ShiLing®

浙江世菱半导体有限公司

ZHEJIANG SHILING SEMICONDUCTOR CO.,LTD.

Specifcation of products

：

：MBRP600100CT

ZHEJIANG SHILING SEMICONDUCTOR CO.,LTD.

0578 3012571 3615078

0578 3611180

323000

E-mail:smrshiling01@163.com

Http//www.smrshiling.com

05 2023.8

ShiLing®
浙江士兰半导体有限公司
ZHEJIANG SHILING SEMICONDUCTOR CO.,LTD.

Ultra-Fast Soft Recovery Diode Module

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.

Equivalent Circuitand Pac kage

Equivalent Circuit

Features

- Repetitive Reverse Voltage : V_{RRM} =100V
- Low Forward Voltage Drop : V_F (typ.) = 0.6V
- Average Forward Current : $I_{F(AV.)}$ = 600A @ Tc= 100 ℃
- Ultra-Fast Reverse Recovery Time : t_{rr} (typ.) = 80 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}	Repetitive Peak Reverse Voltage		100	V
$V_{R(DC)}$	Reverse DC Voltage		100	V
$I_{F(AV)}$	Average Forward Current @ Tc=25℃ @ Tc = 100℃	Resistive Load	800 600	A A
I_{FSM}	Surge (non-repetitive) Forward Current	One Half Cycle at 60Hz, Peak Value	4000	A
I^2t	I^2t for Fusing	Value for One Cycle Current, t_W= 8.3ms, T_j= 25℃ Start		A^2 s
T_j	Junction Temperature		-40 ~ 150	℃
T_{stg}	Storage Temperature		-40 ~ 150	℃
P_d	Maximum Power Dissipation		14	W
-	Mounting Torque		5.0	N.m
-	Terminal Torque		5.0	N.m

Thermal Characteristics

Symbol	Parameter	Conditions	Values			Unit
			Min.	Typ.	Max.	
$R_{th(j-c)}$	Thermal Resistance	Junction to Case	-	-	0.28	℃/W

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

Performance Cu rves

