

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 100 --- 600 V
CURRENT: 5.0 A

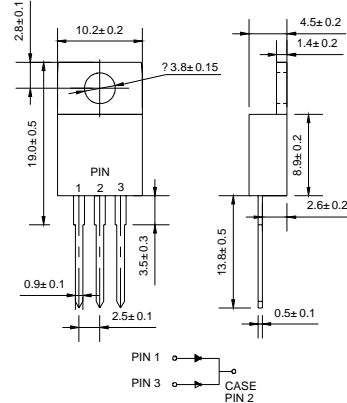
FEATURES

- ◇ 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
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.08ounce, 2.24 grams
- ◇ Mounting position: Any

TO-220AB



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

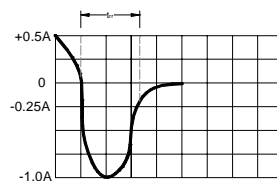
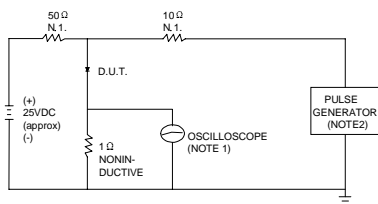
Ratings at 25°C ambient temperature unless otherwise specified.

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

		USF 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		500		μA
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 $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

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

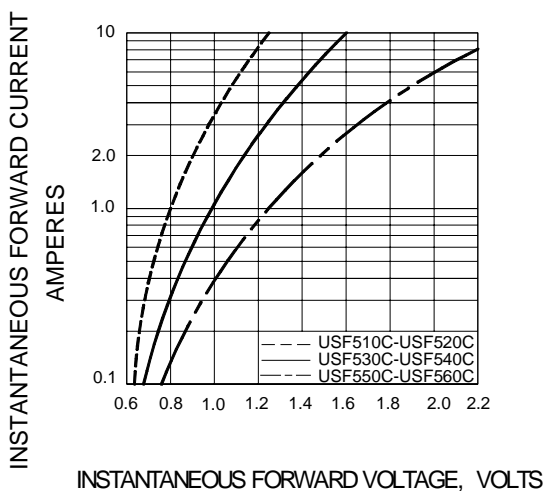


FIG.3 – PEAK FORWARD SURGE CURRENT

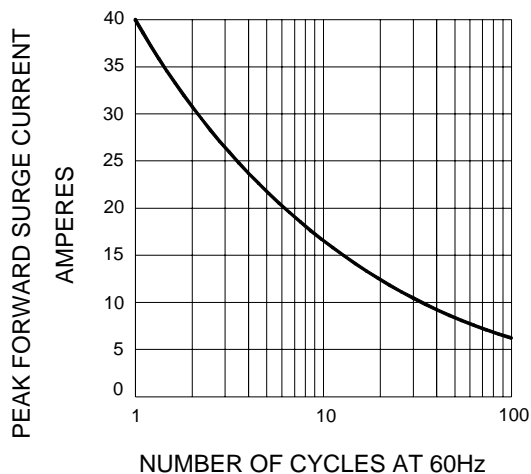


FIG.4-FORWARD DERATING CURVE

