



3DD4242D

主要参数 MAIN CHARACTERISTICS

I _c	1.5A
V _{CEO}	400V
P _c (TO-92/SOT-89)	1W
P _c (DPAK/IPAK)	10W
P _c (TO-126(S))	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

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

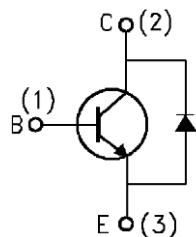
APPLICATIONS

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

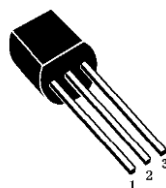
FEATURES

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

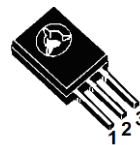
封装 Package



TO-92



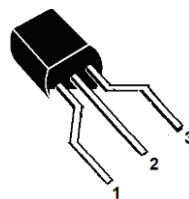
TO-126S



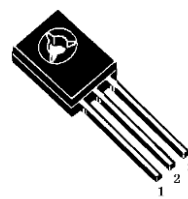
IPAK



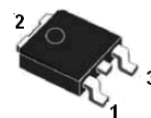
TO-92-F1



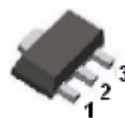
TO-126



DPAK



SOT-89
(3DD4242DO)



说明: 1-B, 2-C, 3-E





订货信息 ORDER MESSAGE

订 货 型 号 Order codes				印 记 Marking	封 装 Package
有卤-编带 Halogen-Reel	无卤-编带 Halogen-Free-Reel	有卤-袋装 Halogen-Bag	无卤-袋装 Halogen-Free-Bag		
3DD4242D-NB-A	3DD4242D-NB-AR	3DD4242D-NB-C	3DD4242D-NB-CR	4242DO	SOT-89
3DD4242D-T-A	3DD4242D-T-AR	3DD4242D-T-C	3DD4242D-T-CR	4242DT	TO-92
3DD4242D-T1-A	3DD4242D-T1-AR	3DD4242D-T1-C	3DD4242D-T1-CR	4242DT	TO-92-F1
3DD4242D-R-A	3DD4242D-R-AR	3DD4242D-R-C	3DD4242D-R-CR	4242DR	PAK
		3DD4242D-V-C	3DD4242D-V-CR	4242DV	IPAK
		3DD4242D-M-C	3DD4242D-M-CR	4242DM	TO-126
		3DD4242D-M1-C	3DD4242D-M1-CR	4242DM	TO-126S
有卤-条管 Halogen-Tube	无卤-条管 Halogen-Free-Tube			印 记 Marking	封 装 Package
3DD4242D-R-B	3DD4242D-R-BR			4242DR	PAK
3DD4242D-V-B	3DD4242D-V-BR			4242DC	IPAK
3DD4242D-M-B	3DD4242D-M-BR			4242DM	TO-126
3DD4242D-M1-B	3DD4242D-M1-BR			4242DM	TO-126S

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/SOT-89)	P _C	1	W
最大集电极耗散功率 Total Dissipation (PAK/IPAK)	P _C	10	W
最大集电极耗散功率 Total Dissipation (TO-126(S))	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
$V_{(BR)_{CBO}}$	$I_C=1mA, I_E=0$	700	800	-	V
$V_{(BR)_{EBO}}$	$I_E=1mA, I_C=0$	9	16	-	V
I_{CBO}	$V_{CB}=700V, I_E=0$	-	-	5	μA
I_{CEO}	$V_{CE}=400V, I_B=0$	-	-	10	μA
I_{EBO}	$V_{EB}=7V, I_C=0$	-	-	5	μA
hFE	$V_{CE}=10V, I_C=100mA$	18	22	26	-
	$V_{CE}=5V, I_C=1.5A$	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
ts	$I_C=0.25A$	1.0		4.0	μS
ft	$V_{CE}=10V, I_C=0.1A$	4	-	-	MHz

热特性 THERMAL CHARACTERISTIC

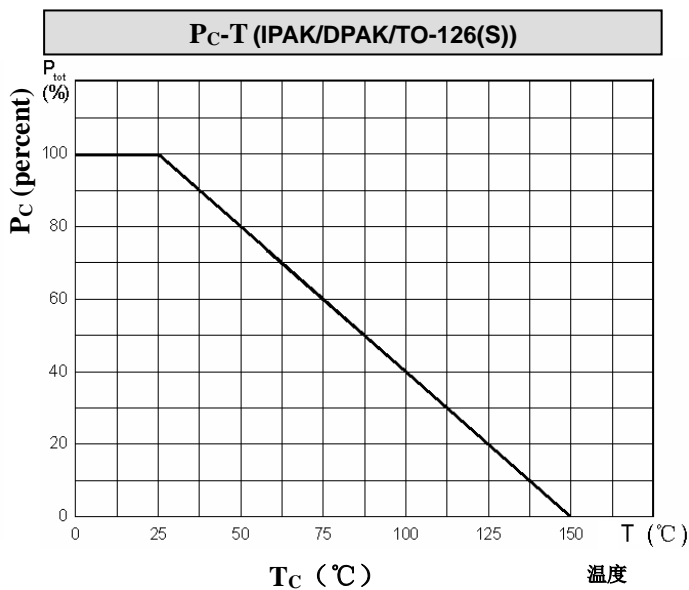
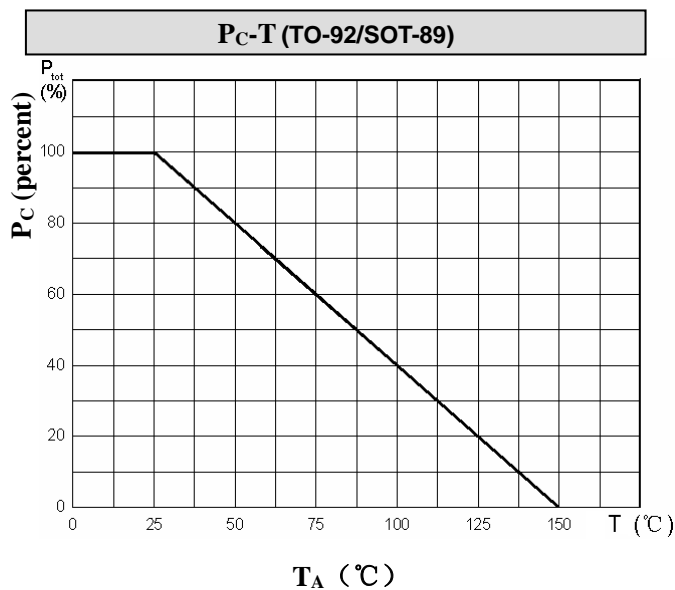
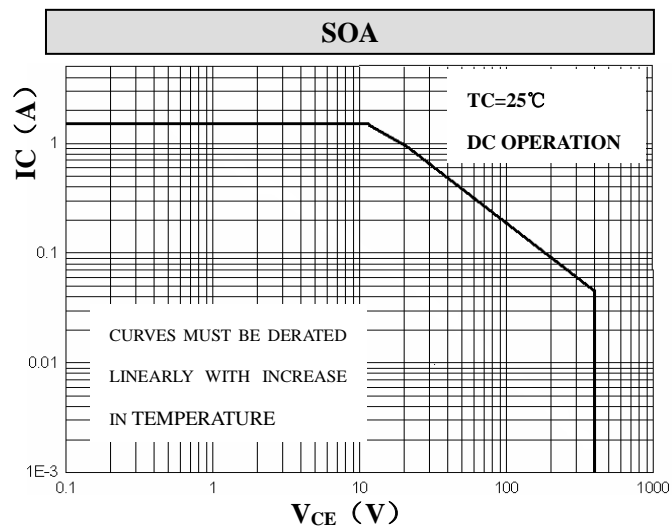
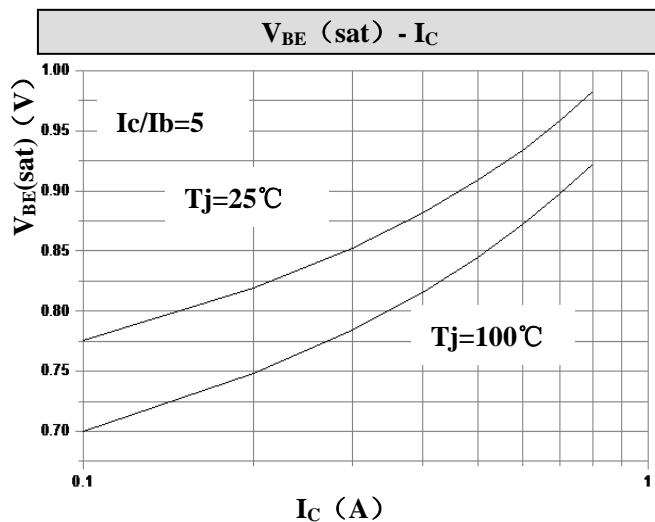
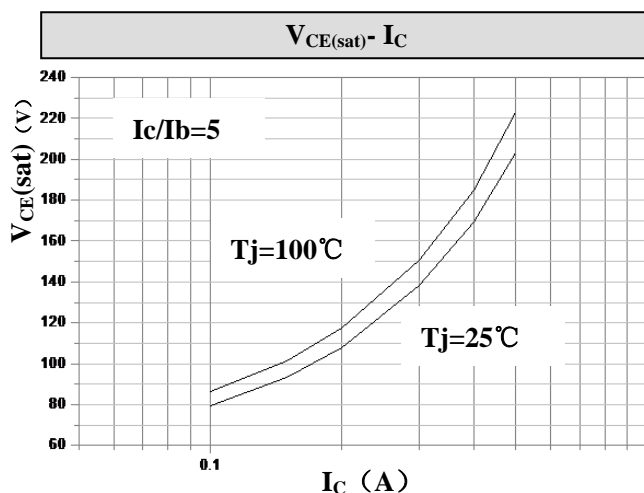
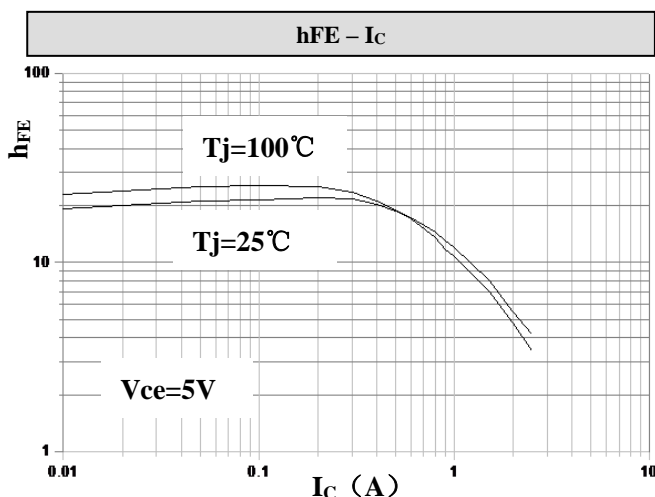
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal Resistance Junction Ambient TO-92/SOT-89	$R_{th(j-a)}$	-	49	$^{\circ}C/W$
结到管壳的热阻 Thermal Resistance Junction Case DPAK/IPAK	$R_{th(j-c)}$	-	12.5	$^{\circ}C/W$
结到管壳的热阻 Thermal Resistance Junction Case TO-126(S)	$R_{th(j-c)}$	-	6.25	$^{\circ}C/W$





NPN 型高压功率开关晶体管
HIGH VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR

特征曲线 ELECTRICAL CHARACTERISTICS (curves)



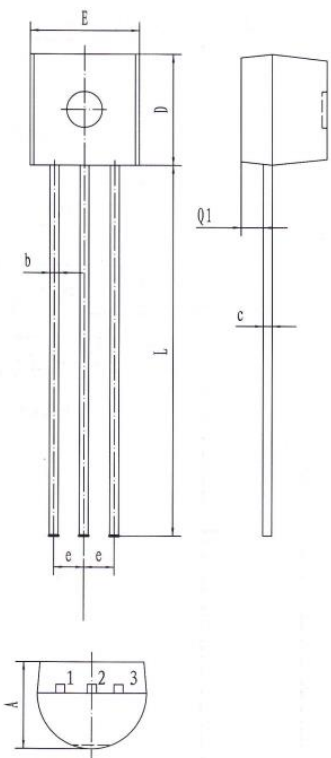


NPN 型高压功率开关晶体管
HIGH VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR

外形尺寸 PACKAGE MECHANICAL DATA

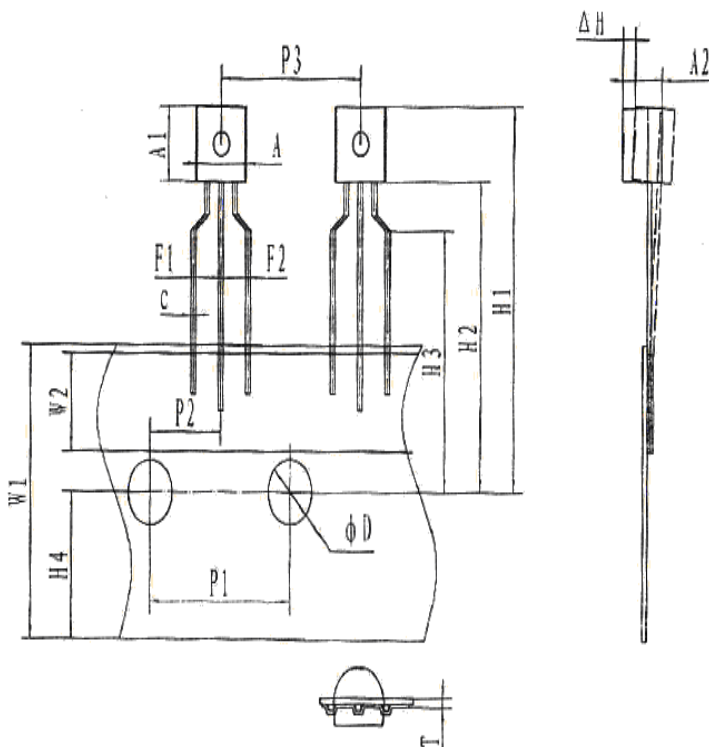
TO-92

单位 Unit : mm



符号 Symbol	尺寸 (mm) Size (mm)
A	3.30-3.90
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
L	12.50-15.50
Q1	0.85-1.00

TO-92-编带



符号 Symbol	尺寸 (mm) Size (mm)
A	4.50-4.70
A1	4.50-4.70
A2	3.50-3.70
c	TYP 0.45
F1/F2	2.20-2.80
W1	17.5-18.5
W2	5.50-6.50
H1	22.0-27.0
H2	18.0-20.0
H3	15.0-17.0
H4	8.50-9.50
P1	12.5-12.9
P2	6.00-6.70
P3	12.5-12.9
T	0.40-0.45
φ D	3.80-4.20
ΔH	0.00-1.00



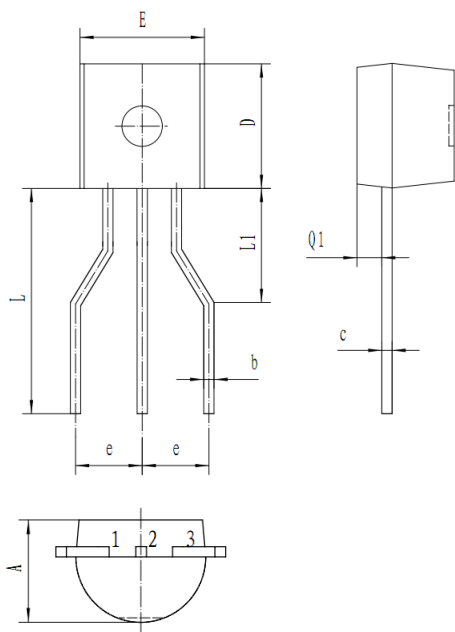


NPN 型高压功率开关晶体管
HIGH VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR

外形尺寸 PACKAGE MECHANICAL DATA

TO-92-F1

单位 Unit : mm

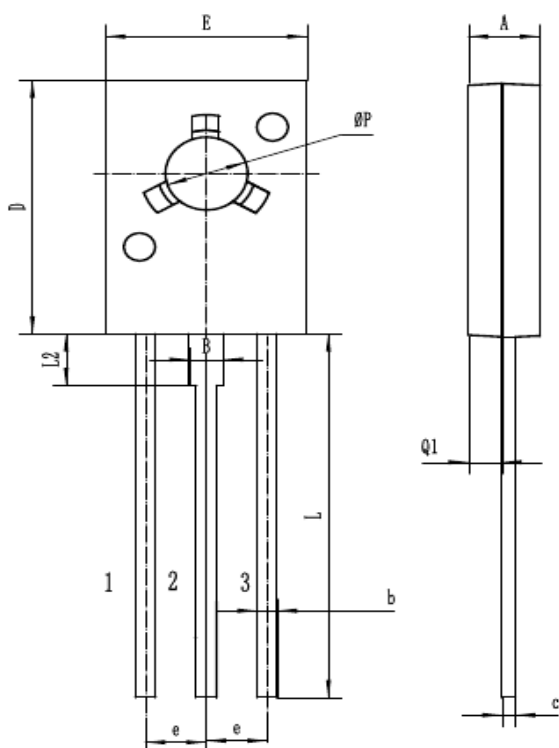


符号 Symbol	尺寸 (mm) Size (mm)
A	3.30-3.90
b	0.35-0.55
c	0.31-0.51
D	4.30-4.90
E	4.30-4.90
e	2.00-3.10
L	5.90-7.10
L1	2.70-3.30
Q1	0.85-0.99

外形尺寸 PACKAGE MECHANICAL DATA

TO-126

单位 Unit : mm



符号 Symbol	尺寸 (mm) Size (mm)
A	2.50-2.90
B	1.22-1.47
b	0.60-0.90
c	0.30-0.70
D	10.50-11.10
E	7.10-8.10
e	2.19-2.39
L	15.30-15.70
L2	2.05-2.35
Q1	1.07-1.47
P	2.95-3.25

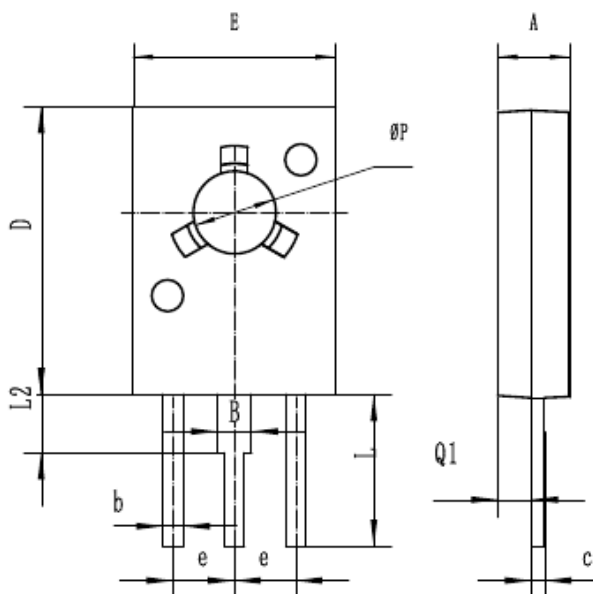




外形尺寸 PACKAGE MECHANICAL DATA

TO-126S

单位 Unit : mm

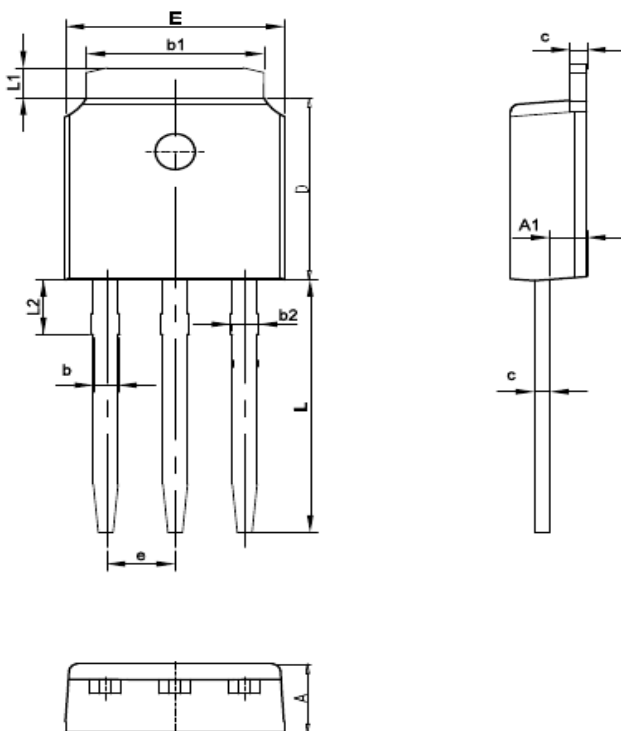


符号 Symbol	尺寸 (mm) Size (mm)
A	2.50-2.90
B	1.22-1.47
b	0.60-0.90
c	0.30-0.70
D	10.50-11.10
E	7.10-8.10
e	2.19-2.39
L	5.30-6.00
L2	2.05-2.35
Q1	1.07-1.47
P	2.95-3.25

外形尺寸 PACKAGE MECHANICAL DATA

IPAK

单位 Unit : mm



符号 Symbol	尺寸 (mm) Size (mm)
A	2.10-2.50
A1	0.87-1.27
b	0.63-0.93
b1	5.13-5.53
B2	0.67-1.00
c	0.40-0.60
D	5.80-6.40
E	6.30-6.90
L	9.10-9.71
e	2.286BSC
L1	0.82-1.22
L2	0.90-1.20



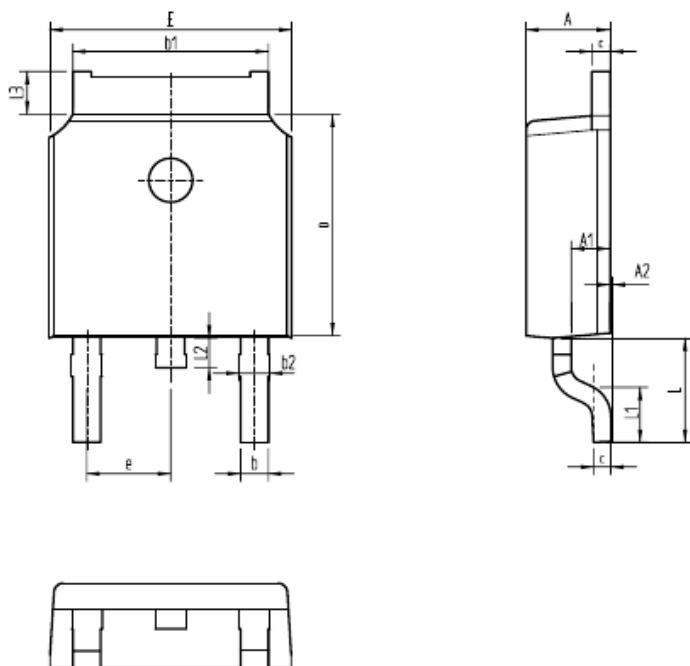


NPN 型高压功率开关晶体管
HIGH VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR

外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm

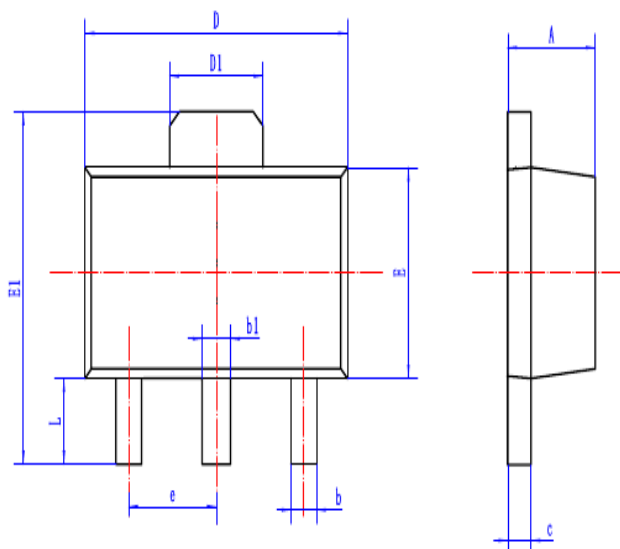


符号 Symbol	尺寸 (mm) Size (mm)
A	2.16-2.41
A1	0.97-1.17
A2	0.00-0.15
b	0.63-0.93
b1	5.13-5.53
b2	0.66-0.96
c	0.40-0.60
D	5.80-6.40
E	6.30-6.90
e	2.286BSC
L	2.50-3.30
L1	1.20-1.80
L2	0.60-1.00
L3	0.85-1.30

外形尺寸 PACKAGE MECHANICAL DATA

SOT-89

单位 Unit : mm



符号 Symbol	尺寸 (mm) Size (mm)
A	1.30-1.70
b	0.30-0.55
b1	0.35-0.65
c	0.30-0.50
D	4.30-4.70
D1	1.55REF
E	2.30-2.60
E1	3.90-4.30
e	1.50TYP
L	0.80-1.20





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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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