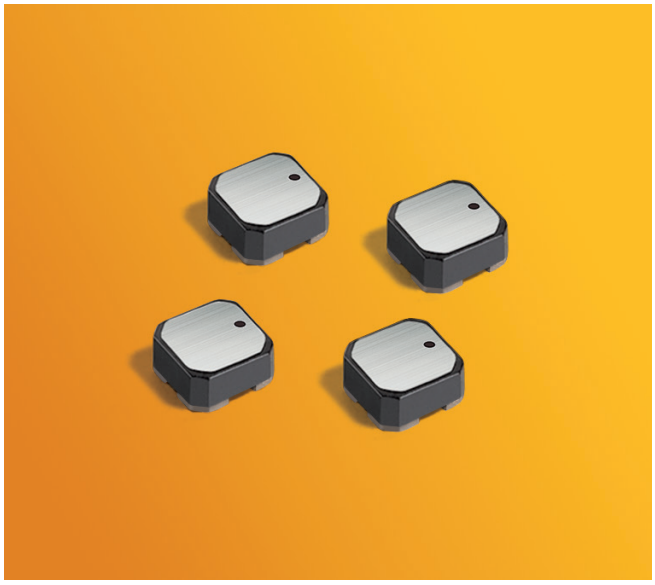
NEW!

Common Mode Chokes for Critical Applications MS412PJD



- Only 1.4 mm high and 3 mm square
- Ideal for use in both power line and signal line applications
- Common- and differential-mode filtering in a single device
- Up to 540 MHz differential mode cutoff frequency
- Can be used as coupled inductors for SEPIC applications
- The tin-lead (Sn-Pb) termination offers the best possible board adhesion.

Core material Ferrite

Weight 48 – 66 mg

Terminations Tin-lead (63/37) over tin over nickel

Ambient temperature –55°C to +105°C with Irms current

Maximum part temperature +155°C (ambient + temp rise).

Storage temperature Component: –55°C to +155°C. Packaging: –55°C to +80°C

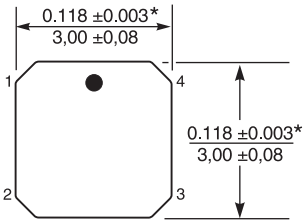
Winding to winding isolation 100 Vrms, one minute

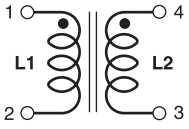
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

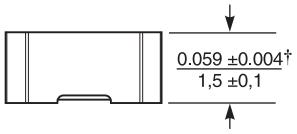
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

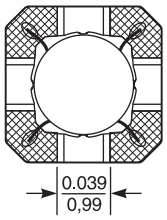
Recommended pick and place nozzle OD: 3 mm; ID: ≤1.5 mm

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

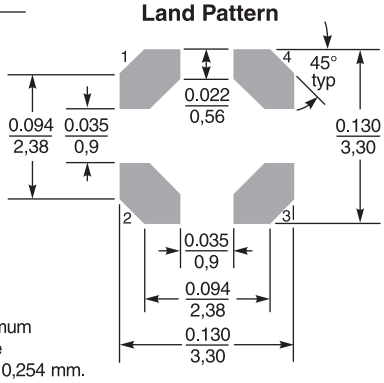








Suggested Land Pattern



*Dimensions are of the case not including termination. For maximum overall dimensions including the termination, add 0.010 inches / 0,254 mm.

†Height dimension is after mounting. For maximum height dimension before mounting, add 0.006 in / 0,152 mm.

Dimensions are in inches / mm

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Document MS1324-1 Revised 01/11/24

MS412PJD Series Common Mode Chokes

Partnumber[1]	Common mode impedance max (kOhms)	Cutoff frequency[2] (MHz)	Inductance (µH)[3] min	Inductance (µH)[3] nom	DCR max[4] (Ohms)	Isolation[5] (Vrms)	Irms[6] (A)
MS412PJD391NSZ	1.03 @ 330 MHz	540	0.273	0.39	0.071	100	1.45
MS412PJD561MSZ	1.44 @ 240 MHz	540	0.448	0.56	0.079	100	1.37
MS412PJD102MSZ	2.43 @ 160 MHz	330	0.800	1.0	0.129	100	1.08
MS412PJD152MSZ	3.56 @ 130 MHz	330	1.20	1.5	0.204	100	0.86
MS412PJD182MSZ	4.37 @ 110 MHz	280	1.44	1.8	0.273	100	0.78
MS412PJD222MSZ	4.67 @ 100 MHz	330	1.76	2.2	0.300	100	0.75
MS412PJD332MSZ	7.28 @ 81 MHz	220	2.64	3.3	0.337	100	0.67
MS412PJD472MSZ	10.7 @ 66 MHz	210	3.76	4.7	0.503	100	0.54
MS412PJD682MSZ	12.1 @ 54 MHz	290	5.44	6.8	0.622	100	0.49
MS412PJD103MSZ	17.8 @ 47 MHz	330	8.00	10	1.040	100	0.38
MS412PJD153MSZ	22.6 @ 33 MHz	140	12.0	15	1.420	100	0.32
MS412PJD183MSZ	29.0 @ 31 MHz	94	14.4	18	1.550	100	0.31
MS412PJD223MSZ	27.3 @ 24 MHz	88	17.6	22	1.89	100	0.28
MS412PJD333MSZ	41.1 @ 21 MHz	59	26.4	33	2.84	100	0.23
MS412PJD473MSZ	48.7 @ 18 MHz	50	37.6	47	4.03	100	0.19
MS412PJD683MSZ	64.5 @ 14 MHz	48	54.4	68	6.11	100	0.16
MS412PJD104MSZ	94.7 @ 13 MHz	47	80.0	100	8.54	100	0.13
MS412PJD124MSZ	116 @ 11 MHz	37	96.0	120	9.23	100	0.13
MS412PJD154MSZ	135 @ 9.3 MHz	27	120	150	12.40	100	0.11
MS412PJD184MSZ	170 @ 8.0 MHz	39	144	180	15.32	100	0.10
MS412PJD224MSZ	155 @ 7.1 MHz	27	176	220	18.56	100	0.09
MS412PJD334MSZ	222 @ 5.9 MHz	16	264	330	27.70	100	0.07

1. When ordering, please specify s**creening** code:

MS412PJD334MSZ

Screening: **Z** = Unscreened
Y = Unscreened (SLDC Option A)
W = Unscreened (SLDC Option B)
H = Group A screening per Coilcraft CP-SA-10001
G = Coilcraft CP-SA-10001 Group A (SLDC Option A)
D = Coilcraft CP-SA-10001 Group A (SLDC Option B)
N = Group A screening per Coilcraft CP-SA-10004
- Screening performed to the document's latest revision.
- Custom screening also available

2 Frequency at which the differential mode attenuation equals 3 dB

3 Inductance shown for each winding, measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR meter or equivalent.

4 DCR is for each winding.

5 Interwinding isolation (hipot) tested for one minute.

6 Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

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

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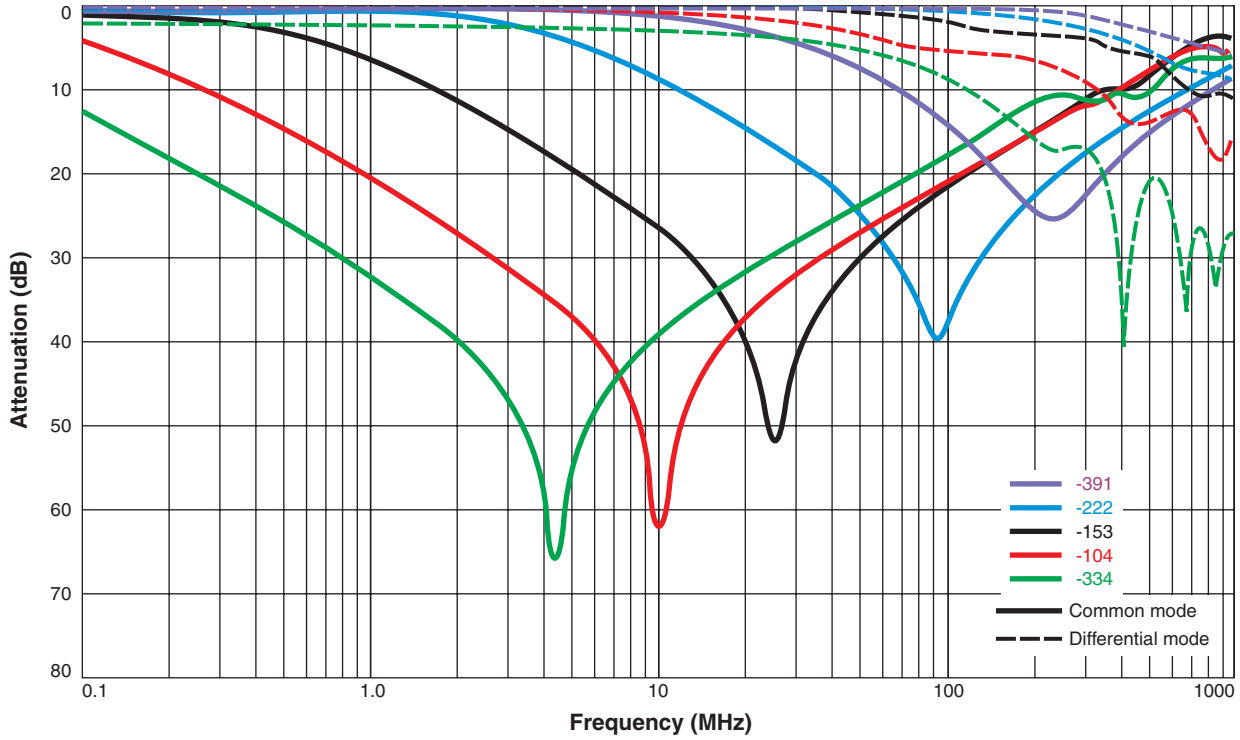
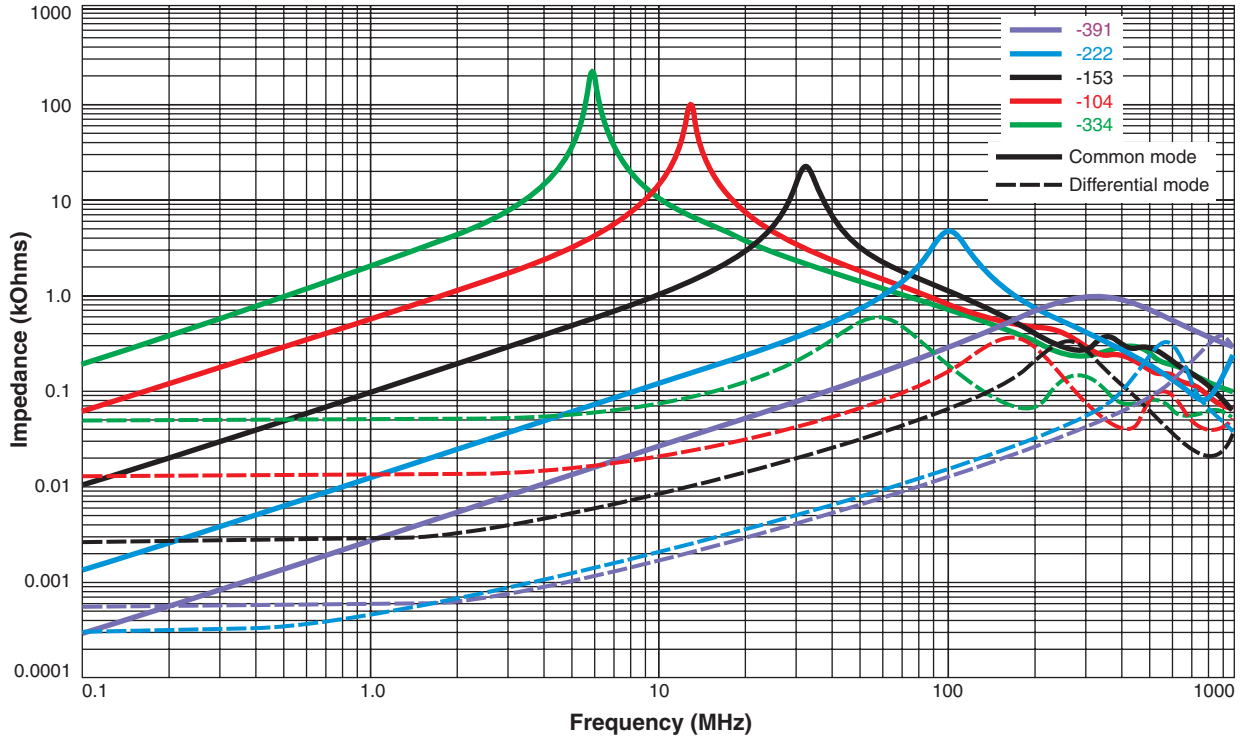
MS412PJD Series Common Mode Chokes

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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