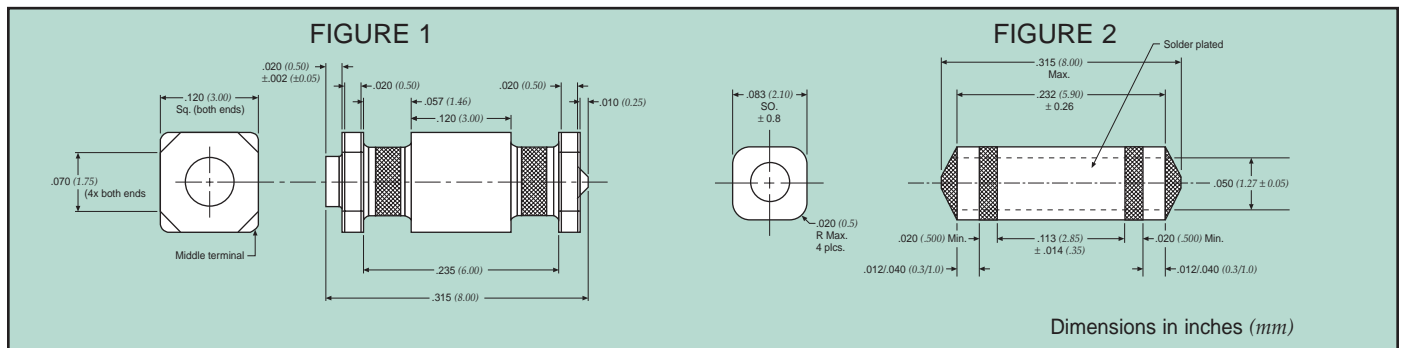


# High Current/High Voltage Surface Mount EMI Filters & 3 Terminal EMI Filter Chips



Single Line Filters

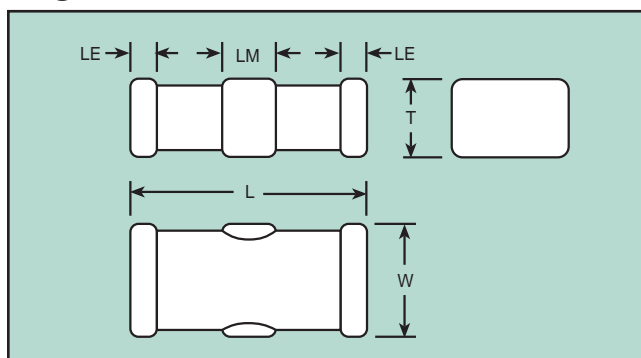
## High Current/High Voltage Surface Mount EMI Filters



Part Number	Figure	Capacitance	Tolerance	Current Ratings	Rated Voltage -55°C to +125°C	Circuit
PSM4-103Z-20-*	1	10,000 pF	80% / -20%	20 Amps	200VDC	C
PSM4-402Z-20-*		4,000 pF	80% / -20%			
PSM4-102M-20-*		1,000 pF	100% / 0%			
PSM1-402Z-10-*		4,000 pF	80% / -20%	10 Amps	200VDC	P <sub>i</sub>
PSM1-252P-10-*		2,500 pF	100% / 0%			
PSM1-102M-10-*		1,000 pF	+/-20%			
SSM1-152P-10-*	2	1,500 pF	100% / 0%	10 Amps	100VDC	C
SSM4-152P-10-*		1,500 pF	100% / 0%			

\* = Denotes packaging style. Replace with T for tape and reel or B for bulk. Contact factory for more information.  
† = Temperature characteristic is +30/-80%

## High Current 3 Terminal EMI Filter Chips



### Mechanical Dimensions:

Body Style/Size	Body Length (L)	Body Width (W)	Body Thickness (T)	End Terminal Length (LE)	Middle Terminal Length (LM)
SF0805	0.079+/-0.008 (2.0 +/-0.2)	0.049+/-0.008 (1.25 +/-0.2)	0.032+/-0.008 (0.8 +/-0.2)	0.012 +/-0.008 (0.3 +/-0.2)	0.024+/-0.008 (0.6 +/-0.2)
SF1205	0.079+/-0.008 (2.0 +/-0.2)	0.049+/-0.008 (1.25 +/-0.2)	0.032+/-0.008 (0.8 +/-0.2)	0.012 +/-0.008 (0.3 +/-0.2)	0.024+/-0.008 (0.6 +/-0.2)
SF1806	0.079+/-0.008 (2.0 +/-0.2)	0.049+/-0.008 (1.25 +/-0.2)	0.032+/-0.008 (0.8 +/-0.2)	0.012 +/-0.008 (0.3 +/-0.2)	0.024+/-0.008 (0.6 +/-0.2)

Dimensions in inches (mm)

Part Number	Body Size	Capacitance (in picofarad)	Capacitance Tolerance	Temp. Charac.	Rated Voltage (Volts DC)	Rated Current (Amps DC)	IR (Megohms Min.)	DC Resistance (ohm Max.)	Operating Temp.
SF0805X223SBND-*	0805	22,000	+50/-20%	X7R	50	1.0	10,000	0.08	-55/+125°C
SF1205X473SBND-*	1205	47,000	+50/-20%	X7R	50	1.0	5,000	0.08	-55/+125°C
(2 AMP FILTER) SF1806Y224ZBNE-*	1806	220,000	+80/-20%	Y5V†	50	2.0	1,000	0.04	-25/+85°C

\* = Denotes packaging style. Replace with T for tape and reel or B for bulk. Contact factory for more information.  
† = Temperature characteristic is +30/-80%

# High Current/High Voltage Hermetically Sealed Filters



## High Current/High Voltage Hermetically Sealed Threaded Case Filters

### Mechanical Dimensions:

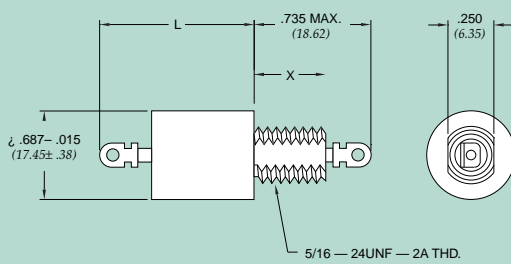


FIGURE 1

Dimensions in inches (mm)

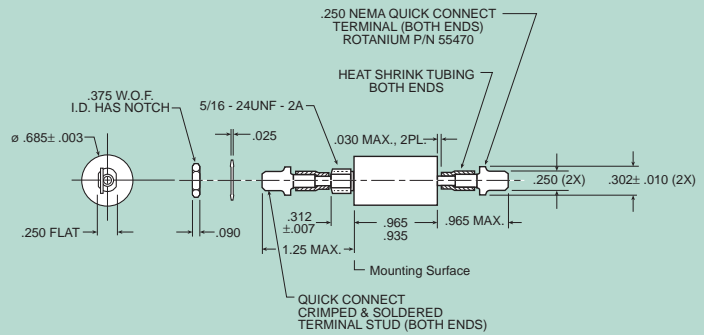


FIGURE 2

Part Number	Fig.	Rated Voltage				I Amp	Min. Cap. $\mu$ F	DCR Max. Ohms	CKT	Max. L in. (mm)	Minimum Insertion Loss (dB)						
		85°C DC	85°C AC	125°C DC	125°C AC						30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz
51-322-014	1	450	240	400	240	25.00	0.360	0.007	LB	0.750 (19.050)	5	17	23	34	48	62	70
51-322-015	1	450	240	400	240	25.00	0.360	0.007	LT	0.750 (19.050)	5	17	23	34	48	62	70
51-322-312*	2	60	-	-	-	10.00	-	0.006	LB	-	14	28	34	44	70	70	70

\* Denotes parts that are UL Recognized to UL1459 and certified to CSA C22.2



# High Current/High Voltage Resin Sealed Filters

Single Line Filters

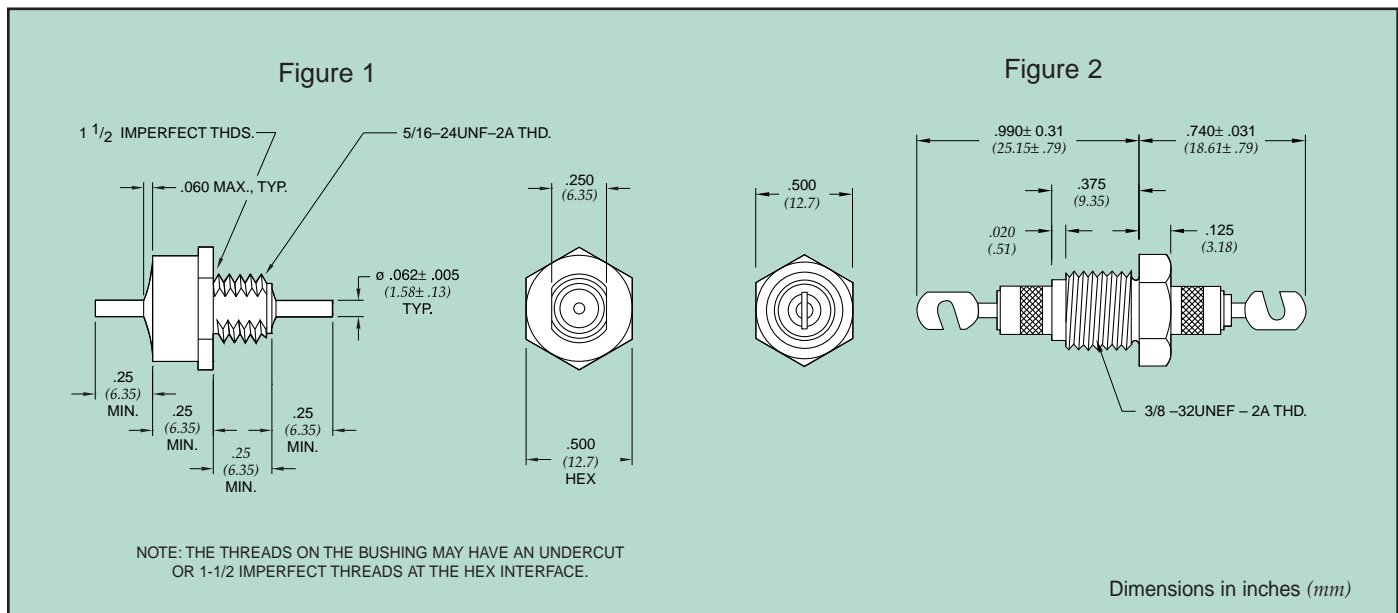
High current filters are ideal for use in high current 5 volt logic bus, but also can be used for +/- 48VDC telephone rack bus, high current switch mode power supplies and DC charging systems.

## Features

- Current ratings up to 100 Amps
- Continuous voltage ratings up to 2000VDC/240VAC
- U.L. 1459 recognized and CSA C22.2 approved versions available
- Rugged bolt-in style for easy installation



## Mechanical Dimensions:



Model	Figure	Rated Voltage 125°C		I Amp	CKT	Minimum Capacitance	Minimum Insertion Loss (dB)							
		DC	AC				1 MHz	3 MHz	10 MHz	30 MHz	100 MHz	300 MHz	1 GHz	10 GHz
54-844-001*	1	600	240	25	C	4700pF±-20%	-	-	12	20	30	33	50	50
54-844-002*	1	600	240	25	C	0.01 μF±-20%	3	7	20	25	35	40	57	57
1280-060**	2	2000	-	25	Pi	1500 pF	-	-	5	15	50	50	50	50

\* Denotes parts that meet 1500VAC Dielectric Withstanding Voltage per UL 1283 and CSA C22.2

\*\* Also available through Spectrum Control's authorized distributors.

Note: 54-853 Series is designed to address high mechanical torque requirements.

# High Current/High Voltage Resin Sealed Filters



## High Current/High Voltage Resin Sealed Filters

FIGURE 1

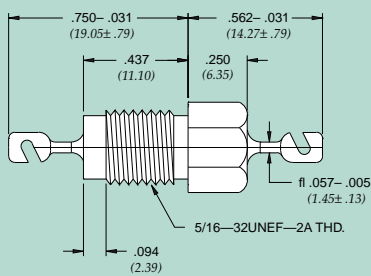
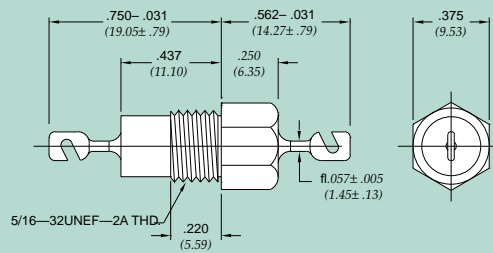


FIGURE 2



Dimensions in inches (mm)

Part Number	M15733 MIL Number	Fig.	Rated Voltage 125°C		1 Amp	CKT	Min. Capacitance	Minimum Insertion Loss (dB)							
			DC	AC				1 MHz	3 MHz	10 MHz	30 MHz	100 MHz	300 MHz	1 GHz	10 GHz
51-702-020	/61-0003	2	500	350	25	P <sub>i</sub>	3000 pF	-	-	-	35	55	55	70	70
51-702-021*	/61-0004	2	500	350	25	P <sub>i</sub>	3000 pF	-	-	10	35	55	55	70	70
1202-005†		1	700	-	25	P <sub>i</sub>	2000 pF	-	-	5	20	50	55	70	70

\* Denotes parts with 5/16-24 threads.

† Also available through Spectrum Control's distributors.



# High Current/High Voltage Single Line Feed-thru Filters

Single Line Filters

## Features

- Available for applications utilizing 400-600VDC, or 250VAC
- L and Pi configurations
- Insertion loss of 60 dB at 150 KHz
- Threaded neck mounting

## Applications

- High voltage medical equipment
- C.O.T.S. (Commercial-Off-The-Shelf) military (meets or exceeds the standard listed in MIL-STD-220A)
- Industrial equipment and controls
- Telecommunication base stations
- Data transmission equipment

## Options:

- Designed to meet MIL-F-15733/72/73/74
- Other configurations available: T, LL

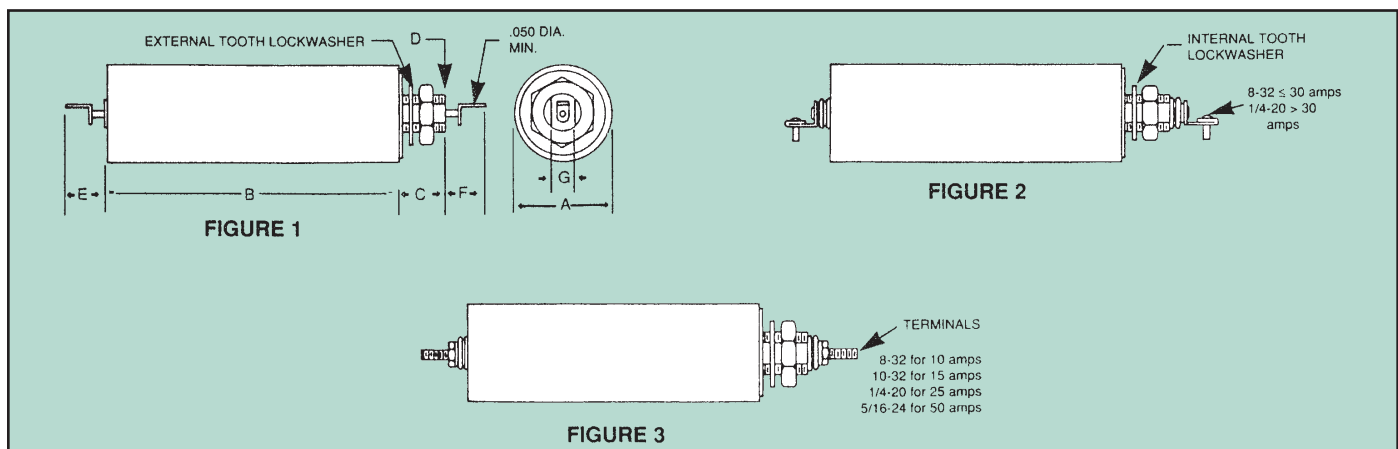
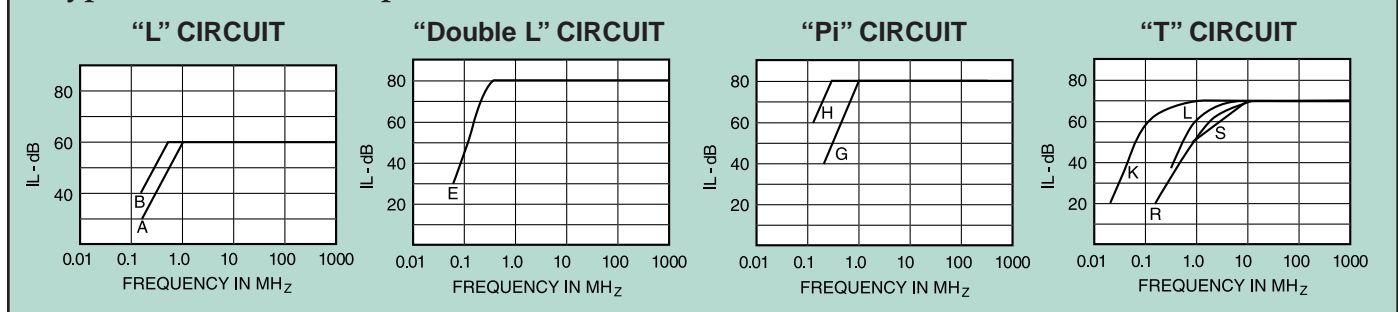


## Electrical Specifications

<b>Voltage:</b>	125 & 250VAC, 0-400 Hz 400 & 600VDC
<b>Max. Voltage Drop:</b>	1% of rated voltage
<b>Temperature Range:</b>	-55°C to +85°C without derating
<b>Insulation Resistance:</b>	in excess of 1000 MΩ
<b>D.C. Test Voltage:</b>	4.2x rated A.C. voltage (in accordance with Method 301 MIL-STD-202 with voltage applied thru resistance of 1 ohm/voltage minimum for one minute)
<b>Insertion Loss:</b>	(minimum dB at 150KHz)
<b>Attenuation:</b>	(in accordance with MIL-STD-220A)
<b>L Circuits:</b>	30 dB
<b>Pi Circuits:</b>	60 dB

## Performance Curves

### Typical Insertion Loss per MIL-STD-220A (under full load)



# High Current/High Voltage Single Line Feed-thru Filters

## "L" Circuit

Part No. w/ Capacitor on Threaded End	Current Rating (Amps)	A Dia.	B Lgth.	C Thread Lgth.	D Threads	E	F	G
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### 125/208 Volts AC / 400VDC

5004-7068	.5	1.00	1.50	.345	7/16-20	.406	.375	.375
5004-7072	1.0	1.00	2.00	.345	7/16-20	.406	.375	.375
5004-7076	2.5	1.00	2.75	.345	7/16-20	.406	.375	.375
5004-7080	5.0	1.25	2.06	.407	3/4-20	.484	.453	.659
5004-7084	10.0	1.25	3.50	.407	3/4-20	.484	.453	.659
5004-7088	15.0	1.50	3.69	.407	3/4-20	.750	.687	.659
5004-7092	20.0	1.75	3.50	.407	3/4-20	.750	.687	.659
5004-7096	30.0	2.00	3.31	.595	1-1/8-18	.750	.703	1.049
5004-6999	50.0	2.25	4.25	.563	1-1/8-18	.968	.750	1.051

### 250/440 Volts AC / 600VDC

5004-7069	.5	1.00	1.63	.345	7/16-20	.406	.375	.440
5004-7073	1.0	1.00	2.38	.345	7/16-20	.406	.375	.440
5004-7077	2.5	1.00	2.13	.345	7/16-20	.406	.375	.440
5004-7081	5.0	1.25	2.19	.407	3/4-20	.484	.453	.659
5004-7085	10.0	1.25	2.88	.407	3/4-20	.484	.453	.659
5004-7089	15.0	1.50	4.44	.407	3/4-20	.750	.687	.659
5004-7093	20.0	1.75	3.69	.407	3/4-20	.750	.687	.659
5004-7097	30.0	2.00	3.50	.595	1-1/8-18	.750	.703	1.049
5004-6998	50.0	2.25	4.56	.563	1-1/8-18	.968	.750	1.051

## "Pi" Circuit

Part No. w/ Capacitor on Threaded End	Current Rating (Amps)	A Dia.	B Lgth.	C Thread Lgth.	D Threads	E	F	G
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### 125/208 Volts AC / 400VDC

5004-7040	.5	1.00	1.50	.345	7/16-20	.406	.375	.375
5004-7043	1.0	1.00	2.00	.345	7/16-20	.406	.375	.375
5004-7046	2.5	1.00	2.75	.345	7/16-20	.406	.375	.375
5004-7049	5.0	1.25	2.06	.407	3/4-20	.484	.453	.659
5004-7052	10.0	1.25	3.50	.407	3/4-20	.484	.453	.659
5004-7055	15.0	1.50	3.69	.407	3/4-20	.750	.687	.659
5004-7058	20.0	1.75	3.50	.407	3/4-20	.750	.687	.659
5004-7061	30.0	2.00	3.31	.595	1-1/8-18	.750	.703	1.049
5004-7064	50.0	2.25	4.25	.563	1-1/8-18	.968	.750	1.051

### 250/440 Volts AC / 600VDC

5004-7041	.5	1.00	1.63	.345	7/16-20	.406	.375	.440
5004-7044	1.0	1.00	2.38	.345	7/16-20	.406	.375	.440
5004-7047	2.5	1.00	2.13	.345	7/16-20	.406	.375	.440
5004-7050	5.0	1.25	2.19	.407	3/4-20	.484	.453	.659
5004-7053	10.0	1.25	2.88	.407	3/4-20	.484	.453	.659
5004-7056	15.0	1.50	4.44	.407	3/4-20	.750	.687	.659
5004-7059	20.0	1.75	3.69	.407	3/4-20	.750	.687	.659
5004-7062	30.0	2.00	3.50	.595	1-1/8-18	.750	.703	1.049
5004-7065	50.0	2.25	4.56	.563	1-1/8-18	.968	.750	1.051



# High Current/High Voltage Single Line Feed-thru Filters

Single Line Filters

High current single line feed-thru filters from Spectrum Control are ideal to meet broad frequency applications. This series filters EMI/RFI with 150-500 Amp current with AC and DC voltages. These filters are ideal for cellular base stations, telephone switching stations and high voltage power supply applications.

## Features

- Ideal for high current applications
- Excellent filtering in a compact, durable package
- Bolt-in style for easy installation
- Current ratings to 500 Amps
- Voltage ratings up to 1000VDC and 240VAC
- Available with single, dual, and triple feed-thrus
- Various capacitance ratings (up to 1.68  $\mu$ F)
- Rugged construction for indoor and outdoor applications
- Various mounting brackets available
- Low cost EMI solution
- Design flexibility

## Applications

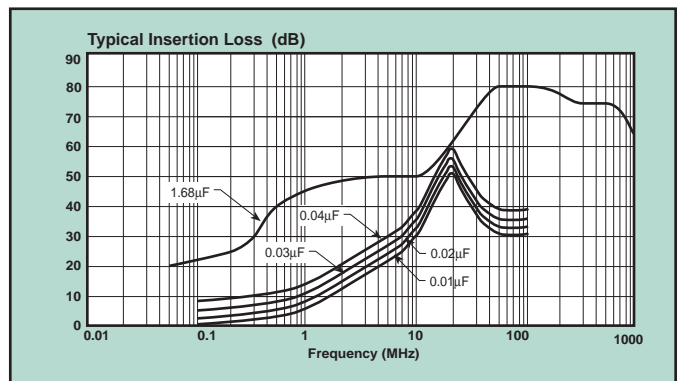
- Telecommunications (cellular base stations, telephone switching racks, etc.)
- Power supplies
- Servers



## Electrical Specifications

**Current Ratings/Bolt Size:** 150 Amps . . . . . 10 mm  
 200 Amps . . . . . 12 mm  
 250 Amps . . . . . 12 mm  
 300 Amps . . . . . 14 mm  
 400 Amps . . . . . 16 mm  
 500 Amps . . . . . 18 mm

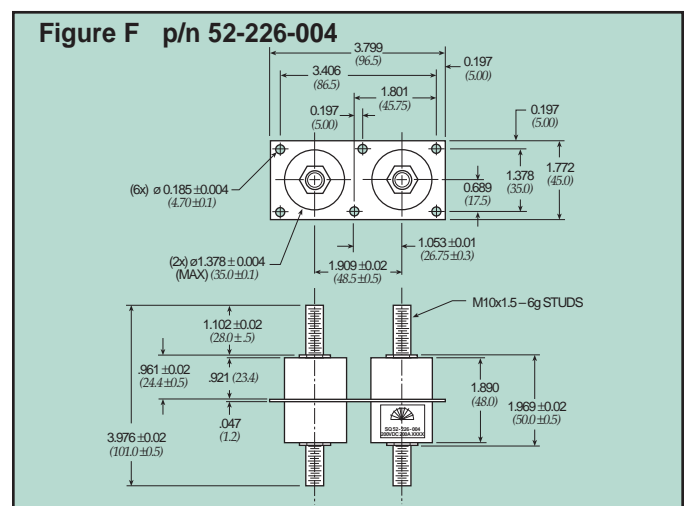
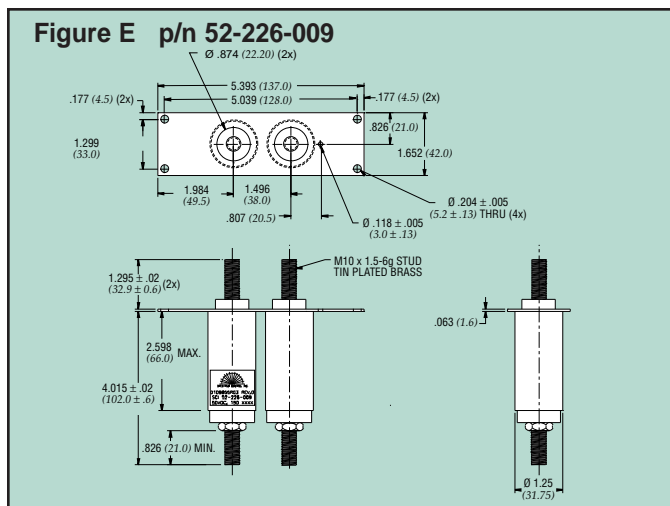
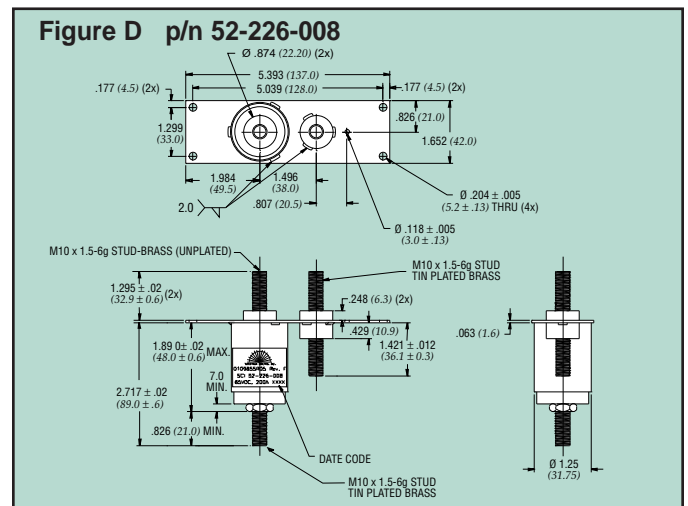
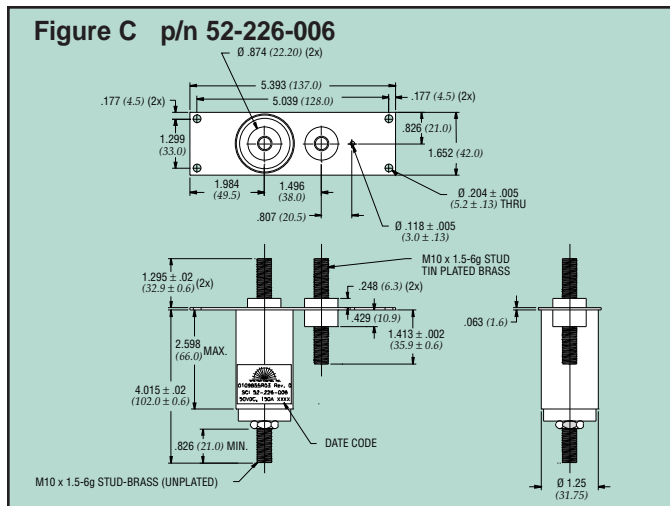
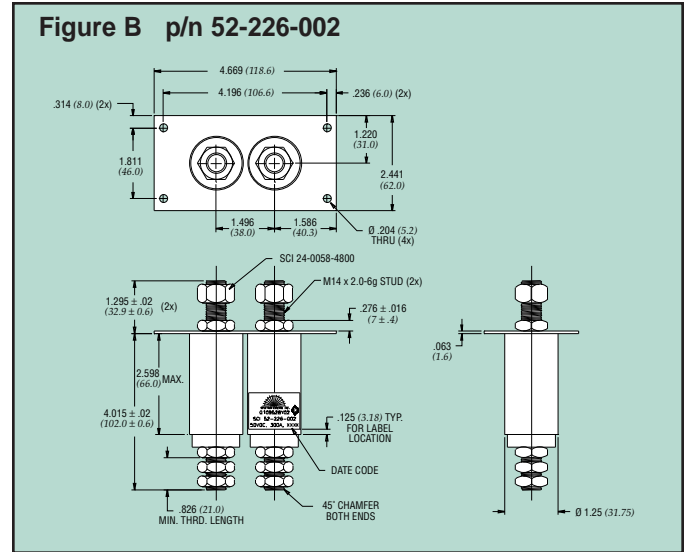
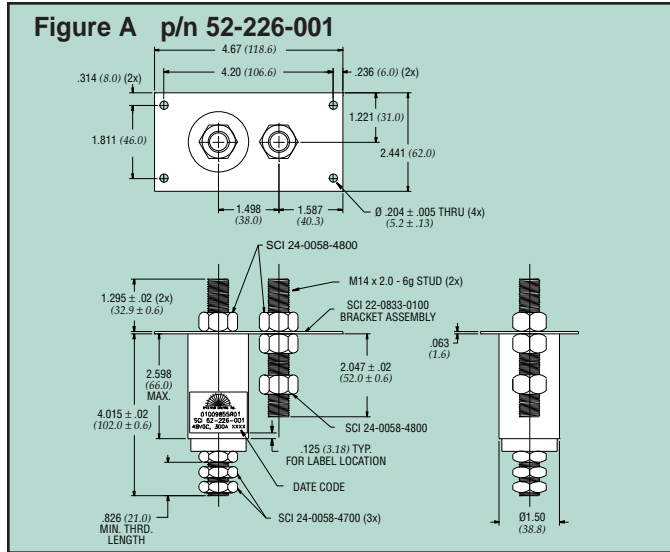
**Temperature Range:** -25°C to 85°C



Part No.	Figure	Voltage Rating @ -40C to +85C	Current Rating	Capacitance Value
52-226-001	A	50VDC Max.	300 Amps	0.02 $\mu$ F min. @ 50VDC
52-226-002	B	50VDC Max.	300 Amps	0.02 $\mu$ F min. @ 50VDC
52-226-006	C	50VDC Max.	150 Amps	0.02 $\mu$ F min. @ 50VDC
52-226-008	D	65VDC Max.	200 Amps	0.02 $\mu$ F min. @ 50VDC
52-226-009	E	50VDC Max.	150 Amps	0.02 $\mu$ F min. @ 50VDC
52-226-004	F	200VDC Max.	200 Amps	1.68 $\mu$ F min. @ 50VDC
52-226-015	G	200VDC Max.	200 Amps	1.68 $\mu$ F min. @ 50VDC
52-267-002	H	200VDC Max.	200 Amps	1.68 $\mu$ F min. @ 40VDC
52-267-003	I	200VDC Max.	200 Amps	1.68 $\mu$ F min. @ 40VDC
52-267-008	J	200VDC Max.	200 Amps	0.02 $\mu$ F min. @ 40VDC
52-267-009	K	200VDC Max.	60 Amps	1.68 $\mu$ F min. @ 50VDC
52-267-010	L	200VDC Max.	250 Amps	1.68 $\mu$ F min. @ 40VDC
52-267-011	M	40VDC Max.	100 Amps	1.68 $\mu$ F min. @ 40VDC
52-267-012	N	250VDC Max.	100 Amps	1.00 $\mu$ F+20% @ 40VDC

# High Current/High Voltage Single Line Feed-thru Filters

## Mechanical Dimensions



Dimensions in inches (mm)





# High Current/High Voltage Single Line Feed-thru Filters

Single Line Filters

Figure G p/n 52-226-015

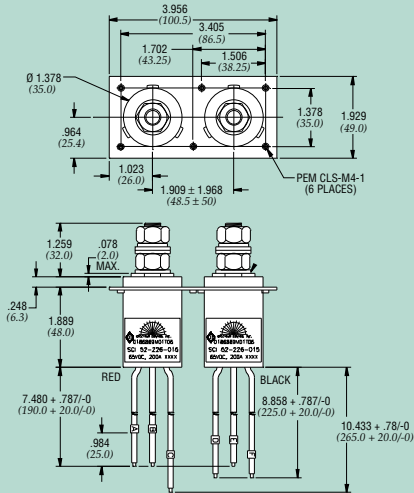


Figure H p/n 52-267-002

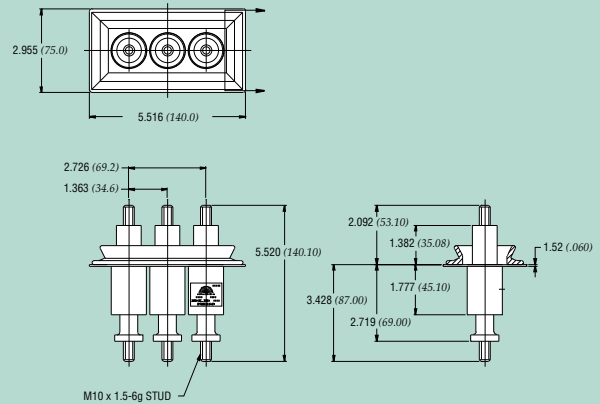


Figure I p/n 52-267-003

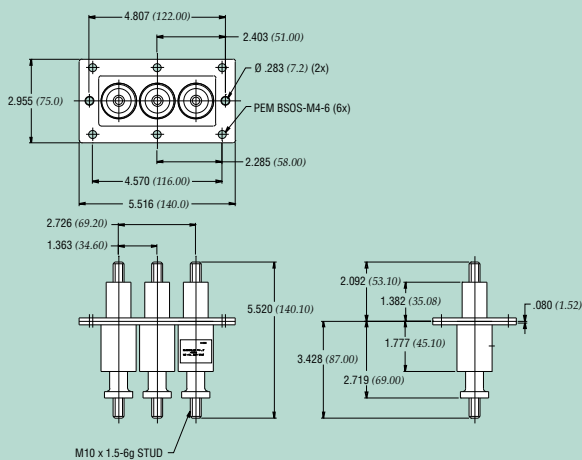
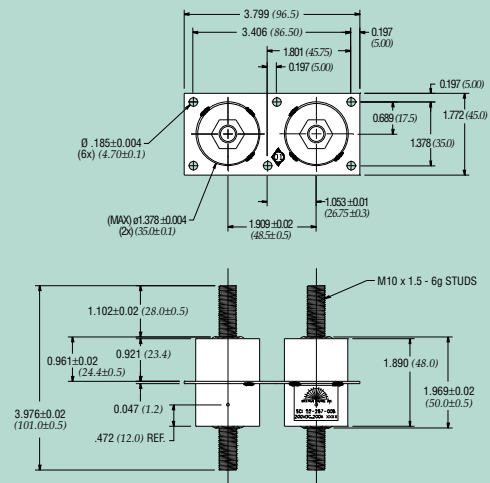


Figure J p/n 52-267-008



Dimensions in inches (mm)

# High Current/High Voltage Single Line Feed-thru Filters



Figure K p/n 52-267-009

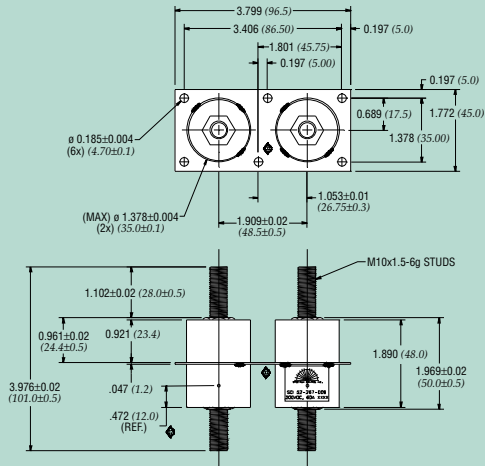


Figure L p/n 52-267-010

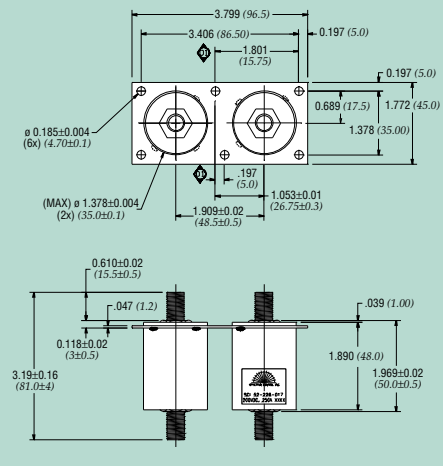


Figure M p/n 52-267-011

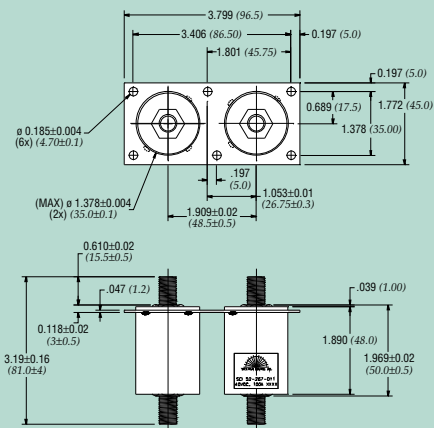
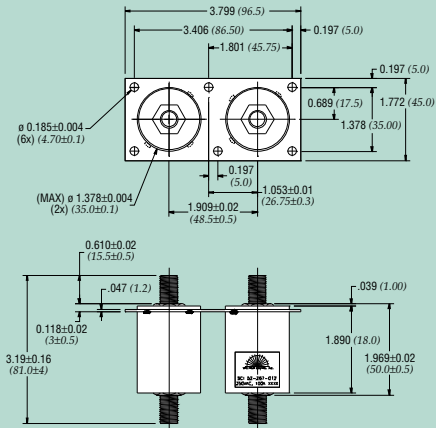


Figure N p/n 52-267-012



Dimensions in inches (mm)