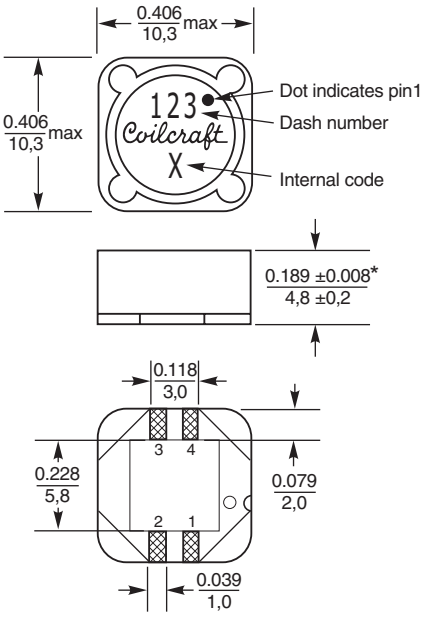
RoHS COMPLIANT

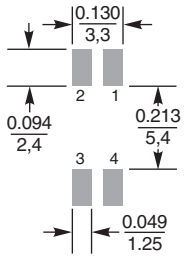
Halogen Free

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

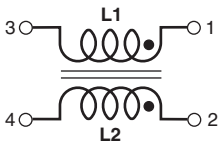


Recommended Land Pattern



* 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 inches / mm



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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

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.

Coilcraft
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

Document 1335-1 Revised 06/22/16

Common Mode Chokes – MSD1048 Series

Partnumber[1]	Common mode impedance max (kOhms)	Cutoff[2] frequency (MHz)	Inductance (µH)[3] min	Inductance (µH)[3] nom	DCR max[4] (Ohms)	Isolation (Vrms)	Irms (A)
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).
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 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.

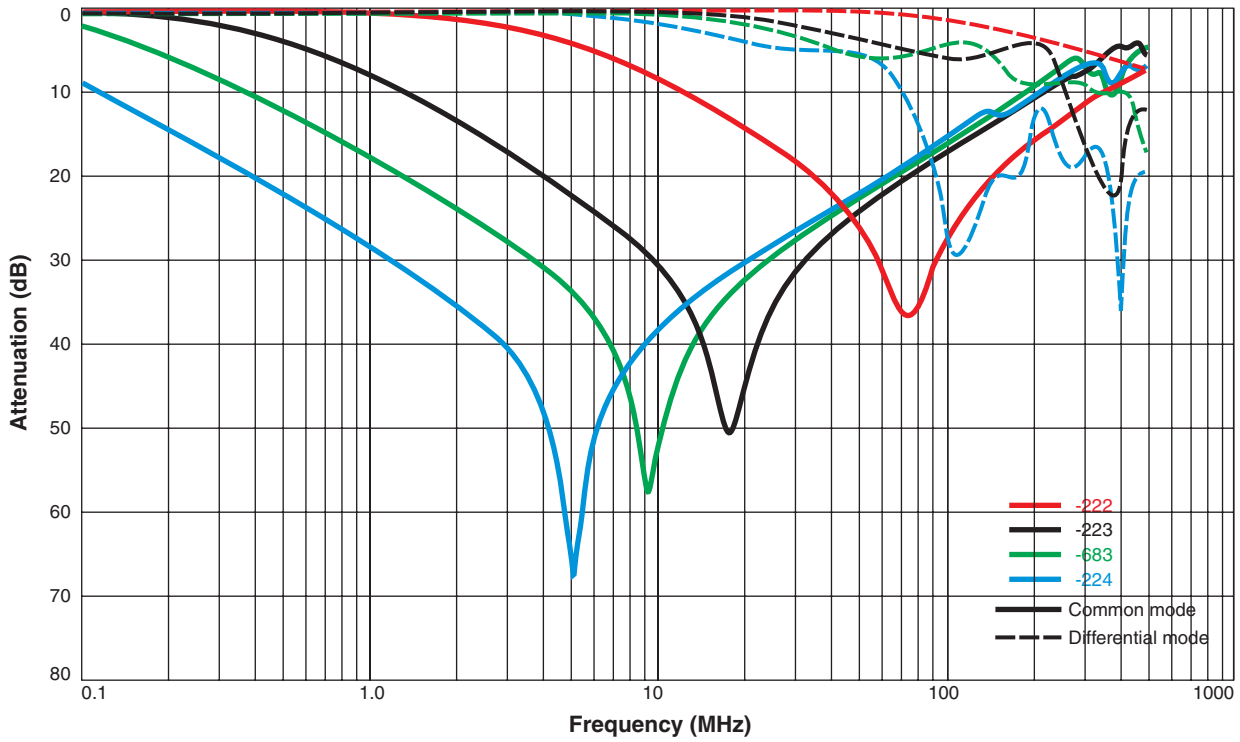
Coilcraft®
www.coilcraft.com

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

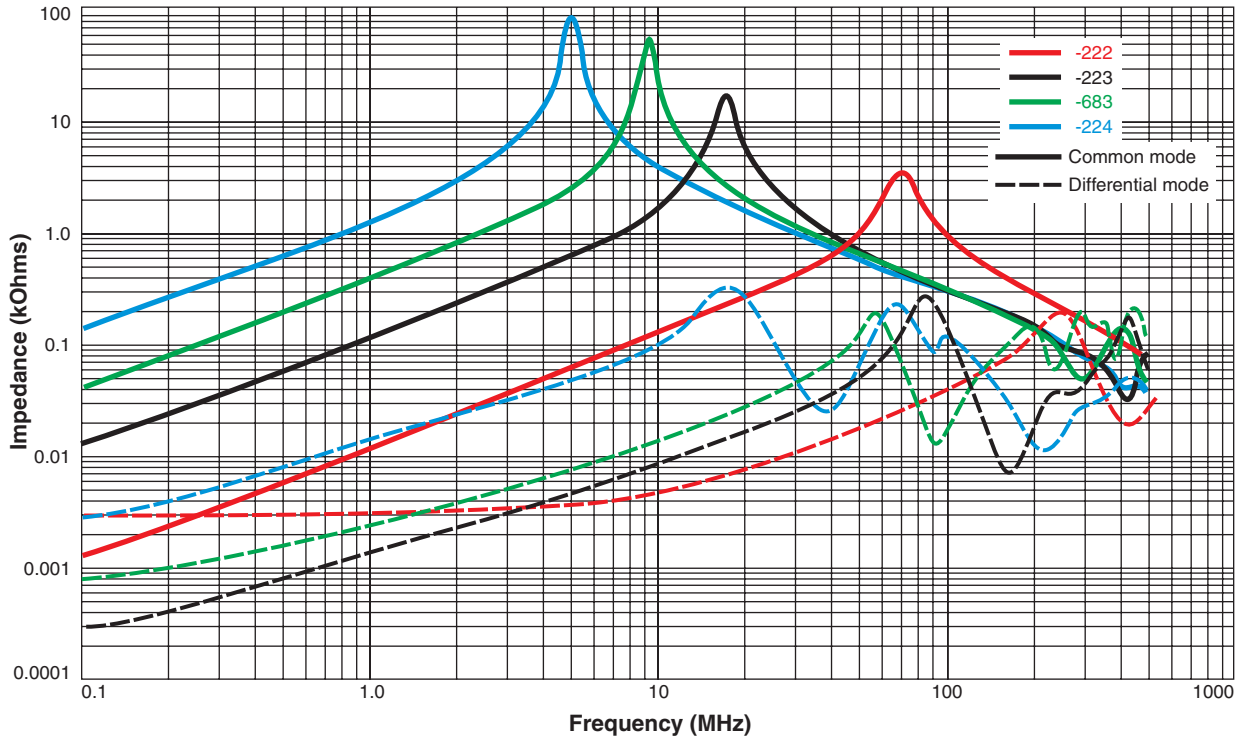
Document 1335-2 Revised 06/22/16

Common Mode Chokes – MSD1048 Series

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



Coilcraft®
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