

产品规格书

Specification of products

产品名称:肖特基二极管

产品型号: MBK600U045K2B

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

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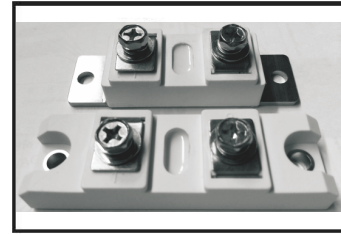
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林益龙	曹剑龙	宗瑞

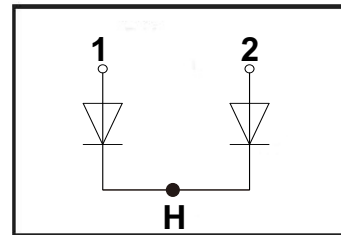
PRODUCT FEATURES

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



APPLICATIONS

- 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°C unless otherwise specified

Symbol	Parameter	Test Conditions	Values	Unit
V _R	Maximum D.C. Reverse Voltage		45	V
V _{RRM}	Maximum Repetitive Reverse Voltage		45	V
I _{F(AV)}	Average Forward Current	T _c =100°C, Per Diode	300	A
		T _c =100°C, Per Moudle	600	A
I _{F(RMS)}	RMS Forward Current	T _c =100°C, Per Diode	420	A
I _{FSM}	Non-Repetitive Surge Forward Current	1/2 Cycle, 60Hz, Sine	6000	A
I ² t	I ² t (For Fusing)	T _J =45°C, t=8.3ms, 60Hz, Sine	21700	A ² s
P _D	Power Dissipation		325	W
T _J	Junction Temperature		-40 to +150	°C
T _{STG}	Storage Temperature Range		-40 to +125	°C
Torque	Module-to-Sink	Recommended (M6)	3~4.7	N.m
Torque	Module Electrodes	Recommended (M6)	3~4.7	N.m
R _{θJC}	Thermal Resistance	Junction-to-Case	0.12	°C /W
Weight			92	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	$V_R=45\text{V}$	--	--	0.5	mA
		$V_R=45\text{V}, T_J=125^{\circ}\text{C}$	--	--	2	mA
V_F	Forward Voltage	$I_F=300\text{A}$	--	0.50	--	V
		$I_F=300\text{A}, T_J=125^{\circ}\text{C}$	--	0.45	--	V

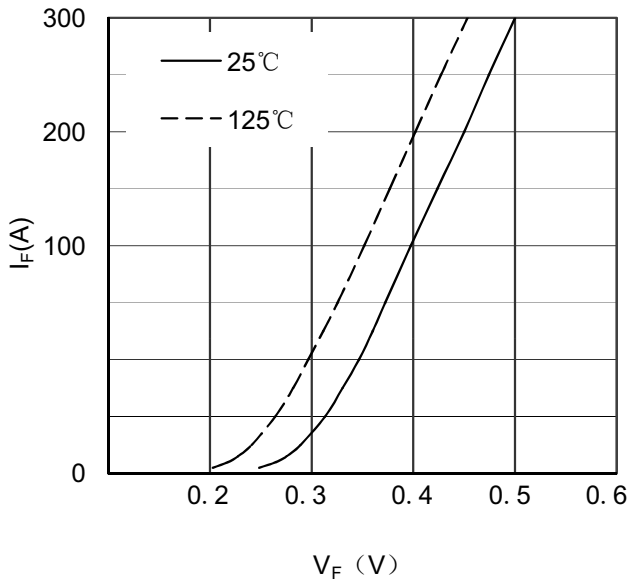


Figure 1. Forward Voltage Drop vs Forward Current

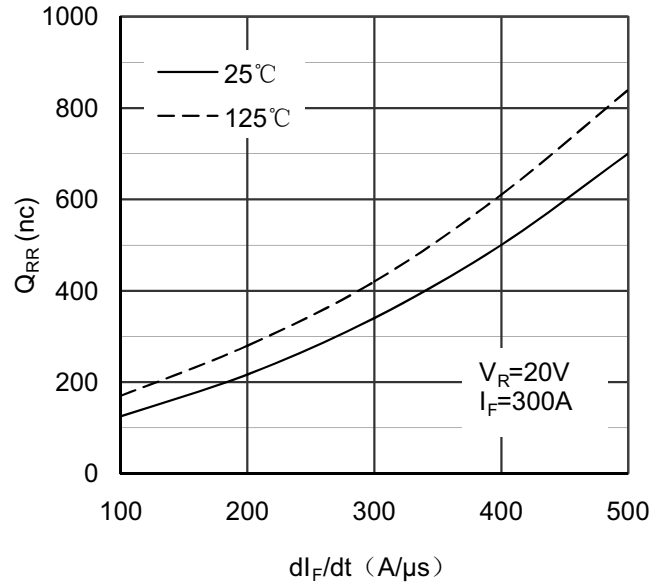


Figure 2. Reverse Recovery Charge vs di_F/dt

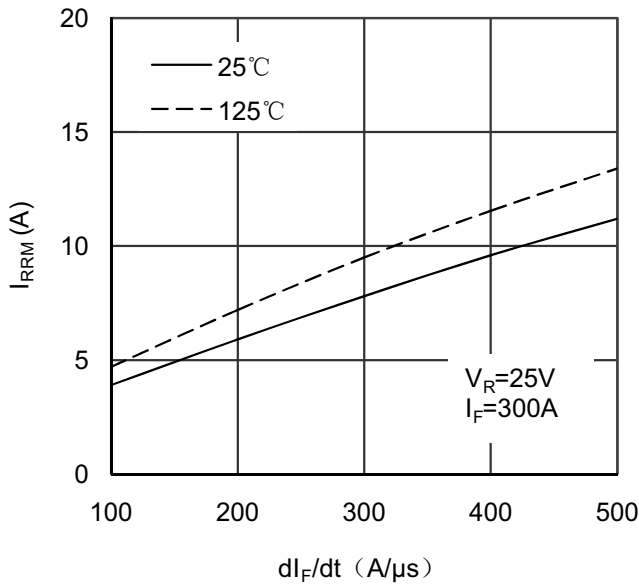


Figure 3. Reverse Recovery Current vs di_F/dt

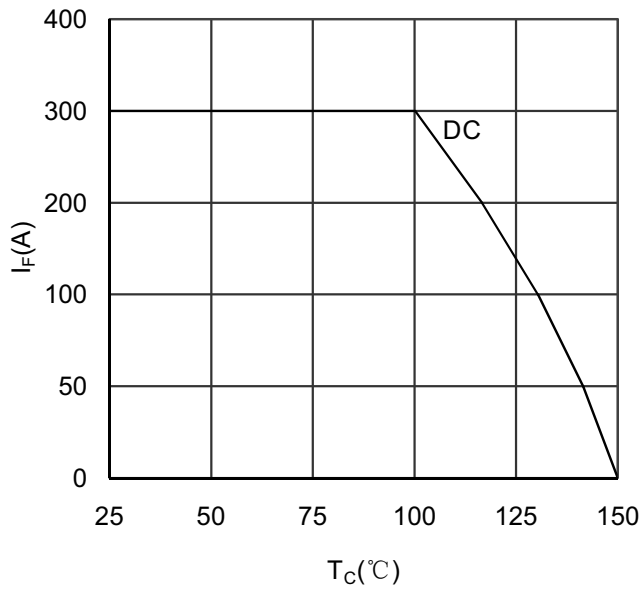


Figure 4. Forward current vs Case temperature

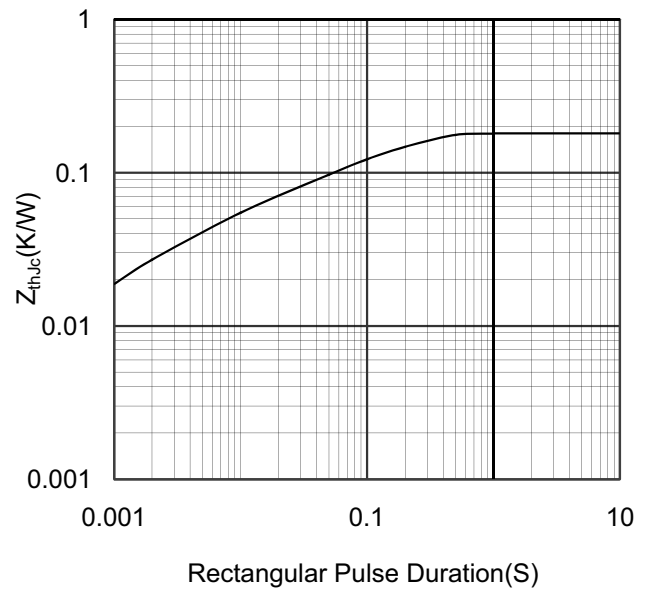
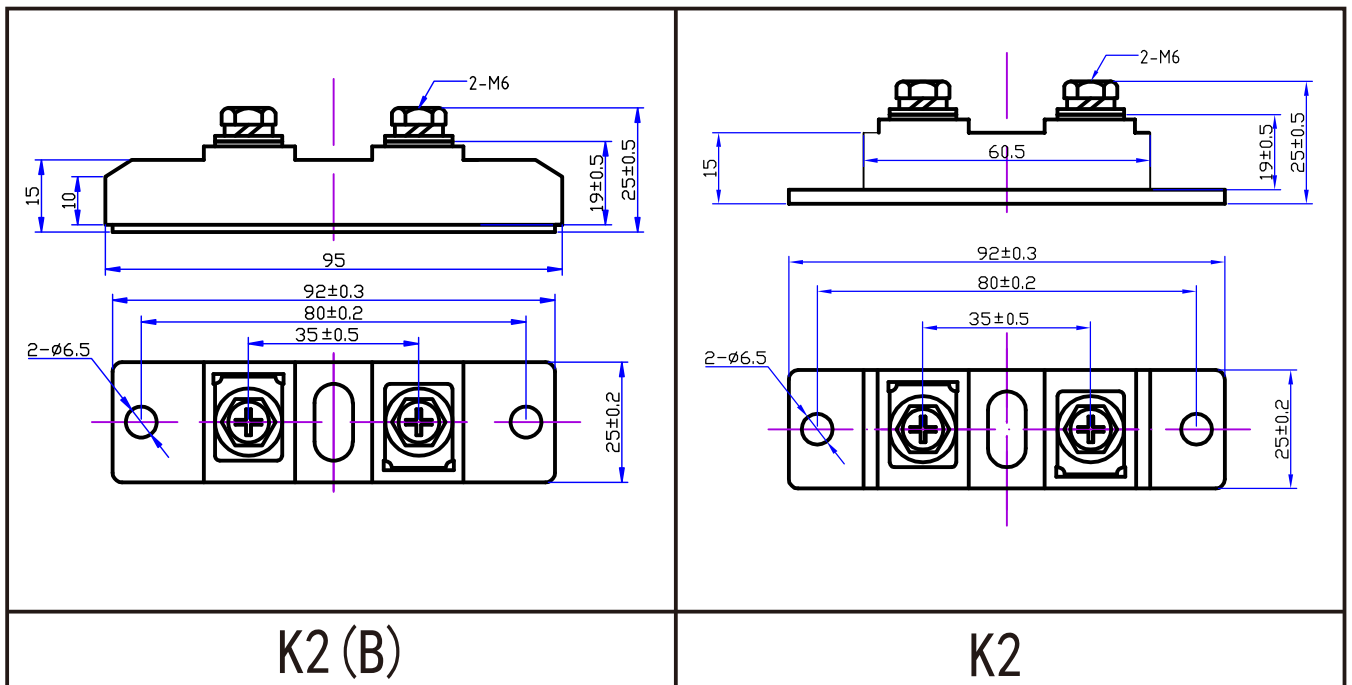


Figure 5. Transient Thermal Impedance

Package Outline



Dimensions (mm)