描述 / Descriptions

SOT-89 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-89 Plastic Package.

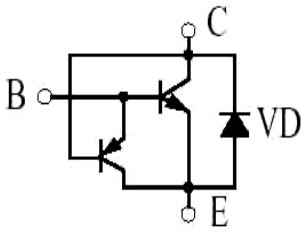
特征 / Features

快速转换。
High Speed Switching

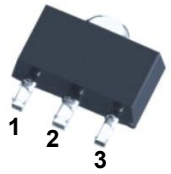
用途 / Applications

主要用于节能灯、日光灯电子镇流器及其它开关、振荡电路。
High frequency electronic lighting ballast applications,converters, inverters switching ,regulators, etc.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1：Base　　PIN 2：Collector　　PIN 3：Emitter

印章代码 / Marking

Marking	H03G **

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

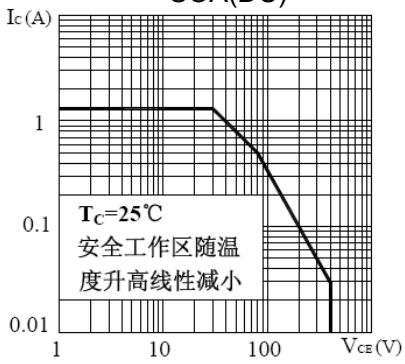
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	600	V
Collector to Emitter Voltage	V_{CEO}	400	V
Emitter to Base Voltage	V_{EBO}	9.0	V
Collector Current - Continuous	I_C	1.3	A
Collector Power Dissipation	P_C(Ta=25℃)	1.0	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{sag}	-55～150	℃

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

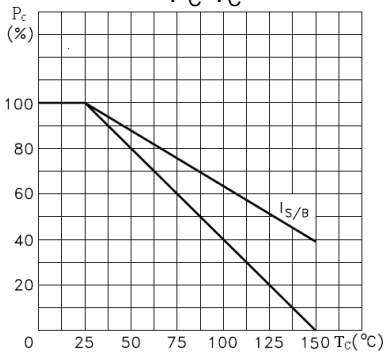
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector-Base Voltage	V_{CBO}	I_C=1mA I_E=0	600			V
Collector-Emitter Voltage	V_{CEO}	I_C=10mA I_B=0	400			V
Emitter-Base Voltage	V_{EBO}	I_E=1mA I_C=0	9.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=600V I_E=0			0.1	mA
Collector cut-off current	I_{CEO}	V_{CE}=400V I_B=0			0.1	mA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=9.0V I_C=0			0.1	mA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5V I_C=200mA	10		40	
	$h_{FE(2)}$	V_{CE}=5V I_C=1mA	7			
	$h_{FE(3)}$	V_{CE}=5V I_C=1.2A	5			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	I_C=500mA I_B=100mA			0.5	V
	$V_{CE(sat)(2)}$	I_C=1.0A I_B=500mA			0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA I_B=100mA			1.2	V
Fall time	t_f	V_{CE}=5V I_C=0.25A (UI9600)			0.8	μS
Storage time	t_s				3.5	μS
Transition Frequency	f_T	V_{CE}=10V I_C=0.1A f=1MHz	5			MHz

电参数曲线图 / Electrical Characteristic Curve

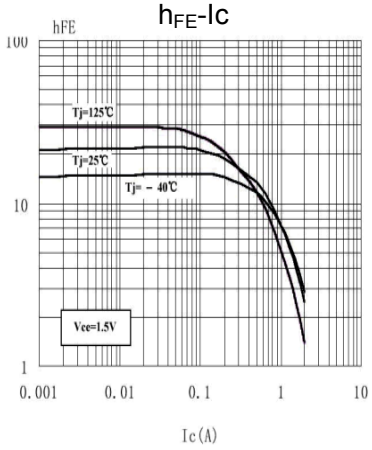
SOA(DC)



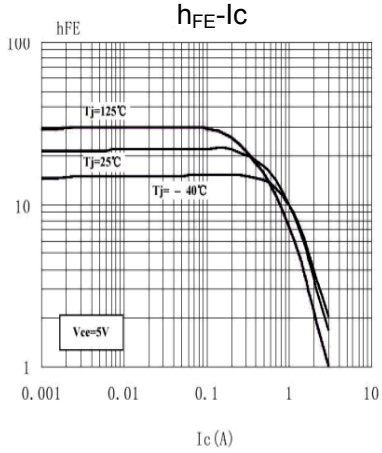
P_C-T_C



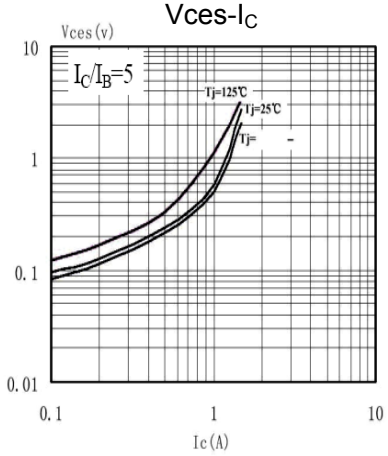
h_{FE}-Ic



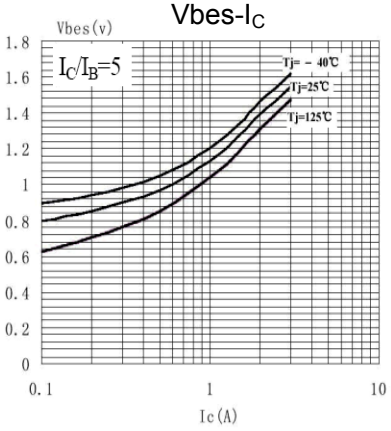
h_{FE}-Ic



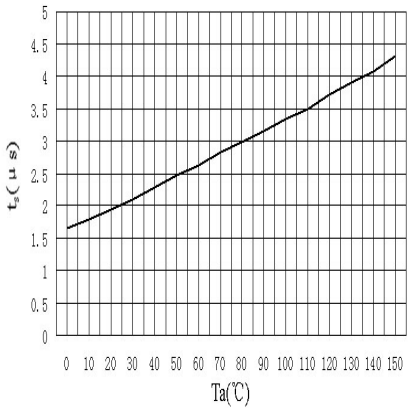
Vces-I_C



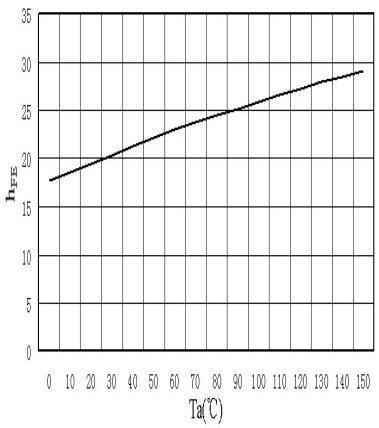
Vbes-I_C



t_S-Ta



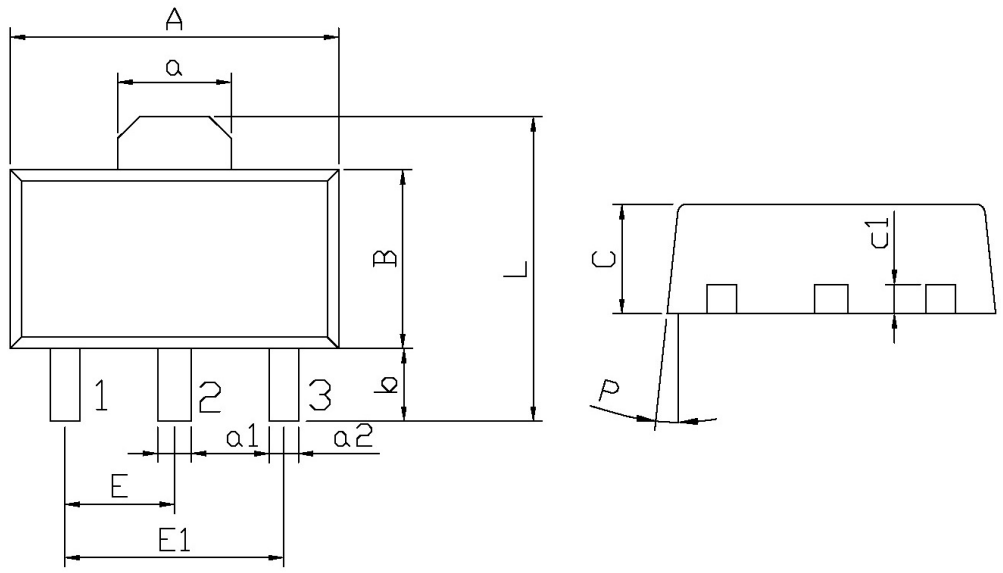
h_{FE}-Ta



外形尺寸图 / Package Dimensions

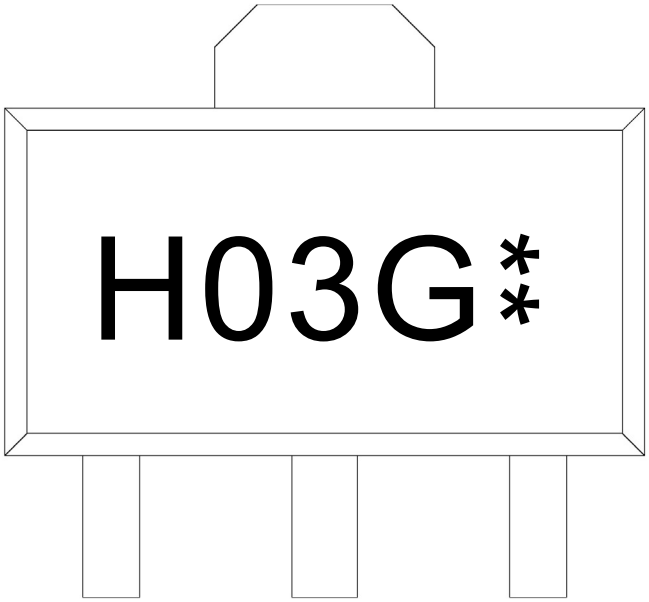
SOT-89

单位：mm



Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	Min	Max		Min	Max
A	4.4	4.7	a1	0.36	0.56
B	2.35	2.65	a2	0.30	0.50
L	3.878	4.478	C	1.40	1.70
a	1.45	1.65	c1	0.35	0.50
E	1.40	1.60	P	6°	
E1	2.80	3.20			
b	0.80	1.20			

印章说明 / Marking Instructions



说明：

H： 为公司代码

03G： 为型号代码

**： 为生产批号代码，随生产批号变化

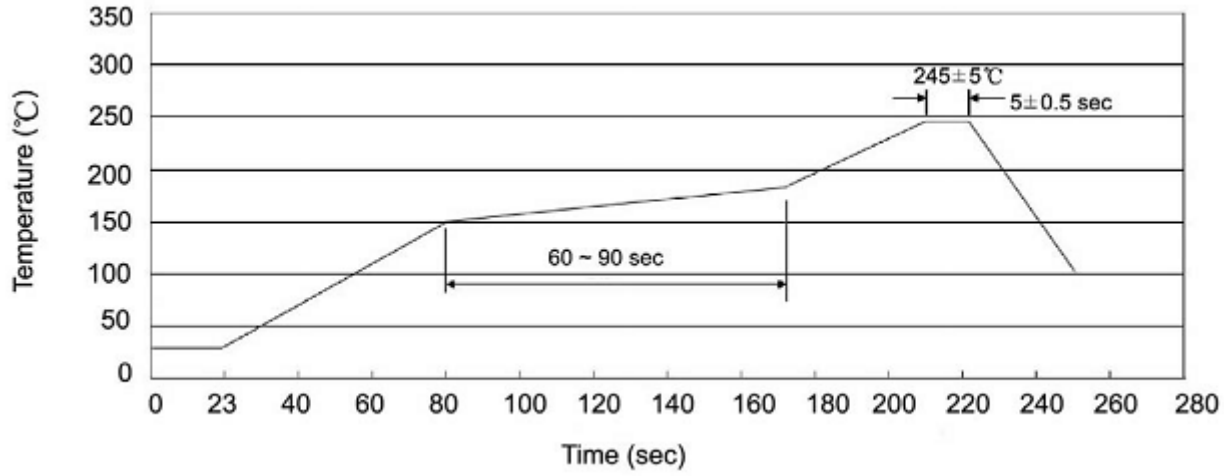
Note:

H: Company Code.

03G: Product Type.

**: Lot No. Code, code change with Lot No.

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℃，时间 60～90sec;

2、峰值温度 245±5℃，时间持续为 5±0.5sec;

3、焊接制程冷却速度为 2～10℃/sec.

Note:

1.Preheating:25~150℃, Time:60~90sec.

2.Peak Temp.:245±5℃, Duration:5±0.5sec.

3. Cooling Speed: 2~10℃/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5℃ 时间：10±1 sec. Temp.:260±5℃ Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-89	1,000	7	7,000	8	56,000	7″ ×12	180×120×180	385×257×392

使用说明 / Notices