



# 3DD4242D(T/I/M)

## 主要参数 MAIN CHARACTERISTICS

$I_c$	1.5A
$V_{CEO}$	400V
$P_c(TO-92)$	1W
$P_c(TO-251\backslash TO-252)$	10W
$P_c(TO-126)$	20W

## 用途

- 节能灯
- 电子镇流器
- 高频开关电源
- 高频功率变换
- 一般功率放大电路

## APPLICATIONS

- Electronic ballasts
- High frequency switching power supply
- High frequency power transform
- Commonly power amplifier circuit

## 产品特性

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

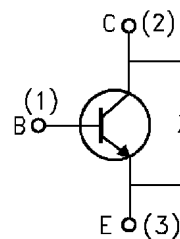
## FEATURES

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

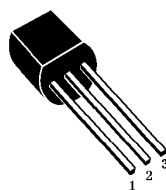
## 订货信息 ORDER MESSAGE

订货型号 Order codes	印记 Marking	无卤素 Halogen Free	封装 Package	包装 Packaging
3DD4242DT-O-T-B-A	4242DT	否 NO	TO-92	编带 Brede
3DD4242DT-O-T-N-C	4242DT	否 NO	TO-92	袋装 Bag
3DD4242DI -O- I -N-B	4242DI	否 NO	TO-251	条管 Tube
3DD4242DI -O- I -N-C	4242DI	否 NO	TO-251	袋装 Bag
3DD4242DU -O- I -B-B	4242DU	否 NO	TO-252	条管 Tube
3DD4242DU -O- I -B-C	4242DU	否 NO	TO-252	袋装 Bag
3DD4242DM-O-M-N-B	4242DM	否 NO	TO-126	条管 Tube
3DD4242DM-O-M-N-C	4242DM	否 NO	TO-126	袋装 Bag

## 封装 Package



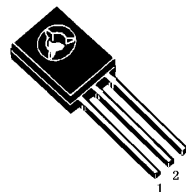
TO-92  
(3DD4242DT)



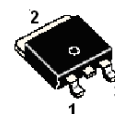
TO-251  
(3DD4242DI)



TO-126  
(3DD4242DM)



TO-252  
(3DD4242DUI)





## 绝对最大额定值 ABSOLUTE RATINGS (Tc=25°C)

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 ( $V_{BE}=0$ )	$V_{CES}$	700	V
集电极—发射极直流电压	Collector- Emitter Voltage ( $I_B=0$ )	$V_{CEO}$	400	V
发射极—基极直流电压	Emitter-Base Voltage	$V_{EBO}$	9	V
最大集电极直流电流	Collector Current (DC)	$I_C$	1.5	A
最大集电极脉冲电流	Collector Current (pulse)	$I_{CP}$	3.0	A
最大集电极耗散功率	Total Dissipation (TO-92)	$P_C$	1	W
最大集电极耗散功率	Total Dissipation (TO-251)	$P_C$	10	W
最大集电极耗散功率	Total Dissipation (TO-126)	$P_C$	20	W
最高结温	Junction Temperature	$T_J$	150	°C
贮存温度	Storage Temperature	$T_{stg}$	-55~+150	°C

## 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
$V(BR)_{CEO}$	$I_C=10mA, I_B=0$	400	470	-	V
$V(BR)_{CBO}$	$I_C=1mA, I_B=0$	700	800	-	V
$V(BR)_{EBO}$	$I_E=1mA, I_C=0$	9	16	-	V
$I_{CBO}$	$V_{CB}=700V, I_E=0$	-	-	5	$\mu A$
$I_{CEO}$	$V_{CE}=400V, I_B=0$	-	-	10	$\mu A$
$I_{EBO}$	$V_{EB}=7V, I_C=0$	-	-	5	$\mu A$
hFE	$V_{CE}=10V, I_C=100mA$	10	20	30	-
	$V_{CE}=5V, I_C=1.5A$	3.0	7.0	-	-
$V_{CE(sat)}$	$I_C=0.5A, I_B=100mA$	-	0.2	0.8	V
$V_{BE(sat)}$	$I_C=0.5A, I_B=100mA$	-	0.9	1.2	V
tf	$V_{CC}=24V, I_C=0.25A, I_{B1}=-I_{B2}=0.05A$	-	-	0.7	$\mu S$
ts		-	-	5	$\mu S$
fr	$V_{CE}=10V, I_C=0.1A$	4	-	-	MHz

## 热特性 THERMAL CHARACTERISTIC

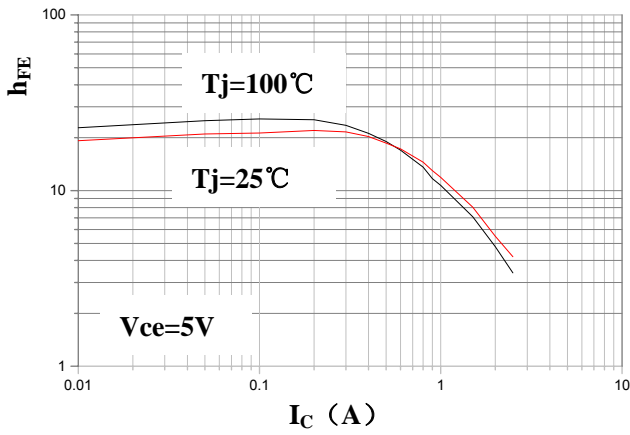
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到环境的热阻 TO-92 Thermal Resistance Junction Case TO-92	$R_{th(j-a)}$	-	125	°C/W
结到管壳的热阻 TO-251/TO-252 Thermal Resistance Junction Case TO-251/TO-252	$R_{th(j-c)}$	-	12.5	°C/W
结到管壳的热阻 TO-126 Thermal Resistance Junction Case TO-126	$R_{th(j-c)}$	-	6.25	°C/W



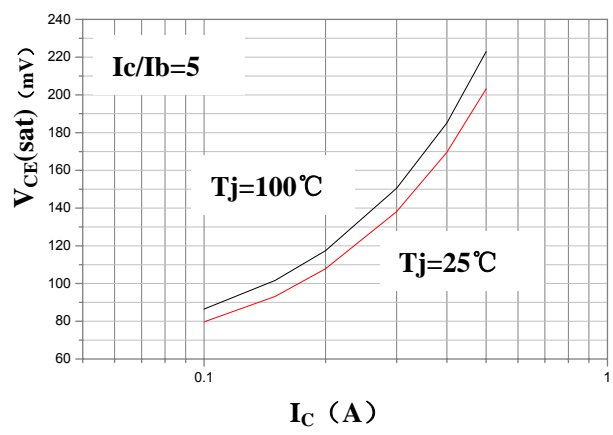


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

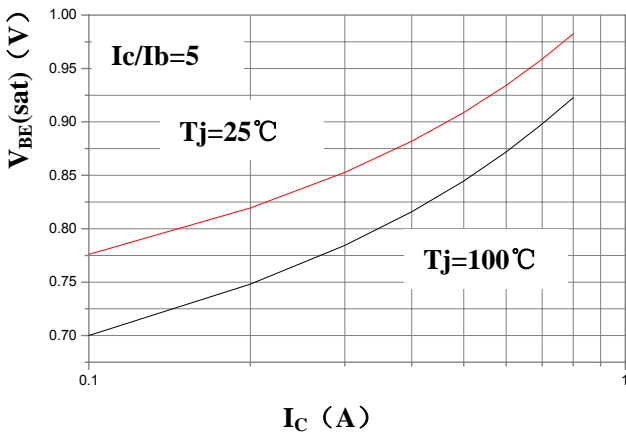
**hFE - I<sub>C</sub>**



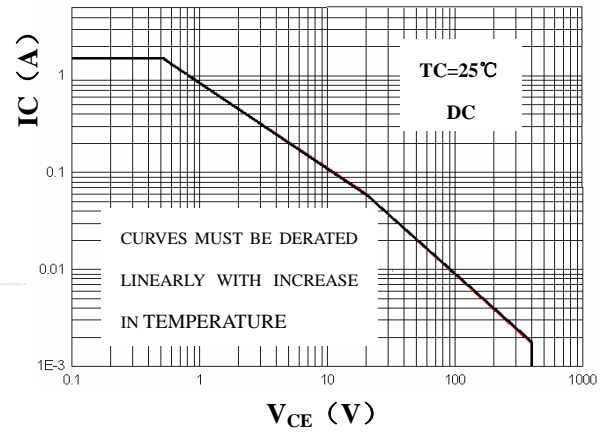
**V<sub>CE(sat)</sub> - I<sub>C</sub>**



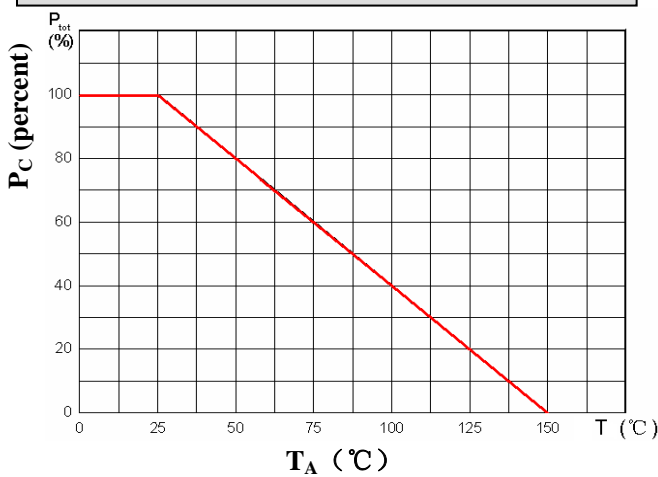
**V<sub>BE</sub> (sat) - I<sub>C</sub>**



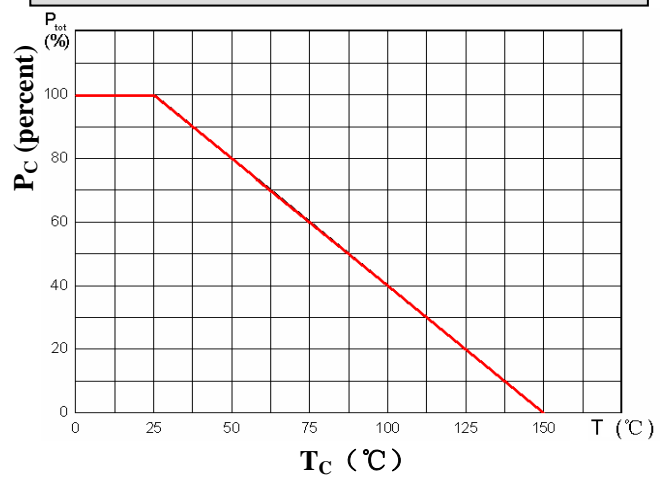
**SOA**



**P<sub>C</sub>-T (TO-92)**



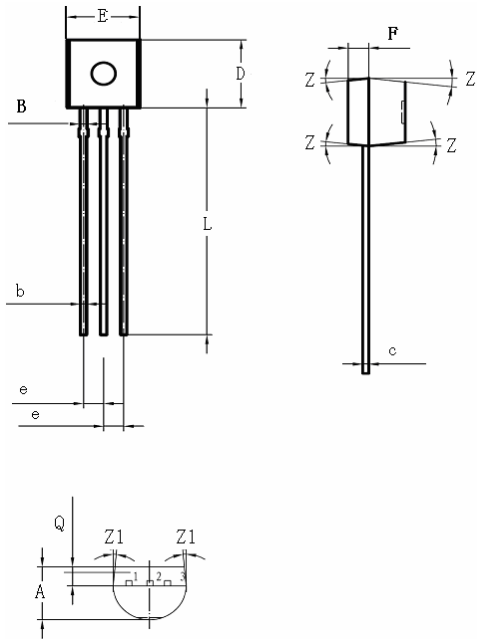
**P<sub>C</sub>-T (TO-251/TO-126)**



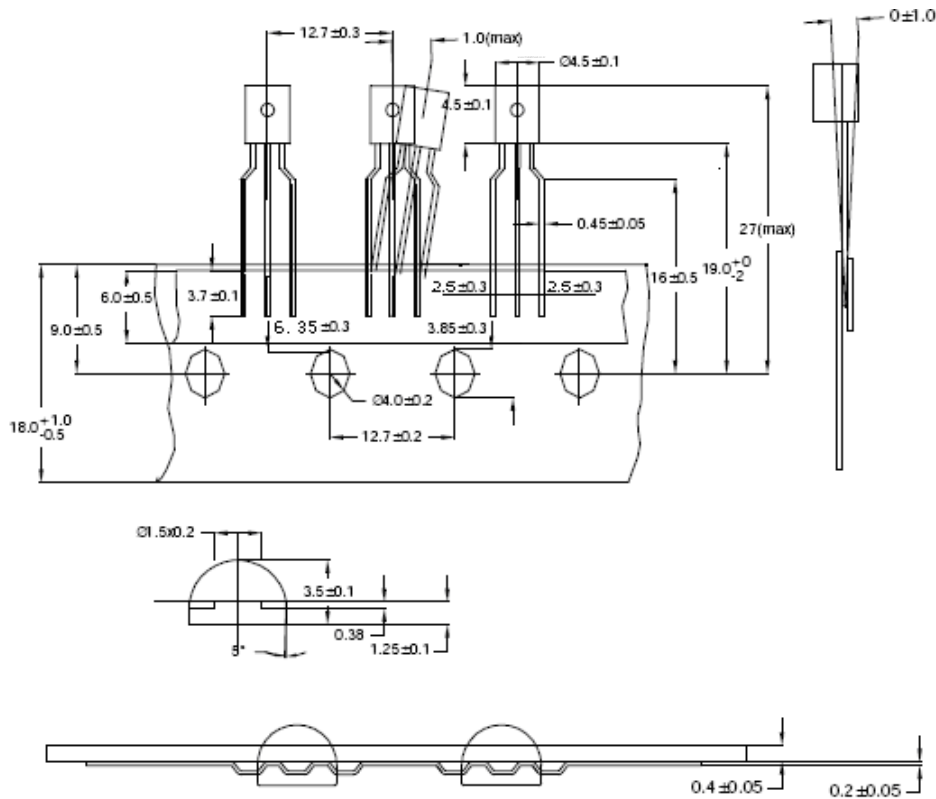


外形尺寸 PACKAGE MECHANICAL DATA  
TO-92

单位 Unit : mm



A	3.30-3.90
B	0.35-0.55
b	0.35-0.55
c	0.31-0.51
D	4.30-4.90
E	4.30-4.90
e	1.17-1.37
F	1.00-1.60
L	12.50-15.50
Q	1.00-1.60
Z	2°
Z1	5°

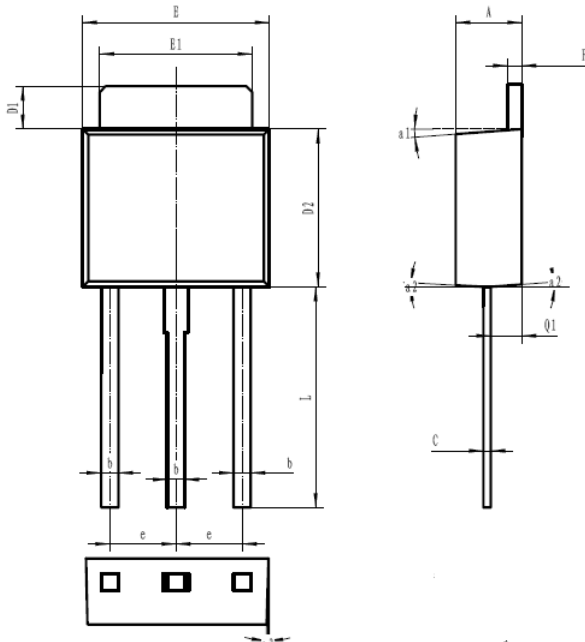




外形尺寸 PACKAGE MECHANICAL DATA

TO-251

单位 Unit : mm

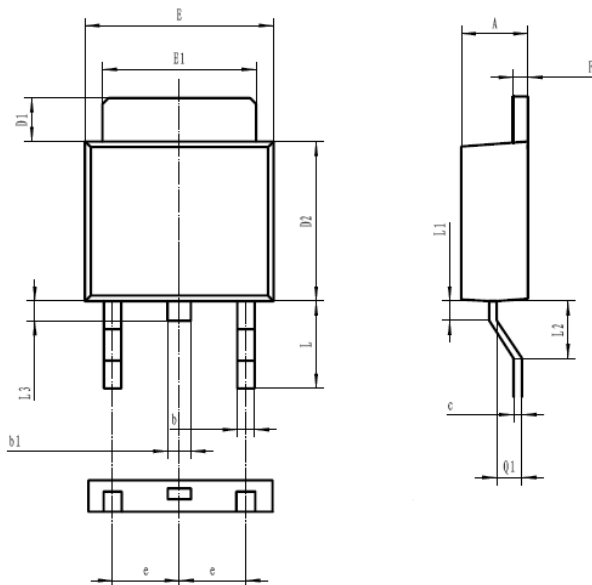


A	2.20-2.40
b	0.55-0.65
b1	0.70-0.90
C	0.45-0.55
D1	1.40-1.60
D2	5.40-5.60
E	6.40-6.60
E1	5.20-5.40
e	2.25-2.35
F	0.45-0.55
L	7.60-7.80
Q1	1.15-1.25
a1	4°-6°
a2	4°-6°
a3	4°-6°

外形尺寸 PACKAGE MECHANICAL DATA

TO-252

单位 Unit : mm



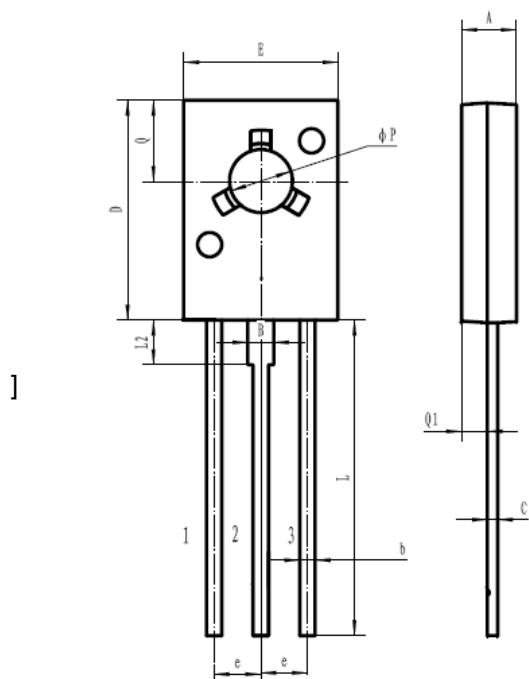
A	2.20-2.40
b	0.55-0.65
b1	0.70-0.90
C	0.45-0.55
D1	1.40-1.60
D2	5.40-5.60
E	6.40-6.60
E1	5.20-5.40
e	2.25-2.35
F	0.45-0.55
L	2.60-2.80
L1	0.90-1.10
L2	1.70-1.90
L3	0.70-0.90
Q1	1.15-1.25





外形尺寸 PACKAGE MECHANICAL DATA  
TO-126

单位 Unit : mm



A	2.50-2.90
B	1.22-1.28
c	0.30-0.70
D	10.50-11.10
E	7.10-8.10
Q	3.80-4.20
Q1	1.07-1.47
L	2.10-2.30
b	0.60-0.90
e	2.19-2.39

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- 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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**附录（Appendix）：修订记录（Revision History）**

日期 Date	旧版本 Last Rev.	新版本 New Rev.	修订内容 Description of Changes
2010-1-7		201001A	
2011-3-2	201001A	201103B	增加 TO-252 封装

