



## ULTRA FAST RECTIFIER

# MUR105 THRU MUR200

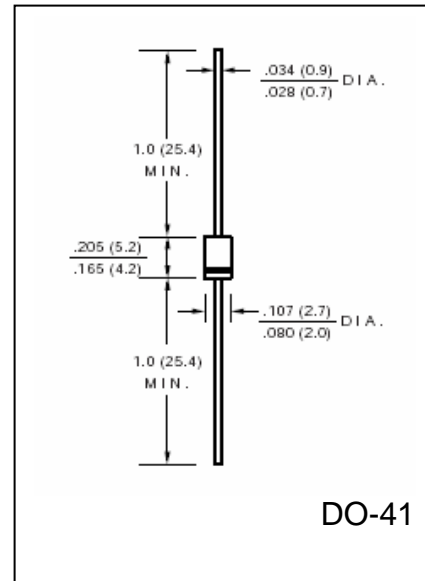
VOLTAGE RANGE 50 to 1000 Volts  
CURRENT 1.0 Ampere

### FEATURES

- Fast switching speed for high efficiency
- Low reverse leakage
- High forward surge current capacity
- High temperature soldering guaranteed:  
260 /10 seconds, 0.375" (9.5mm) lead length

### 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: 0.012 ounce, 0.33 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

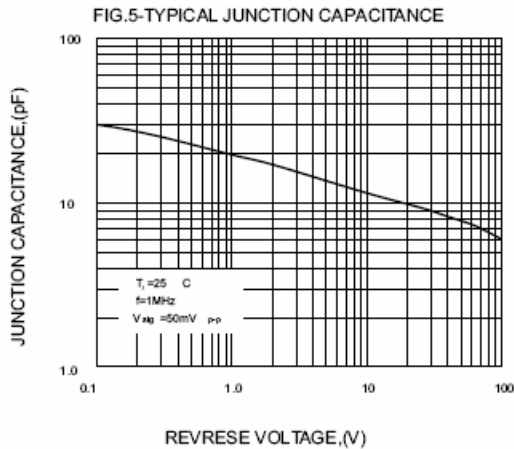
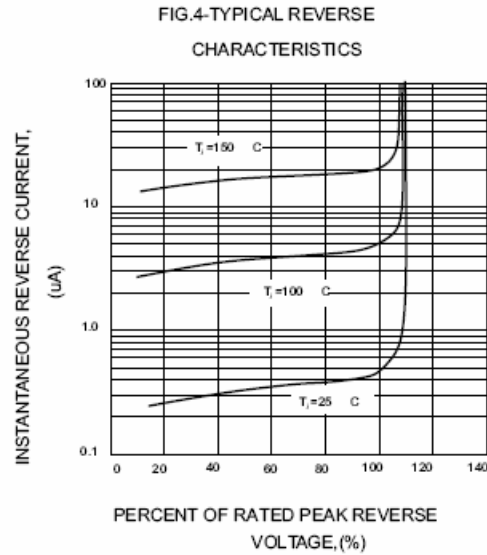
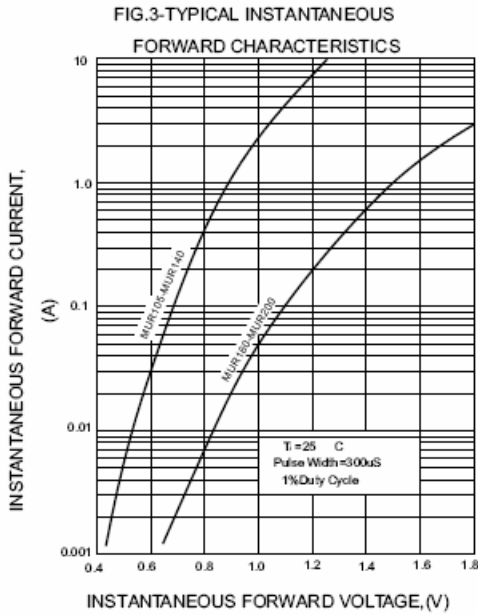
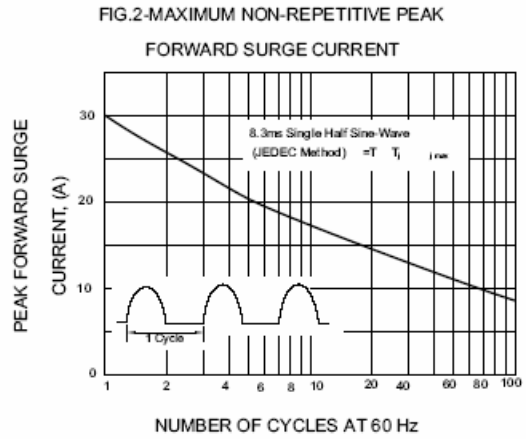
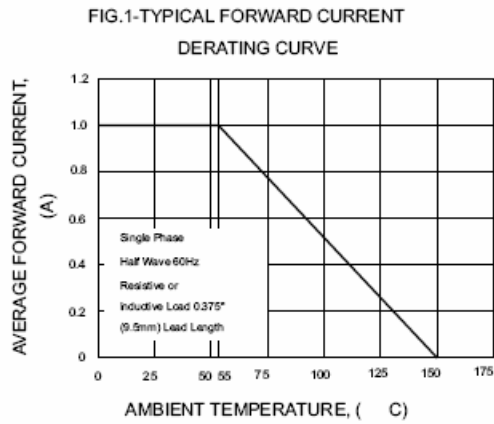
- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	MUR 105	MUR 110	MUR 120	MUR 140	MUR 160	MUR 180	MUR 200	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	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)	$I_{FSM}$	30							Amps
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.0			1.7			Volts	
Maximum DC Reverse Current at Rated $T_A = 25^\circ\text{C}$	$I_R$	10							$\mu\text{A}$
DC Blocking Voltage per element $T_A = 125^\circ\text{C}$		50							
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{RR} = 0.25\text{A}$	$t_{rr}$	50			75			nS	
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	15							pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	(-65 to +175)							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-65 to +175)							$^\circ\text{C}$

### Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted

## RATINGS AND CHARACTERISTIC CURVES MUR105 THRU MUR200



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

