



# SBL540

## 主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	5A
$V_{RRM}$	40 V
$T_j$	125°C
$V_{F(typ)}$	0.39V (@ $T_j=100^\circ\text{C}$ )

### 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

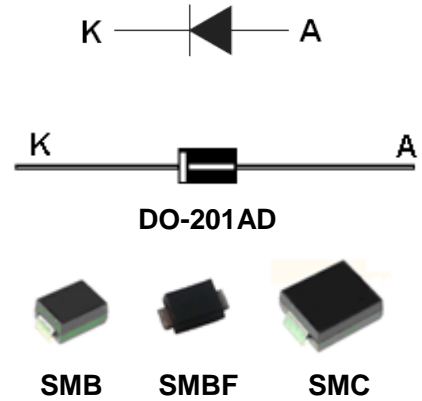
### 产品特性

- 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

- 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
有卤-编带 Halogen-Reel	无卤-编带 Halogen Free-Reel		
SBL540-D-A	SBL540-D-AR	SBL540	DO-201AD
SBL540-XC-A	SBL540-XC-AR	SBL540	SMB
SBL540-XD-A	SBL540-XD-AR	SBL540	SMBF
SBL540-XE-A	SBL540-XE-AR	SBL540	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		$V_{RRM}$	40	V
最大直流阻断电压 Maximum DC blocking voltage		$V_{DC}$	40	V
正向平均整流电流 Average forward current	$T_C=100^{\circ}\text{C}$ 整个器件 per device	$I_{F(AV)}$	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)		$I_{FSM}$	120	A
最高结温 Maximum junction temperature		$T_j$	125	$^{\circ}\text{C}$
储存温度 Storage temperature range		$T_{STG}$	-55~+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
$I_R$	$T_j=25^{\circ}\text{C}$	$V_R=V_{RRM}$		90	150	$\mu\text{A}$
	$T_j=100^{\circ}\text{C}$				15	mA
$V_F$	$T_j=25^{\circ}\text{C}$	$I_F=5\text{A}$		0.43	0.46	V
	$T_j=100^{\circ}\text{C}$			0.39	0.43	V

**热特性 THERMAL CHARACTERISTICS**

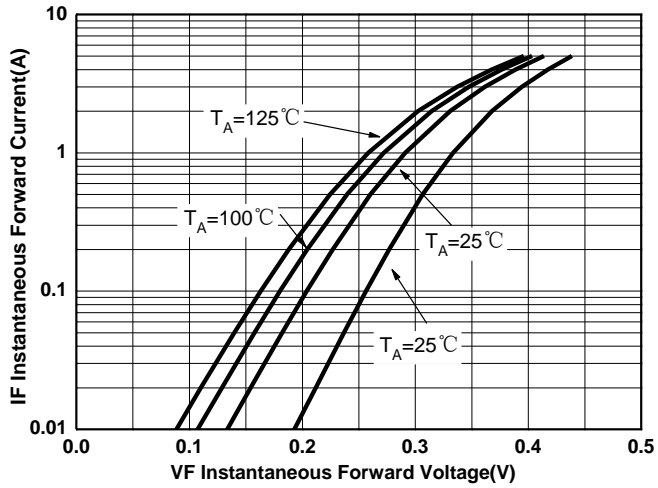
项 目 Parameter		符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到环境的热阻 Thermal resistance from junction to ambient	DO-201AD	$R_{th(j-a)}$		70	$^{\circ}\text{C}/\text{W}$
	SMB/SMBF		140		
	SMC		120		
结到管壳的热阻 Thermal resistance from junction to case	DO-201AD	$R_{th(j-c)}$		25	$^{\circ}\text{C}/\text{W}$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



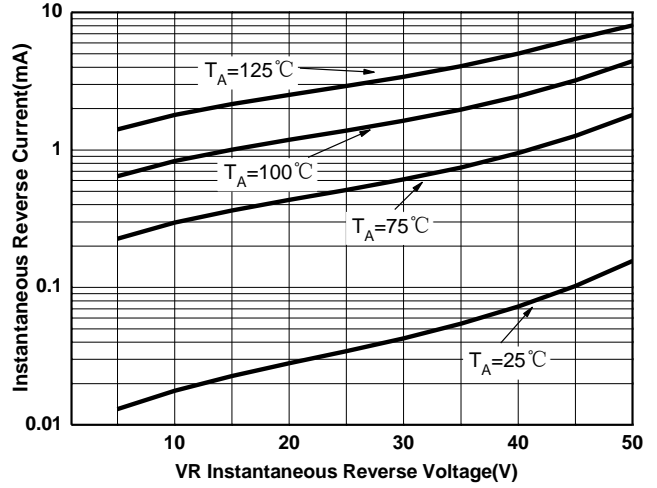


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

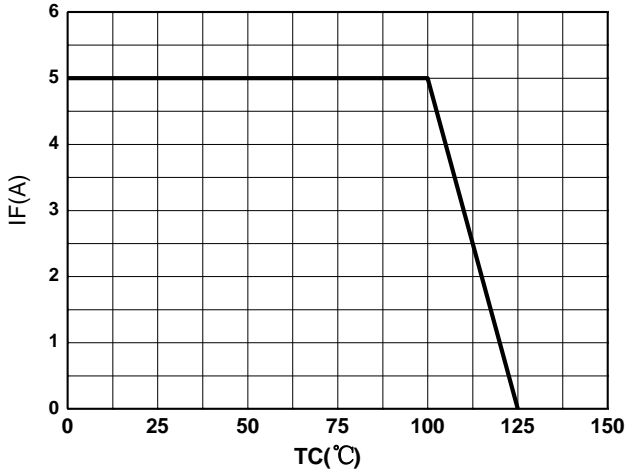
IF vs VF



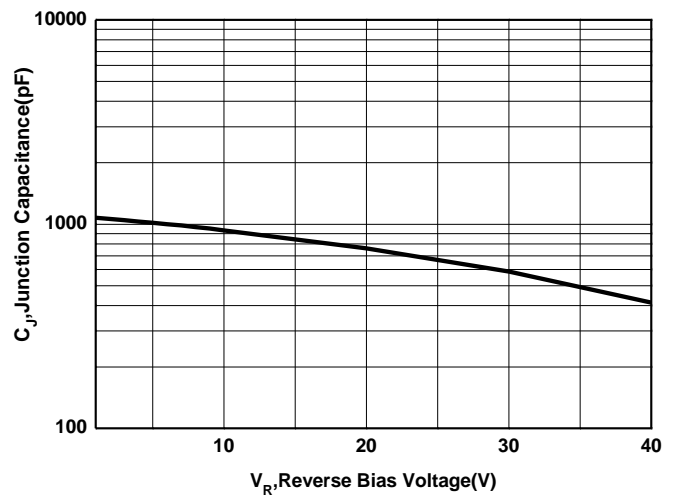
IR vs VR



IF(AV) vs TC(°C)



Cj vs VR

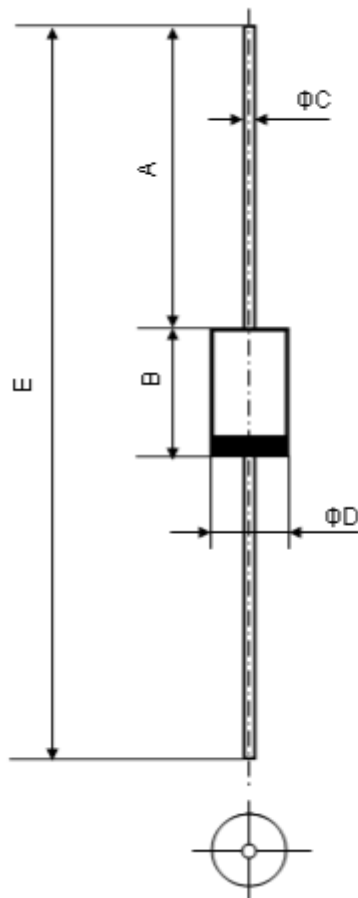




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外形尺寸 PACKAGE MECHANICAL DATA  
DO-201AD

单位 Unit : mm



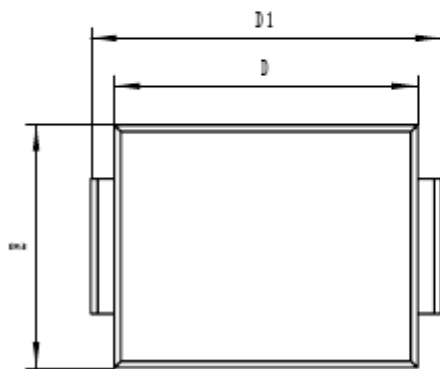
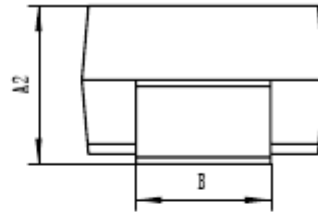
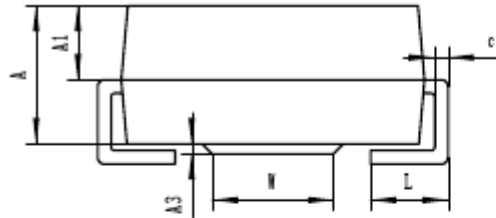
符号 Symbol	Min	Max
A	25.4	--
B	8.5	9.5
C	1.2	1.3
D	5.0	5.6
E	59.5	64





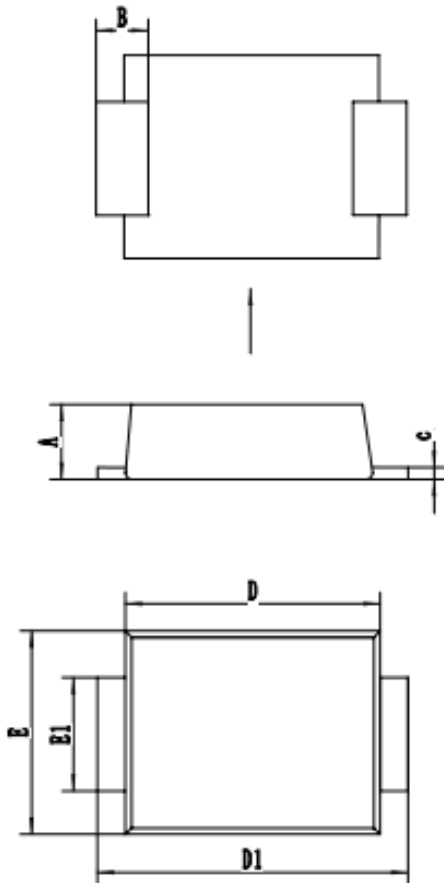
外形尺寸 PACKAGE MECHANICAL DATA  
SMB

单位 Unit : mm



SYMBOL	MM	
	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





符号 symbol	Min	Max
A	1.10	1.30
B	0.80	1.10
C	0.15	0.25
D	4.3	4.7
D1	5.3	5.7
E	3.4	3.8
E1	1.90	2.10



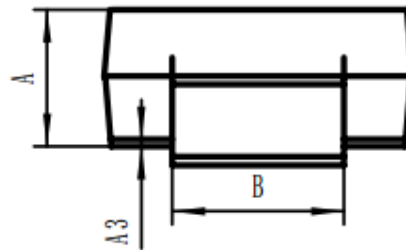
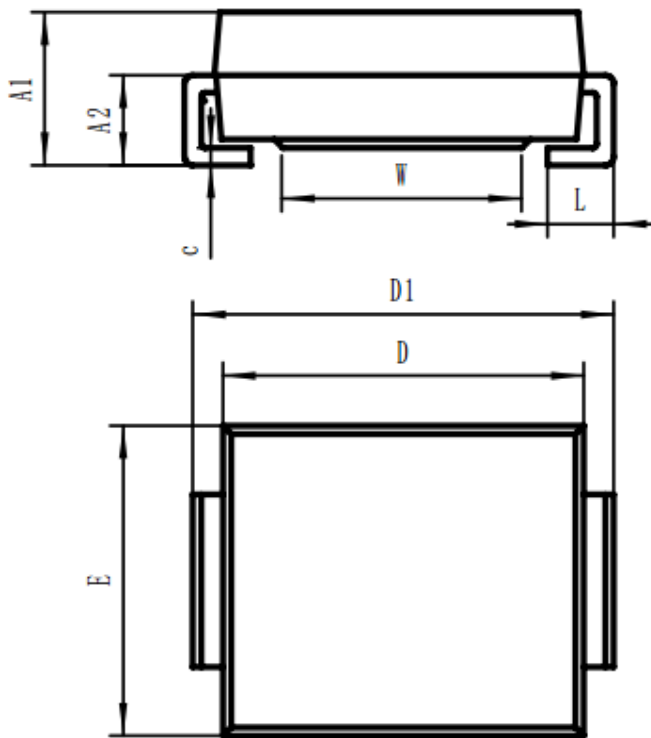


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外形尺寸 PACKAGE MECHANICAL DATA

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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- 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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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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