

# UGP10A-UGP10K

Super Fast Rectifiers

**VOLTAGE RANGE: 50 --- 800 V**

**CURRENT: 1.0 A**

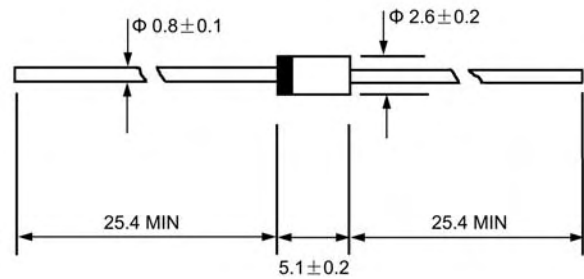
## Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ low leakage current
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ Plastic package has underwriters laboratory flammability classification 94v-0

## Mechanical Data

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any

## DO - 41



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate by 20%.

		UGP 10A	UGP 10B	UGP 10D	UGP 10F	UGP 10G	UGP 10J	UGP 10K	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	300	400	600	800	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	420	560	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	600	800	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	30.0					25.0		A
Maximum instantaneous forward voltage @ 1.0A	$V_F$	0.95			1.25		1.7	2.2	V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0					50.0		$\mu\text{A}$
Maximum reverse recovery time (Note1)	$t_{rr}$	35					ns		
Typical junction capacitance (Note2)	$C_J$	17					pF		
Typical thermal resistance (Note3)	$R_{\theta JA}$	50					$^\circ\text{C/W}$		
Operating junction temperature range	$T_J$	- 55 ----- + 150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ----- + 150							$^\circ\text{C}$

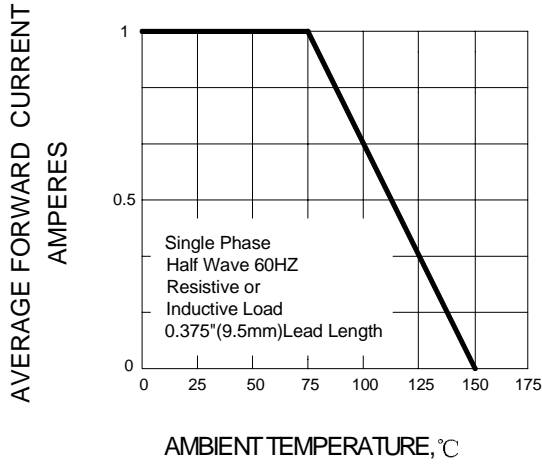
NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

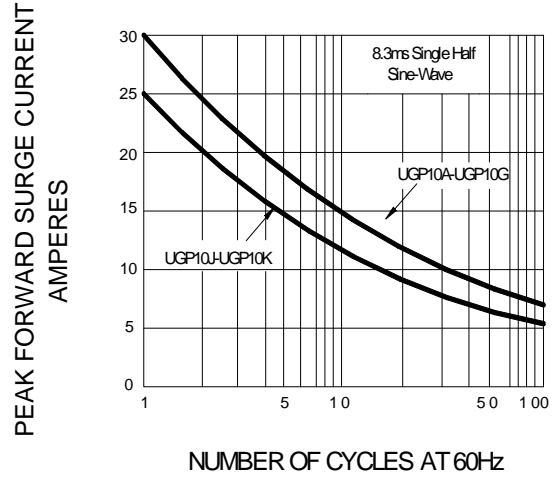
3. Thermal resistance junction to ambient.

### Ratings AND Characteristic Curves

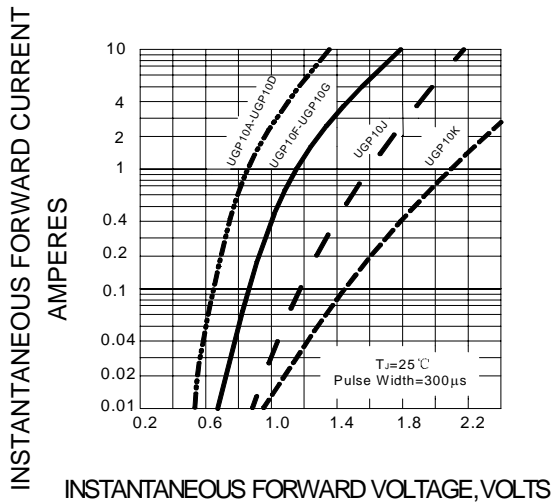
**FIG.1 – FORWARD DERATING CURVE**



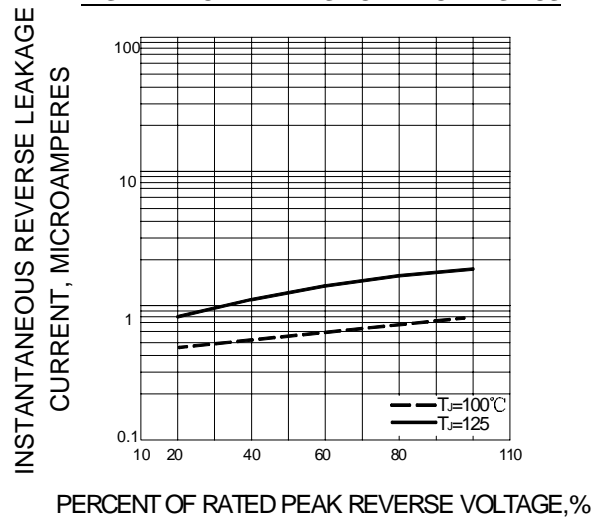
**FIG.2 – PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

