

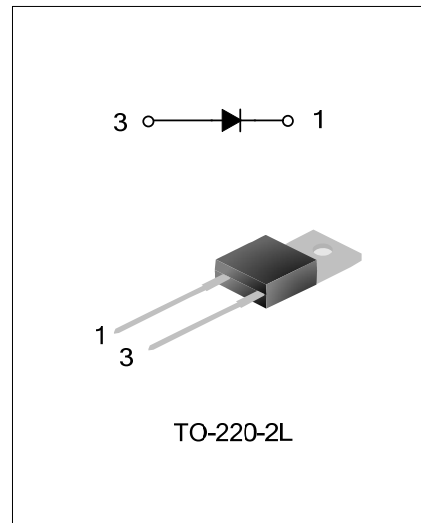
8A, 400V SUPER-FAST RECOVERY RECTIFIER

GENERAL DESCRIPTION

SFR08S40T2 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.

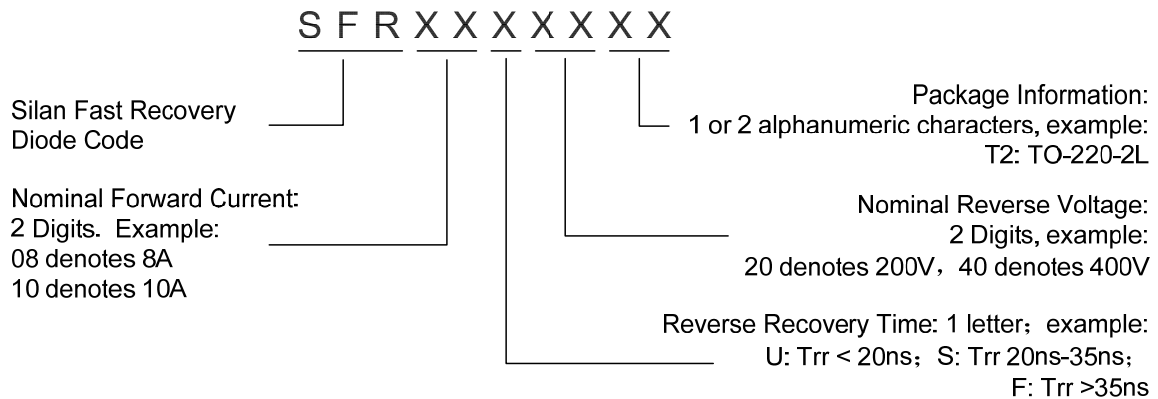
SFR08S40T2 is intended for use in the output rectification stage of SMPS, UPS, DC-DC converters as well as free-wheeling diode in low voltage inverters and chopper motor drivers.



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
SFR08S40T2	TO-220-2L	SFR08S40T2	Pb free	Tube

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	400	V
Average Rectified Forward Current	$I_{F(AV)}$	8.0	A
Non Repetitive Peak Surge Current	I_{FSM}	125	A
Operation Junction Temperature	T_J	-55~+150	°C
Storage Temperature	T_{stg}	-55~+150	°C

THERMAL CHARACTERISTICS

Parameter	Symbol	Rating	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	3.0	°C/W

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (Note 1) ($I_F=8.0$ Amps, $T_C=25^\circ\text{C}$)	V_F	--	--	1.25	V
Maximum Instantaneous Reverse Current(Note 1) (Rated dc Voltage, $T_C=25^\circ\text{C}$)	I_R	--	--	10.0	μA
Maximum Reverse Recovery Time ($I_F=0.5$ Amp, $I_R=1.0$ Amp, $I_{REC}=0.25$ Amp)	t_{rr}	--	--	35	ns

TYPICAL CHARACTERISTICS

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

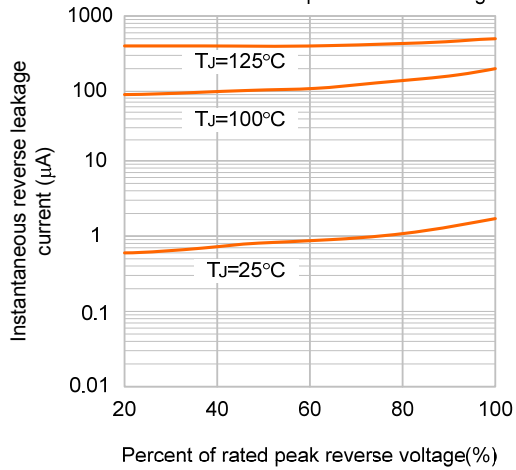


Figure 2. Junction capacitance vs. Reverse voltage

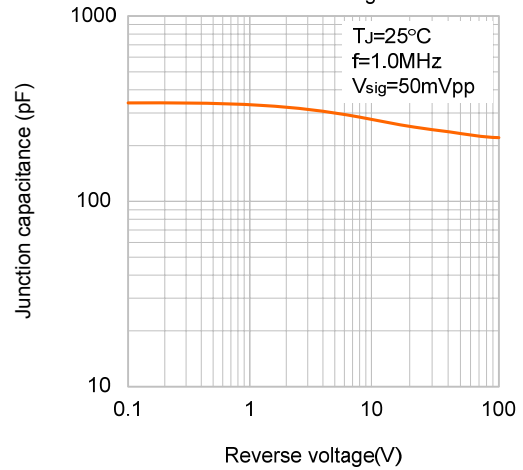
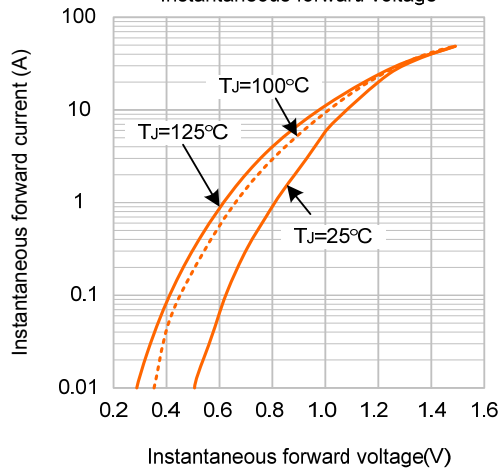
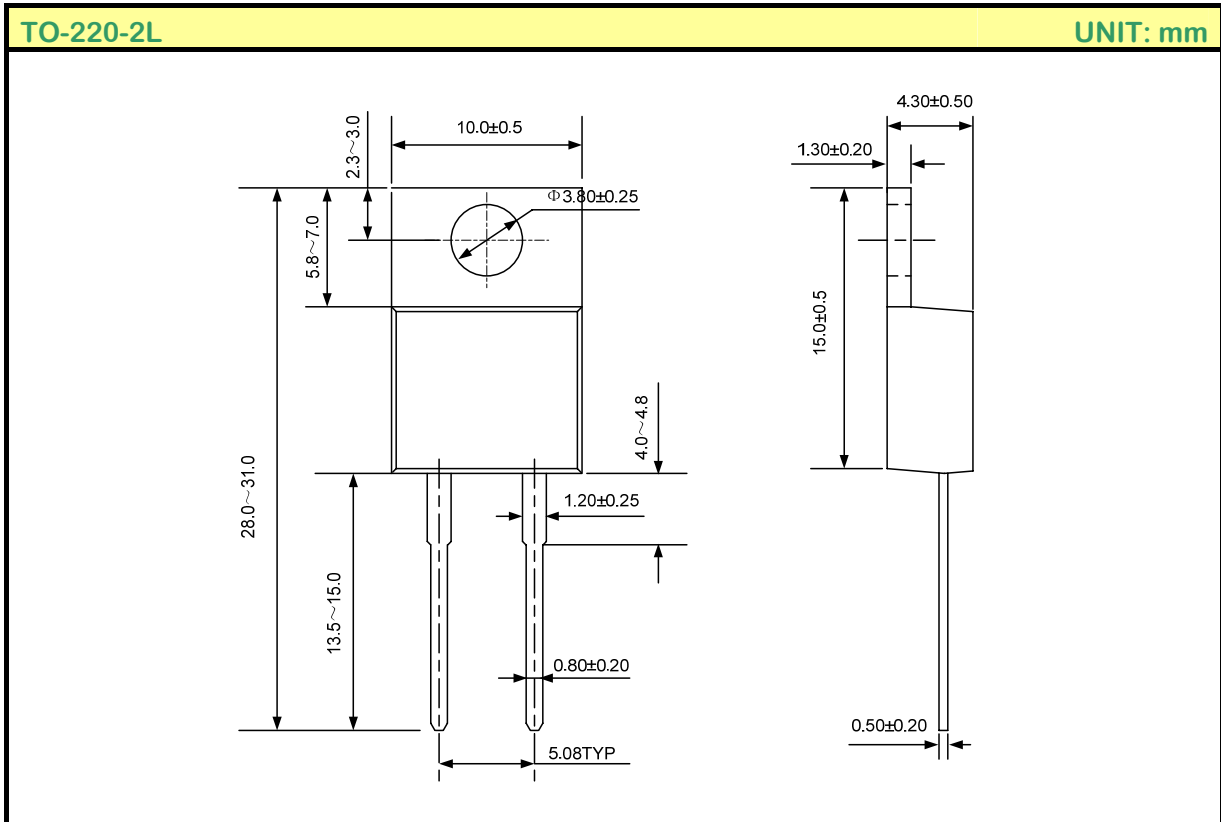


Figure 3. Instantaneous forward current vs. Instantaneous forward voltage



PACKAGE OUTLINE



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- 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.
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- Silan will supply the best possible product for customers!



ATTACHMENT

Revision History

Date	REV	Description	Page
2010.08.30	1.0	Original	
2010.10.21	1.1	Modify the template of Datasheet	