

## Ultra Fast Recovery Rectifier Diodes

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

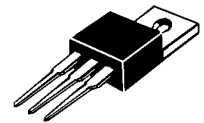
- \* Low  $T_{RR}$
- \* High Surge Capacity
- \* Low Power Loss, High efficiency
- \* 175 Operating Junction Temperature
- \* Low Forward Voltage, High Frequency
- \* High-Switching Speed 21(typ.) Nanosecond Recovery Time
- \* Plastic Material used Carries Underwriters Laboratory



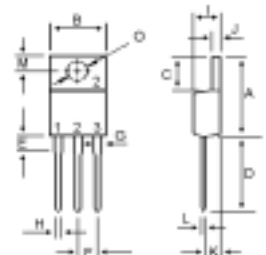
\* *In compliance with EU RoHs 2002/95/EC directives*

**ULTRA FAST  
RECTIFIERS**

**16 AMPERES  
600 VOLTS**



**TO-220AB**



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	5.02	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.98
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90

## MAXIMUM RATINGS

Characteristic	Symbol	UF16C60	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 $V_R$ , $T_C=125$ )	$I_{F(AV)}$	8 16	A
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz, $T_C=125$ )	$I_{FM}$	8.0	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	$I_{FSM}$	150	A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +175	

## THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta jc}$	4.2	/w
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## ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	Min	Type	Max.	Unit
Maximum Instantaneous Forward Voltage ( per diode ) ( $I_F=8$ Amp $T_C=25$ )	$V_F$	--	1.85	2.2	V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C=25$ ) ( Rated DC Voltage, $T_C=100$ )	$I_R$	--	--	25 5	$\mu$ A mA
Reverse Recovery Time ( $I_F=0.5$ A, $I_R=1.0$ , $I_{rr}=0.25$ A )	$T_{rr}$	--	18	25	ns



Common Cathode  
Suffix "C"

# UF16C60

FIG-1 TYPICAL FORWARD CHARACTERISTICS

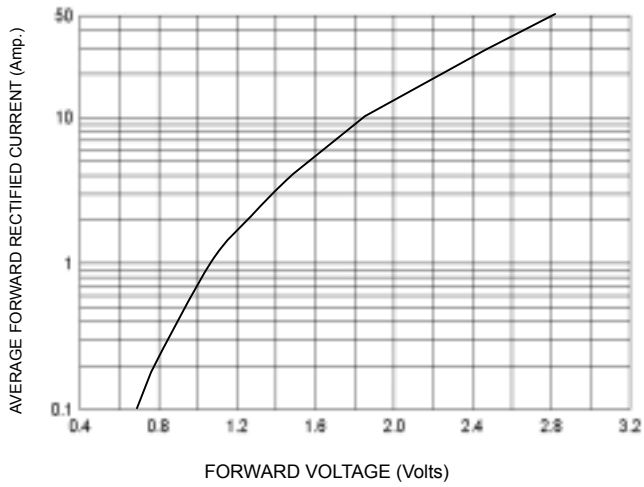


FIG-2 FORWARD CURRENT DERATING CURVE

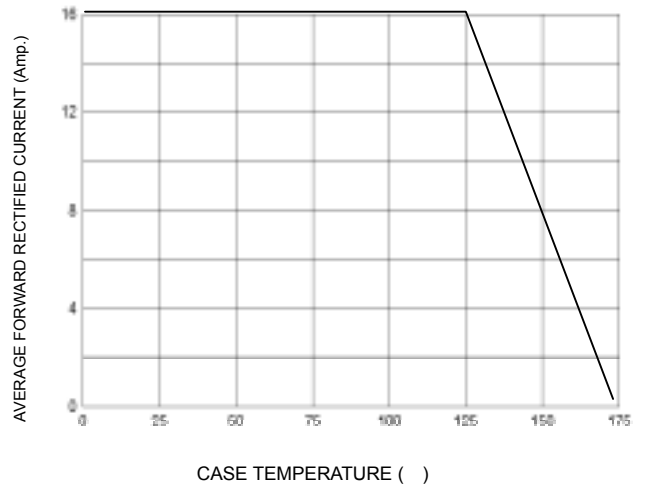


FIG-3 TYPICAL REVERSE CHARACTERISTICS

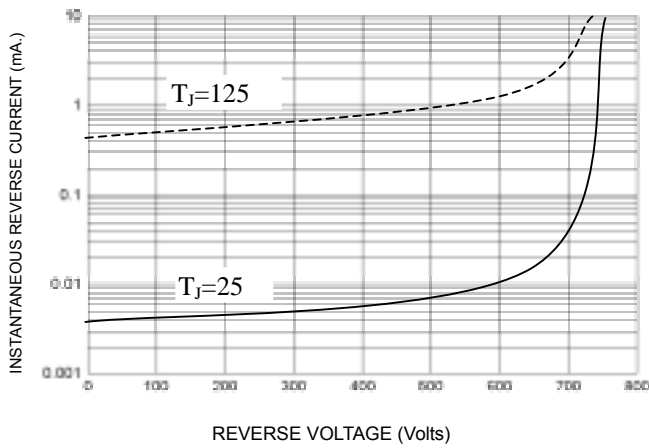
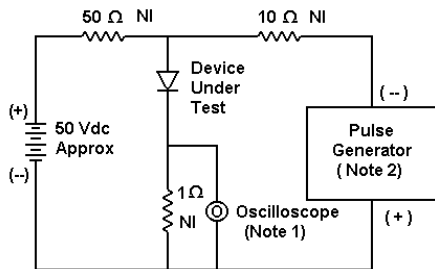
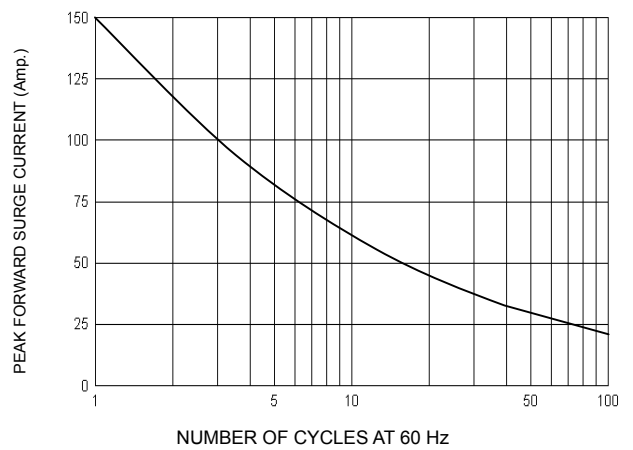
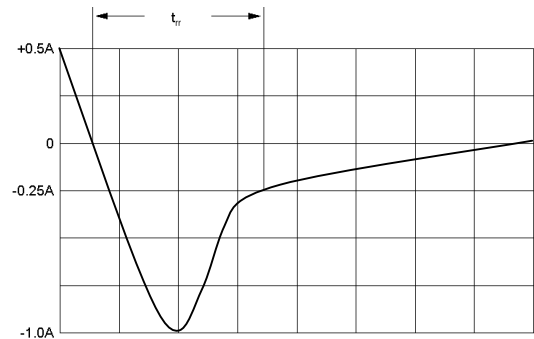


FIG-4 PEAK FORWARD SURGE CURRENT



- 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

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