

产品规格书

Specifcation of products

产品名称:肖特基二极管

产品型号: MBK400U2K1

浙江世菱半导体有限公司
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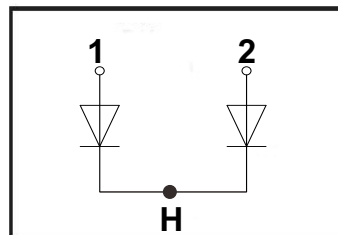
PRODUCT FEATURES

- Ultrafast Reverse Recovery Time
- Soft Reverse Recovery Characteristics
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package



APPLICATION S

- Inversion Welder
- Uninterruptible Power Supply (UPS)
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- Power Factor Correction (PFC) Circuit



ABSOLUTE MAXIMUM RATINGS

T_C=25℃ unless otherwise specified

Symbol	Parameter	Test Conditions	Values	Unit
V _R	Maximum D.C. Reverse Voltage		200	V
V _{RRM}	Maximum Repetitive Reverse Voltage		200	V
I _{F(AV)}	Average Forward Current	T _C =100℃, Per Diode	200	A
		T _C =100℃, Per Moudle	400	A
I _{F(RMS)}	RMS Forward Current	T _C =100℃, Per Diode	280	A
I _{FSM}	Non-Repetitive Surge Forward Current	1/2 Cycle, 60Hz, Sine	4000	A
I ² t	I ² t (For Fusing)	T _J =45℃, t=8.3ms, 60Hz, Sine	14500	A ² s
P _D	Power Dissipation		225	W
T _J	Junction Temperature		-40 to +150	℃
T _{STG}	Storage Temperature Range		-40 to +125	℃
Torque	Module-to-Sink	Recommended (M6)	3~6	N.m
Torque	Module Electrodes	Recommended (M6)	3~5	N.m
R _{θJC}	Thermal Resistance	Junction-to-Case	0.12	℃ /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	$V_R=200\text{V}$	--	--	0.5	mA
		$V_R=200\text{V}, T_J=125^{\circ}\text{C}$	--	--	2	mA
V_F	Forward Voltage	$I_F=200\text{A}$	0.80	0.85	0.90	V
		$I_F=200\text{A}, T_J=125^{\circ}\text{C}$	--	0.75	--	V

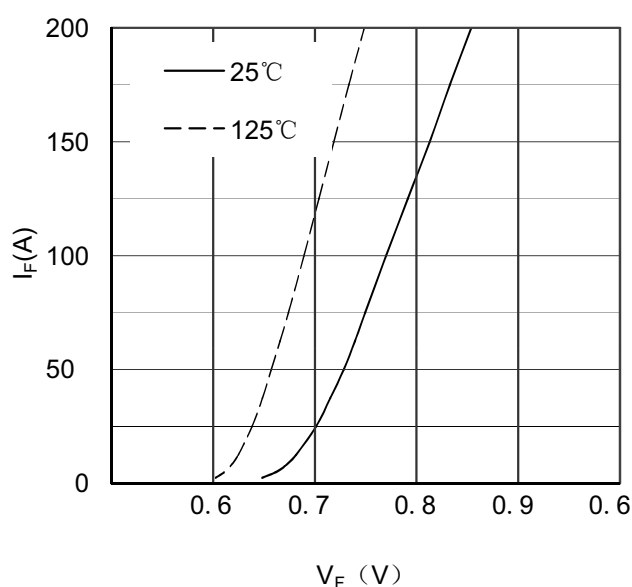


Figure 1. Forward Voltage Drop vs Forward Current

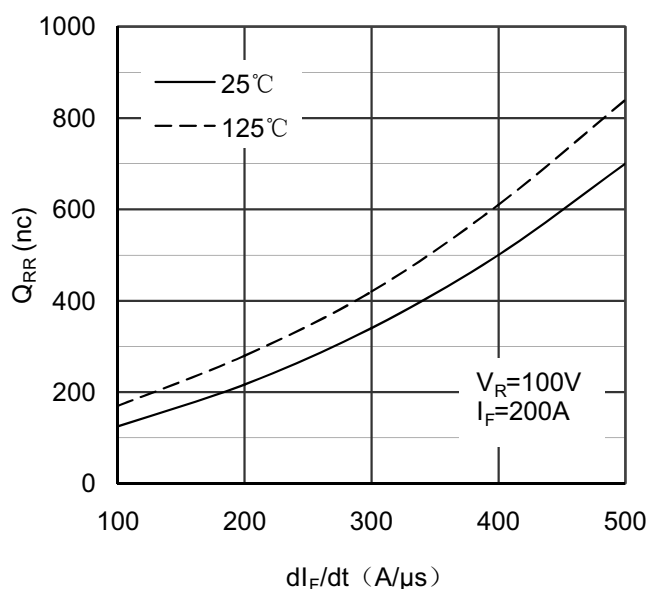


Figure 2. Reverse Recovery Charge vs dI_F/dt

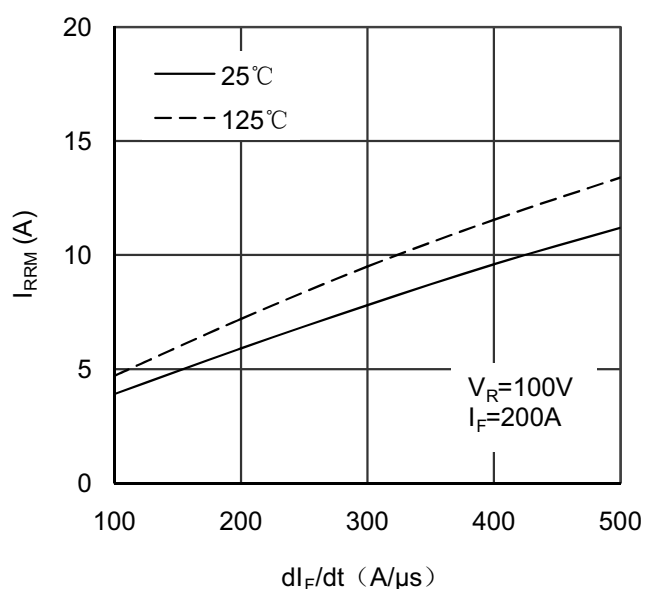


Figure 3. Reverse Recovery Current vs dI_F/dt

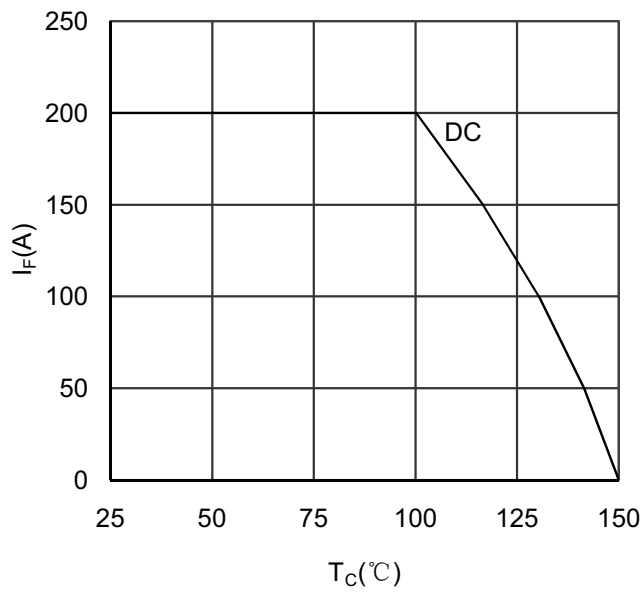


Figure 4. Forward current vs Case temperature

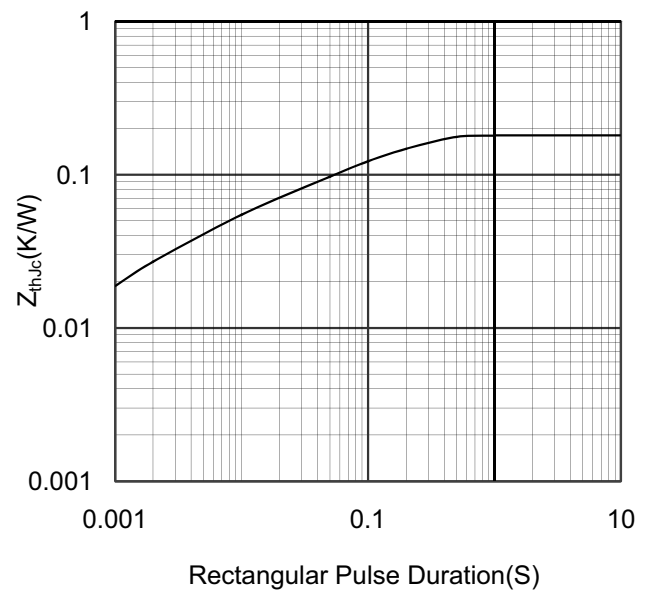


Figure 5. Transient Thermal Impedance

Package Outline

