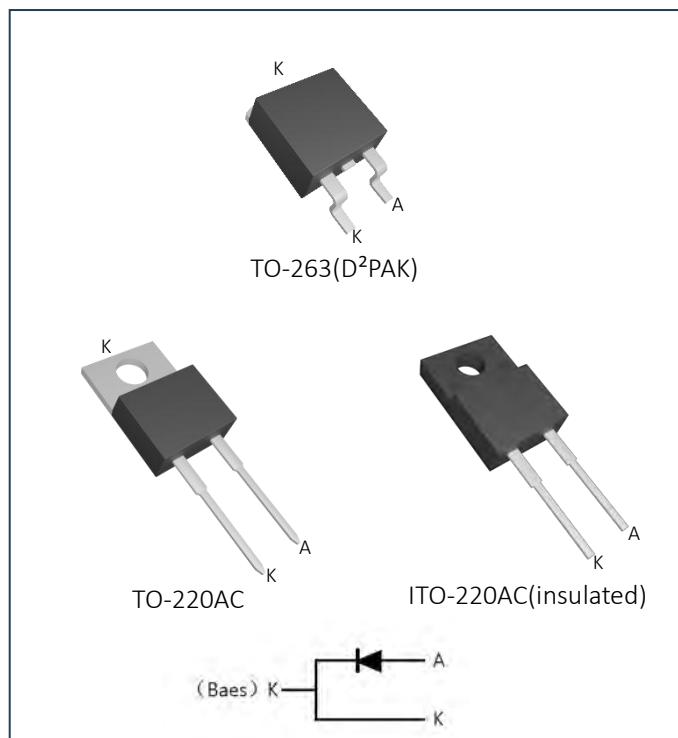


MBR3045 series

肖特基二极管

SCHOTTKY BARRIER DIODE

封装外形 Package



主要参数 Device summary

Symbol	Value
$I_F(AV)$	30A
V_{RRM}	45V
$V_F(typ)$	0.53V/30A@125°C
$I_R(typ)$	2.5mA@125°C
$T_j(max)$	150°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

- 高结温 High Junction temperature
- 低漏电 Low leakage current
- 高可靠性 High reliability
- 环保产品 RoHS product
- ITO-220AC 绝缘电压 $\geq 3000VDC$ $t=100ms$
Package Insulated voltage: ITO-220AC $\geq 3000VDC$
 $t=100ms$

最大额定值 Maximum ratings

项目 Parameter	符合 Symbol	数值 Value	单位 Unit
反向重复峰值电压 Peak repetitive reverse voltage	VRRM	45	V
平均正向电流 Average forward current	IF(AV)	30	A
浪涌电流 Non-repetitive single pulse surge current t=8.3ms	IFSM	300	A
结温 Junction temperature	Tj	-55~+150	°C
存储温度 Storage temperature	TSTG	-55~+150	°C

电特性 Electrical characteristics(Tc=25°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)	
VRRM	IR=0.05mA		45	-	-	V
IR 反向漏电流	Tj=25°C	VR=VRRM	-	-	0.3	mA
	Tj=125°C		-	-	30	
VF 正向电压	Tj=25°C	IF=30A	-	-	0.68	V
	Tj=125°C	IF=1A	-	0.46	-	
		IF=15A	-	0.50	-	
		IF=30A	-	0.53	-	

热特性 Thermal characteristics(Tc=25°C)

Parameter	Symbol	Value	Unit
热阻 Thermal resistance from junction to case	TO-220AC	2.0	°C/W
	ITO-220AC	4.5	
	TO-263(D ² PAK)	2.0	

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

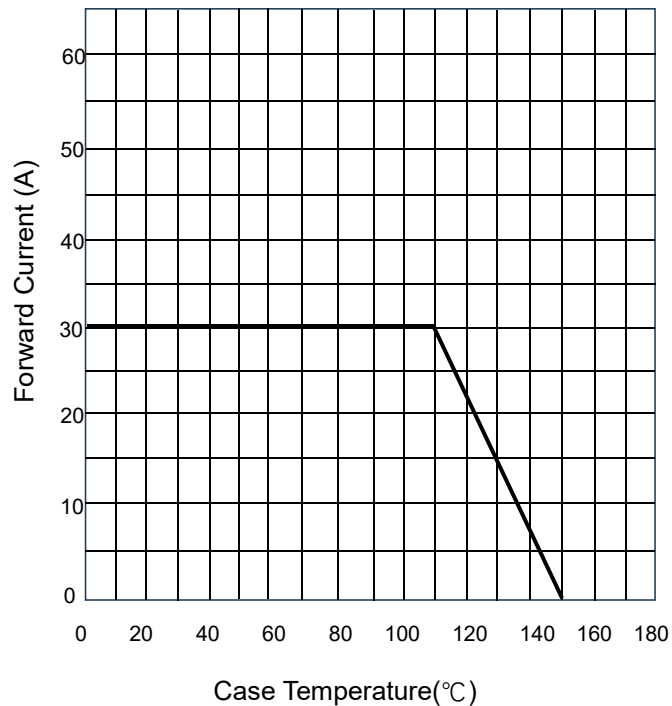


图 2: 正向浪涌循环次数

FIG 2: Surge Forward Current Capability

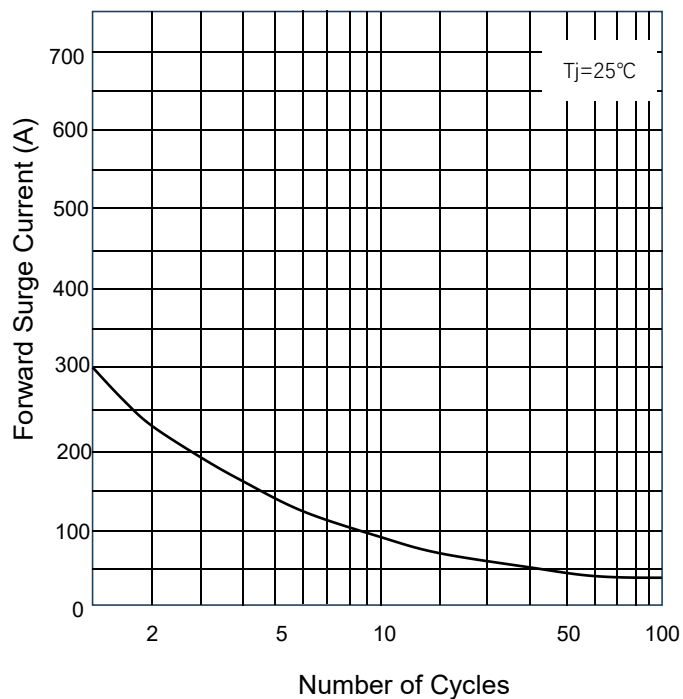


图 3: 反向电压与反向电流

FIG 3: V_R - I_R

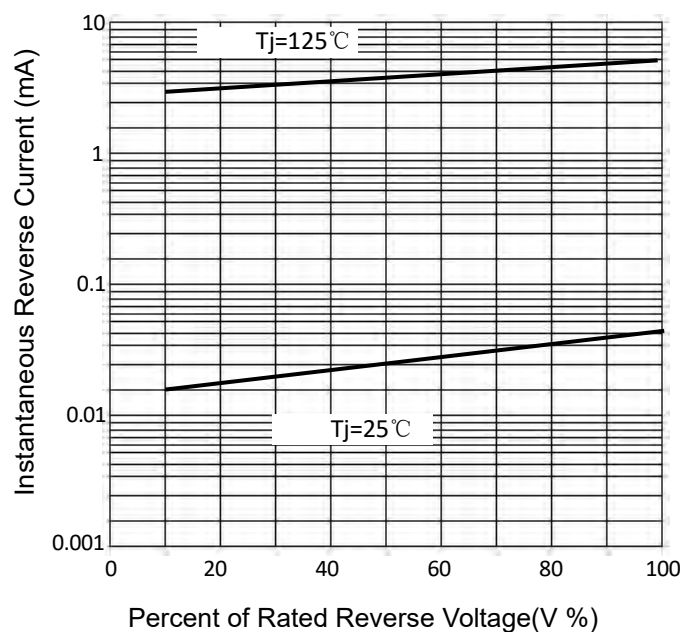
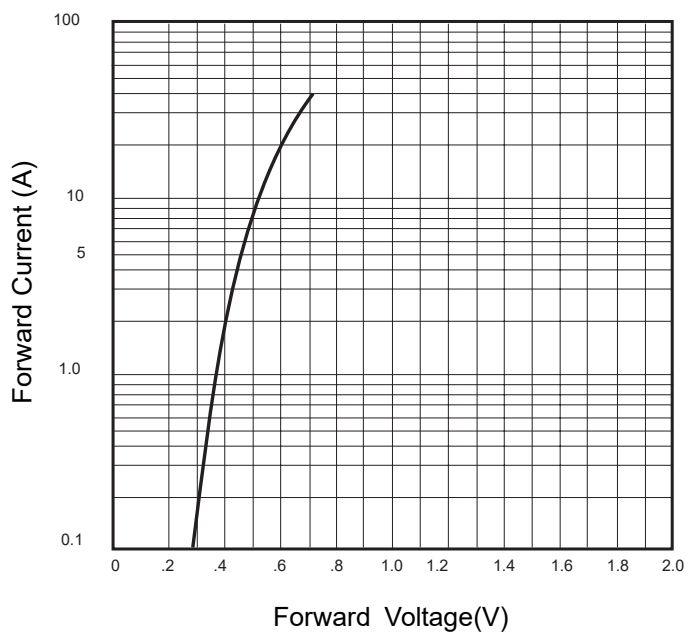


图 4: 正向电流与正向电压

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

Top view diagram of the TO-220AC package. Dimensions are labeled: A (width), B (height of mounting hole area), C (radius of mounting hole), D (total height), E (height of lead area), G (lead thickness), H (total height including leads), I (lead length), and M (lead width).

Side view diagram of the TO-220AC package. Dimensions are labeled: J (lead thickness), K (flange width), L (flange height), and F (lead length).

Dim	Min	Typ	Max
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

ITO-220AC

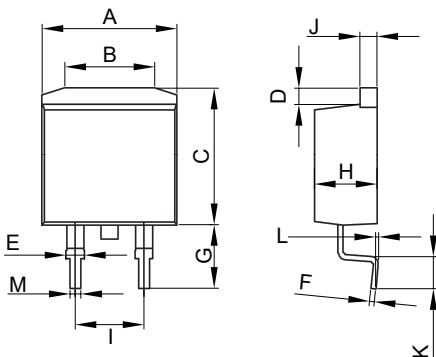
Top view diagram of the ITO-220AC package. Dimensions are labeled: A (width), B (height of mounting hole area), C (radius of mounting hole), D (total height), E (height of lead area), G (lead thickness), H (total height including leads), I (lead length), and M (lead width).

Side view diagram of the ITO-220AC package. Dimensions are labeled: J (lead thickness), K (flange width), L (flange height), and F (lead length).

Dim	Min	Typ	Max
A	9.70	10.00	10.30
B	3.00	3.20	3.40
C	3.10	3.25	3.40
D	15.10	15.40	15.70
E	3.60	3.80	4.00
F	0.45	0.55	0.65
G	0.50	0.60	0.70
H	12.80	13.20	13.60
I	4.88	5.08	5.28
J	2.50	2.70	2.90
K	4.20	4.40	4.60
L	2.60	2.70	2.80
M	1.20	1.30	1.40

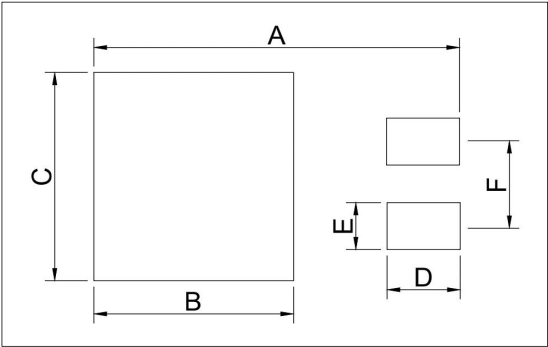
尺寸单位: (mm) Dimensions
in millimeters

TO-263(D²PAK)



Dim	Min	Typ	Max
A	9.80	10.00	10.20
B	6.40	6.70	7.00
C	10.00	10.20	10.40
D	1.00	1.20	1.40
E	1.10	1.30	1.50
F	0.28	0.38	0.48
G	4.50	4.80	5.10
H	4.40	4.60	4.80
I	4.88	5.08	5.28
J	1.17	1.27	1.37
K	2.30	2.50	2.80
L	0.00	0.15	0.30
M	0.70	0.80	0.90

尺寸单位: (mm)
Dimensions in millimeters



Dim	Millimet
A	16
B	9.6
C	11
D	3.5
E	1.8
F	5

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)
WMBR3045HP	MBR3045H	TO-220AC	1.9	管装 Tube	50	1,000	5,000
WMBR3045IP	MBR3045I	ITO-220AC	1.5				
WMBR3045DR	MBR3045D	TO-263(D ² PAK)	1.7	盘装 Reel	800	800	8,000

请仔细阅读

感谢您使用或即将使用本公司的产品。建议您在使用前仔细阅读本资料。

- 本公司竭力为用户提供更优质的产品及服务。
- 江苏信达兴微电子有限公司会不定期的优化产品及相应规格书, 也许无法及时通知到您, 请定期下载最新的版本。
- 江苏信达兴微电子有限公司对任何将其产品用于特殊目的的行为不承担任何责任与风险。
- 江苏信达兴微电子有限公司对自身的产品拥有专利权。
- 任何半导体产品在特定条件下都有一定的失效或发生故障的可能。买方在使用江苏信达兴微电子有限公司产品进行系统设计和整机制造时请遵守安全标准并采取安全措施, 以避免可能造成人身伤害或财产损失的情况!

Please Read Carefully

Thank you for using or about to use our company's products. We suggest that you carefully read this material before use.

- Our company strives to provide users with higher quality products and services.
- Jiangsu POWERSi Microelectronics Co., Ltd. will periodically optimize its products and corresponding specifications, and may not be able to notify you in a timely manner. Please download the latest version regularly.
- Jiangsu POWERSi Microelectronics Co., Ltd. assumes no responsibility or risk for any use of its products for special purposes.
- Jiangsu POWERSi Microelectronics Co., Ltd. holds patent rights for its own products.
- Any semiconductor product has a certain possibility of failure or malfunction under specific conditions. The buyer is requested to comply with safety standards and take safety measures when using products from Jiangsu POWERSi Microelectronics Co., Ltd. for system design and complete machine manufacturing, in order to avoid situations that may cause personal injury or property damage!