

# TIP41CI

Rev.F Mar.-2016

## 描述 / Descriptions

TO-251 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a TO-251 Plastic Package.

## 特征 / Features

与 TIP42CI 互补。

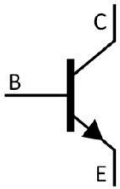
Complement to TIP42CI.

## 用途 / Applications

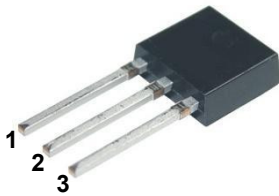
用于中功率线性开关放大。

Medium 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.

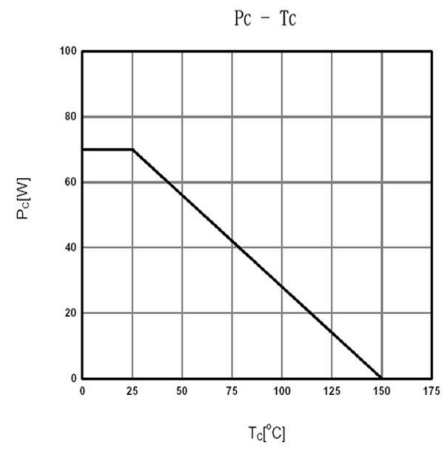
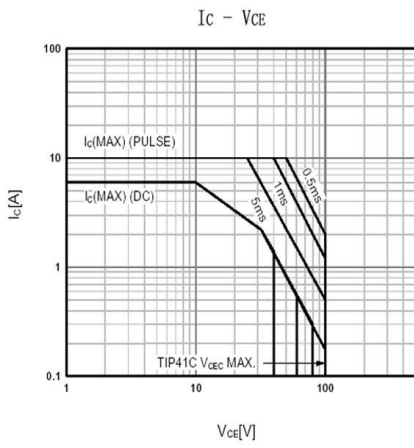
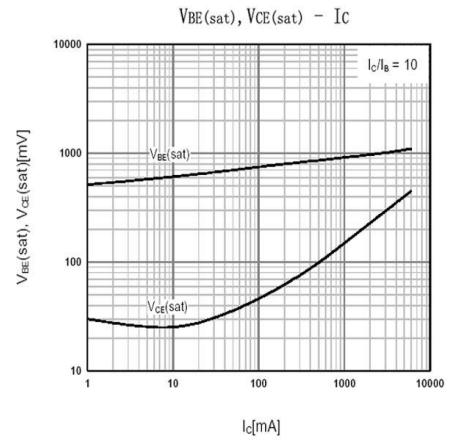
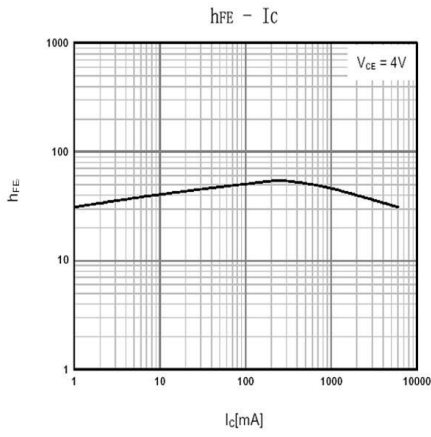
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

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	V
Collector Current - Continuous	$I_C$	6	A
Peak Collector Current	$I_{CP}$	10	A
Base Current - Continuous	$I_B$	2	A
Collector Power Dissipation	$P_C$	1.5	W
Collector Power Dissipation	$P_C(T_c=25^\circ\text{C})$	25	W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{\text{stag}}$	-55~150	°C

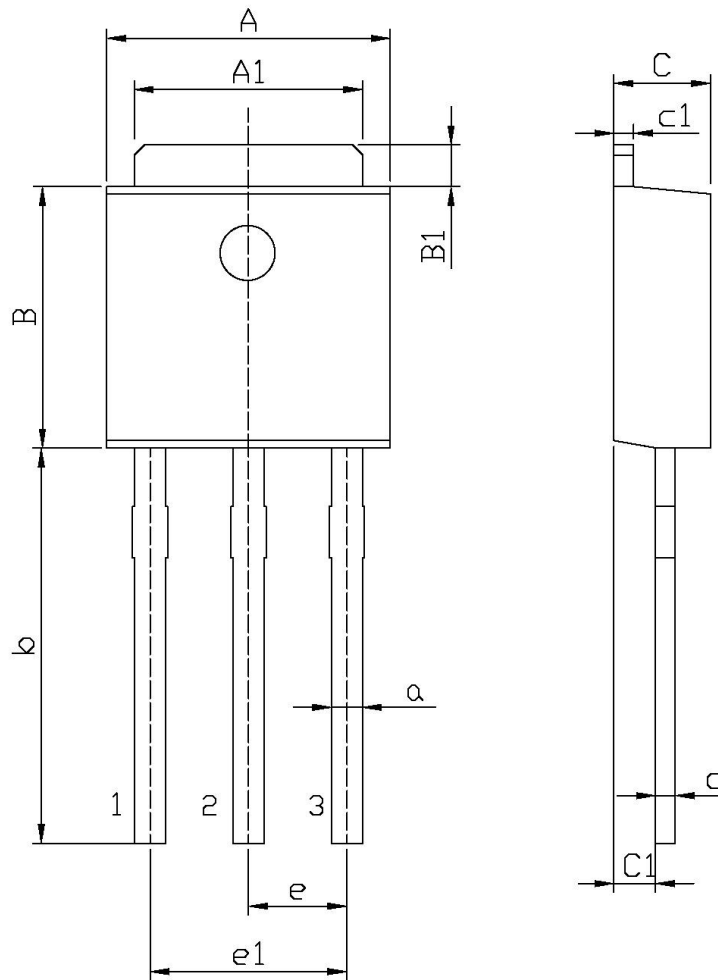
**电性能参数 / Electrical Characteristics(Ta=25°C)**

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	$I_{EBO}$	$V_{EB}=5\text{V}$ $I_C=0$			1	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=4\text{V}$ $I_C=3\text{A}$	15		75	
	$h_{FE(2)}$	$V_{CE}=4\text{V}$ $I_C=0.3\text{A}$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=6\text{A}$ $I_B=0.6\text{A}$			1.5	V
Base to Emitter Voltage	$V_{BE}$	$I_C=6\text{A}$ $V_{CE}=4\text{V}$			2	V
Transition Frequency	$f_T$	$V_{CE}=10\text{V}$ $I_C=500\text{mA}$	3			MHz

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

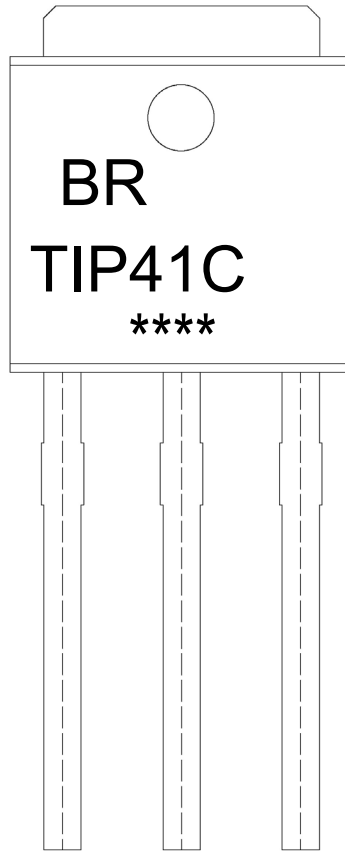


单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	6.45	6.75	a	0.50	0.70
A1	5.10	5.50	b	9.00	9.40
B	5.95	6.25	c	0.45	0.55
B1	0.95	1.25	c1	0.45	0.55
C	2.20	2.40	e	2.24	2.34
C1	0.95	1.15	e1	4.43	4.73

TO-251

印章说明 / Marking Instructions



说明：

BR： 为公司代码

TIP41C： 为产品型号

\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

TIP41C: 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°C，时间 60 ~ 90sec；
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec；
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

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

温度：270±5°C

时间：10±1 sec.

Temp.:270±5°C

Time:10±1 sec

**包装规格 / Packaging SPEC.**

散件包装 / BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-251	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	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-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

**使用说明 / Notices**