



FEATURES

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

APPLICATIONS

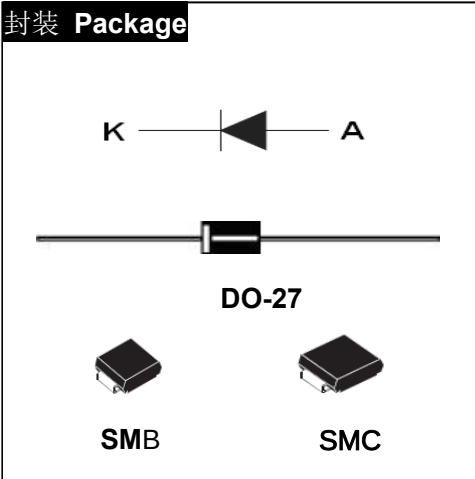
- Low voltage, high frequency rectifier
- Free wheeling diodes, polarity protection applications

产品特性

- 轴向、贴片结构
- 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

用途

- 低压、高频整流
- 低压续流电路和保护电路



主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	5A
V_{RRM}	100 V
T_j	150℃
$V_{F(max)}$	0.60V (@ $T_j=125^{\circ}C$)

产品型号信息PRODUCTMESSAGE

型号Model	印记Marking	封装Package
MBR5100L	MBR5100L	DO-27
SS510L	SS510L	SMB/SMC



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	$I_{F(AV)}$	5	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}	150	A
最高结温 Maximum junction temperature	T_j	150	$^{\circ}\text{C}$
储存温度 Storage temperature range	T_{STG}	-40~+150	$^{\circ}\text{C}$

电特性 ELECTRICAL CHARACTERISTICS

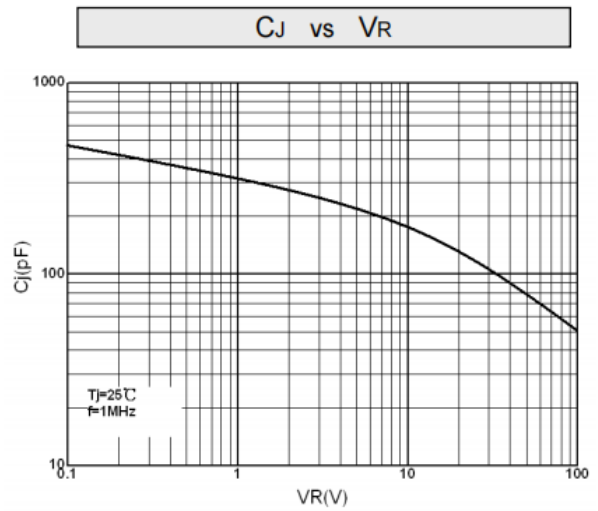
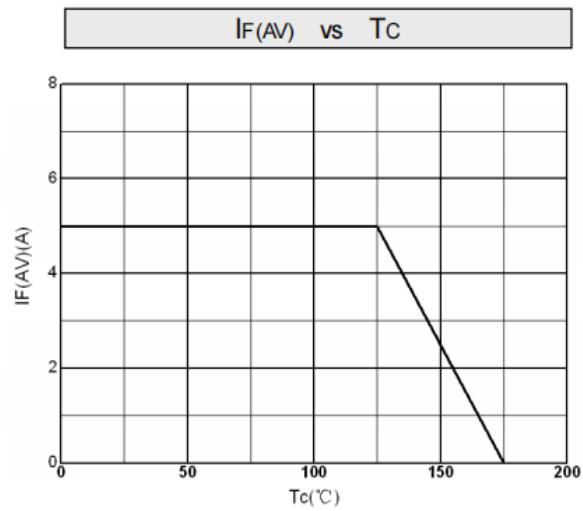
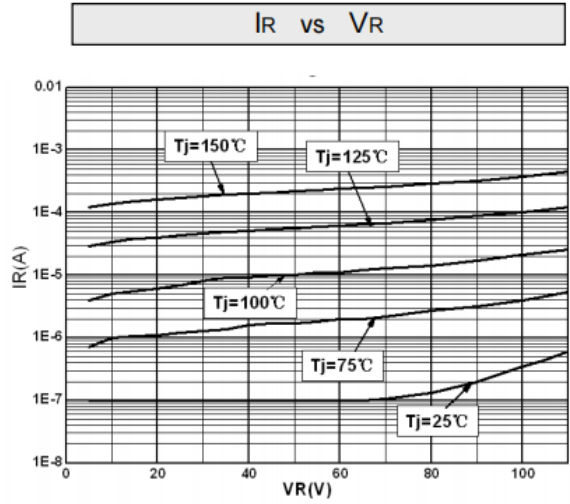
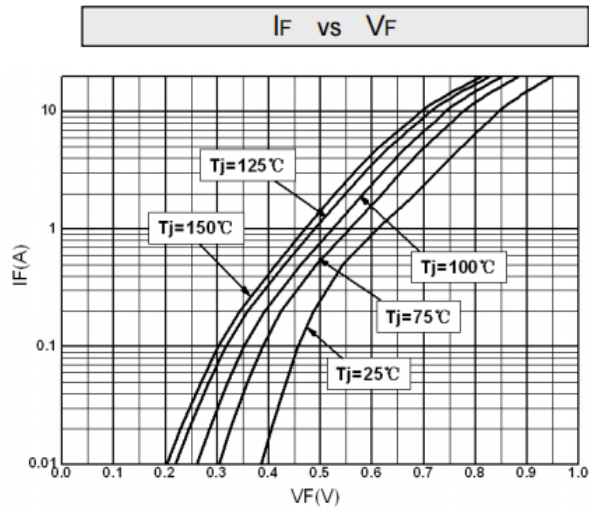
项 目 Parameter	测试条件 Tests conditions		最小值 Value(min)	典型值 Value(typ)	最大值 Value(max)	单位 Unit
I_R	$T_j = 25^{\circ}\text{C}$	$V_R = V_{RRM}$			10	μA
	$T_j = 125^{\circ}\text{C}$				5	mA
V_F	$T_j = 25^{\circ}\text{C}$	$I_F = 5\text{A}$		0.68	0.70	V
	$T_j = 125^{\circ}\text{C}$			0.60		V

热特性 THERMAL CHARACTERISTICS

项 目 Parameter		符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	DO-27 SMB SMC	$R_{th(j-c)}$		25 40 37	$^{\circ}\text{C/W}$
结到环境的热阻 Thermal resistance from junction to ambient	DO-27 SMB SMC	$R_{th(j-a)}$		70 140 120	$^{\circ}\text{C/W}$



特征曲线 ELECTRICAL CHARACTERISTICS (curves)

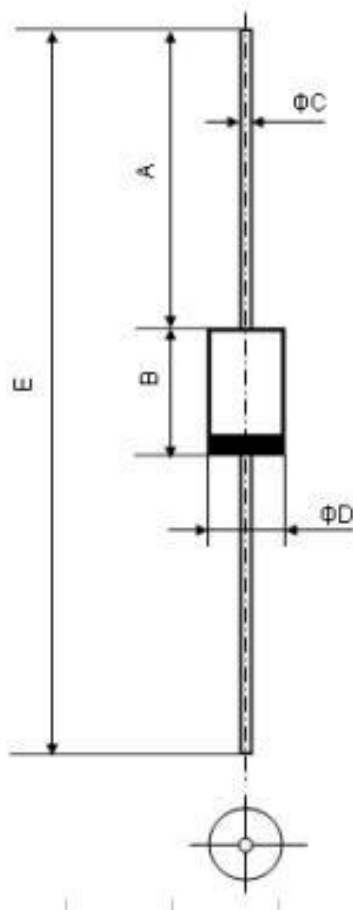




外形尺寸 PACKAGE MECHANICAL DATA

DO-27

单位 Unit : mm



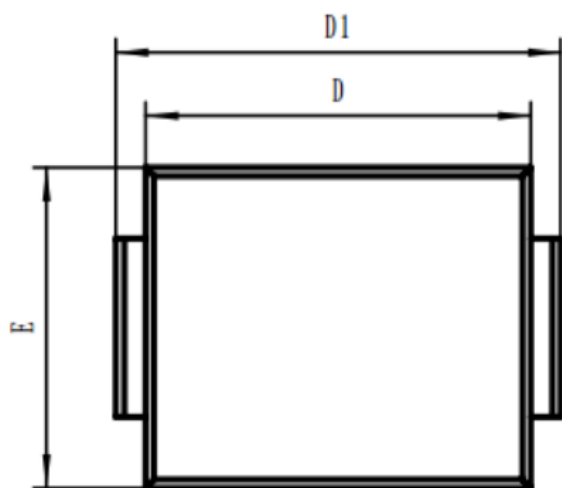
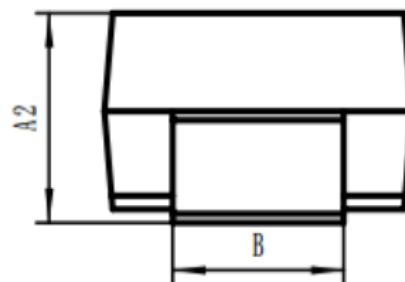
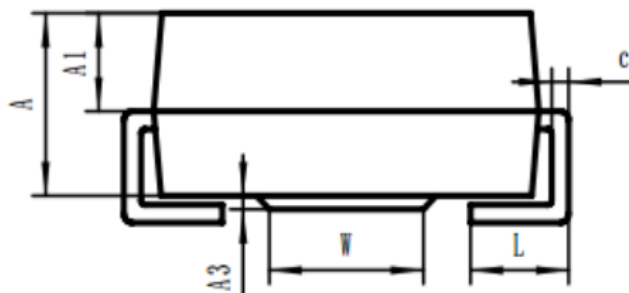
符号 symbol	Min	Max
A	25.4	—
B	5.8	7.6
C	0.7	0.9
D	2.6	3.6



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



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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. Shenzhen Huatianwei Electronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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