SFPF20UP20DN

20A, 200V Ultrafast Dual Diode

Features

- Ultrafast Soft Recovery: T_{rr}=28ns
- Typical Forward Voltage: V_F=0.94V @ I_F=10A
- Reverse Voltage: V_{RRM}=200V
- Avalanche Energy Rated

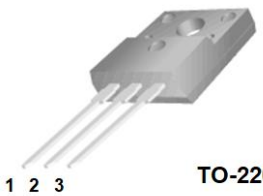
Description

The SFPF20UP20DN is an ultrafast dual diode with low forward voltage drop. This device is designed for FWD in motor and power switching applications, It is specially suited for use in switching power supplies and industrial applications as welder, UPS and inverter.

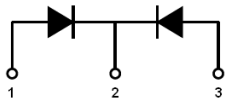
Applications

- Welder & UPS & Inverter
- Switching Power Supply
- FWD for Motor Application

Package Type & internal Circuit



TO-220F



1. Anode 2.Cathode 3.Anode

Absolute Maximum Ratings per diode at T_C=25 ℃ unless otherwise noted

Symbol	Parameter		Ratings	Unit
V_{RRM}	Peak Repetitive Reverse Voltage		200	V
V_{RWM}	Working Peak Reverse Voltage		200	V
V_R	DC Blocking Voltage		200	V
$I_{F(AV)}$	Average Rectified Forward Current	per device at T_C=120℃	10	A
I_{FSM}	Non-repetitive Peak Surge Current		100	A
T_J	Operating Junction Temperature Range		-65~+150	℃
T_{STG}	Storage Temperature Range		-65~+150	℃

Thermal Characteristics

Symbol	Parameter	Ratings	Unit
$R_{th\ (J-C)}$	Thermal Resistance, Junction to case	4.5	℃/W

Electrical Characteristics per diode @T_C=25 ℃ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop	I_F=10A	-	0.94	1.1	V
		I_F=10A, T_C=125℃	-	-	1	V
I_R	Reverse Leakage Current	V_R=200V	-	-	10	uA
T_{rr}	Reverse Recovery Time	I_F=10A, di/dt=-200A/us	-	-	35	ns
E_{AS}	Avalanche Energy	L=20mH	10	-	-	mJ

Typical Performance Characteristics

Fig. 1. Typical Characteristics: V_F vs. I_F

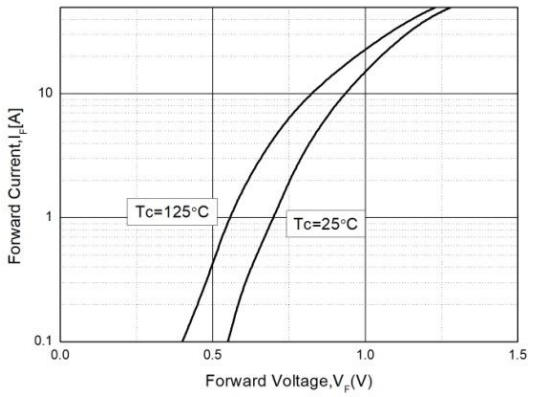


Fig. 2. Typical Characteristics: V_R vs. I_R

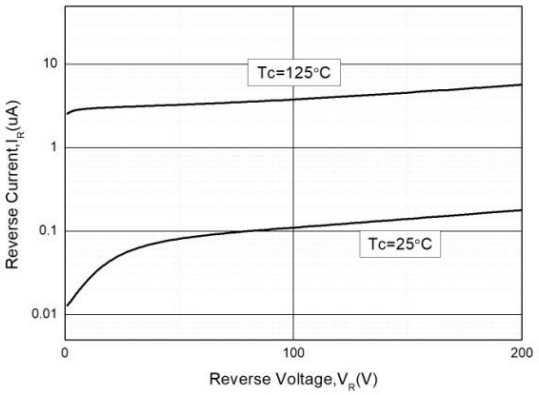


Fig. 3. Typical Reverse Recovery Time vs. di/dt

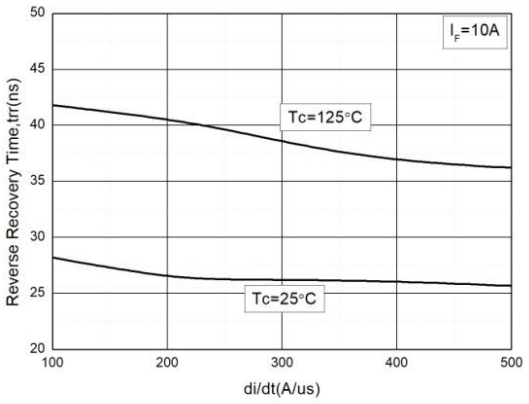
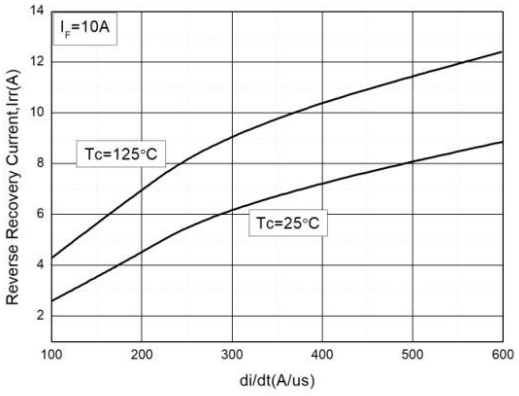


Fig. 4. Typical Reverse Recovery Current vs. di/dt



Package Dimensions

TO-220F

(Dimensions in Millimeters)

