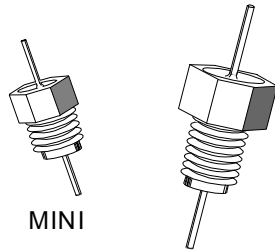


## Metric (3.0x.5mm) Low Pass Filters

Metric style filters are gaining popularity throughout the world. They are a perfect fit for today's requirement for small size, low cost, high performance, and manageability. EMI offers a variety of convenient sizes and circuit configurations to fit almost any requirement. Below is a short discussion of the different types with links to specific products:



STANDARD

3.0x.0.5mm STYLE	“C”	“L”
Mini (Hex Head)	M3C	M3L
Standard (Hex Head)	M4C	M4L

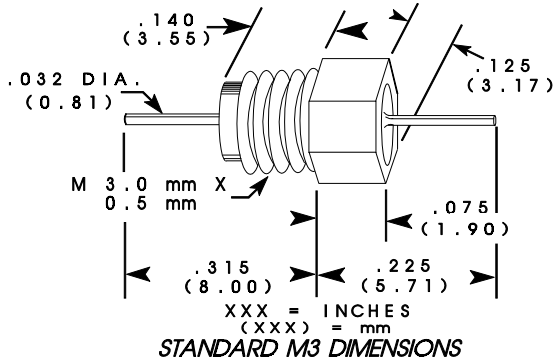
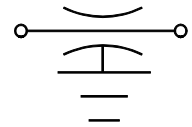
**“Mini”**; Short thread length to minimize protrusion past bulkheads and smaller profile heads to allow tighter spacing. These are the smallest practical threaded components at commercial pricing. While they are limited in capacitance to .033uF due to their small size, they are also the most popular.

**“Standard”**; Full length threads and heads. They are popular where lowest cost is the priority and spacing and protrusion are not a concern. These styles originated decades ago when larger bodies were needed to house long tubular capacitors.

# M3 SERIES MINI METRIC "C" FILTER

SMALLEST 3.0 X 0.5 MM AVAILABLE

MINI M3  
"C" CIRCUIT



Cap/Tolerance:

0pF-.033  $\mu$ F +100/-0%  
Other tolerances available.

Dissipation Factor:

3.5% Maximum

Insulation Resistance:

25°C = 1,000 Megohm- $\mu$ F

125°C = 100 Megohm- $\mu$ F

Dielectric Strength (DWV):

250% of Rated Voltage for 5 sec.

Max Mounting Torque:

2.0 in\*lbs

Operating Temp:

-55°C to +125°C

Dimension Tolerances:

Case: +/- .015" (+/- .381mm) Lead Length: +/- .030" (+/- .762mm) Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

N/A. Internal construction with high temp. Sn10 solder.

Material and Finish:

Steel case, copper leads, silver plating standard. Variations are available.

Marking:

Color dots standard. Custom marking available.

EMI PART NUMBER	CAP "C" CKT	COLOR DOT	MAX WVDC	DC AMPS	TYP. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1 MHz	10 MHz	100 MHz	1 GHz	10 GHz
M3C000D	"0" pF	NONE	200*	10	-	-	-	-	-
M3C050D	5 pF	2 ORANGE	200*	10	-	-	-	-	-
M3C100D	10 pF	VIOLET	200*	10	-	-	-	5	20
M3C250D	25 pF	BLUE	200*	10	-	-	-	10	25
M3C101D	100 pF	GREEN	200*	10	-	-	3	20	28
M3C501D	500 pF	BROWN	200*	10	-	-	15	35	40
M3C102D	1,000 pF	WHITE	200	10	-	5	20	35	45
M3C122D	1,200 pF	WHITE	200	10	-	5	20	35	45
M3C272D	2,700 pF	RED	200	10	5	10	25	40	50
M3C502B	5,000 pF	YELLOW	100	10	5	15	30	45	55
M3C103B	.01 $\mu$ F	2 WHITE	100	10	6	21	35	50	60
M3C153B	.015 $\mu$ F	2 WHITE	100	10	8	20	35	55	60
M3C273A	.027 $\mu$ F	2 RED	50	10	10	28	42	65	65
M3C333A	.033 $\mu$ F	2 RED	50	10	11	30	44	65	65



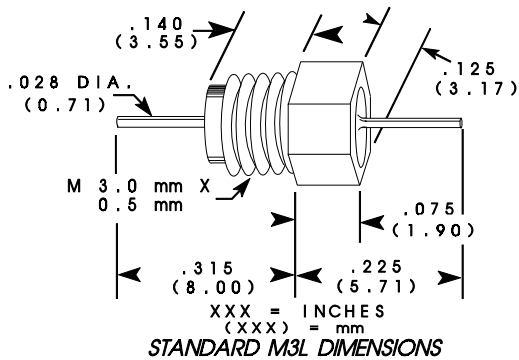
**EMI FILTER COMPANY**  
12750 59th Way North  
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Toll Free: 1-800-323-7990  
email: sales@emifiltercompany.com

\* = HIGH VOLTAGE VARIANT AVAILABLE  
MOUNTING HARDWARE ON REQUEST

# M3 SERIES MINI METRIC "L" FILTER

## SMALLEST 3.0 X 0.5 MM "L" AVAILABLE

MINI M3  
"L" CIRCUIT



Cap /Tolerance:

0pF-.033  $\mu$ F +100/-0%  
Other tolerances available.

Dissipation Factor:

3.5% Maximum

Insulation Resistance:

25°C = 1,000 Megohm- $\mu$ F  
125°C = 100 Megohm- $\mu$ F

Dielectric Strength (DWV):

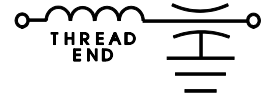
250% of Rated Voltage for 5 sec.

Max Mounting Torque:

2.0 in\*lbs

Operating Temp:

-55°C to +125°C



Dimension Tolerances:

Case: +/- .015" (+/- .381mm) Lead Length: +/- .030" (+/- .762mm) Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

N/A. Internal construction with high temp. Sn10 solder.

Material and Finish:

Steel case, copper leads, silver plating standard. Variations are available.

Marking:

Color dots standard. Custom marking available.

EMI PART NUMBER	CAP "L" CKT	COLOR DOT	MAX WVDC	DC AMPS	TYP. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1 MHz	10 MHz	100 MHz	1 GHz	10 GHz
M3L000D	"0" pF	NONE	200*	10	-	-	-	-	-
M3L050D	5 pF	2 ORANGE	200*	10	-	-	-	-	-
M3L100D	10 pF	VIOLET	200*	10	-	-	-	7	20
M3L250D	25 pF	BLUE	200*	10	-	-	-	13	25
M3L101D	100 pF	GREEN	200*	10	-	-	5	22	35
M3L501D	500 pF	BROWN	200*	10	-	-	18	37	45
M3L102D	1,000 pF	WHITE	200	10	-	8	25	40	40
M3L122D	1,200 pF	WHITE	200	10	-	8	28	42	50
M3L272D	2,700 pF	RED	200	10	8	13	32	45	55
M3L502B	5,000 pF	YELLOW	100	10	7	17	35	47	55
M3L103B	.01 $\mu$ F	2 WHITE	100	10	8	27	48	65	65
M3L153B	.015 $\mu$ F	2 WHITE	100	10	10	28	50	65	65
M3L273A	.027 $\mu$ F	2 RED	50	10	13	35	53	75	75
M3L333A	.033 $\mu$ F	2 RED	50	10	13	33	55	75	75

\* = HIGH VOLTAGE VARIANT AVAILABLE  
MOUNTING HARDWARE ON REQUEST

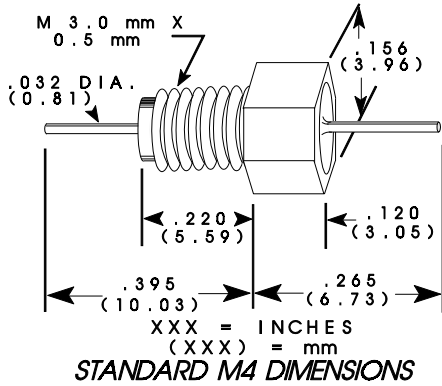


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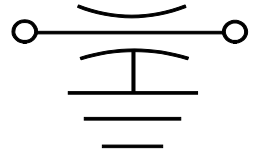
# M4 SERIES METRIC "C" FILTER

## INDUSTRY STANDARD 3.0 X .05 MM

M4  
"C" CIRCUIT



- Cap /Tolerance:  
0pF- .1μF +100/-0%  
Other tolerances available.
- Dissipation Factor:  
3.5% Maximum
- Insulation Resistance:  
25°C = 1,000 Megohm-μF  
125°C = 100 Megohm-μF
- Dielectric Strength (DWV):  
250% of Rated Voltage for 5 sec.
- Max Mounting Torque:  
2.0 in\*lbs
- Operating Temp:  
-55°C to +125°C



Dimension Tolerances:

Case: +/- .015" (+/- .381mm) Lead Length: +/- .030" (+/- .762mm) Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

N/A. Internal construction with high temp. Sn10 solder.

Material and Finish:

Steel case, copper leads, silver plating standard. Variations are available.

Marking:

Color dots standard. Custom marking available.

EMI PART NUMBER	CAP "C" CKT	COLOR DOT	MAX WVDC	DC AMPS	MIN. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1MHz	10MHz	100MHz	1GHz	10GHz
M4C000D	"0"pF	ORANGE	200*	10	-	-	-	-	-
M4C050D	5 pF	2 ORANGE	200*	10	-	-	-	-	-
M4C100D	10 pF	VIOLET	200*	10	-	-	-	5	20
M4C250D	25 pF	BLUE	200*	10	-	-	-	10	25
M4C101D	100 pF	GREEN	200*	10	-	-	3	20	28
M4C501D	500 pF	BROWN	200*	10	-	-	15	35	40
M4C102D	1,000 pF	WHITE	200*	10	-	5	20	35	45
M4C122D	1,200 pF	WHITE	200*	10	-	5	20	35	45
M4C272D	2,700 pF	RED	200*	10	5	10	25	40	50
M4C502D	5,000 pF	YELLOW	200	10	5	15	30	45	55
M4C103D	.01 μF	2 WHITE	200	10	6	21	35	50	60
M4C153B	.015 μF	2 WHITE	100	10	8	20	35	55	60
M4C273B	.027 μF	2 RED	100	10	10	28	42	65	65
M4C333B	.033 μF	2 RED	100	10	11	30	44	65	65
M4C503B	.05 μF	2 YELLOW	100	10	15	35	45	65	-
M4C104A	.1 μF	3 WHITE	50	10	22	40	47	65	-

\* = HIGH VOLTAGE VARIANT AVAILABLE  
MOUNTING HARDWARE ON REQUEST

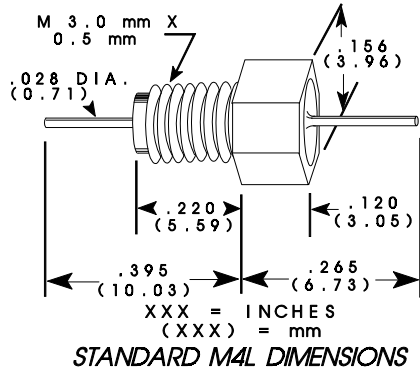


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# M4 SERIES METRIC "L" FILTER

## INDUSTRY STANDARD 3.0 X 0.5 MM

METRIC "L"  
CIRCUIT



Cap /Tolerance:

0pF- .1 $\mu$ F +100/-0%  
Other tolerances available.

Dissipation Factor:

3.5% Maximum

Insulation Resistance:

25°C = 1,000 Megohm- $\mu$ F  
125°C = 100 Megohm- $\mu$ F

Dielectric Strength (DWV):

250% of Rated Voltage for 5 sec.

Max Mounting Torque:

2.0 in\*lbs

Operating Temp:

-55°C to +125°C



Dimension Tolerances:

Case: +/- .015" (+/- .381mm) Lead Length: +/- .030" (+/- .762mm) Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

N/A. Internal construction with high temp. Sn10 solder.

Material and Finish:

Steel case, copper leads, silver plating standard. Variations are available.

Marking:

Color dots standard. Custom marking available.

EMI PART NUMBER	CAP "L" CKT	COLOR DOT	MAX WVDC	DC AMPS	TYP. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1MHz	10MHz	100MHz	1GHz	10GHz
M4L000D	"0"pF	NONE	200*	10	-	-	-	-	-
M4L050D	5 pF	2 ORANGE	200*	10	-	-	-	-	-
M4L100D	10 pF	VIOLET	200*	10	-	-	-	7	20
M4L250D	25 pF	BLUE	200*	10	-	-	-	13	25
M4L101D	100 pF	GREEN	200*	10	-	-	7	22	35
M4L501D	500 pF	BROWN	200*	10	-	-	18	37	45
M4L102D	1,000 pF	WHITE	200*	10	-	8	25	40	40
M4L122D	1,200 pF	WHITE	200*	10	-	8	28	42	50
M4L272D	2,700 pF	RED	200*	10	8	13	32	45	55
M4L502D	5,000 pF	YELLOW	200	10	7	17	35	47	55
M4L103D	.01 $\mu$ F	2 WHITE	200	10	8	27	48	65	65
M4L153B	.015 $\mu$ F	2 WHITE	100	10	10	28	50	65	60
M4L273B	.027 $\mu$ F	2 RED	100	10	13	35	53	75	65
M4L333B	.033 $\mu$ F	2 RED	100	10	13	33	55	75	75
M4L503B	.05 $\mu$ F	2 YELLOW	100	10	18	37	49	80	80
M4L104A	.1 $\mu$ F	3 WHITE	50	10	28	48	60	90	90

\*=HIGH VOLTAGE VARIANT AVAILABLE  
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