

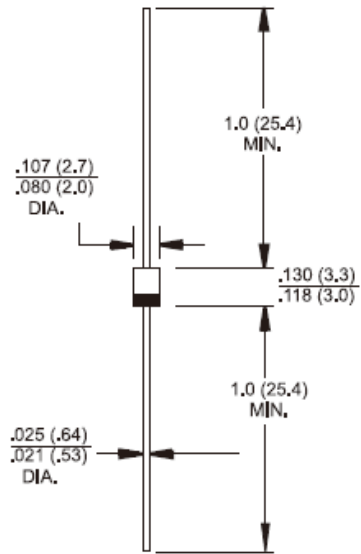
**Features**

- ✧ Plastic package has Underwrites Laboratories Flammability Classification 94V-0
- ✧ Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- ✧ Ultrafast recovery time for high efficiency
- ✧ Excellent high temperature switching
- ✧ Glass passivated junction
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375"(.95mm) lead lengths at 5lbs.(2.3kg) tension
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

**Mechanical Data**

- ✧ Cases: Void free molded plastic body over glass passivated chip junction
- ✧ Terminals: Pure tin plated leads, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode
- ✧ Mounting position: Any
- ✧ Weight: 0.181 grams

**TS-1**



**Dimensions in inches and (millimeters)**

**Marking Diagram**



- UG06X = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

**Maximum Ratings and Electrical Characteristics**

Rating 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%

Type Number	Symbol	UG06A	UG06B	UG06C	UG06D	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	25	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @ $T_L = 75^\circ C$	$I_{F(AV)}$	0.6				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	40				A
Maximum Instantaneous Forward Voltage (Note 1) @ 0.6A	$V_F$	0.95				V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ C$ @ $T_A = 125^\circ C$	$I_R$	5 150				 uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	15				nS
Typical Junction Capacitance (Note 3)	$C_j$	9				pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$ $R_{\theta JL}$	97 28				 °C/W
Operating Temperature Range $T_J$	$T_J$	- 55 to + 150				°C
Storage Temperature Range $T_{STG}$	$T_{STG}$	- 55 to + 150				°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$

Note 3: Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts D.C.

Note 4: Thermal Resistance from Junction to Ambient at 0.375"(9.5mm) Lead Length. Mounted on Cu-Pad Size 0.2" x 0.2" (5mm x 5mm) on PCB.

## RATINGS AND CHARACTERISTIC CURVES (UG06A THRU UG06D)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

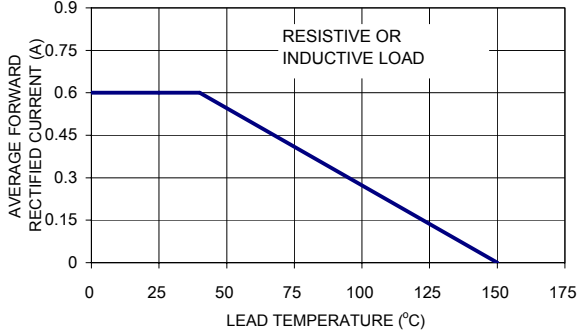


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

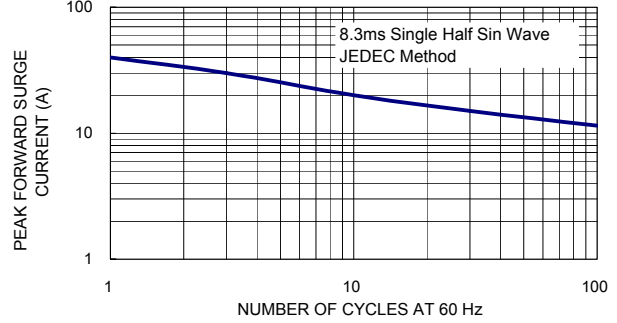


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

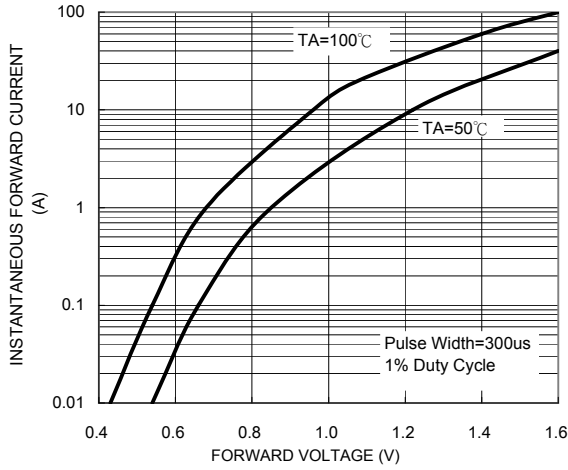


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

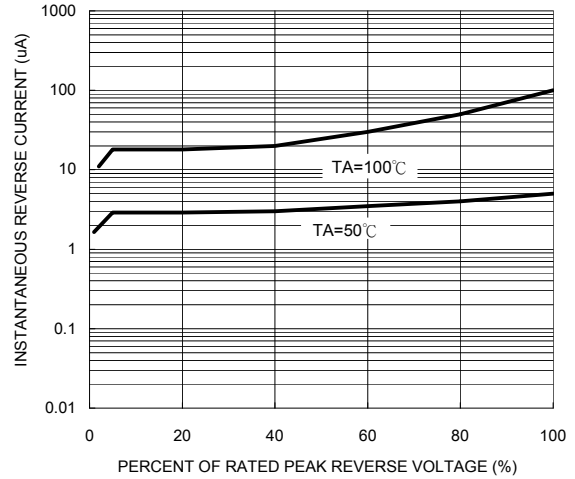


FIG. 5- TYPICAL JUNCTION CAPACITANCE

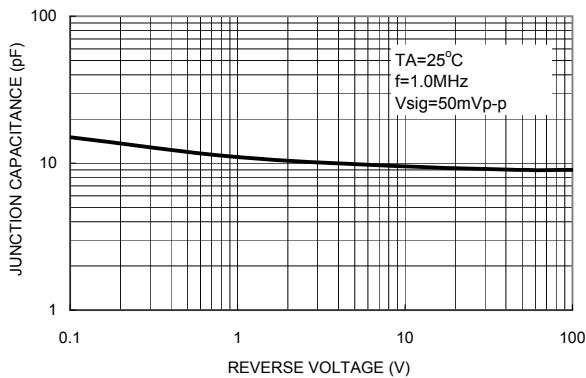


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

