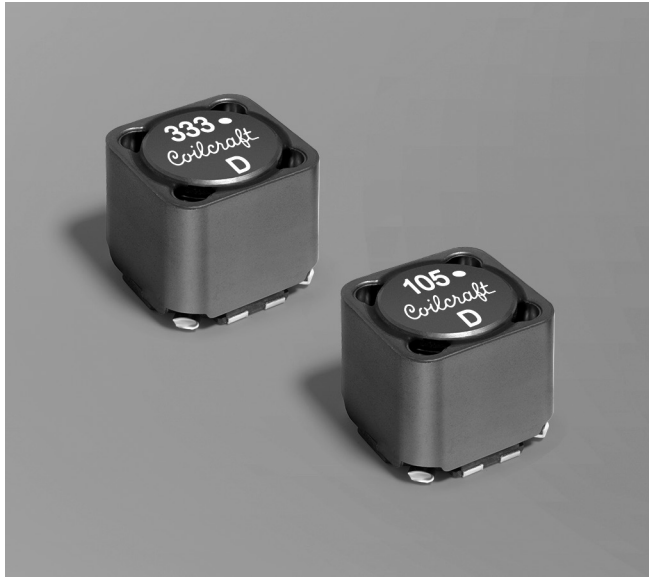


Common Mode Chokes – MSD1514



- Ideal for use in both power line and signal line applications
- Common- and differential-mode filtering in a single device
- Up to 100 MHz differential mode cutoff frequency
- Can be used as coupled inductors for SEPIC applications

Core material Ferrite

Environmental RoHS compliant, halogen free

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

Weight: 9.0 – 11.8 g

Ambient temperature –40°C to +85°C with (40°C rise) 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 500 Vrms, one minute

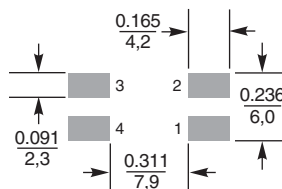
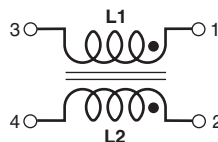
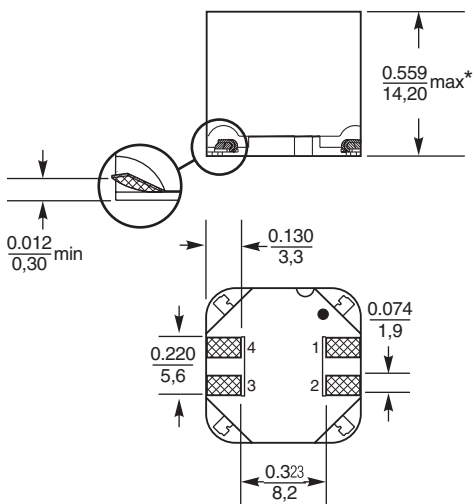
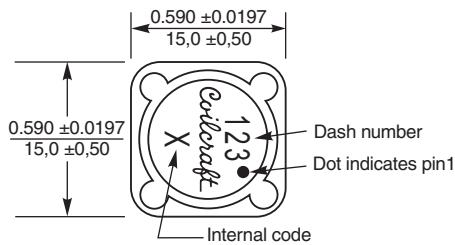
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

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 175/13" reel; Plastic tape: 32 mm wide, 0.5 mm thick, 24 mm pocket spacing, 14.3 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, 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 $\frac{\text{inches}}{\text{mm}}$



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Common Mode Chokes – MSD1514 Series

Partnumber ¹	Common mode impedance max (kOhms)	Cutoff frequency ² (MHz)	Inductance (μH) ³		DCR max ⁴ (Ohms)	Isolation ⁵ (Vrms)	Irms ⁶ (A)
			min	nom			
MSD1514-252ME_	2.96 @ 35 MHz	100	2.00	2.5	0.012	500	5.10
MSD1514-472ME_	4.02 @ 23 MHz	18.0	3.76	4.7	0.014	500	4.50
MSD1514-103ME_	6.54 @ 14 MHz	17.0	8.00	10	0.018	500	4.00
MSD1514-123ME_	7.83 @ 14 MHz	26.0	9.6	12	0.022	500	3.70
MSD1514-153ME_	11.7 @ 11 MHz	9.30	12.00	15	0.028	500	3.40
MSD1514-223ME_	17.1 @ 8.10 MHz	14.0	17.60	22	0.036	500	3.00
MSD1514-273ME_	17.9 @ 7.20 MHz	10.0	21.60	27	0.039	500	2.95
MSD1514-333ME_	22.6 @ 7.10 MHz	21.0	26.40	33	0.052	500	2.55
MSD1514-473ME_	47.6 @ 6.40 MHz	5.30	37.60	47	0.075	500	2.20
MSD1514-683ME_	37.8 @ 4.30 MHz	8.80	54.40	68	0.090	500	2.00
MSD1514-104KE_	59.8 @ 3.70 MHz	11.0	90.00	100	0.126	500	1.65
MSD1514-224KE_	85.6 @ 2.50 MHz	10.0	198	220	0.287	500	1.10
MSD1514-334KE_	58.0 @ 2.00 MHz	7.30	297	330	0.367	500	0.98
MSD1514-474KE_	101.9 @ 1.60 MHz	5.30	423	470	0.550	500	0.77
MSD1514-105KE_	157.9 @ 1.10 MHz	4.90	900	1000	1.25	500	0.55

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

MSD1514-105KED

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 (175 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.



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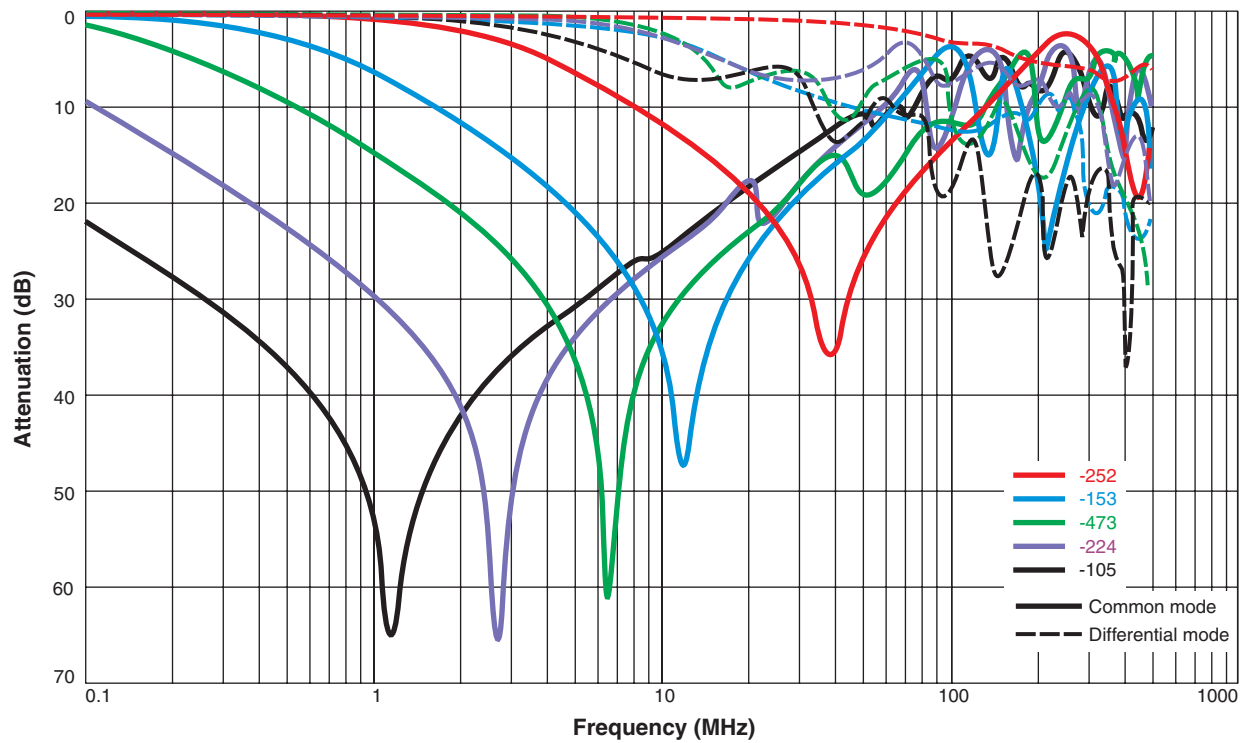
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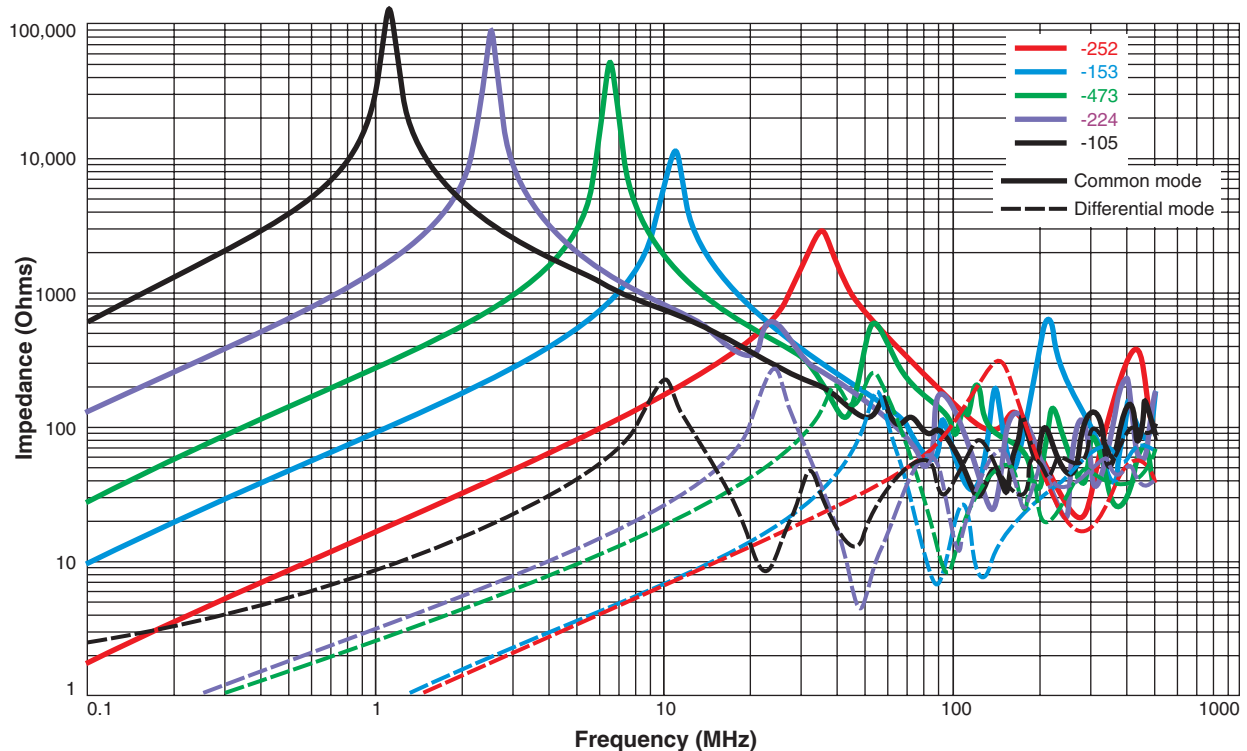


Common Mode Chokes – MSD1514 Series

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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