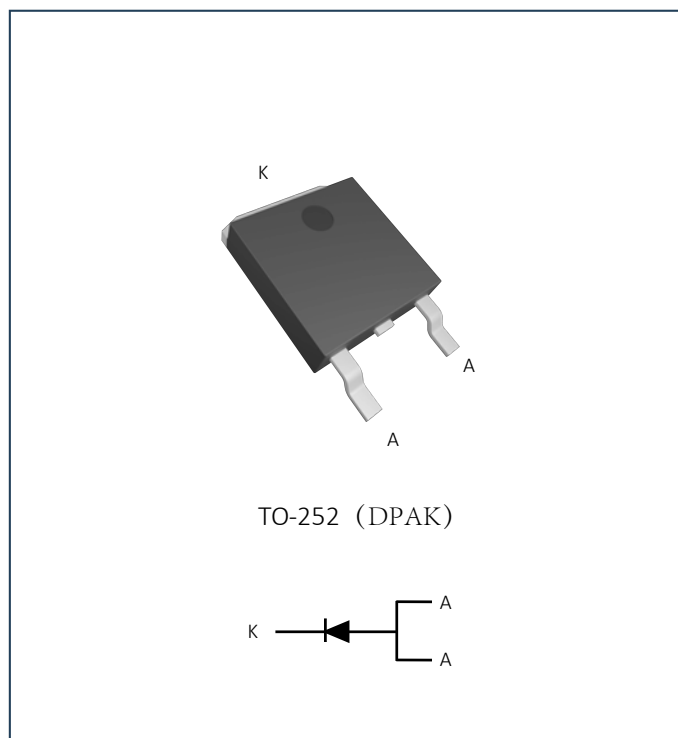


MBR5100BS

肖特基二极管

Schottky Barrier Diode

封装外形 Package



主要参数 Device summary

Symbol	Value
$I_F(AV)$	5A
V_{RRM}	100V
$V_F(typ)$	0.63V@5A 125°C
$I_R(typ)$	0.3mA@100V 125°C
$T_j(max)$	175°C

机械数据 Mechanical Data

- 模塑料符合 UL 94 V-0 易燃等级，符合 RoHS 标准
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- 端子：镀锡引线，可焊接 J-STD-002 和 JESD22-B102
Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- 极性：本体标记
Polarity: As marked on body

产品特点 Features

- 低正向压降 Low forward voltage
- 高频运行 High frequency operation
- 高结温 High Junction temperature
- 低漏电 Low leakage current
- 高可靠性 High reliability
- 环保产品 RoHS product

最大额定值 Maximum ratings

项目 Parameter	符合 Symbol	数值 Value	单位 Unit
反向电压 Peak repetitive reverse voltage	V_{RRM}	100	V
平均正向电流 Average forward current	$I_{F(AV)}$	5	A
浪涌电流 Non-repetitive single pulse surge current $t=8.3ms$ per diode	I_{FSM}	100	A
结温 Junction temperature	T_j	-55~+175	°C
存储温度 Storage temperature	T_{STG}	-55~+175	°C

电特性 Electrical characteristics($T_c=25^{\circ}C$)

项目 Parameter	测试条件 Tests conditions		数值 Value			单位 Unit
			最小值(min)	典型值(typ)	最大值(max)	
反向电压 V_{RRM}	$I_R=0.05mA$		100	-	-	V
反向漏电流 I_R	$T_j=25^{\circ}C$	$V_R=V_{RRM}$	-	-	0.03	mA
	$T_j=125^{\circ}C$		-	-	3	
正向电压 V_F	$T_j=25^{\circ}C$	$I_F=5A$	-	-	0.85	V
	$T_j=125^{\circ}C$	$I_F=1A$	-	0.49	-	
		$I_F=2.5A$	-	0.57	-	
		$I_F=5A$	-	0.63	-	

热特性 Thermal characteristics($T_c=25^{\circ}C$)

热阻 Thermal resistance from junction to case	$R_{th(j-c)}$	3.5	°C/W
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典型特征曲线图 Typical Characteristic Curve

图 1: 正向电流与外壳温度

FIG 1: I_F - T_c

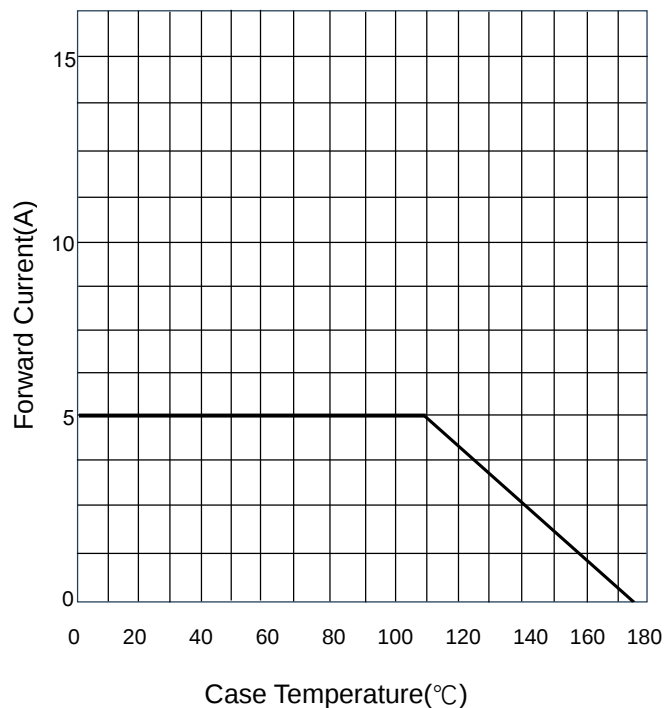


图 2: 正向浪涌循环次数

FIG 2: Surge Forward Current Capability

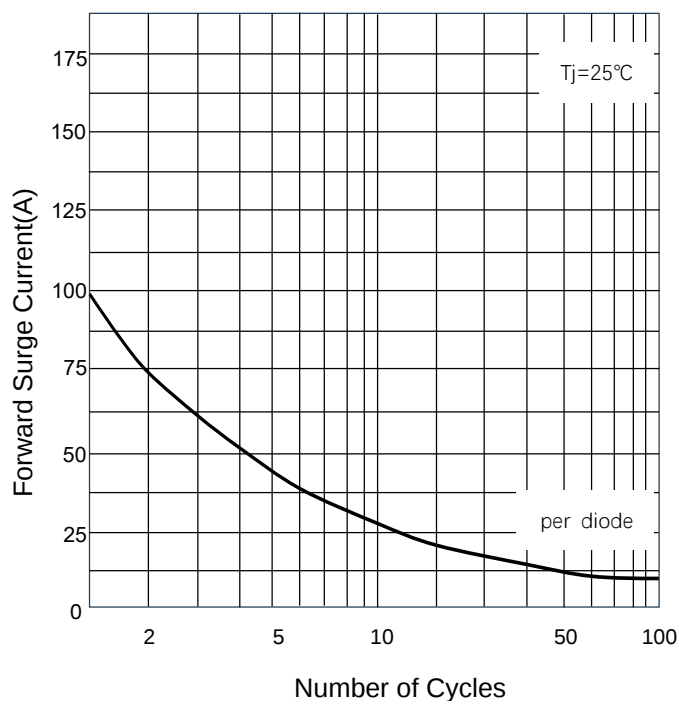


图 3: 反向电压与反向电流

FIG 3: V_R - I_R

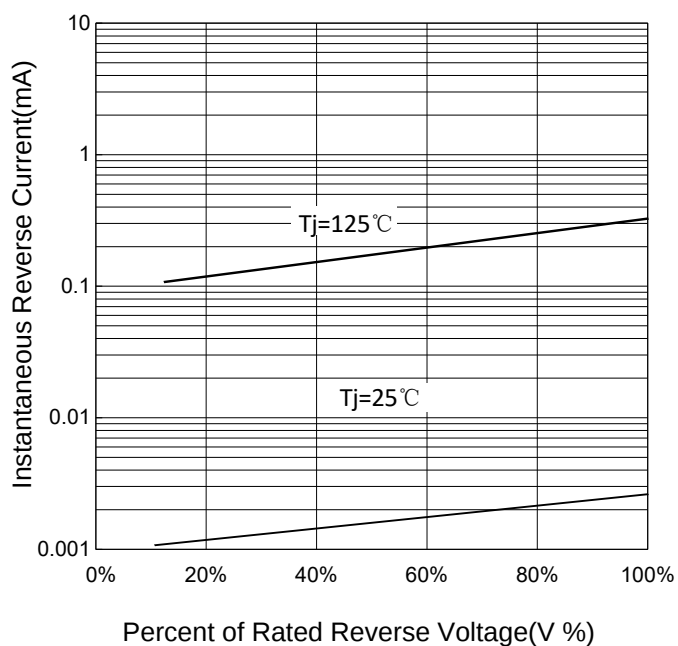
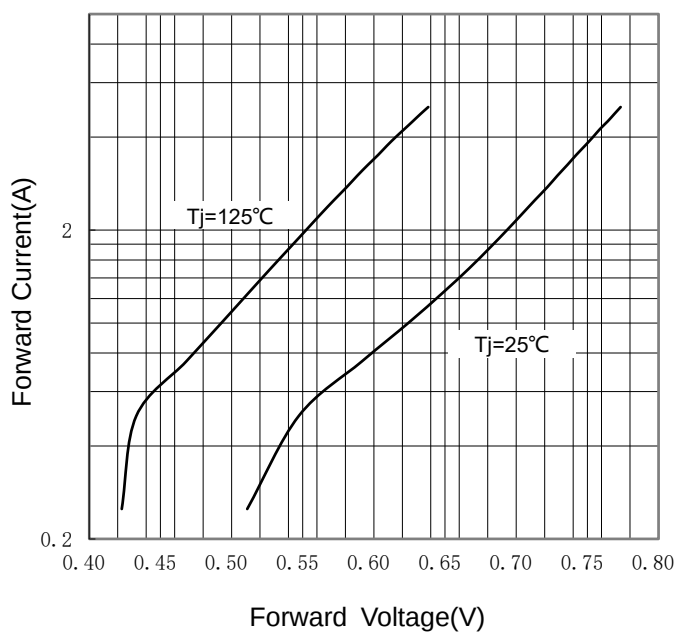
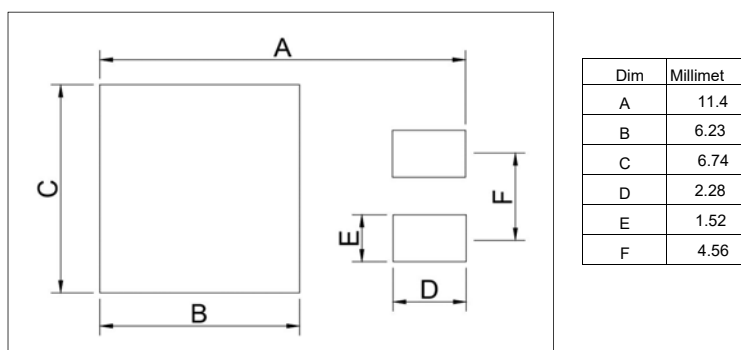
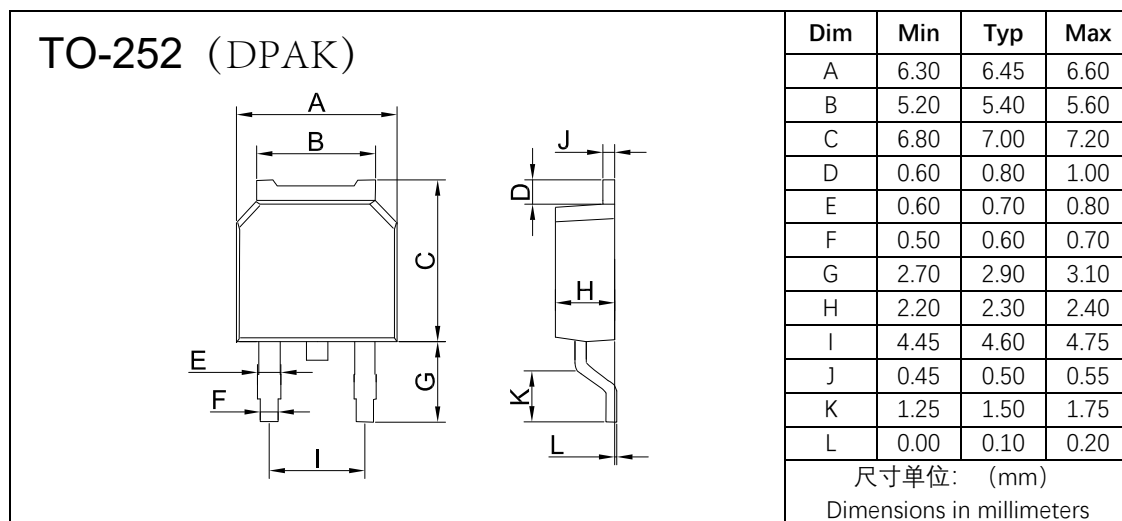


图 4: 正向电流与正向电压

FIG 4: I_F - V_F



外形尺寸图及焊盘布局参考 Outline Dimensions and Pad Layout Reference



订购信息 Ordering Information

订单型号 Order code	印记 Marking	封装 Package	重量 Weight (g)	包装形式 Packing	基本包装 Base qty (pcs)	盒 Box (pcs)	箱 Carton (pcs)
WMBR5100BS000R	MBR5100BS	TO-252 (DPAK)	0.27	盘装 Reel	2500	2500	25000

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