

## Advance Information SWITCHMODE™ Power Rectifier

... using the Schottky Barrier principle this state-of-the-art device is dedicated to the ORing function in paralleling power supply and has the following features:

- Dual Diode Construction — Terminals 1 and 3 May Be Connected for Parallel Operation at Full Rating
- 15 Volt Blocking Voltage
- Very Low Forward Voltage Drop
- Guardring for Stress Protection and High dv/dt Capability
- Guaranteed Reverse Avalanche
- 150°C Operating Junction Temperature

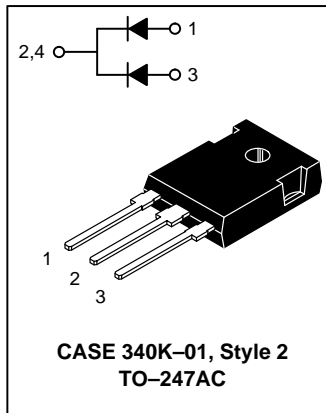
### Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 4.3 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped 30 Units Per Plastic Tube
- Marking: B4015L

**MBR4015LWT**

Motorola Preferred Device

**SCHOTTKY BARRIER  
RECTIFIER  
40 AMPERES  
15 VOLTS**



### MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	15	Volt
Average Rectified Forward Current — Per Diode (Rated $V_R$ ) @ $T_C = 125^\circ\text{C}$ — Per Device	$I_{F(AV)}$	20 40	Amp
Peak Repetitive Forward Current, Per Diode (Rated $V_R$ , Square Wave, 20 kHz) @ $T_C = 90^\circ\text{C}$	$I_{FRM}$	40	Amp
Non Repetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	$I_{FSM}$	400	Amp
Peak Repetitive Reverse Current (2.0 $\mu\text{s}$ , 1.0 kHz)	$I_{RRM}$	2.0	Amp
Operating Junction Temperature	$T_J$	-65 to +150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$
Peak Surge Junction Temperature (Forward Current Applied)	$T_{J(pk)}$	150	$^\circ\text{C}$
Voltage Rate of Change	dv/dt	10000	V/ $\mu\text{s}$

### THERMAL CHARACTERISTICS

Thermal Resistance — Junction to Case — Junction to Ambient	$R_{\theta JC}$ $R_{\theta JA}$	1.4 40	$^\circ\text{C/W}$
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This document contains information on a new product. Specifications and information herein are subject to change without notice.

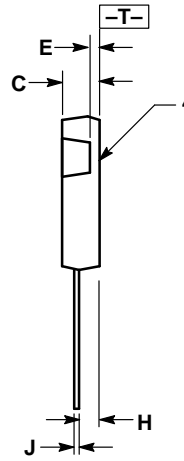
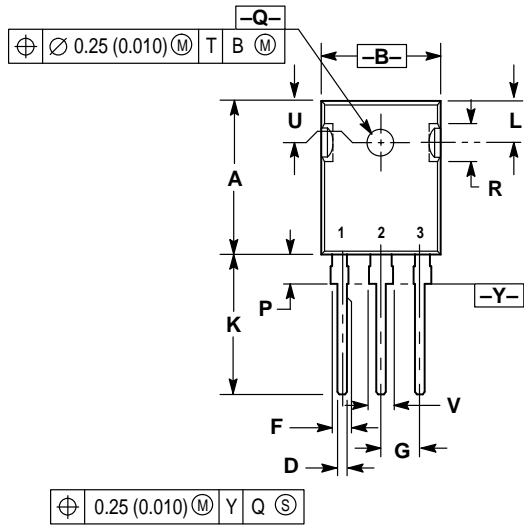
**Preferred** devices are Motorola recommended choices for future use and best overall value.

**ELECTRICAL CHARACTERISTICS**

Rating	Symbol	Max	Unit
Instantaneous Forward Voltage (1) @ $I_F = 20$ Amps, $T_C = 25^\circ\text{C}$ @ $I_F = 20$ Amps, $T_C = 125^\circ\text{C}$ @ $I_F = 40$ Amps, $T_C = 25^\circ\text{C}$ @ $I_F = 40$ Amps, $T_C = 125^\circ\text{C}$	$V_F$	0.42 0.33 0.50 0.42	Volts
Instantaneous Reverse Current (1) @ Rated DC Voltage, $T_C = 25^\circ\text{C}$ @ Rated DC Voltage, $T_C = 75^\circ\text{C}$	$I_R$	5.0 150	mA

(1) Pulse Test: Pulse Width = 300  $\mu\text{s}$ , Duty Cycle < 2.0%

# PACKAGE DIMENSIONS




- NOTES:  
 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.  
 2. CONTROLLING DIMENSION: MILLIMETER.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.7	20.3	0.776	0.799
B	15.3	15.9	0.602	0.626
C	4.7	5.3	0.185	0.209
D	1.0	1.4	0.039	0.055
E	1.27 REF		0.050 REF	
F	2.0	2.4	0.079	0.094
G	5.5 BSC		0.216 BSC	
H	2.2	2.6	0.087	0.102
J	0.4	0.8	0.016	0.031
K	14.2	14.8	0.559	0.583
L	5.5 NOM		0.217 NOM	
P	3.7	4.3	0.146	0.169
Q	3.55	3.65	0.140	0.144
R	5.0 NOM		0.197 NOM	
U	5.5 BSC		0.217 BSC	
V	3.0	3.4	0.118	0.134

- STYLE 2:  
 PIN 1. ANODE 1  
 2. CATHODE(S)  
 3. ANODE 2  
 4. CATHODE(S)

**CASE 340K-01  
 ISSUE O**

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**MOTOROLA**



**MBR4015LWT/D**

