

产品规格书

Specifcation of products

产品名称:快恢复二极管

产品型号:MFK200U6K1

浙江世菱半导体有限公司
ZHEJIANG SHILING SEMICONDUCTOR CO.,LTD.

地址:浙江省 丽水市 莲都区

电话:(0578) 3615066

邮编: 323000

E-mail:smrshiling12@163.com

Http://www.smrshiling.com

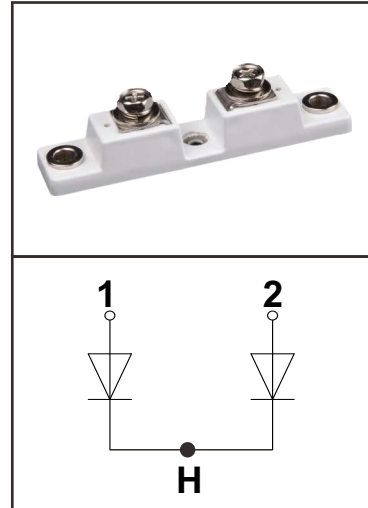
拟制	审核	核准
蓝少波	陈一凡	曹剑龙

PRODUCT FEATURES

- Ultrafast Recovery Time
- Low Recovery Loss
- Low Forward Voltage
- Low Leakage Current
- Low Inductance Package

APPLICATIONS

- Inversion Welder
- Uninterruptible Power Supply
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- PFC



ABSOLUTE MAXIMUM RATINGS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter/Test Conditions		Values	Unit
V_R	Maximum D.C. Reverse Voltage		600	V
V_{RRM}	Maximum Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	$T_C=100^{\circ}\text{C}$, Per Diode	100	A
		$T_C=100^{\circ}\text{C}$, Per Moudle	200	
$I_{F(RMS)}$	RMS Forward Current	$T_C=100^{\circ}\text{C}$, Per Diode	130	
I_{FSM}	Non Repetitive Surge Forward Current	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, Sine, peak value	1100	
		$T_J=45^{\circ}\text{C}$, $t=8.3\text{ms}$, Sine, peak value	1200	A ² S
I^2t	For Fusing	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, Sine, peak value	5000	
		$T_J=45^{\circ}\text{C}$, $t=8.3\text{ms}$, Sine, peak value	5200	
P_D	Power Dissipation		530	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
Torque	Module to Sink	Recommended (M6)	3~5	Nm
Torque	Module Electrodes	Recommended (M6)	3~5	Nm
R_{thJC}	Junction to Case Thermal Resistance(Per Diode)		0.25	$^{\circ}\text{C}/\text{W}$
Weight			70	g

ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=600\text{V}$	--	--	0.5	mA
		$V_R=600\text{V}, T_J=125^{\circ}\text{C}$	--	--	1	mA
V_F	Forward Voltage	$I_F=100\text{A}$	--	1.2	1.5	V
		$I_F=100\text{A}, T_J=125^{\circ}\text{C}$	--	1.0	--	V
t_{rr}	Reverse Recovery Time	$I_F=1\text{A}, V_R=30\text{V}, di_F/dt=-200\text{A}/\mu\text{s}$	--	55	--	ns
t_{rr}	Reverse Recovery Time	$V_R=300\text{V}, I_F=100\text{A}$	--	90	--	ns
I_{RRM}	Max. Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}, T_J=25^{\circ}\text{C}$	--	11	--	A
t_{rr}	Reverse Recovery Time	$V_R=300\text{V}, I_F=100\text{A}$	--	170	--	ns
I_{RRM}	Max. Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$	--	19	--	A

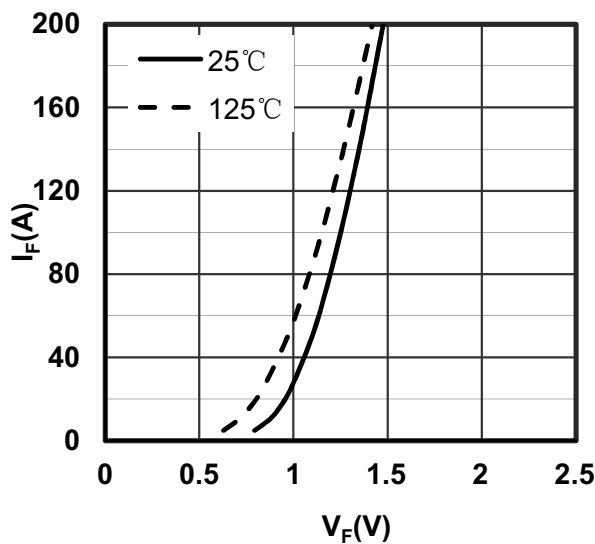


Figure 1. Forward Voltage Drop vs Forward Current

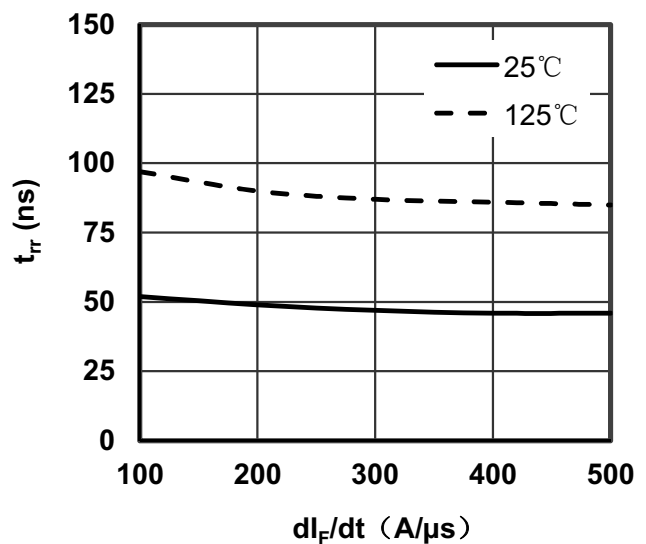


Figure 2. Reverse Recovery Time vs di_F/dt

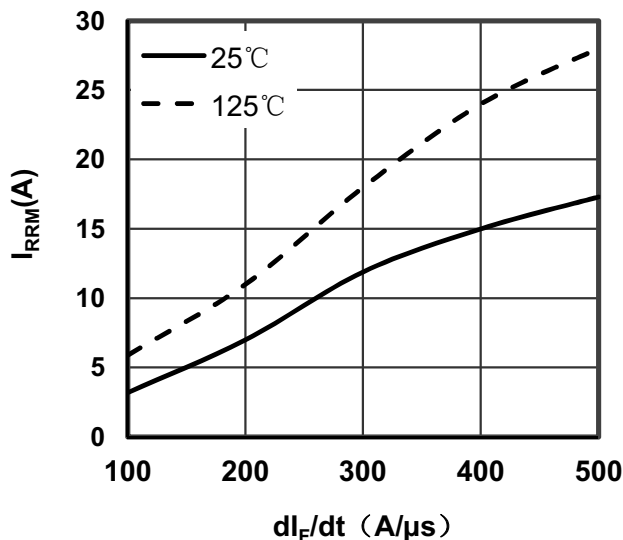


Figure3. Reverse Recovery Current vs di_F/dt

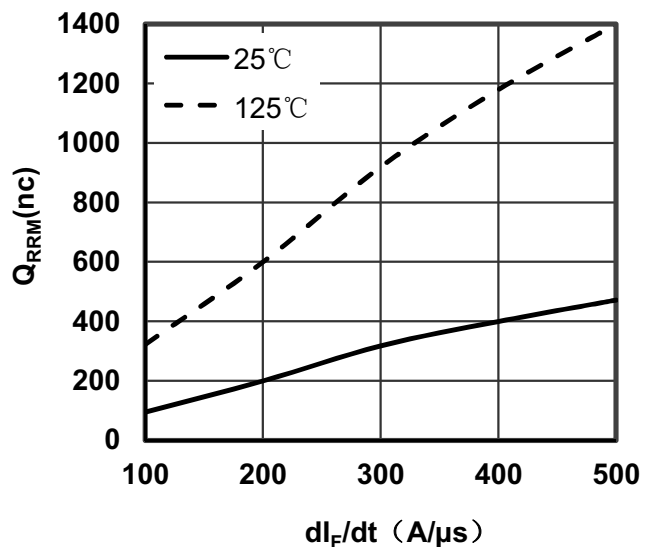


Figure4. Reverse Recovery Charge vs di_F/dt

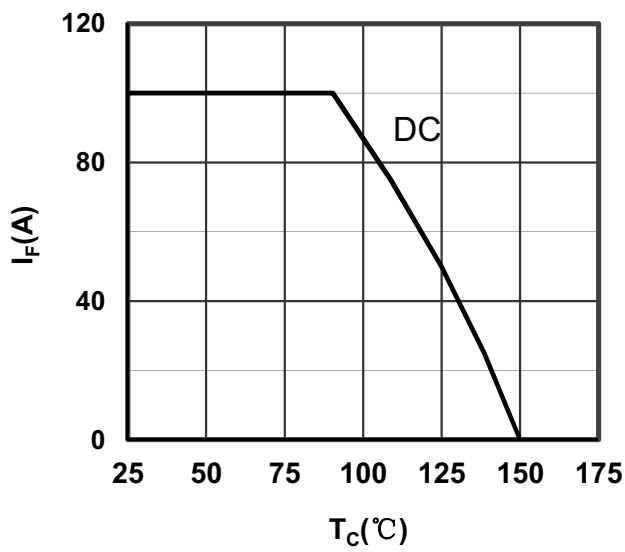


Figure 5. Forward current vs Case temperature

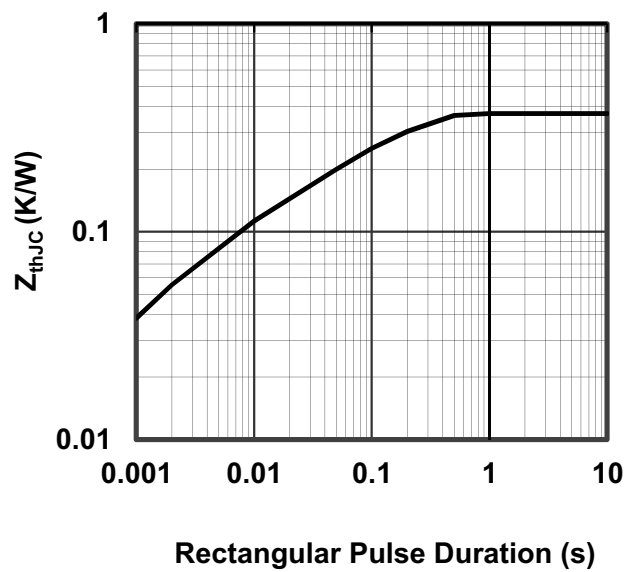


Figure 6. Transient Thermal Impedance

Package Outline

