

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 35 Nanosecond Recovery Time
- * Plastic Material used Carries Underwriters Laboratory

Mechanical Data

- * Case :JEDEC ITO-220AB molded plastic body
- * Terminals:Plated lead,solderable per MIL-STD-750, Method 2026
- * Polarity:As marked
- * Mounting Torque: 4-6kg.cm
- * Weight:1.7 g approx.



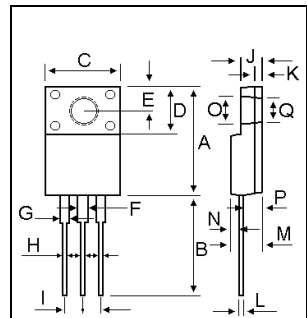
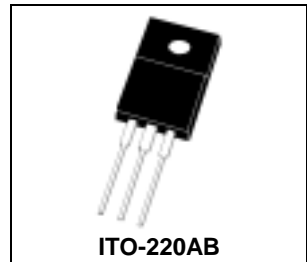
Plating pb free is indicated by box

"G" Green product

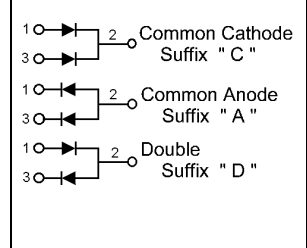
The green product is indicated by the date code before with alphabet "G" XMY

**ULTRA FAST
RECTIFIERS**

**10 AMPERES
50-200 VOLTS**



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



MAXIMUM RATINGS

Characteristic	Symbol	URF10				Unit
		05	10	15	20	
Peak Repetitive Reverse Voltage	V_{RRM}					V
Working Peak Reverse Voltage	V_{RWM}	50	100	150	200	
DC Blocking Voltage	V_R					
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	V
Average Rectifier Forward Current	$I_{F(AV)}$	5.0				A
Total Device (Rated V_R), $T_C=100$		10				
Peak Repetitive Forward Current	I_{FM}	10				A
(Rate V_R , Square Wave, 20kHz, $T_C=125$)						
Non-Repetitive Peak Surge Current	I_{FSM}	100				A
(Surge applied at rate load conditions half-wave, single phase, 60Hz)						
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150				

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	URF10				Unit
		05	10	15	20	
Maximum Instantaneous Forward Voltage ($I_F=5.0$ Amp $T_C=25$) ($I_F=5.0$ Amp $T_C=125$)	V_F	0.975				V
		0.870				
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25$) (Rated DC Voltage, $T_C=125$)	I_R	5.0				uA
		200				
Reverse Recovery Time ($I_F=0.5$ A, $I_R=1.0$, $I_{rr}=0.25$ A)	T_{rr}	35				ns
Typical Thermal Resistance junction to case	$R_{\theta jc}$	3.6				/w
Typical Thermal Resistance junction to case	$R_{\theta j-c}$	3.5				/w
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1$ MHz)	C_P	55				pF

URF1005 Thru URF1020

FIG-1 TYPICAL FORWARD CHARACTERISTICS

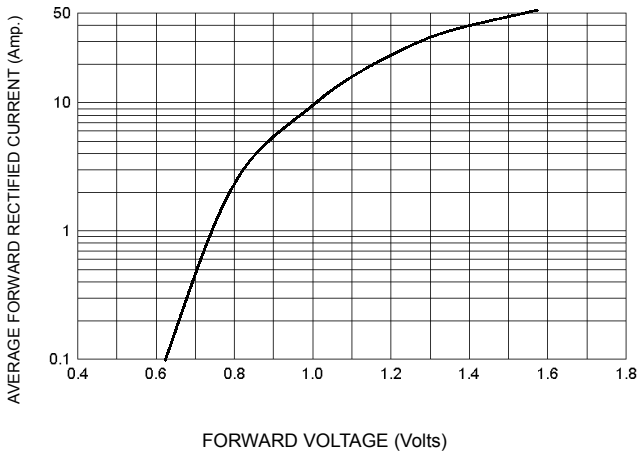


FIG-3 FORWARD CURRENT DERATING CURVE

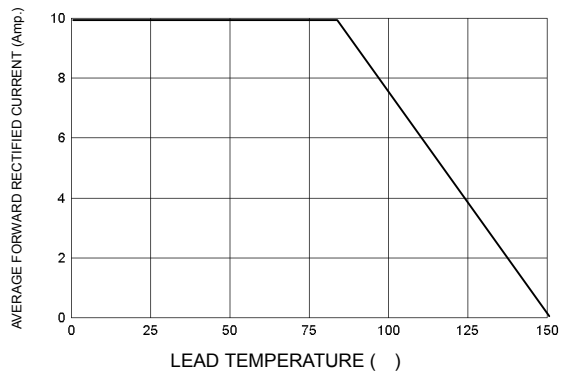


FIG-2 TYPICAL REVERSE CHARACTERISTICS

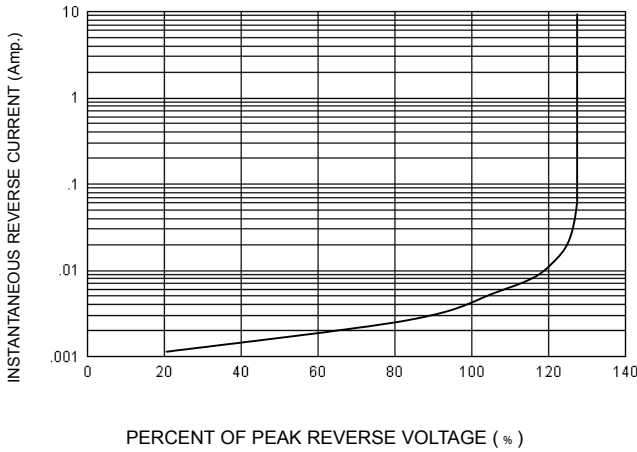


FIG-4 TYPICAL JUNCTION CAPACITANCE

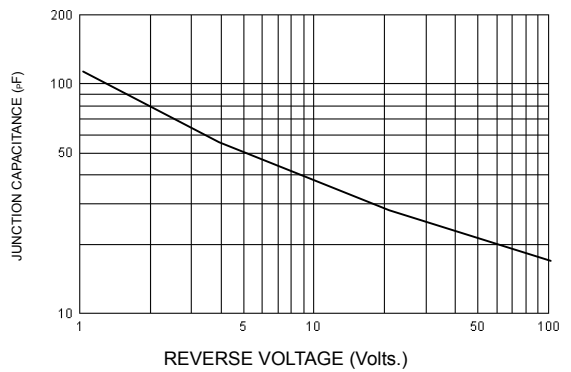
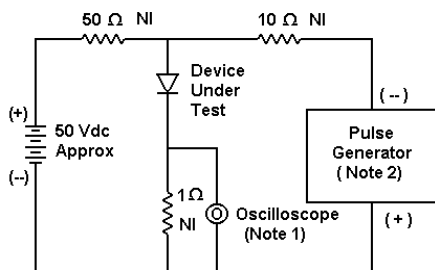
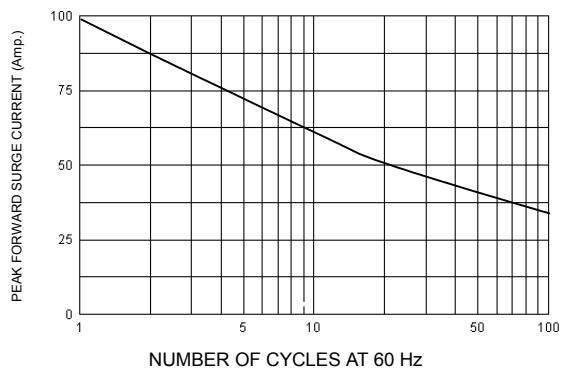
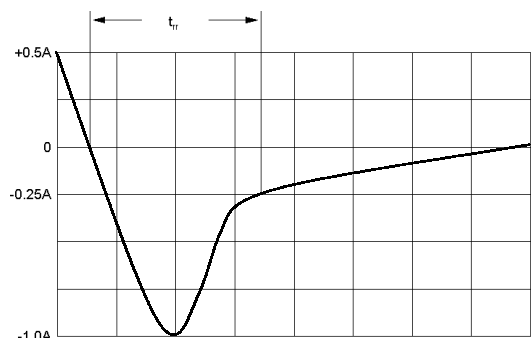


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
 1. Rise Time = 7 ns max. Input Impedance = 1 M Ω , 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