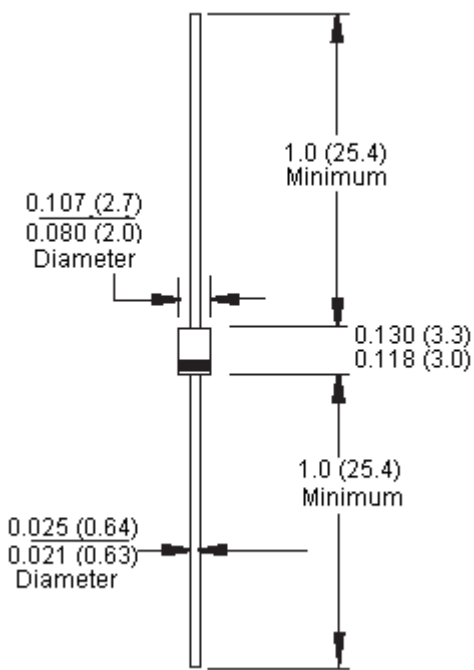




Features:

- Plastic package.
- 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/0.375 inch, (9.5mm) lead lengths at 5lbs., (2.3kg) tension.

TS-1



Dimensions : Inches (Millimetres)

Mechanical Data:

Cases	: Void free moulded plastic body over glass passivated chip junction.
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026.
Polarity	: Colour band denotes cathode end.
Mounting Position	: Any.
Weight	: 0.0064 ounce, 0.181 gram.

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Type Number	Symbol	UG06A	UG06C	UG06D	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	150	200	V
Maximum RMS Voltage	V_{RMS}	35	105	140	
Maximum DC Blocking Voltage	V_{DC}	50	150	200	
Maximum Average Forward Rectified Current 0.375 inch (9.5mm) Lead Length at $T_L = 75^\circ\text{C}$	$I_{(AV)}$	0.6			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) at $T_L = 75^\circ\text{C}$	I_{FSM}	40			
Maximum Instantaneous Forward Voltage at 0.6A	V_F	0.95			V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$	I_R	5.0 150			μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	15			nS
Typical Junction Capacitance (Note 2)	C_j	9.0			pF
Typical Thermal Resistance (Note3)	$R_{\theta JA}$ $R_{\theta JL}$	97 28			$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +150			$^\circ\text{C}$
Storage Temperature Range T_{STG}	T_{STG}				

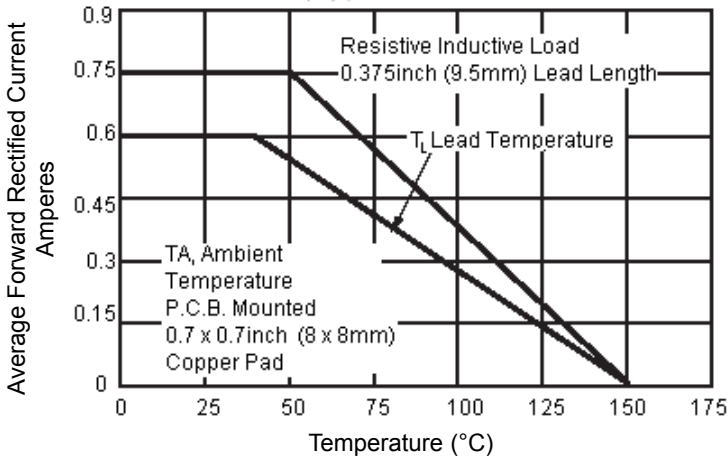
Note: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.

2. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts DC.

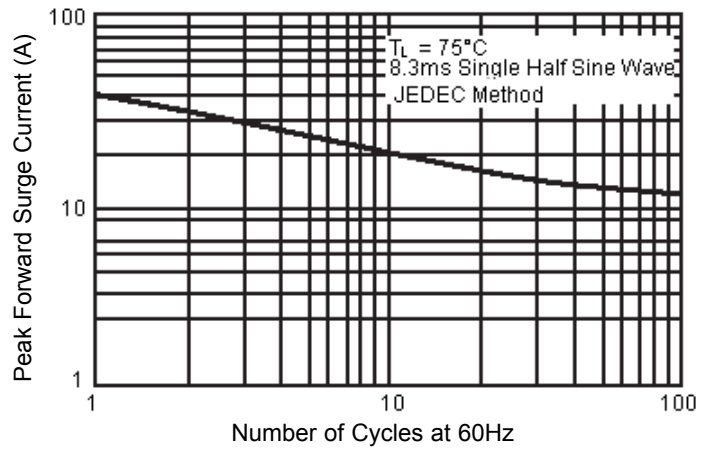
3. Thermal Resistance from junction to Ambient at 0.375 inch (9.5mm) Lead Length
Mounted on Cu-Pad Size 0.2 x 0.2 inches (5mm x 5mm) on PCB.

Ratings and Characteristic Curves (UG06A, UG06C, UG06D)

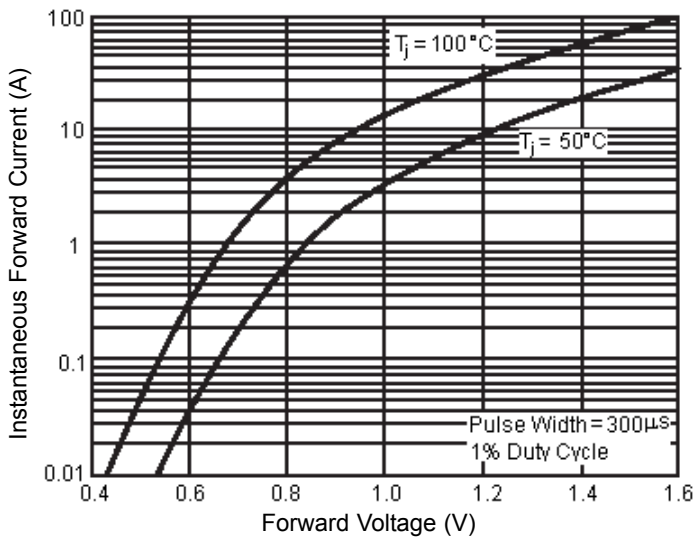
Maximum Forward Current Derating Curve



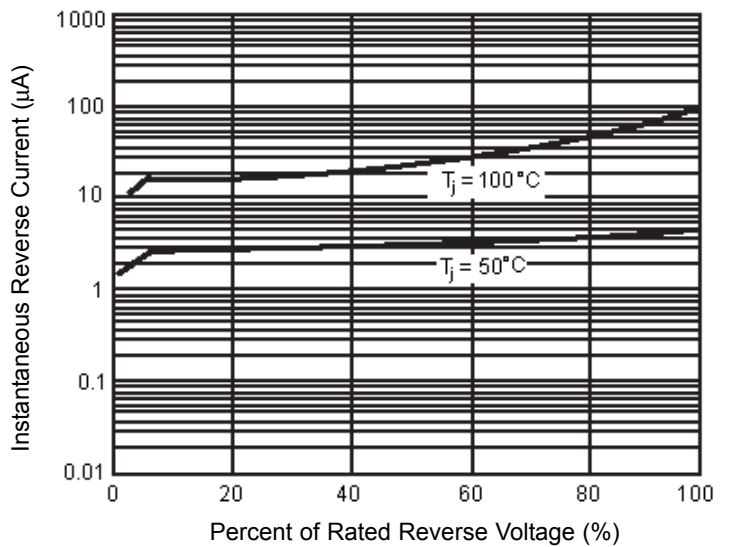
Maximum Non-Repetitive Peak Forward Surge Current



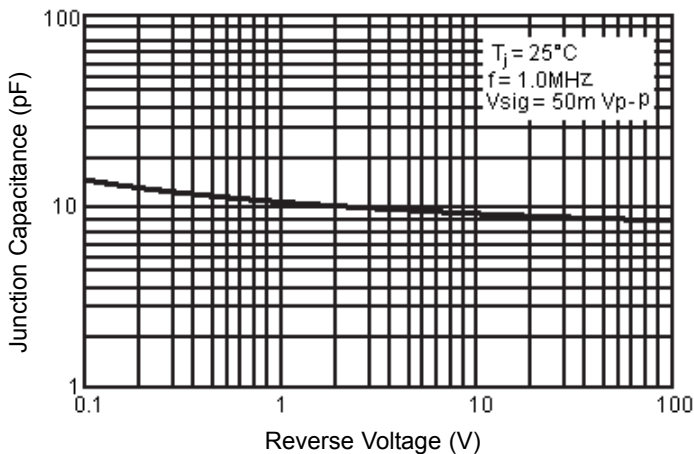
Typical Instantaneous Forward Characteristics



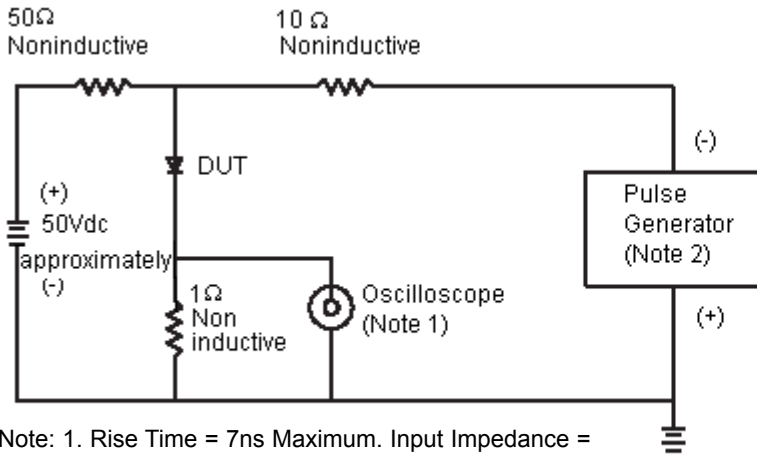
Typical Reverse Characteristics



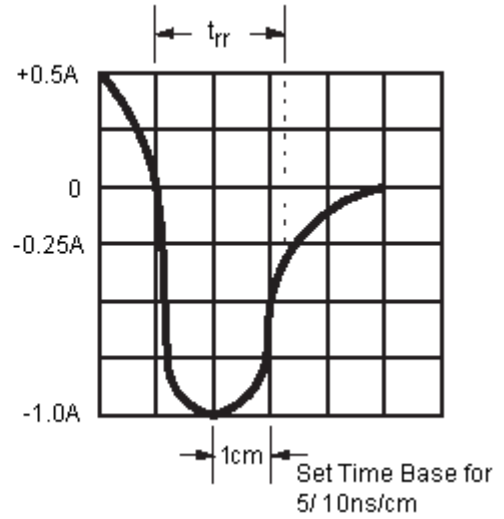
Typical Junction Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram



- Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1 Megohm 22pf
 2. Rise Time = 10ns Maximum Source Impedance = 50 ohms



Part Number Table

Description	Part Number
Diode, Ultra-Fast, 6A, 50V	UG06A
Diode, Ultra-Fast, 6A, 150V	UG06C
Diode, Ultra-Fast, 6A, 200V	UG06D

Notes:

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