



# TIP142

## 主要参数 MAIN CHARACTERISTICS

$I_C$	10A
$V_{CEO}$	100V
$P_C$	125W

### 用途

- 发动机点火
- 高频开关电源
- 高频功率变换
- 一般功率放大电路

### APPLICATIONS

- Engine ignition
- High frequency switching power supply
- High frequency power transform
- Commonly power amplifier circuit

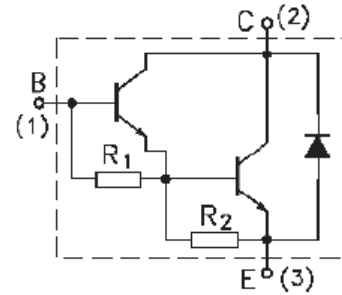
### 产品特性

- 与 TIP147 互补
- 高电流容量
- 高开关速度
- 高可靠性
- 环保 (RoHS) 产品

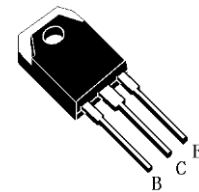
### FEATURES

- Complementary to TIP147
- High current capability
- High switching speed
- High reliability
- RoHS product

## 封装 Package



$R1 \cong 8k\Omega$   
 $R2 \cong 0.12k\Omega$



TO-3PB

## 订货信息 ORDER MESSAGE

订货型号 Order codes				印 记 Marking	封 装 Package
有卤-条管 Halogen-Tube	无卤-条管 Halogen Free-Tube	有卤-编带 Halogen-Reel	无卤-编带 Halogen Free-Reel		
TIP142 - GD -B	N/A	N/A	N/A	TIP142	TO-3PB



**绝对最大额定值 ABSOLUTE RATINGS (T<sub>c</sub>=25℃)**

项 目 Parameter	符 号 Symbol	数 值 Value	单 位 Unit	
集电极—发射极直流电压	Collector- Emitter Voltage (V <sub>BE</sub> =0)	V <sub>CES</sub>	100	V
集电极—发射极直流电压	Collector- Emitter Voltage (I <sub>B</sub> =0)	V <sub>CEO</sub>	100	V
发射极—基极直流电压	Emitter-Base Voltage	V <sub>EBO</sub>	5	V
最大集电极直流电流	Collector Current (DC)	I <sub>C</sub>	10	A
最大集电极脉冲电流	Collector Current (pulse)	I <sub>CP</sub>	15	A
最大基极直流电流	Base Current (DC)	I <sub>B</sub>	500	mA
最大集电极耗散功率	Total Dissipation	P <sub>C</sub>	125	W
最高结温	Junction Temperature	T <sub>j</sub>	150	℃
贮存温度	Storage Temperature	T <sub>stg</sub>	-55~+150	℃

**电特性 ELECTRICAL CHARACTERISTIC**

项 目 Parameter	测试条件 Tests conditions	最小值 Value(min)	典型值 Value(typ)	最大值 Value(max)	单 位 Unit
V(BR) <sub>CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	100	-	-	V
V(BR) <sub>CBO</sub>	I <sub>C</sub> =1 mA, I <sub>E</sub> =0	100	-	-	V
I <sub>CBO</sub>	V <sub>CB</sub> =100V, I <sub>E</sub> =0	-	-	1	mA
I <sub>CEO</sub>	V <sub>CE</sub> =50V, I <sub>B</sub> =0	-	-	2	mA
I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0	-	-	2	mA
hFE(1)	V <sub>CE</sub> =4V, I <sub>C</sub> =5A	1000	-	-	
hFE(2)	V <sub>CE</sub> =4V, I <sub>C</sub> =10A	500	-	-	
V <sub>CE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =10mA	-	-	2.0	V
V <sub>BE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =20mA	-	-	3.0	V

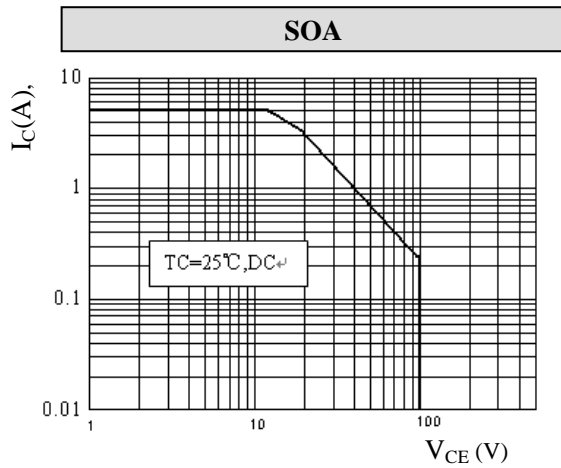
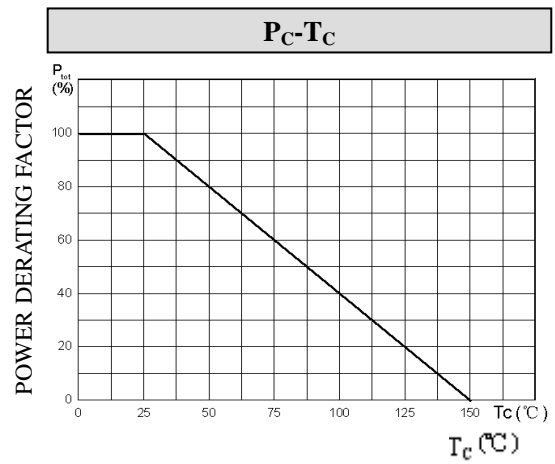
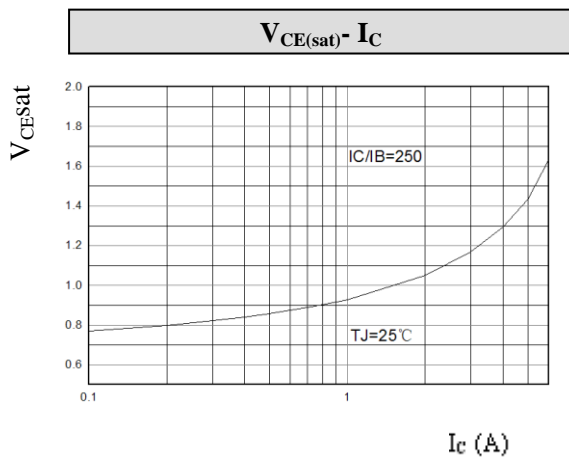
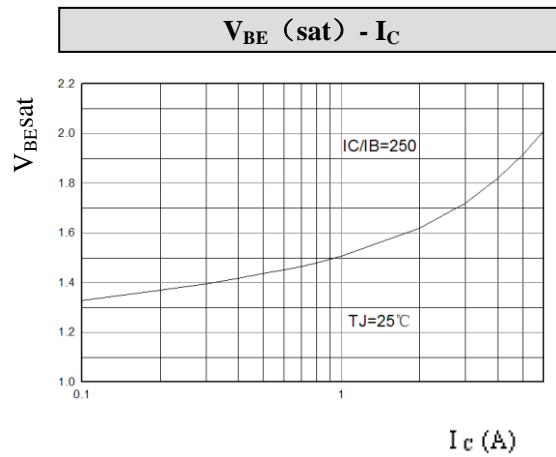
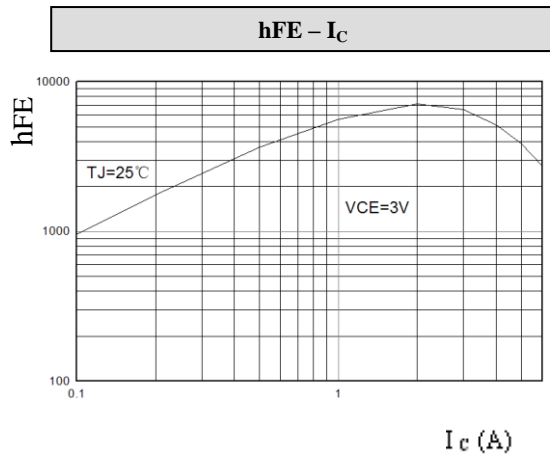
**热特性 THERMAL CHARACTERISTIC**

项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 TO-3PB Thermal Resistance Junction Case TO-3PB	R <sub>th(j-c)</sub>	-	1.0	℃/W





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

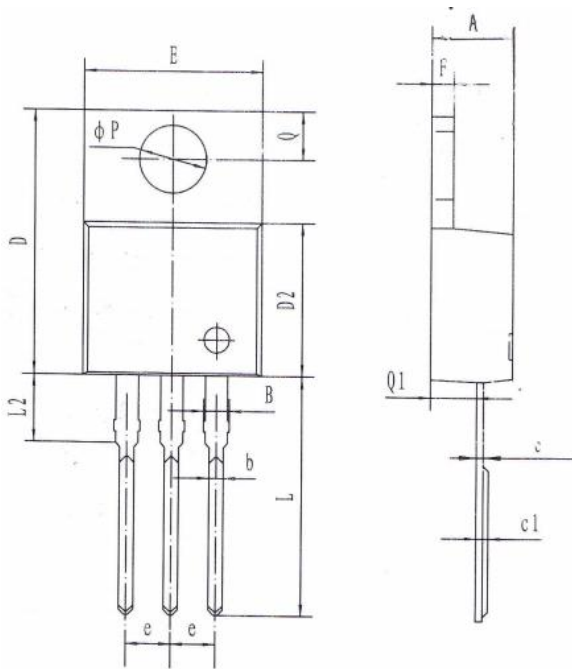




## 外形尺寸 PACKAGE MECHANICAL DATA

## TO-220

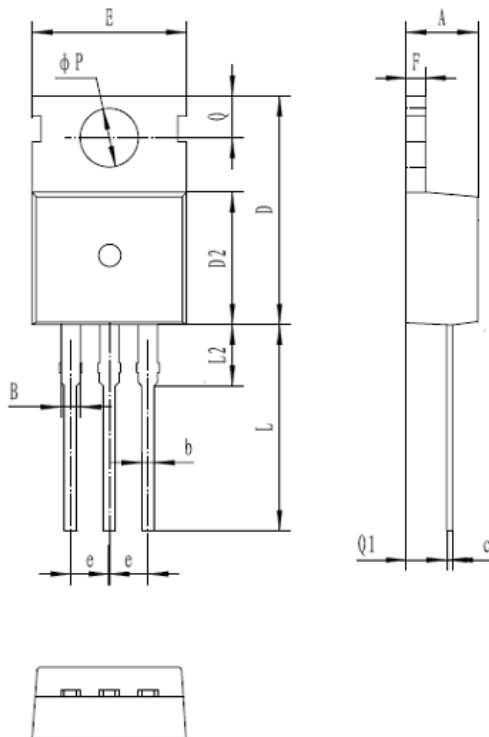
单位 Unit : mm



符号	尺寸 (mm)
A	4.40-4.80
B	1.10-1.40
b	0.70-0.95
c	0.28-0.48
c1	0.32-0.52
D	14.45-16.00
D2	8.20-9.20
E	9.60-10.40
e	2.39-2.69
F	1.20-1.35
L	13.05-14.05
L2	3.70-3.90
P	3.50-4.00
Q	2.40-3.00
Q1	2.20-2.90

## TO-220C

单位 Unit : mm

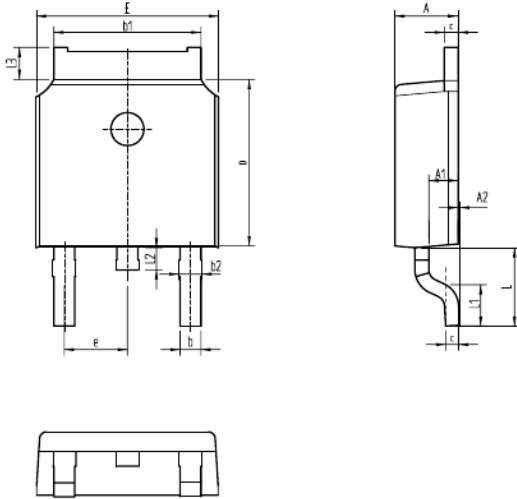


符号	尺寸 (mm)
A	4.30-4.70
B	1.10-1.40
b	0.70-0.95
c	0.40-0.65
D	15.20-16.20
D2	9.00-9.40
E	9.70-10.10
e	2.39-2.69
F	1.25-1.40
L	12.60-13.60
L2	2.80-3.20
P	3.50-3.80
Q	2.60-3.00
Q1	2.20-2.60



外形尺寸 PACKAGE MECHANICAL DATA  
**DPAK**

单位 Unit : mm



符号	尺寸 (mm)
<b>A</b>	2.16-2.41
<b>A1</b>	0.97-1.17
<b>A2</b>	0.00-0.15
<b>b</b>	0.63-0.93
<b>b1</b>	5.13-5.53
<b>b2</b>	0.66-0.96
<b>c</b>	0.40-0.60
<b>D</b>	5.80-6.40
<b>E</b>	6.30-6.90
<b>e</b>	2.286BSC
<b>L</b>	2.50-3.30
<b>L1</b>	1.20-1.80
<b>L2</b>	0.60-1.00
<b>L3</b>	0.85-1.30

**注意事项**

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