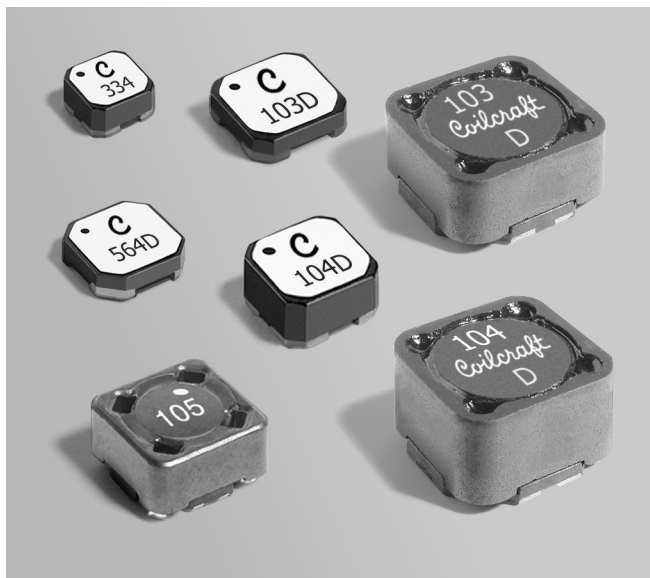




Common Mode Chokes



These Coilcraft dual wound inductors can be used as chokes to eliminate virtually all common mode noise in high-speed, differential mode signal transmission applications such as USB 2.0, IEEE1394 and LVDS. Most provide greater than 30 dB common mode attenuation and greater than 1000 ohms impedance.

Three or four parts each of seven different sizes are shown. More values are available in each size to provide the best solution for a wide range of applications. Contact Coilcraft if your application requires other values.

Part number ¹	Inductance ² min (μH)	DCR max ³ (Ohms)	Isolation (Vrms)	Irms ⁴ (A)
LPD3015-391MR_	0.31	0.071	100	1.45
LPD3015-103MR_	8.0	1.04	100	0.38
LPD3015-104MR_	80.0	8.54	100	0.13
LPD3015-334MR_	264	27.7	100	0.07
LPD4012-331NR_	0.23	0.042	100	1.87
LPD4012-103MR_	8.0	0.638	100	0.48
LPD4012-104MR_	80.0	4.76	100	0.18
LPD5010-681MR_	0.54	0.070	100	1.95
LPD5010-103MR_	8.0	0.78	100	0.50
LPD5010-104MR_	80.0	8.0	100	0.15
LPD5030-571NR_	0.38	0.031	100	2.30
LPD5030-781NR_	0.54	0.038	100	2.25
LPD5030-102NR_	0.70	0.042	100	2.20
LPD5030-103MR_	8.0	0.21	100	1.05
LPD5030-104MR_	80.0	1.79	100	0.35
LPD5030-105MR_	800	16.5	100	0.11
MSD7342-252ML_	2.00	0.033	200	2.17
MSD7342-103ML_	8.00	0.10	200	1.24
MSD7342-104ML_	80.0	0.77	200	0.45
MSD7342-824ML_	656	6.80	200	0.15
MSD1260-472ML_	3.76	0.036	500	3.16
MSD1260-103ML_	8.0	0.060	500	2.45
MSD1260-104ML_	80.0	0.321	500	1.06
MSD1260-105KL_	900	3.06	500	0.34
MSD1278-472ML_	3.76	0.040	500	3.16
MSD1278-103ML_	8.0	0.058	500	2.56
MSD1278-104ML_	80.0	0.30	500	1.13
MSD1278-105KL_	900	2.87	500	0.37

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

MSD7342-105MLC

For LPD3015, LPD4012, LPD5010, LPD5030 and MSD7342:

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape

B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked.

For MSD1260 and MSD1278

Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape

B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

2. Inductance shown for each winding, measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.

3. DCR is specified per winding.

4. Current per winding that causes a 40°C rise from 25°C ambient.

5. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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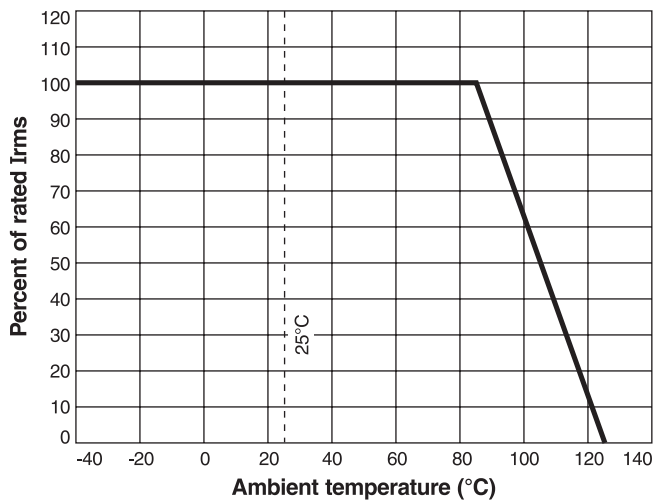
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Common Mode Chokes

Typical Irms Derating



Core material Ferrite

Terminations

LPD RoHS compliant matte tin over nickel over silver

MSD RoHS compliant matte tin over nickel over phos bronze

Ambient temperature -40°C to +85°C with Irms current, +85°C to +125°C with derated current

Storage temperature Component: -40°C to +125°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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.



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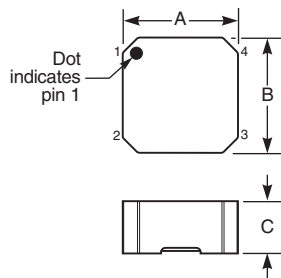
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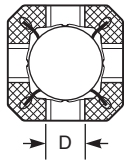
Common Mode Chokes

LPD3015 / LPD4012 / LPD5010 / LPD5030

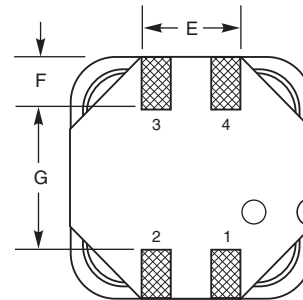
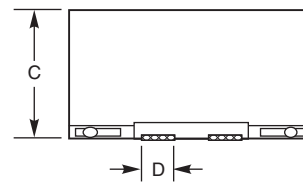
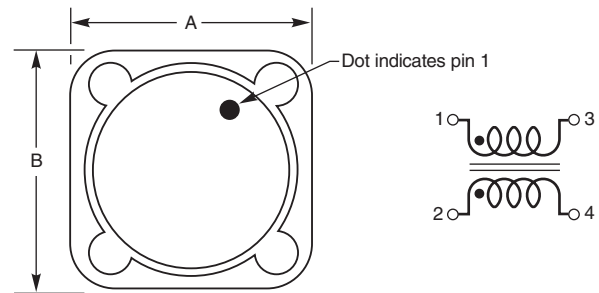
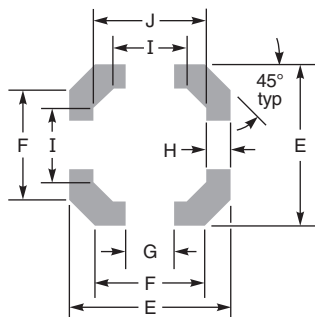
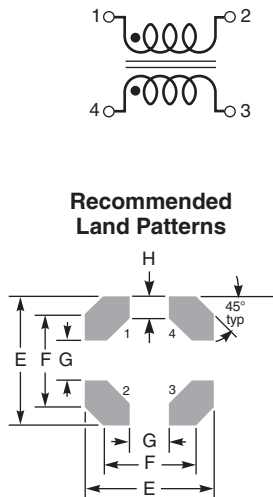
MSD7342 / MSD1260 / MSD1278



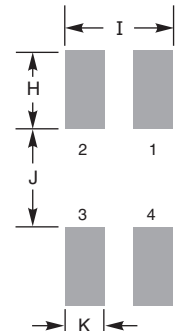
LPD3015
LPD4012



LPD50xx



Recommended
Land Pattern



Part series	A max	B max	C max	D	E	F	G	H	I	J	K	Weight
LPD3015	0.121 3,076	0.121 3,076	0.059 1,50	0.039 0,99	0.130 3,30	0.094 2,30	0.040 1,02	0.022 0,54	—	—	—	inches mm 45 – 52 mg
LPD4012	0.158 4,016	0.158 4,016	0.047 1,20	0.060 1,52	0.174 4,40	0.103 2,606	0.049 1,24	0.031 0,78	—	—	—	inches mm 54 – 64 mg
LPD5010	0.192 4,876	0.192 4,876	0.039 1,0	0.060 1,52	0.197 5,0	0.134 3,4	0.060 1,5	0.030 0,75	0.090 2,3	0.138 3,5	—	inches mm 60 – 70 mg
LPD5030	0.192 4,876	0.192 4,876	0.118 3,0	0.060 1,52	0.197 5,0	0.134 3,4	0.060 1,5	0.030 0,75	0.090 2,3	0.138 3,5	—	inches mm 0.21 – 0.23 g
MSD7342	0.295 7,5	0.295 7,5	0.181 4,6	0.028 0,70	0.091 2,3	0.063 1,6	0.150 3,8	0.083 2,1	0.110 2,8	0.130 3,3	0.043 1,10	inches mm 0.76 – 0.87g
MSD1260	0.484 12,3	0.484 12,3	0.25 6,2	0.059 1,5	0.197 5,0	0.138 3,5	0.197 5,0	0.157 4,0	0.217 5,5	0.177 4,5	0.079 2,0	inches mm 2.8 – 3.2 g
MSD1278	0.484 12,3	0.484 12,3	0.317 8,05	0.059 1,5	0.197 5,0	0.138 3,5	0.197 5,0	0.157 4,0	0.217 5,5	0.177 4,5	0.079 2,0	inches mm 3.7 – 4.4 g

Packaging

LPD3015 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.26 mm thick, 8 mm pocket spacing, 1.65 mm pocket depth
LPD4012 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 1.32 mm pocket depth
LPD5010 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.02 mm pocket depth
LPD5030 750/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.32 mm thick, 8 mm pocket spacing, 3.1 mm pocket depth
MSD7342 250/7" reel; 1000/13" reel Plastic tape: 16 mm wide, 0.4 mm thick, 12 mm pocket spacing, 4.9 mm pocket depth
MSD1260 500/13" reel; Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 6.6 mm pocket depth
MSD1278 500/13" reel; Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 8.1 mm pocket depth



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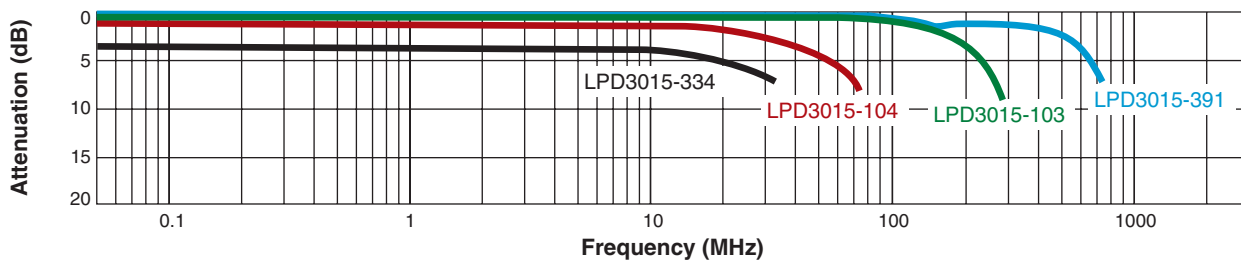
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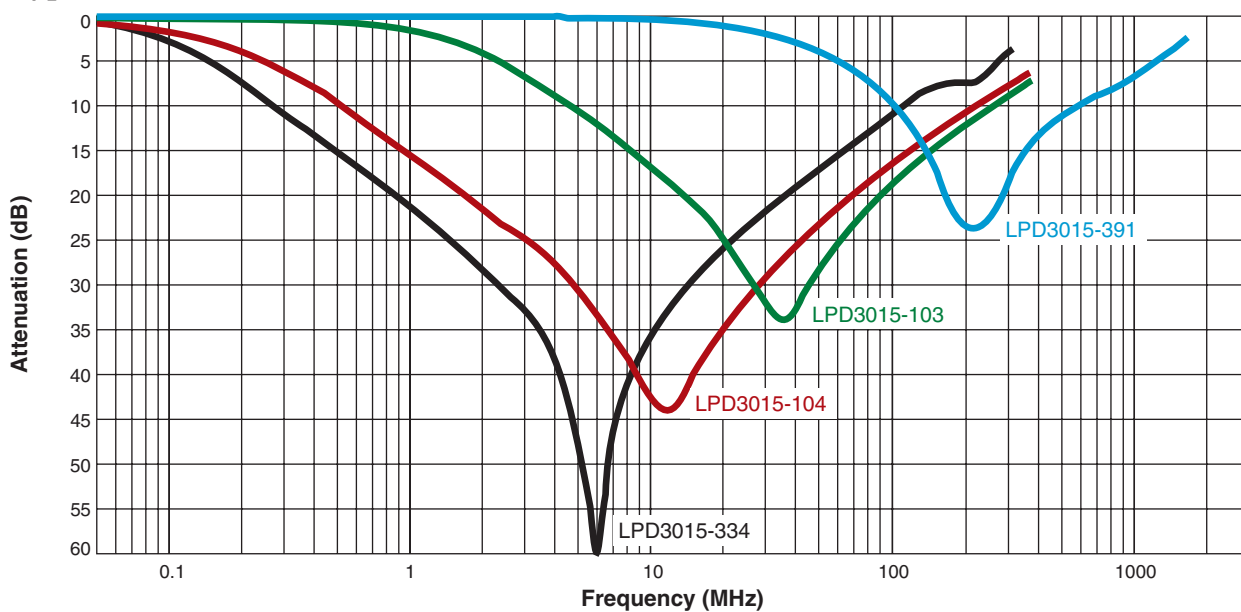


Common Mode Chokes LPD3015

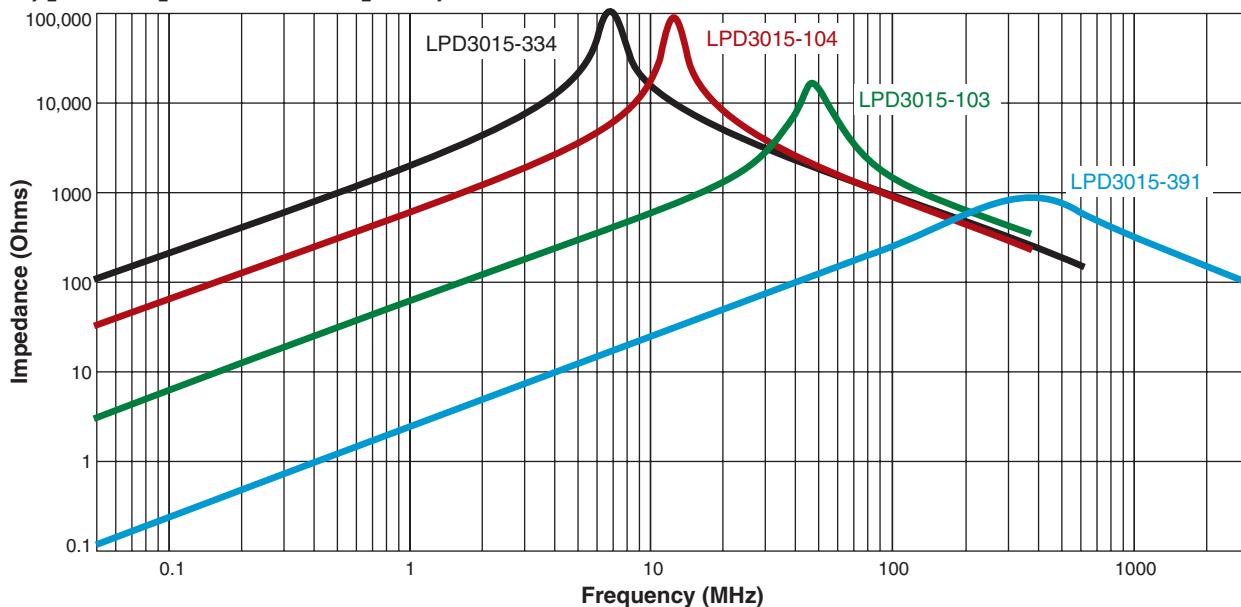
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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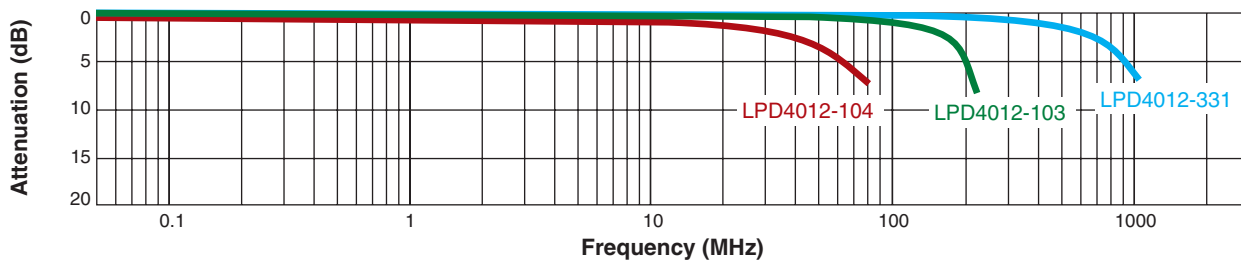
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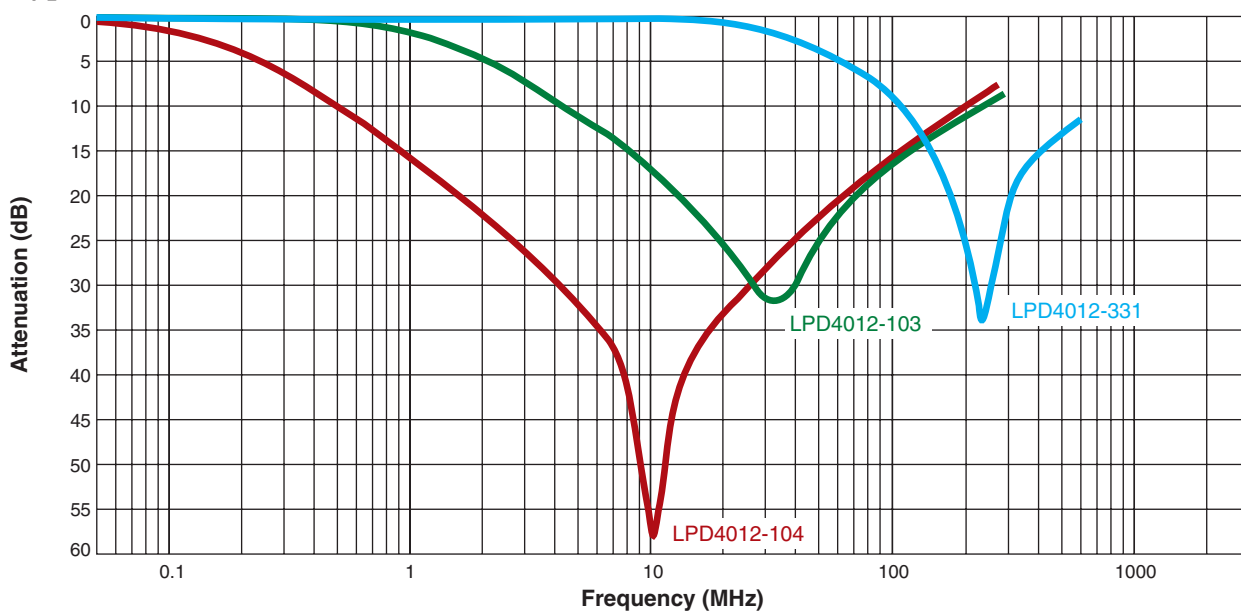


Common Mode Chokes LPD4012

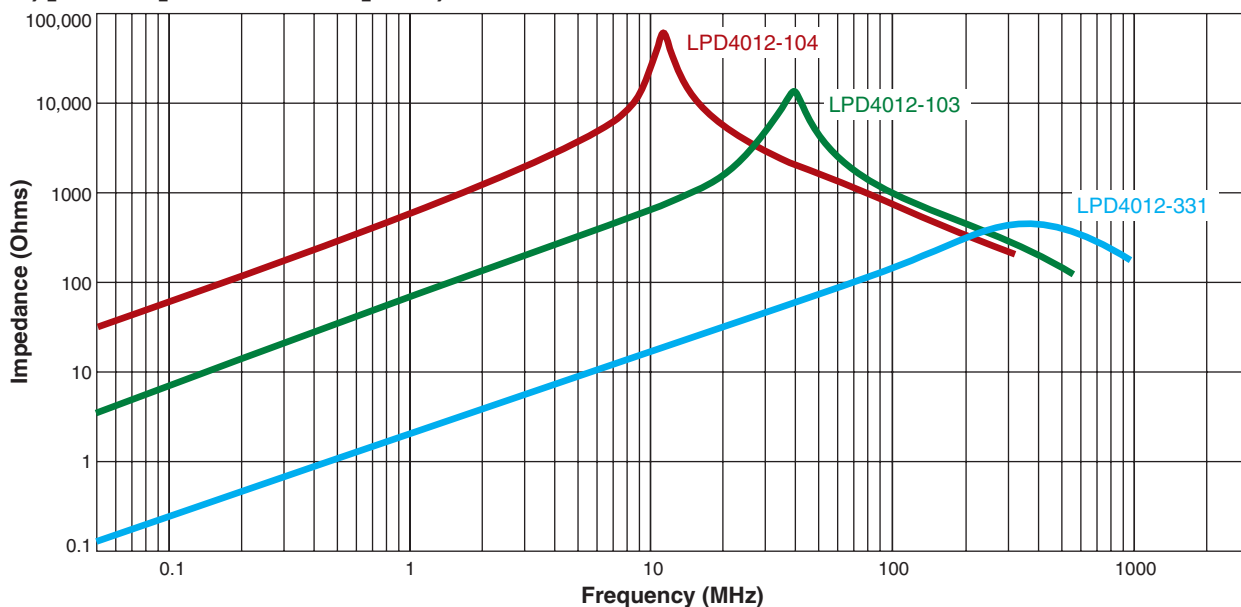
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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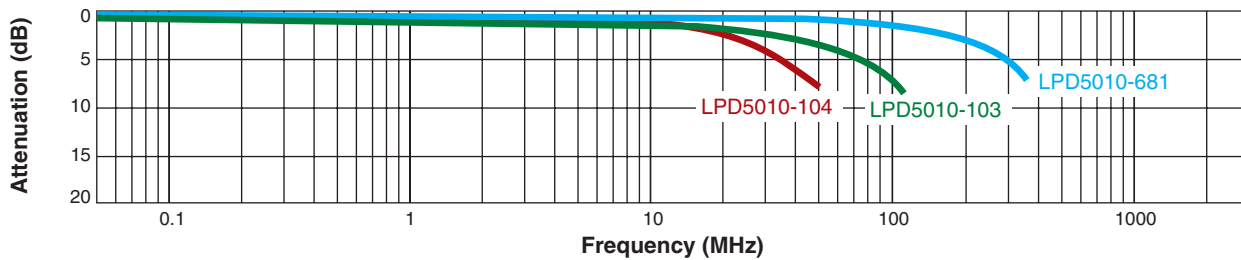
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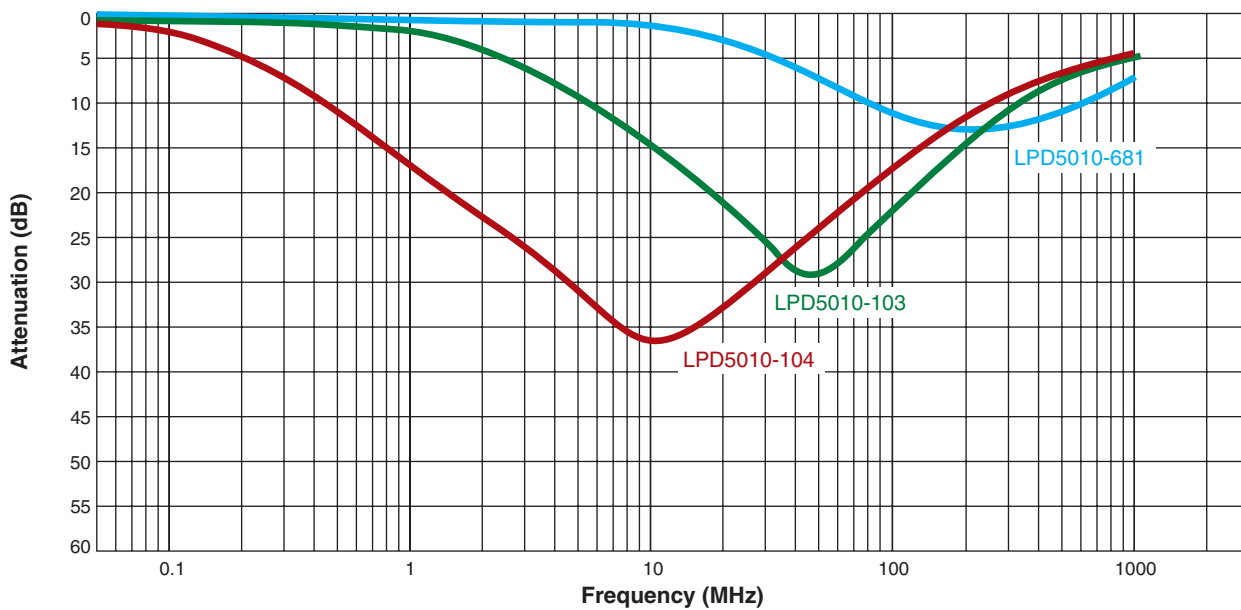


Common Mode Chokes LPD5010

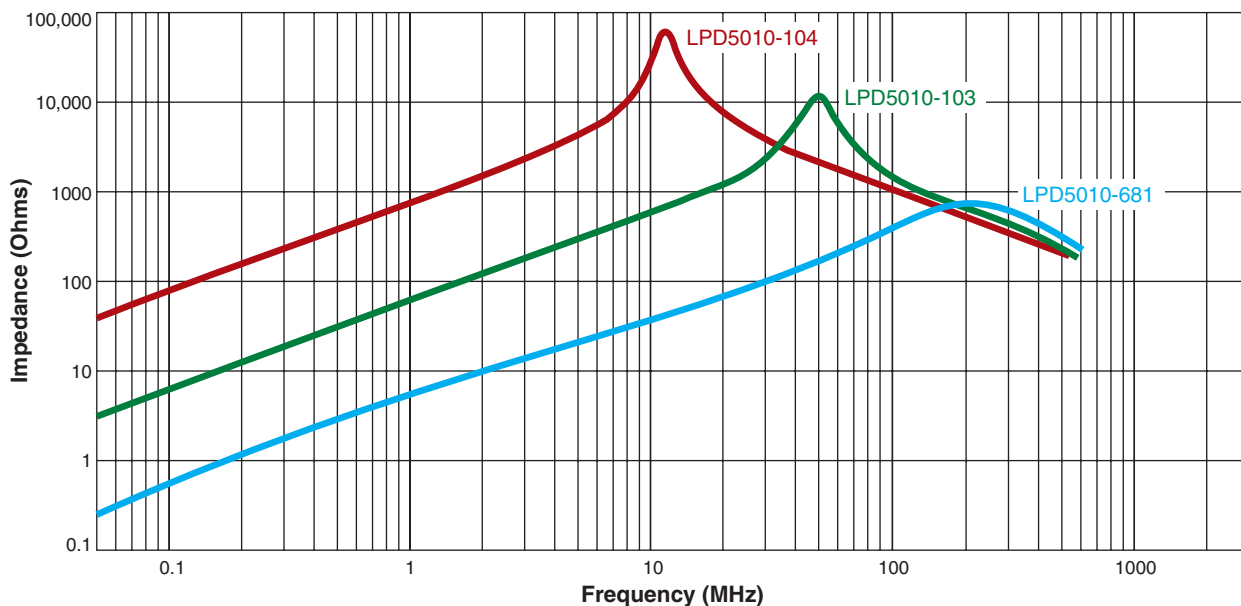
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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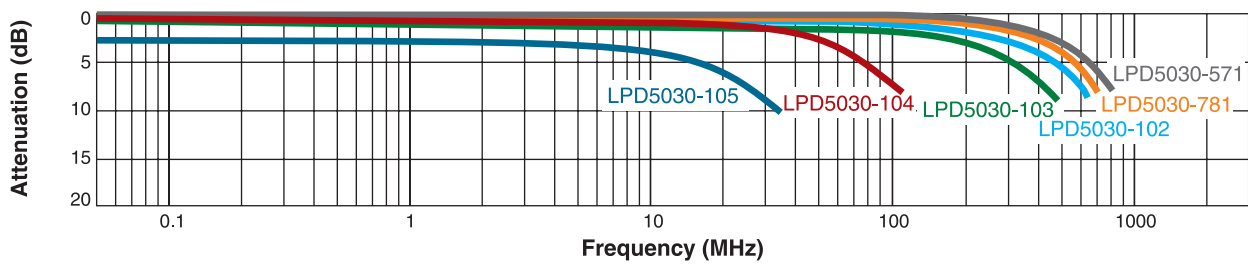
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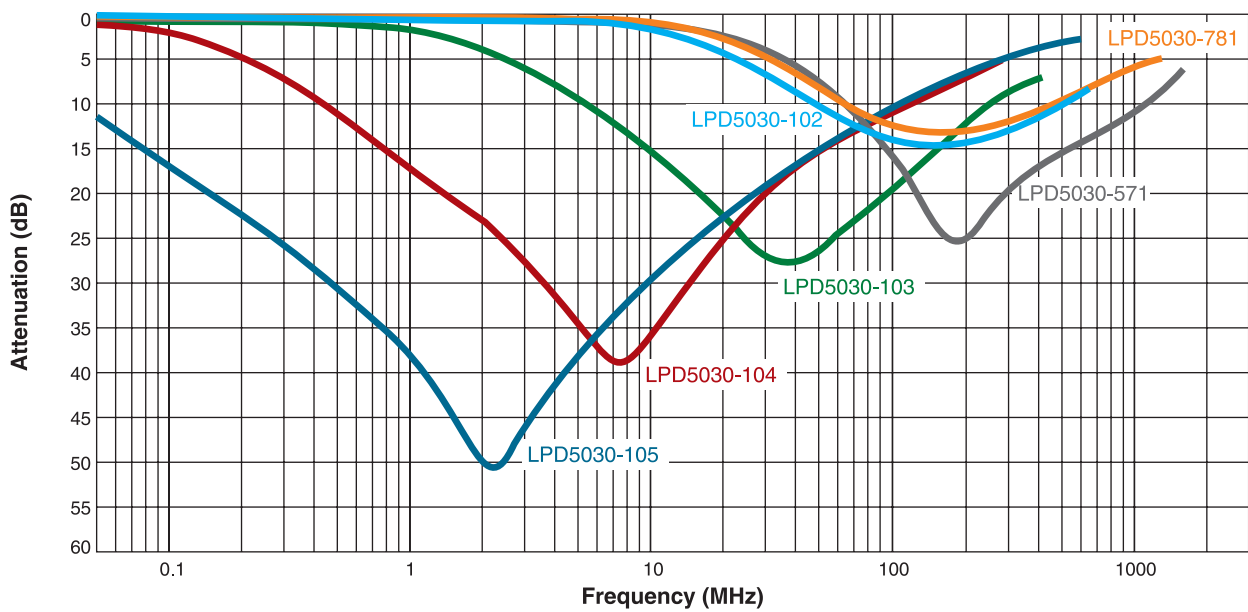


Common Mode Chokes LPD5030

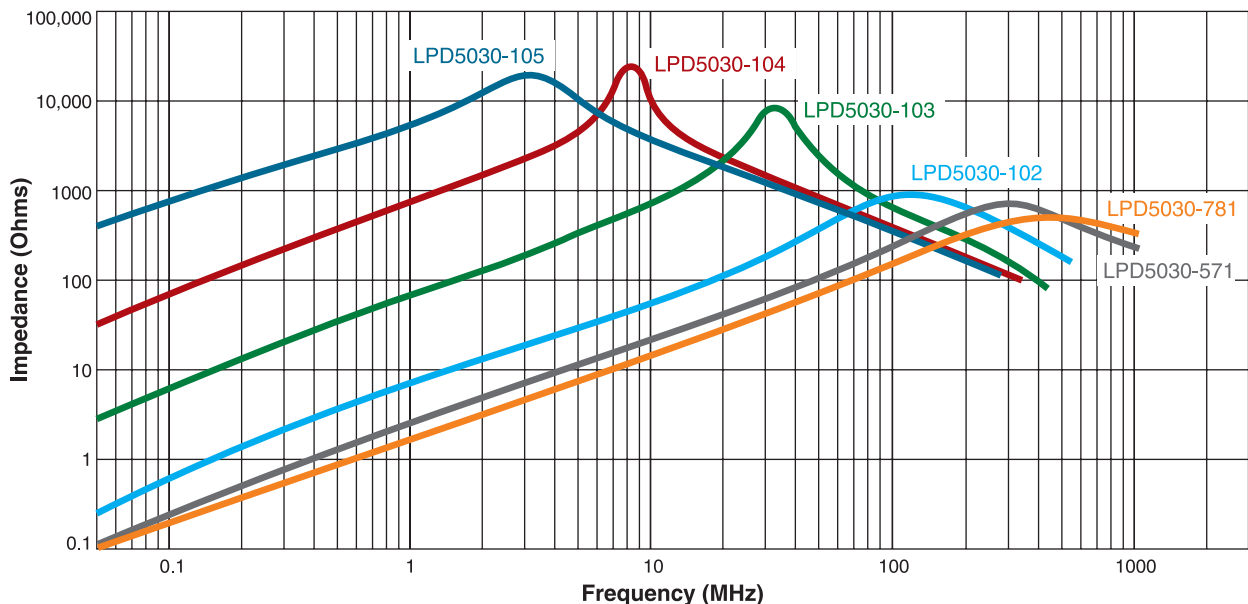
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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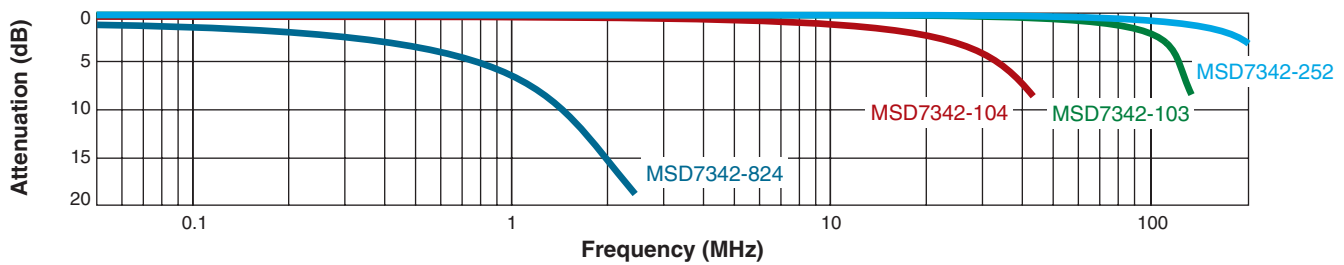
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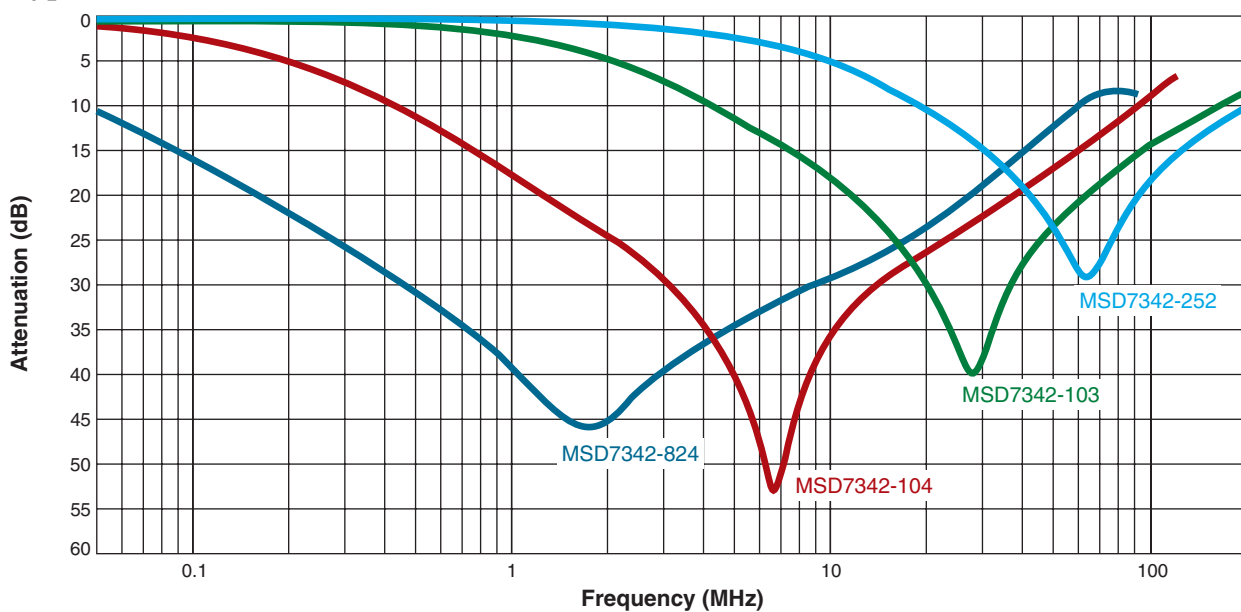


Common Mode Chokes MSD7342

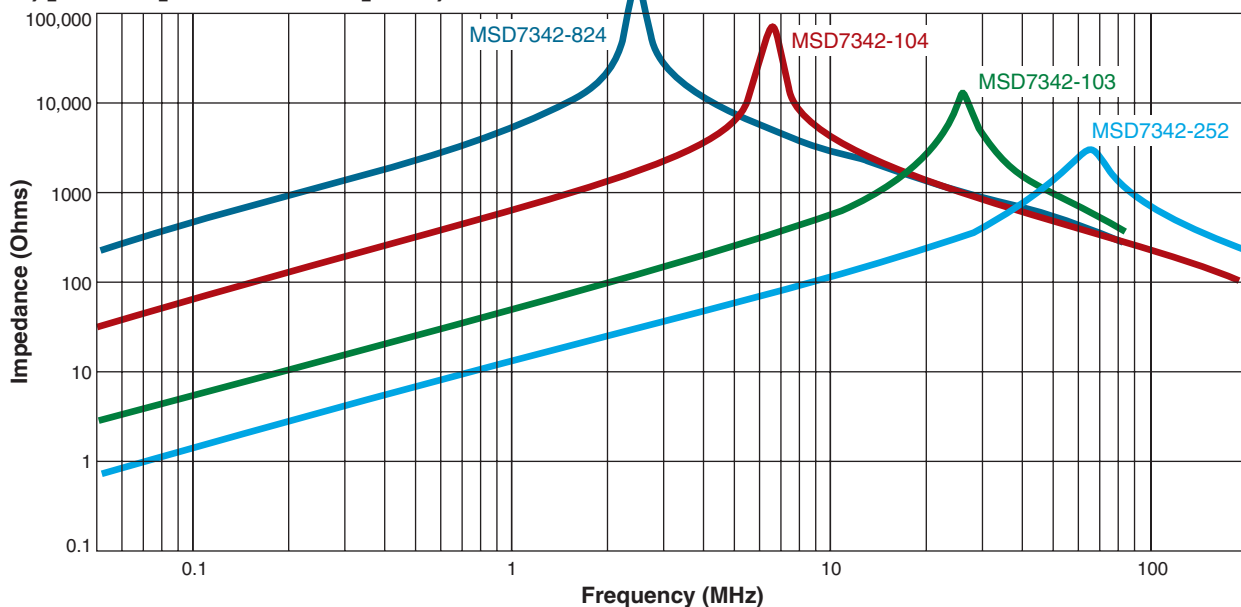
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



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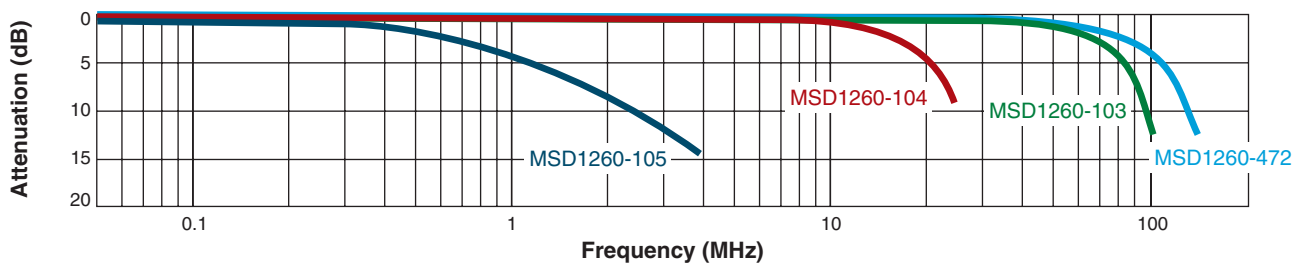
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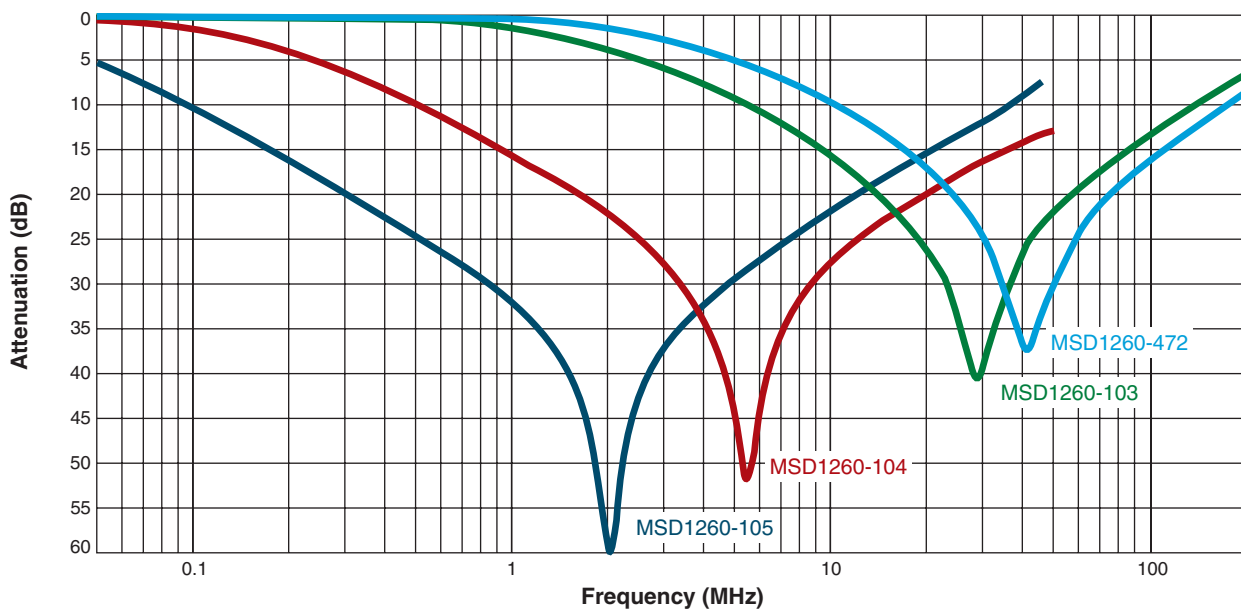


Common Mode Chokes MSD1260

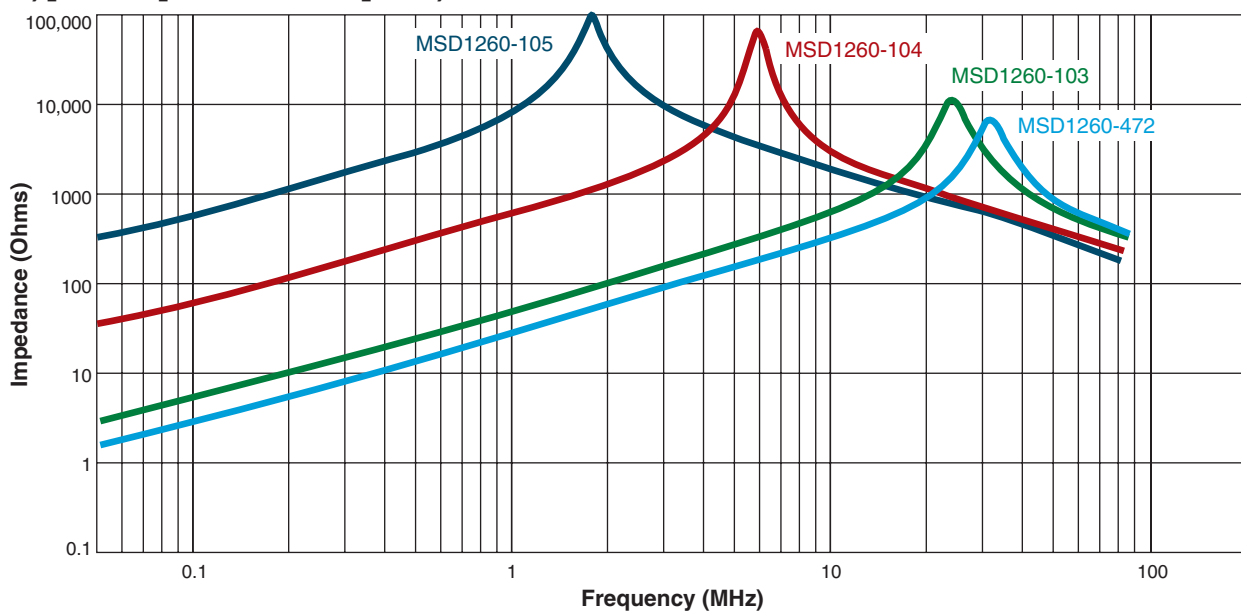
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



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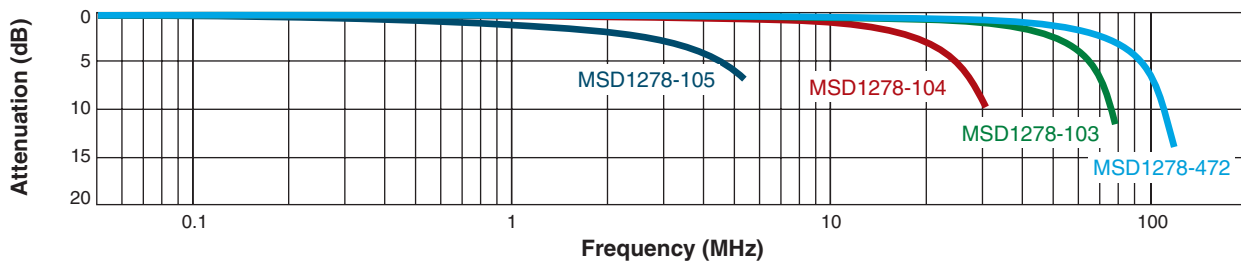
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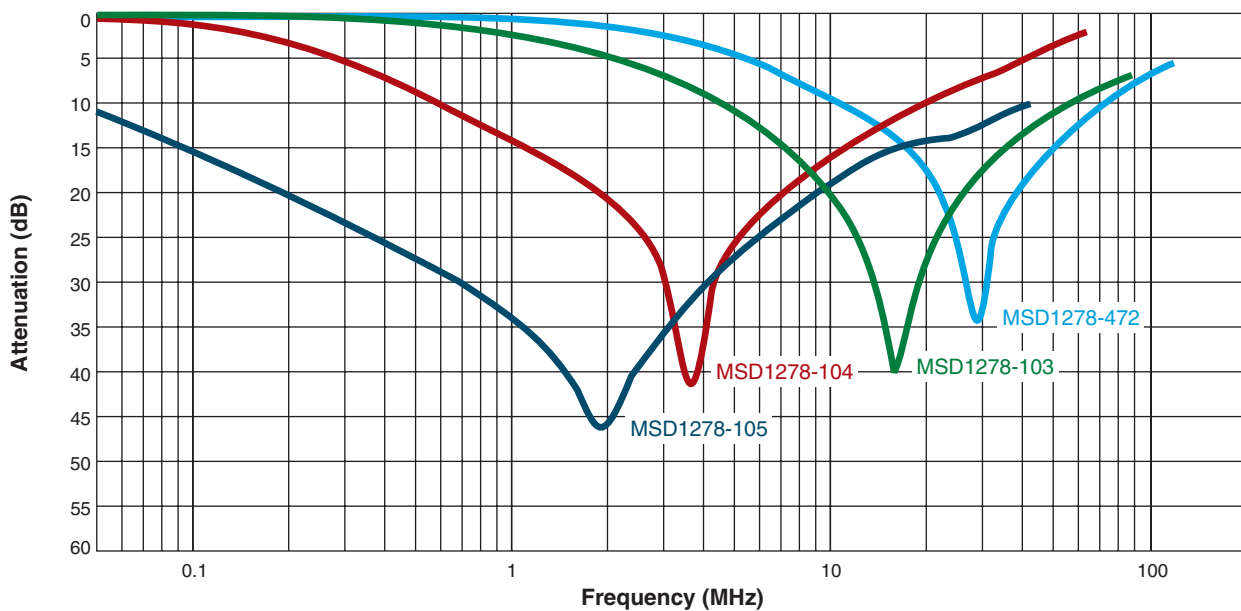


Common Mode Chokes MSD1278

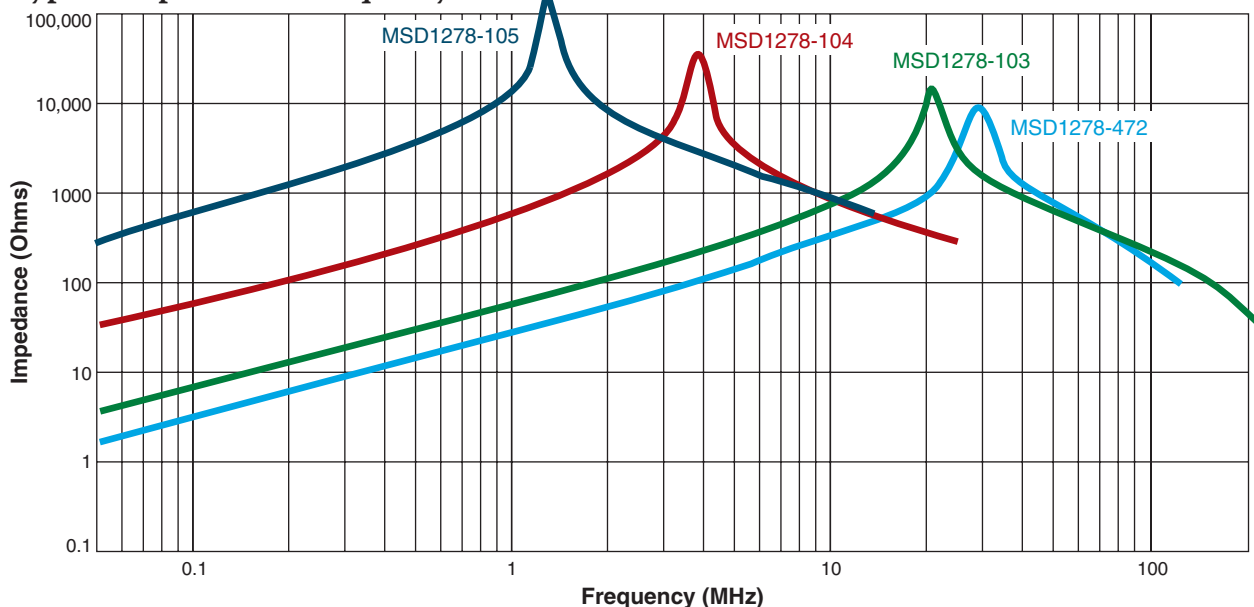
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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