

Part Number	Repetitive Peak Reverse Voltage V_{RRM} V	Max. Bridge Output Voltage V_{BO}^1 V	Max. Average Output Current $I_{FAVM}@25^{\circ}C$ A	Max. Forward Voltage Drop (leg) $V_F@55^{\circ}C$ V	Max. Reverse Current $I_R@V_{RRM}@25^{\circ}C$ μA	Max. Surge Current (leg) I_{FSM}^1 A	Max. Reverse Recovery Time T_{RR}^3 nS	Figure
51000 Series - Single Phase Fullwave Bridge Rectifier Assembly - Convective Air Cooling								
51012	12000	6000	6	6	6.5	400	-	76
51014	24000	12000	6	12	6.5	400	-	77
51000 Series - Three Phase Fullwave Bridge Rectifier Assembly - Convective Air Cooling								
51013	12000	6000	9	6	6.5	400	-	74
51016	24000	12000	9	9	6.5	400	-	78
52000 Series - Single & Three Phase Rectifier Assembly - Oil Dielectric Use Only⁴								
52014	48000 ⁴	24000	4	9	5.0	400	-	77
52016	48000 ⁴	24000	6	9	5.0	400	-	78

¹ The true V_{RRM} of diodes used in an MOV compensated assembly is twice the Max Operating Voltage. Max Applied Voltage is limited, not by V_{RRM} but by the maximum voltage rating of the MOV. Each individual diode is rated at 1000V peak and MOV compensated to give an avalanche rating of 90 Joules max (8 x 20uS) and a V_{NOM} of 680V.

² Average current is based on ambient air temp of 50°C or below with convective cooling and free air movement around assy.

³ Average current based on ambient air temp of 50°C and below with at least 300 lfm airflow around assy.

⁴ The voltage and current rating for the 52000 series parts can be achieved only by complete emersion in dielectric oil such as Shell Diala or equivalent. Contact factory when other dielectric use is intended.

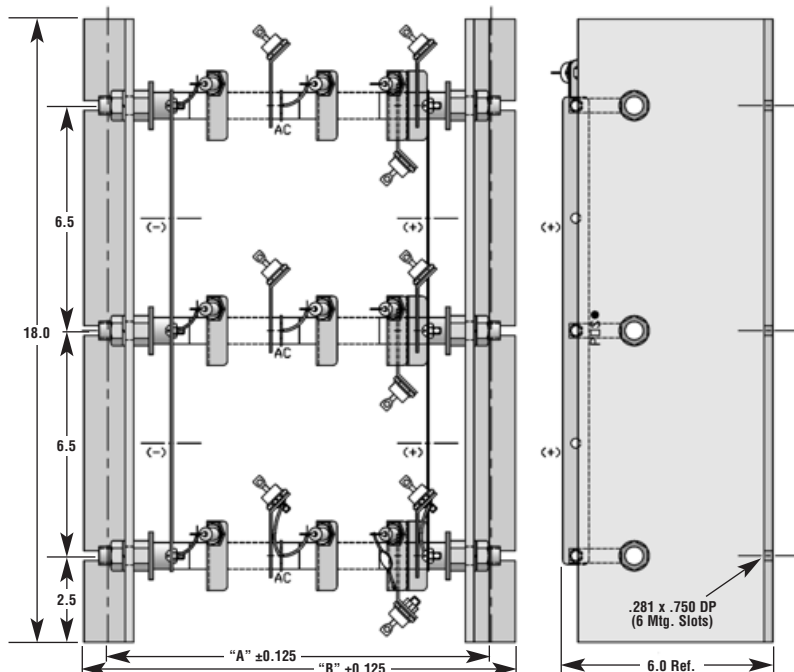
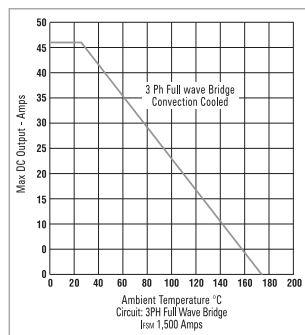
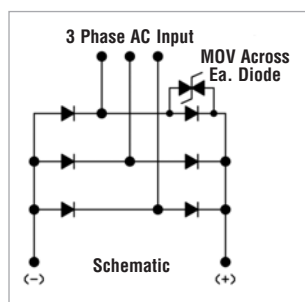
Max storage and operating temperature is -40°C to 125°C. Higher voltage, currents and fast recovery assemblies are available.

Doublers and special configurations, including special lengths, are available on special request. Contact the factory.

Much higher current ratings for 51000 series assemblies are possible when immersed in Shell Diala dielectric or equivalent. Contact Factory.

Product is available in RoHS compliant form. Unless RoHS compliance is requested, existing stocks of non-compliant materials are being shipped.

FIGURE 128



Part Number	Repetitive Peak Reverse Voltage V_{RRM} Per Leg ⁴ V	Max. Applied Voltage ⁴ V	Avg. Forward Current Max. $I_{FAVM}@40^{\circ}C$ A	Max. Forward Voltage Drop $V_F@I_F$ Per Leg ¹ V	Max. Reverse Current $I_R@V_{RRM}@25^{\circ}C^5$ μA	Max. Surge Current I_{FSM}^3 A	Max. Reverse Recovery Time T_{RR} nS	Package Dimension A (Inches)	Package Dimension B (Inches)
3PH Series - High Current Full Wave Bridge									
3PHFWB40A4KV	4000	2000	40	4	<100	1500	-	8.161	9.38
3PHFWB40A8KV	8000	4000	40	8	<100	1500	-	10.411	11.63
3PHFWB40A12KV	12000	6000	40	12	<100	1500	-	12.661	13.88
3PHFWB40A16KV	16000	8000	40	16	<100	1500	-	14.911	16.13
3PHFWB40A20KV	20000	10000	40	20	<100	1500	-	17.161	18.38
3PHFWB40A24KV	24000	12000	40	24	<100	1500	-	19.411	20.63
3PHFWB40A28KV	28000	14000	40	28	<100	1500	-	21.661	22.88
3PHFWB40A32KV	32000	16000	40	32	<100	1500	-	23.911	25.13
3PHFWB40A36KV	36000	18000	40	36	<100	1500	-	26.161	27.38

Maximum junction operating temperature $T_J = 180^{\circ}C$

Part Number	Repetitive Peak Reverse Voltage V_{RRM} Per Leg ⁴ V	Max. Applied Voltage ⁴ V	Avg. Forward Current Max. $I_{FAVM}@40^{\circ}C$ A	Max. Forward Voltage Drop $V_F@I_F$ Per Leg ² V	Max. Reverse Current $I_R@V_{RRM}@25^{\circ}C^5$ μA	Max. Surge Current I_{FSM}^3 A	Max. Reverse Recovery Time T_{RR} nS	Package Dimension A (Inches)	Package Dimension B (Inches)
3PH Series - Medium Current Full Wave Bridge									
3PHFWB18A8KV	8000	4000	18	8	<100	1050	-	8.161	9.38
3PHFWB18A16KV	16000	8000	18	16	<100	1050	-	10.411	11.63
3PHFWB18A24KV	24000	12000	18	24	<100	1050	-	12.661	13.88
3PHFWB18A32KV	32000	16000	18	32	<100	1050	-	14.911	16.13
3PHFWB18A40KV	40000	20000	18	40	<100	1050	-	17.161	18.38
3PHFWB18A48KV	48000	24000	18	48	<100	1050	-	19.411	20.63

Maximum junction operating temperature $T_J = 150^{\circ}$

¹ V_F measured at 14 Amperes Forward Current

² V_F measured at 6 Amperes Forward Current

³ 1/2 Sine(60Hz) @ $T_J=150^{\circ}C$

⁴ Individual diodes used in these assemblies are protected with MOVs. The clamp voltage of the MOVs is set considerably below the diode avalanche voltage. For this reason, the maximum safe input voltage applied to the bridge should not exceed 50% of the rated V_{RRM} .

⁵ Leakage current values include both MOV and diode leakage measured at 50% of V_{RRM} See note 4.

All listed products shipped on December 31, 2013 or later will be RoHS Compliant. Available earlier by special request, contact factory or sales rep for availability.