



Features:

- 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

Specifications:

Mechanical Data:

Cases	: Moulded plastic
Lead	: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
Polarity	: Colour band denotes cathode end
High temperature soldering guaranteed	: 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension
Mounting position	: Any
Weight	: 1.2g

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	MUR420	MUR440	MUR460	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	
Maximum DC Blocking Voltage	V_{DC}	200	400	600	
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length	$I_{(AV)}$	4			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125	70		
Maximum Instantaneous Forward Voltage at 4A	V_F	0.89	1.28		V

Type Number	Symbol	MUR420	MUR440	MUR460	Units
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	5 150	10 250		μA μA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	25	50		nS
Typical Junction Capacitance (Note 1) $T_J = 25^\circ\text{C}$	C_j	65			pF
Maximum Forward Recovery Time TFR ($I_F = 1\text{A}$, $di/dt = 100\text{A}/\mu\text{s}$, Rev. to 1V)	T_{FR}	25	50		nS
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	28			$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-65 to +150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}				

Note: 1. Measured at 1MHz and Applied Reverse Voltage of 4V DC.

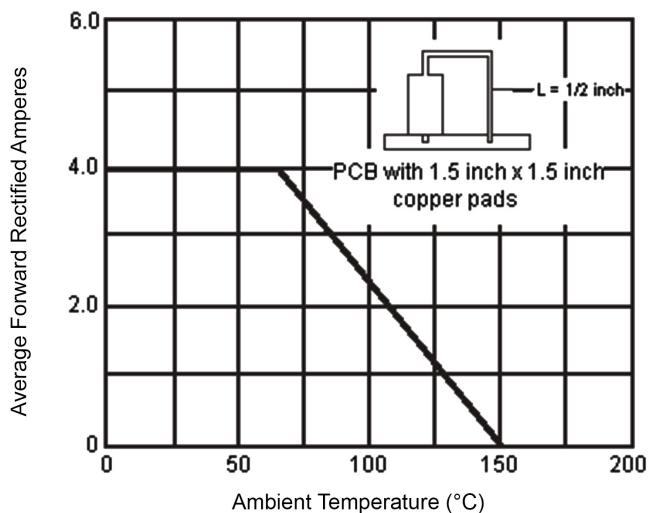
Note: 2. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.

Note: 3. Thermal Resistance from Junction to Ambient, Lead Length = 1/2 inch on PC Board with 1.5 x 1.5" Copper Surface.

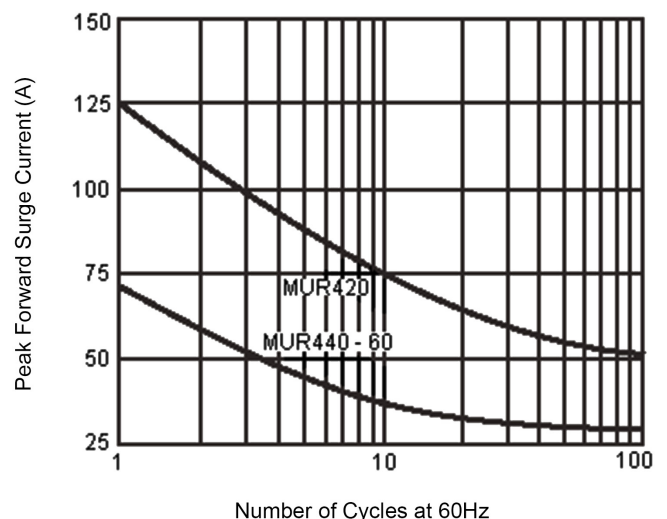
Note: 4. Pulse test: $t_p = 300 \mu\text{s}$, Duty Cycle < 2%.

Ratings and Characteristic Curves

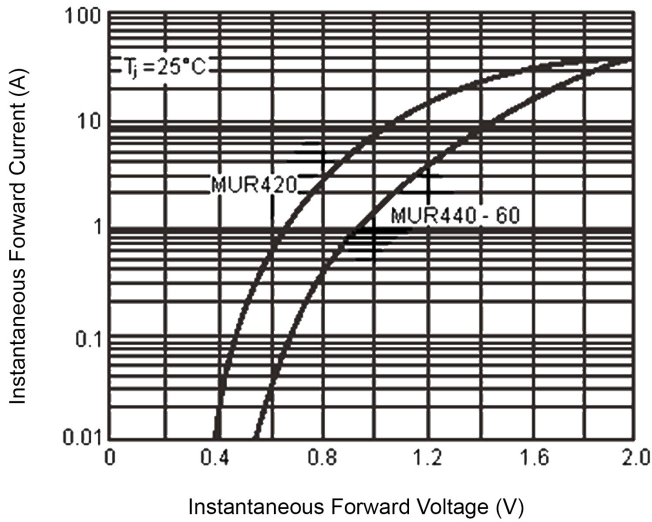
Maximum Forward Current Derating Curve



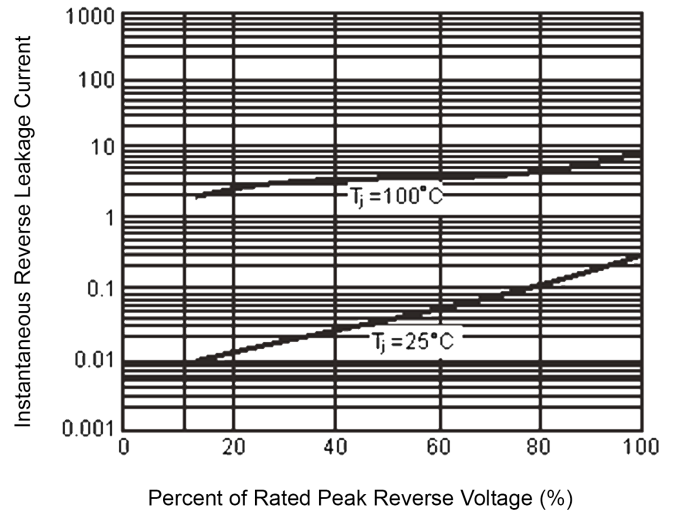
Maximum Non-Repetitive Forward Surge Current



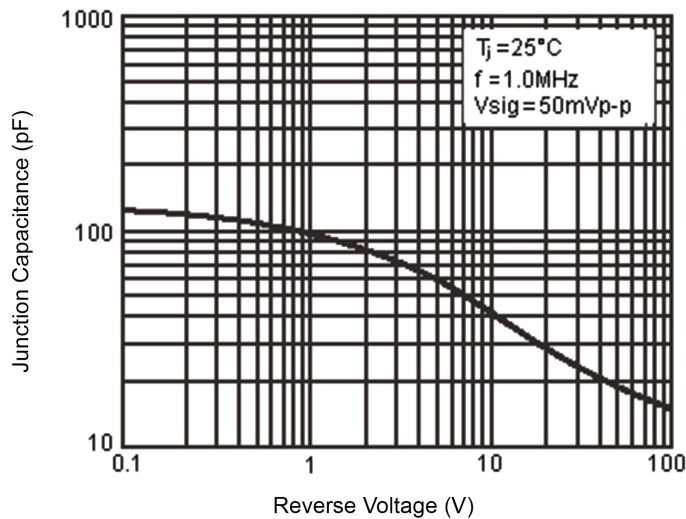
Typical Instantaneous Forward Characteristics



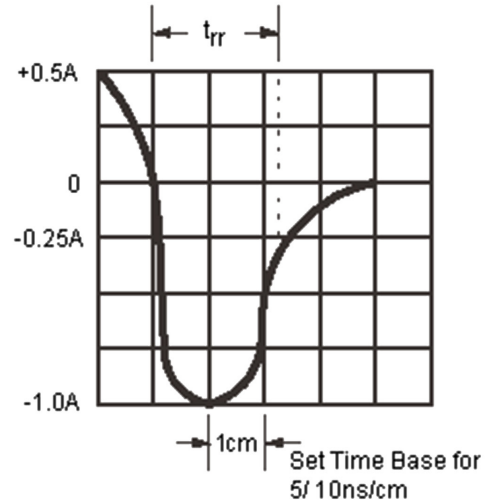
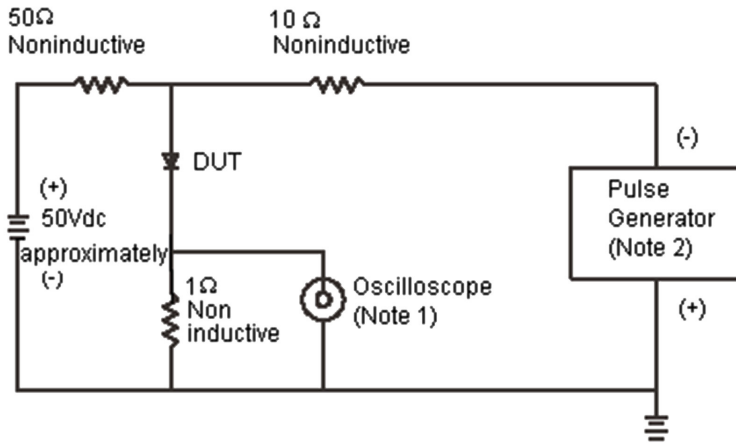
Typical Reverse Characteristics



Typical Junction Capacitance Per leg



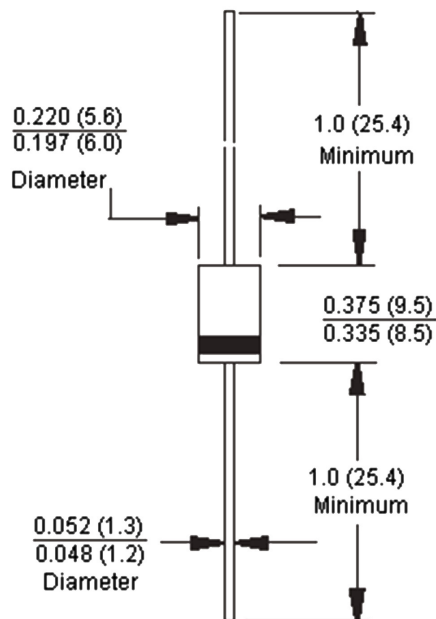
Reverse Recovery Time Characteristic and Test Circuit Diagram



Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1MΩ 22pf

Note: 2. Rise Time = 10ns Maximum Source Impedance = 50Ω

DO-201AD



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Fast, 4A, 200V	MUR420
Diode, Fast, 4A, 400V	MUR440
Diode, Fast, 4A, 600V	MUR460

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