

产品规格书

Specifcation of products

产品名称:肖特基二极管

产品型号: MBK600U1K2

浙江世菱半导体有限公司
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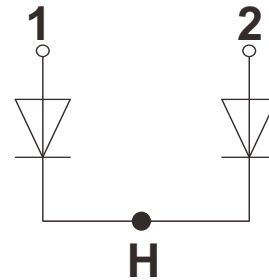
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PRODUCT FEATURES

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

APPLICATIONS

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



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		100	V
V_{RRM}	Maximum Repetitive Reverse Voltage		100	V
$I_{F(AV)}$	Average Forward Current	$T_C=110^{\circ}\text{C}$, Per Diode	300	A
		$T_C=110^{\circ}\text{C}$, Per Moudle	600	A
$I_{F(RMS)}$	RMS Forward Current	$T_C=110^{\circ}\text{C}$, Per Diode	360	A
I_{FSM}	Non-Repetitive Surge Forward Current	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, 50Hz, Sine	3000	A
		$T_J=45^{\circ}\text{C}$, $t=8.3\text{ms}$, 60Hz, Sine	3200	A
I^2t	I^2t (For Fusing)	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, 50Hz, Sine	44600	A^2s
		$T_J=45^{\circ}\text{C}$, $t=8.3\text{ms}$, 60Hz, Sine	45000	A^2s
P_D	Power Dissipation		694	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)	3~5.0	N.m
Torque	Module Electrodes	Recommended (M6)	3~5.0	N.m
$R_{\theta C}$	Thermal Resistance	Junction-to-Case, Per Diode	0.18	$^{\circ}\text{C} / \text{W}$
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	$V_R=100\text{V}$	--	--	0.5	mA
		$V_R=100\text{V}, T_J=125^{\circ}\text{C}$	--	--	10	mA
V_F	Forward Voltage	$I_F=300\text{A}$	--	0.70	--	V
		$I_F=300\text{A}, T_J=125^{\circ}\text{C}$	--	0.60	--	V

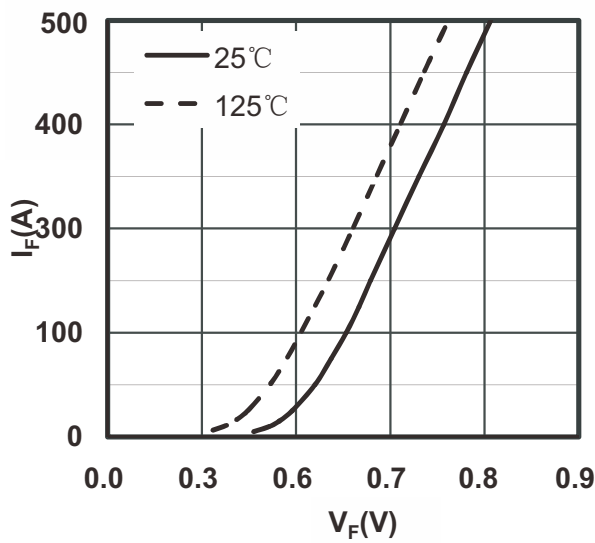


Figure 1. Forward Voltage Drop vs Forward Current

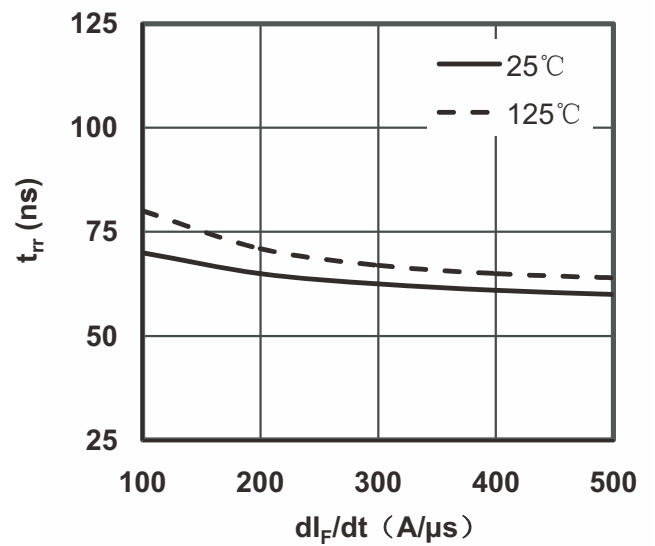


Figure 2. Reverse Recovery Time vs di_F/dt

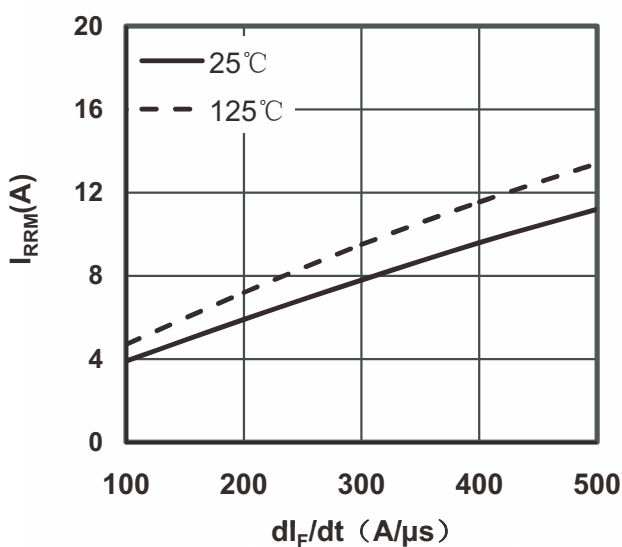


Figure 3. Reverse Recovery Current vs di_F/dt

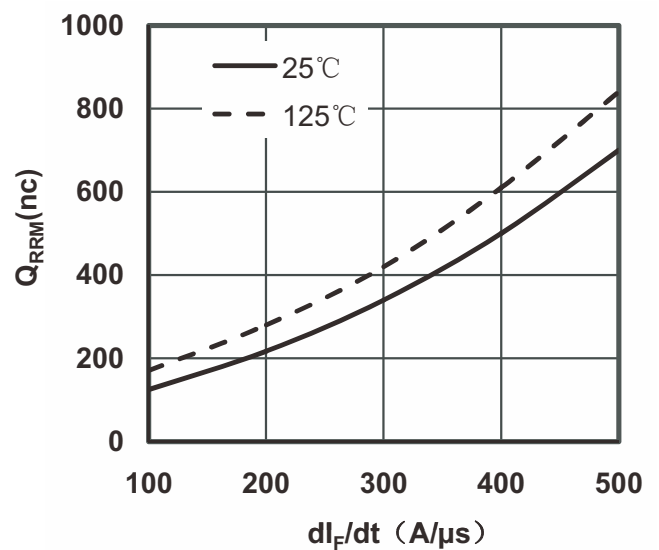
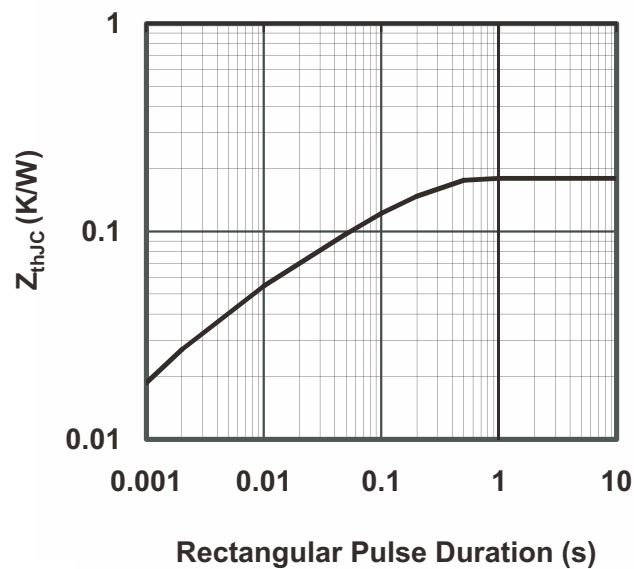
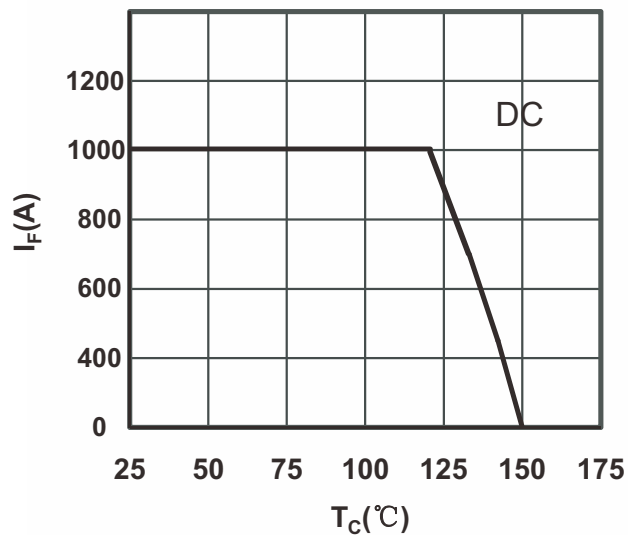
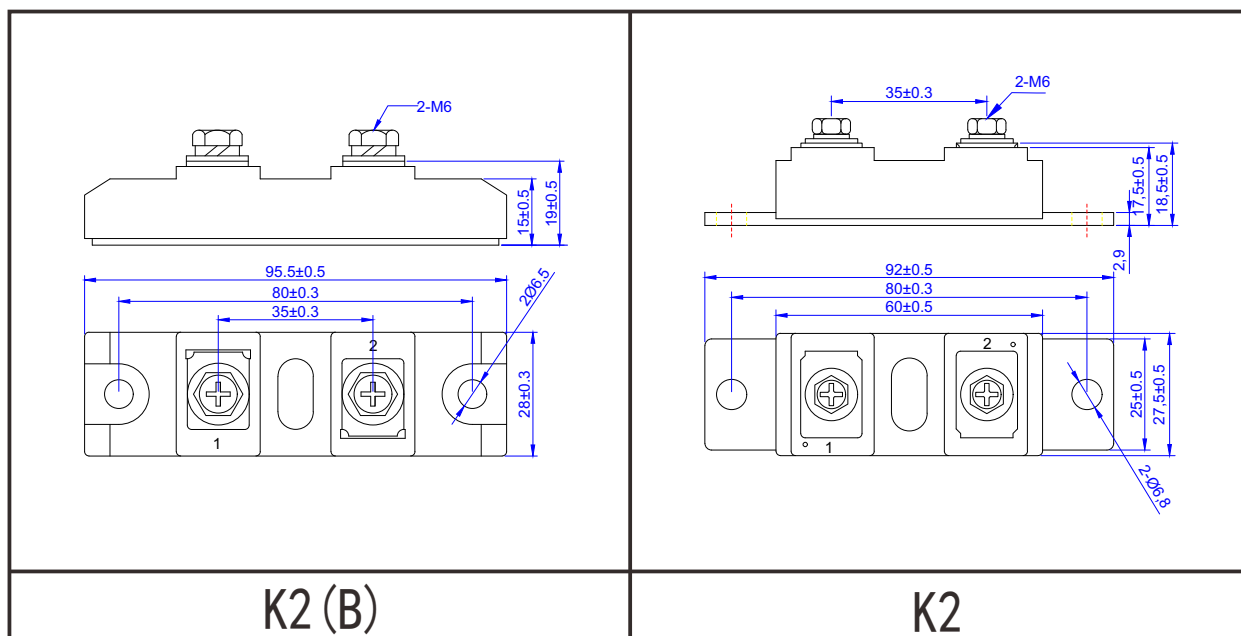


Figure 4. Reverse Recovery Charge vs di_F/dt



Package Outlines



Unit:mm