

Switchmode Full Plastic Dual Ultrafast Power Rectifiers

Designed for use in switching power supplies, inverters and as free wheeling diodes. These state-of-the-art devices have the following features:

- * High Surge Capacity
- * Low Power Loss, High efficiency
- * Glass Passivated chip junctions
- * 150 Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction
- * Low Forward Voltage , High Current Capability
- * High-Switching Speed 50 & 75 Nanosecond Recovery Time
- * Plastic Material used Carries Underwriters Laboratory

**ULTRA FAST
RECTIFIERS**

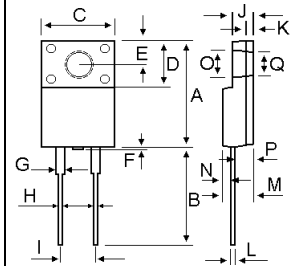
**8 AMPERES
700-1000 VOLTS**



ITO-220AC

MAXIMUM RATINGS

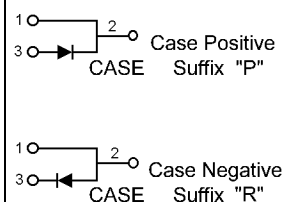
Characteristic	Symbol	URAF08				Unit
		70	80	90	100	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	700	800	900	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	490	560	630	700	V
Average Rectifier Forward Current Per Leg $T_C=125$	$I_{F(AV)}$	8.0				A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_C=125$)	I_{FM}	16				A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	100				A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +125				



DIM	MILLIMETERS	
	MIN	MAX
A	15.05	15.15
B	13.35	13.45
C	10.00	10.10
D	6.55	6.65
E	2.65	2.75
F	1.55	1.65
G	1.15	1.25
H	0.55	0.65
I	2.50	2.60
J	3.00	3.20
K	1.10	1.20
L	0.55	0.65
M	4.40	4.60
N	1.15	1.25
P	2.65	2.75
O	3.35	3.45
Q	3.15	3.25

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	URAF08				Unit
		70	80	90	100	
Maximum Instantaneous Forward Voltage ($I_F = 8$ Amp $T_C = 25$) ($I_F = 8$ Amp $T_C = 25$)	V_F	1.75 1.56				V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$) (Rated DC Voltage, $T_C = 125$)	I_R	10 500				uA
Reverse Recovery Time ($I_F = 0.5$ A, $I_R = 1.0$, $I_{rr} = 0.25$ A)	T_{rr}	150				ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	55				pF



URAF0870 Thru URAF08100

FIG-1 TYPICAL FORWARD CHARACTERISITICS

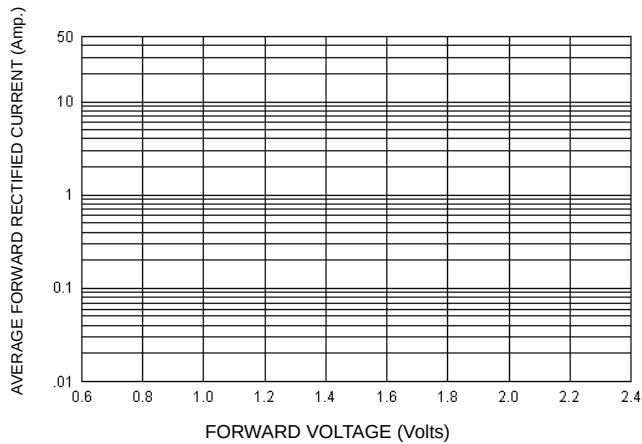


FIG-2 TYPICAL REVERSE CHARACTERISTICS

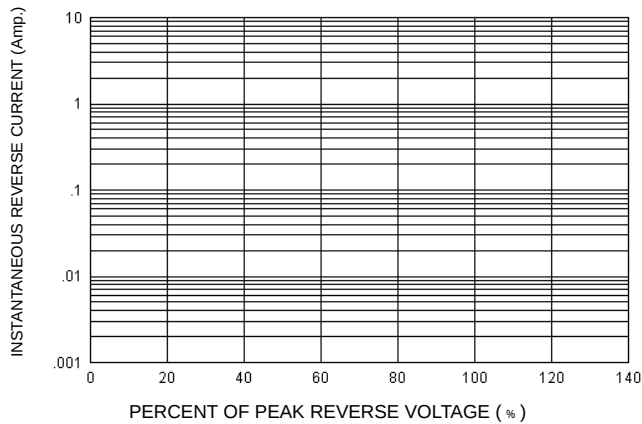


FIG-3 FORWARD CURRENT DERATING CURVE

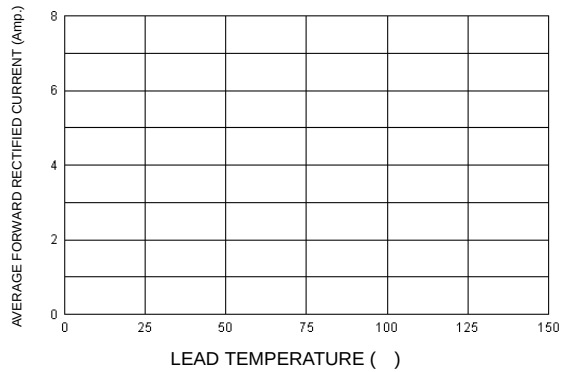


FIG-4 TYPICAL JUNCTION CAPACITANCE

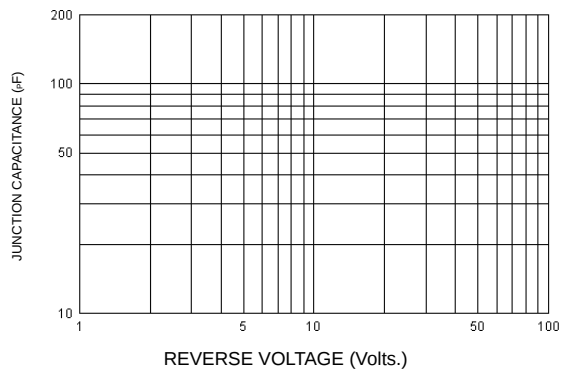
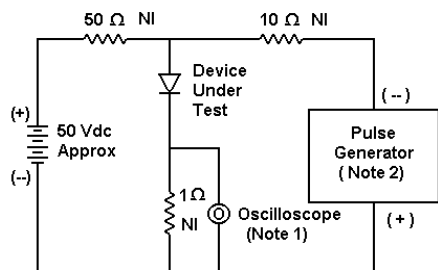
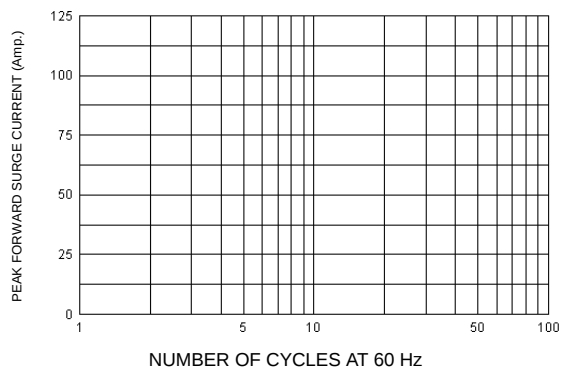
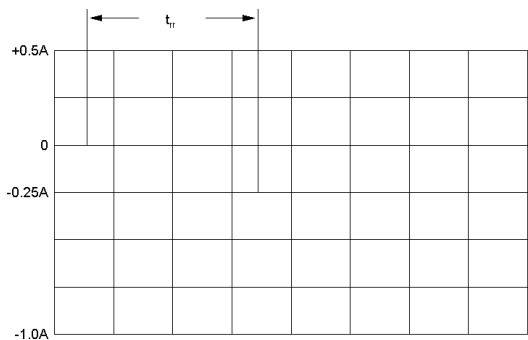


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
1. Rise Time = 7 ns max. Input Impedance = 1 MΩ, 22 pF
 2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 10/20 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram