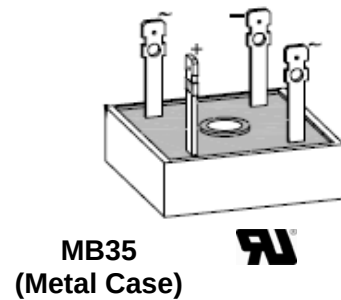


40A Single-Phase Bridge Rectifier

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



Mechanical Data

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

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

Symbol	Description	MB4005	MB401	MB402	MB404	MB406	MB408	MB4010	Unit	Conditions
V_{RRM}	Max. Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
V_{RMS}	Max. RMS Voltage	35	70	140	280	420	560	700	V	
V_{DC}	Max. DC blocking voltage	50	100	200	400	600	800	1000	V	
I_O	Average Rectified Output Current	40							A	$T_A=60^{\circ}\text{C}$
I_{FSM}	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
V_{FM}	Forward Voltage per leg	1.2							V	I _o =20A
I_{RM}	Max. Reverse DC Current At Rated DC Blocking Voltage per leg	10							μA	T _C = 25°C
		1000							μA	T _C = 125°C
I²t	Rating for Fusing (t<8.3ms)	664							A ² s	
C_J	Typical junction capacitance per leg	300							pF	f=1MHz V _R = 4V
R_{thjc}	Typical Thermal Resistance per leg	2.1							°C / W	Note
V_{ISO}	RMS Isolation Voltage from Case to Leads	2500							V	
T_J,T_{STG}	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

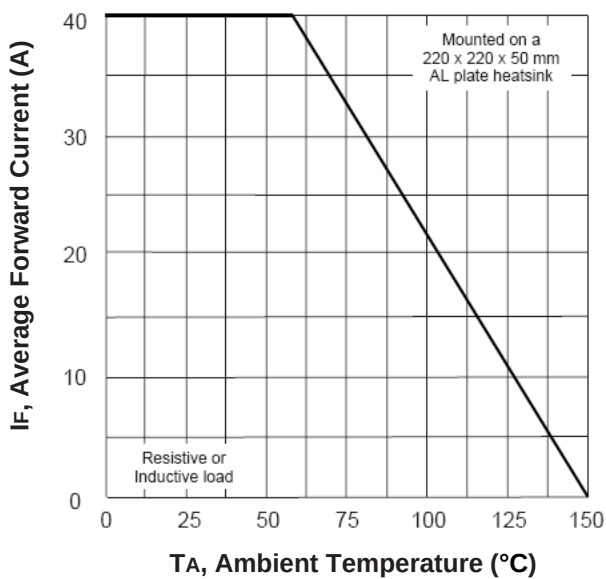
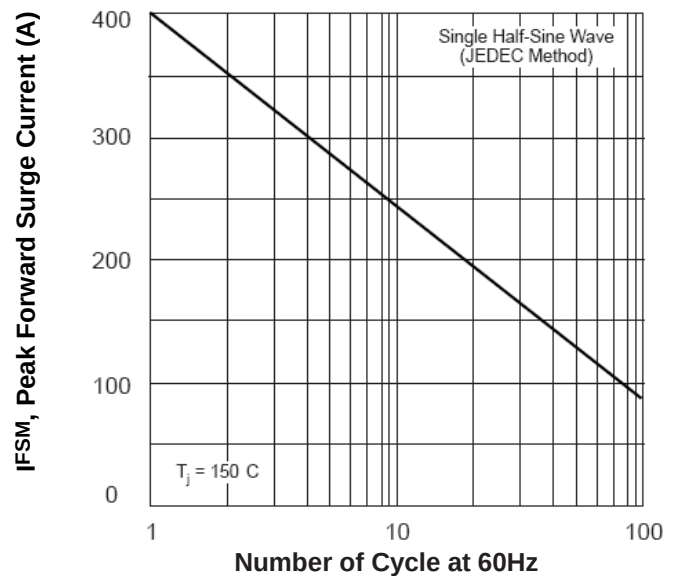


Fig.2-Max. Non-repetitive Peak Forward Surge Current Per Leg



40A Single-Phase Bridge Rectifier

MB4005 – MB4010

Fig.3-Typical Instantaneous Forward Characteristic Per Leg

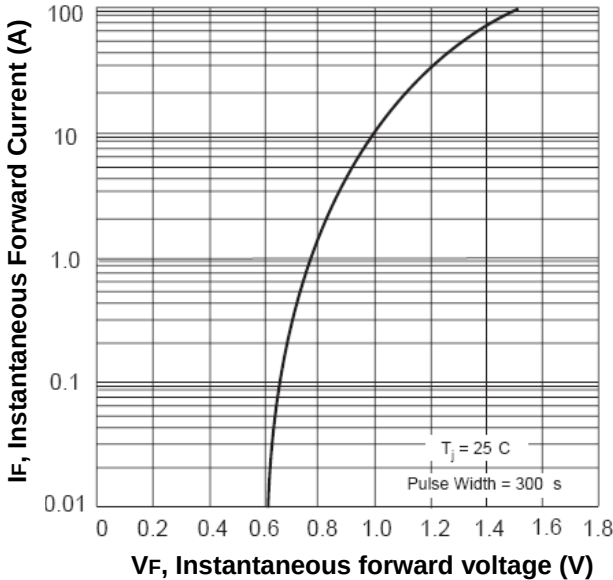


Fig.4-Typical Reverse Characteristics Per Leg

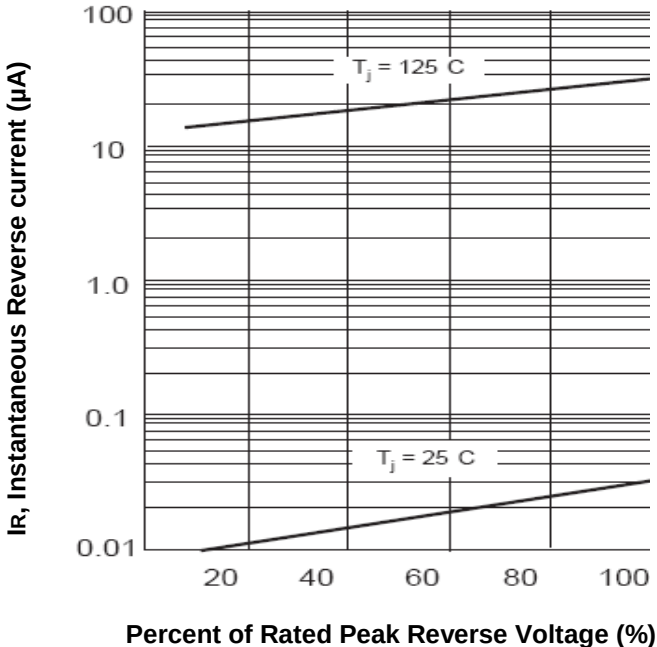
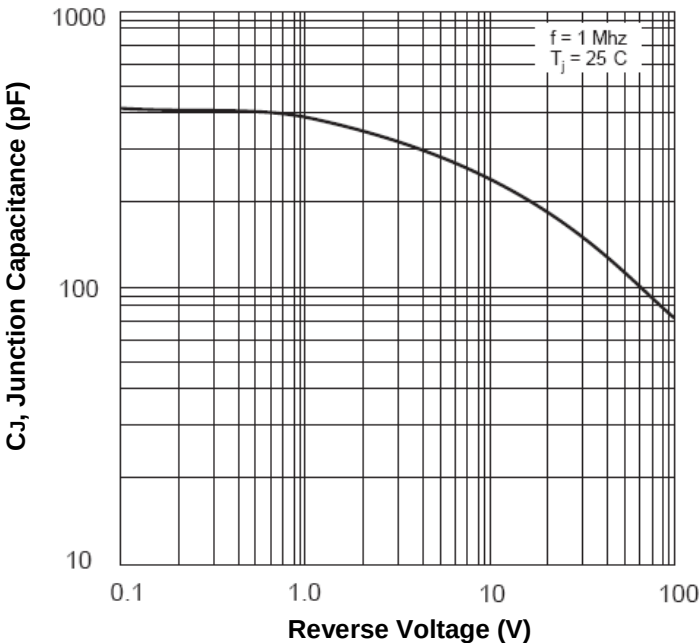


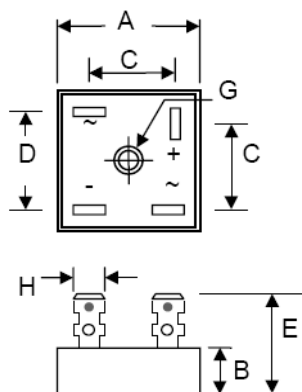
Fig.5-Typical Junction Capacitance Per Leg



40A Single-Phase Bridge Rectifier

MB4005 – MB4010

Dimensions in inch (mm)



	KBPC		KBPC-W	
Dim	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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