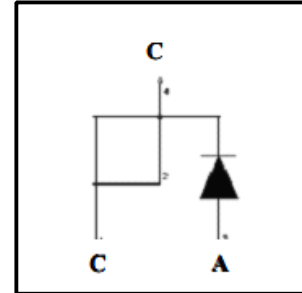


8A,200V Ultrafast Single Diode

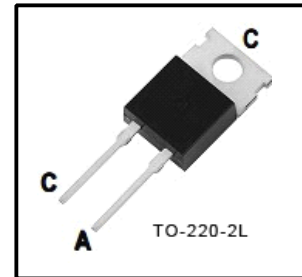
Features

- Ultrafast recovery time
- Low forward voltage drop
- Low leakage current
- High reliability by planer design
- Maximum Junction Temperature Range (150°C)



General Description

Winsemi's FRD..series are the state of the are Ultra fast recovery rectifiers specifically designed with optimized performance of forward voltage drop and ultra fast recovery time the planar structure and the platinum doped life time control, guarantee the best over all performance, ruggedness and reliability characteristics.



Applications

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_{RRM}	Peak Repetitive Revers Voltage	200	V
$I_{F(AV)}$	Average Forward Current Square wave, duty=1/2, $T_C=25^\circ C$	8	A
I_{FM}	Repetitive Peak Forward Current Square wave, 20kHz, $T_C=115^\circ C$	16	A
I_{FSM}	No-Repetitive Peak Surge current	100	A
P_D	Power Dissipation	50	W
T_{STG}, T_J	Operating Junction Temperature	-65~175	$^\circ C$

Electrical Characteristics $T_C=25^\circ C$

Symbol	Parameter	Test Conditions	Value	Units
V_F	Forward Voltage Drop (Max)	$I_F=5.0A, T_C=100^\circ C$	0.85	V
		$I_F=20A, T_C=25^\circ C$	1.3	V
I_{RRM}	Reverse Current(Max)	Rated DC Voltage, $T_J=100^\circ C$	600	μA
		Rated DC Voltage, $T_J=25^\circ C$	5.0	μA
T_{rr}	Reverse Recovery Time(Max)	$I_F=1.0A, di/dt=50A/\mu s$	35	ns
		$I_F=0.5A, I_R=1.0A, I_{REC}=0.25A$	25	
R_{QJC}	Thermal Resistance		3.0	$^\circ C/W$

Typical Performance Curves

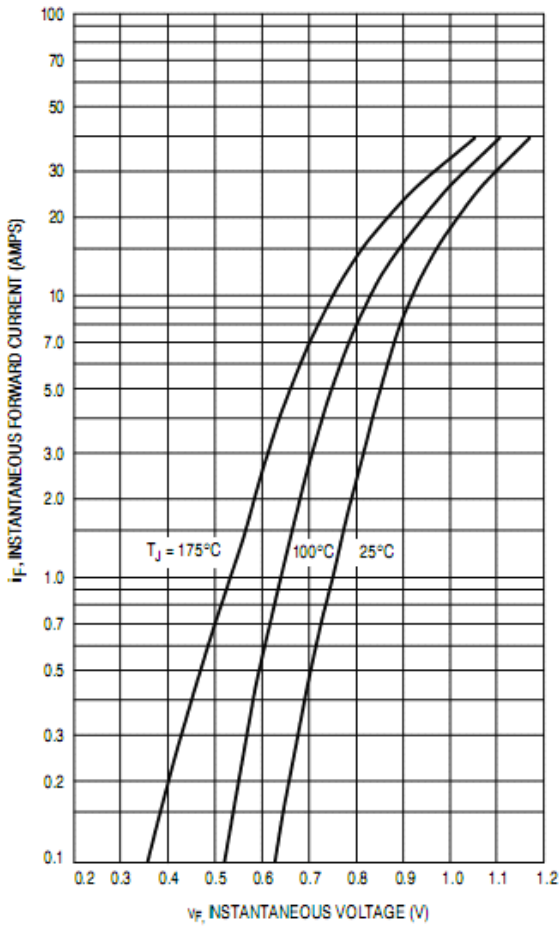


Fig.1 Forward Characteristics

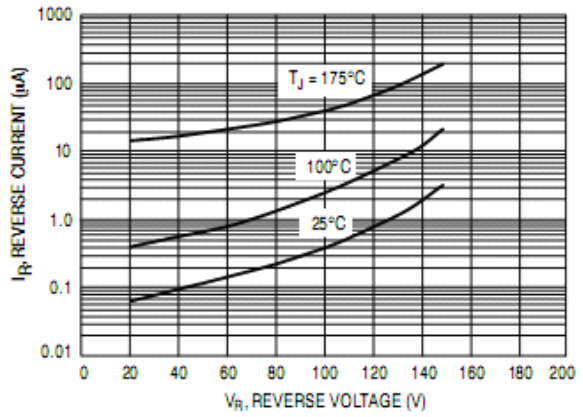


Fig.2 Reverse Characteristics

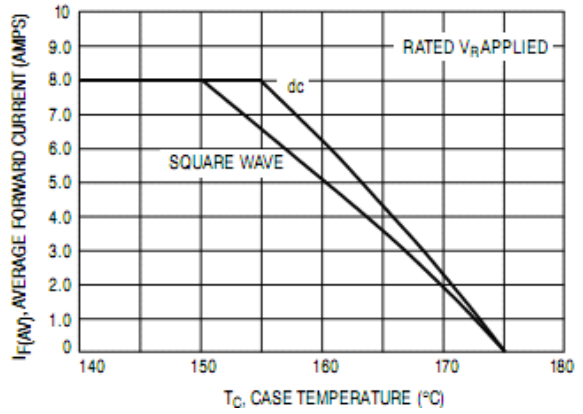


Fig.3 Current Derating, Case

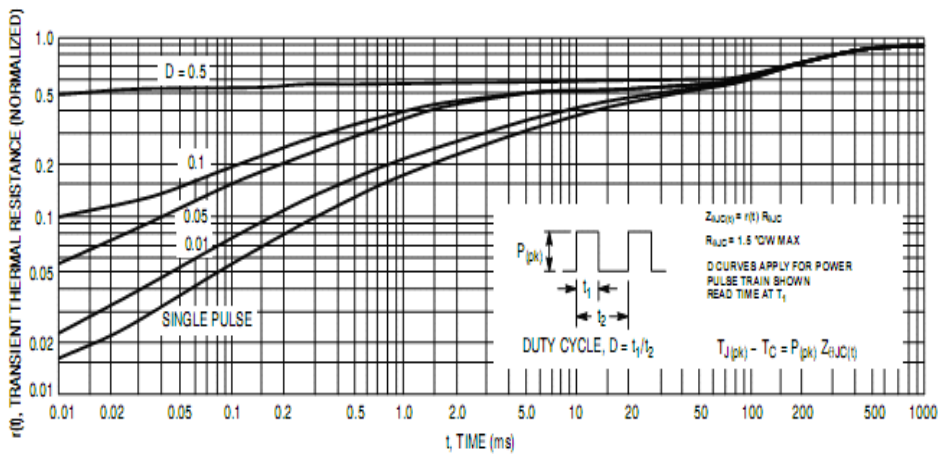


Fig.4 Thermal Response

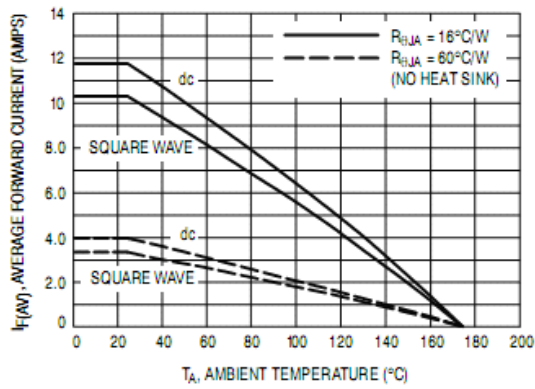


Fig.5 Current Derating Ambient

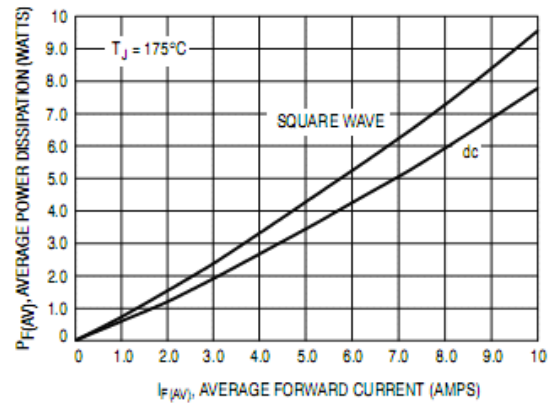


Fig.6 Power Dissipation

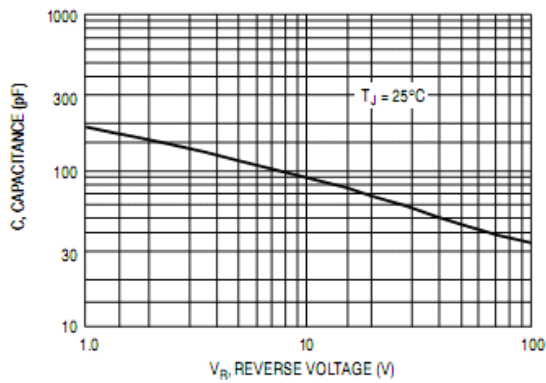


Fig.7 Typical Capacitance

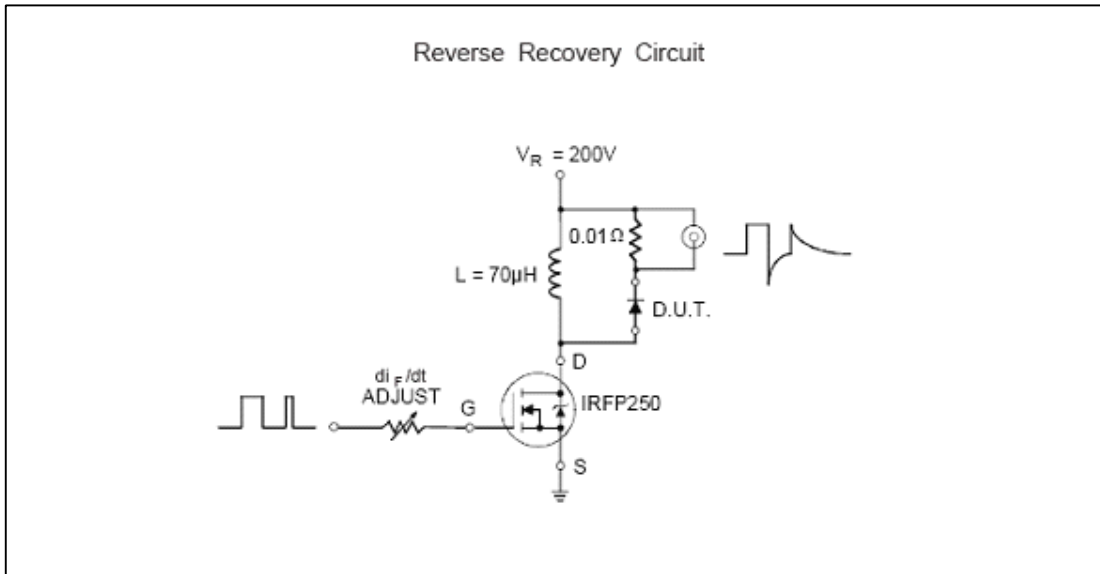


Fig.8 Reverse Recovery Parameter Test circuit

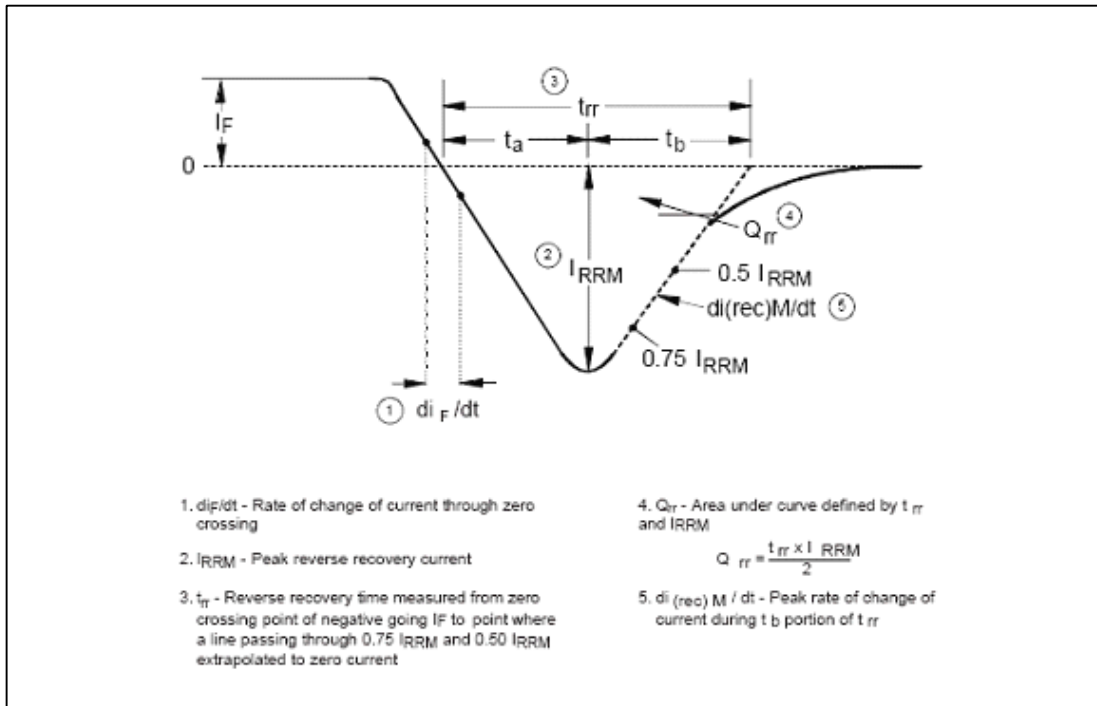


Fig.9 reverse Recovery Waveform and definitions

To-220-2L Package Dimension

