Fast Diode

RoHS Compliant

Features:

- Designed for use in switching power supplies, inverters and as free wheeling diodes
- High efficiency, low VF
- High reliability
- Ultrafast recovery time for high efficiency
- 175°C operating junction temperature

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
Weight	: 0.34g

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	MUR160	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Voltage	V_{RMS}	420	
Maximum DC Blocking Voltage	V_{DC}	600	
Maximum Average Forward Rectified Current (Square Wave Note 4) at TA = 80°C	$I_{(AV)}$	1	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	35	

Type Number	Symbol	MUR160	Units
Maximum Instantaneous Forward Voltage at 1.0A Tj = 150°C Tj = 25°C	V_F	1.05 1.25	V
Maximum DC Reverse Current at TA = 25°C at Rated DC Blocking Voltage at TA = 125°C	I_R	5 150	µA µA
Maximum Reverse Recovery Time at (Note 2)	T_{RR}	50	nS
Typical Junction Capacitance (Note 1)	C_J	27	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50	°C/W
Operating Temperature Range	T_J	-65 to +175	°C
Storage Temperature Range	T_{STG}		

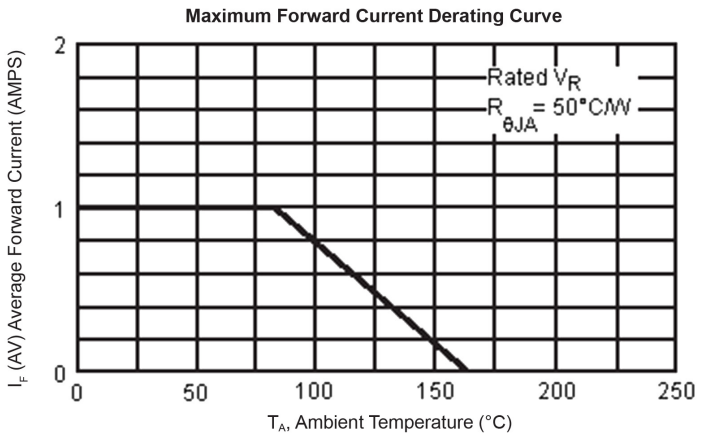
Note 1: Measured at 1MHz and Applied Reverse Voltage of 4V DC.

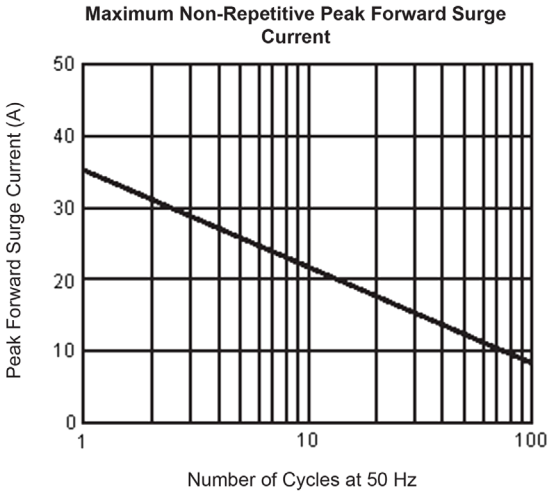
Note 1: Reverse Recovery Test Conditions: I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A.

Note 1: Thermal Resistance from Junction to Ambient, with Units Mounted on PC Board with 0.2" × 0.2" Copper Surface.

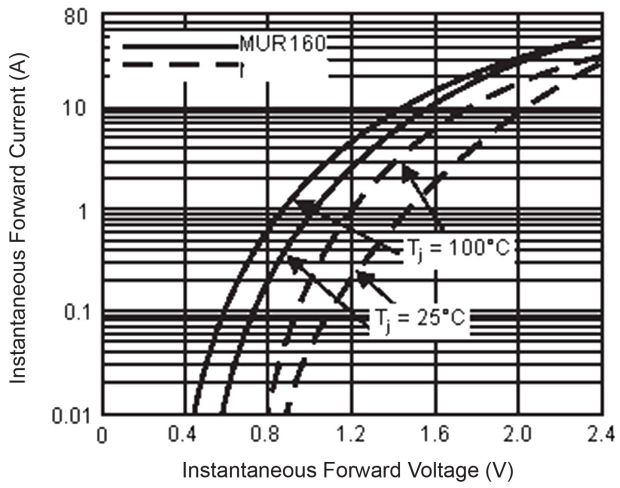
Note 1: Pulse Test: Pulse Width = 300µS, Duty Cycle 2%.

Ratings and Characteristic Curves (MUR160)

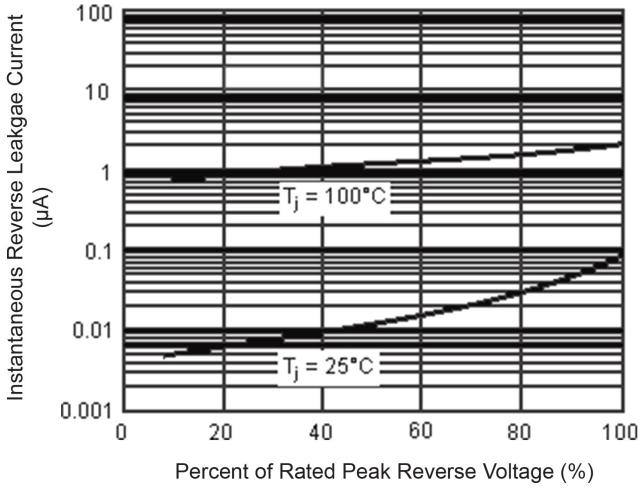




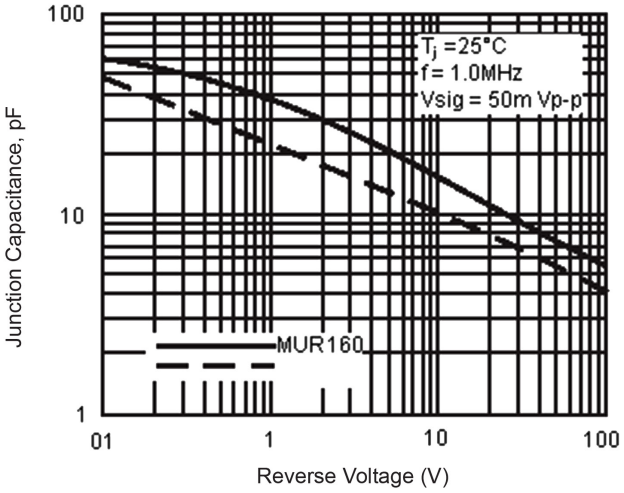
Typical Instantaneous Forward Characteristics



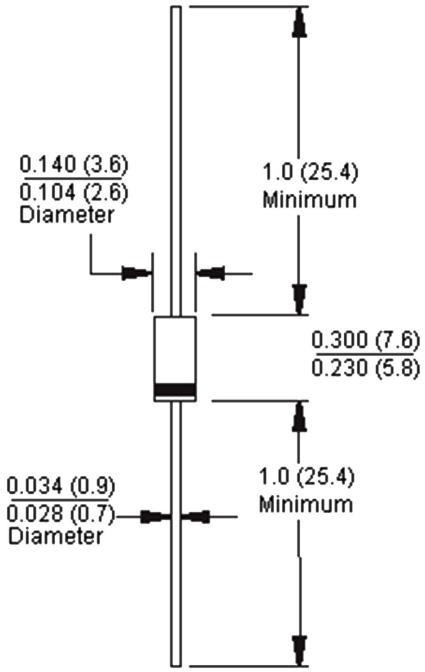
Typical Reverse Leakage Characteristics



Typical Junction Capacitance

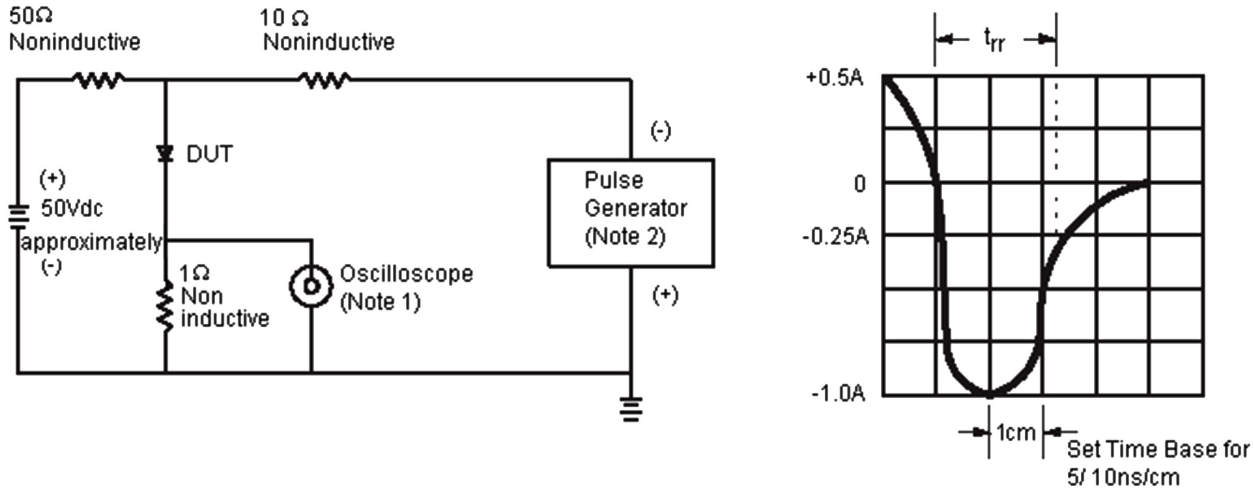


DO-15 / DO-204AC



Dimensions : Inches (Millimetres)

Reverse Recovery Time Characteristic and Test Circuit Diagram



Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1MΩ 22pf
2. Rise Time = 10ns Maximum Source Impedance = 50Ω

Part Number Table

Description	Part Number
Diode, Fast Recovery, 1A, 600V	MUR160