

TIP42C

Rev.E Mar.-2016

描述 / Descriptions

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

特征 / Features

与 TIP41C 互补。

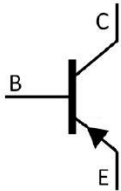
Complement to TIP41C.

用途 / Applications

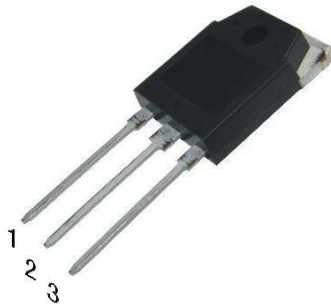
用于大功率线性开关。

High power linear switching 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.

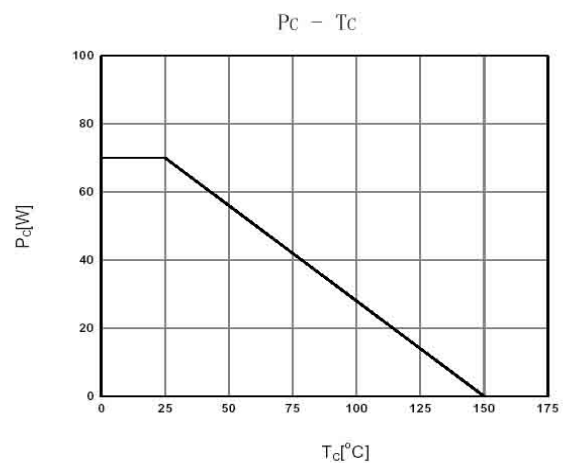
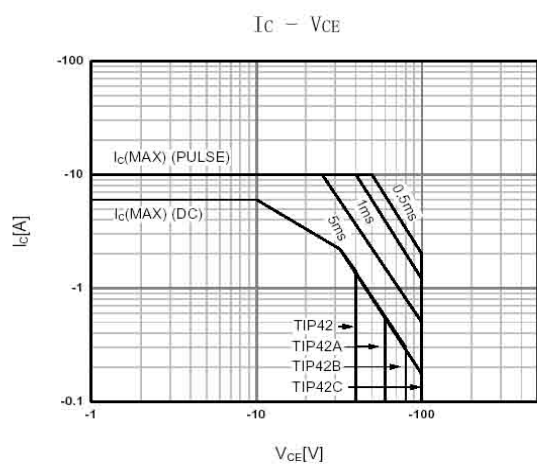
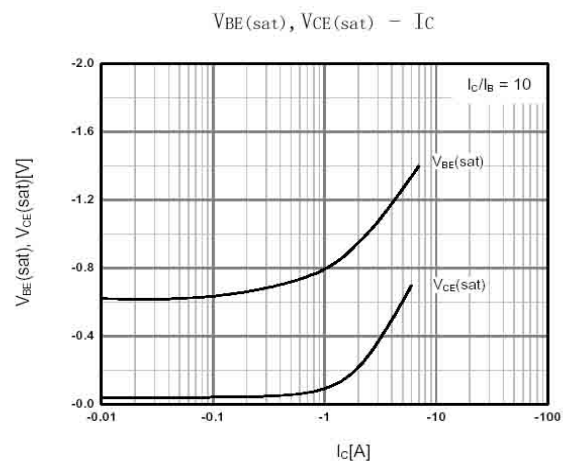
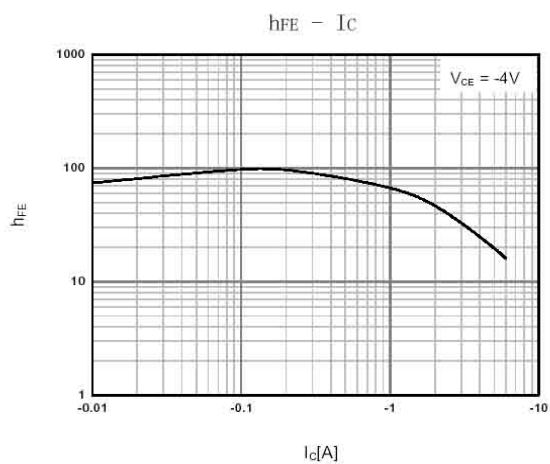
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-100	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-6.0	A
Peak Collector Current	I_{CP}	-10	A
Base Current	I_B	-2.0	A
Total Power Dissipation	P_C	3.0	W
	$P_C(T_C=25^\circ\text{C})$	100	W
Storage Temperature Range	T_j	150	°C
Thermal Resistance Junction	T_{sag}	-55 ~ 150	°C

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

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 Emitter Breakdown Voltage	V_{CEO}	$I_C=-30\text{mA}$ $I_B=0$	-100			V
Collector Cut-Off Current	I_{CEO}	$V_{CE}=-60\text{V}$ $I_B=0$			-0.7	mA
Collector Cut-Off Current	I_{CES}	$V_{CE}=-100\text{V}$ $V_{EB}=0$			-400	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0\text{V}$ $I_C=0$			-1.0	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-4.0\text{V}$ $I_C=-3.0\text{A}$	15		75	
	$h_{FE(2)}$	$V_{CE}=-4.0\text{V}$ $I_C=-0.3\text{A}$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-6.0\text{A}$ $I_B=-0.6\text{A}$			-1.5	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=-4.0\text{V}$ $I_C=-6.0\text{A}$			-2.0	V
Transition Frequency	f_T	$I_C=-500\text{mA}$ $V_{CE}=-10\text{V}$	3.0			MHz

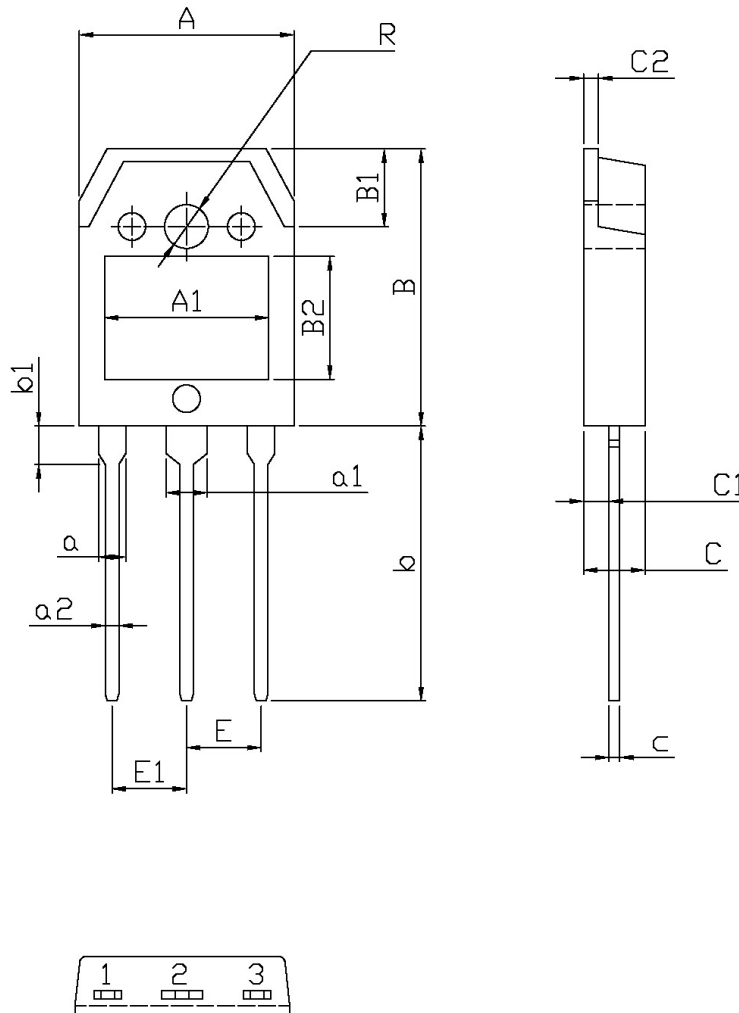
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

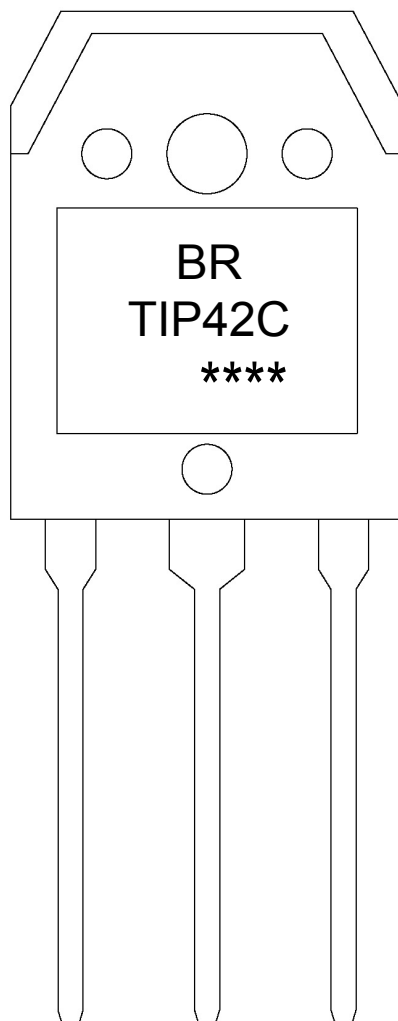
T□-3P

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

TIP42C： 为产品型号

****： 为生产批号代码，随生产批号变化。

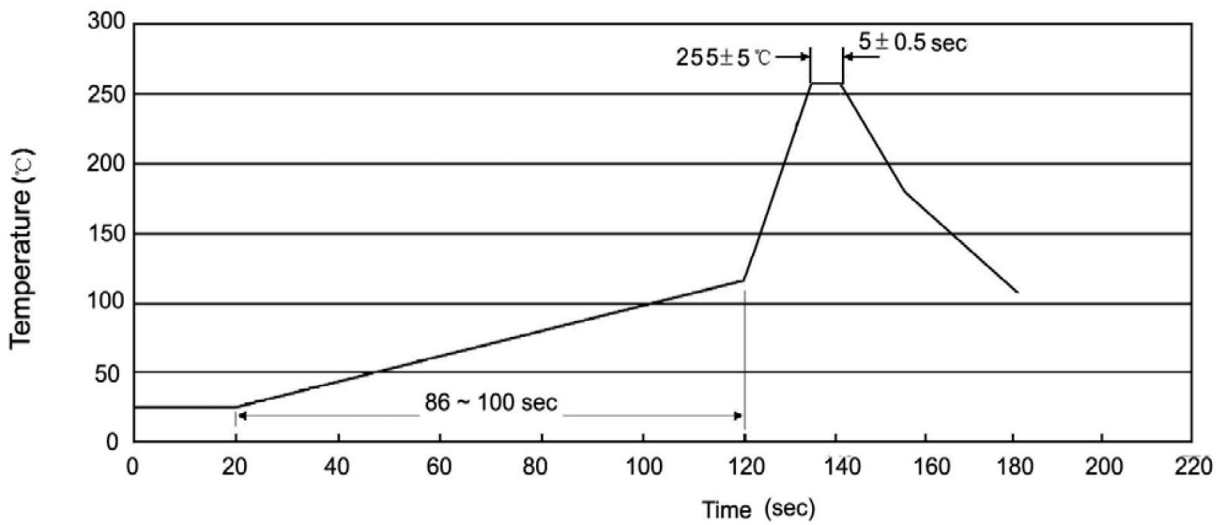
Note:

BR: Company Code.

TIP42C: Product Type.

****: 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