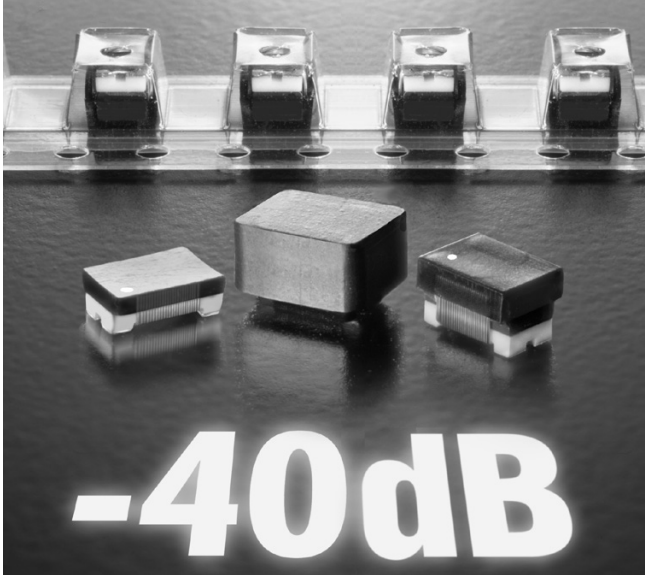


# Common Mode EMI Filters – M2022



- Provide excellent noise attenuation
- Compact, 1812 size surface mount package.
- Available as the standard filter, a low profile (-ALPL) and a shielded (-ASL) version
- Excellent isolation, environmental stability and low cost.

**Core material** Ferrite

**Terminations** RoHS compliant gold over nickel over moly-manganese

**Weight:** M2022-AL 155 mg; M2022-ALPL 85.5 mg; M2022-ASL 319 mg

**Ambient temperature** -40°C to +85°C

**Storage temperature** Component: -40°C to +85°C.

Tape and reel packaging: -40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number	Common mode peak impedance (kOhms)	Cutoff frequency <sup>2</sup> (MHz)	Inductance <sup>3</sup> (µH)	DCR max <sup>4</sup> (mOhms)	Isolation <sup>5</sup> (Vrms)	Current max (mA)
M2022-AL_	38.3 @ 120 MHz	170	4.2 ±10%	800	50	500
M2022-ALPL_	40.0 @ 160 MHz	120	4.0 ±10%	990	50	500
M2022-ASL_	32.0 @ 66 MHz	140	11.5 min	850	50	500

1. When ordering, please specify **packaging** codes:

M2022-ALPLC  
↓

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

**B** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

2. Frequency at which the differential mode attenuation equals -3 dB

3. Inductance is per winding, measured at 10 MHz.

4. DCR is specified per winding.

5. Winding to winding isolation (hipot) tested for one minute.

6. Electrical specifications at 25°C.



www.coilcraft.com

**US** +1-847-639-6400 sales@coilcraft.com

**UK** +44-1236-730595 sales@coilcraft-europe.com

**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw

**China** +86-21-6218 8074 sales@coilcraft.com.cn

**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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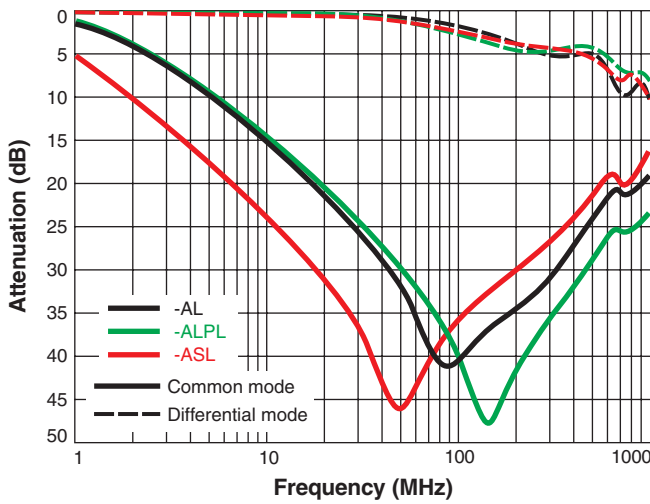
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



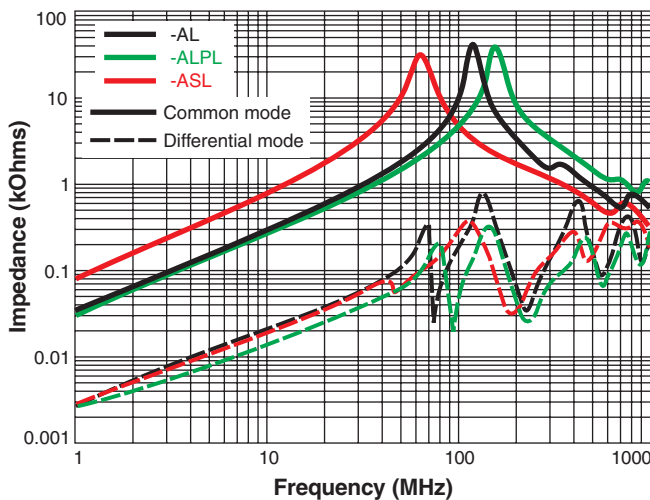
# M2022 Common Mode EMI Filters

## Typical Attenuation\*

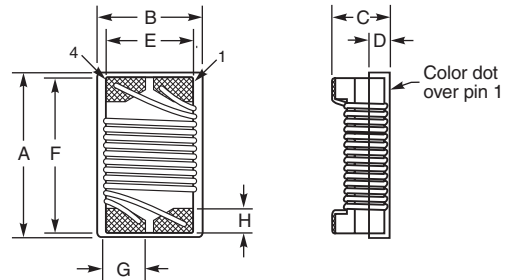


\*Ref: 50 Ohms.

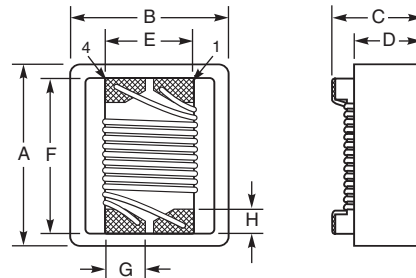
## Typical Impedance vs Frequency



## M2022-AL, M2022-ALPL



## M2022-ASL



### M2022-AL

A max	B max	C max	D ref	E ref	F ref	G min	H
0.195	0.150	0.135	0.070	0.100	0.178	0.04	0.03
4,95	3,81	3,43	1,78	2,54	4,52	1,02	0,76

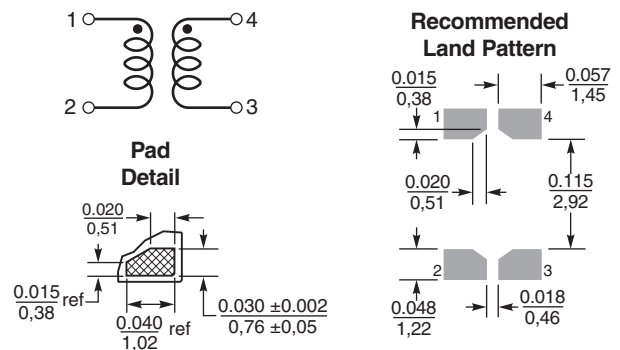
### M2022-ALPL

A max	B max	C max	D ref	E ref	F ref	G min	H
0.195	0.150	0.079	0.070	0.100	0.178	0.04	0.03
4,95	3,81	2,01	1,78	2,54	4,52	1,02	0,76

### M2022-ASL

A max	B max	C max	D ref	E ref	F ref	G min	H
0.231	0.196	0.150	0.107	0.100	0.178	0.04	0.03
5,87	4,98	3,81	2,72	2,54	4,52	1,02	0,76

**Packaging** 600 per 7" reel; 2200 per 13" reel  
 Plastic tape: 12 mm wide, 8 mm pocket spacing  
 M2022-AL: 0.3 mm thick, 3.7 mm pocket depth  
 M2022-ALP: 0.3 mm thick, 2.25 mm pocket depth  
 M2022-AS: 0.25 mm thick, 3.94 mm pocket depth



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**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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