

USF2010C-USF2060C

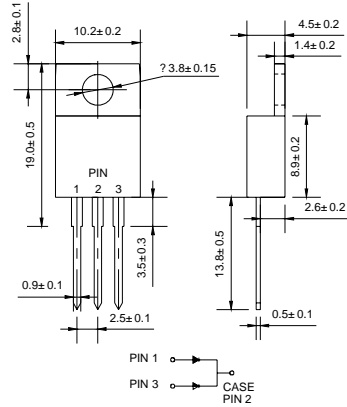
Super Fast Rectifiers



VOLTAGE RANGE: 100 --- 600 V

FORWARD CURRENT: 20 A

TO-220AB



Dimensions in millimeters

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: 0.06 ounce, 1.67 grams
- ◇ Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

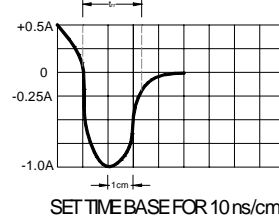
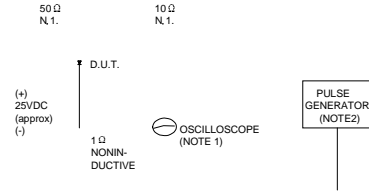
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

Type Number	Symbol	USF 2010C	USF 2020C	USF 2030C	USF 2040C	USF 2050C	USF 2060C	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 @ $T_C=100^\circ C$	$I_{F(AV)}$	20						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	150						A
Maximum instantaneous forward voltage @ 10 A	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}	35						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

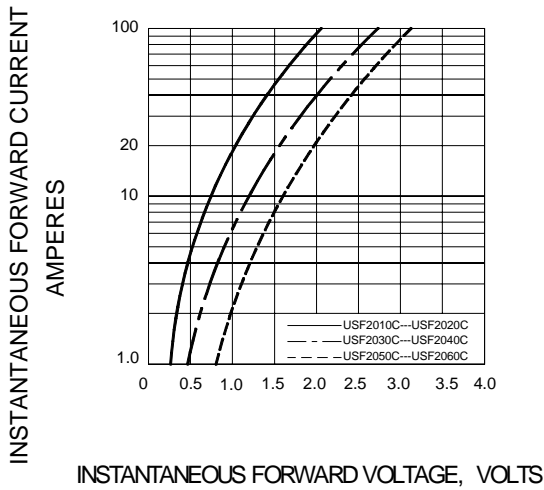


FIG.3 – PEAK FORWARD SURGE CURRENT

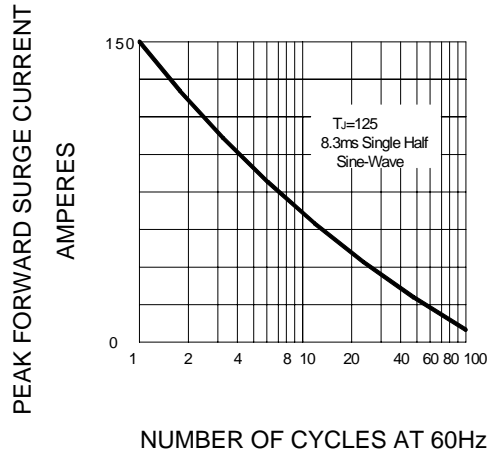
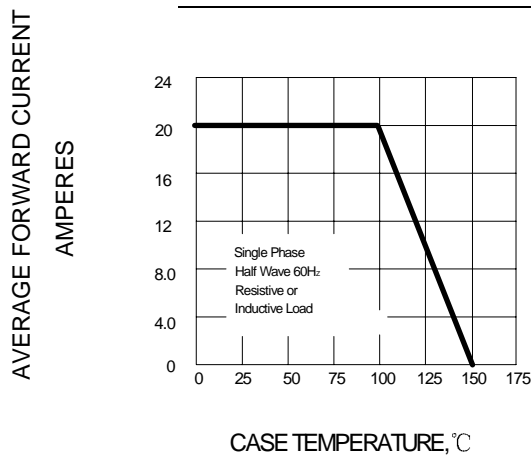


FIG.4-FORWORD DERATING CURVE



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