



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

APPLICATIONS

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

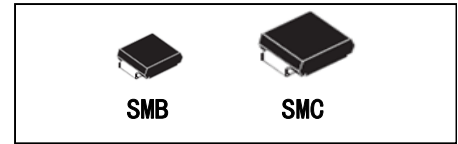
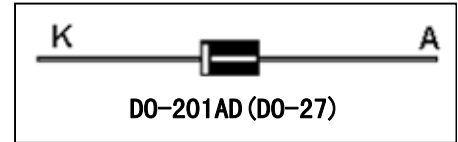
产品特性

- 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

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



订货信息 ORDER MESSAGE

订货型号 Order codes	印记 Marking	封装 Package	无卤素 Halogen Free	包装 Packaging	器件重量 Device Weight
HBR3100D	HBR3100	DO-201AD	否 NO	编带 Tape	1.1g(approx.)
HBR3100DR	HBR3100	DO-201AD	是 YES	编带 Tape	1.1g(approx.)
HBR3100D2	HBR3100	DO-201AD-B2	否 NO	散装 Bulk	1.1g(approx.)
HBR3100D2R	HBR3100	DO-201AD-B2	是 YES	散装 Bulk	1.1g(approx.)
HBR3100D3	HBR3100	DO-201AD-B3	否 NO	散装 Bulk	1.1g(approx.)
HBR3100D3R	HBR3100	DO-201AD-B3	是 YES	散装 Bulk	1.1g(approx.)
HBR3100D4	HBR3100	DO-201AD-B4	否 NO	散装 Bulk	1.1g(approx.)
HBR3100D4R	HBR3100	DO-201AD-B4	是 YES	散装 Bulk	1.1g(approx.)
HBR3100D5	HBR3100	DO-201AD-B5	否 NO	散装 Bulk	1.1g(approx.)
HBR3100D5R	HBR3100	DO-201AD-B5	是 YES	散装 Bulk	1.1g(approx.)
HBR3100K	HBR3100	SMB	否 NO	编带 Tape	0.096g(approx.)
HBR3100KR	HBR3100	SMB	是 YES	编带 Tape	0.096g(approx.)
HBR3100P	HBR3100	SMC	否 NO	编带 Tape	0.24g(approx.)
HBR3100PR	HBR3100	SMC	是 YES	编带 Tape	0.24g(approx.)



**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	μA
	$T_j=125^{\circ}\text{C}$				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

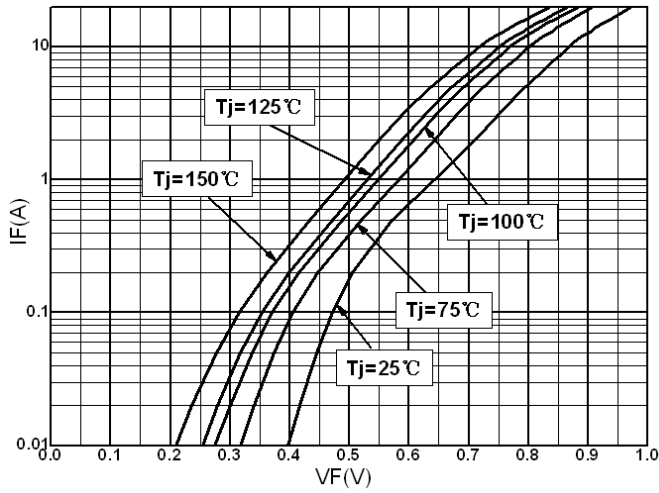
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit	
结到环境的热阻 Thermal resistance from junction to ambient	DO-201AD(-B2/B3/B4/B5)	$R_{th(j-a)}$		70	$^{\circ}\text{C/W}$
	SMB			140	
	SMC			120	
结到管壳的热阻 Thermal resistance from junction to case	DO-201AD(-B2/B3/B4/B5)	$R_{th(j-c)}$		25	$^{\circ}\text{C/W}$
	SMB			40	
	SMC			37	



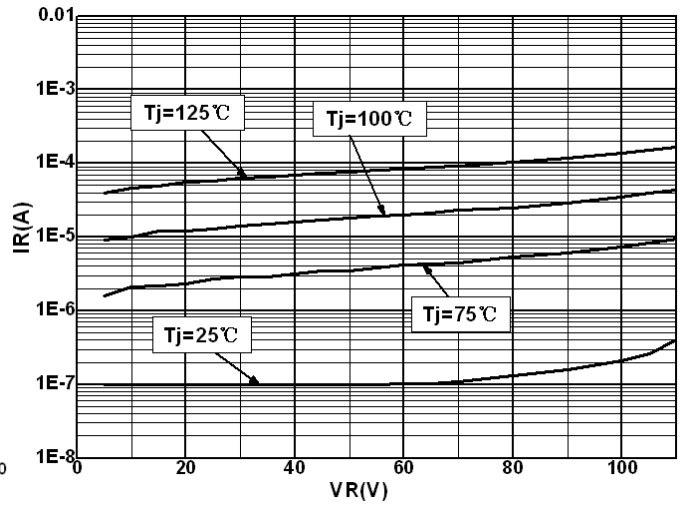


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

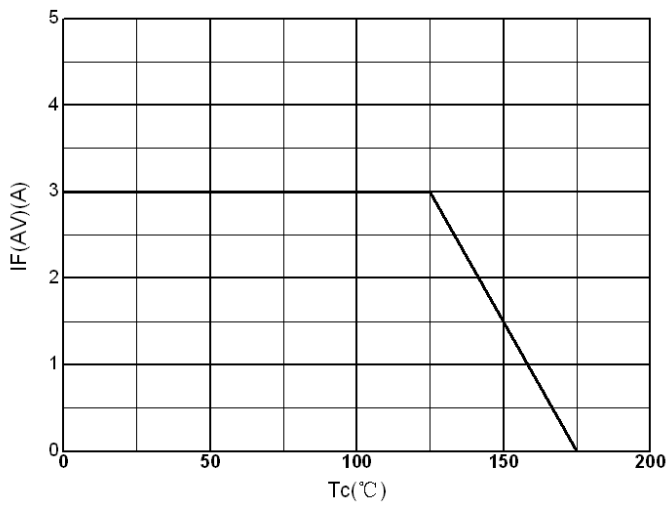
IF vs VF



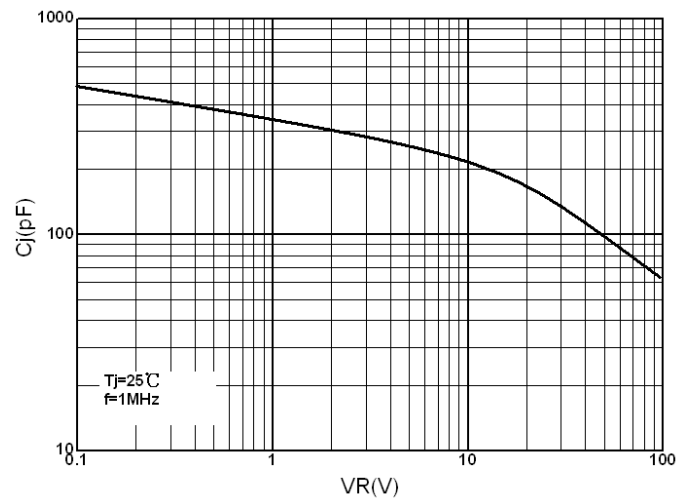
IR vs VR



IF(AV) vs Tc



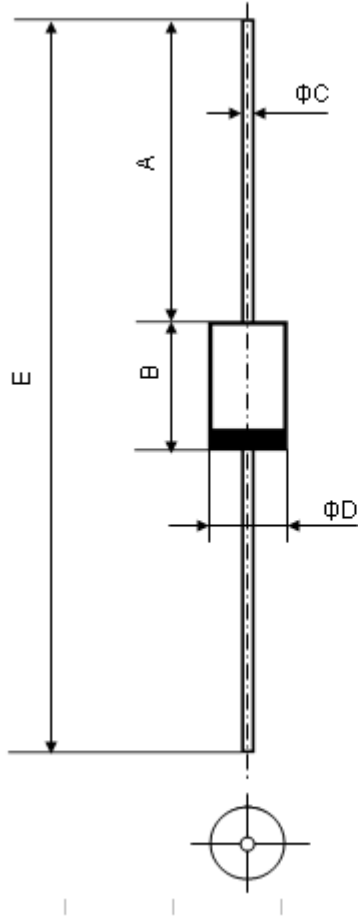
CJ vs VR





外形尺寸 PACKAGE MECHANICAL DATA
DO-201AD

单位 Unit : mm



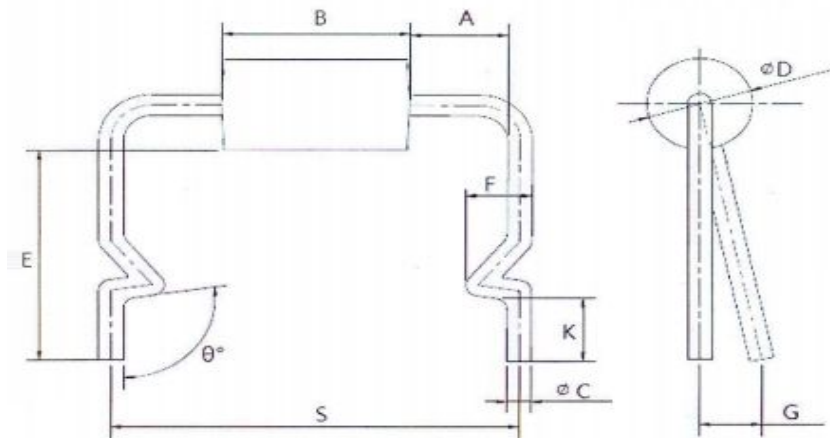
符号 Symbol	Min	Max
A	25.4	--
B	8.5	9.5
C	1.2	1.3
D	5.0	5.6
E	59.5	64



外形尺寸 PACKAGE MECHANICAL DATA

DO-201AD 成型尺寸图

单位 Unit : mm



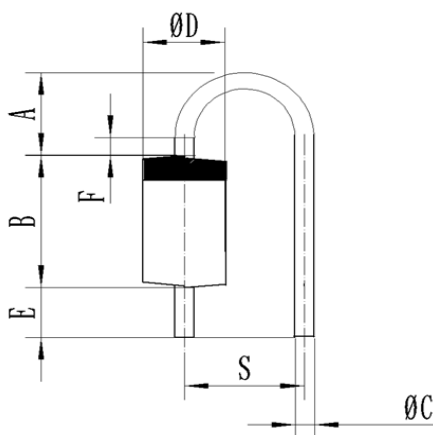
DO-201AD-B2(B3)成型图

符号 Symbol	Min	Max
A	1.0	---
B	8.5	9.5
C	1.2	1.3
D	5.0	5.6
E	(12.0)	
F	2.2	2.8
G	---	2.0
K	3.5	4.0
S	19.5	20.5
θ°	100	140

DO-201AD-B2 尺寸

符号 Symbol	Min	Max
A	1.0	---
B	8.5	9.5
C	1.2	1.3
D	5.0	5.6
E	(12.0)	
F	2.2	2.8
G	---	2.0
K	5.5	6.0
S	19.5	20.5
θ°	100	140

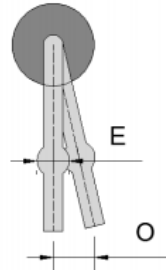
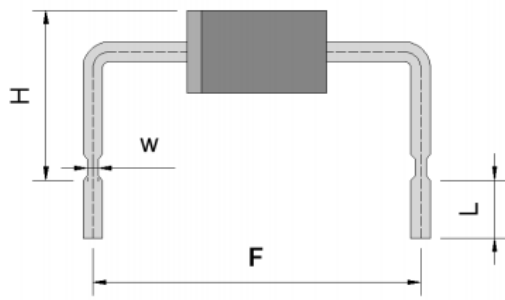
DO-201AD-B3 尺寸



DO-201AD-B4 成型图

符号 Symbol	Min	Max
A	4.00	5.00
B	7.20	9.50
C	1.20	1.35
D	4.80	5.30
E	3.00	4.00
F	1.00	2.00
S	7.00	8.00
说明：单位为mm		

DO-201AD-B4 尺寸



符号 Symbol	Min	Max
F	19.5	20.5
H		11.0
L	3.0	4.0
O		1.5
E	1.8	2.2
W	0.6	0.8

DO-201AD-B5 外形图及尺寸

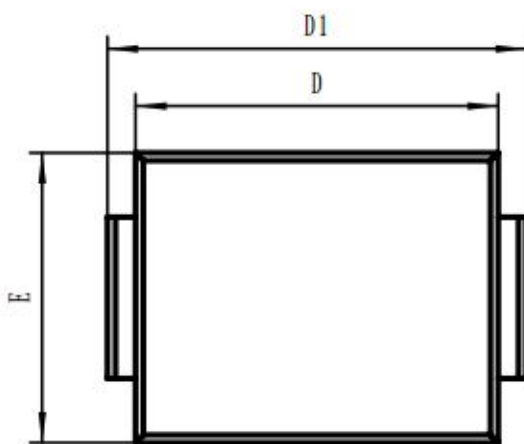
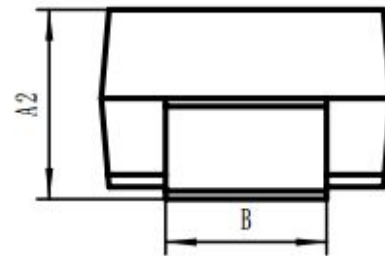
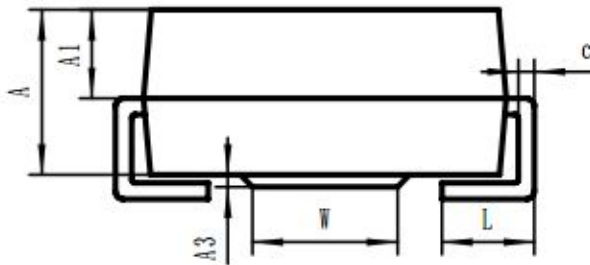




外形尺寸 PACKAGE MECHANICAL DATA

SMB

单位 Unit : mm



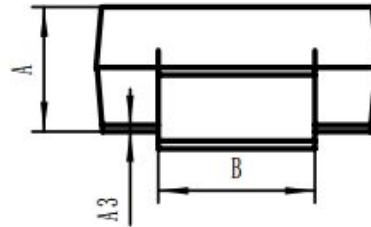
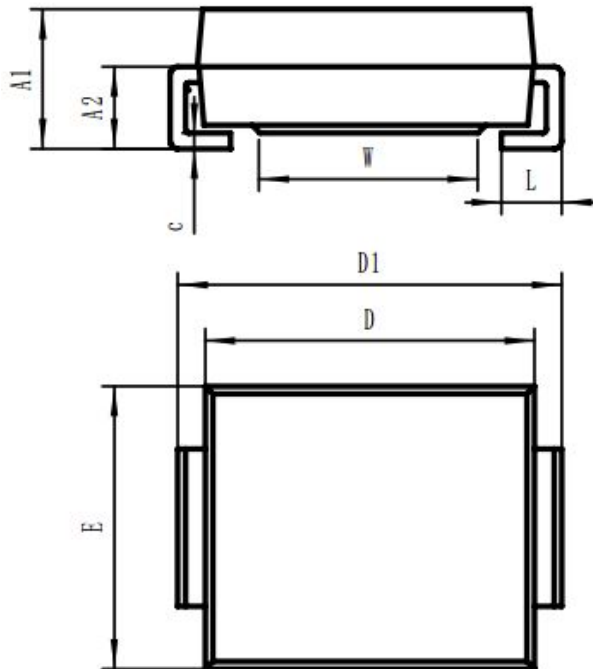
SYMBOL	MIN	MAX
A	1.85	2.25
A1	0.90	1.30
A2	2.10	2.60
A3	0.10	0.20
B	1.80	2.20
c	0.10	0.30
D	4.30	4.70
D1	4.95	5.45
E	3.40	3.80
L	0.80	1.50
W	1.60	2.00





外形尺寸 PACKAGE MECHANICAL DATA
SMC

单位 Unit : mm



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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- 2.购买时请认清公司商标,如有疑问请与公司本部联系。
- 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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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
2014-8-26	201403C	201408D	Added DO-201AD-B2,DO-201AD-B3,DO-201AD-B4 spec.
2016-4-11	201408D	201604E	Added DO-201AD-B5 spec.

