

产品规格书

Specification of products

产品名称: 快恢复二极管

产品型号: MURP400200N-K3

浙江世菱半导体有限公司
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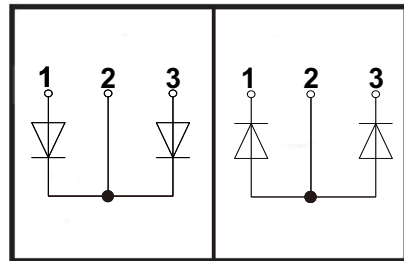
PRODUCT FEATURES

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



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		200	V
V _R RM	Maximum Repetitive Reverse Voltage		200	V
I _{F(AV)}	Average Forward Current	T _C =100°C, Per Diode	200	A
		T _C =100°C, Per Moudle	400	A
		T _C =100°C, 20KHz, Per Moudle	300	A
I _{F(RMS)}	RMS Forward Current	T _C =100°C, Per Diode	300	A
I _{FSM}	Non-Repetitive Surge Forward Current	1/2 Cycle, 50Hz, Sine	1800	A
		1/2 Cycle, 60Hz, Sine	2000	A
I ² t	I ² t (For Fusing)	T _J =45°C, t=10ms, 50Hz, Sine	16200	A ² s
		T _J =45°C, t=8.3ms, 60Hz, Sine	20000	A ² s
P _D	Power Dissipation		625	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	Nm
Torque	Module Electrodes	Recommended (M6)	3~4.7	Nm
R _{θJC}	Thermal Resistance	Junction-to-Case	0.20	°C /W
Weight			100	g

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{RM}	Reverse Leakage Current	V _R =200V	--	--	1	mA
		V _R =200V, T _J =125°C	--	--	2	mA
V _F	Forward Voltage	I _F =200A	--	0.95	1.30	V
		I _F =200A, T _J =125°C	--	--	1.20	V
t _{rr}	Reverse Recovery Time	I _F =1A, V _R =30V, di _F /dt=-200A/μs	--	43	--	ns
t _{rr}	Reverse Recovery Time	V _R =100V, I _F =200A	--	90	--	ns
I _{RRM}	Max. Reverse Recovery Current	di _F /dt=-100A/μs, T _J =25°C	--	5	--	A
t _{rr}	Reverse Recovery Time	V _R =100V, I _F =200A	--	112	--	ns
I _{RRM}	Max. Reverse Recovery Current	di _F /dt=-100A/μs, T _J =125°C	--	6.8	--	A

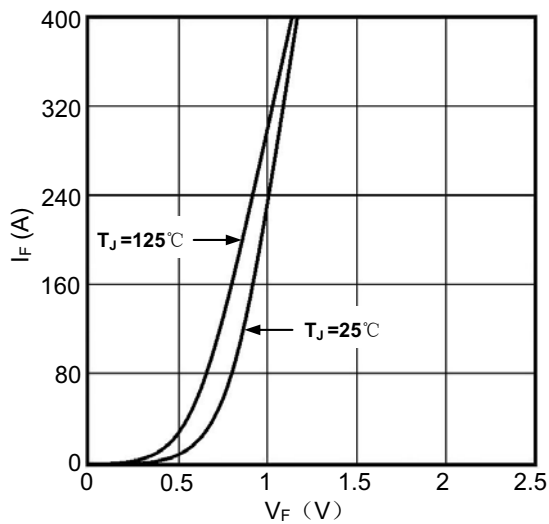


Figure1. Forward Voltage Drop vs Forward Current

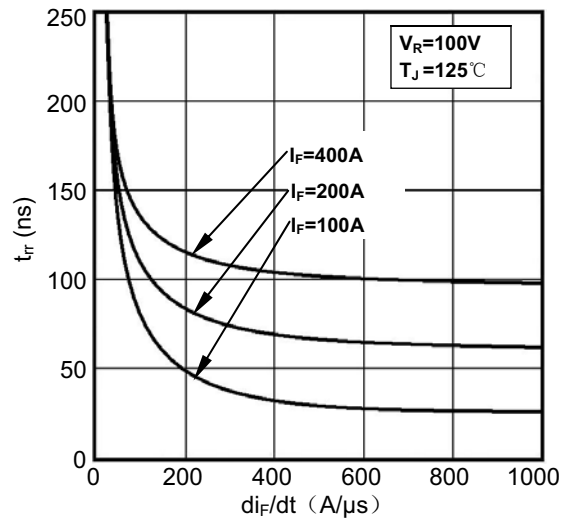


Figure2. Reverse Recovery Time vs di_F/dt

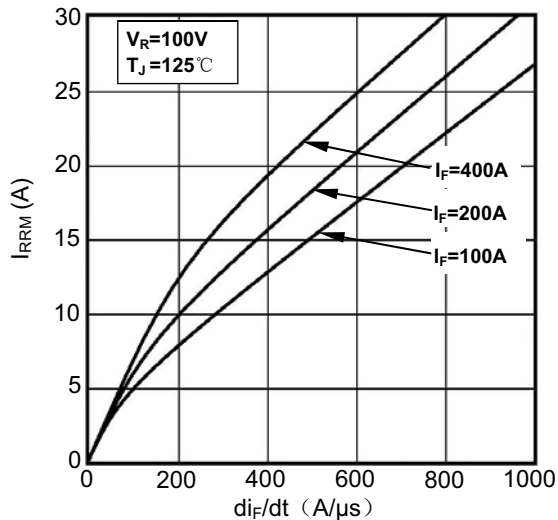


Figure3. Reverse Recovery Current vs di_F/dt

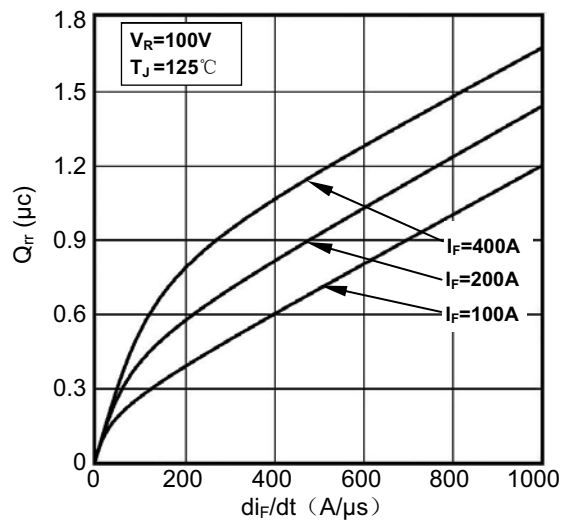


Figure4. Reverse Recovery Charge vs di_F/dt

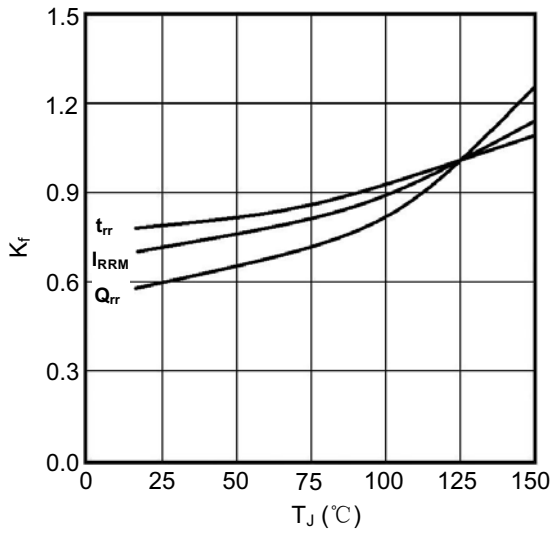


Figure5. Dynamic Parameters vs Junction Temperature

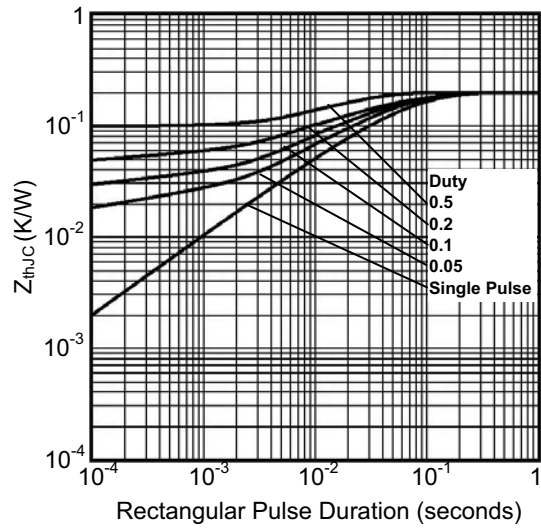
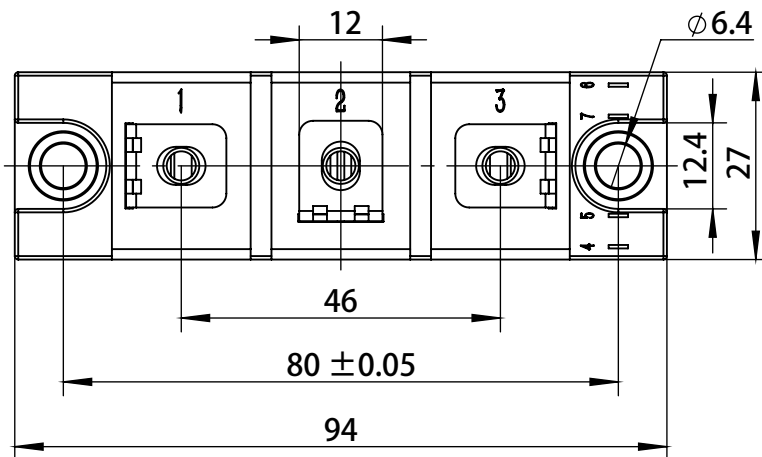
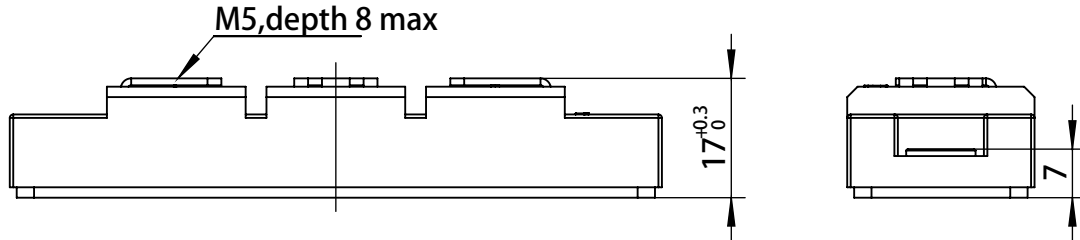


Figure6. Transient Thermal Impedance

Package Outline



Dimensions (mm)