

# MUR120 -MUR160

**PRV : 200 - 600 Volts**  
**Io : 1.0 Ampere**

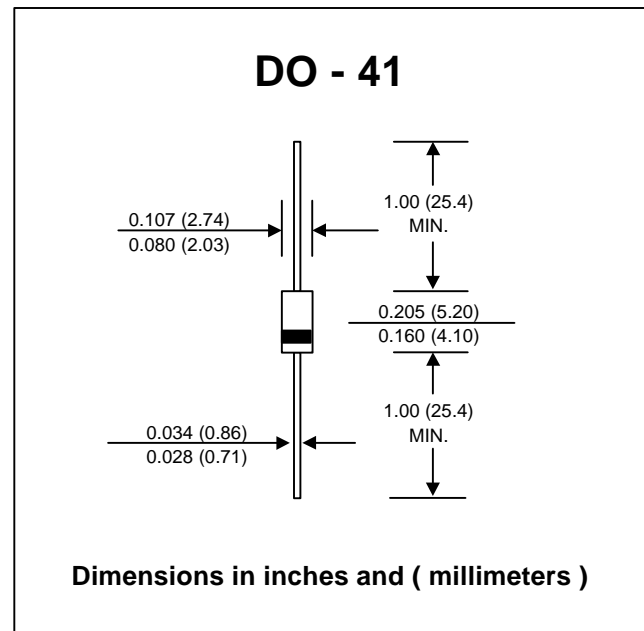
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram

# ULTRAFAST RECTIFIERS



## 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%.

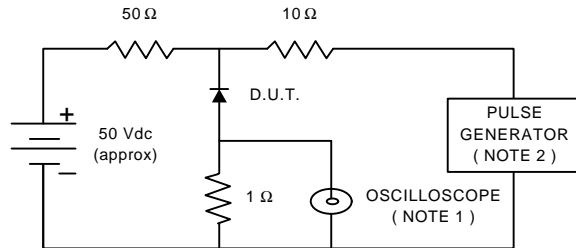
RATING	SYMBOL	MUR120	MUR140	MUR160	UNIT
Maximum Repetitive Peak Reverse Voltage	VRRM	200	400	600	V
Maximum Working Reverse Voltage	VRWM	200	400	600	V
Maximum DC Blocking Voltage	VDC	200	400	600	V
Maximum Average Forward Current , See Fig. 2	IF(AV)	1.0			A
Non-repetitive Peak Forward Surge Current	IFSM	35			A
Maximum Forward Voltage at IF = 1 Amp. (Note 1)	VF	0.875	1.25		V
Maximum Reverse Current at TJ = 25 °C	IR	2.0	5.0		μA
Rated DC Blocking Voltage TJ = 125 °C	IR(H)	50	150		μA
Maximum Reverse Recovery Time ( Note 2 )	Trr	25	50		ns
Junction Temperature Range	TJ	- 65 to + 175			°C
Storage Temperature Range	TSTG	- 65 to + 175			°C

### Notes :

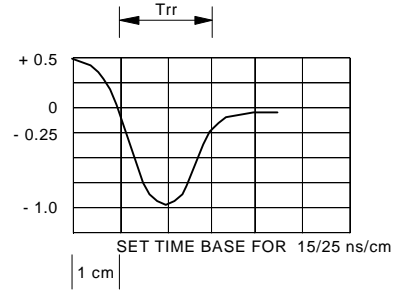
- (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle ≤ 2.0%
- (2) Reverse Recovery Test Conditions : IF = 0.5A, IR = 1A ; Irr = 0.25 A

## RATING AND CHARACTERISTIC CURVES ( MUR120 - MUR160 )

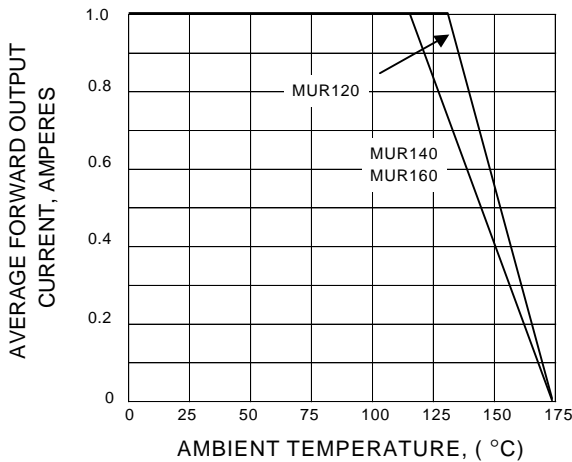
**FIG. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



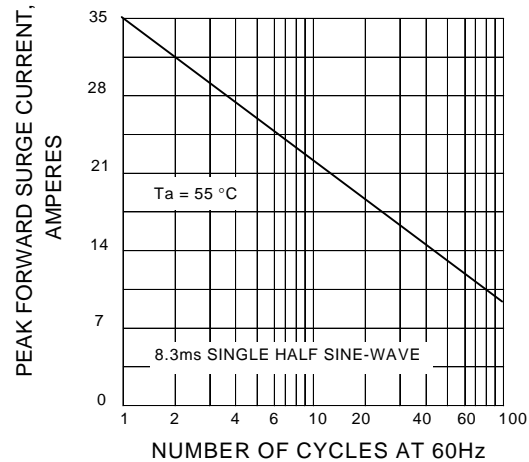
NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



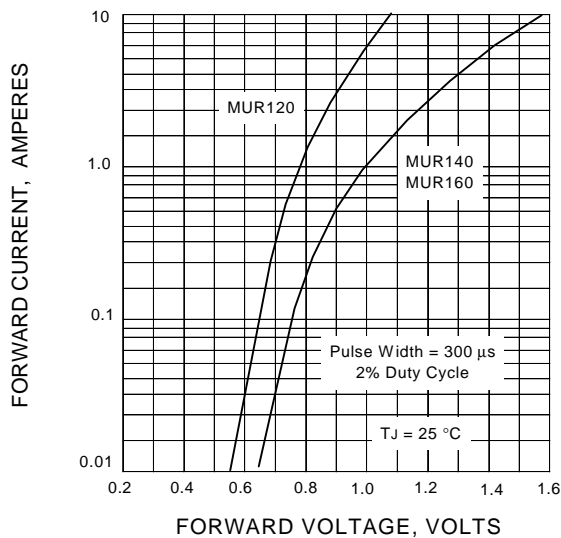
**FIG. 2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG. 5 - TYPICAL REVERSE CHARACTERISTICS**

