

# 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 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

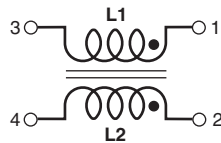
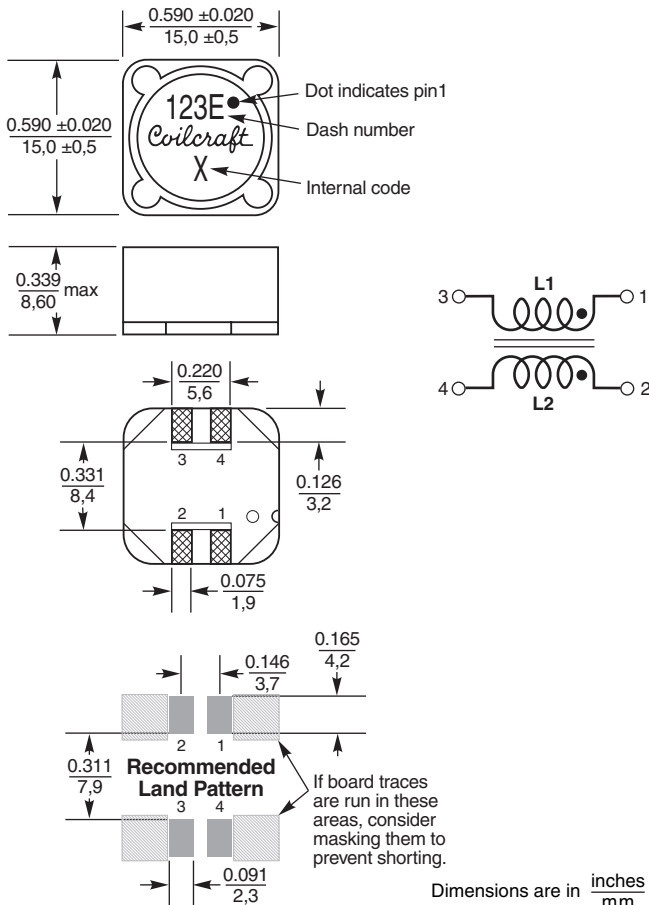
**Winding-to-winding isolation** 500 Vrms, one minute

**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)

**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 <sup>1</sup>	Common mode impedance max (kOhms)	Cutoff frequency <sup>2</sup> (MHz)	Inductance (μH) <sup>3</sup>		DCR max <sup>4</sup> (Ohms)	Isolation <sup>5</sup> (Vrms)	Irms <sup>6</sup> (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). 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.

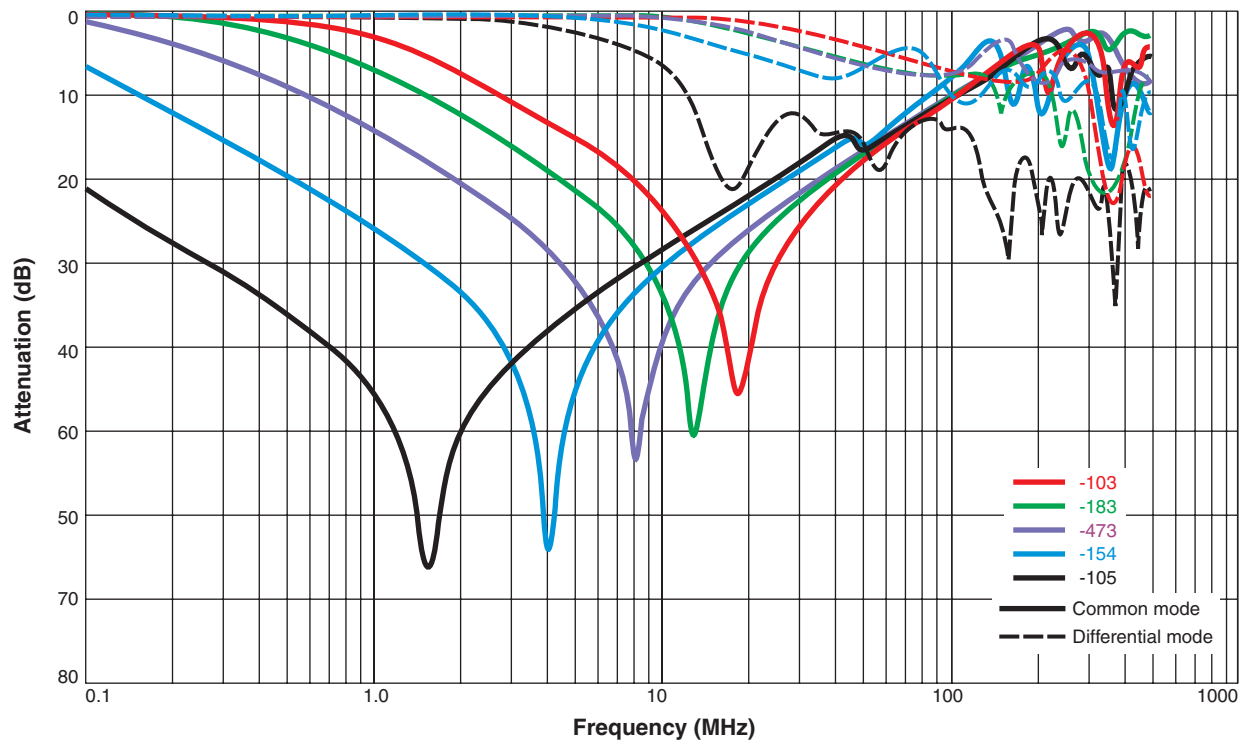
9. Electrical specifications at 25°C.

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

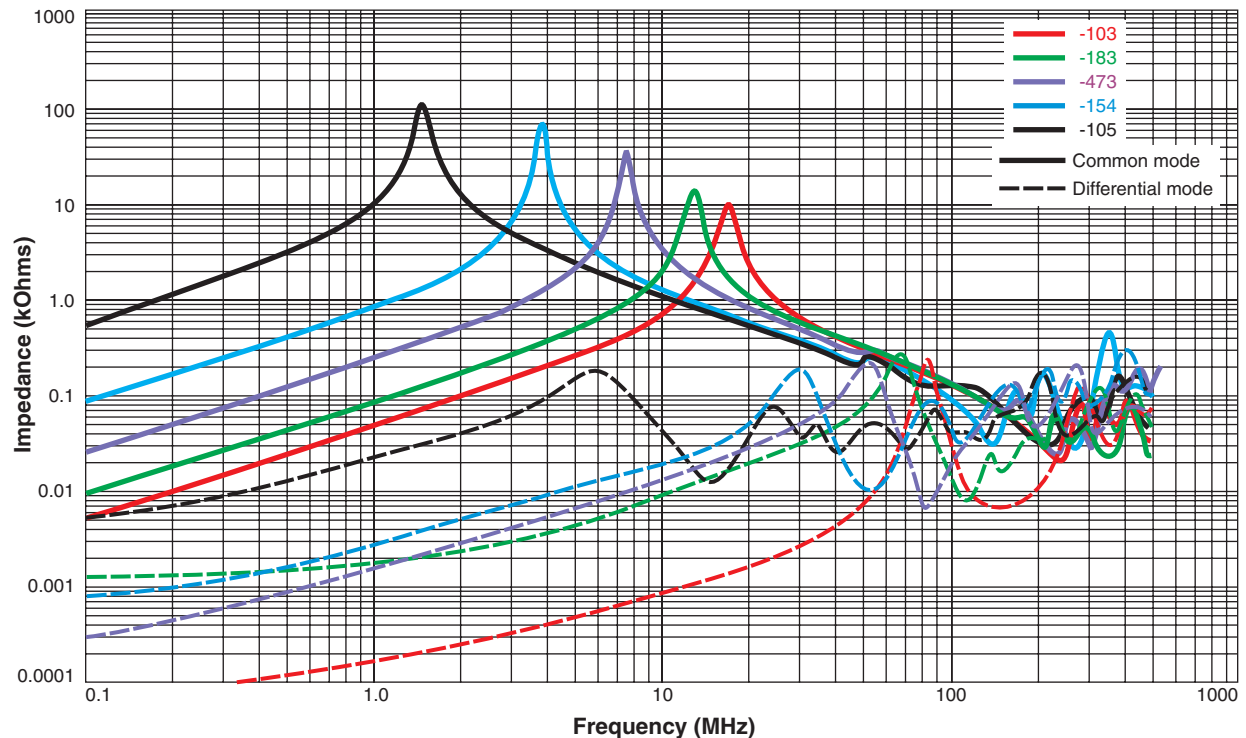


# Common Mode Chokes – MSD1583 Series

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



**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

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