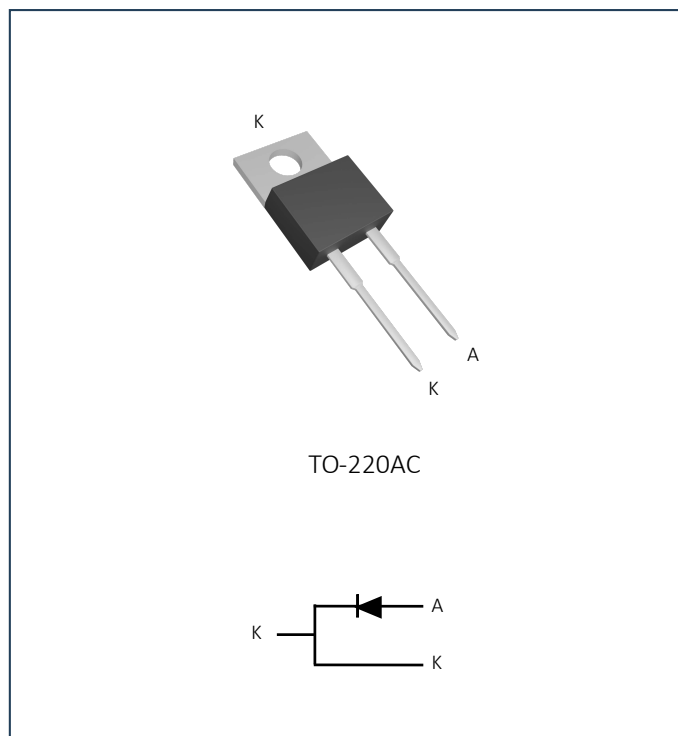


MBR20200

肖特基二极管

Schottky Barrier Diode

封装外形 Package



主要参数 Device summary

Symbol	Value
$I_F(AV)$	20A
V_{RRM}	200V
$V_F(typ)$	0.74V@20A 125°C
$I_R(typ)$	1mA@200V 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

- 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}	200	V
平均正向电流 Average forward current	$I_{F(AV)}$	20	A
浪涌电流 Non-repetitive single pulse surge current $t=8.3ms$	I_{FSM}	250	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}	$I_R=0.05mA$		200	-	-	V
反向漏电流 I_R	$T_j=25^{\circ}C$	$V_R=V_{RRM}$	-	-	0.03	mA
	$T_j=125^{\circ}C$		-	-	30	
正向电压 V_F	$T_j=25^{\circ}C$	$I_F=20A$	-	-	0.95	V
	$T_j=125^{\circ}C$	$I_F=1A$	-	0.46	-	
		$I_F=10A$	-	0.66	-	
		$I_F=20A$	-	0.74	-	

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

项目 Parameter	符合 Symbol	数值 Value	单位 Unit
热阻 Thermal resistance from junction to case	$R_{th(j-c)}$	2.0	°C/W

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

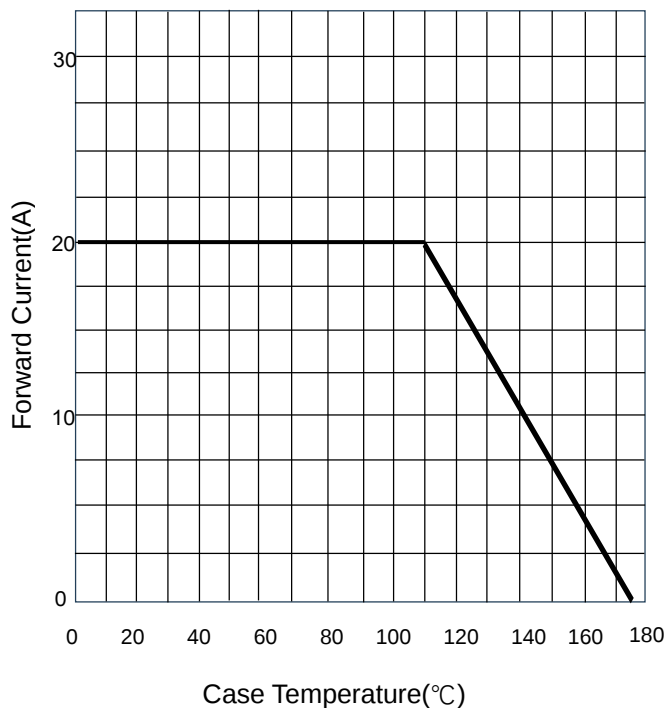


图 2: 正向浪涌循环次数

FIG 2: Surge Forward Current Capability

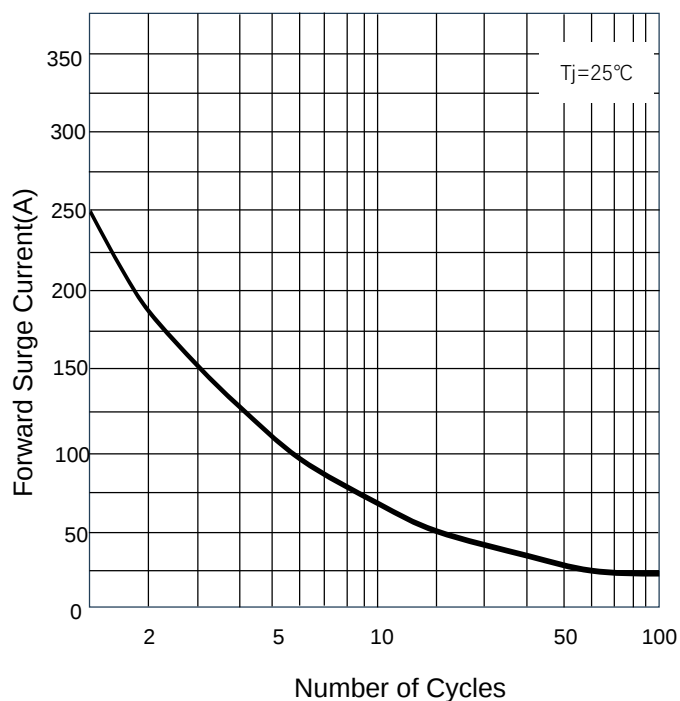


图 3: 反向电压与反向电流

FIG 3: V_R - I_R

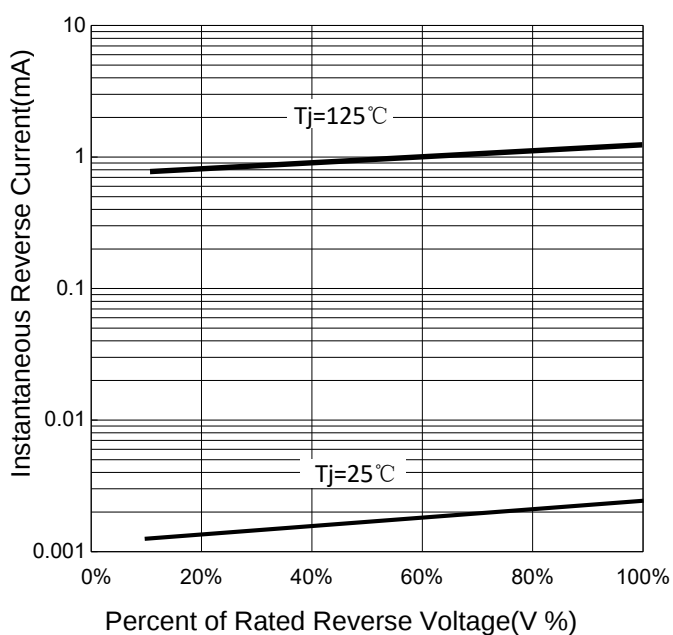
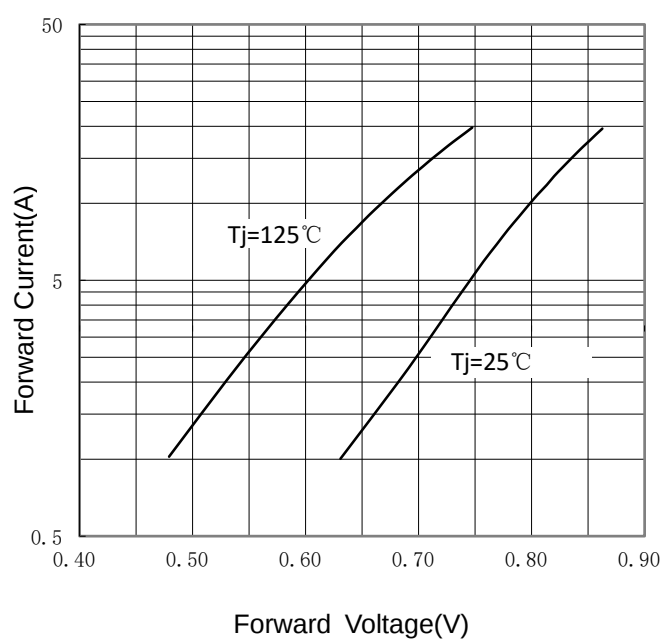
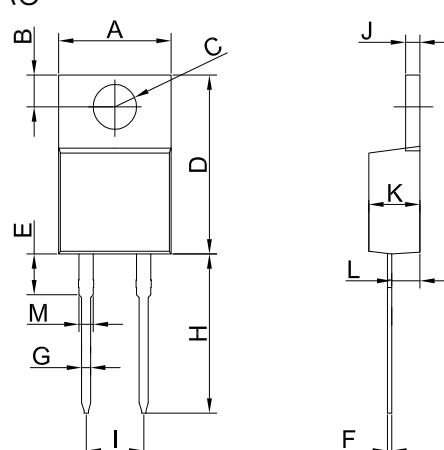


图 4: 正向电流与正向电压

FIG 4: I_F - V_F



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

TO-220AC		Dim	Min	Typ	Max
 The diagram shows the mechanical dimensions of a TO-220AC package. It includes a top view with dimensions A (width), B (height), C (hole diameter), D (body height), E (lead height), G (lead thickness), H (total height), I (lead width), J (lead length), K (lead angle), L (lead thickness), and M (lead width). A side view shows the package profile with dimensions F (lead length), J (lead length), K (lead angle), L (lead thickness), and M (lead width).		A	9.80	10.10	10.40
		B	2.60	2.74	2.90
		C	3.69	3.84	3.99
		D	14.95	15.25	15.55
		E	3.50	3.80	4.10
		F	0.28	0.38	0.48
		G	0.60	0.80	1.00
		H	13.30	13.60	13.90
		I	4.88	5.08	5.28
		J	1.17	1.27	1.37
		K	4.30	4.50	4.70
		L	2.30	2.50	2.70
		M	1.10	1.30	1.50
尺寸单位: (mm)		Dimensions in millimeters			

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)
WMBR20200000P	MBR20200	TO-220AC	1.9	管装 Tube	50	1000	5000

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