描述 / Descriptions

TO-3P 塑封封装 NPN 半导体三极管。Silicon NPN Transistor in a TO-3P Plastic Package.

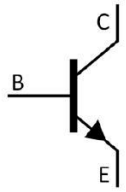
特征 / Features

快速转换。
High Speed Switching

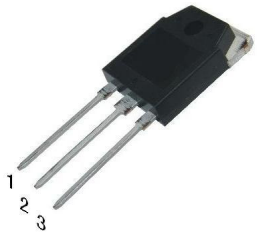
用途 / Applications

节能灯电路。
High frequency electronic lighting ballast applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1：Base　　PIN 2：Collector　　PIN 3：Emitter

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

见印章说明。See Marking Instructions.

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

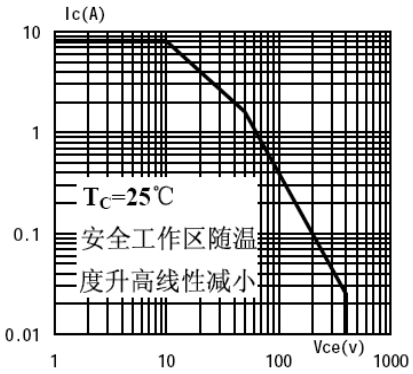
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	700	V
Collector to Emitter Voltage	V_{CEO}	400	V
Emitter to Base Voltage	V_{EBO}	9.0	V
Collector Current - Continuous	I_C	8.0	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	P_C(Tc=25℃)	110	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55～150	℃

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

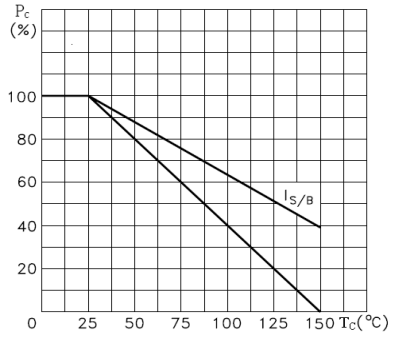
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector to Base Voltage	V_{CBO}	I_C=1mA I_E=0	700			V
Collector to Emitter Voltage	V_{CEO}	I_C=10mA I_B=0	400			V
Emitter to Base Voltage	V_{EBO}	I_E=1mA I_C=0	9.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=700V I_E=0			0.1	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}	V_{CE}=5.0V I_C=2.0A	10		40	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=8.0A I_B=2.0A			1.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=8.0A I_B=2.0A			1.5	V
Transition Frequency	f_T	V_{CE}=10V I_C=0.5A f=1.0MHz	5.0			MHz
Fall time	t_f	V_{CE}=5V I_C=0.5A (UI9600)			0.8	μs
Storage time	t_S		4.0		9.0	μs

电参数曲线图 / Electrical Characteristic Curve

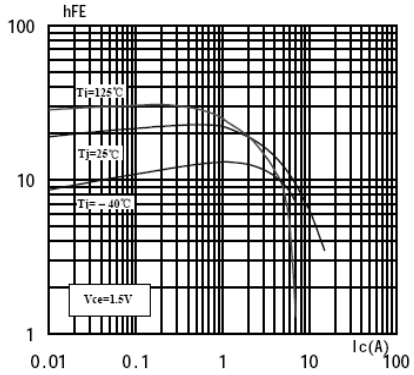
SOA(DC)



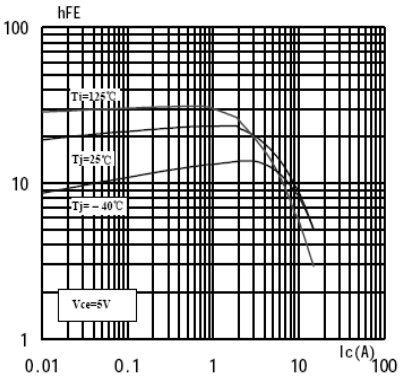
P_C-T_C



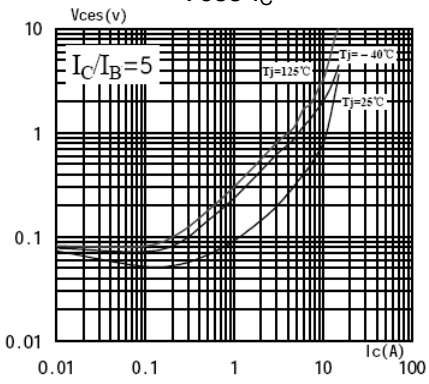
h_{FE}-Ic



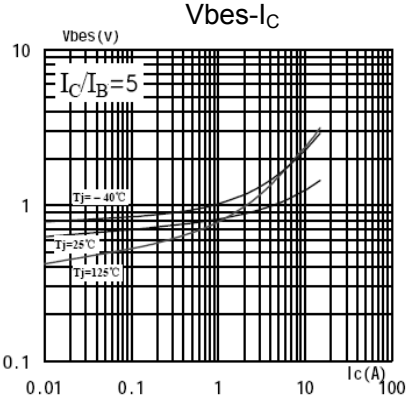
h_{FE}-Ic



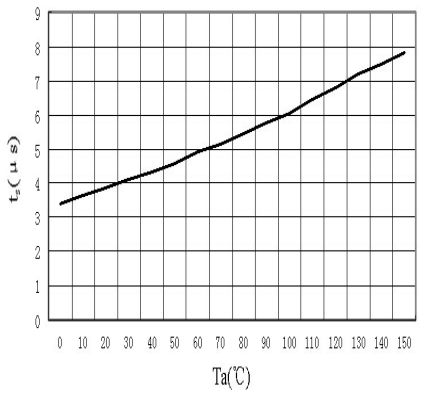
Vces-I_C



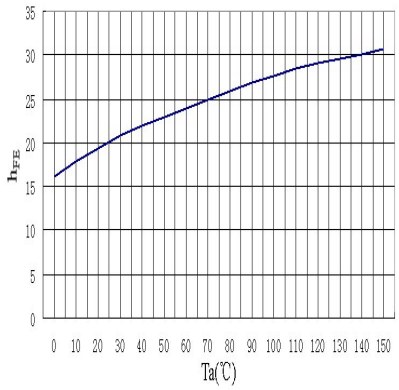
Vbes-I_C



t_S-Ta



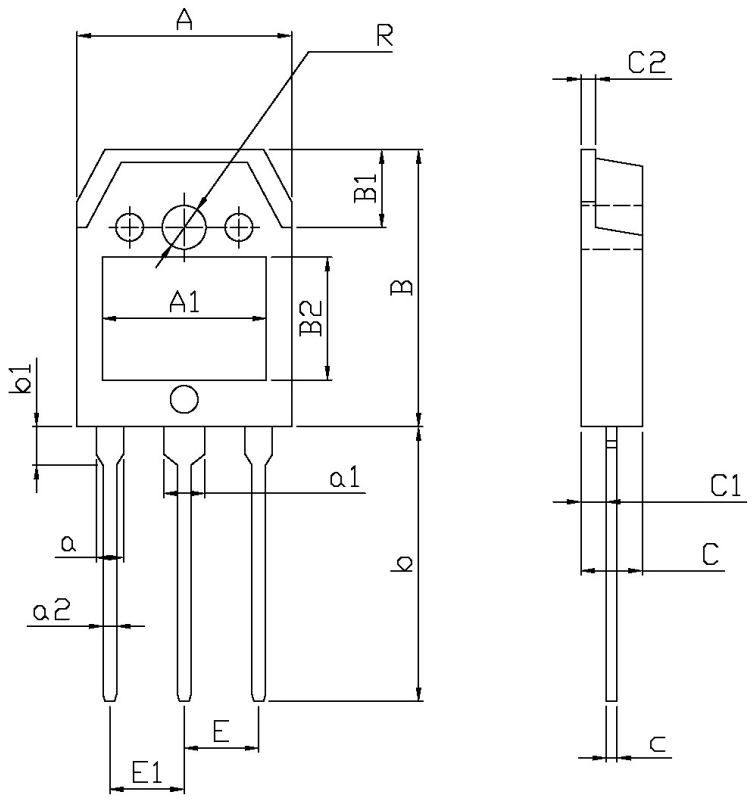
h_{FE}-Ta

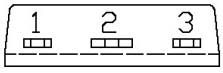


外形尺寸图 / Package Dimensions

TO-3P

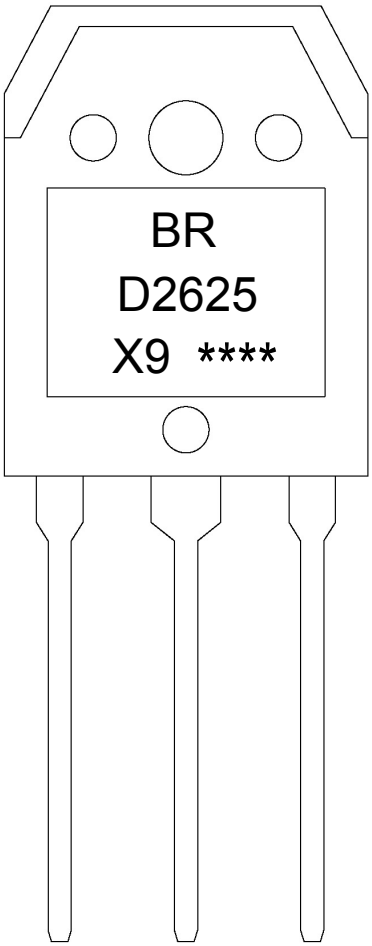
单位：mm





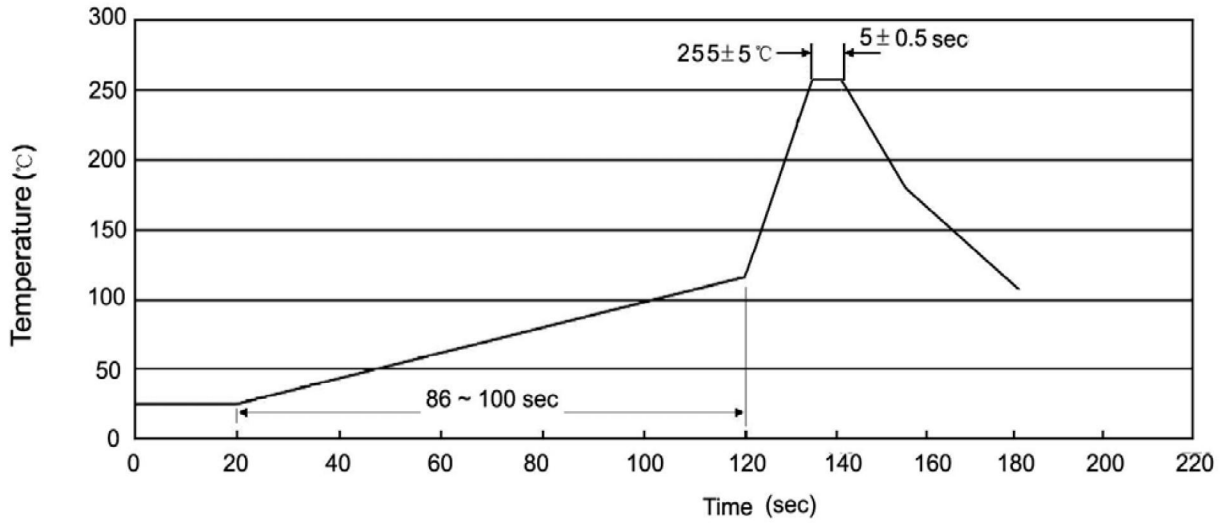
Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	15.4	16.0	a2	0.8	1.2
R	3.1	3.5	E	5.45	
B	19.8	20.8	E1	5.45	
B1	5.5	5.9	C	4.3	4.7
B2	9.0		C1	1.2	1.6
A1	12.0		C2	1.4	1.6
b	19.6	20.6	c	0.5	0.7
b1	3.0	3.4			
a	1.8	2.2			
a1	2.8	3.2			

印章说明 / Marking Instructions



说明：	
BR：	为公司代码
D2625：	为型号代码
X9：	为规格代码
****：	为生产批号代码，随生产批号变化。
Note:	
BR:	Company Code.
D2625:	Product Type.
X9:	Specifications Code.
****:	Lot No. Code, code change with Lot No.

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

1、预热温度 25～150℃，时间 60～90sec;

2、峰值温度 255±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.:255±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：270±5℃　　时间：10±1 sec.　　Temp.:270±5℃　　Time:10±1 sec

包装规格 / Packaging SPEC.

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-3P	30	15	450	5	2250	497.5×46×8	555×164×50	575×290×180

使用说明 / Notices