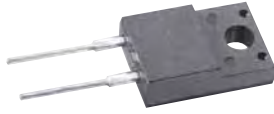


# USF505F-USF560F

Super Fast Rectifiers

**VOLTAGE RANGE: 50 --- 600 V**  
**CURRENT: 5.0 A**



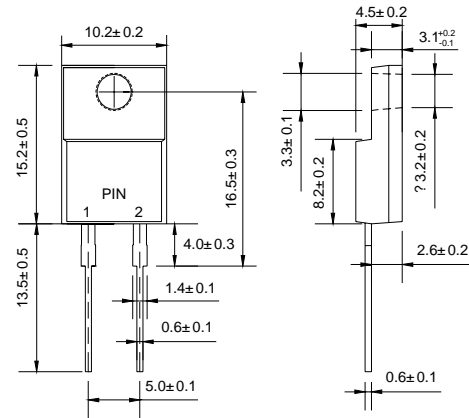
**ITO-220AC**

## Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ◇ Case: JEDEC ITO-220AC, molded plastic
- ◇ Polarity: As marked
- ◇ Weight: 0.056 ounces, 1.587 gram
- ◇ Mounting position: Any



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

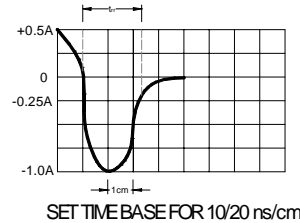
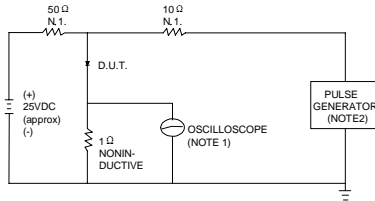
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

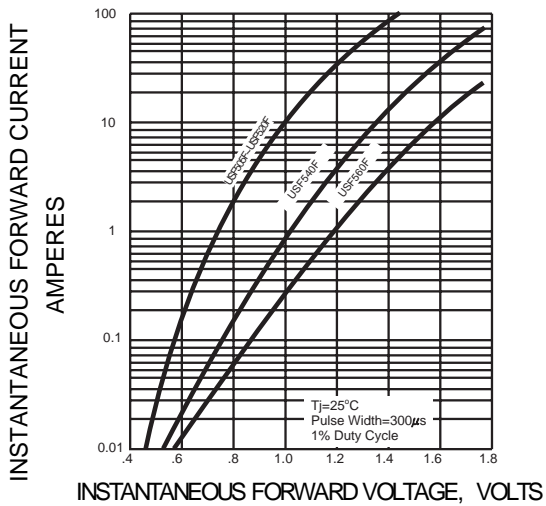
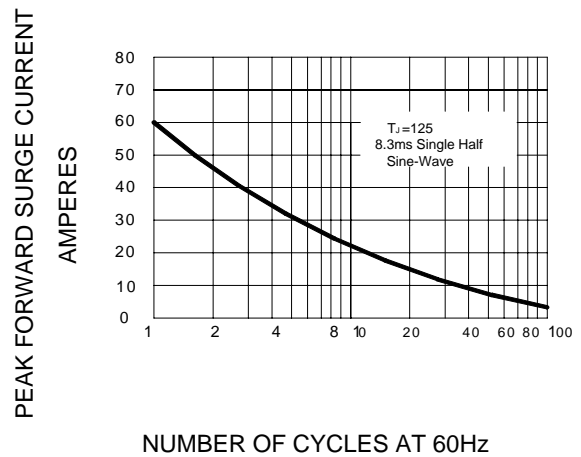
		USF 505F	USF 510F	USF 515F	USF 520F	USF 540F	USF 560F	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	150	200	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	280	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	400	600	V
Maximum average forward rectified current @ $T_C=100^\circ C$	$I_{F(AV)}$	5.0						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	60						A
Maximum instantaneous forward voltage @ 5.0A	$V_F$	0.975				1.3	1.5	V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=150^\circ C$	$I_R$	5.0				10.0		$\mu A$
		250				500		
Maximum reverse recovery time (Note1)	$t_{rr}$	25				50		ns
Operating junction temperature range	$T_J$	- 55 ----- + 150						$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ----- + 150						$^\circ C$

NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

## Ratings AND Characteristic Curves

**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**


NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ. 22pF.  
2.RISE TIME = 10ns MAX.SOURCE IMPEDANCE = 50 Ω.

**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**

**FIG.3 – PEAK FORWARD SURGE CURRENT**

**FIG.4-FORWARD DERATING CURVE**
