

### FEATURES

- Super fast switching speed.
- Low leakage.
- Low forward voltage.
- High current capability.
- High surge capability.
- High temperature soldering guaranteed:  
260°C/10 seconds/0.375" (9.5mm) lead length  
at 5 lbs (2,3kg) tension

### MECHANICAL DATA

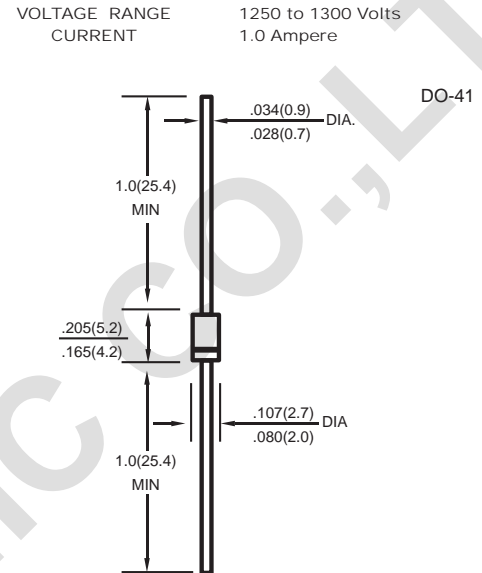
- **Case:** Transfer molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Polarity:** Color band denotes cathode end
- **Lead:** Plated axial lead, solderable per MIL-STD-202E method 208C
- **Mounting position:** Any
- **Weight:** 0.041 ounce, 0.39 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load derate current by 20%.



Dimensions in inches and (millimeters)

	SYMBOLS	MUR105	MUR110	MUR115	MUR120	MUR140	MUR160	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	35						Amps
Maximum Instantaneous Forward Voltage Drop at 1.0A	$V_F$	0.95				1.25		Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	$T_A=25^\circ\text{C}$	5.0						$\mu\text{A}$
	$T_A=125^\circ\text{C}$	50						
Maximum Reverse Recovery Time(NOTE 1)	$t_{rr}$	35						nS
Typical Junction Capacitance(NOTE2)	$C_J$	30				20		pF
Typical Thermal Resistance(NOTE3).	$R_{\theta JA}$	40						$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150						$^\circ\text{C}$

#### NOTES:

1. Test condition:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .

2. Measured at 1MHz and applied reverse of 4.0volts.

3. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, P.C.B. mounted.

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

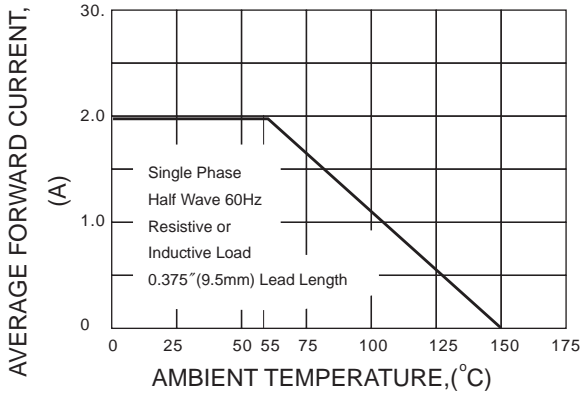


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

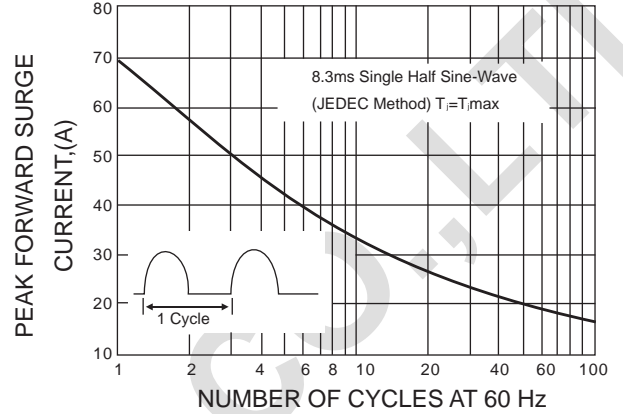


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

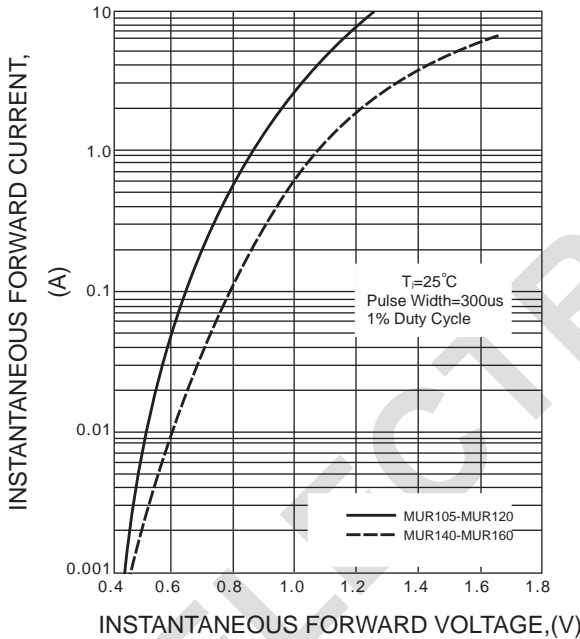


FIG.4-TYPICAL REVERSE CHARACTERISTICS

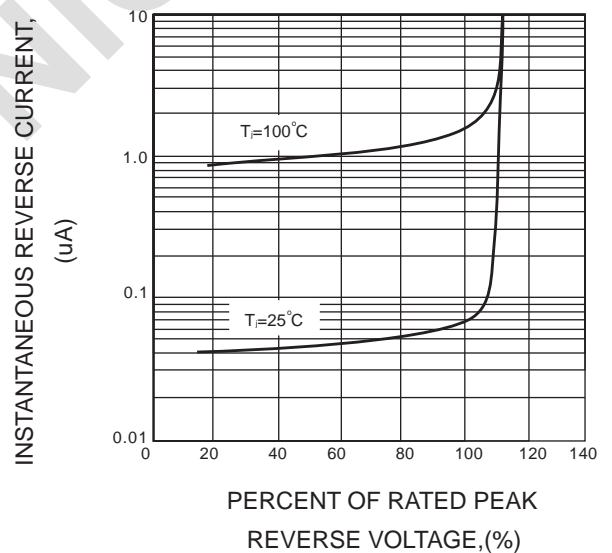


FIG.5-TYPICAL JUNCTION CAPACITANCE

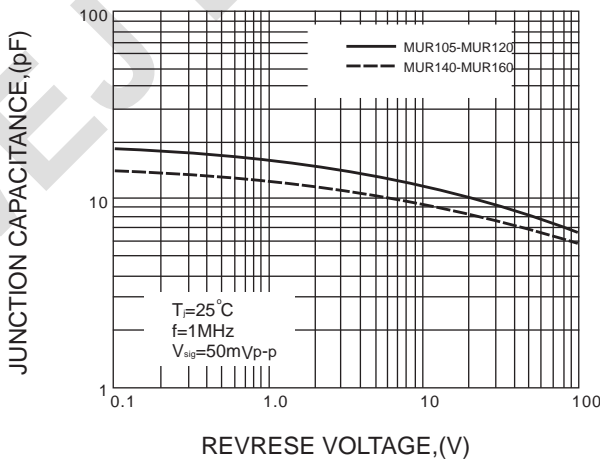
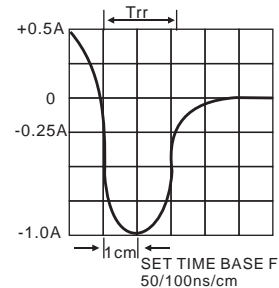
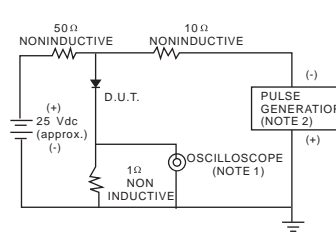


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm. 22pF  
2. Rise time=10ns max. Source Impedance= 50 ohms