

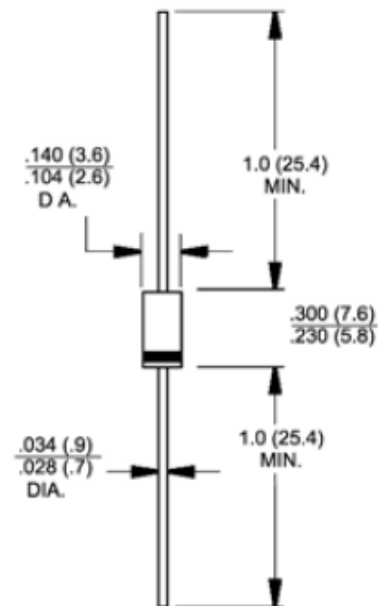
**Ultrafast Plastic Rectifiers**

**FEATURES**

- Reverse Voltage 400 to 600 Volts
- Forward Current 1.0 Ampere
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- Ultrafast recovery time for high efficiency
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10Seconds, 0.375" (9.5mm) lead length at 5 lbs. (2.3Kg) tension

**MECHANICAL DATA**

- Cases: JEDEC DO-204AC(DO-15), molded plastic body over passivated chip
- Terminals: Axial leads, solder-able per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.015 ounce, 0.4 gram



**Dimensions in inches and (millimeters)**



**Pb-free; RoHS-compliant**

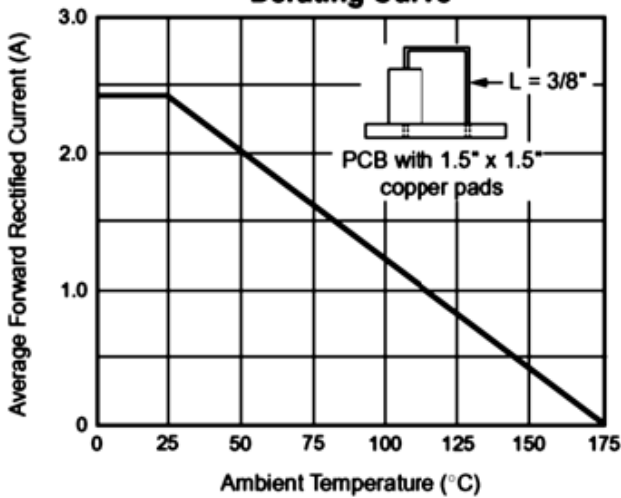
**MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbols	MUR140	MUR160	Units
Maximum repetitive peak reverse voltage	VRRM	400	600	Volts
Working peak reverse voltage	VRWM	400	600	Volts
Maximum DC blocking voltage	VDC	400	600	Volts
Maximum average forward rectified current at $T_A = 120^{\circ}\text{C}$	IF(AV)	1.0		Amp
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	35.0		Amps
Maximum instantaneous forward voltage (Note 1)	at F = 1.0A, $T_J = 25^{\circ}\text{C}$ at IF = 1.0A, $T_J = 150^{\circ}\text{C}$	VF	1.25 1.05	Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	$T_J = 25^{\circ}\text{C}$ $T_J = 150^{\circ}\text{C}$	IR	5.0 150	$\mu\text{A}$ $\mu\text{A}$
Maximum reverse recovery time at IF = 0.5A, IR = 1.0A, I rr = 0.25A		trr	50	nS
Maximum reverse recovery time at IF = 1.0A, di/dt=50A/us, VR = 30V, I rr = 10%	IRM	trr	75	nS
Maximum forward recovery time at IF = 1.0A, di/dt=100A/us, recovery to 1.0V		tfr	50	nS
Typical thermal resistance junction to ambient (Note 2)	R $\theta$ JA	50		$^{\circ}\text{C}/\text{W}$
Operating junction and storage temperature range	TJ, TSTG	-55 to +175		$^{\circ}\text{C}$

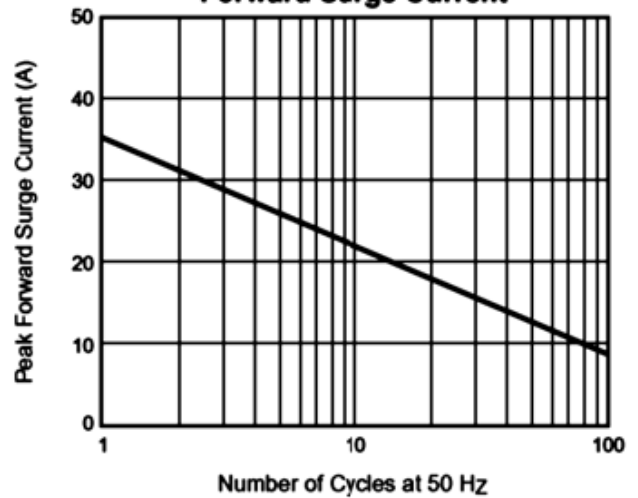
- NOTE:**
1. Pulse test:  $t_p=300\mu\text{s}$ , duty cycle < 2%
  2. Lead length = 3/8" on P.C. Board with 1.5" x 1.5" copper surface

**RATINGS AND CHARACTERISTIC CURVES** ( $T_A = 25^\circ\text{C}$ , unless otherwise specified.)

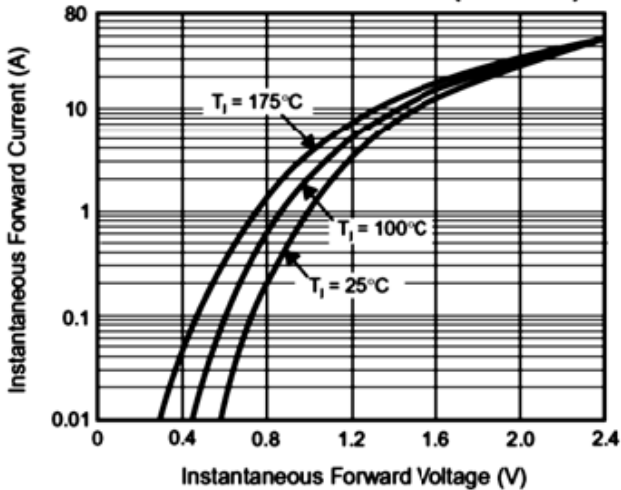
**Fig. 1 – Forward Current Derating Curve**



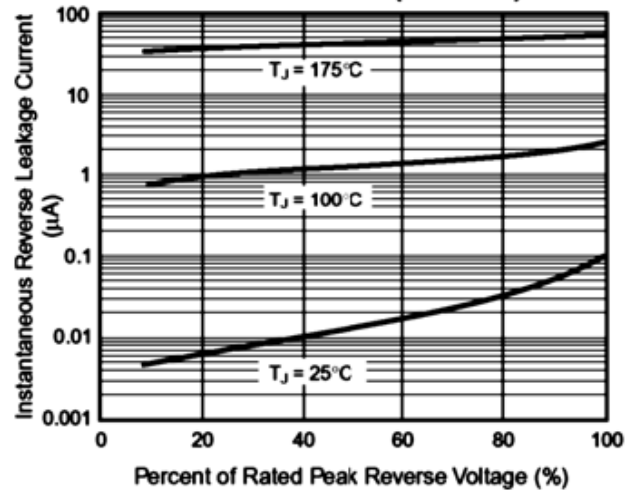
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



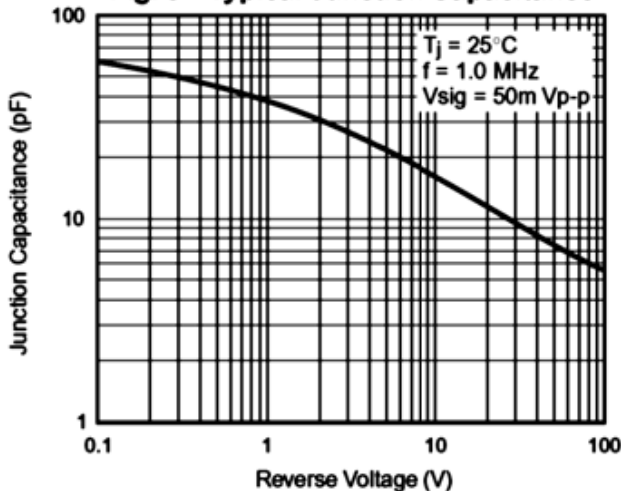
**Fig. 3 – Typical Instantaneous Forward Characteristics (MUR160)**



**Fig. 4 – Typical Reverse Leakage Characteristics (MUR160)**



**Fig. 5 – Typical Junction Capacitance**



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