

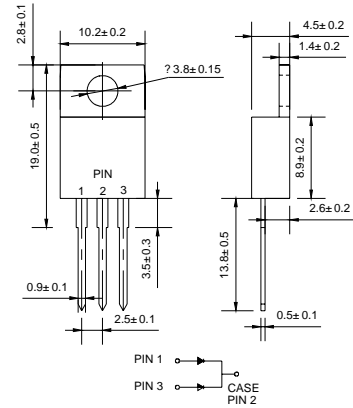
**VOLTAGE RANGE: 100 --- 600 V**  
**CURRENT: 5.0 A**  
**TO-220AB**

## 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 TO-220AB, molded plastic
- ◇ Polarity: As marked
- ◇ Weight: 0.08ounce, 2.24 grams
- ◇ 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%.

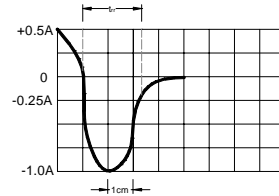
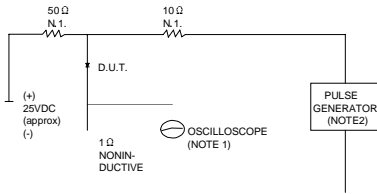
Type Number	Symbol	USF 510C	USF 520C	USF 530C	USF 540C	USF 550C	USF 560C	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	100	200	300	400	500	600	V
Maximum RMS voltage	$V_{RMS}$	70	140	210	280	350	420	V
Maximum DC blocking voltage	$V_{DC}$	100	200	300	400	500	600	V
Maximum average forward rectified 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 @ $T_J=125^\circ C$	$I_{FSM}$	40						A
Maximum instantaneous forward voltage @ 2.5A	$V_F$	0.98		1.3		1.7		V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=150^\circ C$	$I_R$	5.0			10			$\mu A$
		250			500			
Maximum reverse recovery time (Note1)	$t_{rr}$	25						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

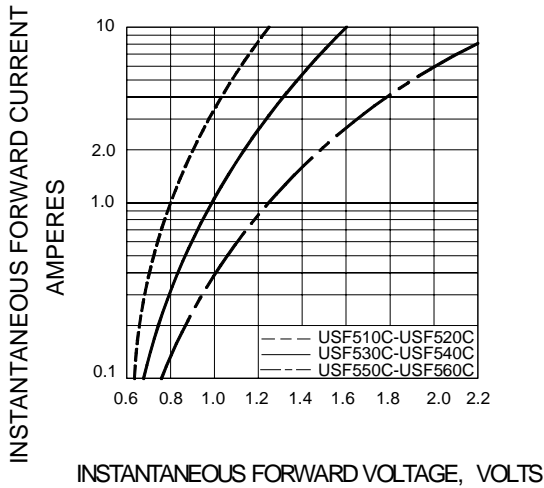
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



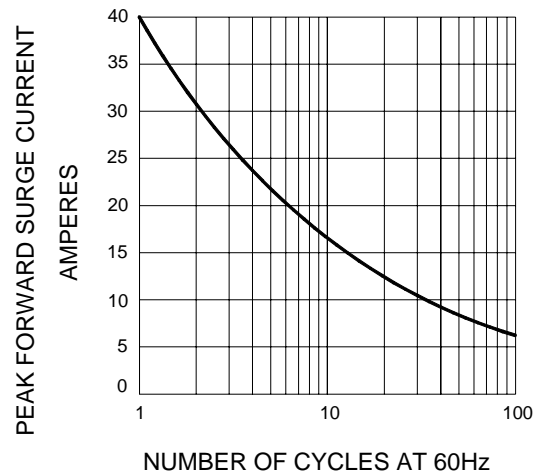
SET TIME BASE FOR 10 ns/cm

NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1M $\Omega$ . 22pF.  
2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50  $\Omega$ .

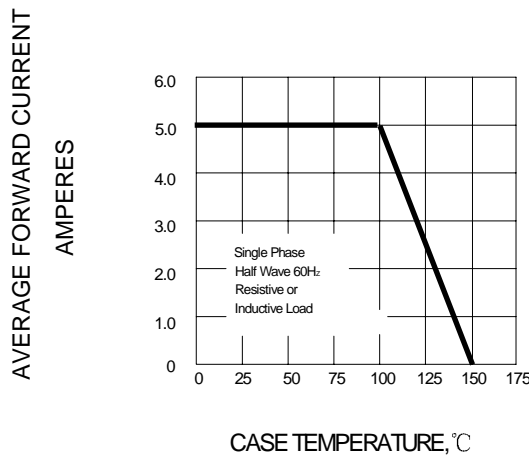
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



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



**FIG.4-FORWARD DERATING CURVE**



PACKAGE	PCS/TUBE	CARTON	CARTON	CARTON	CARTON
					NW/KG
TO-220	50	5000	57*22*18	13	9