

Common Mode Chokes – MSD1583



- Only 8.6 mm high and 15 mm square
- Ideal for use in both power line and signal line applications
- Common- and differential-mode filtering in a single device
- Up to 38 MHz differential mode cutoff frequency
- Can be used as coupled inductors for SEPIC applications

Core material Ferrite

Weight: 3.7 – 4.4 g

Environmental RoHS compliant, halogen free

Terminations RoHS compliant matte tin over nickel over phosphor 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 500 Vrms, one minute

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

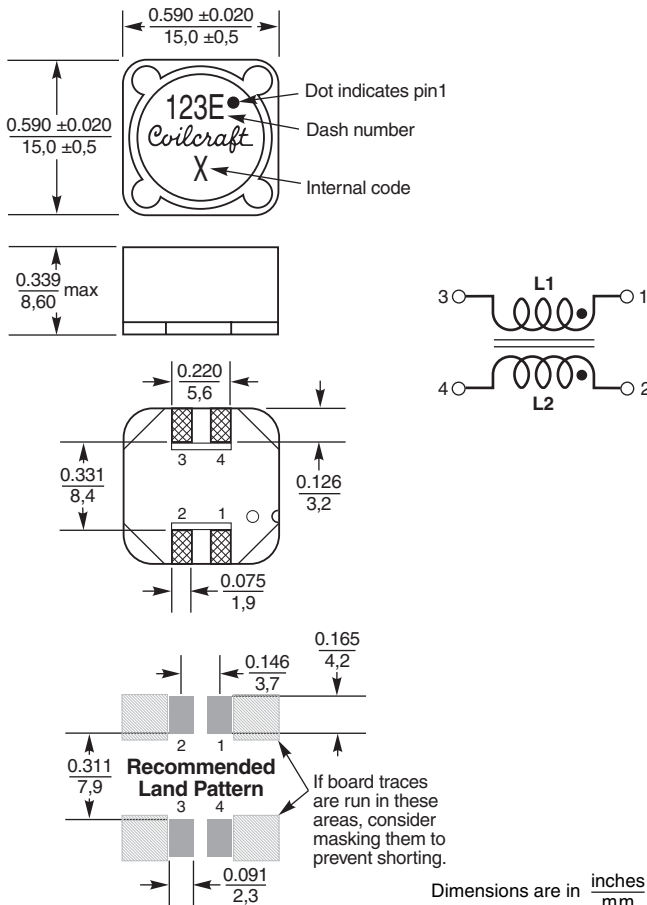
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging 300/13" reel; Plastic tape: 32 mm wide, 0.5 mm thick, 24 mm pocket spacing, 8.6 mm pocket depth

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





Common Mode Chokes – MSD1583 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			
MSD1583-103ME_	10.86 @ 17 MHz	38	8.0	10	0.031	500	3.68
MSD1583-123ME_	12.11 @ 16 MHz	30	9.6	12	0.037	500	3.54
MSD1583-153ME_	12.31 @ 14 MHz	25	12.0	15	0.045	500	3.18
MSD1583-183ME_	15.77 @ 13 MHz	25	14.4	18	0.048	500	3.04
MSD1583-223ME_	14.47 @ 12 MHz	28	17.6	22	0.065	500	2.44
MSD1583-333ME_	33.82 @ 9 MHz	28	26.4	33	0.095	500	2.16
MSD1583-473ME_	39.79 @ 7.6 MHz	23	37.6	47	0.115	500	1.98
MSD1583-683ME_	49.24 @ 5.9 MHz	17	54.4	68	0.165	500	1.56
MSD1583-104KE_	69.83 @ 5 MHz	16	90.0	100	0.260	500	1.24
MSD1583-154KE_	73.09 @ 3.9 MHz	12	135	150	0.380	500	1.06
MSD1583-224KE_	78.91 @ 3.3 MHz	9.7	198	220	0.460	500	0.92
MSD1583-474KE_	104.9 @ 2.2 MHz	7.4	423	470	1.04	500	0.65
MSD1583-105KE_	129.0 @ 1.5 MHz	5.8	900	1000	2.40	500	0.42

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

MSD1583-105KED

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 (300 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.

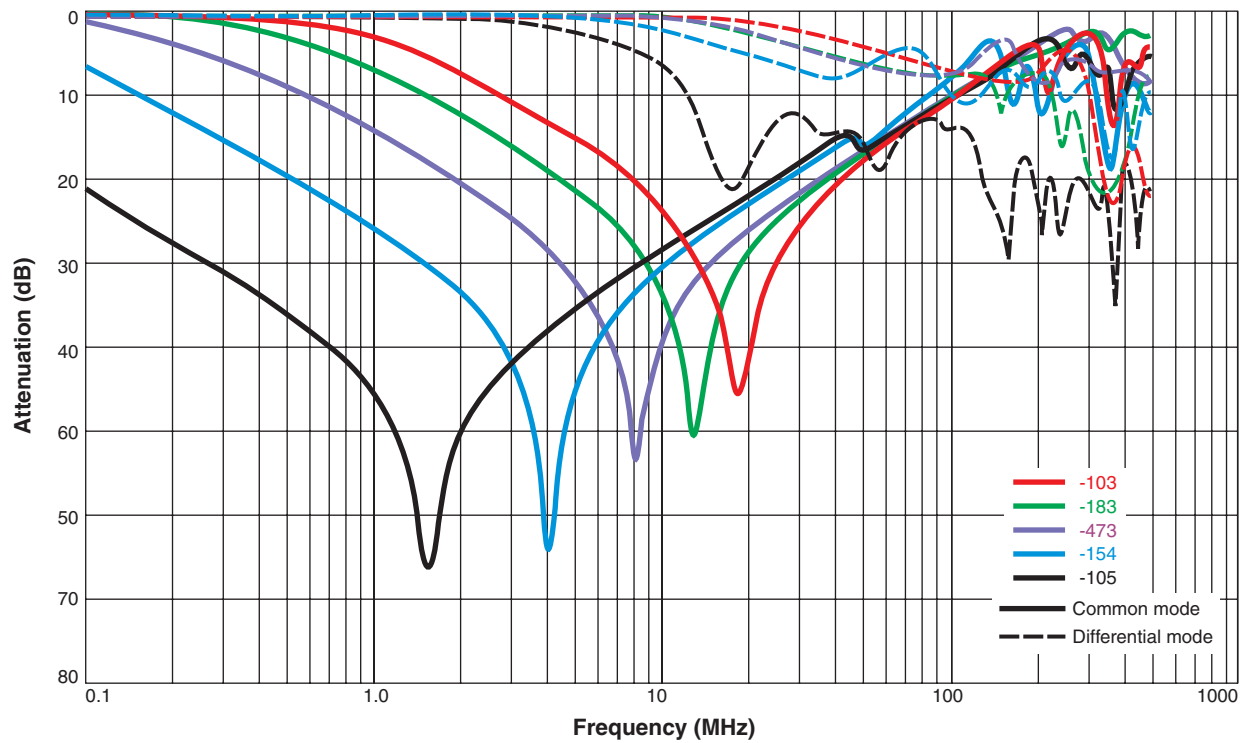
9. Electrical specifications at 25°C.

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

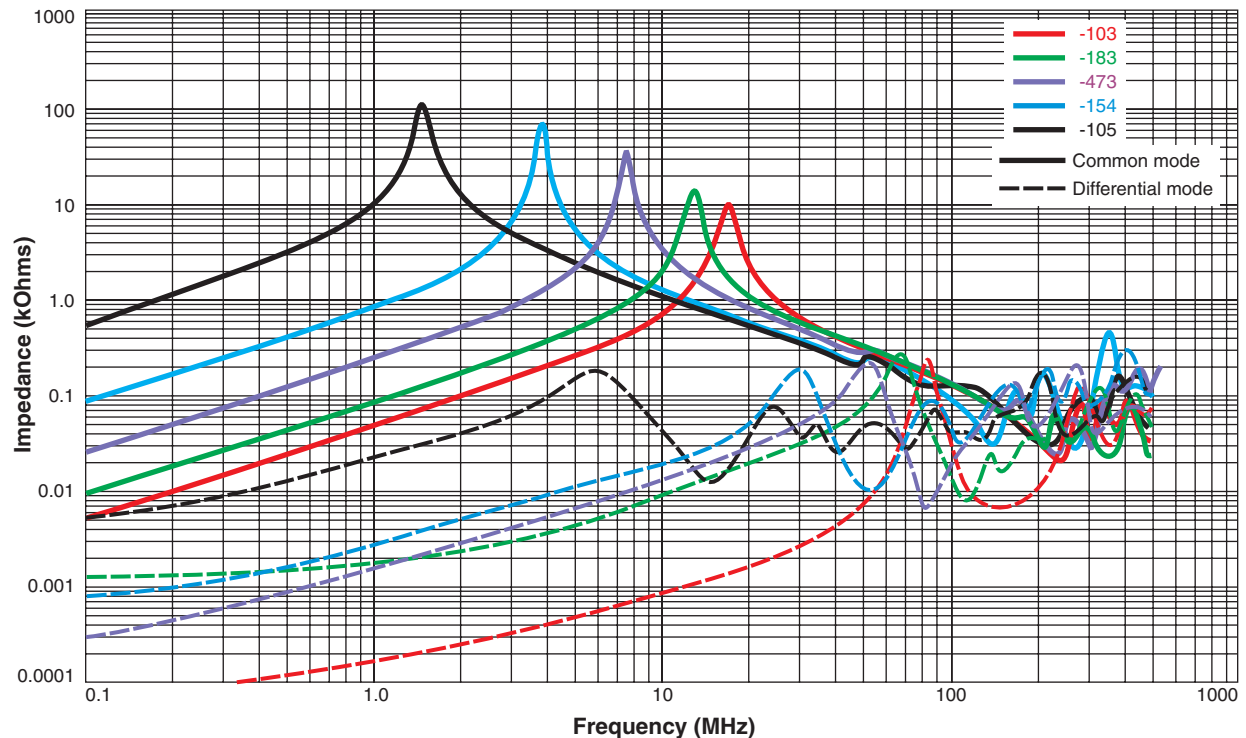


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Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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