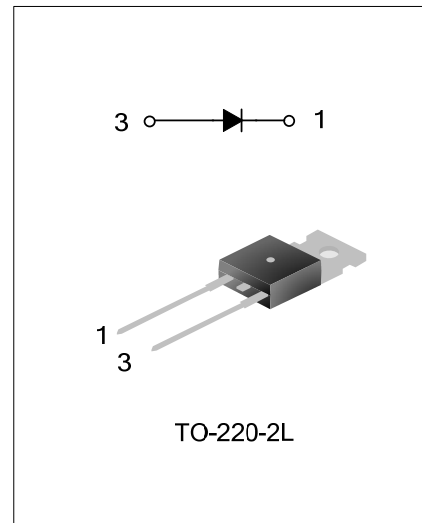


## 10A, 400V SUPER-FAST RECOVERY RECTIFIER

### GENERAL DESCRIPTION

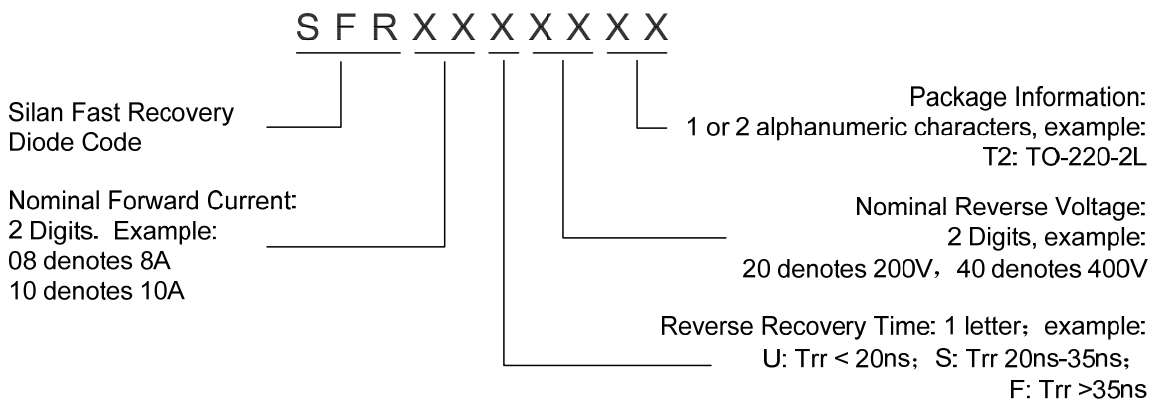
SFR10S40T2 is a Super-Fast Recovery Diode, fabricated in advanced silicon planar epitaxial technology. The process parameter and the device structure are fine tuned with optimized performance of forward voltage drop and reverse recovery time. Accuracy epitaxial dope control, advanced planar junction terminal structure and the platinum doped life control, guarantee the best overall performance, ruggedness and reliability characteristics. SFR10S40T2 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 35 Nanosecond Recovery Time
- \* Low Forward Voltage Drop
- \* Low Leakage Current
- \* 150 °C Operating Junction Temperature

### NOMENCLATURE



### ORDERING SPECIFICATIONS

Part No.	Package	Marking	Material	Packing
SFR10S40T2	TO-220-2L	SFR10S40T2	Pb free	Tube

## ABSOLUTE MAXIMUM RATINGS

Characteristics	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	VRRM	400	V
Average Rectified Forward Current	IF(AV)	10.0	A
Non Repetitive Peak Surge Current	IFSM	150	A
Operation Junction Temperature	TJ	-55~+150	°C
Storage Temperature	Tstg	-55~+150	°C

## THERMAL CHARACTERISTICS

Characteristics	Symbol	Rating	Unit
Thermal Resistance, Junction-to-Case	RθJC	3.0	°C/W

## ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (Note 1) (IF=10.0 Amps, Tc=25°C)	VF	--	--	1.3	V
Maximum Instantaneous Reverse Current(Note 1) (Rated dc Voltage, Tc=25°C)	IR	--	--	10.0	μA
Maximum Reverse Recovery Time (IF=0.5 Amp, IR=1.0Amp, IREC=0.25Amp)	trr	--	--	35	ns

**TYPICAL CHARACTERISTICS**

Figure 1. Instantaneous reverse leakage current vs. Percent of rated peak reverse voltage

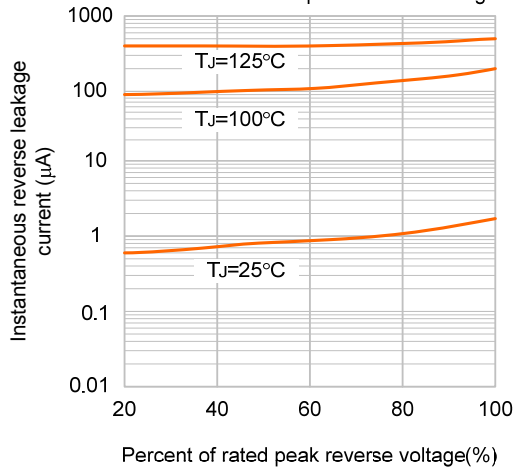


Figure 2. Junction capacitance vs. Reverse voltage

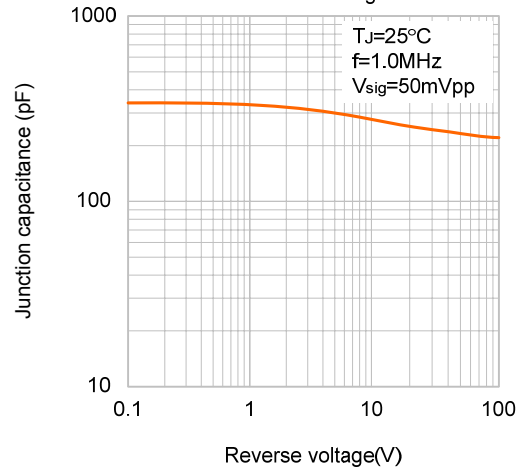
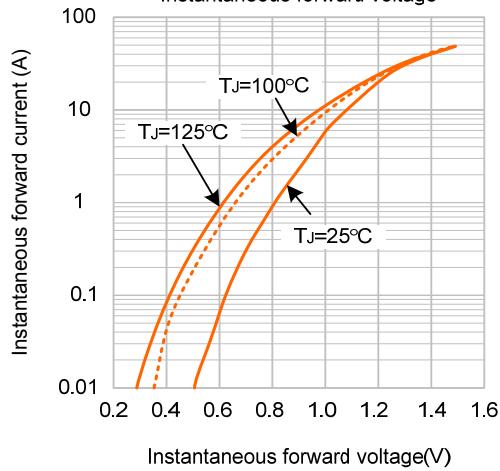
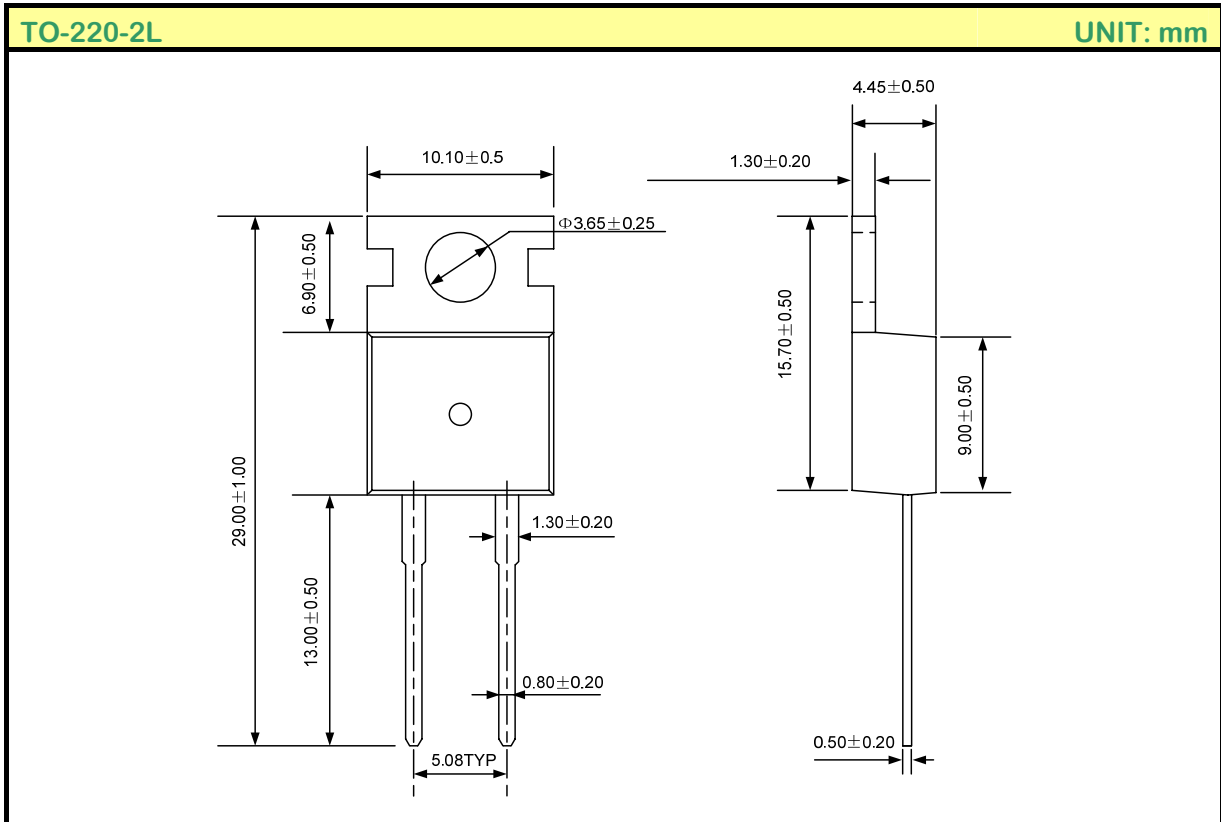


Figure 3. Instantaneous forward current vs. Instantaneous forward voltage



**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
2011.05.12	1.0	Initial release	