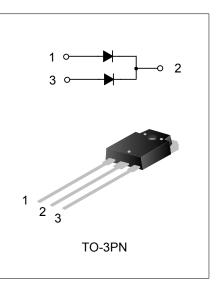
# 20A, 200V ULTRA-FAST RECOVERY RECTIFIER

#### GENERAL DESCRIPTION

SFR20U20PN is a Ultra-Fast Recovery Diode, fabricated in advanced silicon planar epitaxial technology. The process parameter and the device structure are fine tuned with optimized performance of forward voltage drop and reverse recovery time.

Accuracy epitaxial dope control, advanced planar junction terminal structure and the platinum doped life control, guarantee the best overall performance, ruggedness and reliability characteristics. SFR20U20PN is intended for use in the output rectification stage of

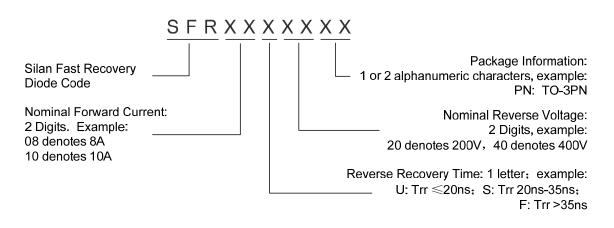
SMPS, UPS, DC-DC converters as well as free-wheeling diode in low voltage inverters and chopper motor drivers.



### **FEATURES**

- \* Ultrafast 20 Nanosecond Recovery Time
- \* Low Forward Voltage Drop
- \* Low Leakage Current
- \* 150 °C Operating Junction Temperature

#### NOMENCLATURE



#### ORDERING INFORMATION

Part No.	Package	Marking	Material	Packing
SFR20U20PN	TO-3PN	20U20	Pb free	Tube

## **ABSOLUTE MAXIMUM RATINGS**

Characteristics	Symbol	Rating	Unit	
Peak Repetitive Reverse Voltage	VRRM	200	V	
Average Rectified Forward Cuttent	Per Leg Total Device	lF(AV)	10.0 20	A
Non Repetitive Peak Surge Current	Per Leg	IFSM	100	А
Operation Junction Temperature		TJ	-40~+150	°C
Storage Temperature		Tstg	-40~+150	°C

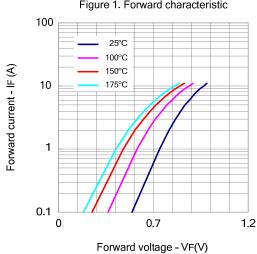
### THERMAL CHARACTERISTICS (Per Leg)

Characteristics	Symbol	Rating	Unit
Thermal Resistance, Junction-to-Case	Rejc	1.5	°C/W

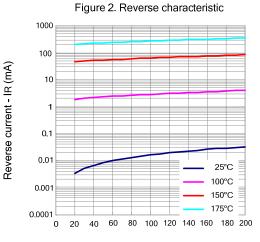
## ELECTRICAL CHARACTERISTICS (Per Leg)

Characteristics	Symbol	Min.	Тур.	Max.	Unit
Maximum Instantaneous Forward Voltage (Note 1) (IF=10.0 Amps, Tc=25°C)	VF			0.97	v
Maximum Instantaneous Reverse Current(Note 1) (Rated dc Voltage, Tc=25°C)	lR	-		5.0	μA
Maximum Reverse Recovery Time (IF=0.5 Amp, IR=1.0Amp, IREC=0.25Amp)	trr			20	ns

## **TYPICAL CHARACTERISTICS**



#### Figure 1. Forward characteristic

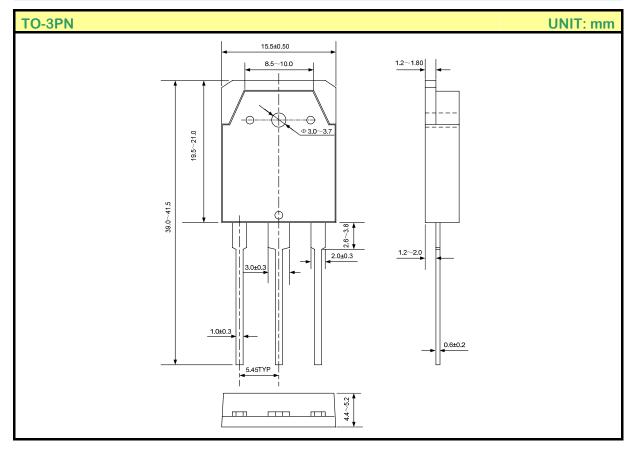


Reverse voltage - VR(V)



# SFR20U20PN\_Datasheet

## PACKAGE OUTLINE



#### **Disclaimer:**

- Silan reserves the right to make changes to the information herein for the improvement of the design and performance without further notice! Customers should obtain the latest relevant information before placing orders and should verify that such information is complete and current.
- All semiconductor products malfunction or fail with some probability under special conditions. When using Silan products in system design or complete machine manufacturing, it is the responsibility of the buyer to comply with the safety standards strictly and take essential measures to avoid situations in which a malfunction or failure of such Silan products could cause loss of body injury or damage to property.
- Silan will supply the best possible product for customers!



# ATTACHMENT

## **Revision History**

Date	REV	Description	Page
2011.04.28	1.0	Original	