

# 产品规格书

## DATA SHEET

产品名称：快恢复模块

产品型号：MFDK200A60

200A ( 600V )

制作人	审核	核准
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### 变更履历：

更改日期	版次	变更前	变更后	修改人	备注
2022.07.11	Rev. 1.0	/	新增	刘诗洋	

## 200A/600V 玻璃钝化快恢复整流模块

### 200A/600V Glass Passivated FRD Half Bridge Module

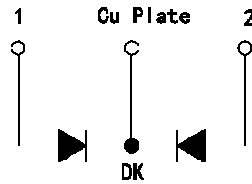
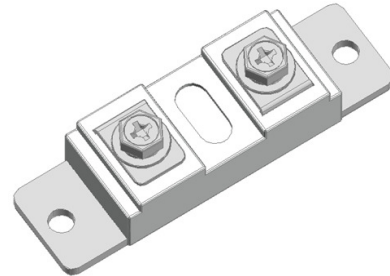
#### ■特征 Features

- GPP 玻璃钝化芯片  
GPP Glass passivated chip
- 低反向漏电流  
Low Reverse Leakage Current
- 高耐浪涌电流能力  
High surge current capability
- 符合 ROHS 要求  
ROHS compliance

关键参数 KEY PARAMETERS		
参数 PARAMETER	数值 VALUE	单位 UNIT
$I_{F(AV)}$	200	A
TRR (typ)	95	ns
$V_F$	1.2	V
$V_{RRM}$	600	V
$I_{fsm}$	1100	A

#### ■应用范围 Applications

- 电焊机  
Electric welding maching
- 电机控制器  
Motor Controllers
- 工业自动化设备  
Industrial automation equipment
- 逆变器  
Inverters



#### ■机械参数 Mechanical Data

- 本体: MFDK  
Case: MFDK
- 极性: 极性符号铸在管体上  
Polarity : Polarity symbols being marked on body
- 安装位置: 用 M6 螺丝固定在散热片上, 桥和安装表面之间填充硅热混合物以达到最佳的散热效果  
Mounting Position : Fixing the bridge rectifier with M6 screw to the heat sink.

Coat silicon thermal compound between backside of the bridge, which will be contacted with the heat sink for Maximizing heat transfer

#### ■最大额定值 Maximum Ratings @ $T_a = 25^\circ\text{C}$ unless otherwise noted

特征/测试条件 Characteristic / Test Conditions	符号 SYMBOL	典型值 TYP	单位 UNIT
反向重复峰值电压 Maximum recurrent peak reverse voltage	$V_{RRM}$	600	V
最大平均正向电流 Maximum Average Forward Current	$I_{F(AV)}$	100	A
$T_c=100^\circ\text{C}$ 单管 Per Diode 整只 Per Moudle		200	
最大正向浪涌电流, 8.3ms 单半正弦波叠加在额定负载上 Peak Surge Forward Current, 8.3ms single half sine-wave superimposed on rated load	$I_{fsm}$	1100	A
存储温度 Storage Temperature Range	TSTG	-40 ~ +150	$^\circ\text{C}$
结温 Junction Temperature	$T_j$	-40 ~ +150	$^\circ\text{C}$

■ 电性特性 Electrical Characteristics @ Ta = 25°C unless otherwise noted

特征/测试条件 Characteristic / Test Conditions	符号 SYMBOL	典型值 TYP	最大值 MAX	单位 UNIT
正向峰值电压 Peak Forward Voltage	$V_F$	1.2	1.25	V
VR=VRRM, 脉冲测试, 单个二极管的额定值 VR=VRRM, Pulse measurement Rating of per diode	$I_R$	VR=600V, Tj=25°C	10	μA
		VR=600V, Tj=25°C	500	mA
反向恢复时间 Reverse recovery time	$T_{rr}$	IF=0.5A IRM=1A IRR=0.25ATC=25°C	90	us
		IF=0.5A IRM=1A IRR=0.25ATC=125°C	150	

■ 热特性 Thermal Characteristics @ Ta = 25°C unless otherwise noted

特征/测试条件 Characteristic / Test Conditions	符号 SYMBOL	典型值 TYP	单位 UNIT
结到管壳的热阻,有散热片 Junction to case Thermal Resistance, with heat sink	$R_{\theta JC}$	0.4	°C/W

■ 特性曲线 Characteristic Curve

FIG.1 . Derating Curve For Output Rectified Current

图 1. 电流降额曲线

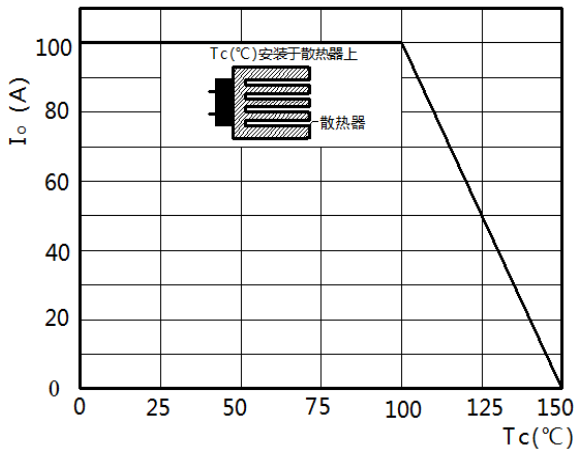


FIG.2 . Maximum Non-Repetitive Peak Forward Surge Current Per Bridge Element

图 2. 最大正向不重复峰值浪涌电流

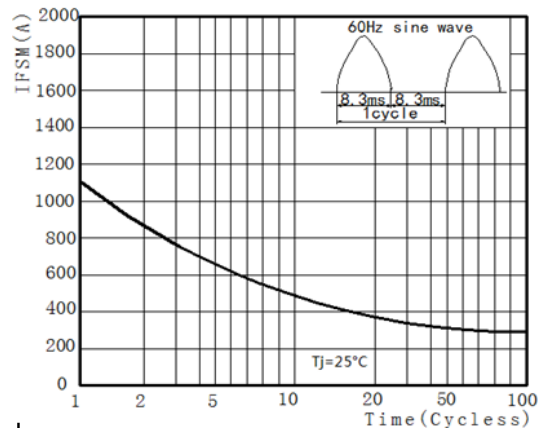


FIG3. Typical Reverse Characteristics Per Bridge Element

图 3. 典型反向特性

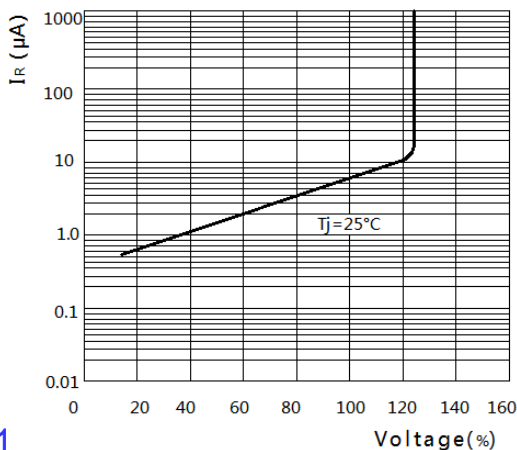
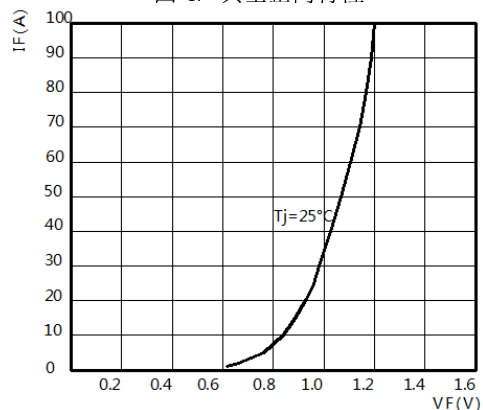
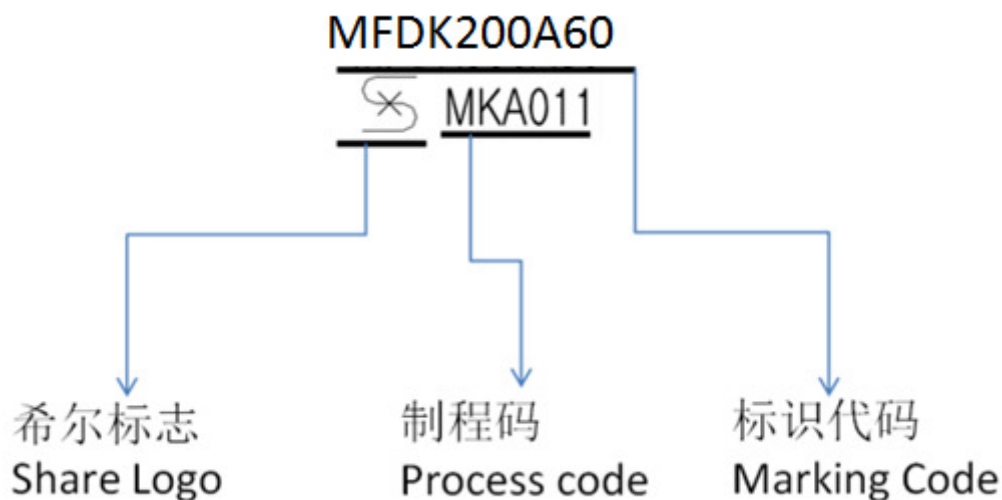


FIG4. Typical Forward Characteristics Per Bridge Element

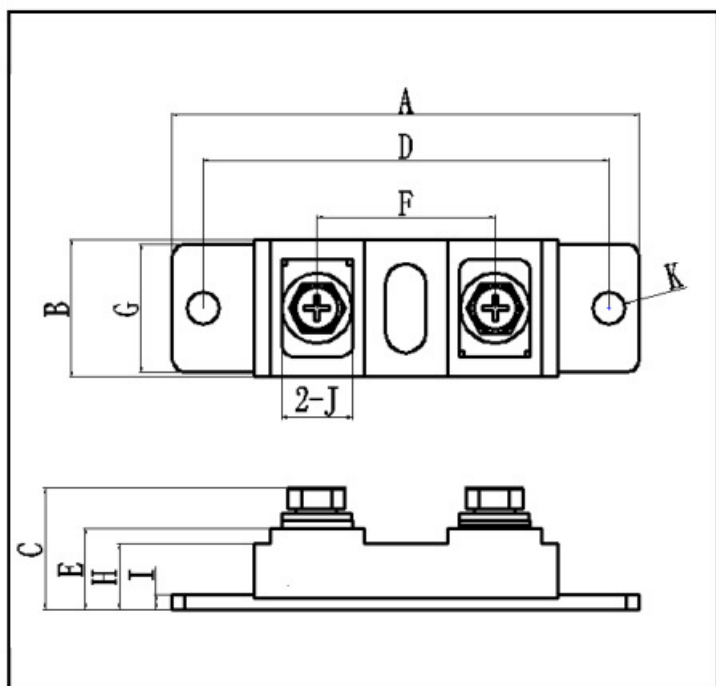
图 4. 典型正向特性



■ 标记图 Marking Diagram



■ 尺寸图 Dimension Drawi



Dim.	Unit(mm)		Unit(inch)	
	Min.	Max.	Min.	Max.
A	91.5	92.5	3.602	3.642
B	26.5	27.5	1.043	1.083
C	23.4	24.4	0.921	0.961
D	79.5	80.5	3.130	3.169
E	15.5	16.5	0.610	0.650
F	34.6	35.6	1.362	1.402
G	24.7	25.7	0.972	1.012
H	12.5	13.5	0.492	0.531
I	2.8	3.2	0.110	0.126
J	13.8	14.2	0.543	0.559
K	6.3	6.5	0.248	0.256

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