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

Specifcation of products

：

：MURP300200CT

Ultra Fast Soft Recovery Diode Module

Description

Ultra-FRD moduledevices are optimized to reducelosses and EMI/RFI in high frequency powerconditioningelectricalsystems. Thesediodemodulesare ideally suited for powerconverters, motorsdrivesand other applications where switching losses are significant portionof the total losses.

Features

Repetitive Reverse Voltage : V_{RRM} = 200V
Low Forward Voltage Drop : V_F (typ.) = 1.0V
Average Forward Current : $I_{F(AV.)}$ = 300A @ Tc= 100°C
Ultra-Fast Reverse Recovery Time : t_{rr} (typ.) = 95 ns
ExtensiveCharacterization of Recovery Parameters
Reduced EMI and RFI
Non Isolation Type Package

Applications

MotorDrives, Free wheel use, High Power Converters, Welders, VariousSwitching and Telecommunication Power Supply.

Absolute MaximumRatings @ T_j=25°C (Per Leg)

Symbol	Parameter	Conditions	Ratings	Unit
V_{RRM}	Repetitive Peak Reverse Voltage			
$V_{R(DC)}$	Reverse DC Voltage			
$I_{F(AV)}$	Average Forward Current @ Tc=25°C @ Tc = 100	Resistive Load		
I_{FSM}	Surge (non-repetitive) Forward Current	One Half Cycle at 60Hz, Peak Value		
I^2t	I^2t for Fusing V,	Value for One Cycle Current, t_W		
T_j	JunctionTemperature			
T_{stg}	StorageTemperature			
P_d	MaximumPower Dissipation			
-	Mounting Torque			
-	Terminal Torque			

Thermal Characteristics

Symbol	Parameter	Conditions	Values			Unit
			Min.	Typ.	Max.	
$R_{th(j-c)}$	Thermal Resistance	Junction to Case	-	-	0.12	°C/W

Electrical Characteristics @T_j=25°C (unless otherwise specified)

Symbol	Parameter	Conditions		Values			Unit
				Min.	Typ.	Max.	
V_R	Cathode Anode Breakdown Voltage	I_R = 100uA		200	-	-	V
V_{FM}	Maximum Forward Voltage	I_{FM} = 300A, T_c= 25°C		-	1.0	1.1	V
		I_{FM} = 300A, T_c=100°C		-	0.8	1.0	V
I_{RRM}	Repetitive Peak Reverse Current	T_C= 100°C , V_{RRM} applied		-	-	10.0	mA
t_{rr}	Reverse Recovery Time	I_{FM}= 300A, V_R= 150V di/dt=-100A/us	T_c= 25°C	-	95	100	ns
			T_c = 100°C	-	180	-	ns

Performance Curves

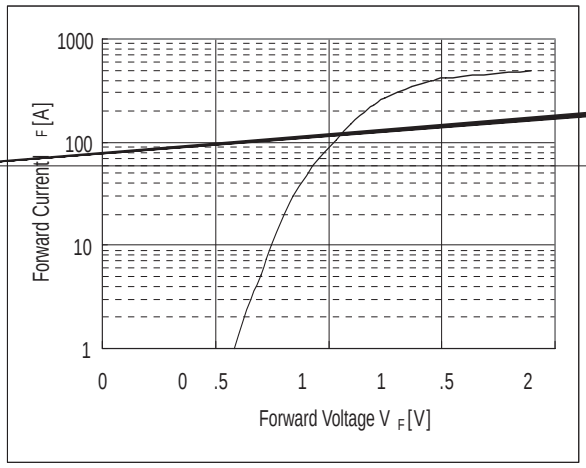

Fig. 1 : Typical Forward Voltage Drop vs. Instantaneous Forward Current

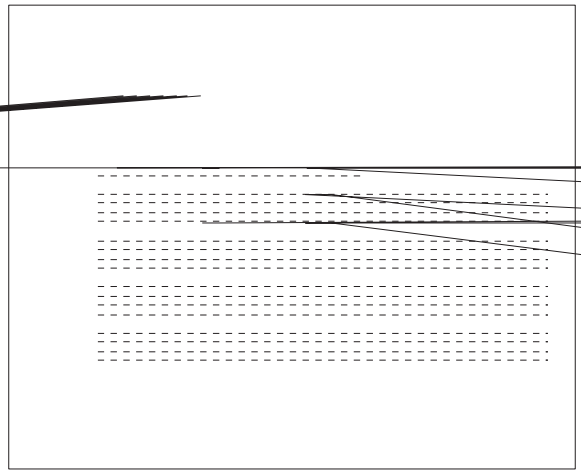

Fig. 2 : Typical Reverse Recovery Time vs. -di/dt