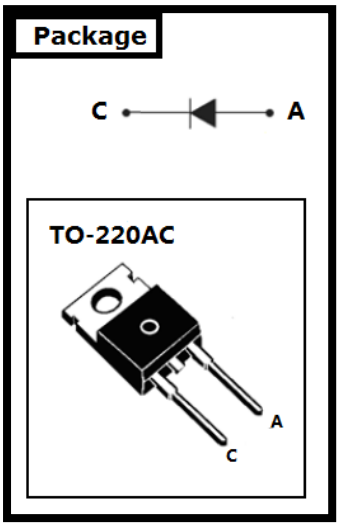
# SL20S120F

## FAST RECOVER DIODE




## Features

- 1200V,20A
- Soft Recovery
- Operation Temperature ＜175℃
- Planar Construction

## Applications

- Switching Power Supplies
- Power Switching Circuits
- General Purpose

## Absolute Maximum Ratings

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{RRM}$ | Peak Repetitive Reverse Voltage | 1200 | V |
| $I_{F(AV)}$ | Diode Continuous Forward Current ( $T_C$=100 ℃) | 20 | A |
| $I_{FRM}$ | Repetitive Peak Surge Current (20kHz Square Wave) | 45 | A |
| $T_J$ | Operating Junction Temperature Range | -55 to +175 | ℃ |
| $T_{STG}$ | Storage Temperature Range | -55 to +175 | ℃ |

## Electrical Characteristics ($T_C$=25℃ unless otherwise noted)

| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| $V_F$ | Diode Forward Voltage | $I_F$=20A $T_C$=25℃ | | 2.7 | 3 | V |
| | Diode Forward Voltage | $I_F$=20A $T_C$=125℃ | | 2.3 | 2.8 | V |
| IR | Instantaneous reverse current | VR=1200V | | | 10 | uA |
| $I_{RRM}$ | Diode peak Reverse Recovery Current | $I_F$= 2A dif/dt=200A/us VR=30V | | 1.3 | | A |
| trr | Diode Reverse Recovery Time | | | 42 | | ns |
| $Q_{RR}$ | Diode Reverse Recovery Charge | | | 63 | | nC |
| $I_{RRM}$ | Diode peak Reverse Recovery Current | $I_F$= 20A, dif/dt=200A/us VR=100V | | 6.2 | | A |
| trr | Diode Reverse Recovery Time | | | 65 | | ns |
| $Q_{RR}$ | Diode Reverse Recovery Charge | | | 217 | | nC |

**Fig.1 Forward Current vs Forward Voltage**

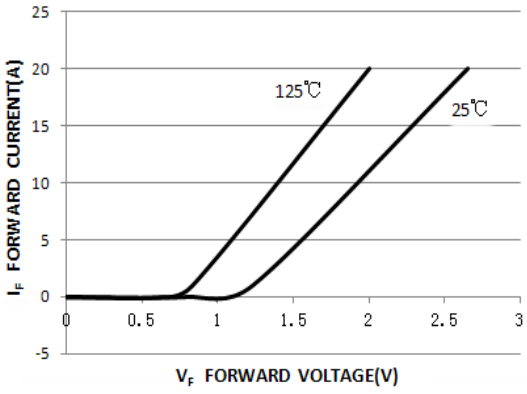



**Fig.2 Reverse Current vs Reverse Voltage**

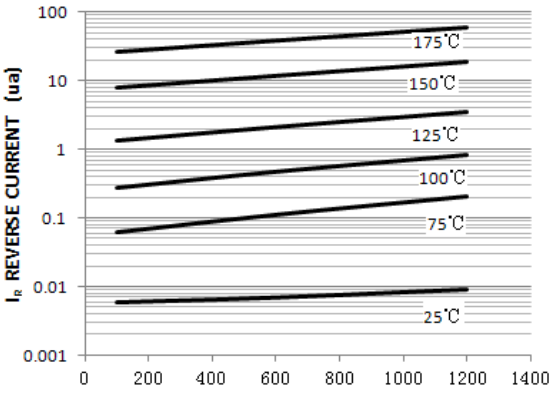



**Fig.3 trr Test Circuit**

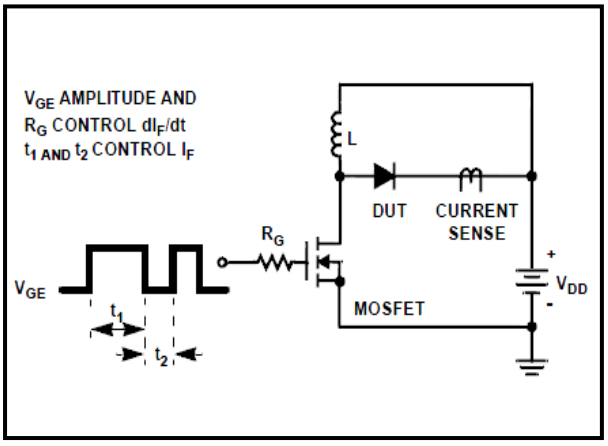



**Fig.4 trr Waveforms and Definitions**