

Switchmode Full Plastic 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:

- * Low T_{RR}
- * High Surge Capacity
- * Low Power Loss, High efficiency
- * 175 Operating Junction Temperature
- * Low Forward Voltage, High Frequency
- * High-Switching Speed 21(typ.) Nanosecond Recovery Time
- * Plastic Material used Carries Underwriters Laboratory



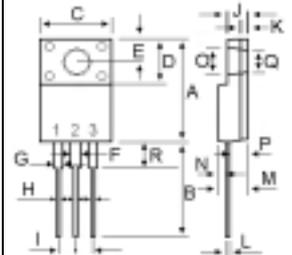
* In compliance with EU RoHs 2002/95/EC directives

**ULTRA FAST
RECTIFIERS**

**20 AMPERES
600 VOLTS**



TO-220AB



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
O	3.35	3.45
P	2.65	2.75
Q	3.15	3.25

MAXIMUM RATINGS

Characteristic	Symbol	UFF20C60	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R), $T_C=55$	$I_{F(AV)}$	10 20	A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_C=125$)	I_{FM}	20	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	175	A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +175	

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	Min	TYPE	MAX.	Unit
Maximum Instantaneous Forward Voltage ($I_F=10$ Amp $T_C=25$) ($I_F=10$ Amp $T_C=125$)	V_F		2.2 1.95	2.5 2.3	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25$) (Rated DC Voltage, $T_C=125$)	I_R			25 10	μ A mA
Reverse Recovery Time ($I_F=0.5$ A, $I_R=1.0$, $I_{rr}=0.25$ A)	T_{rr}		20	25	ns
Typical Thermal Resistance junction to case	$R_{\theta j-c}$		3.6		/w



Common Cathode
Suffix "C"

UFF20C60

FIG-1 TYPICAL FORWARD CHARACTERISTICS

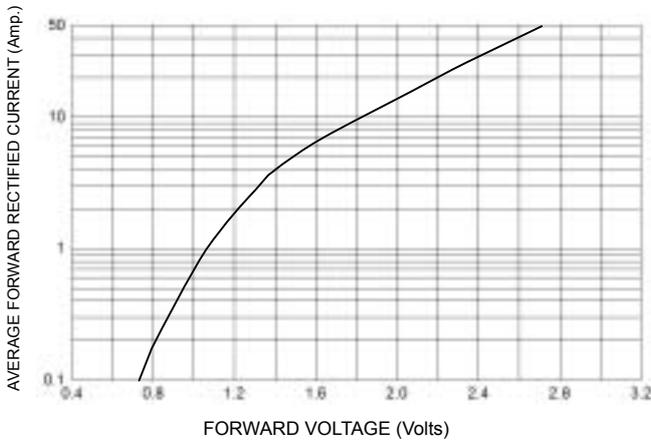


FIG-3 FORWARD CURRENT DERATING CURVE

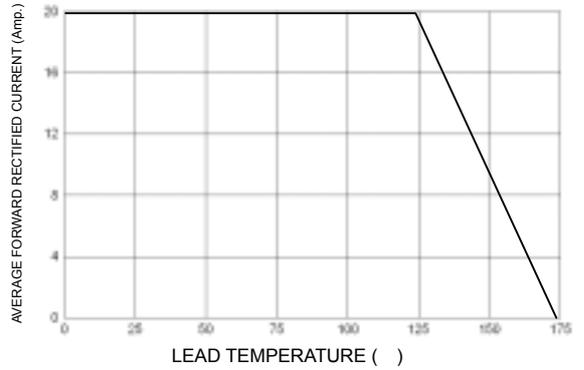


FIG-2 TYPICAL REVERSE CHARACTERISTICS

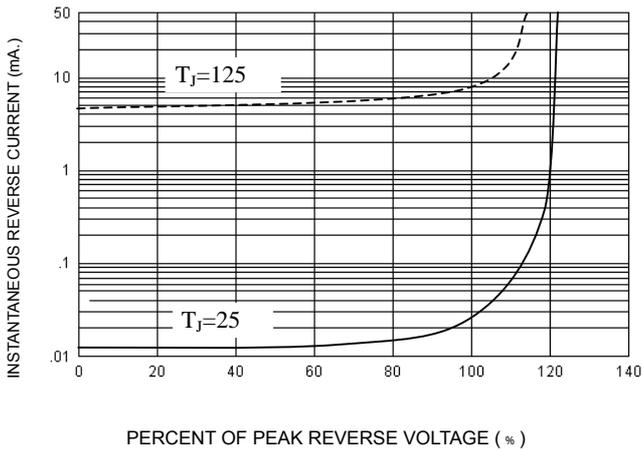


FIG-4 TYPICAL JUNCTION CAPACITANCE

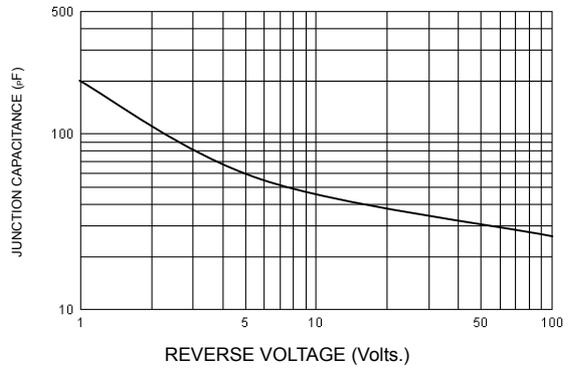
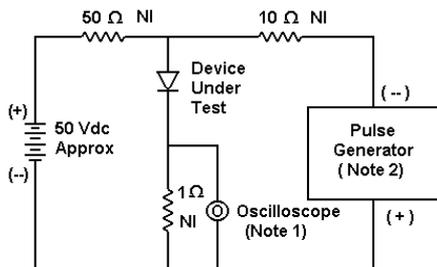
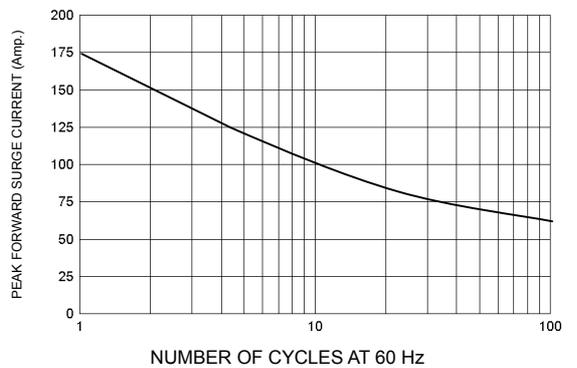
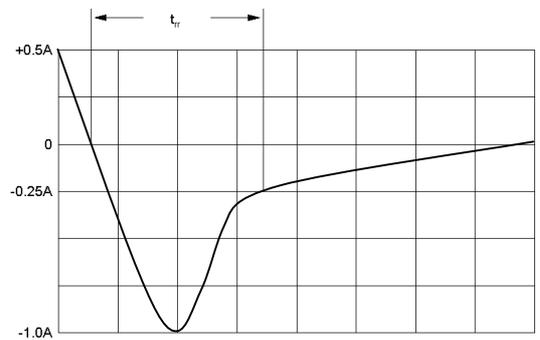


FIG-5 PEAK FORWARD SURGE CURRENT



- 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