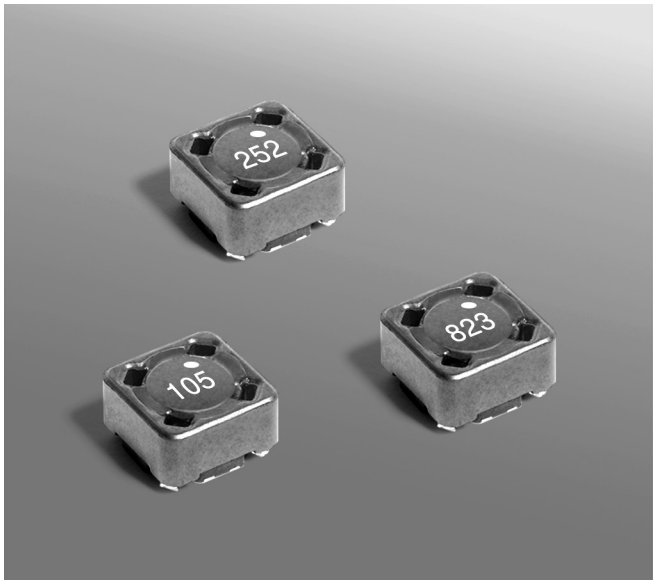
Common Mode Chokes – MSD7342



- Only 4.6 mm high and 7.5 mm square
- Ideal for use in both power line and signal line applications
- Common- and differential-mode filtering in a single device
- Up to 230 MHz differential mode cutoff frequency
- Can be used as coupled inductors for SEPIC applications

Core material Ferrite

Weight 0.76 – 0.87g

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

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 200 Vrms, one minute

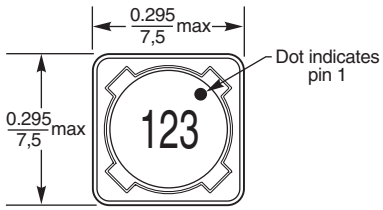
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

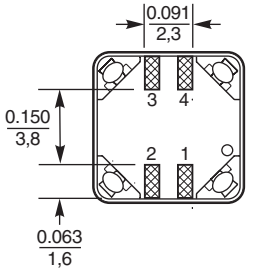
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

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

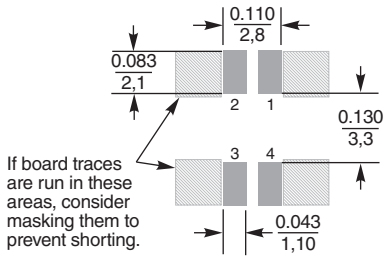
Packaging 250/7″ reel; 1000/13″ reel Plastic tape: 16 mm wide, 0.4 mm thick, 12 mm pocket spacing, 4.9 mm pocket depth

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

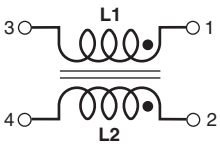




Recommended Land Pattern



Dimensions are in inches / mm



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Document 1330-1 Revised 06/27/16

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Common Mode Chokes – MSD7342 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)
MSD7342-252ML_	3.07 @ 59 MHz	89	2.00	2.5	0.033	200	2.17
MSD7342-332ML_	3.86 @ 50 MHz	70	2.64	3.3	0.037	200	2.05
MSD7342-472ML_	4.93 @ 37 MHz	55	3.76	4.7	0.051	200	1.74
MSD7342-562ML_	5.96 @ 34 MHz	67	4.48	5.6	0.063	200	1.57
MSD7342-682ML_	7.85 @ 31 MHz	79	5.44	6.8	0.070	200	1.49
MSD7342-822ML_	9.09 @ 32 MHz	55	6.56	8.2	0.075	200	1.44
MSD7342-103ML_	9.15 @ 24 MHz	63	8.00	10	0.10	200	1.24
MSD7342-123ML_	11.85 @ 22 MHz	47	9.60	12	0.12	200	1.14
MSD7342-153ML_	14.43 @ 20 MHz	53	12.0	15	0.13	200	1.09
MSD7342-183ML_	18.24 @ 18 MHz	38	14.4	18	0.17	200	0.95
MSD7342-223ML_	18.37 @ 15 MHz	49	17.6	22	0.22	200	0.84
MSD7342-273ML_	25.63 @ 14 MHz	42	21.6	27	0.25	200	0.79
MSD7342-333ML_	26.26 @ 14 MHz	41	26.4	33	0.27	200	0.76
MSD7342-393ML_	35.44 @ 11 MHz	42	31.2	39	0.38	200	0.64
MSD7342-473ML_	34.38 @ 11 MHz	38	37.6	47	0.42	200	0.61
MSD7342-563ML_	41.03 @ 7.9 MHz	40	44.8	56	0.46	200	0.58
MSD7342-683ML_	70.55 @ 8.5 MHz	52	54.4	68	0.60	200	0.51
MSD7342-823ML_	84.57 @ 7.4 MHz	26	65.6	82	0.68	200	0.48
MSD7342-104ML_	89.05 @ 6.6 MHz	24	80.0	100	0.77	200	0.45
MSD7342-124ML_	101.4 @ 6.4 MHz	22	96.0	120	1.03	200	0.39
MSD7342-154ML_	121.2 @ 5.2 MHz	19	120	150	1.35	200	0.34
MSD7342-184ML_	141.5 @ 4.6 MHz	20	144	180	1.52	200	0.32
MSD7342-224ML_	133.0 @ 4.8 MHz	25	176	220	1.72	200	0.30
MSD7342-274ML_	103.7 @ 3.6 MHz	18	216	270	2.41	200	0.25
MSD7342-334ML_	131.7 @ 3.8 MHz	9.1	264	330	2.70	200	0.24
MSD7342-394ML_	145.9 @ 3.1 MHz	11	312	390	3.05	200	0.23
MSD7342-474ML_	187.2 @ 2.7 MHz	11	376	470	4.00	200	0.20
MSD7342-564ML_	204.4 @ 2.6 MHz	8.1	448	560	4.43	200	0.19
MSD7342-684ML_	210.0 @ 2.4 MHz	3.3	544	680	5.00	200	0.18
MSD7342-824ML_	251.8 @ 2.1 MHz	6.6	656	820	6.80	200	0.15
MSD7342-105ML_	276.1 @ 2.1 MHz	5.1	800	1000	7.80	200	0.14

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

MSD7342-105MLC

Termination: **L** = RoHS compliant matte tin over nickel over phos bronze.
Special order: **T** = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (250 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 C instead.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1000 parts per full reel).

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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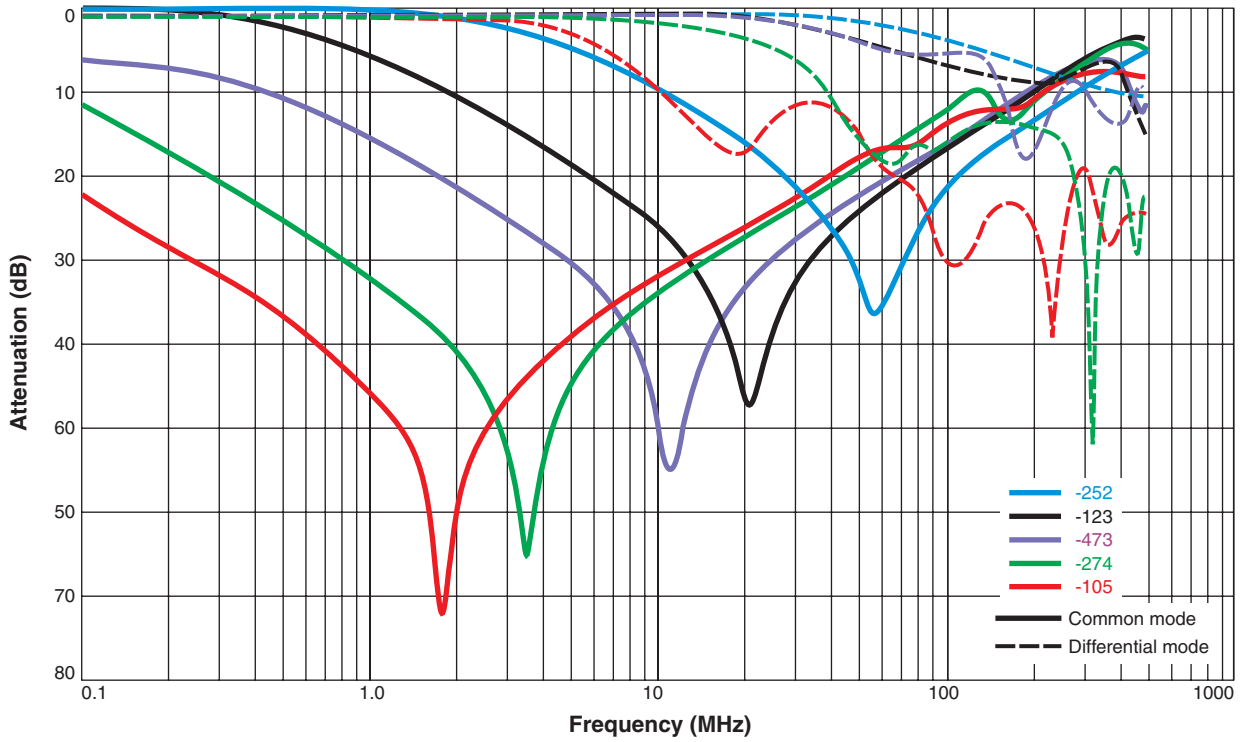
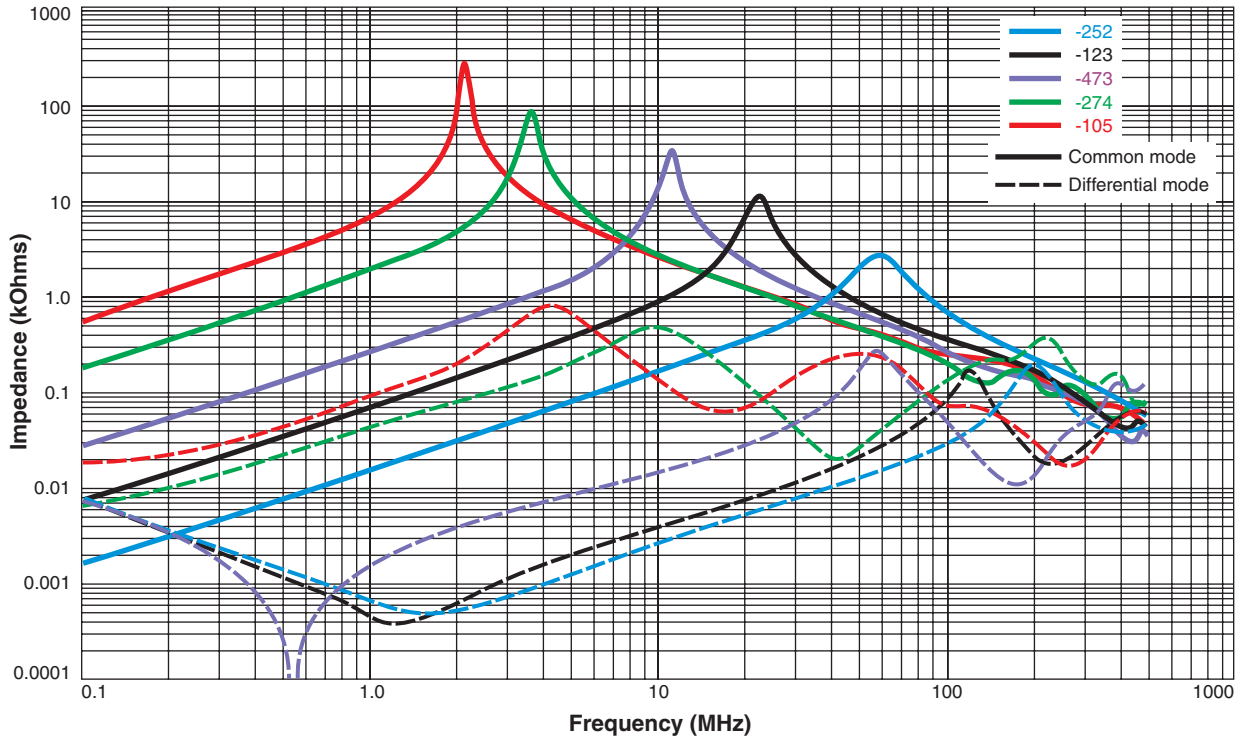
Common Mode Chokes – MSD7342 Series

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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