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浙江芯芯电子有限公司

ZHEJIANG XINXIN ELECTIRICAL CO., LTD.

产品规格书

Specification of Products

产品名称：快恢复二极管

产品型号：MURP2001200

浙江芯芯电子有限公司

ZHEJIANG XINXIN ELECTIRICAL CO., LTD.

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Ultra-Fast Soft Recovery Diode Module

MURP2001200

Description

Ultra-FRD module devices are optimized to reduce losses and EMI/RFI in high frequency power conditioning electrical systems. These diode modules are ideally suited for power converters, motors drives and other applications where switching losses are significant portion of the total losses.

Features

- ☞ Repetitive Reverse Voltage V_{RRM} = 1200V
- ☞ Low Forward Voltage Drop V_F : (typ.) = 1.2V
- ☞ Average Forward Current I_F : (AV.) = 200A @ Tc= 100℃
- ☞ Ultra-Fast Reverse Recovery Time : t_{rr} (typ.) = 130 ns
- ☞ Extensive Characterization of Recovery Parameters
- ☞ Reduced EMI and RFI
- ☞ Non Isolation Type Package

Applications

Motor Drives, Free wheel use, High Power Converters Welders Various Switching and Telecommunication Power Supply.

Equivalent Circuit and Package

Equivalent Circuit

Package

Please see the package Out line information

Absolute Maximum Ratings @ T_j=25℃ (Per Leg)

Symbol	Parameter	Conditions	Ratings	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		1200	V
$V_{R(DC)}$	Reverse DC Voltage		320	V
$I_{F(AV)}$	Average Forward Current @ Tc= 25℃ @ Tc= 100℃	Resistive Load	400 200	A A
I_{FSM}	Surge (non-repetitive) Forward Current	One Half Cycle at 60Hz, Peak Value	3300	A
I^2t	I^2t for Fusing	Value for One Cycle Current, tw= 8.3ms, T_j= 25℃ Start	$45.0 * 10^3$	A^2 s
T_j	Junction Temperature		-40 ~ 125	℃
T_{stg}	Storage Temperature		-40 ~ 125	℃
P_d	Maximum Power Dissipation		700	W
-	Mounting Torque		4.0	N.m
-	Terminal Torque		3.0	N.m

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Thermal Characteristics

Symbol	Parameter	Conditions	Values			Unit
			Min.	Typ.	Max.	
$R_{th(j-c)}$	ThermalResistance	Junctionto Case	-	-	0.15	℃/W

Electrical Characteristics T_c=25℃ (unlessotherwisespecified)

Symbol	Parameter	Conditions		Values			Unit
				Min.	Typ.	Max.	
V_R	Cathode Anode Breakdown Voltage	I_R= 100uA		1200	-	-	V
V_{FM}	Maximum ForwardVoltage	I_{FM} = 200A, T_c= 25℃		-	1.2	1.5	V
		I_{FM} = 200A, T_c=100℃		-	1.0	1.2	V
I_{RRM}	Repetitive Peak Reverse Current	T_C= 100℃, V_{RRM} applied		-	-	8.5	mA
T_{rr}	ReverseRecoveryTime	I_{FM} = 200A, V_R = 300V di/dt=-100A/us	T_C= 25℃	-	130	150	ns
			T_C= 100℃	-	180	-	ns

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Rating and Characteristic

PerformanceCurves

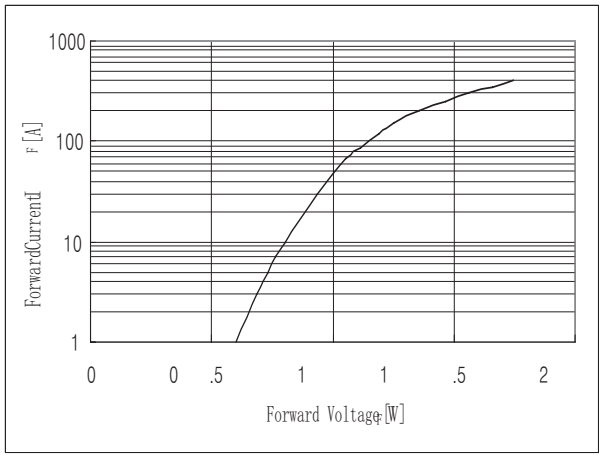

Fig. 1 : Typical Forward Voltage Drop vs. Instantaneous Forward Current

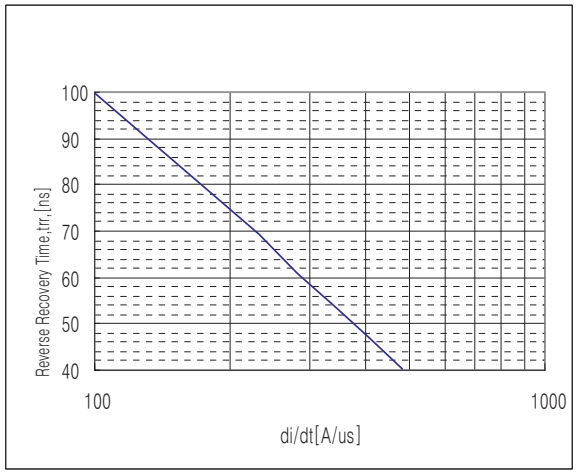

Fig. 2 : Typical Reverse Recovery Time vs. -di/dt

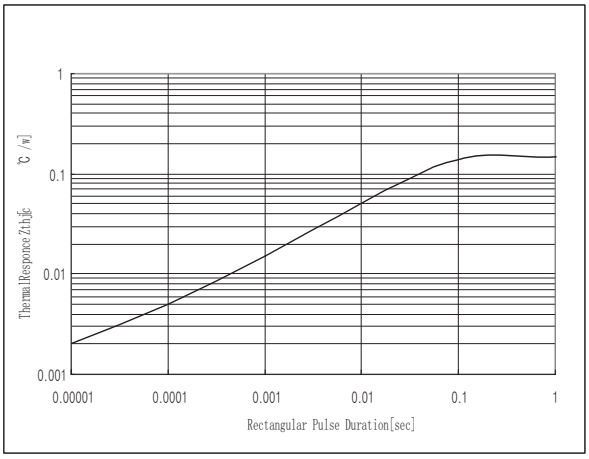

Fig. 3 : Transient Thermal Impedance (2) Characteristics

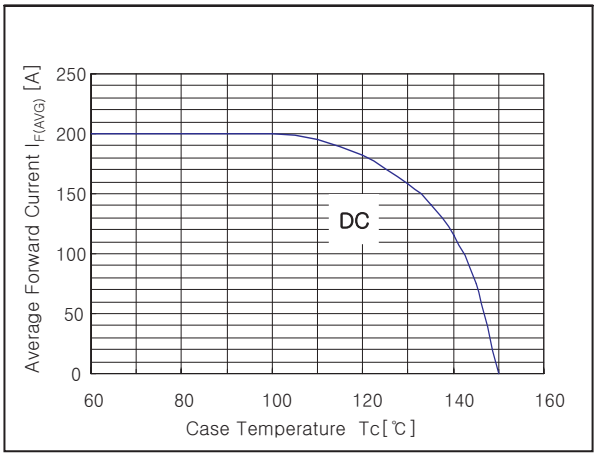

Fig. 4 : Forward Current Derating Curve

Outside Dimension