



# 3DD4140PL

## 主要参数 MAIN CHARACTERISTICS

$I_c$	12A
$V_{CEO}$	200V
$P_c(TO-220/TO-220-S1)$	80W

### 用途

- 节能灯
- 电子镇流器
- 电子变压器
- 一般功率放大电路

### APPLICATIONS

- Energy-saving light
- Electronic ballasts
- Electronic transformer
- Commonly power amplifier circuit

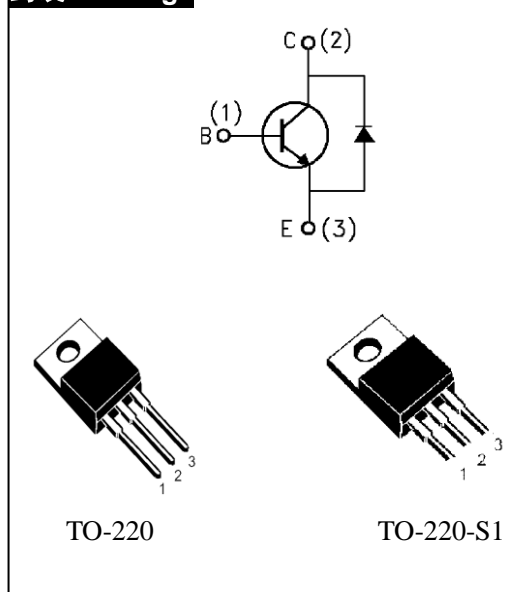
### 产品特性

- 中耐压
- 高电流容量
- 高开关速度
- 高可靠性
- 环保 (RoHS) 产品

### FEATURES

- Middling breakdown voltage
- High current capability
- High switching speed
- High reliability
- RoHS product

## 封装 Package



## 订货信息 ORDER MESSAGE

订货型号 Order codes				印 记 Marking	封 装 Package
有卤-条管	无卤-条管	有卤-袋装	无卤-袋装		
Halogen-Tube	halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag		
3DD4140PL-CA-B	3DD4140PL-CA-BR	3DD4140PL-CA-C	3DD4140PL-CA-CR	4140PL	TO-220
3DD4140PL-CP-B	3DD4140PL-CP-BR	3DD4140PL-CP-C	3DD4140PL-CP-CR	4140PL	TO-220-S1



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>	350	V
集电极—发射极直流电压 Collector- Emitter Voltage (I <sub>B</sub> =0)	V <sub>CEO</sub>	200	V
发射极—基极直流电压 Emitter-Base Voltage	V <sub>EBO</sub>	7	V
最大集电极直流电流 Collector Current (DC)	I <sub>C</sub>	12	A
最大集电极脉冲电流 Collector Current (pulse)	I <sub>CP</sub>	24	A
最大基极直流电流 Base Current (DC)	I <sub>B</sub>	6	A
最大基极脉冲电流 Base Current (pulse)	I <sub>BP</sub>	12	A
最大集电极耗散功率 Total Dissipation (TO-220)	P <sub>C</sub>	80	W
最高结温 Junction Temperature	T <sub>J</sub>	150	℃
贮存温度 Storage Temperature	T <sub>stg</sub>	-55~+150	℃

注：pulse电流宽度为小于5ms的非重复单脉冲。 Pulse Test: Pulse Width = 5.0 ms, Duty Cycle < 10%.

## 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	200	-	-	V
V(BR) <sub>CBO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	350	-	-	V
V(BR) <sub>EBO</sub>	I <sub>E</sub> =1mA, I <sub>C</sub> =0	7	-	-	V
I <sub>CBO</sub>	V <sub>CB</sub> =350V, I <sub>E</sub> =0	-	-	100	μA
I <sub>CEO</sub>	V <sub>CE</sub> =200V, I <sub>B</sub> =0	-	-	50	μA
I <sub>EBO</sub>	V <sub>EB</sub> =7V, I <sub>C</sub> =0	-	-	10	μA
Hfe(1)	V <sub>CE</sub> =5V, I <sub>C</sub> =2A	8	-	50	
Hfe(2)	V <sub>CE</sub> =5V, I <sub>C</sub> =12A	5	-	-	
V <sub>CE(sat)</sub> (1)	I <sub>C</sub> =2A, I <sub>B</sub> =0.4A	-	-	0.5	V
V <sub>CE(sat)</sub> (2)	I <sub>C</sub> =10A, I <sub>B</sub> =2A	-	-	2.0	V
V <sub>BE(sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =1A	-	-	1.6	V
t <sub>f</sub>	V <sub>CC</sub> =24V I <sub>C</sub> =4A, I <sub>B1</sub> =-I <sub>B2</sub> =0.8A	-	-	0.7	μS
t <sub>s</sub>		-	-	4	μS
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A	4	-	-	MHz

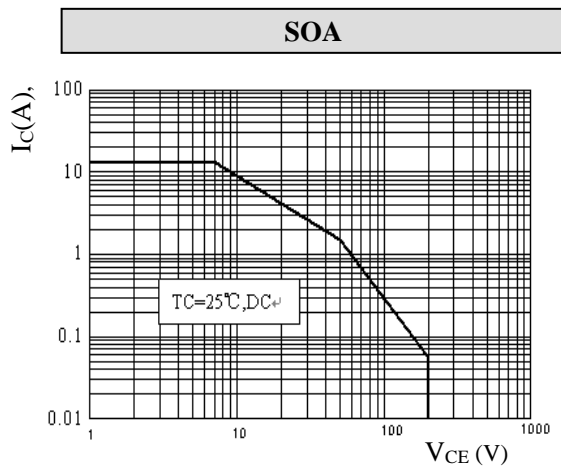
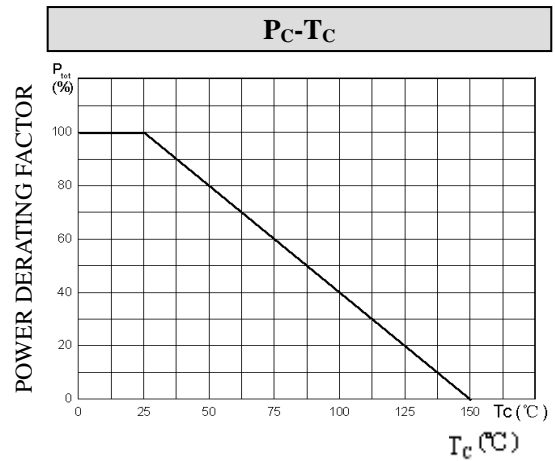
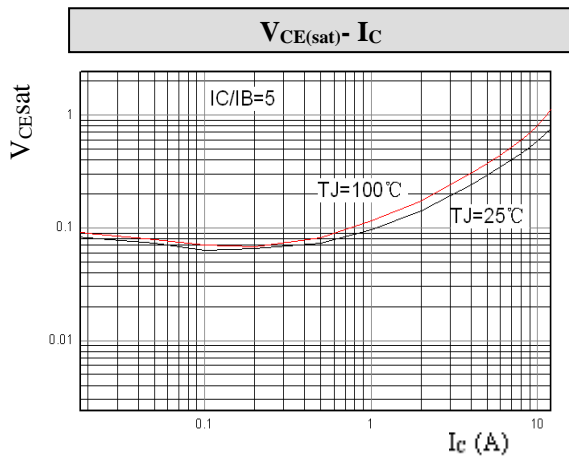
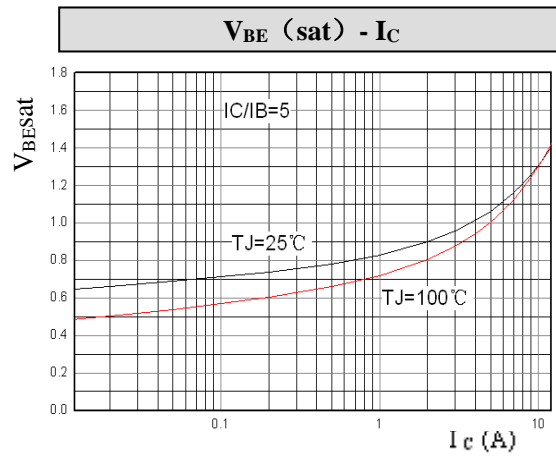
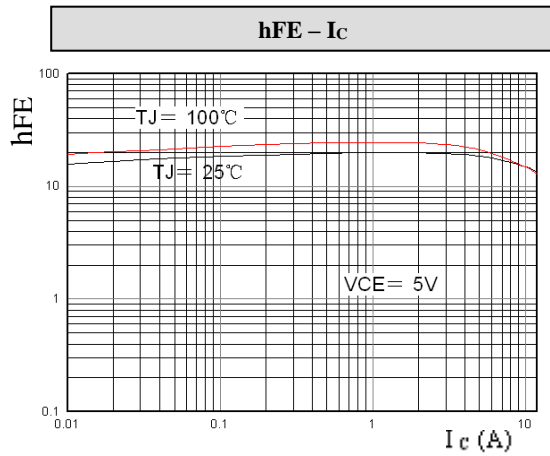
## 热特性 THERMAL CHARACTERISTIC

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-220 Thermal Resistance Junction Case TO-220	R <sub>th(j-c)</sub>	-	1.56	℃/W





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

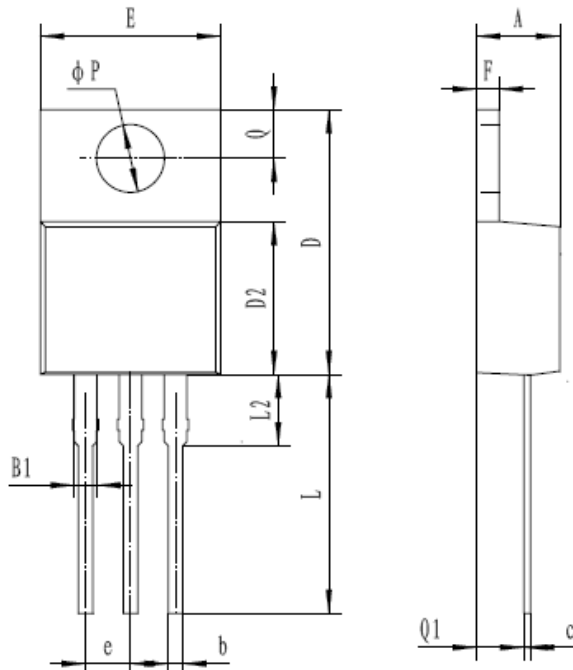




## 外形尺寸 PACKAGE MECHANICAL DATA

单位 Unit : mm

## TO-220



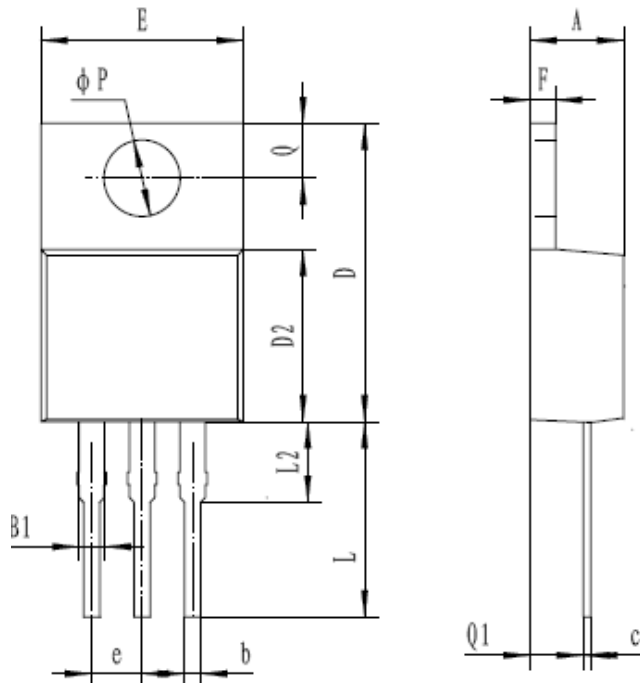
符号	尺寸 (mm)
A	4.4-4.8
B1	1.1-1.4
b	0.7-0.95
c	0.3-0.55
D	14.45-16.0
D2	8.2-9.2
E	9.6-10.4
e	2.54 (typ)
F	1.2-1.35
L	13.05-14.05
L2	3.7-3.9
P	3.5-4.0
Q	2.4-3.0
Q1	2.2-2.9





外形尺寸 PACKAGE MECHANICAL DATA  
TO-220-S1

单位 Unit : mm



符号	尺寸 (mm)
A	4.4-4.8
B1	1.1-1.4
b	0.7-0.95
c	0.3-0.55
D	14.45-16.0
D2	8.2-9.2
E	9.6-10.4
e	2.54 (typ)
F	1.2-1.35
L	6.96-8.16
L2	3.7-3.9
P	3.5-4.0
Q	2.4-3.0
Q1	2.2-2.9



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- 3.在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
- 4.本说明书如有版本变更不另外告知。

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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