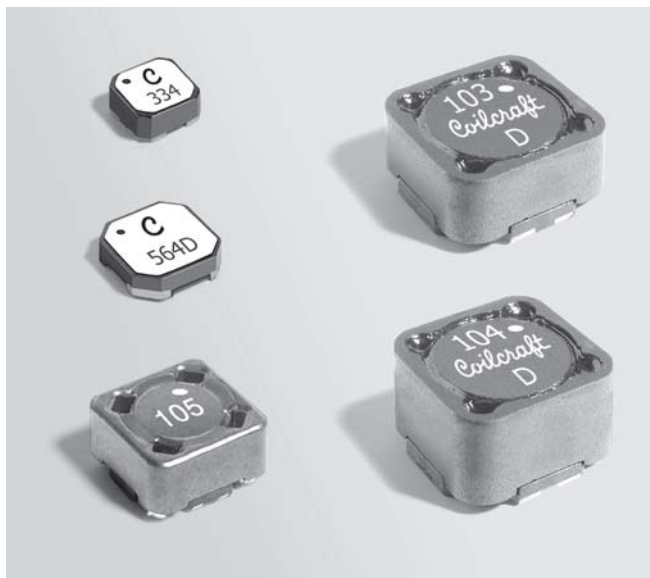




Common Mode Chokes



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.

Four parts each of five 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 (μ H)	DCR max ³ (Ohms)	Isolation (Vrms)	Irms ⁴ (A)
LPD3015-391ML_	0.31	0.071	100	1.45
LPD3015-103ML_	8.0	1.04	100	0.38
LPD3015-104ML_	80.0	8.54	100	0.13
LPD3015-334ML_	264	27.7	100	0.07
LPD4012-331NL_	0.23	0.042	100	1.87
LPD4012-103ML_	8.0	0.638	100	0.48
LPD4012-104ML_	80.0	4.76	100	0.18
LPD4012-564ML_	448	22.10	100	0.08
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:

MSD7342-105ML **C**

For LPD3015, LPD4012 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.

- Inductance shown for each winding, measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.
 - DCR is specified per winding.
 - Current per winding that causes a 40°C rise from 25°C ambient.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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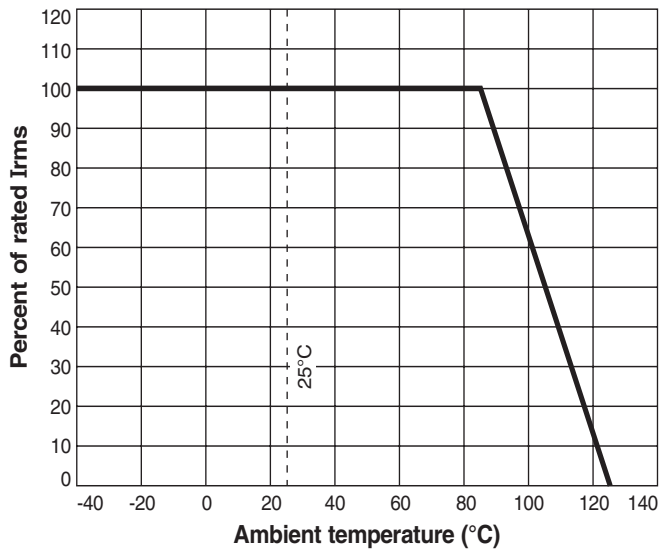
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Common Mode Chokes

Typical Irms Derating



Core material Ferrite

Terminations

LPD RoHS compliant silver-palladium-platinum-glass frit

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.

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)

Mean Time Between Failures (MTBF) 26,315,789 hours

Failures in Time (FIT) 38 in one billion hours

PCB washing Only pure water or alcohol recommended

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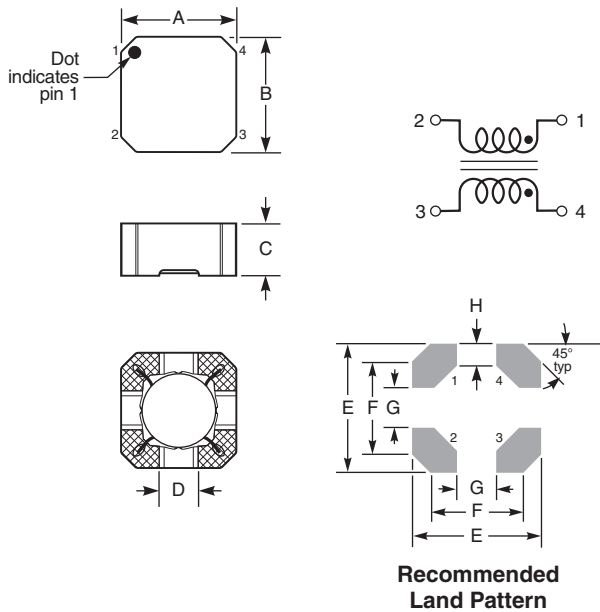
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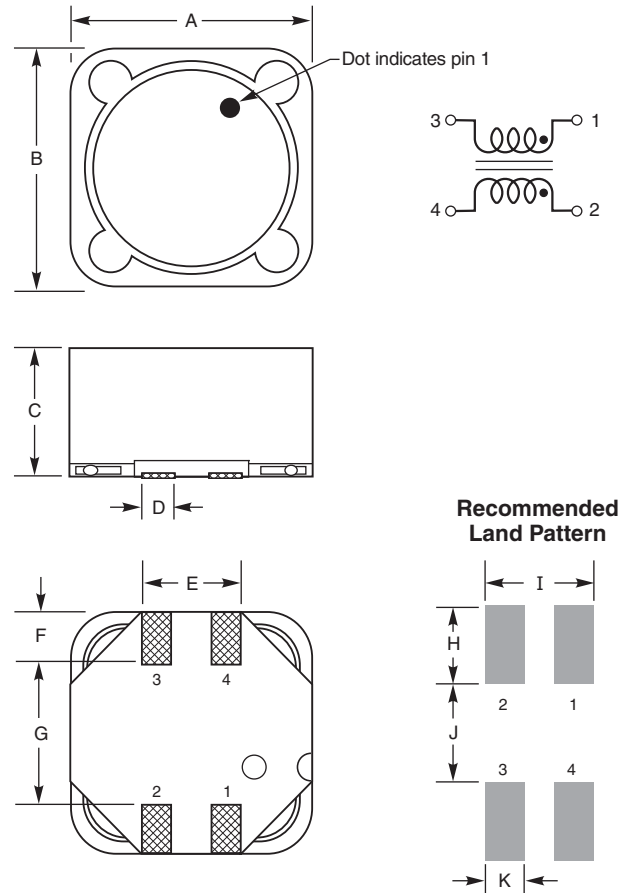


Common Mode Chokes

LPD3015 /LPD4012



MSD7342 /MSD1260 /MSD1278



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
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
- 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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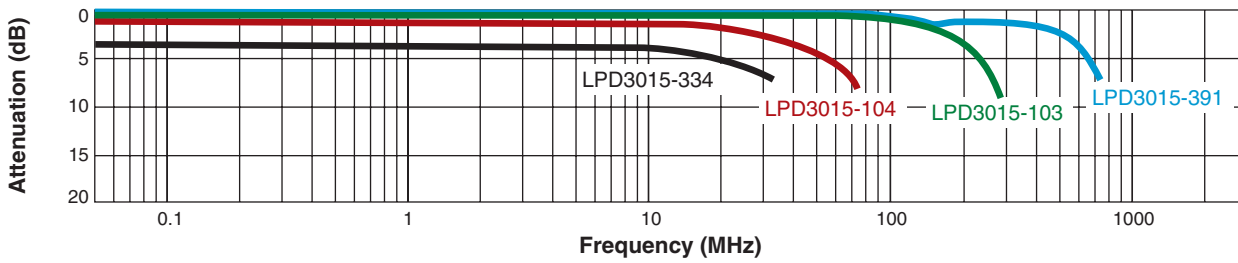
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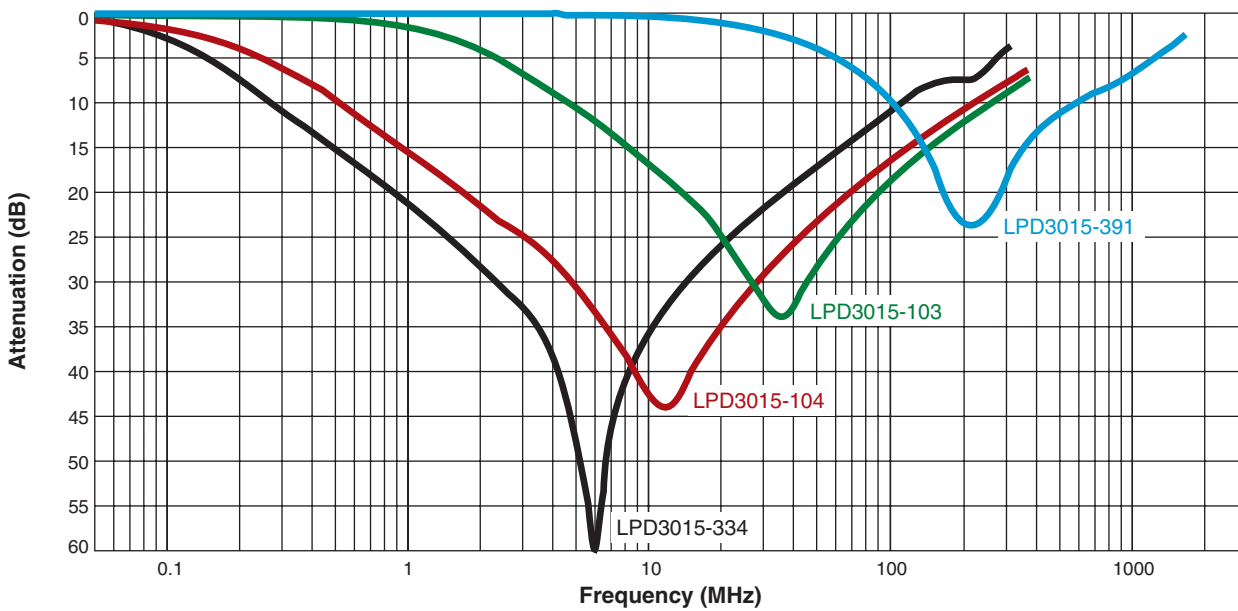


Common Mode Chokes LPD3015

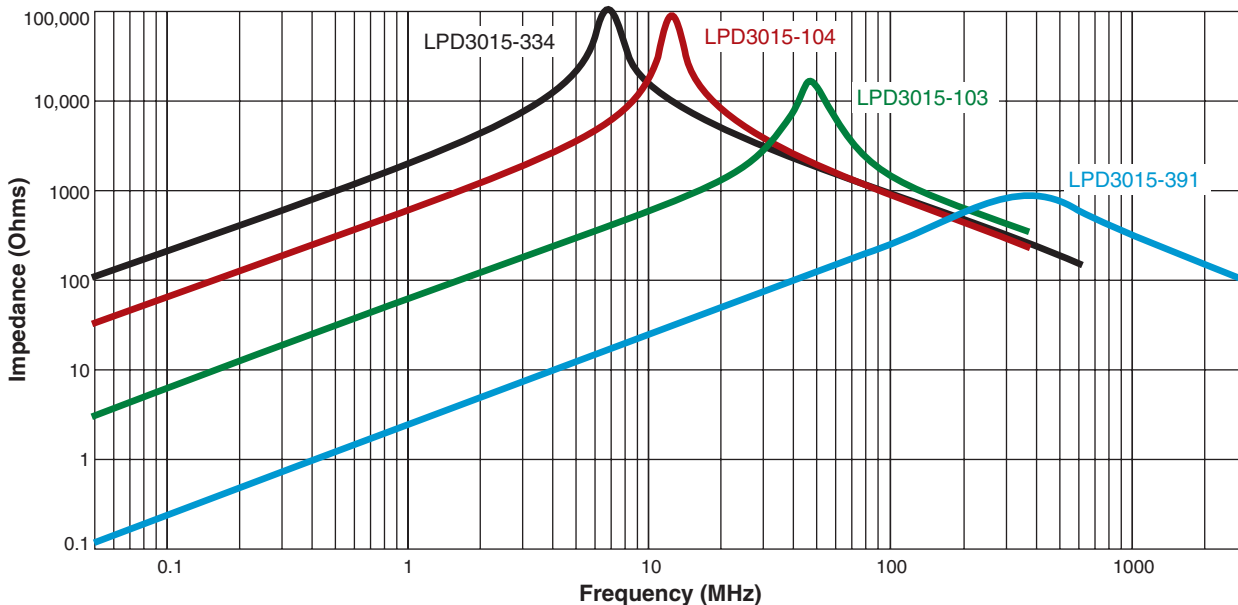
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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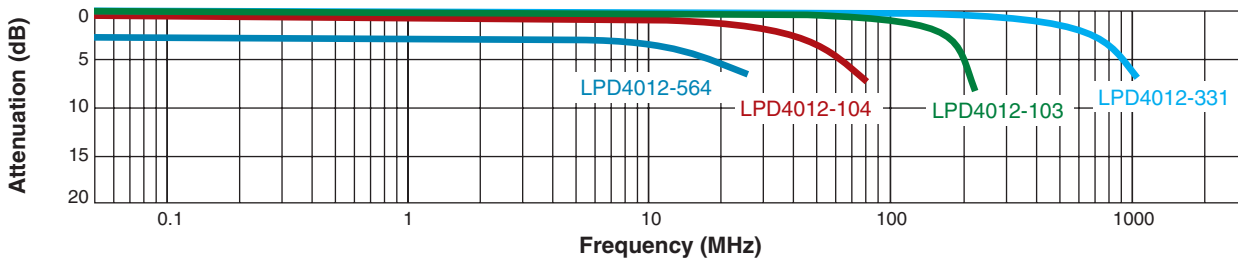
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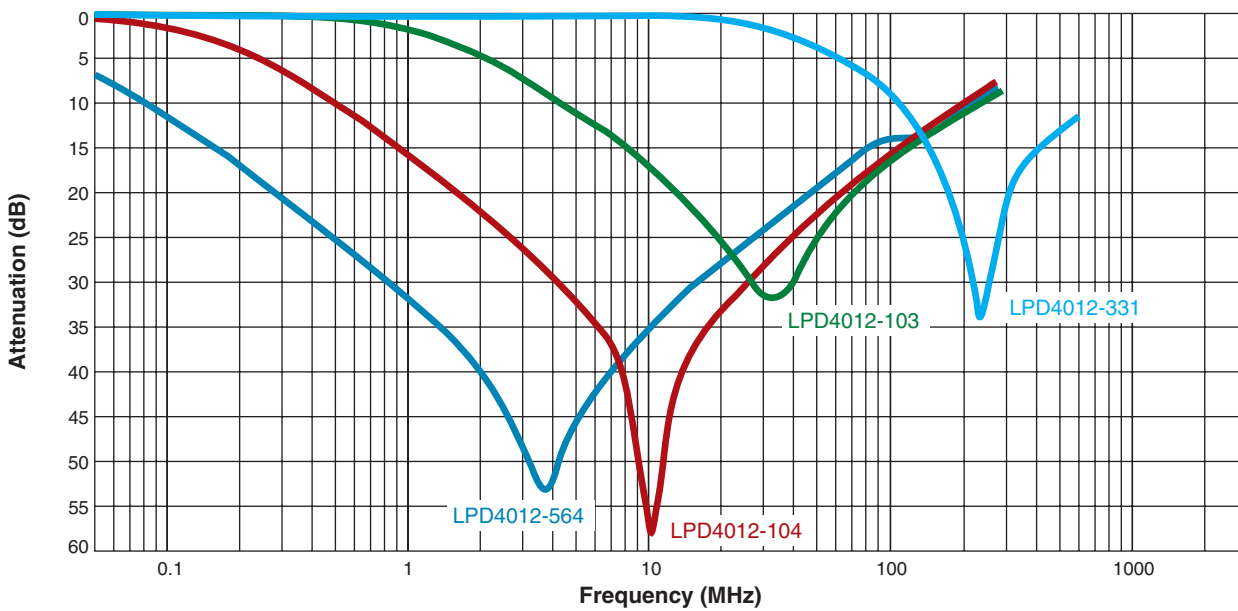


Common Mode Chokes LPD4012

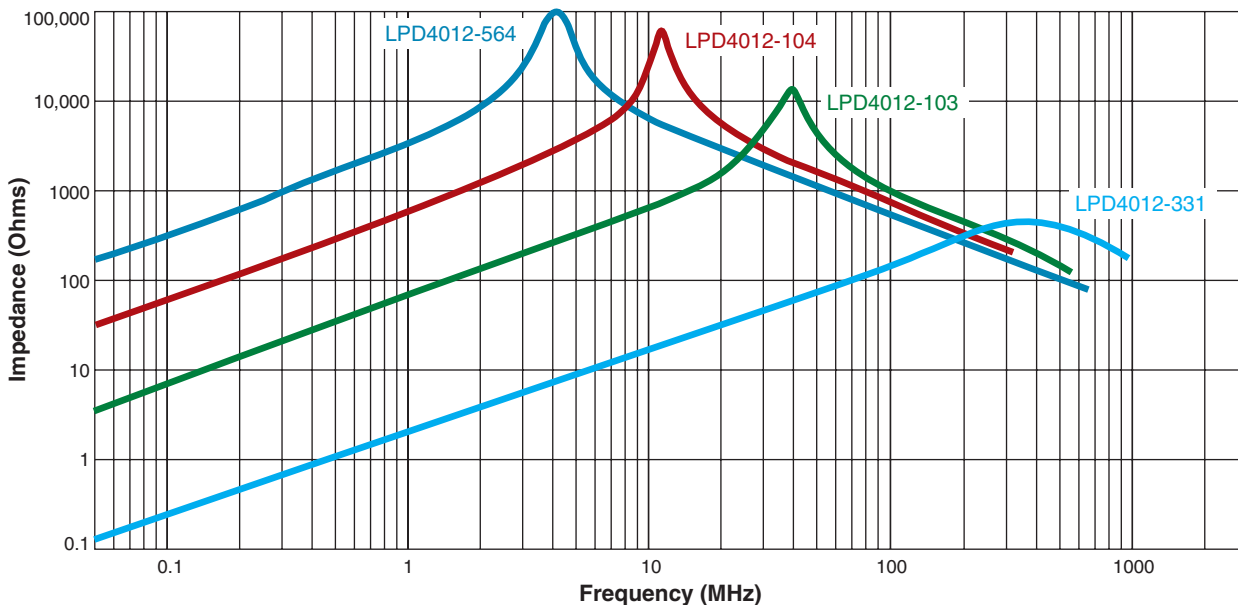
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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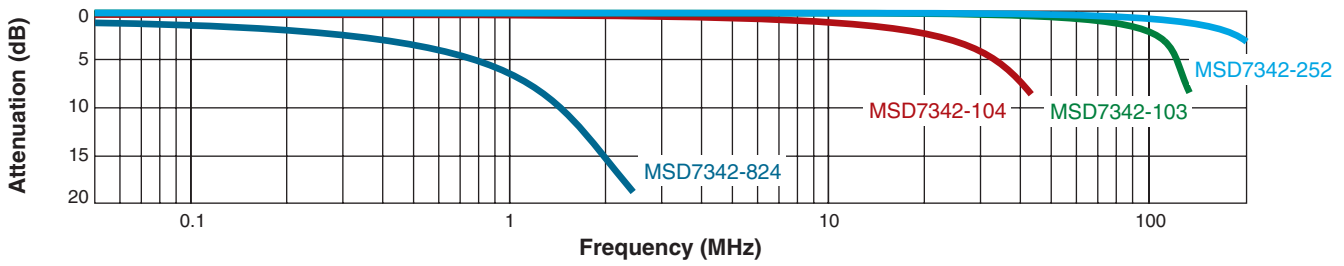
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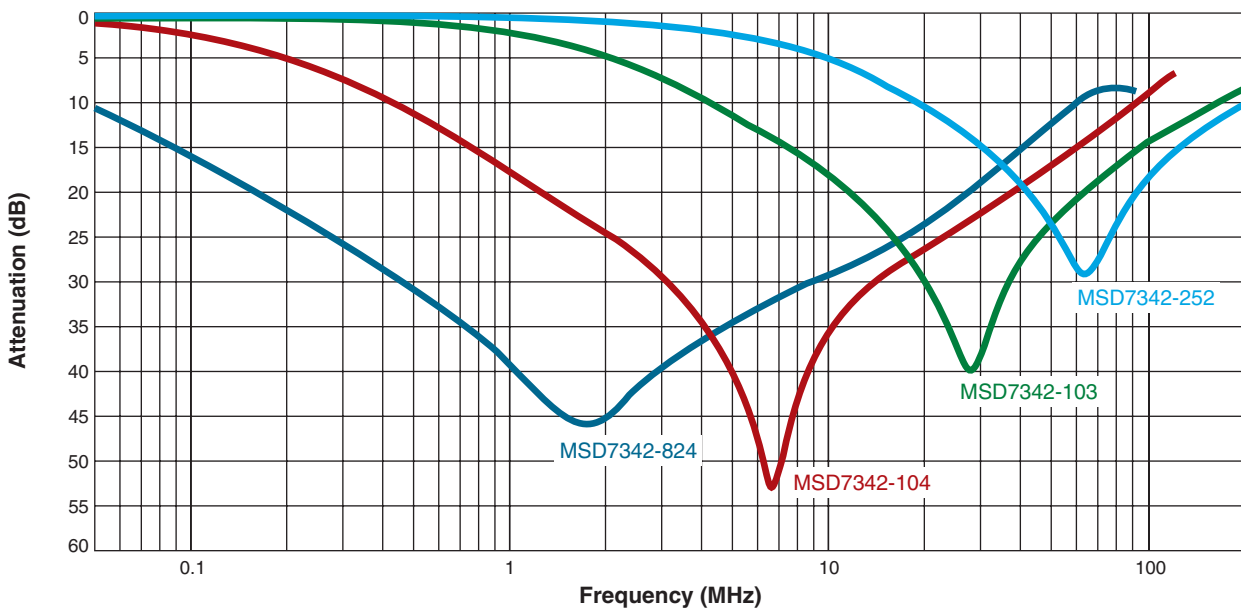


Common Mode Chokes MSD7342

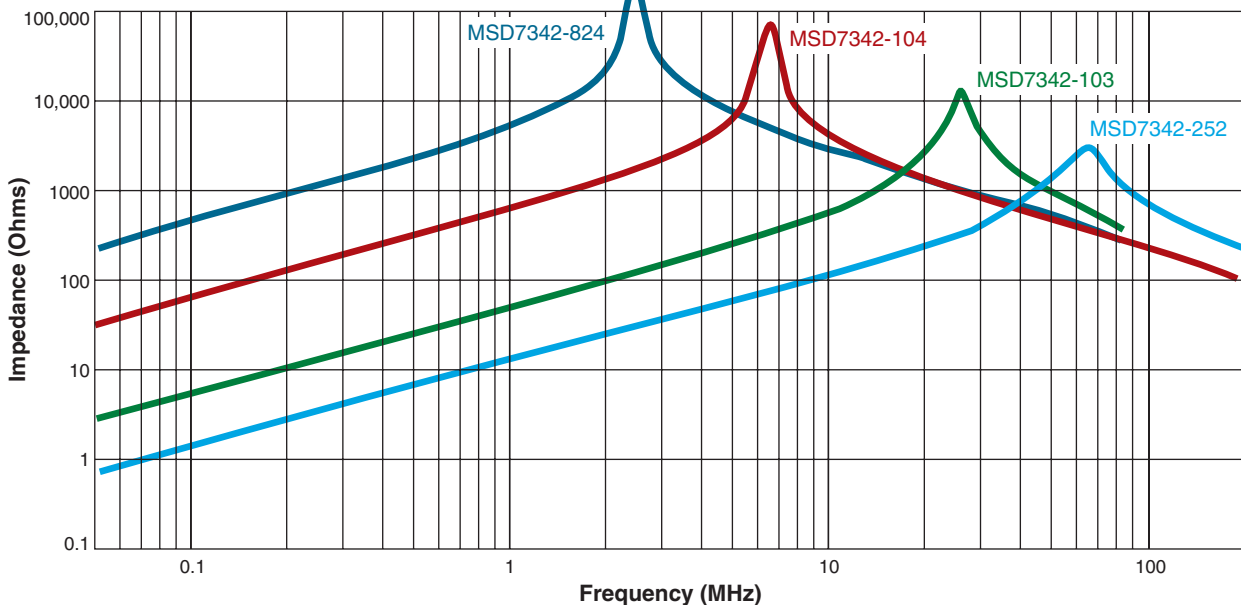
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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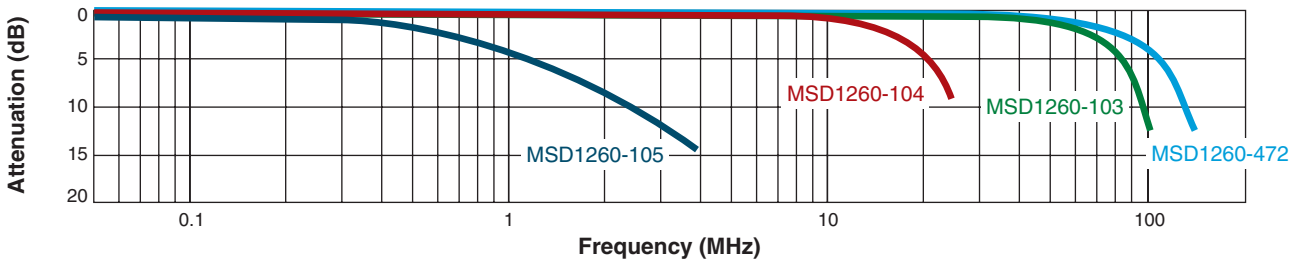
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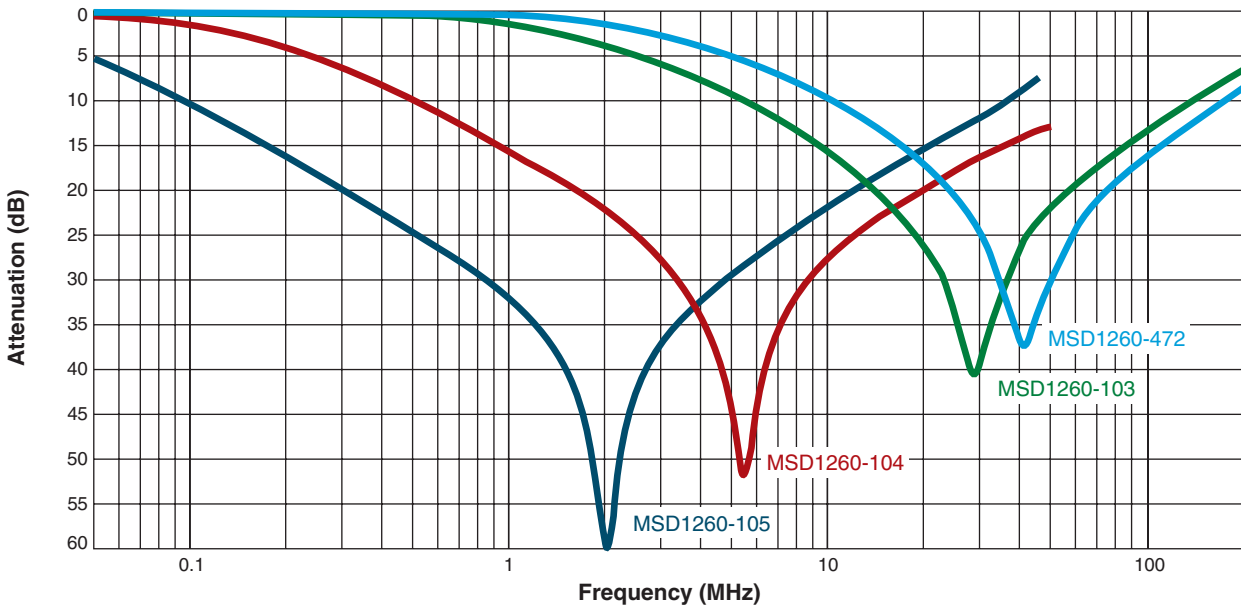


Common Mode Chokes MSD1260

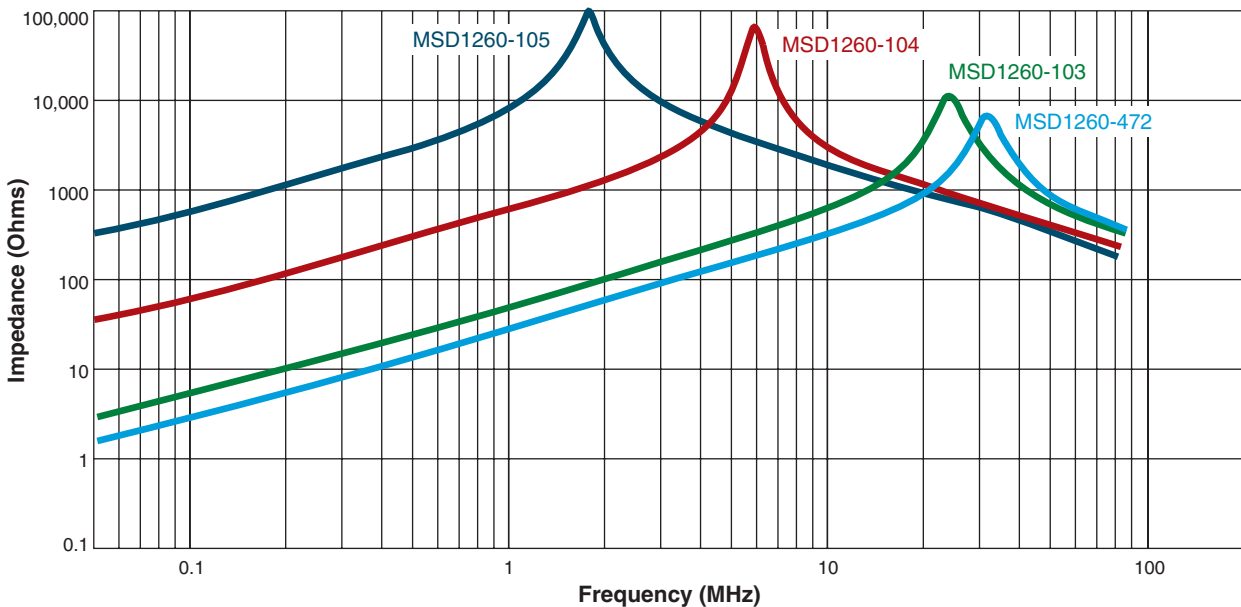
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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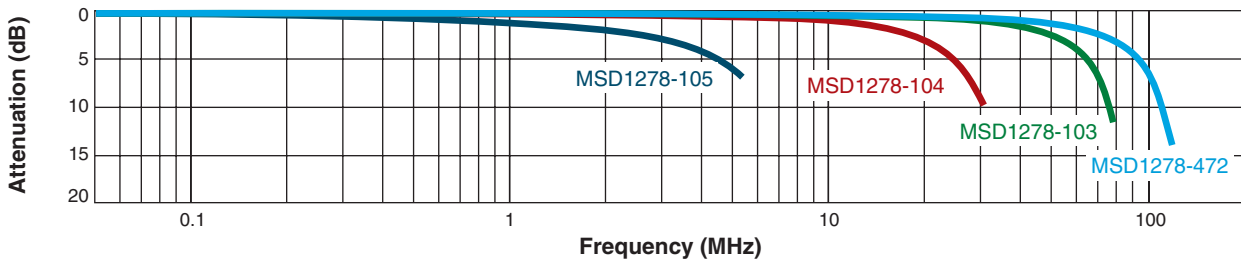
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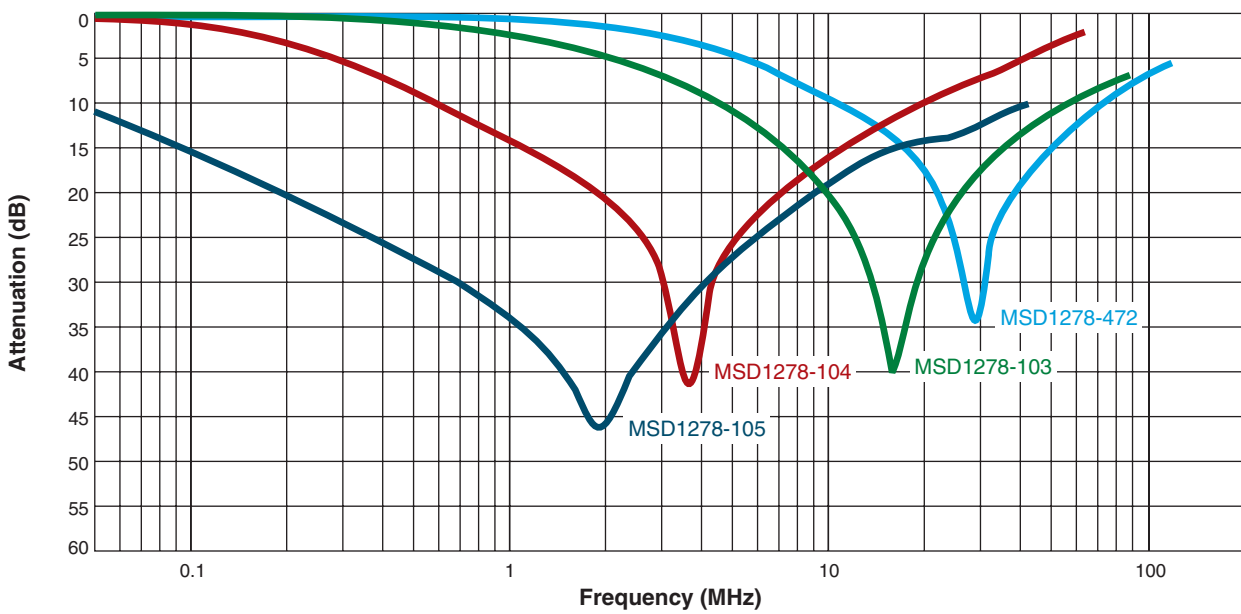


Common Mode Chokes MSD1278

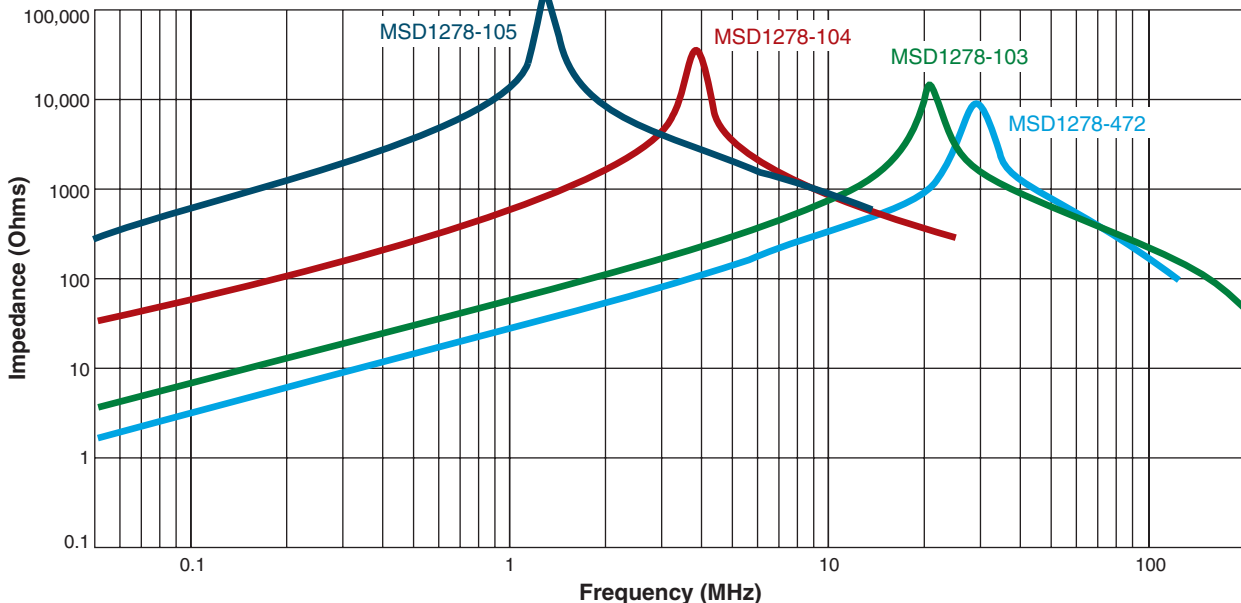
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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