

Common Mode Chokes – MSD1048



- Only 4.8 mm high and 10.3 mm square
- Ideal for use in both power line and signal line applications
- Common- and differential-mode filtering in a single device
- Up to 200 MHz differential mode cutoff frequency
- Can be used as coupled inductors for SEPIC applications

Core material Ferrite

Weight: 1.5– 1.8 g

Environmental RoHS compliant, halogen free

Terminations RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

Ambient temperature –40°C to +85°C with Irms current.

Maximum part temperature +125°C (ambient + temp rise).

Storage temperature Component: –40°C to +125°C.

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

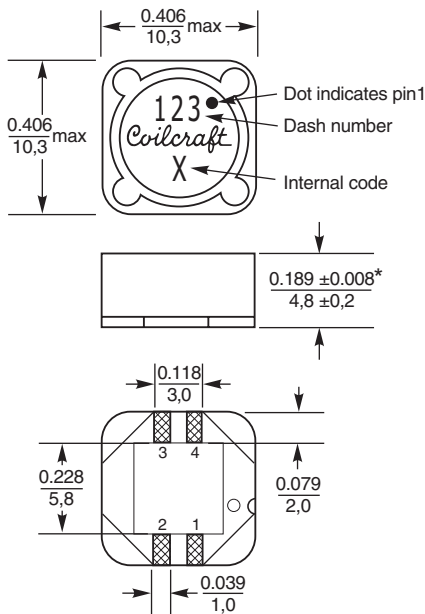
Winding-to-winding isolation 200 Vrms, one minute

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

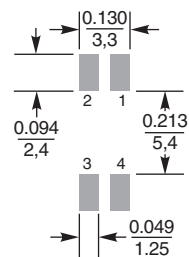
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 800/13" reel Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 5.1 mm pocket depth

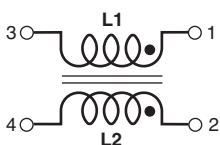
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).



Recommended Land Pattern



* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.012 inch (0,3 mm).



Dimensions are in $\frac{\text{inches}}{\text{mm}}$



Common Mode Chokes – MSD1048 Series

Partnumber ¹	Common mode impedance max (kOhms)	Cutoff ² frequency (MHz)	Inductance (μ H) ³		DCR max ⁴ (Ohms)	Isolation (Vrms)	Irms (A)
			min	nom			
MSD1048-222NE_	3.49 @71 MHz	200	1.54	2.2	0.019	200	2.4
MSD1048-103ME_	10.1 @27 MHz	97	8.00	10	0.053	200	1.5
MSD1048-223ME_	17.0 @17 MHz	44	17.6	22	0.098	200	1.3
MSD1048-473ME_	32.4 @12 MHz	29	37.6	47	0.208	200	1.1
MSD1048-683ME_	52.2 @9.3 MHz	38	54.4	68	0.297	200	1.0
MSD1048-104ME_	58.3 @7.4 MHz	19	80.0	100	0.387	200	0.85
MSD1048-224KE_	87.9 @5.0 MHz	16	198	220	0.840	200	0.62

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

MSD1048-224KED

Termination: **E** = RoHS compliant matte tin over nickel over phos bronze.

Special order: **Q** = RoHS tin-silver-copper (95.5/4/0.5) or **P** = non-RoHS tin-lead (63/37).

Packaging: **D** = 13" machine-ready reel. EIA-481 embossed plastic tape. (800 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

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 D.

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.

9. Electrical specifications at 25°C.

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



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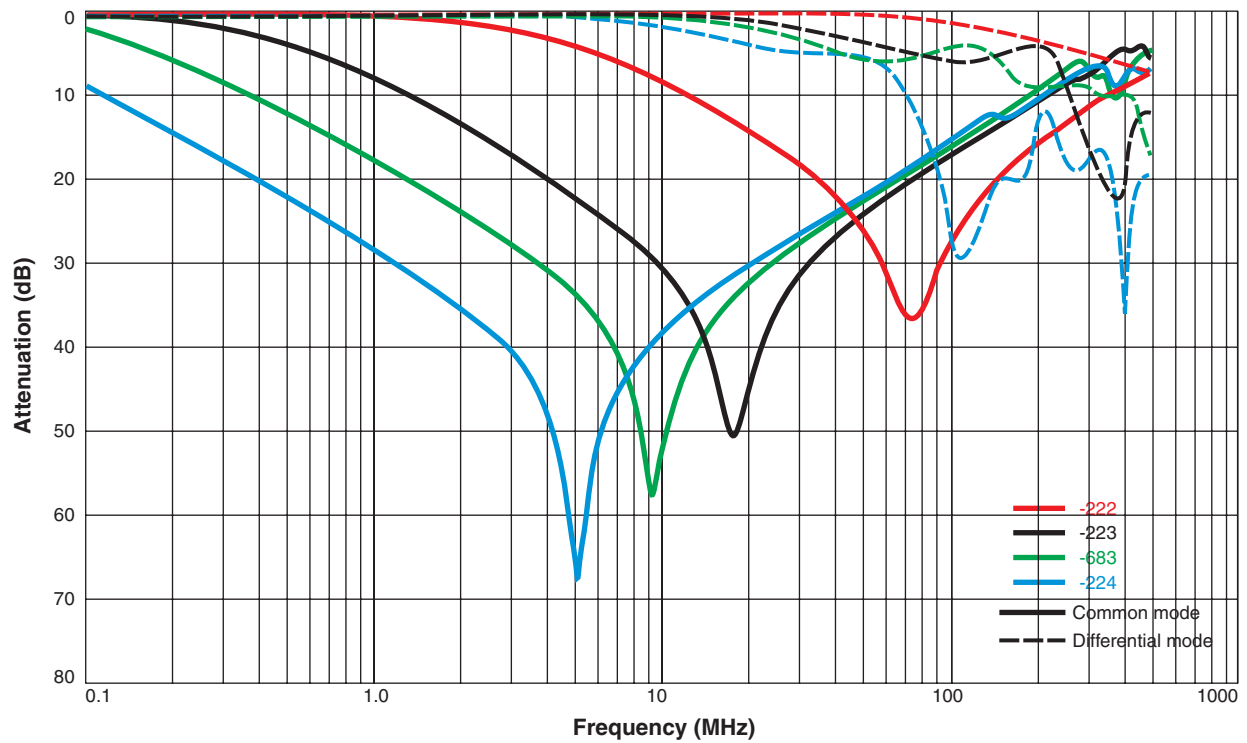
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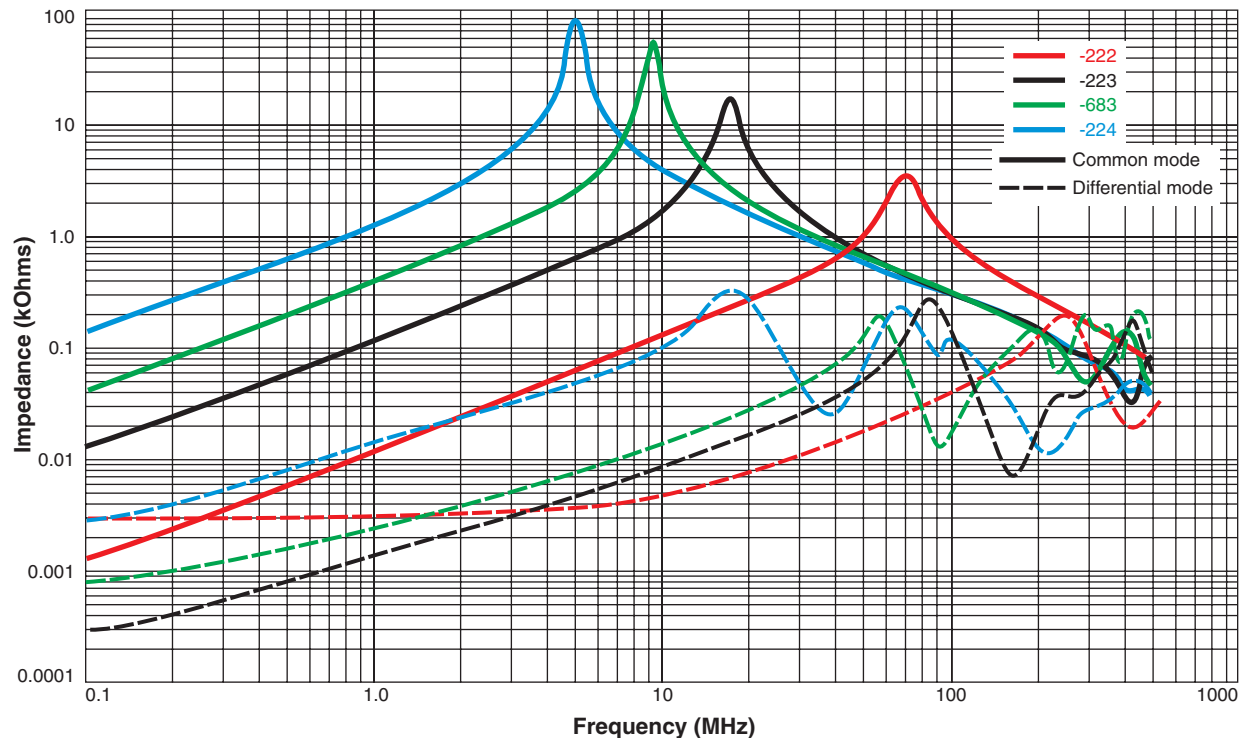


Common Mode Chokes – MSD1048 Series

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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