



3DD13003X

主要参数 MAIN CHARACTERISTICS

I_C	1.5A
V_{CEO}	400V
$P_C(TO-92)$	1W
$P_C(TO-126(S))$	20W
$P_C(TO-220)$	40W

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

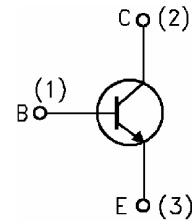
产品特性

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

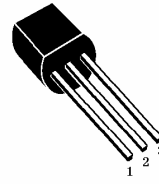
FEATURES

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

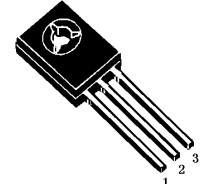
封装 Package



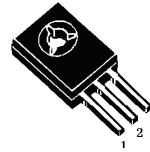
TO-92



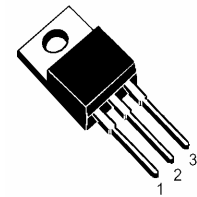
TO-126



TO-126S



TO-220



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
3DD13003X-O-T-B-A	13003X	否 NO	TO-92	编带 Brede
3DD13003X-O-T-N-C	13003X	否 NO	TO-92	袋装 Bag
3DD13003X-O-M-N-C	13003X	否 NO	TO-126	袋装 Bag
3DD13003X-O-M-N-B	13003X	否 NO	TO-126	条管 Tube
3DD13003X-O-MS-N-C	13003X	否 NO	TO-126S	袋装 Bag
3DD13003X-O-MS-N-B	13003X	否 NO	TO-126S	条管 Tube
3DD13003X-O-Z-N-C	13003X	否 NO	TO-220	袋装 Bag
3DD13003X-O-Z-N-B	13003X	否 NO	TO-220	条管 Tube





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}	600	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-126(S))	P _C	20	W
最大集电极耗散功率 Total Dissipation (TO-220)	P _C	40	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	490	-	V
V(BR) _{CBO}	I _C =1mA, I _B =0	600	800	-	V
V(BR) _{EBO}	I _E =1mA, I _C =0	9	13	-	V
I _{CBO}	V _{CB} =580V, I _E =0	-	-	5	μA
I _{CEO}	V _{CE} =400V, I _B =0	-	-	10	μA
I _{EBO}	V _{EB} =7V, I _C =0	-	-	5	μA
hFE	V _{CE} =10V, I _C =500mA	8	20	40	-
V _{CE(sat)}	I _C =0.5A, I _B =0.1A	-	0.18	0.5	V
	I _C =1.5A, I _B =0.5A	-	0.18	3	V
V _{BE(sat)}	I _C =0.5A, I _B =0.1A	-	0.9	1	V
t _f	V _{CC} =24V I _C =0.5A, I _{B1} =-I _{B2} =0.1A	-	-	0.7	μS
t _s	V _{CC} =24V I _C =0.5A, I _{B1} =-I _{B2} =0.1A	-	-	4	μS
f _T	V _{CE} =10V, I _C =0.5A	4	-	-	MHz

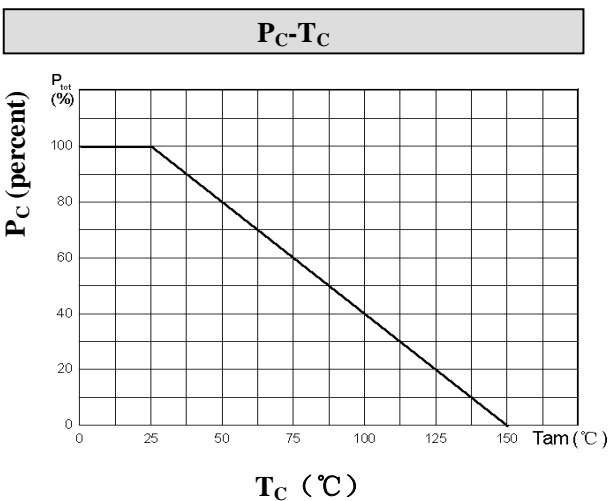
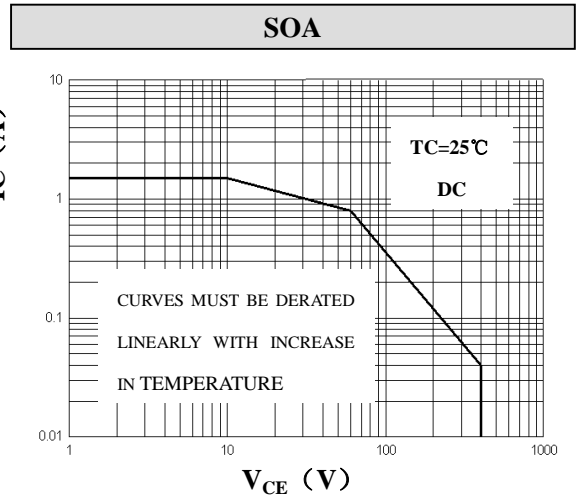
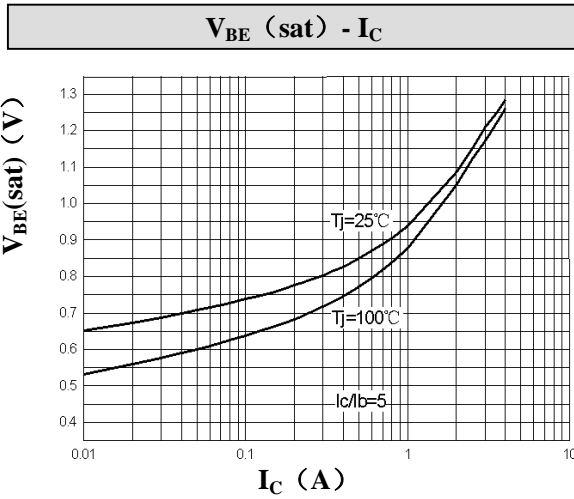
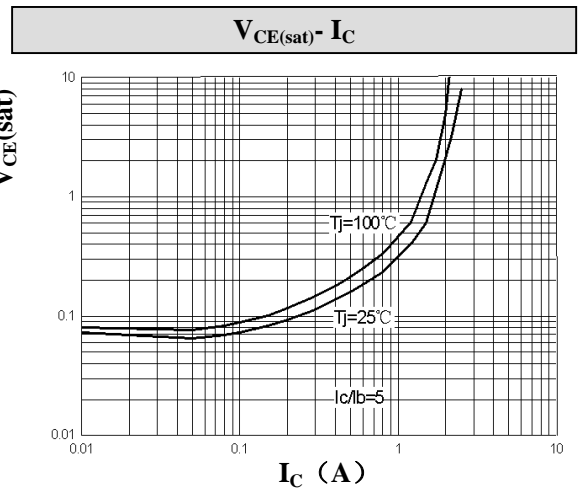
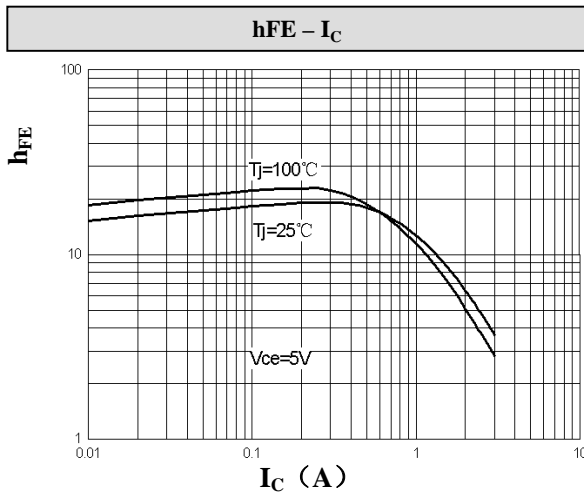
热特性 THERMAL CHARACTERISTIC

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-92 Thermal Resistance Junction Case TO-92	R _{th(j-a)}	-	125	°C/W
结到管壳的热阻 TO-126(S) Thermal Resistance Junction Case TO-126(S)	R _{th(j-c)}	-	6.25	°C/W
结到管壳的热阻 TO-220 Thermal Resistance Junction Case TO-220	R _{th(j-c)}	-	3.125	°C/W





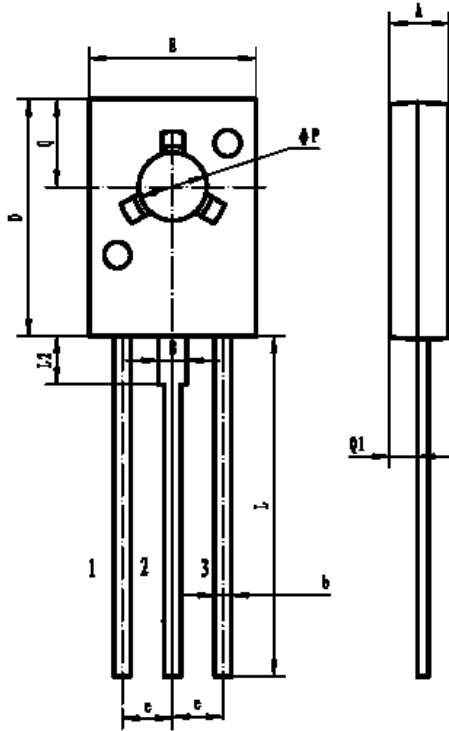
特征曲线 ELECTRICAL CHARACTERISTICS (curves)





外形尺寸 PACKAGE MECHANICAL DATA
TO-126

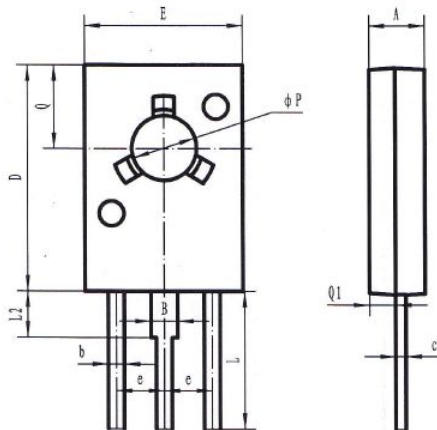
单位 Unit : mm



符号 symbol	MIN	MAX
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	15.30	15.70
L2	2.10	2.30
b	0.60	0.90
e	2.19	2.39

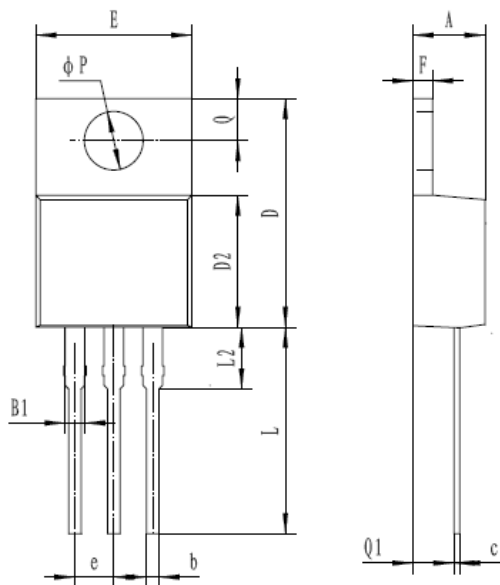
外形尺寸 PACKAGE MECHANICAL DATA
TO-126S

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	7.80-8.20
L2	2.10-2.30
b	0.60-0.90
e	2.19-2.39





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



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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

NOTE

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2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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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
2009-7-30	200906E	200907F	增加 TO-126S 封装
2009-10-29	200907F	200910G	电话号码、订货代码
2010-3-9	200910G	201003H	hFE 条件、Icbo 测试条件 (原条件有误)

