

Power Line Filters

Compact design requires minimal real estate and delivers excellent filtering characteristics for both differential and common mode. RoHS compliant, easily installed for a broad array of applications.



Appliance Filters PF50-PF53

Single Stage.....PF54-PF69

With Wire Leads PF56-PF57

With Wire Leads for Medical Applications PF58-PF59

Higher Current PF66-PF69

DC – Higher Current PF70-PF71

Dual Stage.....PF72-PF79

Power Line Filters Appliance Filters

11-MPC Series

Features

- Miniature general purpose PCB mounted filter
- Requires minimal PCB real estate space
- Low cost
- Operating temperature: -25°C to +70°C
- Two forms of cases are available:
metal case and plastic case

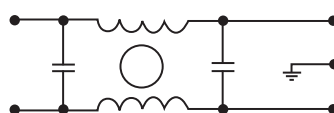
Applications

- Personal computers and peripherals
- Digital equipment
- Measuring instruments and medical equipment
- TV & VCR monitors and display units
- Home appliances

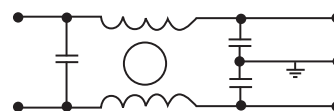


Circuit Diagram

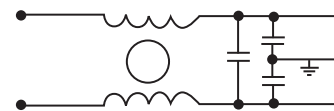
Circuit 1



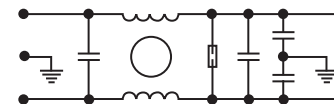
Circuit 2



Circuit 3



Circuit 4



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Circuit Diagram	Figure	Temperature Rise (Max.)
11-MPC-001-2-B	120/250VAC	1A	5uA	1	A1	30°C
11-MPC-001-5-A			0.50mA	2	A	
11-MPC-001-5-B		A1				
11-MPC-002-5-B		2A		3	D	
11-MPC-002-5-D					E	
11-MPC-003-5-E		3A		2	A1	
11-MPC-006-5-B					C	
11-MPC-006-5-C		6A	4	B		
11-MPC-016-5-B					16A	

Note: Test voltage: 1500VAC one minute, line to ground
Insulation resistance: 300 Mohm min. at 500VDC
Voltage drop: 1V max. at rated current
Weight: 17.5g

PCB Power Filters Miniature Printed Circuit Board

11-MPC Series

Figure A

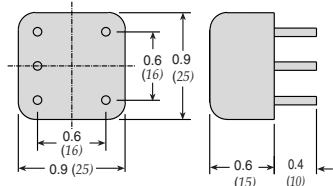


Figure A1

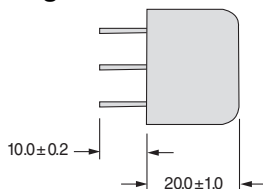


Figure B

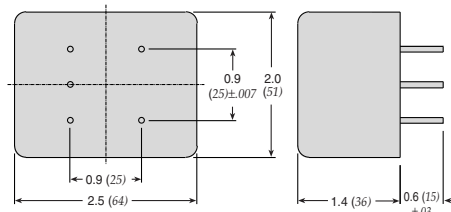


Figure C

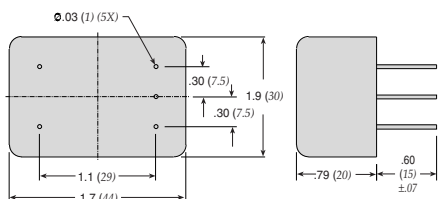


Figure D

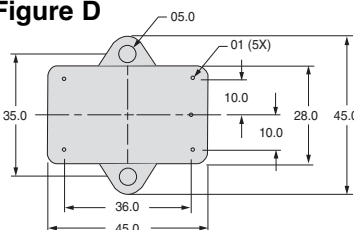
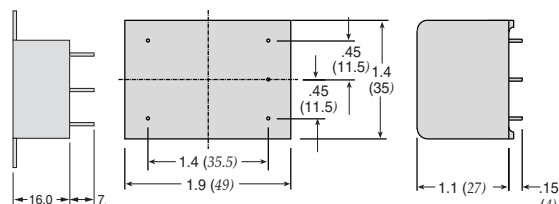
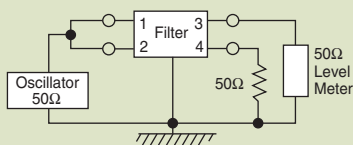


Figure E

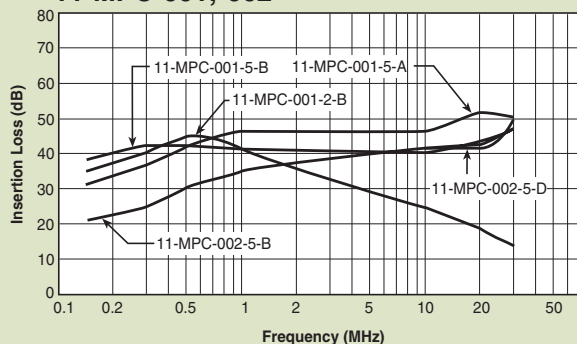


Dimensions in inches (mm)

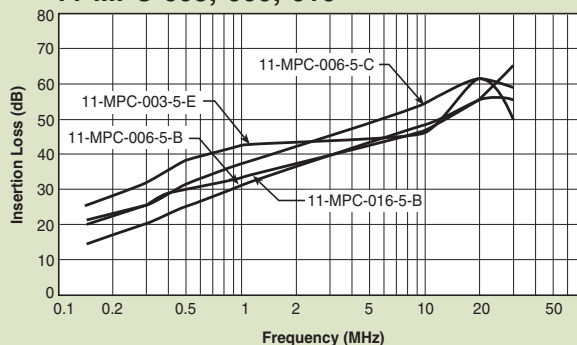
Common Mode



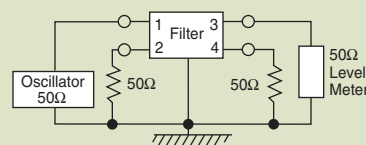
11-MPC-001;-002



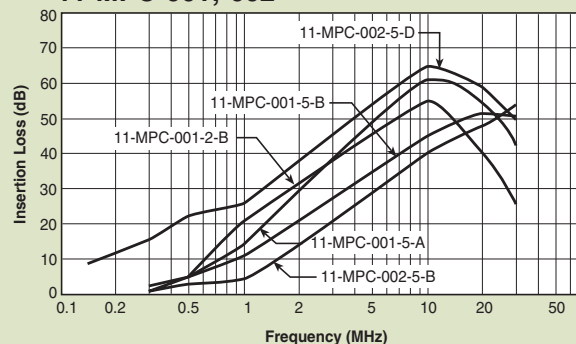
11-MPC-003;-006;-016



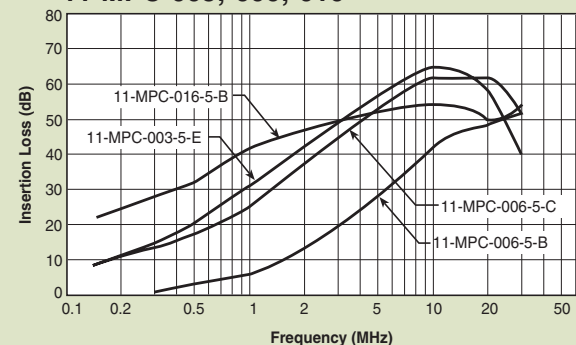
Normal Mode



11-MPC-001;-002



11-MPC-003;-006;-016



Power Line Filters Appliance Filters

62-AL/62-AC Series

Features

- Low-cost plastic case
- Compact design requires minimal real estate space
- Suitable for products that must conform to FCC regulations
- Wide variety of circuit and filtering options
- Good filtering characteristics for both normal mode and common mode
- Epoxy molded for reliability
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page PF53)

Applications

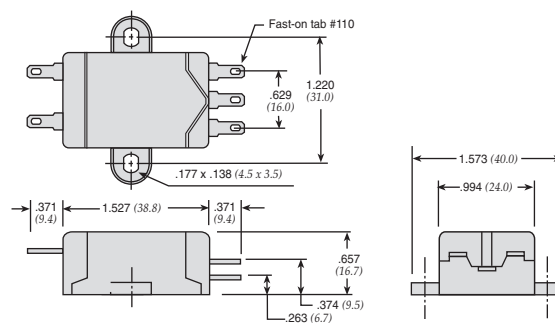
- Personal computers and peripherals
- Digital equipment
- Industrial equipment
- Vending machines
- Home appliances
- Office equipment

Specifications

Model*	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Capacitance		Inductance (L ₁)	Temperature Rise (Max.)
				C _Y	C _X		
62-AFL-010-3-11	250VAC	1.0A	0.35mA	2200pF	0.1uF	11.0mH	40°C
62-AFC-010-3-11			0.50mA	3300pF			
62-AFL-010-5-11		1.6A	0.35mA	2200pF		6.0mH	
62-AFC-010-5-11			0.50mA	3300pF			
62-AFL-016-3-11		3.0A	0.35mA	2200pF		2.4mH	
62-AFC-016-3-11			0.50mA	3300pF			
62-AFL-016-5-11		4.5A	0.35mA	2200pF		1.0mH	
62-AFC-016-5-11			0.50mA	3300pF			
62-AFL-030-3-11		6.0A	0.35mA	2200pF		0.53mH	
62-AFC-030-3-11			0.50mA	3300pF			
62-AFL-030-5-11			0.35mA	2200pF			
62-AFC-030-5-11			0.50mA	3300pF			
62-AFL-045-3-11			0.35mA	2200pF			
62-AFC-045-3-11			0.50mA	3300pF			
62-AFL-045-5-11			0.35mA	2200pF			
62-AFC-045-5-11			0.50mA	3300pF			

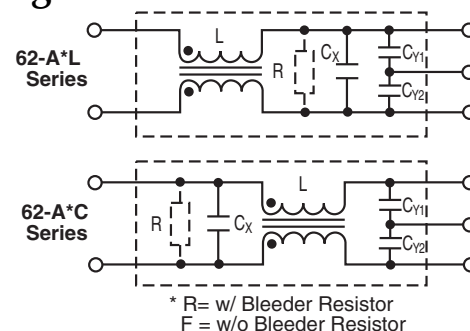
Note: All types are designed to meet the requirement of UL 1283, CSA 22.2. VDE 0565-3
 Test voltage: 1500VAC one minute, line to ground
 Insulation resistance: 300 Mohm min. at 500VDC
 Voltage drop: 1V max.

* Available with bleeder resistor
 Replace F with R for part number



Dimensions in inches (mm)

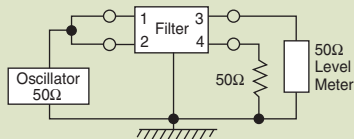
Circuit Diagrams



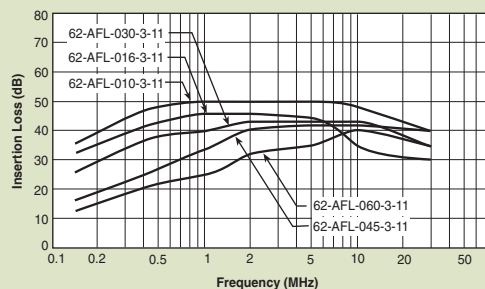
Power Line Filters Appliance Filters

62-AL/62-AC Series

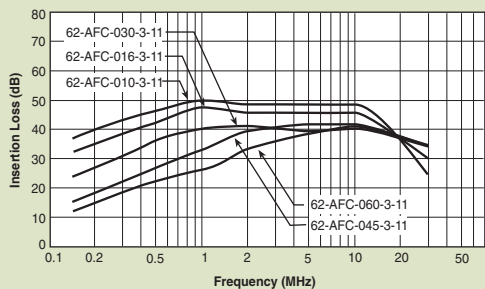
Common Mode



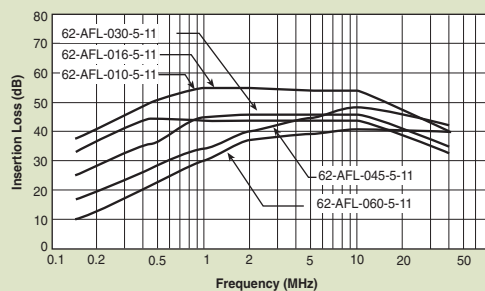
62-AFL-xxx-3-11



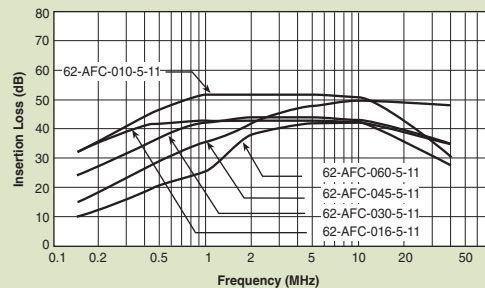
62-AFC-xxx-3-11



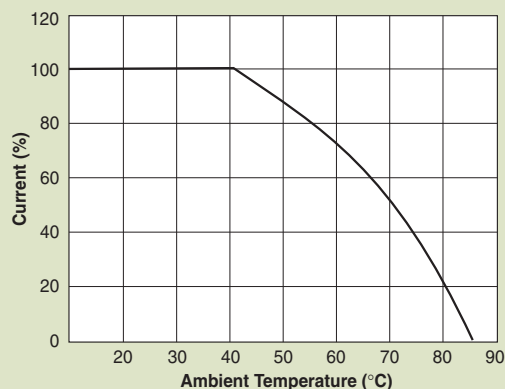
62-AFL-xxx-5-11



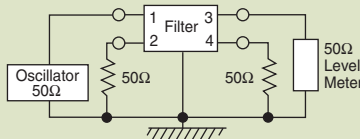
62-AFC-xxx-5-11



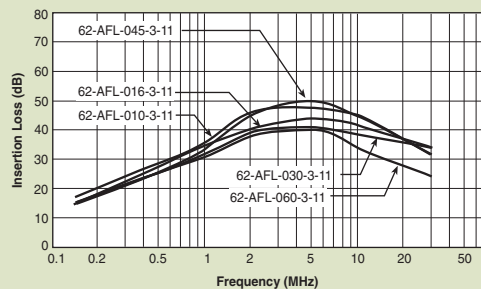
Temperature Characteristics



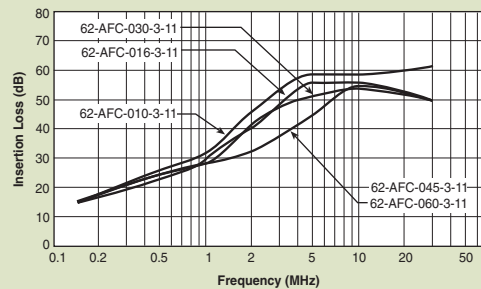
Normal Mode



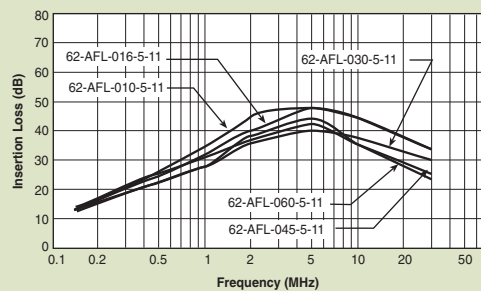
62-AFL-XXX-3-11



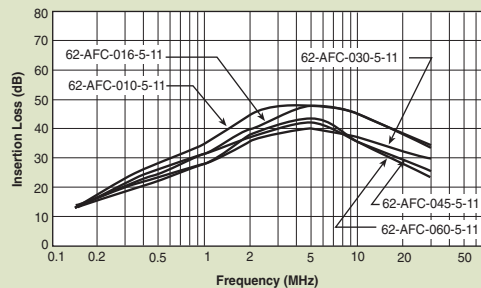
62-AFC-XXX-3-11



62-AFL-xxx-5-11



62-AFC-xxx-5-11



Power Line Filters Single Stage

62-PPF/PQF/PRF Series



Tested and found to be
IAW VDE 0565 Part 3

Features

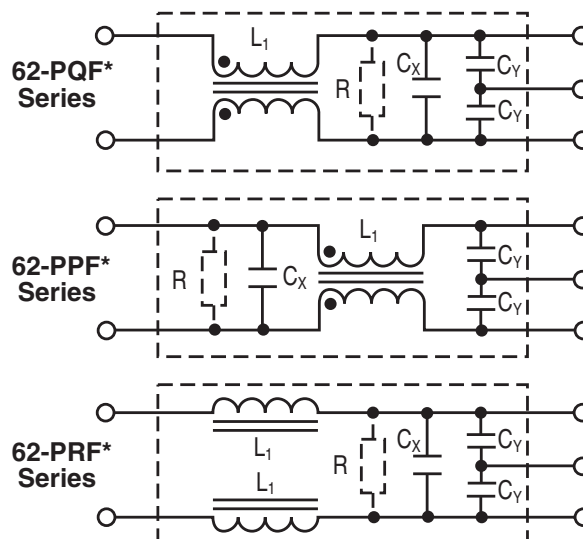
- Low-cost plastic case
- Compact design requires minimal real estate space
- Suitable for products that must conform to FCC and FTZ regulations
- Wide variety of circuit and filtering options
- Good filtering characteristics for both normal mode and common mode
- Epoxy molded for reliability
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page PF55)

Applications

- Personal computers and peripherals
- Digital equipment
- Industrial equipment
- Vending machines
- Office equipment



Circuit Diagrams



* Bleeder Resistor is available only for
62-P(Q/R/P)F-XXX-X-12

Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Capacitance		Inductance (L ₁)	Temperature Rise (Max.)
				C _Y	C _X		
62-PQF-020-5-11	250VAC	2A	0.50mA	3300pF	0.1uF	15mH	30°C
62-PQF-020-5-12					.22uF		
62-PPF-020-5-11					0.1uF		
62-PPF-020-5-12					.22uF		
62-PQF-030-5-11		3A			0.1uF	8mH	
62-PQF-030-5-12					.22uF		
62-PPF-030-5-11					0.1uF		
62-PPF-030-5-12					.22uF		
62-PQF-060-5-11		6A			0.1uF	2.1mH	
62-PQF-060-5-12					.22uF		
62-PPF-060-5-11					0.1uF		
62-PPF-060-5-12					.22uF		
62-PRF-010-5-11		1A			0.1uF	486uH	
62-PRF-010-5-12					.22uF		
62-PRF-020-5-11		2A			0.1uF	181uH	
62-PRF-020-5-12					.22uF		
62-PRF-030-5-11		3A			0.1uF	97uH	
62-PRF-030-5-12					.22uF		

Note: All types are designed to meet the requirement of UL 1283, CSA 22.2, VDE 0565-3

Test voltage: 1500VAC one minute, line to ground

Insulation resistance: 300 Mohm min. at 500VDC

Voltage drop: 1V max. (except 62-PRF-010-5-11) at rated current

62-PRF-010-5-11: 1.5V max. at rated current

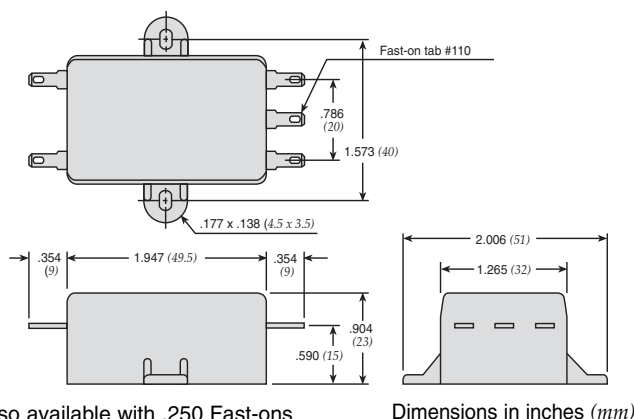
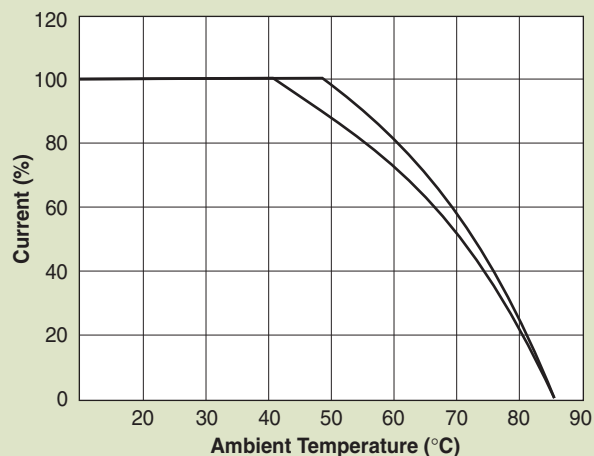
Weight: 62-PPF & PQF Series: 2.11 ounces (60 grams)

62-PRF Series: 1.76 ounces (50 grams)

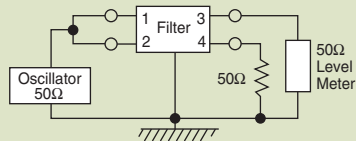
Power Line Filters Single Stage

62-PPF/PQF/PRF Series

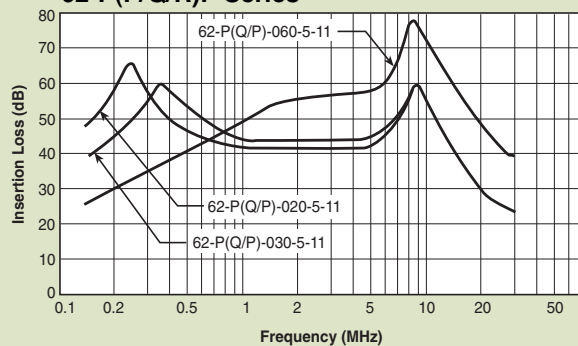
Temperature Characteristics



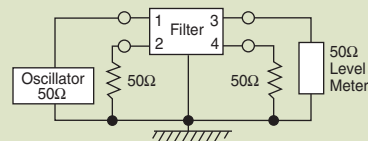
Common Mode



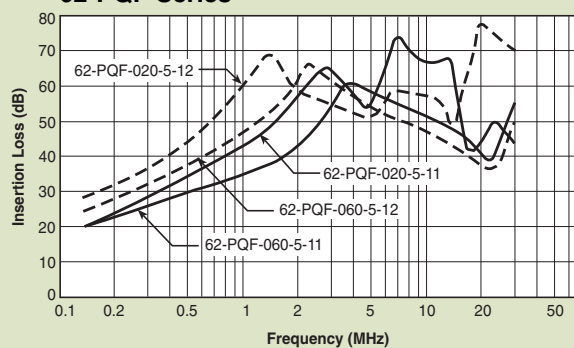
62-P(P/Q/R)F Series



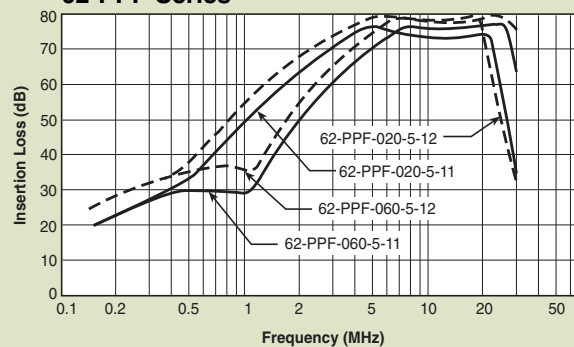
Normal Mode



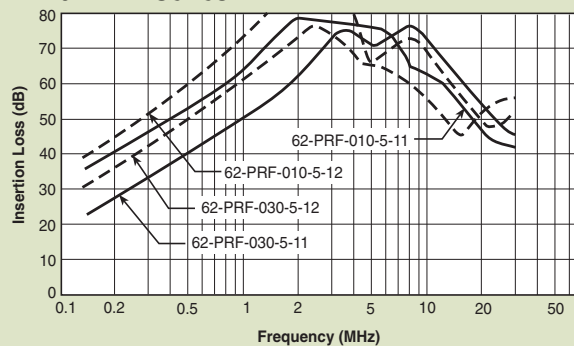
62-PQF Series



62-PPF Series



62-PRF Series



Power Line Filters Single Stage Wire Leads

62-PML Series

Features

- Compact design requires minimal real estate space
- Suitable for products that must conform to FCC and FTZ regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective shielding
- Excellent filtering characteristics for both normal mode and common mode
- Structure provides effective shielding for noise generated externally and internally
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page PF57)

Applications

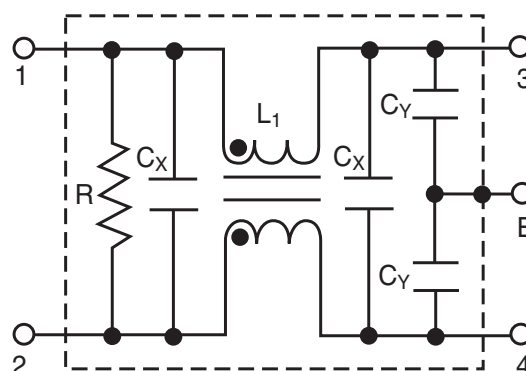
- Digital equipment
- Personal computers and peripherals
- Measuring instruments
- Medical equipment
- Factory automation equipment



Tested and found to be
IAW VDE 0565 Part 3



Circuit Diagram



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Capacitance		Inductance (L ₁)	Temperature Rise (Max.)
				C _Y	C _X		
62-PML-015-3-11	250VAC	1.5A	0.35mA	2200pF	0.1uF	10.0mH	30°C
62-PML-015-5-11			0.50mA	3300pF			
62-PML-030-3-11		3A	0.35mA	2200pF		4.3mH	
62-PML-030-5-11			0.50mA	3300pF			
62-PML-050-3-11		5A	0.35mA	2200pF		2.4mH	
62-PML-050-5-11			0.50mA	3300pF			

Note: All types are designed to meet the requirement of UL 1283, CSA 22.2. VDE 0565-3

Test voltage: 1500VAC one minute, line to ground

Insulation resistance: 300 Mohm min. at 500VDC

Voltage drop: 1V max. at rated current

Weight: 62-PML-015 Series: 3.06 ounces (87 grams)

62-PML-030 Series: 3.17 ounces (90 grams)

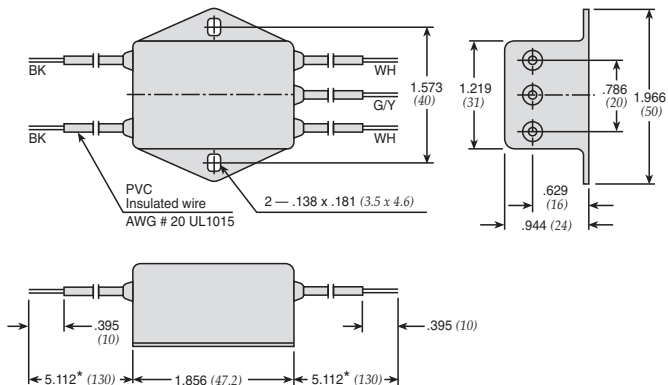
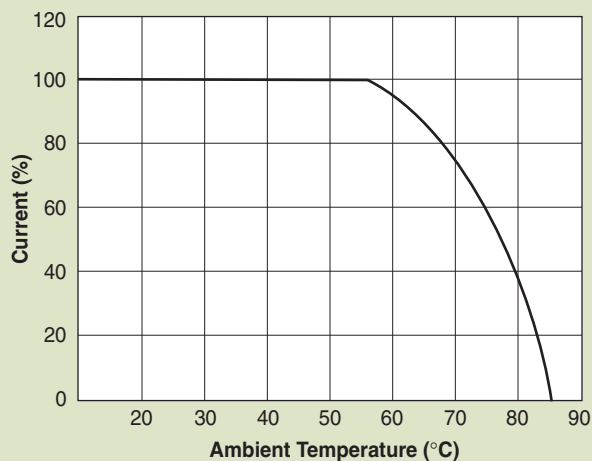
62-PML-050 Series: 3.28 ounces (93 grams)

Discharge time: 0.4 sec. max.

Power Line Filters Single Stage Wire Leads

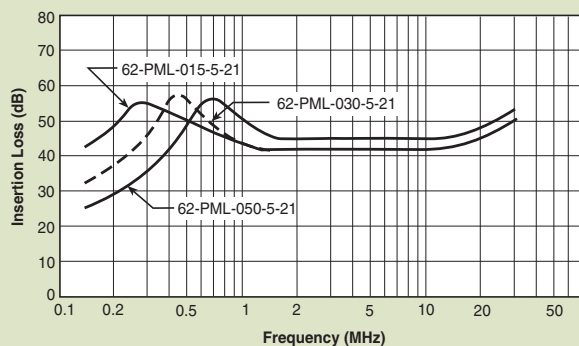
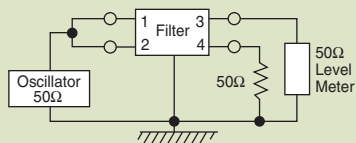
62-PML Series

Temperature Characteristics

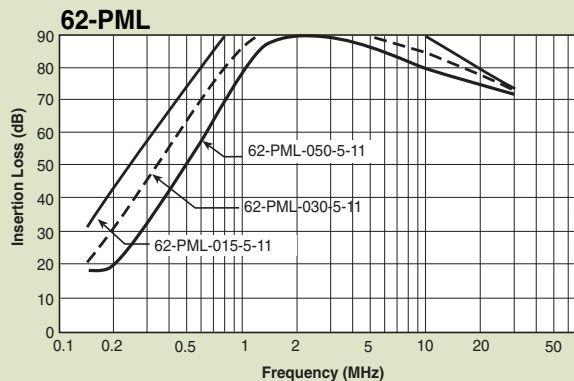
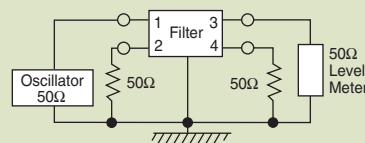


* Custom lengths available upon request. Dimensions in inches (mm)

Common Mode



Normal Mode



Power Line Filters Single Stage Wire Leads

for Medical Purpose Applications

12-PML & 12-PMF Series



Features

- Compact design requires minimal real estate space
- Suitable for products that must conform to FCC and FTZ regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective shielding
- Excellent filtering characteristics for both normal mode and common mode
- Structure provides effective shielding for noise generated externally and internally
- Operating temperature: -25°C to +70°C
- Low leakage current

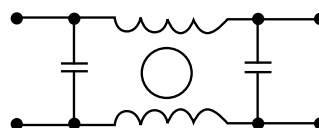
Applications

- Digital equipment
- Personal computers and peripherals
- Measuring instruments
- Medical equipment
- Factory automation equipment

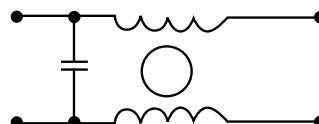


Circuit Diagram

Circuit 1



Circuit 2



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Circuit Diagram	Figure	Temperature Rise (Max.)	
12-PML-001-2-A	120/250VAC	1A	5uA	1	A	30°C	
12-PML-002-2-A		2A					
12-PML-006-2-A		6A					
12-PML-010-2-A		10A					
12-PMF-001-2-B		1A		2	B		
12-PMF-002-2-B		2A					
12-PMF-006-2-B		6A					
12-PML-001-2-C		1A		1	C		

Note: All types are designed to meet the requirement of UL 1283, CSA 22.2. VDE 0565-3

Test voltage: 1500VAC one minute, line to ground

Insulation resistance: 300 Mohm min. at 500VDC

Voltage drop: 1V max. at rated current

Discharge time: 0.4 sec. max.

Power Line Filters Single Stage Wire Leads

for Medical Purpose Applications

12-PML & 12-PMF Series

Figure A

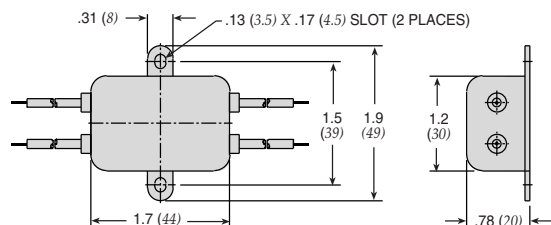


Figure C

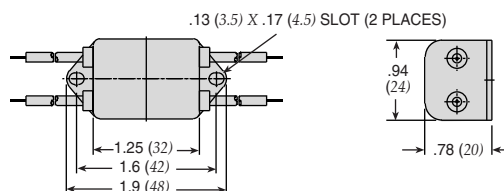
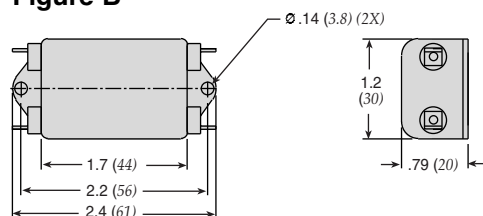
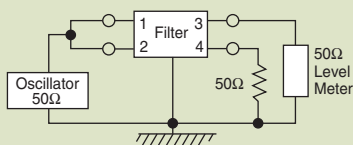


Figure B

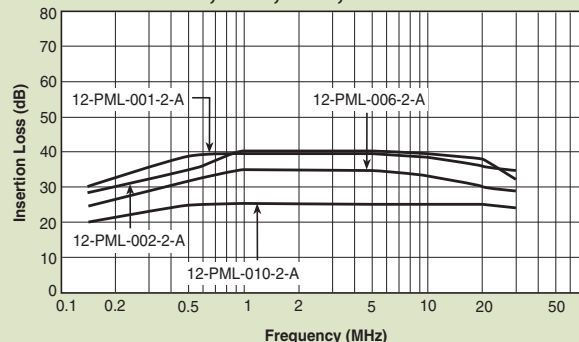


Dimensions in inches (mm)

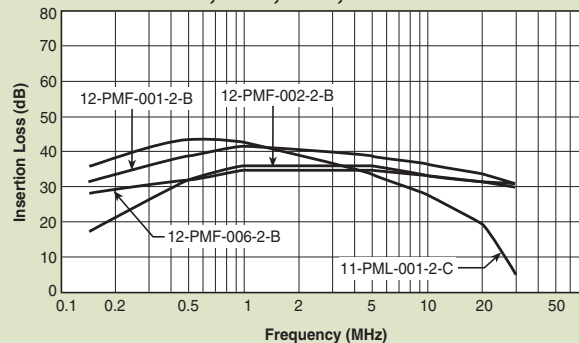
Common Mode



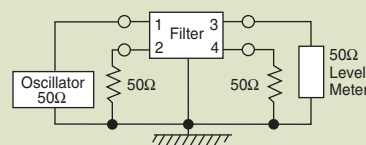
12-PML-001;-002;-006;-010



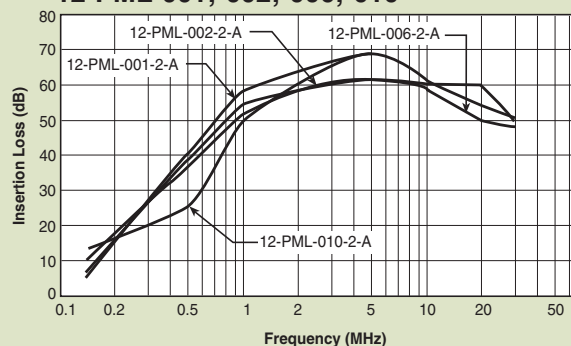
12-PMF-001;-002;-006;-010



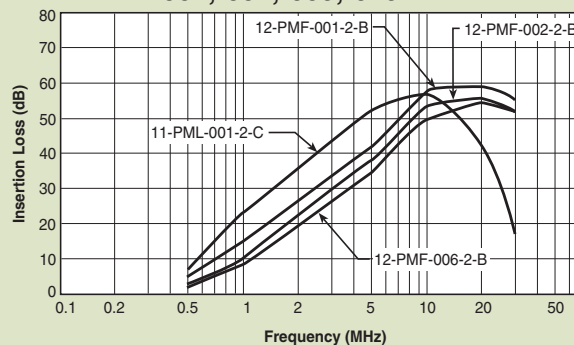
Normal Mode



12-PML-001;-002;-006;-010



12-PMF-001;-002;-006;-010



Power Line Filters Single Stage

62-LMF & LMB Series



Tested and found to be
IAW VDE 0565 Part 3

Features

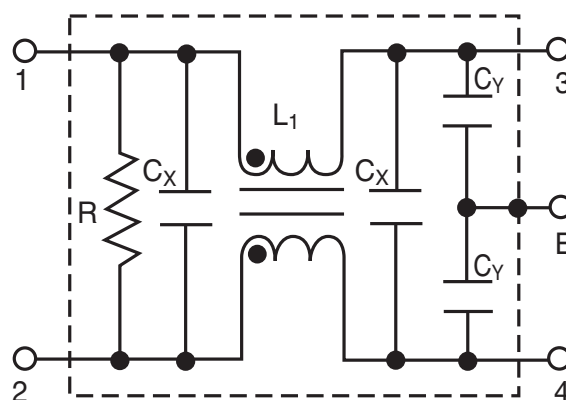
- Space saving, compact designs
- Suitable for products that must conform to FCC and FTZ regulations
- Excellent filtering characteristics for both normal mode and common mode
- Structure provides effective shielding for noise generated externally and internally
- Metal case provides effective shielding
- Rugged construction
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page PF61)

Applications

- Digital equipment
- Office automation equipment, such as copy and fax machines
- Computers and peripherals
- Instrumentation and controls



Circuit Diagram



Specifications

Model*	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Capacitance		Inductance (L ₁)	Temperature Rise (Max.)
				C _Y	C _X		
62-LMB-030-5-11	250VAC	3A	0.50mA	3300pF	0.1uF	14mH	45°C
62-LMF-030-5-11		5A			0.1uF & .22uF	7.0mH	
62-LMB-050-5-11							
62-LMF-050-5-11		8A			.22uF	4.2mH	
62-LMB-080-5-11							
62-LMF-080-5-11		10A			.33uF	2.2mH	
62-LMB-100-5-11							
62-LMF-100-5-11							

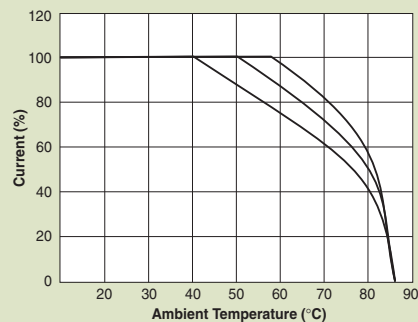
Note: Test voltage: 1500VAC one minute, line to ground
Insulation resistance: 300 Mohm min. at 500VDC
Voltage drop: 1V max. at rated current
Discharge time: 0.4 sec. max.
Weight: 5.3 ounces (150 grams)

*62-LMF - designates Fast-on terminals
62-LMB - designates Bolt-in terminals
62-LML - wire lead in/outputs also available

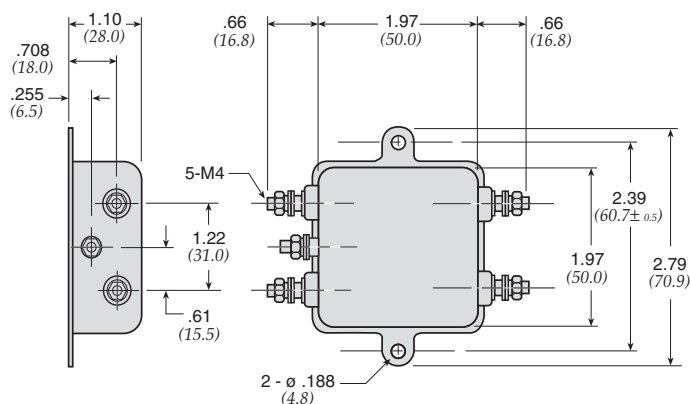
Power Line Filters Single Stage

62-LMF & LMB Series

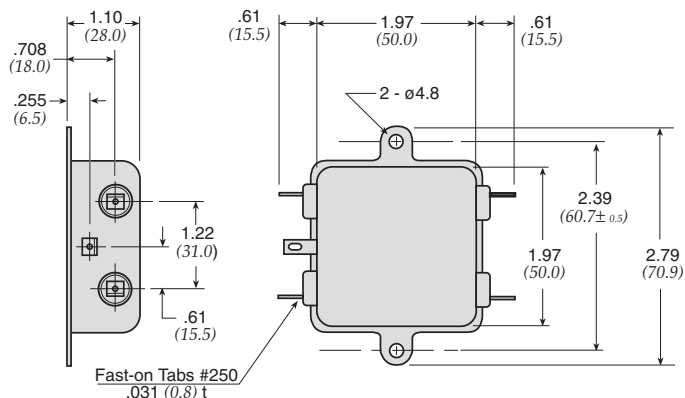
Temperature Characteristics



62-LMB

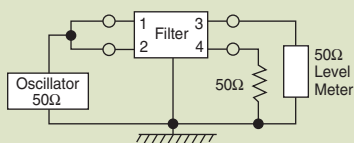


62-LMF

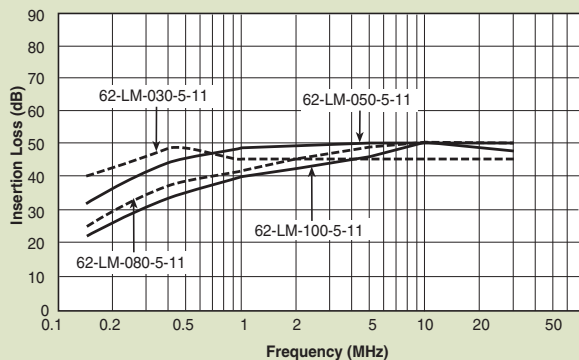


Dimensions in inches (mm)

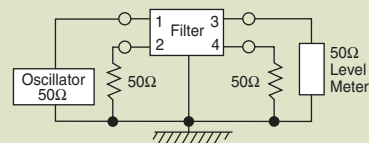
Common Mode



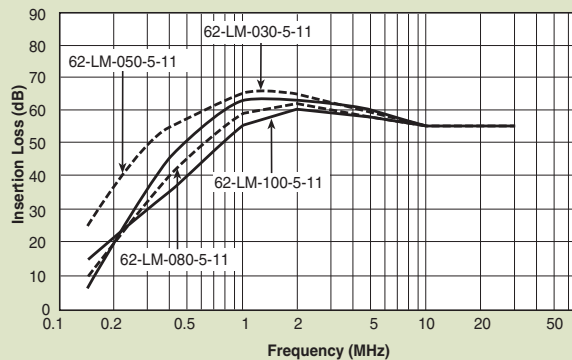
62-LMF & LMB



Normal Mode



62-LMF & LMB



Power Line Filters Single Stage

62-PMF & PMB Series



Tested and found to be
IAW VDE 0565 Part 3

Features

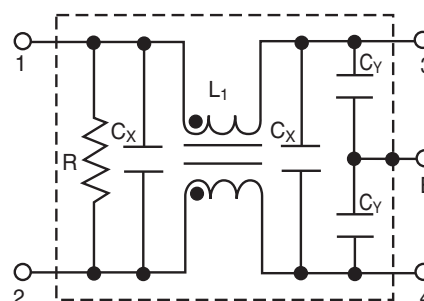
- Space-saving, compact designs
- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective EMI shielding
- Excellent filtering characteristics for both normal mode and common mode
- Epoxy molded for internal component reliability
- Structure provides effective shielding for noise generated externally and internally
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page PF63)

Applications

- Digital equipment
- Computers and peripherals
- Measuring instruments
- Medical equipment
- Equipment requiring very high impulse attenuation
- Factory automation equipment
- Industrial equipment such as UPS, inverters and converters
- Telecommunications equipment
- Office automation equipment, such as copy and fax machines



Circuit Diagram



Specifications

Model*	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Capacitance		Inductance (L ₁)	Temperature Rise (Max.)
				C _Y	C _X		
62-PMB-050-5-11	250VAC	5A	0.50mA	3300pF	0.1uF	14mH	30°C
62-PMF-050-5-11		8A			.1uF	7.0mH	
62-PMB-080-5-11							
62-PMF-080-5-11							
62-PMB-100-5-12							10A
62-PMF-100-5-12		15A			.33uF	2.2mH	35°C
62-PMB-150-5-13							
62-PMF-150-5-13							
62-PMB-200-5-13							
62-PMF-200-5-13							

Note: Test voltage: 1500VAC one minute, line to ground
Insulation resistance: 300 Mohm min. at 500VDC
Voltage drop: 1V max.
Discharge time: 0.4 sec. max.
Weight: 8.82 ounces (250 grams)

* PMF - designates Fast-on terminals

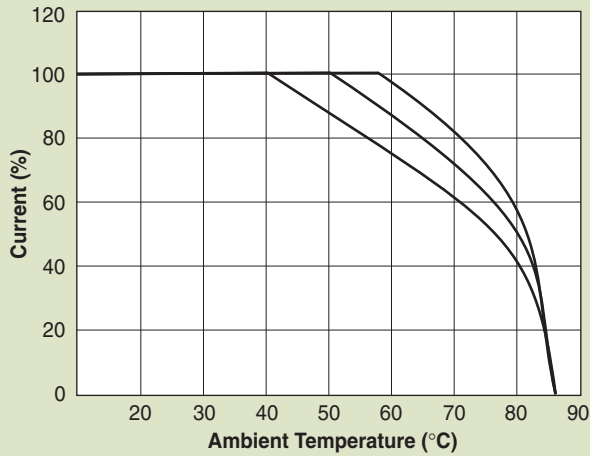
PMB - designates Bolt-in terminals

** The temperature rise of 20 amp units can be decreased to 30°C by mounting on 200 X 200 x 1.0(mm) steel chassis

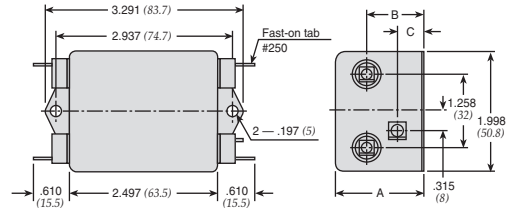
Power Line Filters Single Stage

62-PMF & PMB Series

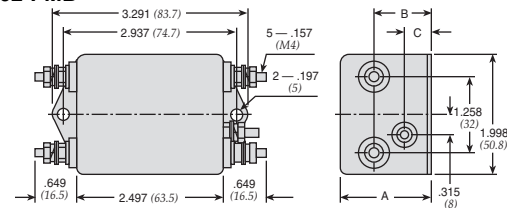
Temperature Characteristics



62-PMF



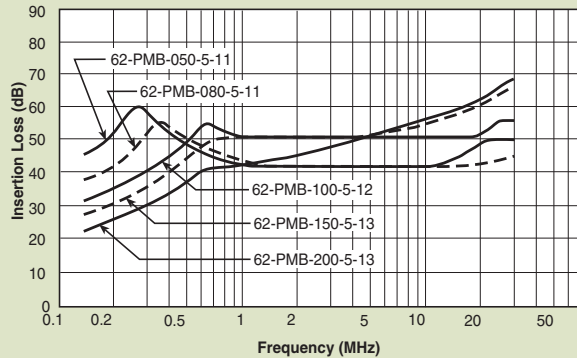
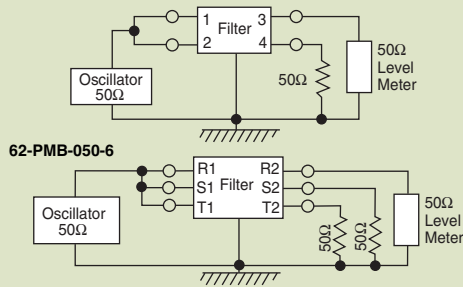
62-PMB



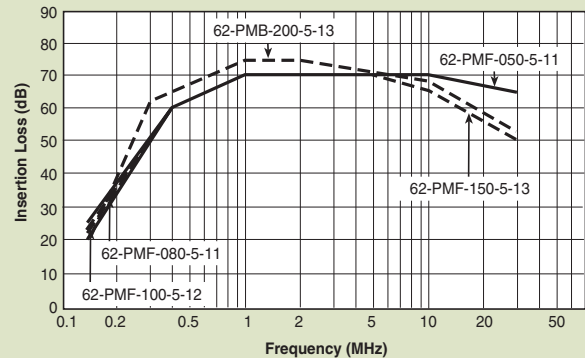
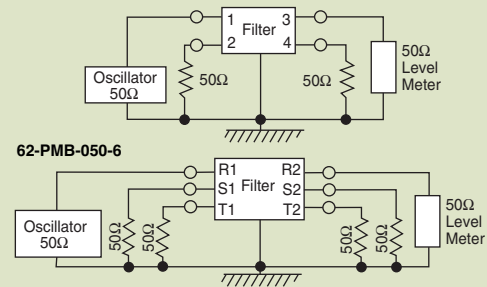
MODEL	A	B	C
62-PMF/PMB-100-200	1.490 (38)	.944 (24)	.433 (11)
62-PMF/PMB-050-080	1.258 (32)	.786 (20)	0 (0)

Dimensions in inches (mm)

Common Mode



Normal Mode



Power Line Filters Single Stage

12-PMF Series



Features

- Space-saving, compact designs
- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective EMI shielding
- Excellent filtering characteristics for both normal mode and common mode
- Epoxy molded for internal component reliability
- Structure provides effective shielding for noise generated externally and internally
- Operating temperature: -25°C to +85°C

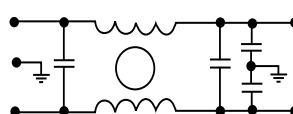
Applications

- Digital equipment
- Computers and peripherals
- Measuring instruments
- Medical equipment
- Equipment requiring very high impulse attenuation
- Factory automation equipment
- Industrial equipment such as UPS, inverters and converters
- Telecommunications equipment
- Office automation equipment, such as copy and fax machines

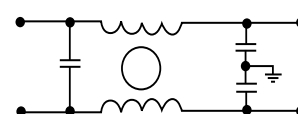


Circuit Diagram

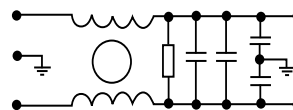
Circuit 1



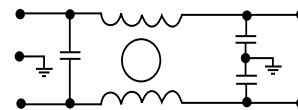
Circuit 2



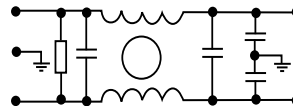
Circuit 3



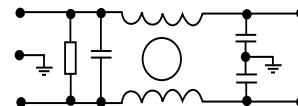
Circuit 4



Circuit 5



Circuit 6



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Circuit Diagram	Figure	Temperature Rise (Max.)
12-PMF-001-5-A	120/250VAC	1A	0.5mA	1	A	30°C
12-PMF-002-5-B		2A		2	B	
12-PMF-003-5-A		3A		4	A	
12-PMF-003-5-B				2	B	
12-PMF-006-5-A		6A		4	A	
12-PMF-006-5-C				1	C	
12-PMF-006-5-D		6		D		
12-PMF-010-5-A		10A		2	A	
12-PMF-010-5-C				3	C	
12-PMF-015-5-C		15A		5	E	
12-PMF-015-5-E					C	
12-PMF-020-5-C		20A			D	
12-PMF-020-5-D					D	
12-PMF-020-5-E					E	

Note: Test voltage: 1500VAC one minute, line to ground
Insulation resistance: 300 Mohm min. at 500VDC
Voltage drop: 1V max.
Discharge time: 0.4 sec. max.

Power Line Filters Single Stage

12-PMF Series

Figure A

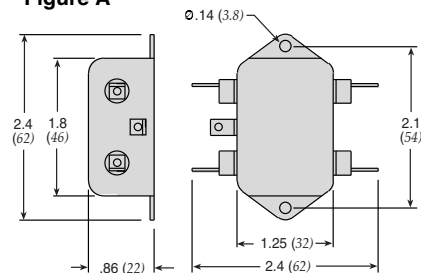


Figure B

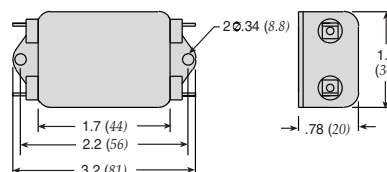


Figure C

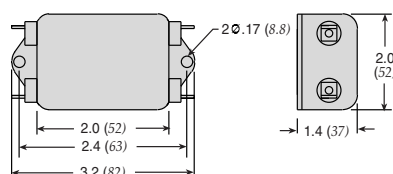


Figure D

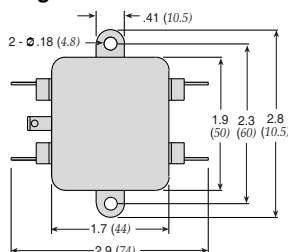
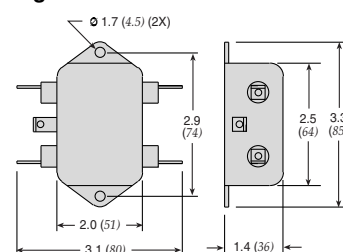
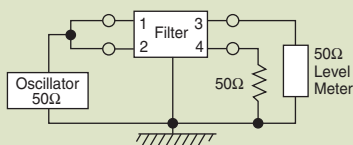


Figure E

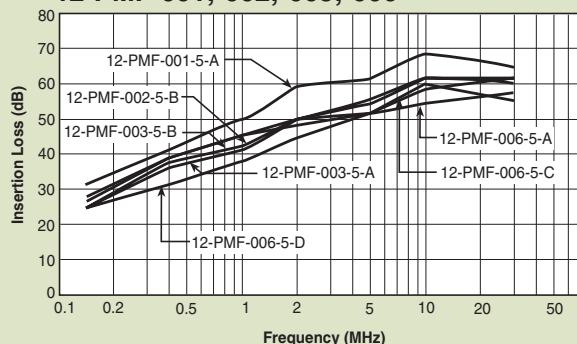


Dimensions in inches (mm)

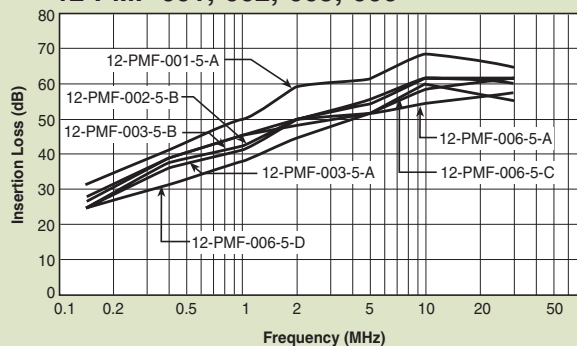
Common Mode



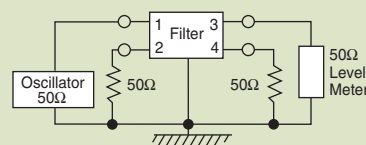
12-PMF-001;-002;-003;-006



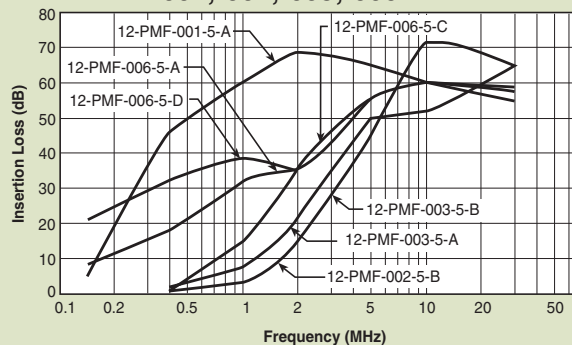
12-PMF-001;-002;-003;-006



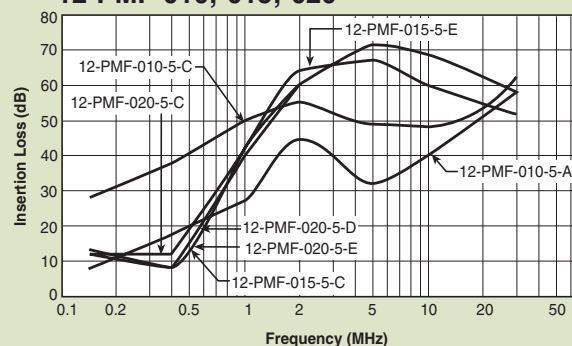
Normal Mode



12-PMF-001;-002;-003;-006



12-PMF-010;-015;-020



Power Line Filters Single Stage - Higher Current

62-PMB Series

Features

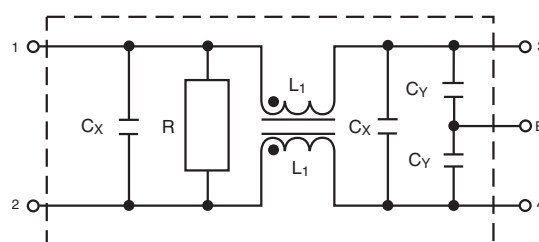
- Space-saving, compact designs
- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective shielding
- Excellent filtering characteristics for both normal mode and common mode
- Epoxy molded for internal component reliability
- Structure provides effective shielding for noise generated externally and internally
- Safety agency approvals pending
- Designed to be in accordance with VDE 0565 Part 3
- Operating temperature: -25°C to +85°C (including temperature rise)

Applications

- Digital equipment
- Computers and peripherals
- Measuring instruments
- Medical equipment
- Equipment requiring very high impulse attenuation
- Factory automation equipment
- Industrial equipment such as UPS, inverters and converters
- Telecommunications equipment
- Office automation equipment, such as copy and fax machines



Circuit Diagram



Specifications

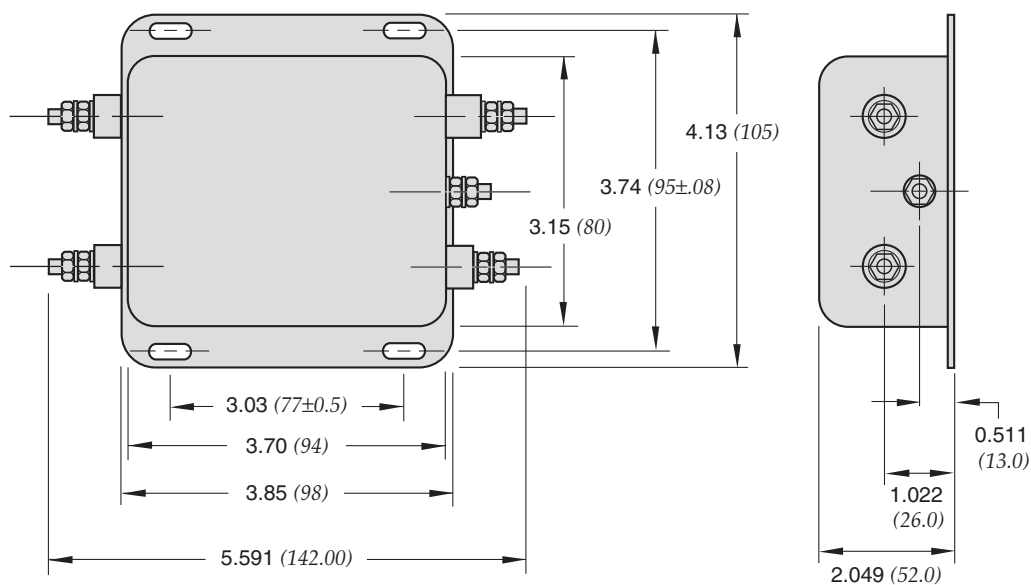
Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Capacitance		Inductance (L ₁)	Temperature Rise (Max.)
				C _Y	C _X		
62-PMB-300-5-14	250VAC	30A	0.50mA	3300pF	.47uF	1.6mH	45°C
62-PMB-400-5-14		40A				0.8mH	

Note: Test voltage: 1500VAC one minute, line to earth
Insulation resistance: 300 Mohm min. at 500VDC
Voltage drop: 1V max.
Discharge time: 0.4 sec. max.
Weight: 8.82 ounces (250 grams)

Power Line Filters Single Stage - Higher Current

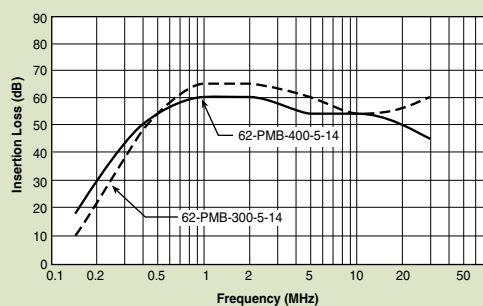
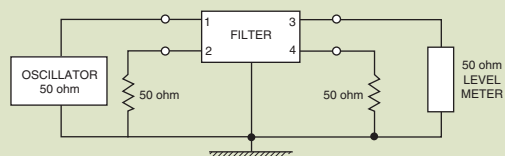
62-PMB Series

62-PMB-300-5-14 and 62-PMB-400-5-14

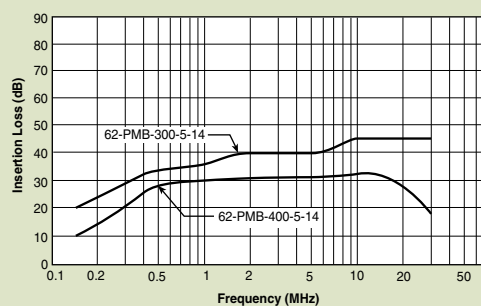
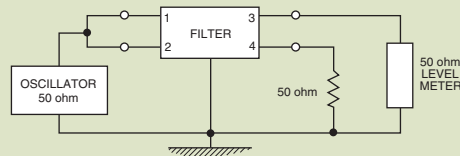


Dimensions in inches (mm)

Normal Mode



Common Mode



Power Line Filters Single Stage - Higher Current

12-PMB Series

Features

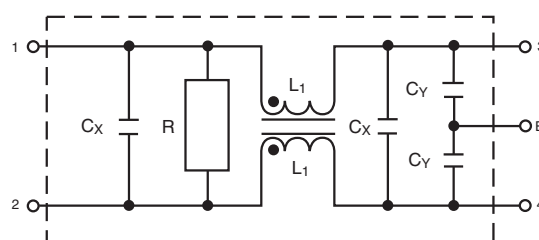
- Space-saving, compact designs
- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective shielding
- Excellent filtering characteristics for both normal mode and common mode
- Epoxy molded for internal component reliability
- Structure provides effective shielding for noise generated externally and internally
- Designed to be in accordance with VDE 0565 Part 3
- Operating temperature: -25°C to +85°C

Applications

- Digital equipment
- Computers and peripherals
- Measuring instruments
- Medical equipment
- Equipment requiring very high impulse attenuation
- Factory automation equipment
- Industrial equipment such as UPS, inverters and converters
- Telecommunications equipment
- Office automation equipment, such as copy and fax machines



Circuit Diagram



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Circuit Diagram	Figure	Temperature Rise (Max.)			
12-PMB-025-5-A	120/250VAC	25A	0.5mA	1	A	30°C			
12-PMB-030-5-A		30A			B				
12-PMB-035-5-B		35A							
12-PMB-050-5-B		50A			C				
12-PMB-100-8-C		100A	1.0mA						
12-PMB-120-8-C		120A							

Note: Test voltage: 1500VAC one minute, line to earth
 Insulation resistance: 300 Mohm min. at 500VDC
 Voltage drop: 1V max.
 Discharge time: 0.4 sec. max.
 Weight: 8.82 ounces (250 grams)

Power Line Filters Single Stage - Higher Current

12-PMB Series

Figure A

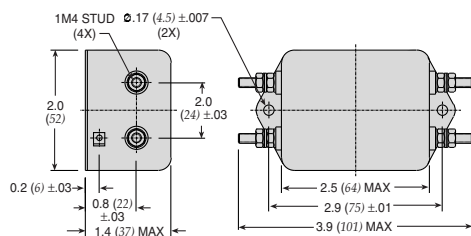


Figure B

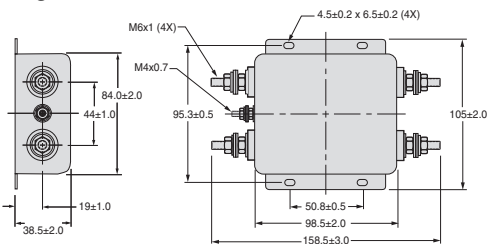
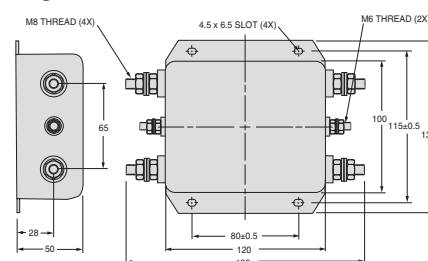
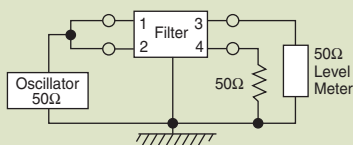


Figure C

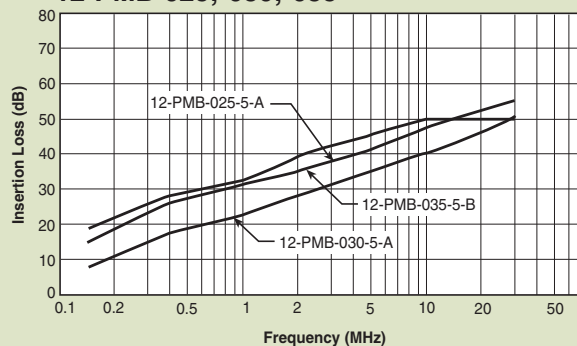


Dimensions in inches (mm)

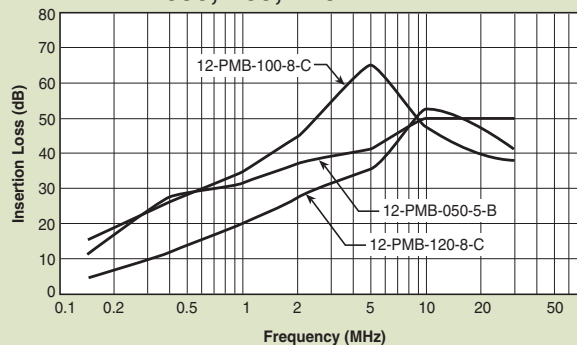
Common Mode



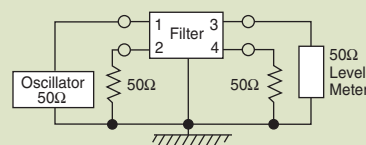
12-PMB-025;-030;-035



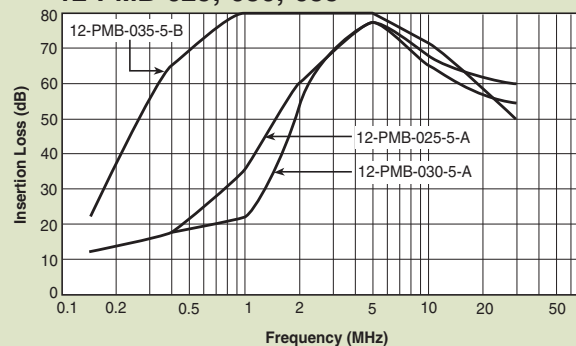
12-PMB-050;-100;-120



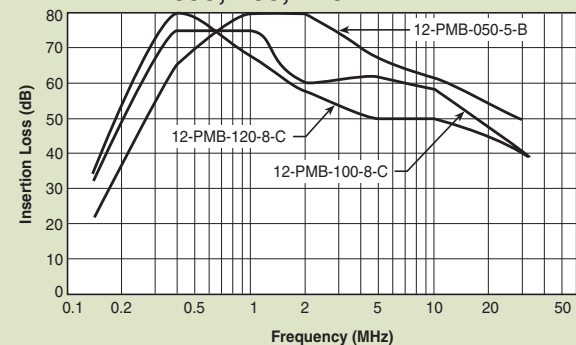
Normal Mode



12-PMB-025;-030;-035



12-PMB-050;-100;-120



Power Line Filters DC - Higher Current

12-PMF & 12 PMB DC Series

Features

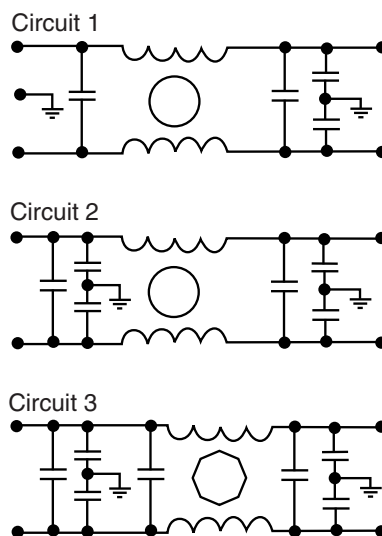
- Space-saving, compact designs
- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective shielding
- Excellent filtering characteristics for both normal mode and common mode
- Epoxy molded for internal component reliability
- Structure provides effective shielding for noise generated externally and internally
- Designed to be in accordance with VDE 0565 Part 3
- Operating temperature: -40°C to +85°C

Applications

- Digital equipment
- Computers and peripherals
- Measuring instruments
- Equipment requiring very high impulse attenuation
- Factory automation equipment
- Industrial equipment such as UPS, inverters and converters
- Telecommunications equipment



Circuit Diagram



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Circuit Diagram	Figure	Temperature Rise (Max.)	
12-PMF-006-DC-C	48/250 VDC	6A	1	A	30°C	
12-PMF-010-DC-C		10A				
12-PMF-015-DC-C		15A		B		
12-PMF-020-DC-C		20A				
12-PMF-025-DC-D		25A		C		
12-PMB-025-DC-F		30A				
12-PMB-030-DC-F		35A		D		
12-PMB-035-DC-F		40A				
12-PMB-040-DC-F		50A	2	E		
12-PMB-040-DC-B		60A				
12-PMB-050-DC-B		80A	3	F		
12-PMB-060-DC-B		100A				
12-PMB-080-DC-G		120A				
12-PMB-080-DC-C		140A	2	G		
12-PMB-100-DC-C		180A				
12-PMB-120-DC-C		200A	2	G		
12-PMB-140-DC-C		260A				
12-PMB-180-DC-E						
12-PMB-200-DC-E						
12-PMB-260-DC-E						

Note: Test voltage: 1500VAC one minute, line to earth
Insulation resistance: 300 Mohm min. at 500VDC
Voltage drop: 1V max.

Discharge time: 0.4 sec. max.
Weight: 8.82 ounces (250 grams)

Power Line Filters DC - Higher Current

12-PMF & 12-PMB DC Series

Figure B

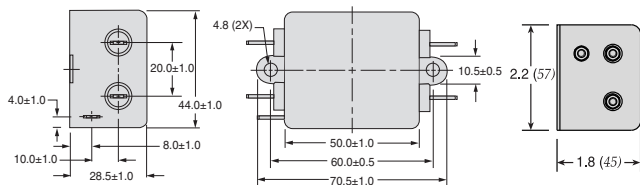


Figure C

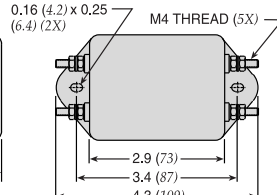


Figure A

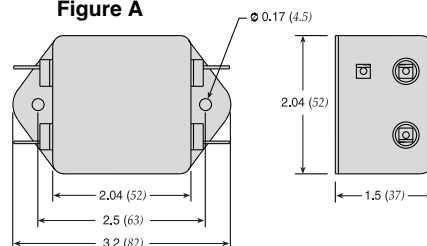


Figure D

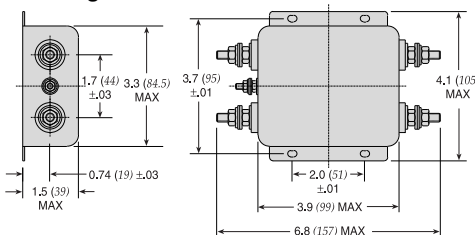


Figure E

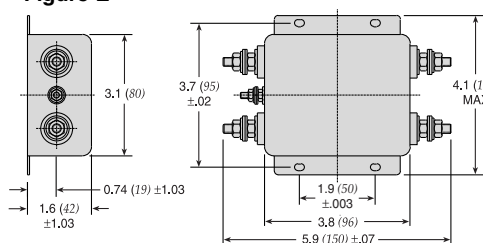


Figure F

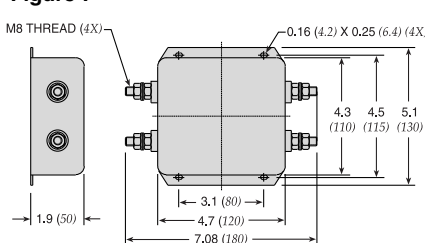
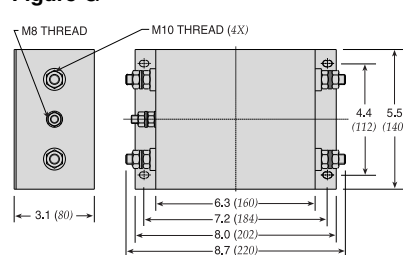
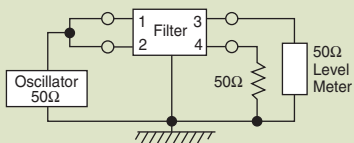


Figure G

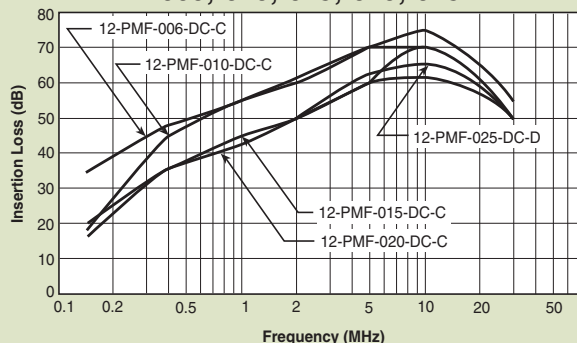


Dimensions in inches (mm)

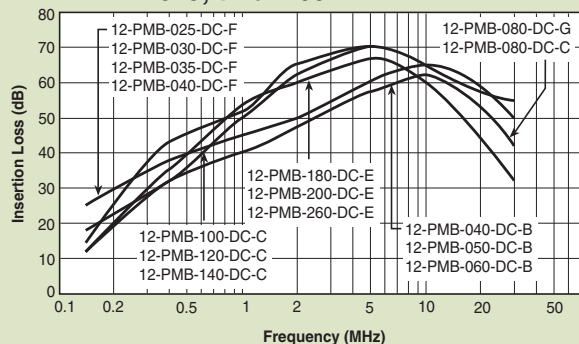
Common Mode



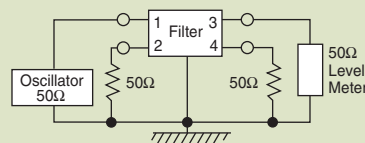
12-PMF-006;-010;-015;-020;-025



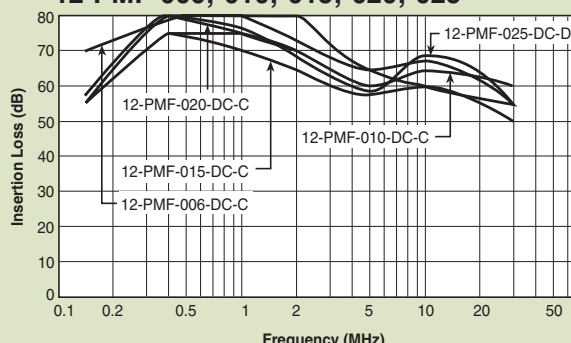
12-PMB-025; thru -260



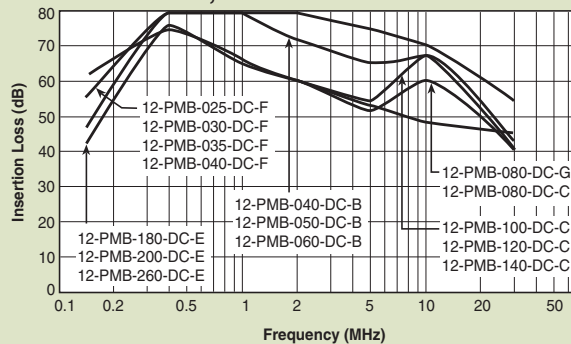
Normal Mode



12-PMF-006;-010;-015;-020;-025



12-PMB-025; thru -260



Power Line Filters Dual Stage

62-MMF Series

Features

- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective EMI shielding
- Two stages for excellent filtering characteristics
- Epoxy molded for reliability
- Structure provides effective shielding for noise generated both externally and internally
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page PF73)

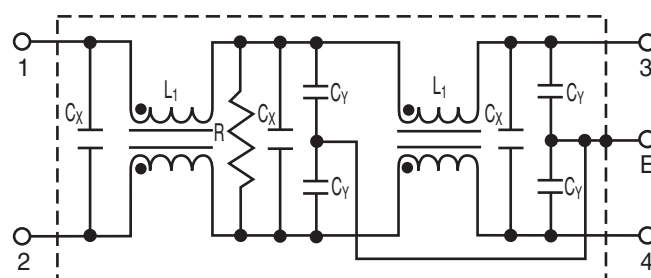
Applications

- Digital equipment
- Personal computers and peripherals
- Measuring instruments and medical equipment
- Telecommunications equipment
- Equipment requiring very high noise attenuation



Circuit Diagram

62-MMF-XXX-7-11



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Capacitance			Inductance (L ₁) (2X)	Temperature Rise (Max.)
				C _{Y1}	C _{Y2}	C _X		
62-MMF-030-7-11	250VAC	3A	.7mA	3300pF	1000pF	0.1uF	3.7mH	30°C
62-MMF-050-7-11	250VAC	5A	.7mA	3300pF	1000pF	0.1uF	2.9mH	30°C

Note: All types are designed to meet the requirement of UL 1283, CSA 22.2, VDE 0565-3

Test voltage: 1500VAC one minute, line to ground

Insulation resistance: 300 Mohm min. at 500VDC

Leakage current: 0.7 mA max.

Voltage drop: 1V max.

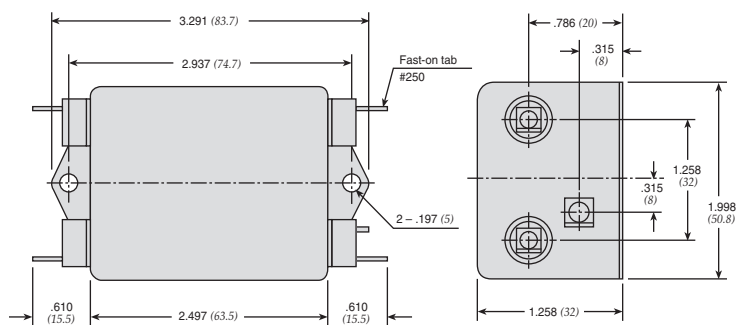
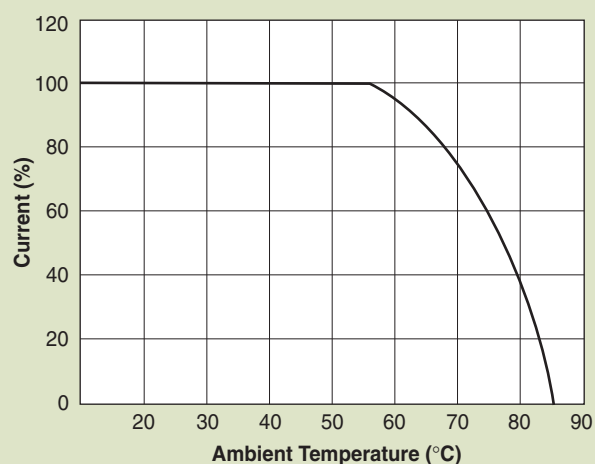
Discharge time: 0.4 sec. max.

Weight: 6.0 ounces (170 grams)

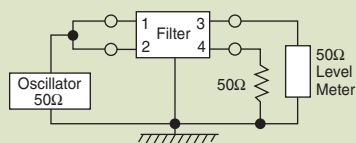
Power Line Filters Dual Stage

62-MMF Series

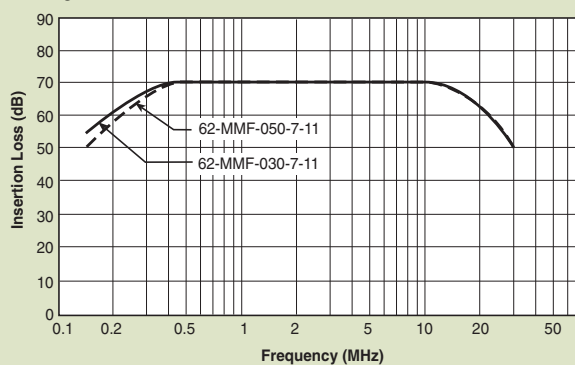
Temperature Characteristics



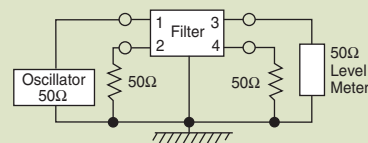
Common Mode



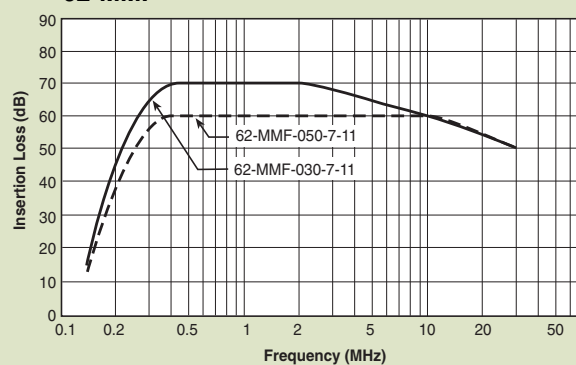
62-MMF



Normal Mode



62-MMF



Power Line Filters Dual Stage

12-MMF & 12-MMB Series

Features

- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective EMI shielding
- Two stages for excellent filtering characteristics
- Structure provides effective shielding for noise generated both externally and internally
- Operating temperature: -40°C to +85°C
- High performance
- Low leakage current

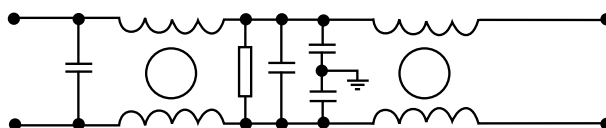
Applications

- Digital equipment
- Switching power supplies
- Personal computers and peripherals
- Measuring instruments and medical equipment
- Telecommunications equipment
- Equipment requiring very high noise attenuation

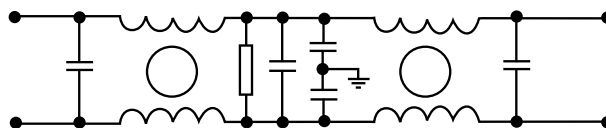


Circuit Diagram

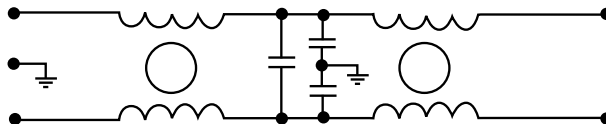
Circuit 1



Circuit 2



Circuit 3



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Circuit Diagram	Figure	Temperature Rise (Max.)
12-MMF-002-5-F	120/250VAC	2A	0.25mA@120VAC/ 0.5mA@250VAC	1	A	30°C
12-MMF-003-5-F		3A			A	
12-MMF-003-5-A				3	B	
12-MMF-006-5-F		6A		2	A	
12-MMF-006-5-G					C	
12-MMF-008-5-B		8A			A	
12-MMF-010-5-F		10A			A1	
12-MMF-010-5-G					C	
12-MMF-010-5-B					D	
12-MMF-012-5-B		12A			G	
12-MMB-015-5-E		15A			E	
12-MMB-020-5-F		20A			F	
12-MMB-030-5-D		30A				
12-MMB-050-5-C		50A				

Note: All types are designed to meet the requirement of UL 1283, CSA 22.2, VDE 0565-3

Test voltage: 1500VAC one minute, line to ground

Insulation resistance: 300 Mohm min. at 500VDC

Voltage drop: 1V max.

Discharge time: 0.4 sec. max.

Power Line Filters Dual Stage

12-MMF & 12-MMB Series

Figure B

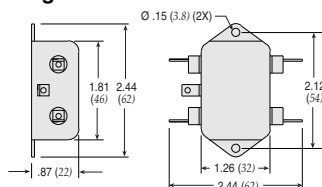


Figure C

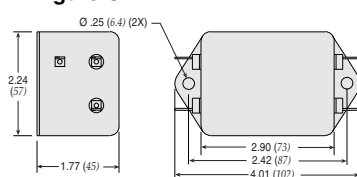


Figure A

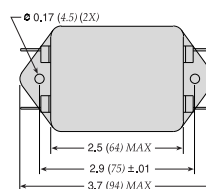


Figure A1

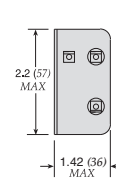


Figure D

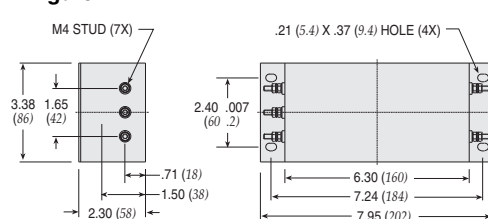


Figure E

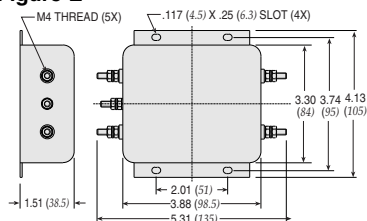


Figure F

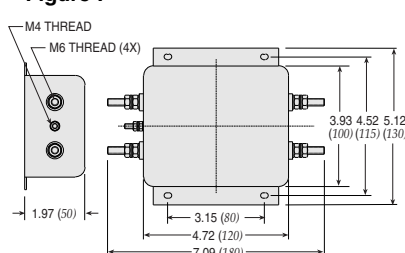
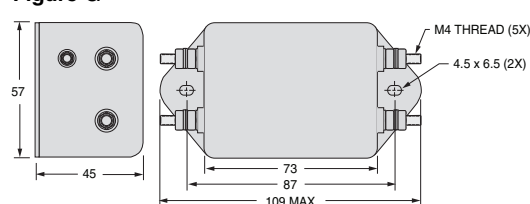
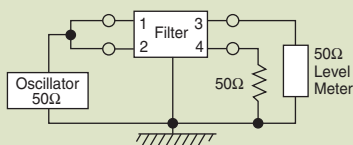


Figure G

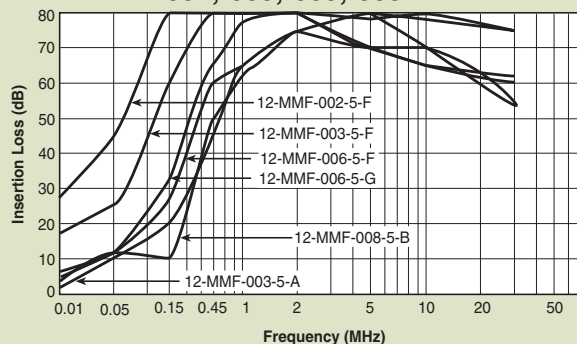


Dimensions in inches (mm)

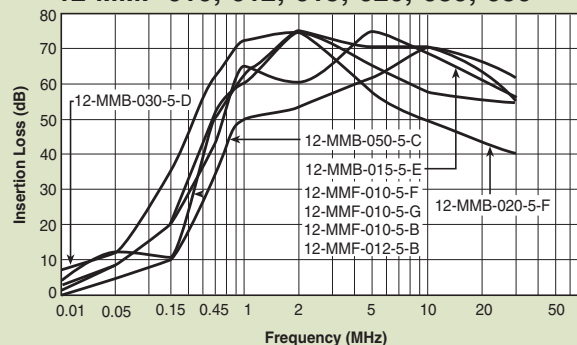
Common Mode



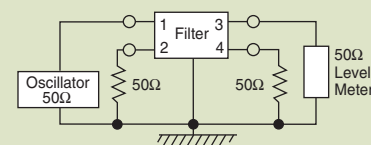
12-MMF-002;-003;-006;-008



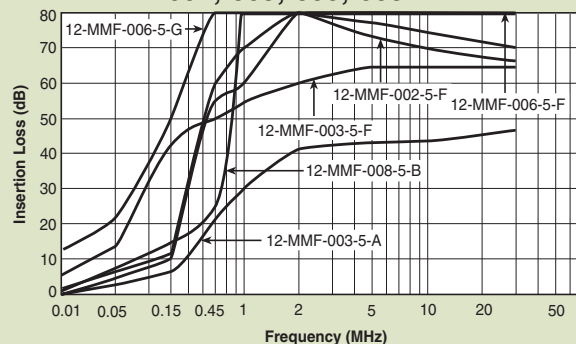
12-MMF-010;-012;-015;-020;-030;-050



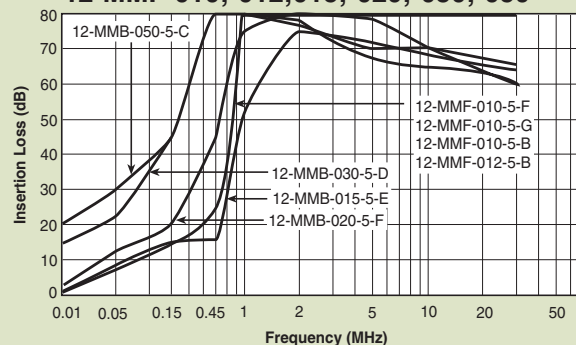
Normal Mode



12-MMF-002;-003;-006;-008



12-MMF-010;-012;-015;-020;-030;-050



Power Line Filters Dual Stage

12-MMF & 12-MMB Series

Features

- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective EMI shielding
- Two stages for excellent filtering characteristics
- Structure provides effective shielding for noise generated both externally and internally
- Operating temperature: -40°C to +85°C
- High performance

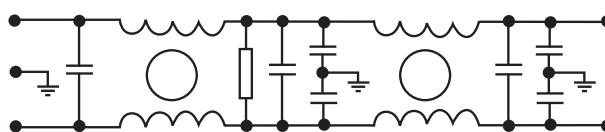
Applications

- Digital equipment
- Personal computers and peripherals
- Measuring instruments and medical equipment
- Telecommunications equipment
- Equipment requiring very high noise attenuation

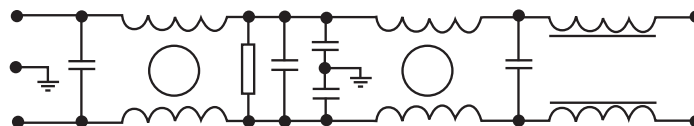


Circuit Diagram

Circuit 1



Circuit 2



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Circuit Diagram	Figure	Temperature Rise (Max.)
12-MMF-003-11-F	120/250VAC	3A	1.5mA	1	A	30°C
12-MMF-006-11-F		6A				
12-MMF-010-11-F		10A			C	
12-MMB-015-11-G		15A		1	B	
12-MMB-020-11-D		20A				
12-MMB-030-11-D		30A		2	D	
12-MMB-040-11-B		40A		1	E	
12-MMB-040-11-E					F	
12-MMB-050-11-H		50A				

Note: All types are designed to meet the requirement of UL 1283, CSA 22.2. VDE 0565-3

Test voltage: 1500VAC one minute, line to ground

Insulation resistance: 300 Mohm min. at 500VDC

Leakage current: 0.7 mA max.

Voltage drop: 1V max.

Discharge time: 0.4 sec. max.

Weight: 6.0 ounces (170 grams)

Figure A

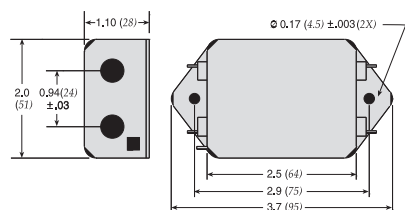


Figure B

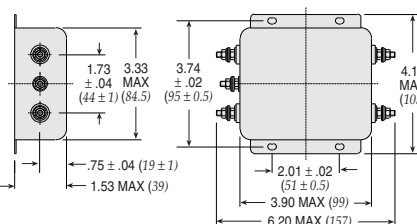


Figure C

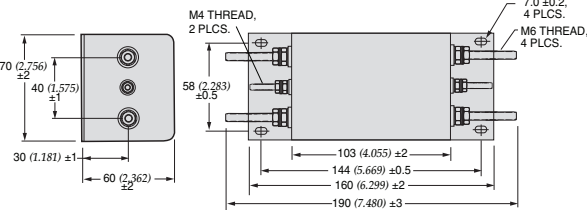


Figure D

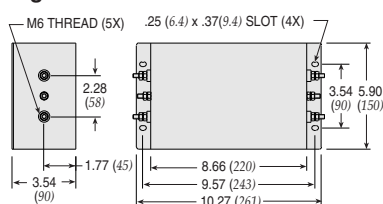


Figure E

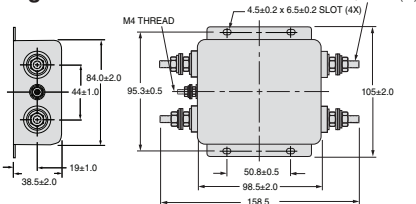
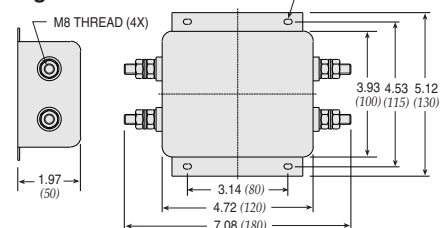


Figure F



Dimensions in inches (*mm*)

Figure 1 is a line graph showing Insertion Loss (dB) versus Frequency (MHz) for five different MMICs. The y-axis represents Insertion Loss in dB, ranging from 0 to 120 in increments of 15. The x-axis represents Frequency in MHz, ranging from 0.1 to 50 on a logarithmic scale. The five curves are labeled as follows:

- 12-MMF-003-11-F: Highest loss curve, peaking at approximately 105 dB at 2 MHz.
- 12-MMF-012-11-A: Second highest loss curve, peaking at approximately 95 dB at 2 MHz.
- 12-MMF-006-11-F: Third highest loss curve, peaking at approximately 90 dB at 2 MHz.
- 12-MMF-010-11-F: Fourth highest loss curve, peaking at approximately 85 dB at 2 MHz.
- 12-MMB-015-11-G: Lowest loss curve, peaking at approximately 80 dB at 2 MHz.

All curves show a characteristic peak in insertion loss around 2 MHz, followed by a decrease in loss at higher frequencies. The curves for 12-MMF-003-11-F and 12-MMF-012-11-A show a slight increase in loss at 50 MHz compared to 10 MHz, while the others show a more significant decrease.

The graph shows the insertion loss characteristics of several MMB components. The y-axis represents Insertion Loss in dB, ranging from 0 to 120. The x-axis represents Frequency in MHz, ranging from 0.1 to 50. The components and their approximate curves are:

- 12-MMB-040-11-B**: Starts at ~15 dB at 0.1 MHz, rises to a peak of ~95 dB at 1 MHz, and then gradually decreases to ~60 dB at 50 MHz.
- 12-MMB-020-11-D**: Starts at ~55 dB at 0.1 MHz, rises to a peak of ~80 dB at 2 MHz, and then decreases to ~55 dB at 50 MHz.
- 12-MMB-030-11-D**: Starts at ~5 dB at 0.1 MHz, rises to a peak of ~48 dB at 1 MHz, and then decreases to ~50 dB at 50 MHz.
- 12-MMB-040-11-E**: Starts at ~15 dB at 0.1 MHz, rises to a peak of ~90 dB at 5 MHz, and then decreases to ~55 dB at 50 MHz.
- 12-MMB-050-11-H**: Starts at ~5 dB at 0.1 MHz, rises to a peak of ~48 dB at 1 MHz, and then decreases to ~50 dB at 50 MHz.

This graph shows the insertion loss in decibels (dB) as a function of frequency in megahertz (MHz) for several components. The x-axis is logarithmic, ranging from 0.1 to 50 MHz. The y-axis is linear, ranging from 0 to 120 dB. The components and their approximate loss characteristics are:

- 12-MMF-012-11-A:** Shows the highest loss, starting at ~45 dB at 0.1 MHz, peaking at ~80 dB around 0.5 MHz, and then gradually decreasing to ~60 dB at 50 MHz.
- 12-MMF-003-11-F:** Starts at ~35 dB at 0.1 MHz, peaks at ~80 dB around 0.5 MHz, and decreases to ~60 dB at 50 MHz.
- 12-MMF-006-11-F:** Starts at ~30 dB at 0.1 MHz, peaks at ~75 dB around 0.5 MHz, and decreases to ~60 dB at 50 MHz.
- 12-MMF-010-11-F:** Starts at ~15 dB at 0.1 MHz, peaks at ~75 dB around 0.5 MHz, and decreases to ~60 dB at 50 MHz.
- 12-MMB-015-11-G:** Starts at ~10 dB at 0.1 MHz, peaks at ~75 dB around 0.5 MHz, and decreases to ~60 dB at 50 MHz.
- 12-MMF-003-11-F (continued):** This curve continues from the previous one, showing a peak of ~90 dB at 2 MHz and then decreasing to ~60 dB at 50 MHz.
- 12-MMF-006-11-F (continued):** This curve continues from the previous one, showing a peak of ~80 dB at 2 MHz and then decreasing to ~60 dB at 50 MHz.
- 12-MMF-010-11-F (continued):** This curve continues from the previous one, showing a peak of ~75 dB at 2 MHz and then decreasing to ~60 dB at 50 MHz.
- 12-MMB-015-11-G (continued):** This curve continues from the previous one, showing a peak of ~75 dB at 2 MHz and then decreasing to ~60 dB at 50 MHz.

The graph shows the insertion loss in dB for five different MMB models across a frequency range from 0.1 to 50 MHz. The y-axis ranges from 0 to 120 dB in increments of 15. The x-axis is logarithmic, with major ticks at 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, and 50 MHz. The models and their approximate peak insertion loss values are:

- 12-MMB-040-11-B: ~85 dB (peak at ~0.5 MHz)
- 12-MMB-050-11-H: ~48 dB (peak at ~0.5 MHz)
- 12-MMB-040-11-E: ~45 dB (peak at ~0.5 MHz)
- 12-MMB-020-11-D: ~15 dB (peak at ~0.2 MHz)
- 12-MMB-030-11-D: ~48 dB (peak at ~10 MHz)

Power Line Filters Dual Stage

12-MMF & 12-MMB Series

Features

- Suitable for products that must conform to FCC regulations
- Excellent attenuation for high voltage impulse
- Metal case provides effective EMI shielding
- Two stages for excellent filtering characteristics
- Epoxy molded for reliability
- Structure provides effective shielding for noise generated both externally and internally
- Operating temperature: -25°C to +85°C

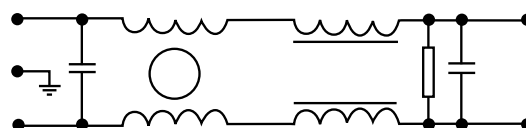
Applications

- Digital equipment
- Personal computers and peripherals
- Measuring instruments and medical equipment
- Telecommunications equipment
- Equipment requiring very high noise attenuation

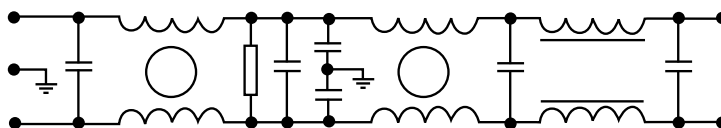


Circuit Diagram

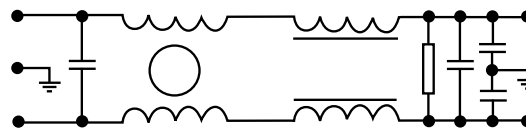
Circuit 1



Circuit 2



Circuit 3



Specifications

Model	Rated Voltage (@ 50/60Hz)	Rated Current	Leakage Current (Max.)	Circuit Diagram	Figure	Temperature Rise (Max.)
12-MMF-001-5-F	120/250VAC	1A	0.5mA	3	A	30°C
12-MMF-003-5-G		3A			5uA	
12-MMF-003-2-G						
12-MMF-006-5-G		6A	0.5mA	2	C	
12-MMB-010-5-D		10A				
12-MMB-015-5-E		15A				
12-MMB-020-5-E		20A				
12-MMB-030-5-E		30A				

Note: All types are designed to meet the requirement of UL 1283, CSA 22.2. VDE 0565-3
 Test voltage: 1500VAC one minute, line to ground
 Insulation resistance: 300 Mohm min. at 500VDC
 Leakage current: 0.7 mA max.
 Voltage drop: 1V max.
 Discharge time: 0.4 sec. max.
 Weight: 6.0 ounces (170 grams)

Power Line Filters Dual Stage

12-MMF & 12-MMB Series

Figure A

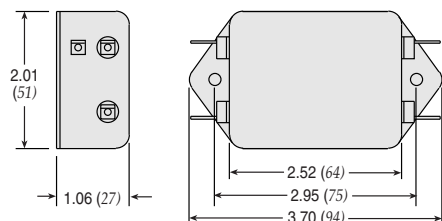


Figure B

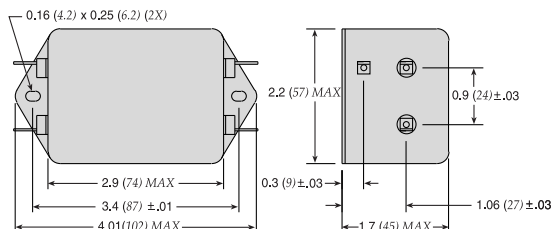


Figure C

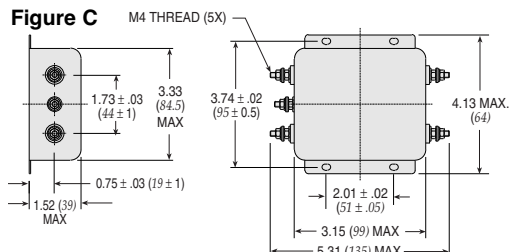
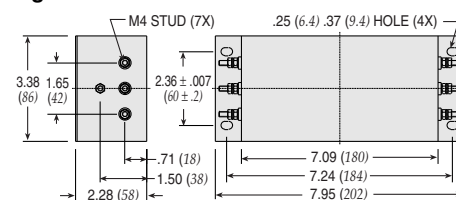
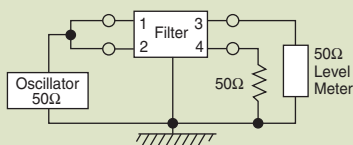


Figure D

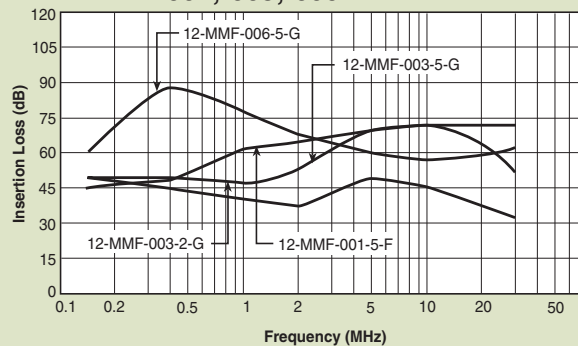


Dimensions in inches (mm)

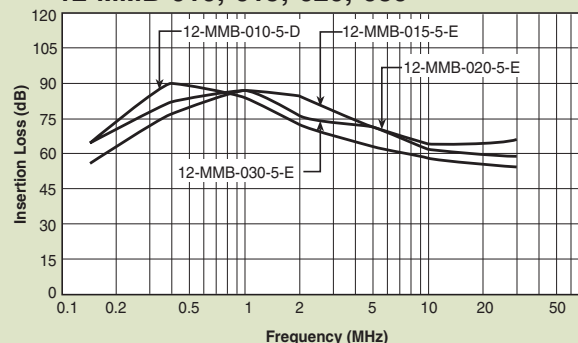
Common Mode



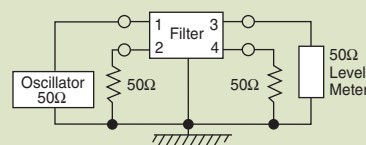
12-MMF-001;-003;-006



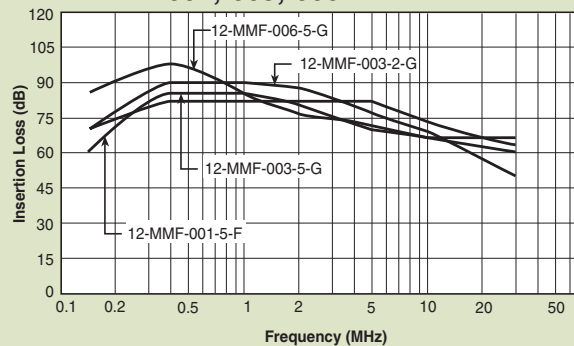
12-MMB-010;-015;-020;-030



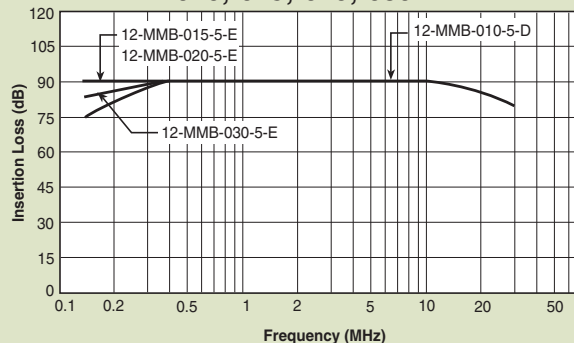
Normal Mode



12-MMF-001;-003;-006



12-MMB-010;-015;-020;-030



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9