



# HBR3100

## 主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	3A
$V_{RRM}$	100 V
$T_j$	175 °C
$V_{F(max)}$	0.7V (@ $T_j=125^{\circ}C$ )

### 用途

- 低压、高频整流
- 低压续流电路和保护电路

### 产品特性

- 轴向结构
- 低功耗，高效率
- 良好的高温特性
- 有过压保护环，高可靠性
- 环保 (RoHS) 产品

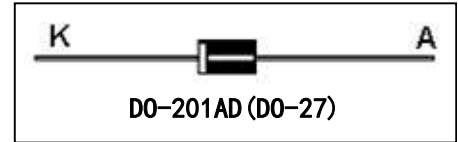
### APPLICATIONS

- Low voltage, high frequency rectifier
- Free wheeling diodes, polarity protection applications

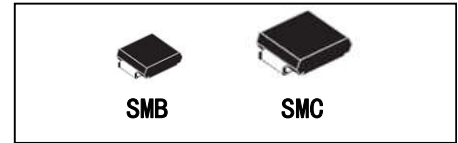
### FEATURES

- Axial Lead Rectifier
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product

## 封装 Package



SMA



## 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		
N/A	N/A	HBR3100-D-A	HBR3100-D-AR	HBR3100	DO-201AD
N/A	N/A	HBR3100-XA-A	HBR3100-XA-AR	HBR3100	SMA
N/A	N/A	HBR3100-XC-A	HBR3100-XC-AR	HBR3100	SMB
N/A	N/A	HBR3100-XE-A	HBR3100-XE-AR	HBR3100	SMC
有卤-散装 Halogen- Bulk	无卤-散装 Halogen Free-Bulk			印 记 Marking	封 装 Package
HBR3100-D2-F	HBR3100-D2-FR			HBR3100	DO-201AD-B2



**绝对最大额定值 ABSOLUTE RATINGS** ( $T_c=25^{\circ}\text{C}$ )

项 目 Parameter	符 号 Symbol	数 值 Value	单 位 Unit
最大反向重复峰值电压 Repetitive peak reverse voltage	$V_{RRM}$	100	V
最大直流阻断电压 Maximum DC blocking voltage	$V_{DC}$	100	V
正向平均整流电流 $T_c=125^{\circ}\text{C}$ Average Rectified Forward Current	$I_{F(AV)}$	3	A
正向峰值浪涌电流 Surge non repetitive forward current (额定负载 8.3ms 半正弦波—按 JEDEC 方法) 8.3 ms single half-sine-wave (JEDEC Method)	$I_{FSM}$	120	A
最高结温 Maximum junction temperature	$T_j$	175	$^{\circ}\text{C}$
储存温度 Storage temperature range	$T_{STG}$	-40~+150	$^{\circ}\text{C}$

**电特性 ELECTRICAL CHARACTERISTICS**

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
$I_R$	$T_j = 25^{\circ}\text{C}$	$V_R = V_{RRM}$			10	$\mu\text{A}$
	$T_j = 125^{\circ}\text{C}$				5	mA
$V_F$	$T_j = 25^{\circ}\text{C}$	$I_F = 3\text{A}$		0.74	0.80	V
	$T_j = 125^{\circ}\text{C}$			0.65	0.7	V

**热特性 THERMAL CHARACTERISTICS**

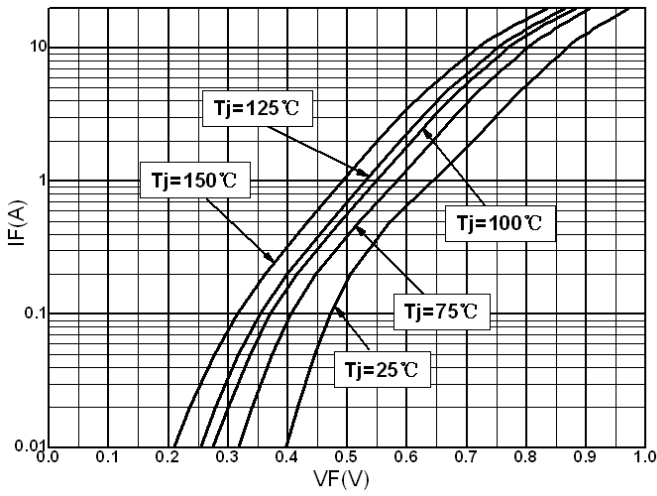
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到环境的热阻 Thermal resistance from junction to ambient	DO-201AD(-B2)		70	$^{\circ}\text{C/W}$
	SMA		150	
	SMB		140	
	SMC		120	
结到管壳的热阻 Thermal resistance from junction to case	DO-201AD(-B2)		25	$^{\circ}\text{C/W}$
	SMA		50	
	SMB		40	
	SMC		37	



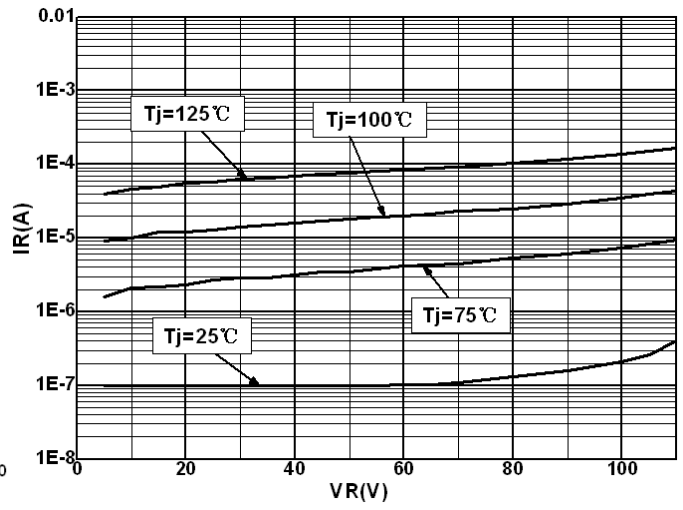


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

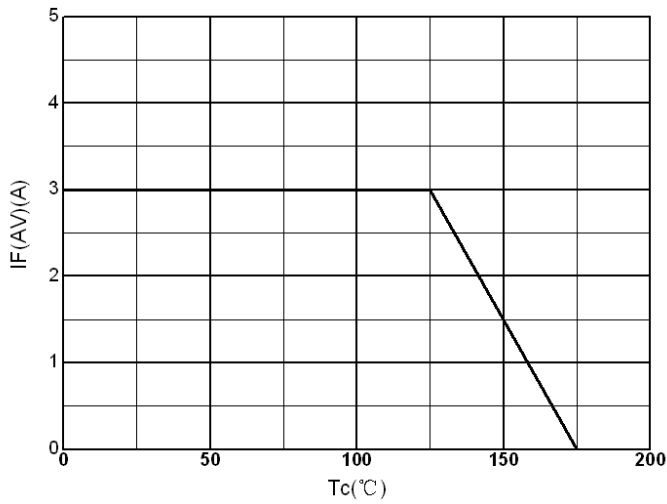
IF vs VF



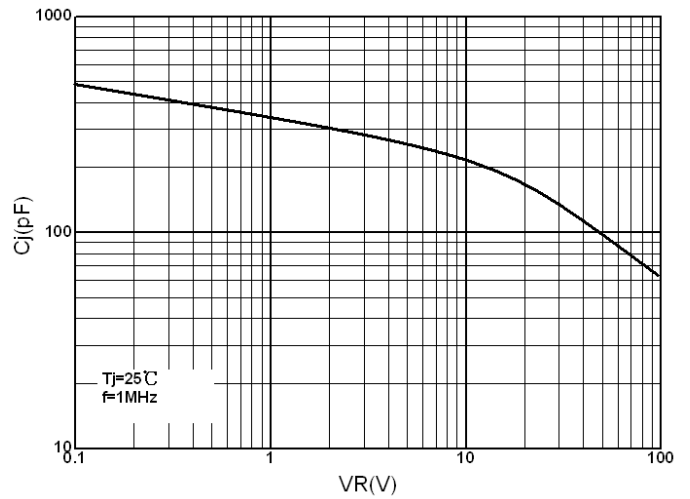
IR vs VR

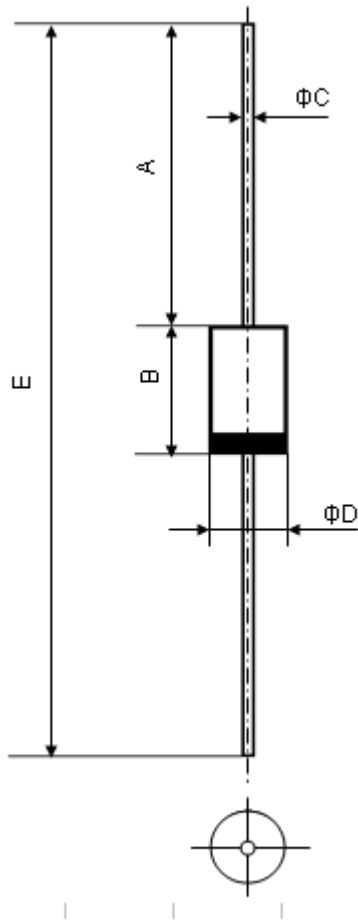


IF(AV) vs Tc



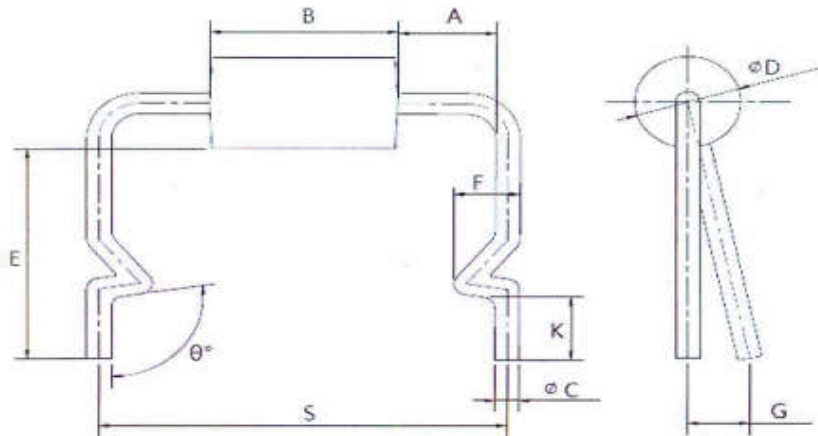
Cj vs VR





符号 Symbol	Min	Max
A	25.4	--
B	8.5	9.5
C	1.2	1.3
D	5.0	5.6
E	59.5	64



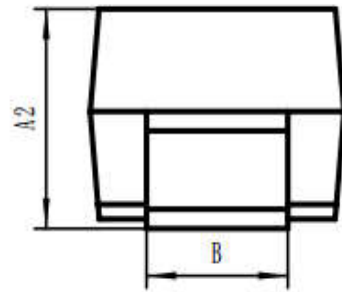
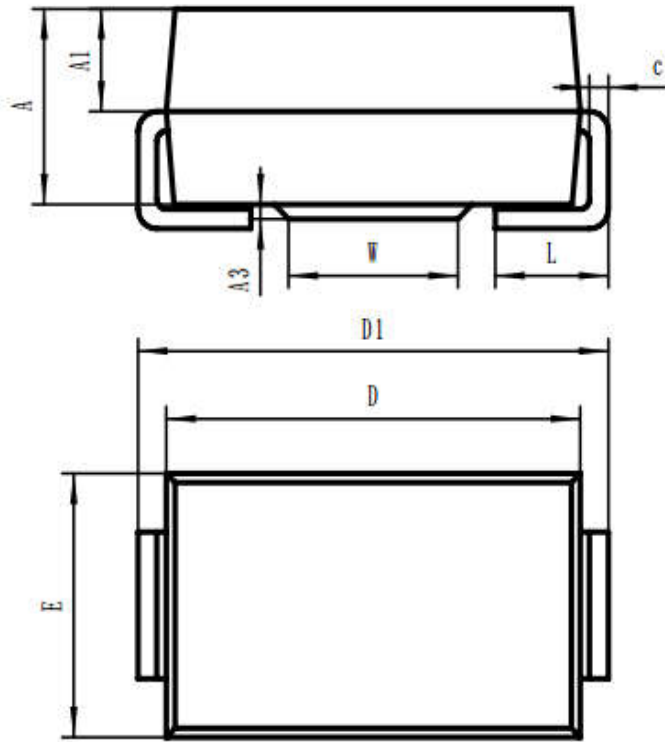


DO-201AD-B2 成型图

符号 <sup>o</sup> Symbol <sup>o</sup>	Min. <sup>o</sup>	Max. <sup>o</sup>
A <sup>o</sup>	1.0 <sup>o</sup>	— <sup>o</sup>
B <sup>o</sup>	8.5 <sup>o</sup>	9.5 <sup>o</sup>
C <sup>o</sup>	1.2 <sup>o</sup>	1.3 <sup>o</sup>
D <sup>o</sup>	5.0 <sup>o</sup>	5.6 <sup>o</sup>
E <sup>o</sup>	(12.0) <sup>o</sup>	
F <sup>o</sup>	2.2 <sup>o</sup>	2.8 <sup>o</sup>
G <sup>o</sup>	— <sup>o</sup>	2.0 <sup>o</sup>
K <sup>o</sup>	3.5 <sup>o</sup>	4.0 <sup>o</sup>
S <sup>o</sup>	19.5 <sup>o</sup>	20.5 <sup>o</sup>
$\theta$ <sup>o</sup>	100 <sup>o</sup>	140 <sup>o</sup>

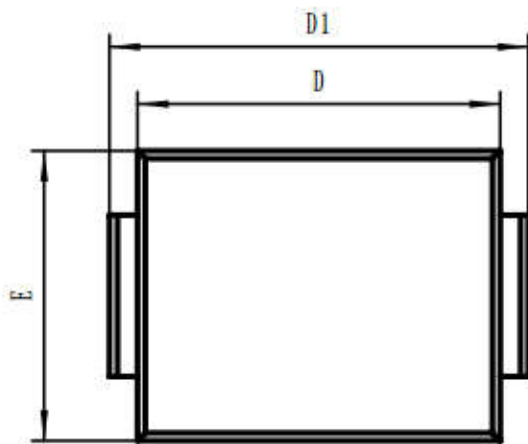
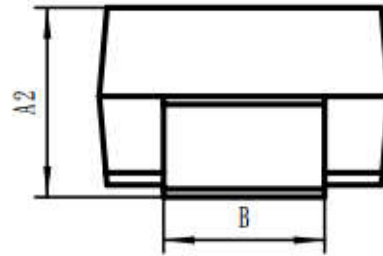
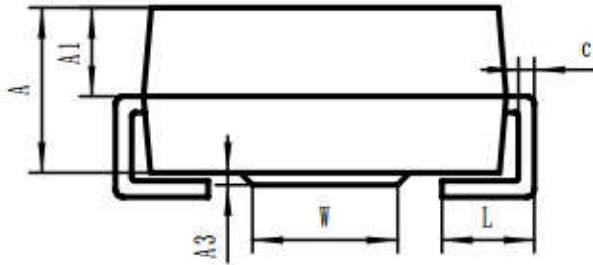
DO-201AD-B2 尺寸





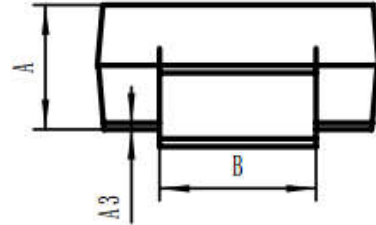
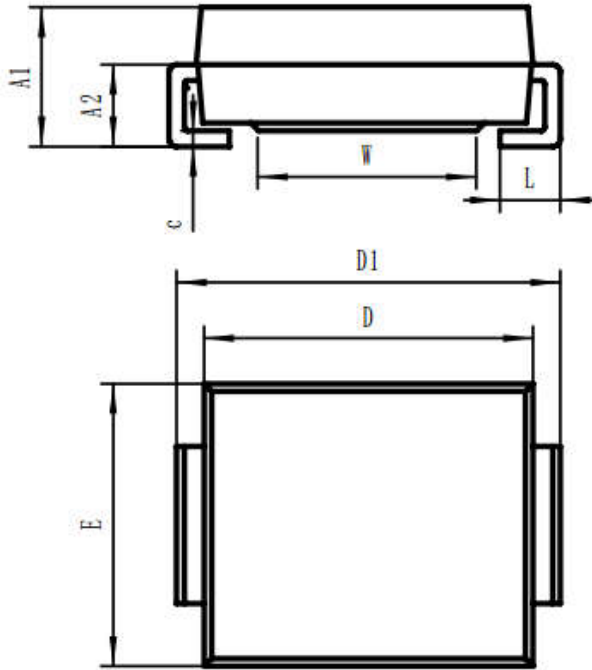
SYMBOL	MIN	MAX
A	1.80	2.20
A1	0.85	1.25
A2	1.90	2.60
A3	0.10	0.20
B	1.30	1.70
c	0.15	0.25
D	4.20	4.65
D1	4.70	5.30
E	2.50	2.90
L	0.85	1.55
W	1.60	2.00





SYMBOL	MIN	MAX
A	1.85	2.25
A1	0.90	1.30
A2	2.10	2.60
A3	0.10	0.20
B	1.80	2.20
c	0.10	0.30
D	4.30	4.70
D1	4.95	5.45
E	3.40	3.80
L	0.80	1.50
W	1.60	2.00





SYMBOL	MIN	MAX
A	2.30	2.70
A1	2.40	3.00
A2	1.30	1.90
A3	0.10	0.20
B	2.80	3.10
c	0.15	0.25
D	6.70	7.10
D1	7.70	8.30
E	5.80	6.20
L	0.90	1.60
W	4.30	4.70





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