

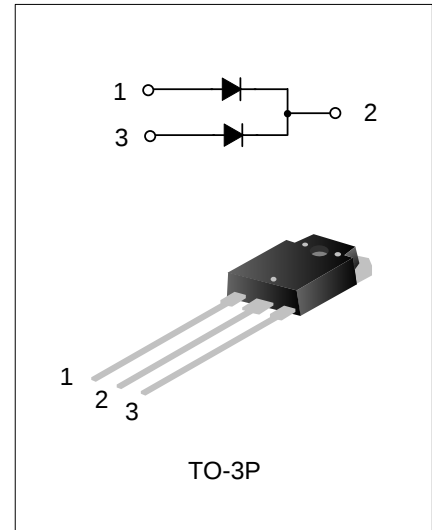
60A, 300V ULTRA-FAST RECOVERY RECTIFIER

GENERAL DESCRIPTION

RFR60F30APN is an 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.

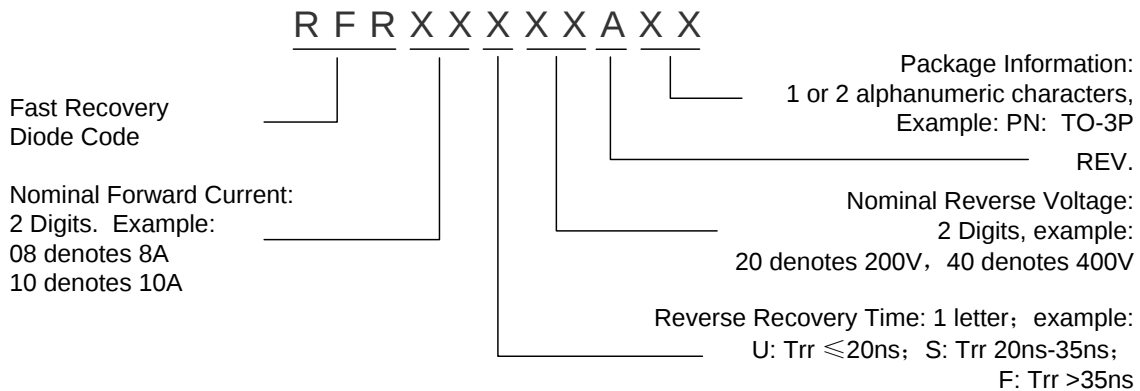
SFR60F30PN is intended for use in the output rectification stage of SMPS, UPS, DC-DC converters as well as free-wheeling diode in low voltage inverters and chopper motor drivers.



FEATURES

- ♦ Ultrafast 45 Nanosecond Recovery Time
- ♦ Low Forward Voltage Drop
- ♦ Low Leakage Current

NOMENCLATURE



ORDERING INFORMATION

Part No.	Package	Marking	Material	Packing
RFR60F30APN	TO-3P	60F30A	Pb free	Tube

RFR60F30APN_Datasheet

ABSOLUTE MAXIMUM RATINGS

Characteristics		Symbol	Rating	Unit
Peak Repetitive Reverse Voltage		V_{RRM}	300	V
Average Rectified Forward Current ($T_C=135^{\circ}\text{C}$)	Per Leg	$I_{F(AV)}$	30	A
	Total Device		60	
Non Repetitive Peak Surge Current	Per Leg	I_{FSM}	300	A
Operation Junction Temperature Range		T_J	$-65\sim+175$	$^{\circ}\text{C}$
Storage Temperature Range		T_{stg}	$-65\sim+175$	$^{\circ}\text{C}$

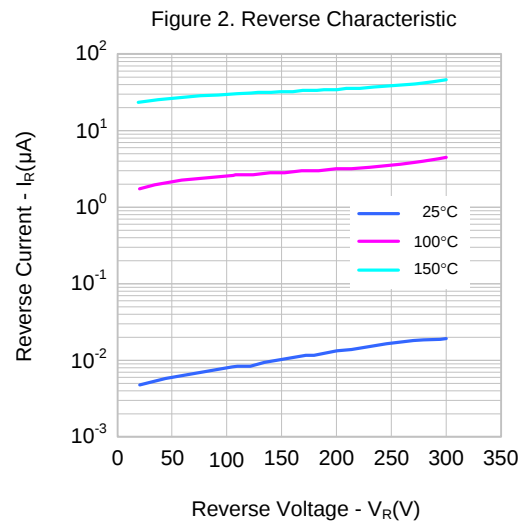
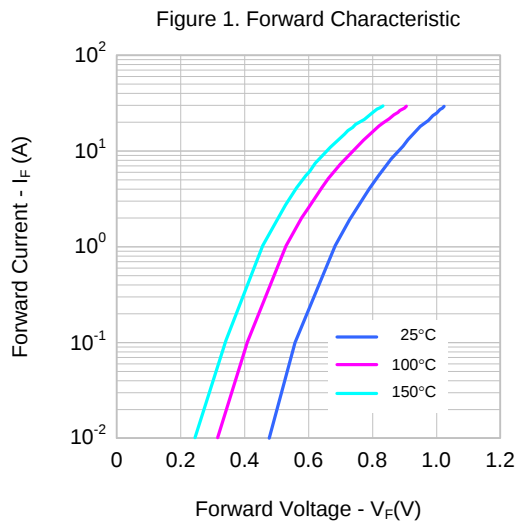
THERMAL CHARACTERISTICS (Per Leg)

Characteristics	Symbol	Rating	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	0.53	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS (Per Leg)

Characteristics		Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage	$I_F=30.0\text{ Amps}$, $T_C=25^{\circ}\text{C}$	V_F	--	--	1.25	V
	$I_F=30.0\text{ Amps}$, $T_C=125^{\circ}\text{C}$		--	0.9	1.05	
Maximum Instantaneous Reverse Current	Rated dc Voltage, $T_C=25^{\circ}\text{C}$	I_R	--	--	100	μA
	Rated dc Voltage, $T_C=125^{\circ}\text{C}$		--	--	600	
Maximum Reverse Recovery Time ($I_F=0.5\text{ Amp}$, $I_R=1.0\text{ Amp}$, $I_{REC}=0.25\text{ Amp}$)		t_{rr}	--	--	45	ns

TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS(continued)

Figure 3. Power Dissipation (Per leg)

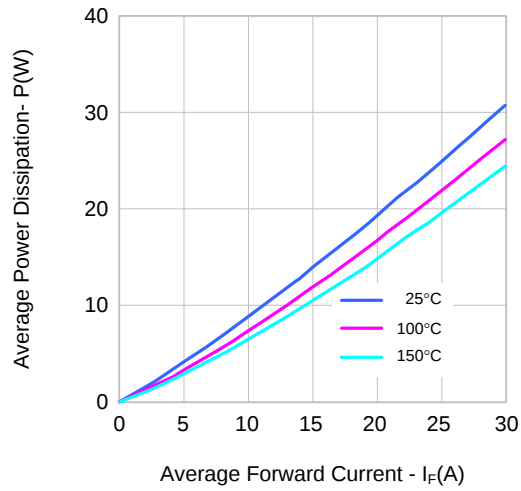
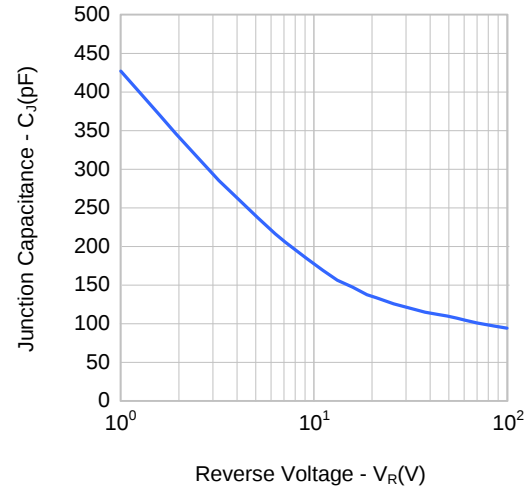


Figure 4. Junction Capacitance Characteristic



PACKAGE OUTLINE

TO-3P

UNIT: mm

