Advance Information

SWITCHMODE™ Power Rectifier

MBR4015LWT

Motorola Preferred Device

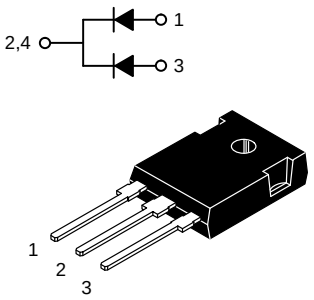
SCHOTTKY BARRIER RECTIFIER 40 AMPERES 15 VOLTS

. . . 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



CASE 340K–01, Style 2
TO–247AC

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°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°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 µs, 1.0 kHz)	I_{RRM}	2.0	Amp
Operating Junction Temperature	T_J	–65 to +150	°C
Storage Temperature	T_{stg}	–65 to +150	°C
Peak Surge Junction Temperature (Forward Current Applied)	$T_{J(pk)}$	150	°C
Voltage Rate of Change	dv/dt	10000	V/µs

THERMAL CHARACTERISTICS

Thermal Resistance — Junction to Case — Junction to Ambient	$R_{\theta JC}$ $R_{\theta JA}$	1.4 40	°C/W

SWITCHMODE is a trademark of Motorola Inc.

This document contains information on a new product. Specifications and information herein are subject to change without notice.

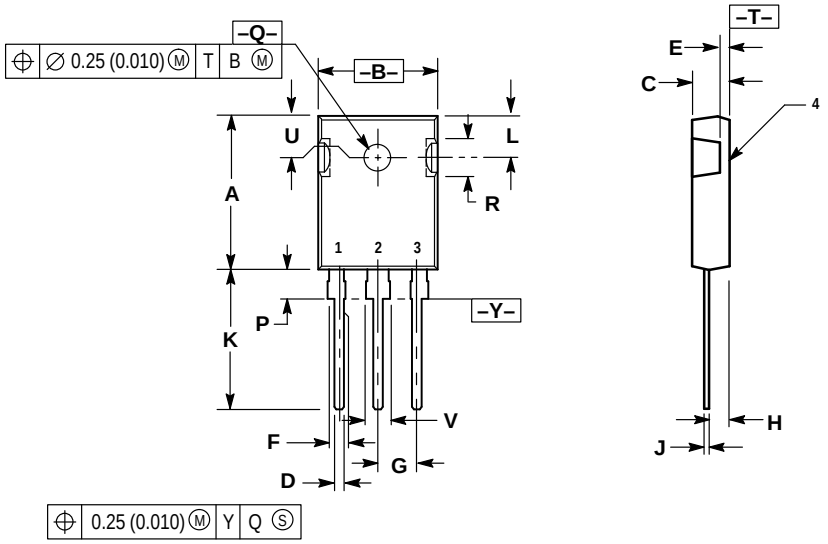
Preferred devices are Motorola recommended choices for future use and best overall value.

ELECTRICAL CHARACTERISTICS

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

(1) Pulse Test: Pulse Width = 300 μs, Duty Cycle < 2.0%

PACKAGE DIMENSIONS



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

	MILLIMETERS		INCHES	
DIM	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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