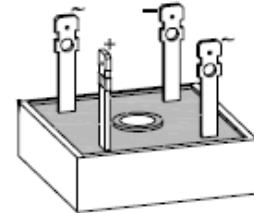


## 40A Single-Phase Bridge Rectifier

### Features

- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Max. Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- This series is UL recognized under component index, File number E194718
- RoHS Compliant



**MB35**  
(Metal Case)



### Mechanical Data

<b>Case:</b>	KBPC (MB35) Metal case with faston lugs
<b>Terminals:</b>	Plated faston lugs
<b>Polarity:</b>	As marked on case
<b>Mounting:</b>	Through hole with #10 screw
<b>Mounting Torque:</b>	23 cm-kg (20 in-lbs) Max.
<b>Weight:</b>	30 grams

### Maximum Ratings And Electrical Characteristics ( $T_{amb}=25^{\circ}C$ )

Symbol	Description	MB4005	MB401	MB402	MB404	MB406	MB408	MB4010	Unit	Conditions
<b>V<sub>RRM</sub></b>	Max. Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
<b>V<sub>RMS</sub></b>	Max. RMS Voltage	35	70	140	280	420	560	700	V	
<b>V<sub>DC</sub></b>	Max. DC blocking voltage	50	100	200	400	600	800	1000	V	
<b>I<sub>o</sub></b>	Average Rectified Output Current	40							A	$T_A=60^{\circ}C$
<b>I<sub>FSM</sub></b>	Non-Repetitive Peak Forward Surge Current	400							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)

# 40A Single-Phase Bridge Rectifier

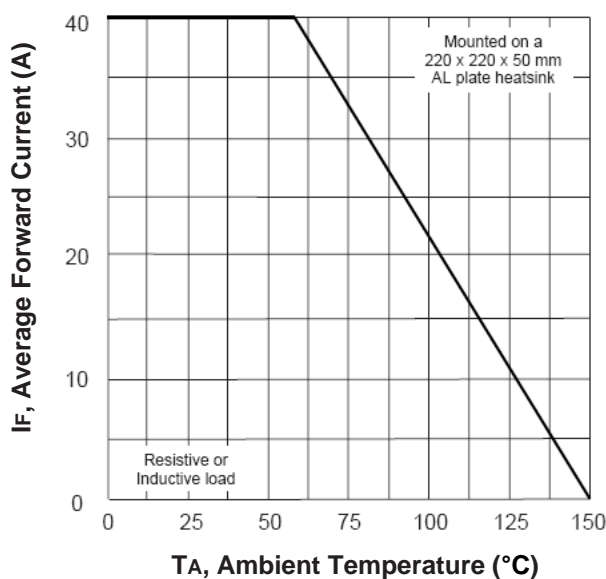
## MB4005 – MB4010

Symbol	Description	MB4005	MB401	MB402	MB404	MB406	MB408	MB4010	Unit	Conditions
<b>V<sub>FM</sub></b>	Forward Voltage per leg	1.2							V	I <sub>o</sub> =20A
<b>I<sub>RM</sub></b>	Max. Reverse DC Current At Rated DC Blocking Voltage per leg	10							μA	T <sub>C</sub> = 25°C
		1000							μA	T <sub>C</sub> = 125°C
<b>I<sup>2</sup>t</b>	Rating for Fusing (t<8.3ms)	664							A <sup>2</sup> s	
<b>C<sub>J</sub></b>	Typical junction capacitance per leg	300							pF	f=1MHz V <sub>R</sub> = 4V
<b>R<sub>thjC</sub></b>	Typical Thermal Resistance per leg	2.1							°C / W	Note
<b>V<sub>ISO</sub></b>	RMS Isolation Voltage from Case to Leads	2500							V	
<b>T<sub>J</sub>,T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-65 to +150							°C	

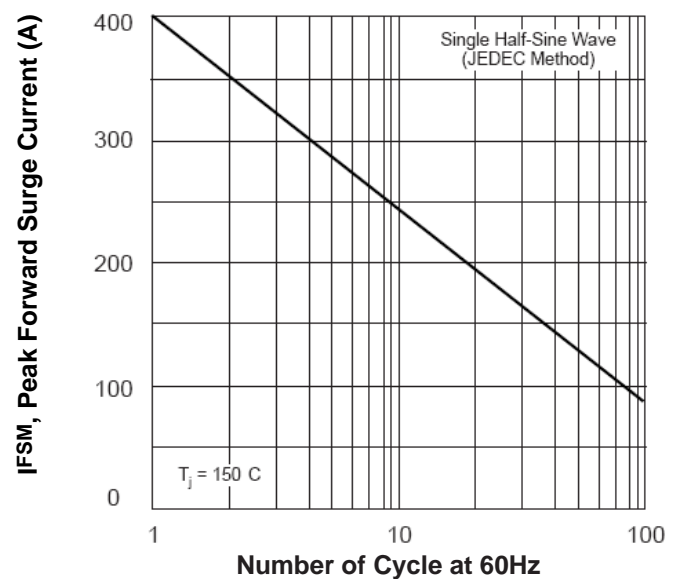
**Note:** Thermal Resistance junction to case, mounted on heatsink.

### Typical Characteristics Curves

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



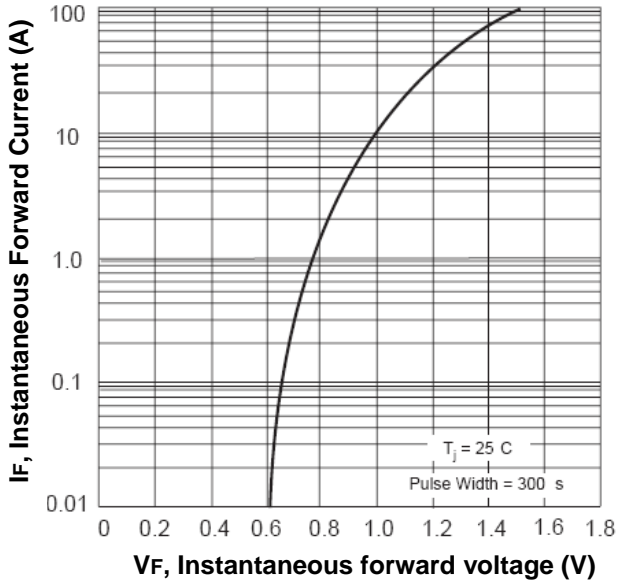
**Fig.2-Max. Non-repetitive Peak Forward Surge Current Per Leg**



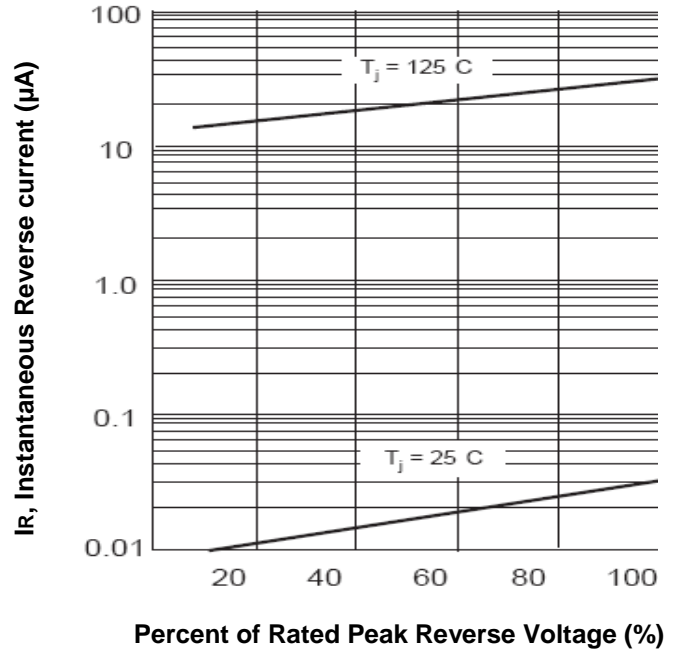
# 40A Single-Phase Bridge Rectifier

## MB4005 – MB4010

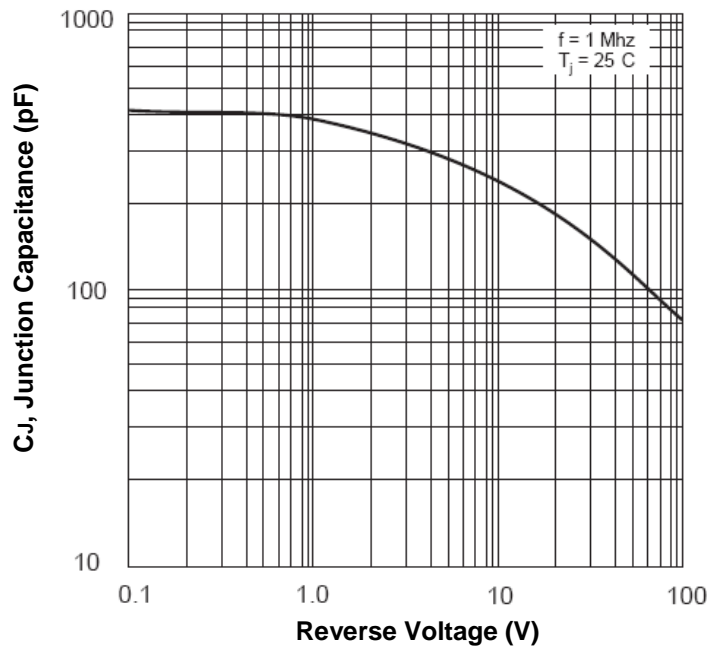
**Fig.3-Typical Instantaneous Forward Characteristic Per Leg**



**Fig.4-Typical Reverse Characteristics Per Leg**



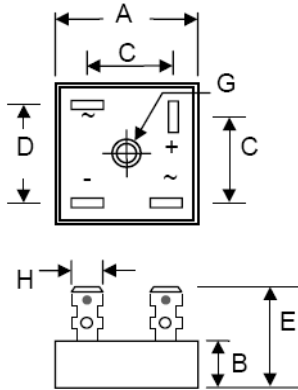
**Fig.5-Typical Junction Capacitance Per Leg**



# 40A Single-Phase Bridge Rectifier

## MB4005 – MB4010

### Dimensions in inch (mm)



Dim	KBPC		KBPC-W	
	Min	Max	Min	Max
A	27.94	28.96	27.94	28.96
B	10.97	11.23	10.97	11.23
C	15.50	17.60	17.10	19.10
D	17.50	18.50	10.90	11.90
E	22.86	25.40	30.50	—
G	Hole for #10 screw, 5.08Ø Nominal			
H	6.35 Typical		0.97Ø	1.07Ø
All Dimension in mm				

### KBPC (MB35)

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