



# SUPER FAST RECTIFIER

## MUR105 - MUR160

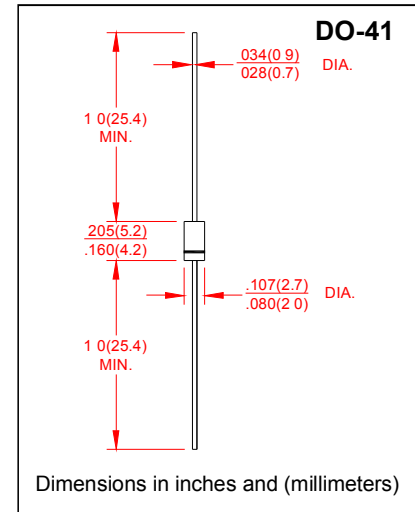
**Reverse Voltage: 50 to 600 V**  
**Forward Current: 1 A**

### FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- High temperature soldering guaranteed: 260°C/10 seconds at terminals

### MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plastic axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.012ounce, 0.33 gram



### 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%.

	Symbols	MUR 105	MUR 110	MUR 115	MUR 120	MUR 130	MUR 140	MUR 150	MUR 160	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length @ $T_A=55^\circ\text{C}$	$I_{AV}$	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 at 1.0A	$V_F$	0.9				1.25				Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$					5.0 100				$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	25				50				ns
Typical Junction Capacitance (Note 2)	$C_j$	30				15				pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	70								$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_j$	-65 to +175								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +175								$^\circ\text{C}$

- Note: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 Volts.  
 3. Mount on 5mmX5mm Cu-Pad on PCB.

**RATINGS AND CHARACTERISTIC CURVES MUR105 - MUR160**

FIG.1-MAXIMUM AVERAGE FORWARD CURRENT DERATING

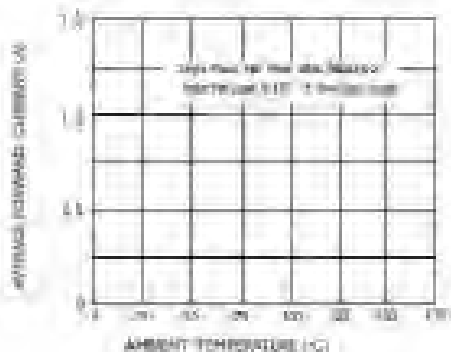


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

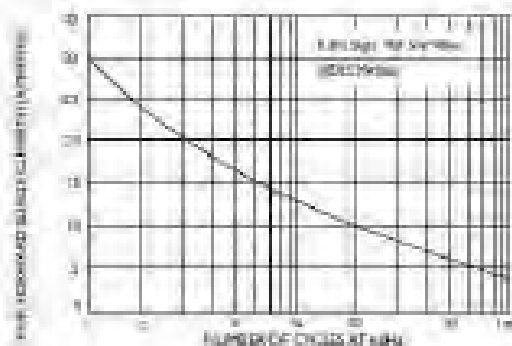


FIG.3-TYPICAL FORWARD CHARACTERISTICS

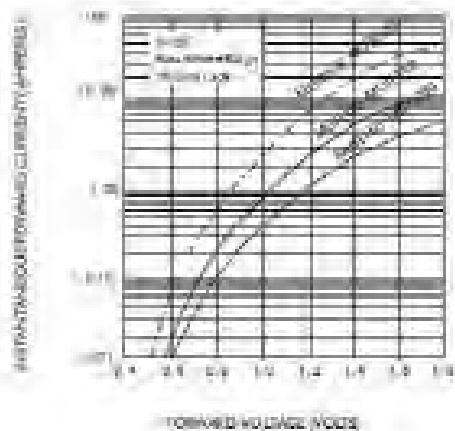


FIG.4-TYPICAL REVERSE CHARACTERISTICS

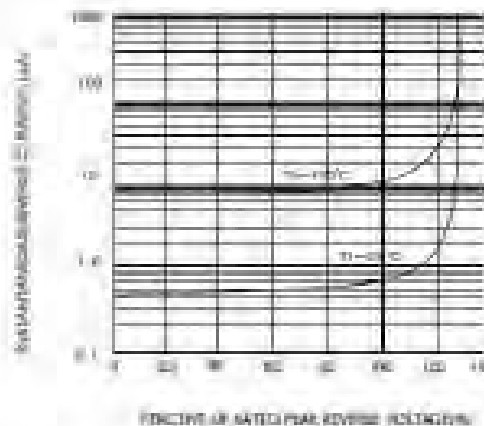


FIG.5-TYPICAL JUNCTION CAPACITANCE

