MBR40100CT

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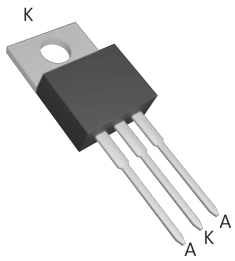
Schottky Barrier Diode

封装外形 Package



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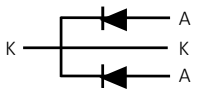


主要参数 Device summary

Symbol	Value
$I_{F(AV)}$	40A
V_{RRM}	100V
$V_{F(typ)}$	0.68V@20A 125℃
$I_{R(typ)}$	1.0mA@100V 125℃
$T_{j(max)}$	175℃

机械数据 Mechanical Data

å Ħu UL 94 V-0 ˘ Ħu RoHS ‰

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant

å ˙ ˘ ㄱ J-STD-002 ˇ JESD22-B102

Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

å ˙ r

Polarity: As marked on body

产品特点 Features

- High frequency operation
- High Junction temperature
- ٧ Low leakage current
- ㄱ High reliability
- Ğ°° س 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	per device per diode	$I_{F(AV)}$	40 20	A
浪涌电流 Non-repetitive single pulse surge current t=8.3ms	per diode	I_{FSM}	250	A
结温 Junction temperature		T_j	-55~+175	℃
存储温度 Storage temperature		T_{STG}	-55~+175	℃

电特性 Electrical characteristics(T_C=25℃)

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℃	$V_R=V_{RRM}$	-	-	0.1	mA
	T_j=125℃		-	-	20	
正向电压 V_F	T_j=25℃	I_F=20A	-	-	0.85	V
	T_j=125℃	I_F=1A	-	0.39	-	
		I_F=10A	-	0.61	-	
		I_F=20A	-	0.68	-	

热特性 Thermal characteristics(T_C=25℃)

项目 Parameter	符合 Symbol	数值 Value	单位 Unit
热阻 Thermal resistance from junction to case	$R_{th(j-c)}$	2.5	℃/W

典型特征曲线图 Typical Characteristic Curve

图 1：正向电流与外壳温度

FIG 1:IF-Tc

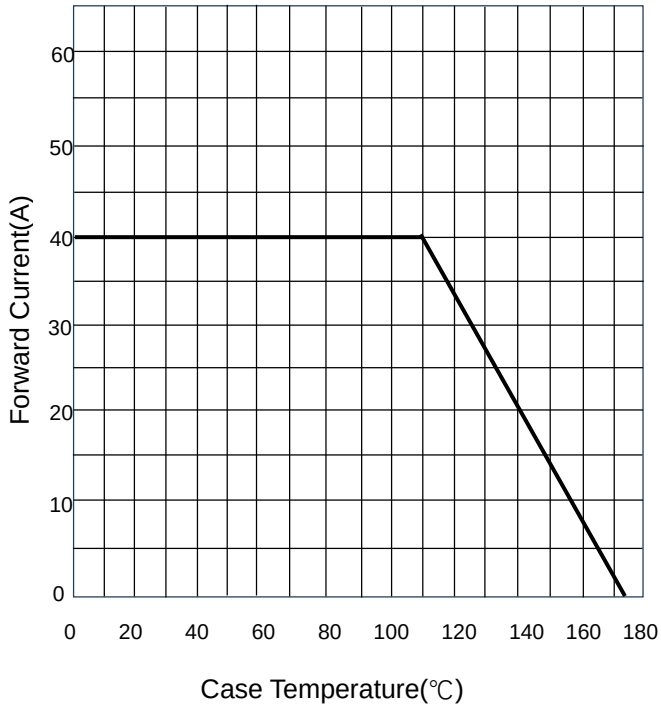


图 2：正向浪涌循环次数

FIG 2:Surge Forward Current Capability

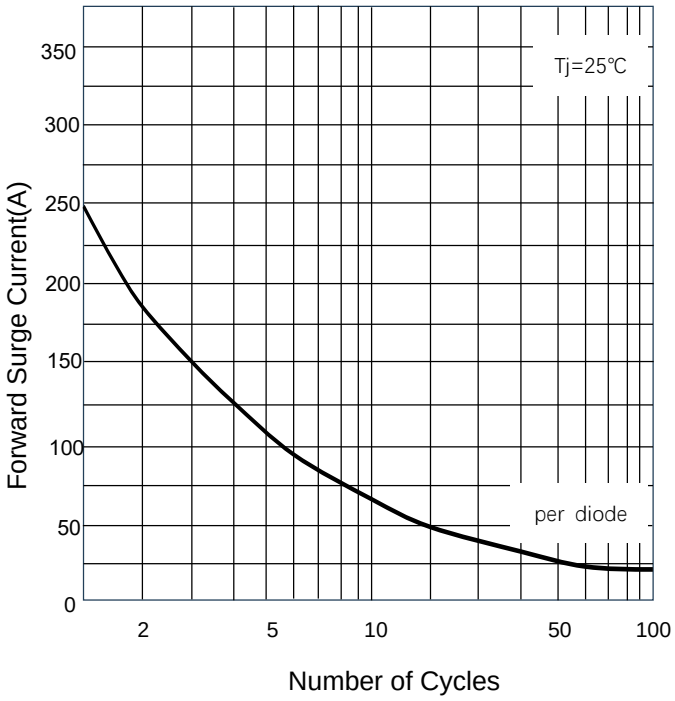


图 3：反向电压与反向电流

FIG 3:VR-IR

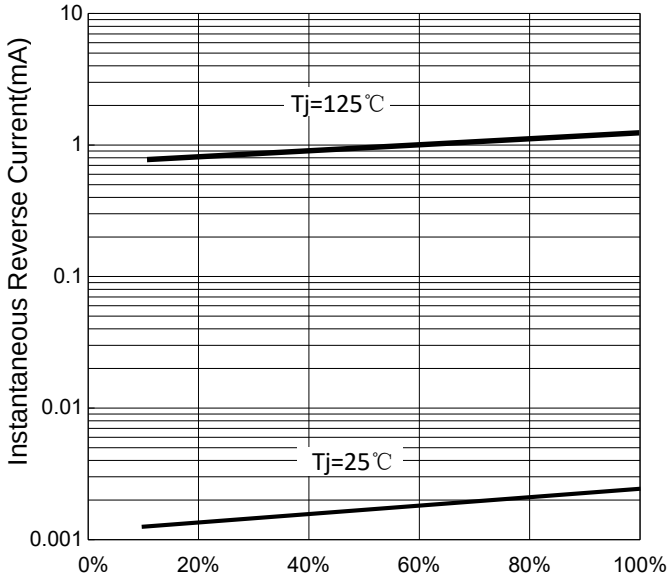
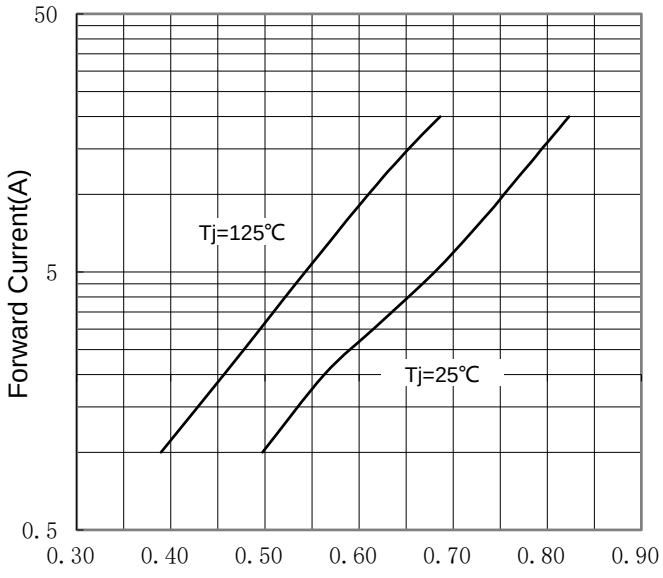


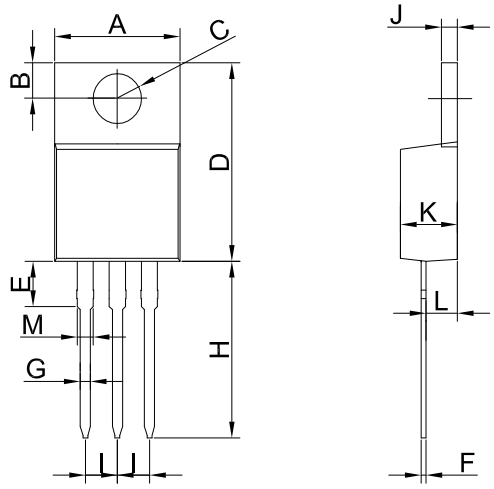
图 4：正向电流与正向电压

FIG 4:IF-VF



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

TO-220AB



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	2.44	2.54	2.64
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)
WMBR40100CT000P	MBR40100CT	TO-220AB	1.9	管装 Tube	50	1000	5000

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