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MBR030 MBR040

Advance Information

SWITCHMODE RECTIFIERS

... designed for use in switching power supplies, inverters, and as free wheeling diodes, these devices have the following features:

- Low Forward Voltage
- Low Leakage Current
- DO-204AH (DO-35) Glass Package

SCHOTTKY RECTIFIERS

0.5 AMPERE
30-40 VOLTS



MAXIMUM RATINGS

Rating	Symbol	MBR030	MBR040	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	40	Volts
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current (Rated V_F) $T_L = 90^\circ\text{C}$, $L = 3/4"$ $T_A = 60^\circ\text{C}$, $L = 3/8"$, (Mt. Method #1)	$I_F(AV)$	← 0.6 →		Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	← 15.0 →		Amps
Operating Junction and Storage Temperature	T_J, T_{stg}	-65 to +150		

THERMAL CHARACTERISTICS

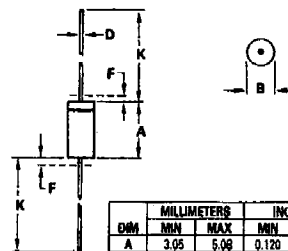
Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Lead = 1/2"	$R_{\theta JL}$	180	190	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Typ	Max	Unit
Instantaneous Forward Voltage (1) ($I_F = 0.1\text{ A}$, $T_J = 25^\circ\text{C}$) ($I_F = 0.5\text{ A}$, $T_J = 25^\circ\text{C}$)	V_F	0.460 0.610	0.600 0.750	Volts
Reverse Current (Rated dc Voltage, $T_J = 150^\circ\text{C}$) (Rated dc Voltage, $T_J = 25^\circ\text{C}$)	I_R	0.8 0.003	1.0 0.001	mA

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

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



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.05	5.09	0.120	0.200
B	1.52	2.29	0.060	0.090
D	0.48	0.58	0.018	0.022
E	-	1.27	-	0.050
K	25.40	38.10	1.000	1.500

All JEDEC dimensions and notes apply.

NOTES:

1. PACKAGE CONTOUR OPTIONAL WITHIN A AND B. HEAT SLUGS, IF ANY, SHALL BE INCLUDED WITHIN THIS CYLINDER, BUT NOT SUBJECT TO THE MINIMUM LIMIT OF B.
2. LEAD DIAMETER NOT CONTROLLED IN ZONE F TO ALLOW FOR FLASH, LEAD FINISH BUILDUP AND MINOR IRREGULARITIES OTHER THAN HEAT SLUGS.
3. POLARITY DENOTED BY CATHODE BAND.
4. DIMENSIONING AND TOLERANCING PER ANSI Y14.5, 1973.

MECHANICAL CHARACTERISTICS

CASE: Glass

FINISH: External leads are plated and are readily solderable

POLARITY: Cathod indicated by polarity band.

WEIGHT: 0.2 Gram (approximately).

MAXIMUM LEAD TEMPERATURE FOR SOLDERING PURPOSES: 230 $^\circ\text{C}$, 1/2" from case for 10 seconds.



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors