

描述 / Descriptions

SOT-23 NPN Silicon NPN transistor in a SOT-23 Plastic Package.

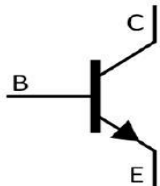
特征 / Features

Low current, Low voltage.

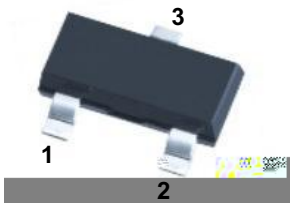
用途 / Applications

General power amplifier and switching application.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

放大及印章代码 / h_{FE} Classifications & Marking

h _{FE} Classifications Symbol	A	B	C
h _{FE} Range	110 220	200 450	420 800
Marking	H1J	H1K	H1L

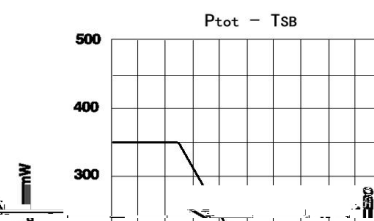
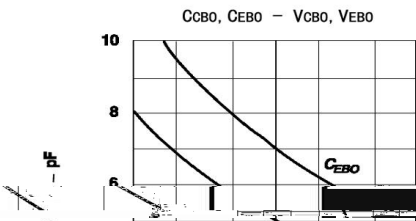
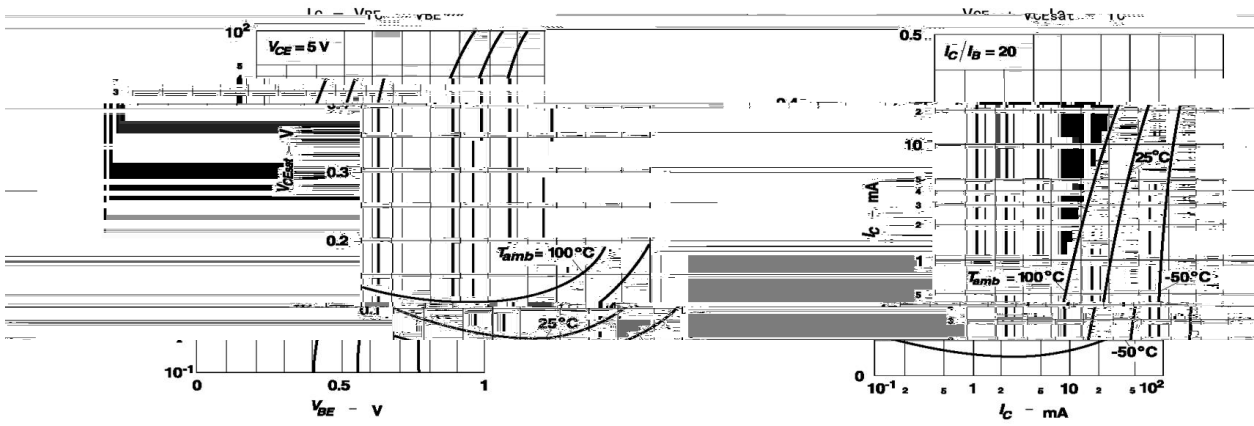
极限参数 / Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

电性能参数 / Electrical Characteristics(Ta=25°C)

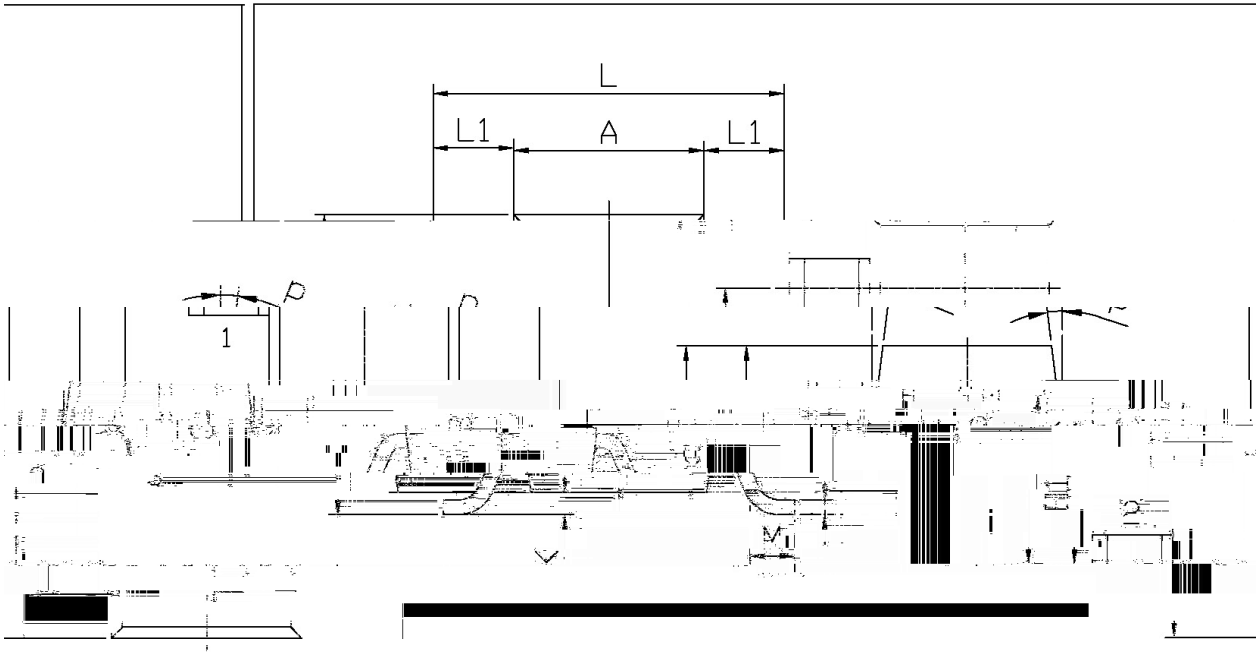
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V$ $I_E=0$			0.015	μA
Collector Cut-Off Current	I_{CEO}	$V_{CE}=25V$ $I_B=0$			1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5V$ $I_C=0$			0.05	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=2.0mA$	110		800	
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=10mA$ $I_B=0.5mA$		0.09	0.25	V
	$V_{CE(sat)(2)}$	$I_C=100mA$ $I_B=5.0mA$		0.2	0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)(1)}$	$I_C=10mA$ $I_B=0.5mA$		0.7		V
	$V_{BE(sat)(2)}$	$I_C=100mA$ $I_B=5.0mA$		0.9		V
Base to Emitter Voltage	$V_{BE(1)}$	$V_{CE}=5.0V$ $I_C=2.0mA$	0.58		0.7	V
	$V_{BE(2)}$	$V_{CE}=5.0V$ $I_C=10mA$			0.75	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=10mA$ $f=100MHz$		300		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		2.5	4.5	pF
Noise Figure	NF	$V_{CE}=6.0V$ $I_C=0.1mA$ $R_g=10K$ $f=1.0KHz$		1.0	10	dB

电参数曲线图 / Electrical Characteristic Curve



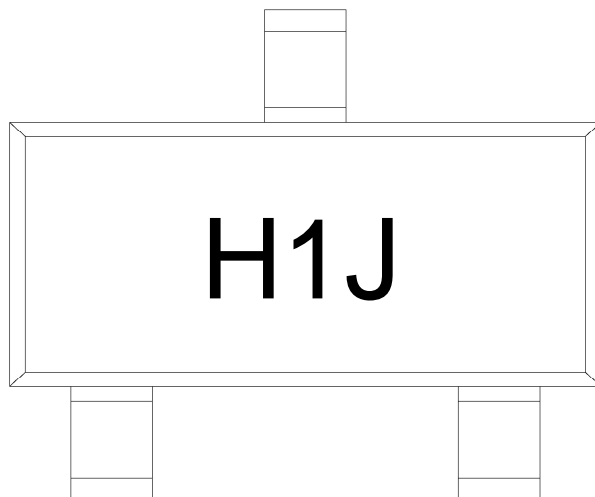
外形尺寸图 / Package Dimensions

UNIT: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L1	0.45	0.65	C	0.91	1.20
A	2.10	2.50	K	0.05	0.20
B	2.70	3.40	M	0.20MIN	
E	1.70	2.10	P	7°	
E1	3.85	4.05			
b	0.35	0.55			

印章说明 / Marking Instructions



H

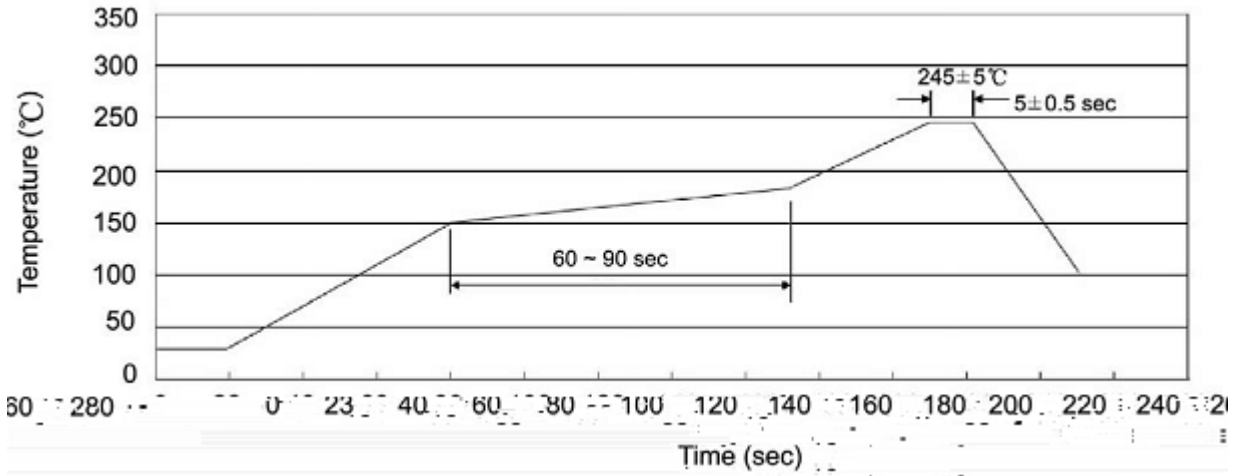
1J

Note:

H: Company Code

1J: Product Type Code

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak temperature: 245 ± 5°C, Time: 5 ± 0.5 sec.