储存温度		T_{stg}	-55~+150	
Solder Temperature/Solder Time 焊接温度/焊接时间		T/t	260/10	°C/S

■ ELECTRICAL CHARACTERISTICS 电特性 ($T_A=25^\circ\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

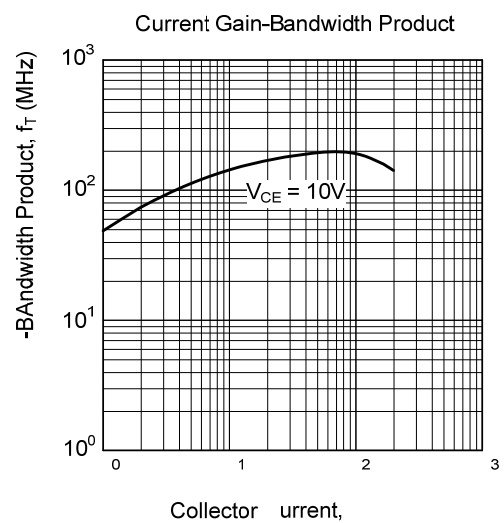
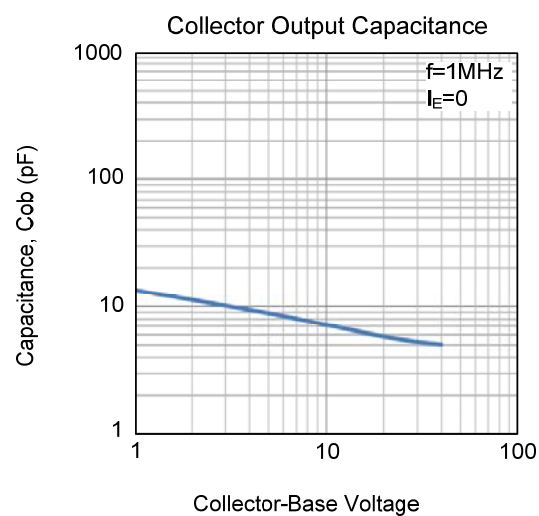
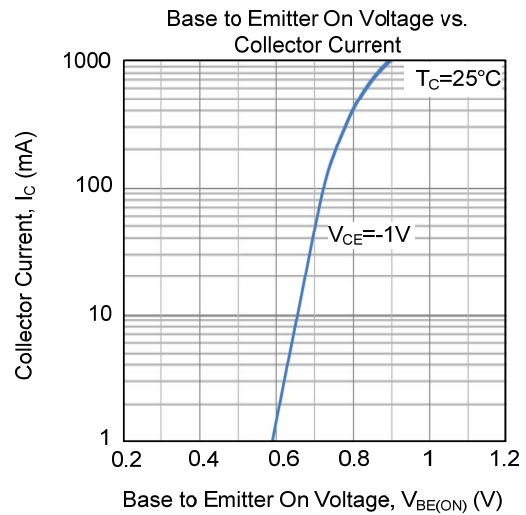
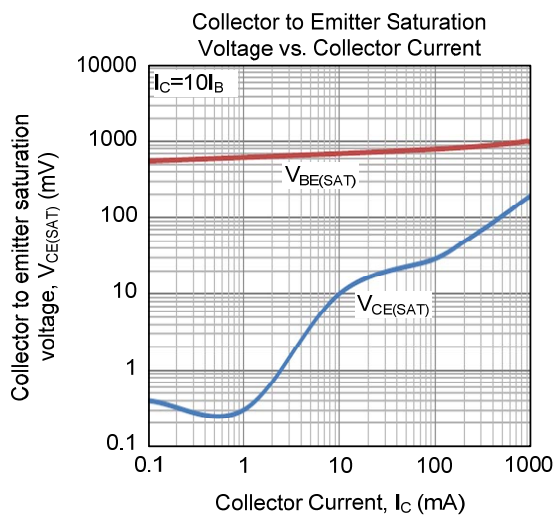
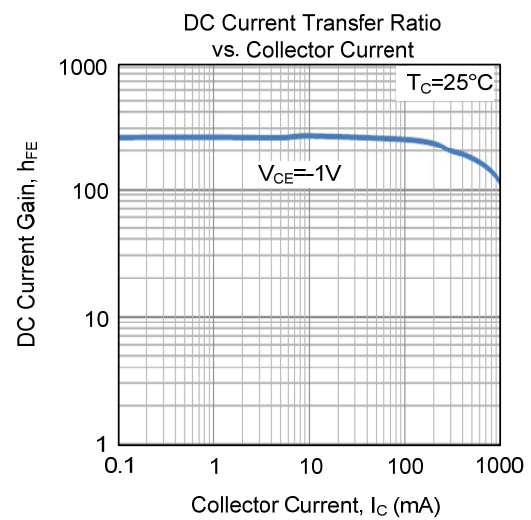
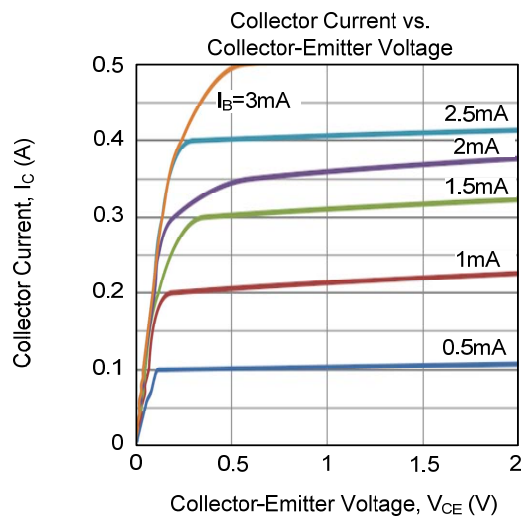
Characteristic 特性参数	Test Condition 测试条件	Symbol 符号	Min 最小值	Typ 典型值	Max 最大值	Unit 单位
Collector-Emitter Breakdown Voltage 集电极-发射极击穿电压 (3)	$I_B=0, I_C=-1\text{mA}$	$V_{(BR)CEO}$	25	--	--	V
Collector-Base Breakdown Voltage 集电极-基极击穿电压	$I_E=0, I_C=-100\mu\text{A}$	$V_{(BR)CBO}$	40	--	--	
Emitter-Base Breakdown Voltage 发射极-基极击穿电压	$I_E=0, I_C=-10\mu\text{A}$	$V_{(BR)EBO}$	6	--	--	
Emitter Cutoff Current 发射极截止电流	$V_{CE}=-3\text{V}, V_{EB}=-0.4\text{V}$	I_{BEO}	--	--	50	μA
Collector Cutoff Current 集电极截止电流	$V_{CE}=-120\text{V}, V_{EB}=-0.4\text{V}$	I_{CBO}	--	--	50	
DC Current Gain 直流电流增益	$I_C=-1\text{mA}, V_{CE}=-5\text{V}$	hFE	50	--	--	
	$I_C=-10\text{mA}, V_{CE}=-5\text{V}$		60	--	--	
	$I_C=-50\text{mA}, V_{CE}=-5\text{V}$		30	--	--	
Collector-Emitter Saturation Voltage 集电极-发射极饱和压降	$I_C=-10\text{mA}, I_B=-1\text{mA}$	$V_{CE(sat)}$	--	--	0.2	V
	$I_C=-50\text{mA}, I_B=-10\text{mA}$		--	--	0.5	
Base-Emitter Saturation Voltage 基极-发射极饱和压降	$I_C=-150\text{mA}, I_B=-1\text{mA}$	$V_{BE(sat)}$	--	--	1.0	
	$I_C=-50\text{mA}, I_B=-5\text{mA}$		--	--	1.0	
Current-Gain-Bandwidth Product 电流增益-带宽乘积	$I_C=-10\text{mA}, V_{CE}=-10\text{V}$ $f=100\text{MHz}$	f_T	100	--	300	MHz
Output Capacitance 输出电容	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$	C_{obo}	--	--	6.0	pF
Small-Signal Current Gain 小信号电流增益	$I_C=-1\text{mA}, V_{CE}=-10\text{V}, f=1\text{kHz}$	hFE	40	--	200	
Noise Figure 噪声系数	$V_{CE}=-5\text{V}, I_C=-200\mu\text{A}$ $R_S=1\text{K}\Omega, f=1.0\text{KHz}$	NF	--	--	8.0	dB

1. FR-5 = 1.0 × 0.75 × 0.062 in.

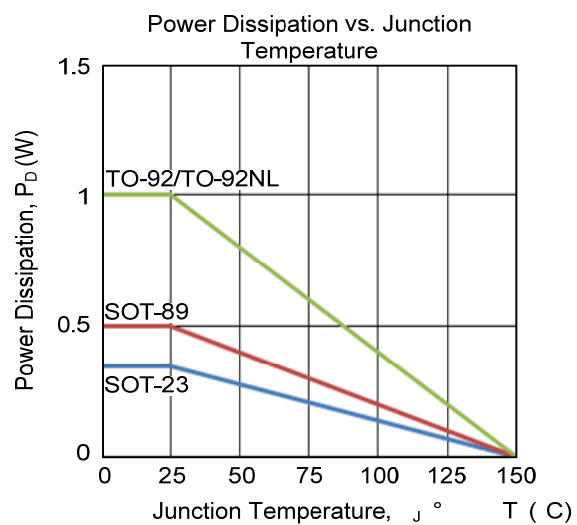
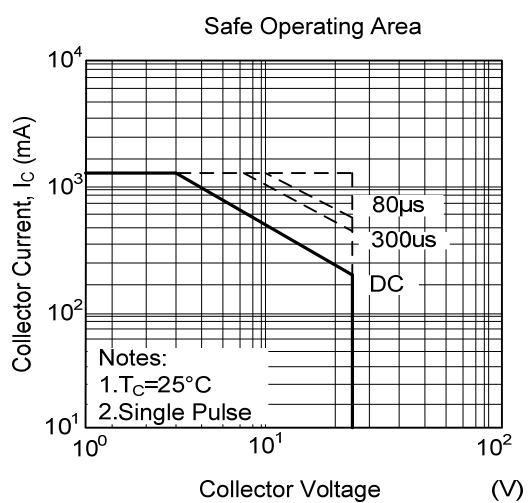
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

3. Pulse Width ≤ 300μs; Duty Cycle ≤ 2.0%.

■ TYPICAL CHARACTERISTICS

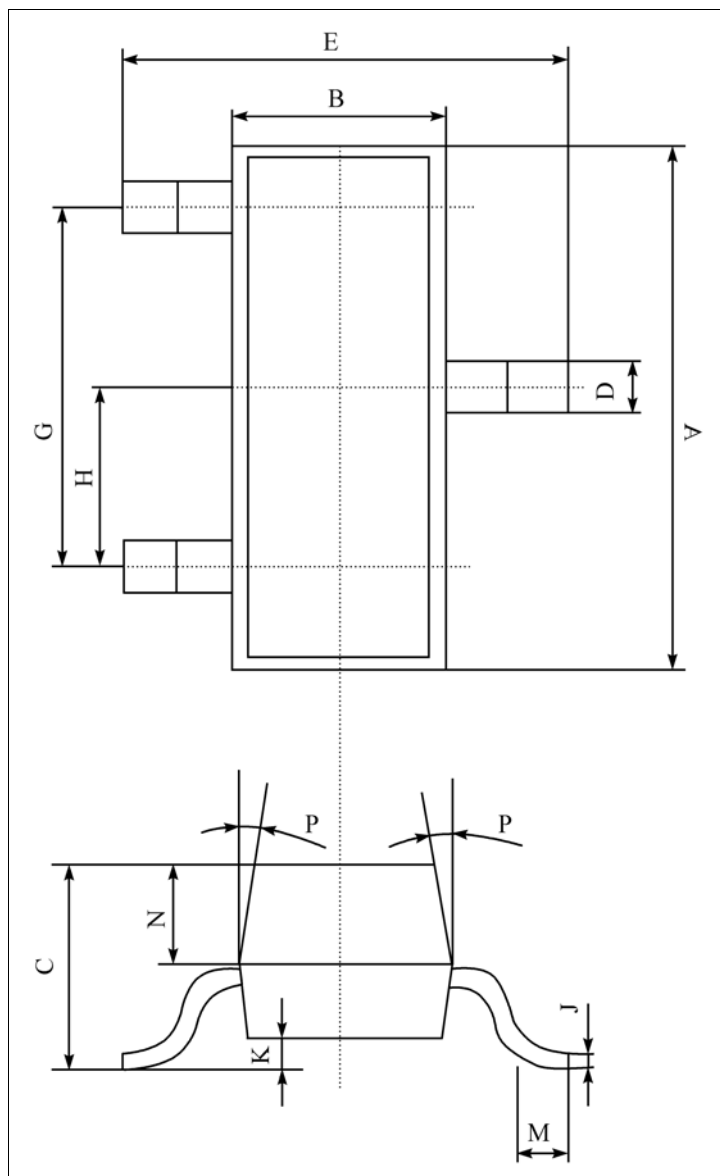


■ TYPICAL CHARACTERISTICS (Cont.)



■ DIMENSION 外形封装尺寸数据

单位 (UNIT) : mm

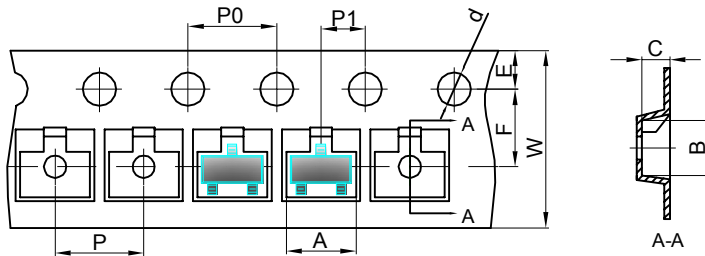


序号	数值及公差
A	2.90±0.10
B	1.30±0.10
C	1.00±0.10
D	0.40±0.10
E	2.40±0.20
G	1.90±0.10
H	0.95±0.05
J	0.13±0.05
K	0.00-0.10
M	≥0.20
N	0.60±0.10
P	7±2°

Packing
SOT-23 包装规格
SMD片式表面贴封装
包装方式: 载带卷盘包装
Tape & Reel, 3Kpcs/Reel
每卷数量3000只 (3Kpcs/Reel)
每盒数量45000只 (45Kpcs/BOX)
每箱数量180000只 (180Kpcs/Cartons)

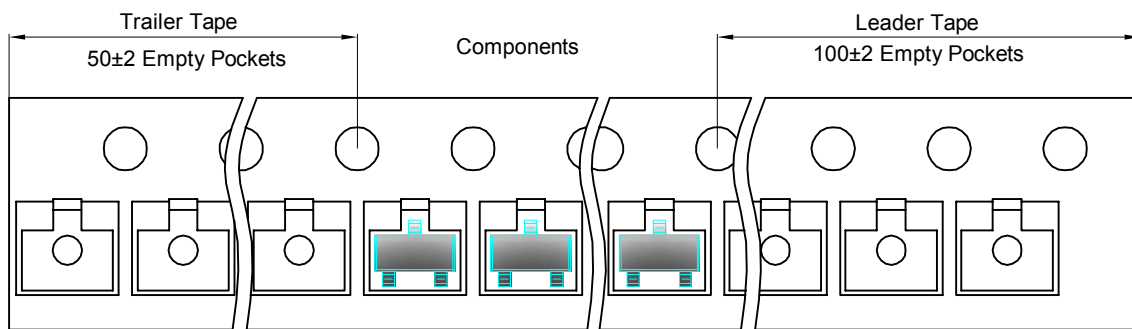
SOT-23 Tape and reel

SOT-23 Embossed Carrier Tape

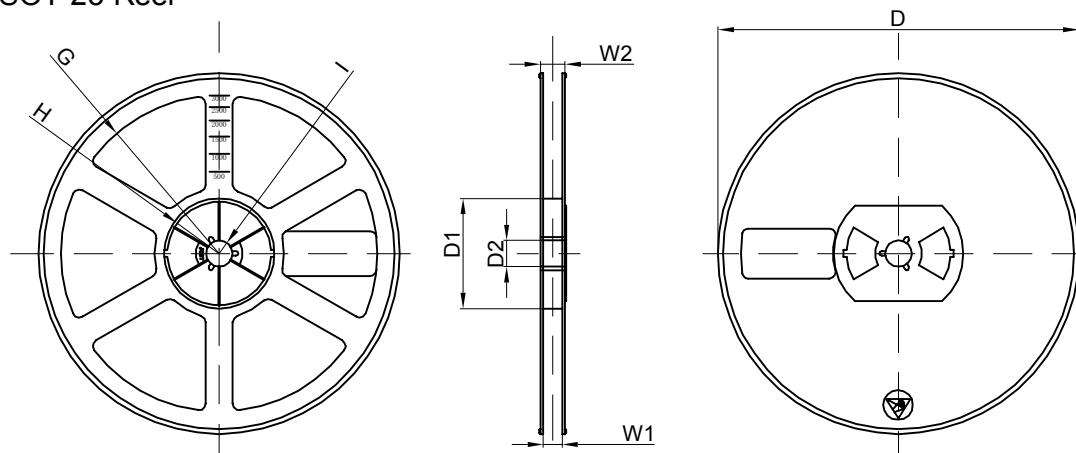


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	