



# Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: [frontiersales@frontierusa.com](mailto:frontiersales@frontierusa.com)

Web: <http://www.frontierusa.com>

## 6A ULTRA FAST RECOVERY RECTIFIER

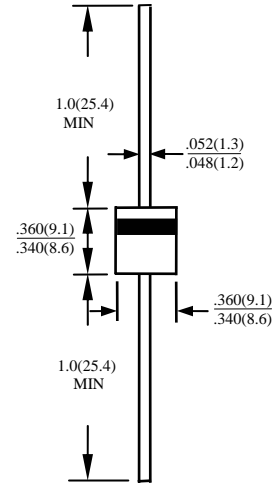
### UF60-005 THRU UF60-10

#### FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- ULTRA FAST RECOVERY TIMES FOR HIGH EFFICIENCY
- LOW FORWARD VOLTAGE, HIGH CURRENT CAPABILITY
- LOW LEAKAGE
- HIGH SURGE CAPABILITY
- HIGH TEMPERATURE SOLDERING GUARANTEED:  
260°C/0.375" (9.5mm) LEAD LENGTHS FOR 10 SECONDS AT 5 LBS. (2.3 KG) TENSION.

#### MECHANICAL DATA

- CASE: P6, JEDEC DO-201AD, MOLDED PLASTIC DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: AXIAL LEADS SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE END
- MOUNTING POSITION: ANY
- WEIGHT: 2.1 GRAM



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 CURRENT BY 20%

RATINGS	SYMBOL	UF60-005	UF60-01	UF60-02	UF60-04	UF60-06	UF60-08	UF60-10	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	$V_{RRM}$	50	100	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	$V_{RMS}$	35	70	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	$V_{DC}$	50	100	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375"(9.5mm) LEAD LENGTH AT TA=50°C	$I_O$	6.0							A
PEAK FORWARD SURGE CURRENT 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	300							A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	$C_J$	150							PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	10							°C/W
STORAGE TEMPERATURE RANGE	$T_{STG}$	-55 TO + 150							°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	-55 TO + 150							°C

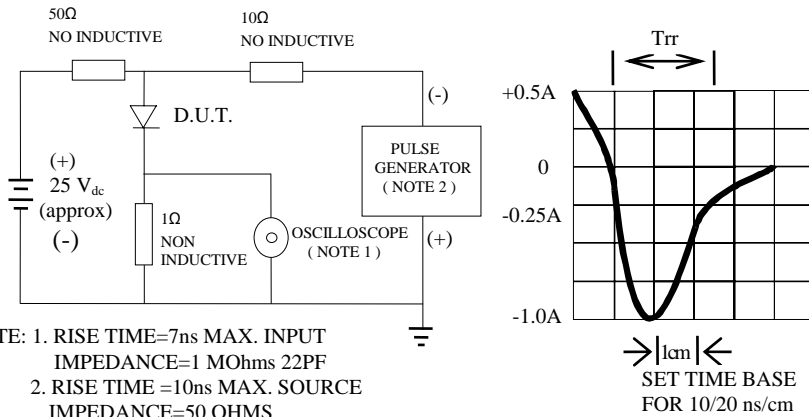
#### ELECTRICAL CHARACTERISTICS (AT TA =25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	UF60-005	UF60-01	UF60-02	UF60-04	UF60-06	UF60-08	UF60-10	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_O$ DC	$V_F$	1.3			1.4	1.7	2.0		V
MAXIMUM REVERSE CURRENT AT TA=25°	$I_R$	25							μA
MAXIMUM REVERSE CURRENT AT TA=100°	$I_R$	250							μA
MAXIMUM REVERSE RECOVERY TIME (NOTE3)	$T_{RR}$	50				75			nS

- NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS  
 2. BOTH LEADS ATTACHED TO HEAT SINK 70x70x1(mm) COPPER PLATE AT LEAD LENGTH 5mm  
 3. REVERSE RECOVERY TEST CONDITIONS:  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$

# RATINGS AND CHARACTERISTIC CURVE UF60-005 THRU UF60-10

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF  
 2. RISE TIME =10ns MAX. SOURCE IMPEDANCE=50 OHMS

FIG. 2 -TYPICAL FORWARD CURRENT DERATING CURVE

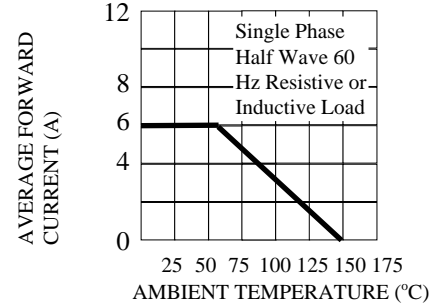


FIG. 3 -TYPICAL REVERSE CHARACTERISTICS

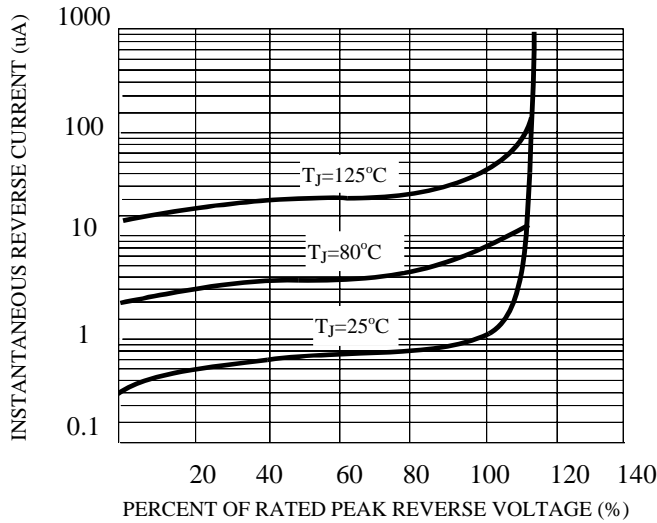


FIG. 4 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

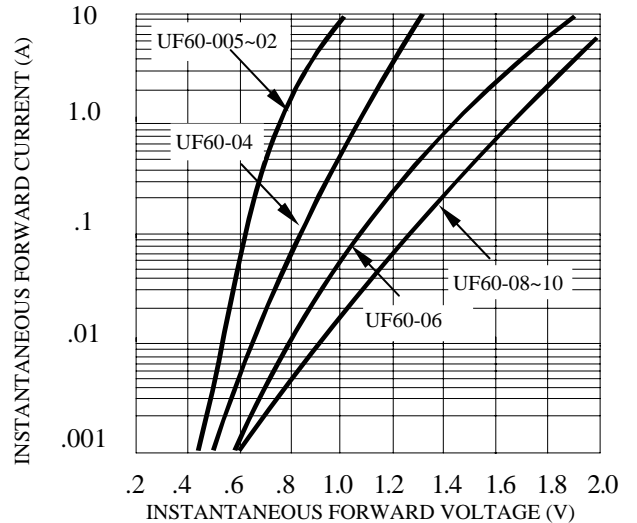


FIG. 5 -MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

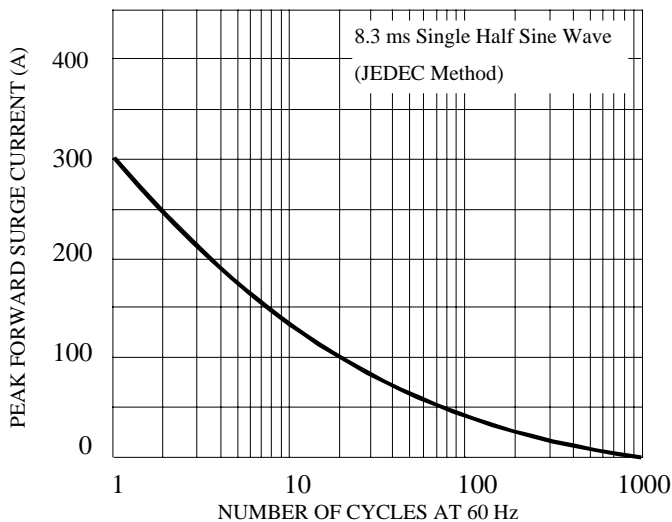


FIG. 6 -TYPICAL JUNCTION CAPACITANCE

