



# MUR120 THRU MUR160

## ULTRA FAST RECTIFIERS

Reverse Voltage - 200 to 600 Volts Forward Current - 1.0 Amperes

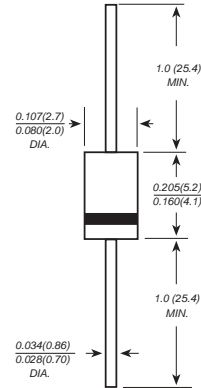
### FEATURES

The plastic package carries Underwriters Laboratory  
Flammability Classification 94V-0  
Ultra fast switching for high efficiency  
Low reverse leakage  
High forward surge current capability  
High temperature soldering guaranteed:  
260°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-41 molded plastic body over passivated chip  
**Terminals:** Plated axial leads, solderable per MIL-STD-750,  
Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.014 ounce, 0.40 grams

DO-41



Dimensions in inches and (millimeters)

### 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 current derate by 20%.

	SYMBOLS	MUR120	MUR130	MUR140	MUR160	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	300	400	600	VOLTS
Maximum RMS voltage	$V_{RMS}$	140	210	280	420	VOLTS
Maximum DC blocking voltage	$V_{DC}$	200	300	400	600	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length	$I_{(AV)}$	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	$V_F$	0.875	1.25			Volts
Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$	$I_R$	10.0 100.0				$\mu A$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	25	50			ns
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0				$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150				$^\circ C$

**Note:** 1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$   
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

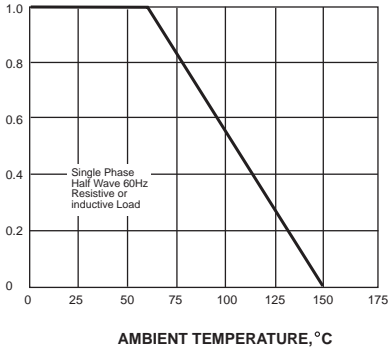


®

# RATINGS AND CHARACTERISTIC CURVES MUR120 THRU MUR160

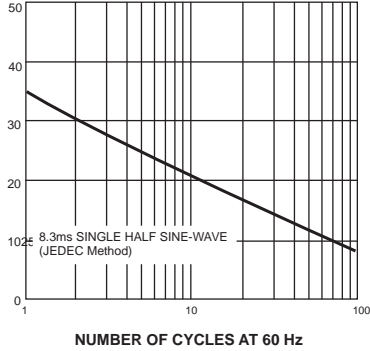
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



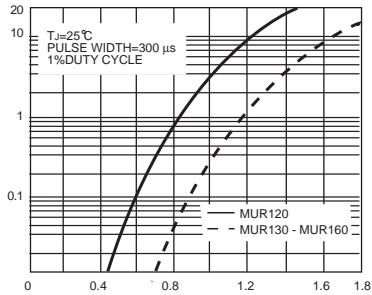
PEAK FORWARD SURGE CURRENT, AMPERES

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



INSTANTANEOUS FORWARD CURRENT, AMPERES

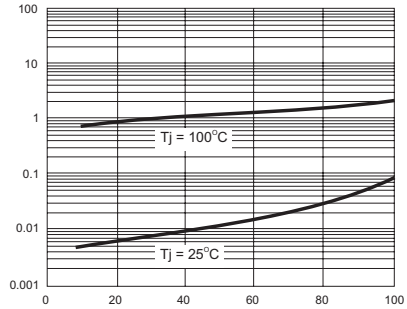
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %