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

产品规格书

Specifcation of products

型号：MUK300300CI

浙江世菱半导体有限公司
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Ultra-Fast Soft Recovery Diode Module

Description

Ultra-FRD module devicesare 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} =300V
Low Forward Voltage Drop : V_F (typ.) = 1.0V
Average Forward Current : $I_{F(AV.)}$ = 300A @ Tc= 125 °C
Ultra-Fast ReverseRecovery Time : t_{rr}(typ.) = 65 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

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

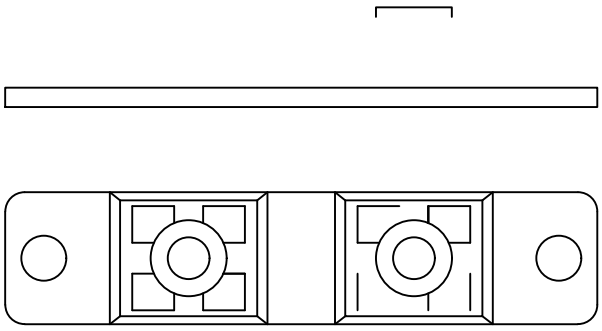
Symbol	Parameter	Conditions	Ratings	Unit
V_{RRM}				
$V_{R(DC)}$				
$I_{F(AV)}$				
I_{FSM}				
I^2t				

Thermal Characteristics

Symbol	Parameter	Conditions	Values			Unit
			Min.	Typ.	Max.	
$R_{th(j-c)}$	Thermal Resistance	Junction to Case	-	-	0.10	℃/W

Electrical Characteristics @ T_j =25℃ (unless otherwise specified)

Symbol	Parameter	Conditions		Values			Unit
				Min.	Typ.	Max.	
V_R	Cathode Anode Breakdown Voltage	I_R= 100uA		300	–	–	V
V_{FM}	Maximum Forward Voltage	I_{FM}= 300A, T_c= 25℃		–		1.1	V
		I_{FM}= 300A, T_c =100℃		–		0.8	V
I_{RRM}	Repetitive Peak Reverse Current	T_C= 100℃, V_{RRM} applied		–	–	5.0	mA
t_{rr}	Reverse Recovery Time	I_{FM}= 300A, V_R= 150V di/dt=-100A/us	T_C= 25℃	–	65	70	ns
			T_C= 100℃	–	100	–	ns



Performance Cu rves

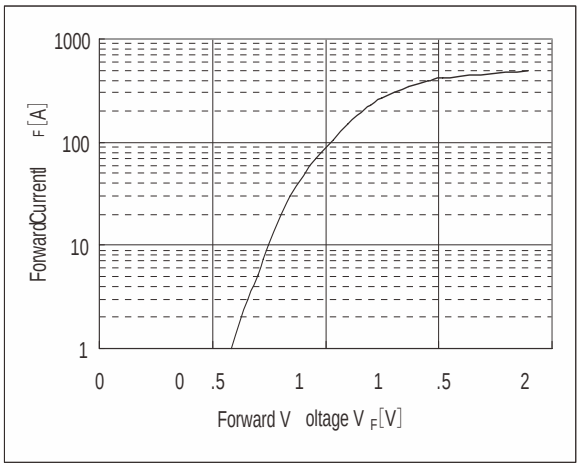


Fig. 1 : Typical Forward Voltage Drop vs. Instantaneous Forward Cur rent

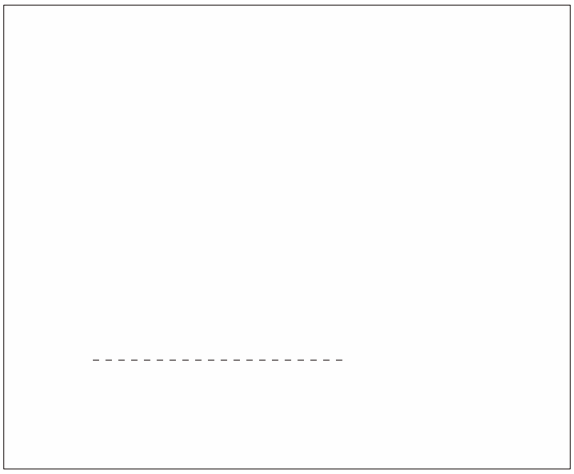


Fig. 2 : Typical Reverse Recovery Time vs. -di/dt