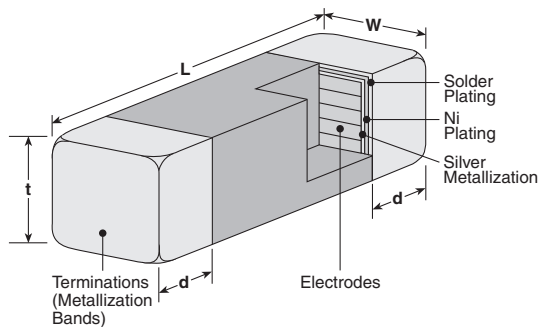


features

- Monolithic structure for closed magnetic path eliminates crosstalk and provides high reliability in a wide temperature and humidity range
- Standard EIA packages: 1J, 2A, 2B
- Nickel barrier with solder overcoat for excellent solderability
- Magnetically shielded
- Marking: Black body color with no marking
- Products with lead-free terminations meet EU RoHS requirements

dimensions and construction



| Size Code | Dimensions inches (mm) | | | |
|------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| | L | W | t | d |
| 1J (0603) | .063±.006 (1.6±0.15) | .031±.006 (0.8±0.15) | .031±.006 (0.8±0.15) | .014±.006 (0.36±0.15) |
| 2A (0805) | .079±.008 (2.0±0.2) | .049±.008 (1.25±0.2) | .035±.008 (0.9±0.2) | .02±.01 (0.51±0.25) |
| 2B (1206) | .126±.008 (3.2±0.2) | .063±.008 (1.6±0.2) | .043±.008 (1.1±0.2) | .02±.01 (0.51±0.25) |

ordering information

| | | | | | | | |
|------------|------------|----------------|------------------------------|----------------------|---|--------------------------------|--------------------|
| New Part # | MCL | 1J | H | T | TE | R10 | K |
| | Type | Size Code | Material | Termination Material | Packaging | Nominal Inductance | Tolerance |
| | | 1J 2A 2B | Permeability Code: H J | T: Sn | TD: 7" paper tape (1J - 4,000 pieces/reel 2A - 0.047µH ~ 2.2µH = 4,000 pieces/reel) TE: 7" embossed plastic (2A - 2.7µH ~ 10µH = 3,000 pieces/reel 2B - 3,000 pieces/reel) | 047 = 0.047µH R10 = 0.100µH | K: ±10% M: ±20% |

applications and ratings

| Part Designation | Inductance L (µH) | Minimum Q | L.Q. Test Frequency (MHz) | Self Resonant Frequency Typical (MHz) | DC Resistance Maximum (Ω) | Allowable DC Current Maximum (mA) | Operating Temperature Range |
|------------------|-------------------|-----------|---------------------------|---------------------------------------|---------------------------|-----------------------------------|-----------------------------|
| MCL1JHTTD047M | 0.047 | 10 | 50 | 260 | 0.30 | 50 | -55°C to +125°C |
| MCL1JHTTD068M | 0.068 | | | 250 | | | |
| MCL1JHTTD082M | 0.082 | | | 245 | | | |
| MCL1JHTTDR10* | 0.10 | 15 | 25 | 240 | 0.50 | | |
| MCL1JHTTDR12* | 0.12 | | | 205 | | | |
| MCL1JHTTDR15* | 0.15 | | | 180 | 0.60 | | |
| MCL1JHTTDR18* | 0.18 | | | 165 | | | |
| MCL1JHTTDR22* | 0.22 | | | 150 | 0.80 | | |
| MCL1JHTTDR27* | 0.27 | 136 | | | | | |

* Add tolerance character (K, M) - Other tolerances available upon request

For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

2/24/08

applications and ratings

| Part Designation | Inductance L (μH) | Minimum Q | L.Q. Test Frequency (MHz) | Self Resonant Frequency Typical (MHz) | DC Resistance Maximum (Ω) | Allowable DC Current Maximum (mA) | Operating Temperature Range | | | |
|------------------|-------------------|-----------|---------------------------|---------------------------------------|---------------------------|-----------------------------------|-----------------------------|-----|------|-----|
| MCL1JHTTDR33* | 0.33 | 15 | 25 | 125 | 0.85 | 35 | -55°C to +125°C | | | |
| MCL1JHTTDR39* | 0.39 | | | 110 | 1.00 | | | | | |
| MCL1JHTTDR47* | 0.47 | | | 105 | 1.35 | | | | | |
| MCL1JHTTDR56* | 0.56 | | | 95 | 1.55 | | | | | |
| MCL1JHTTDR68* | 0.68 | | | 90 | 1.70 | | | | | |
| MCL1JHTTDR82* | 0.82 | | | 85 | 2.10 | | | | | |
| MCL1JJTTD1R0* | 1.0 | 35 | 10 | 75 | 0.60 | 25 | | | | |
| MCL1JJTTD1R2* | 1.2 | | | 65 | 0.80 | | | | | |
| MCL1JJTTD1R5* | 1.5 | | | 60 | 0.80 | | | | | |
| MCL1JJTTD1R8* | 1.8 | | | 55 | 0.95 | | | | | |
| MCL1JJTTD2R2* | 2.2 | | | 50 | 1.15 | | | | | |
| MCL1JJTTD2R7* | 2.7 | | | 45 | 1.35 | | | | | |
| MCL1JJTTD3R3* | 3.3 | 15 | 10 | 40 | 1.55 | 15 | | | | |
| MCL1JJTTD3R9* | 3.9 | | | 35 | 1.70 | | | | | |
| MCL1JJTTD4R7* | 4.7 | | | 33 | 2.10 | | | | | |
| MCL2AHTTD047M | 0.047 | | | 15 | 50 | | | 320 | 0.20 | 300 |
| MCL2AHTTD068M | 0.068 | | | | | | | 280 | | |
| MCL2AHTTD082M | 0.082 | | | | | | | 255 | | |
| MCL2AHTTDR10* | 0.10 | 20 | 25 | 235 | 0.30 | 250 | | | | |
| MCL2AHTTDR12* | 0.12 | | | 220 | 0.40 | | | | | |
| MCL2AHTTDR15* | 0.15 | | | 200 | | | | | | |
| MCL2AHTTDR18* | 0.18 | | | 185 | 0.50 | | | | | |
| MCL2AHTTDR22* | 0.22 | | | 170 | | | | | | |
| MCL2AHTTDR27* | 0.27 | | | 150 | | | | | | |
| MCL2AHTTDR33* | 0.33 | 25 | 25 | 145 | 0.55 | 200 | | | | |
| MCL2AHTTDR39* | 0.39 | | | 135 | 0.65 | | | | | |
| MCL2AHTTDR47* | 0.47 | | | 125 | | | | | | |
| MCL2AHTTDR56* | 0.56 | | | 115 | 0.75 | | 150 | | | |
| MCL2AHTTDR68* | 0.68 | | | 105 | 0.80 | | | | | |
| MCL2AHTTDR82* | 0.82 | | | 100 | 1.00 | | | | | |
| MCL2AJTTD1R0* | 1.0 | 45 | 10 | 75 | 0.40 | 50 | | | | |
| MCL2AJTTD1R2* | 1.2 | | | 65 | 0.50 | | | | | |
| MCL2AJTTD1R5* | 1.5 | | | 60 | | | | | | |
| MCL2AJTTD1R8* | 1.8 | | | 55 | 0.60 | | 30 | | | |
| MCL2AJTTD2R2* | 2.2 | | | 50 | 0.65 | | | | | |
| MCL2AJTTE2R7* | 2.7 | | | 45 | 0.75 | | | | | |
| MCL2AJTTE3R3* | 3.3 | 41 | 0.80 | | | | | | | |
| MCL2AJTTE3R9* | 3.9 | 38 | 0.90 | | | | | | | |
| MCL2AJTTE4R7* | 4.7 | 35 | 1.00 | | | | | | | |

* Add tolerance character (K, M) - Other tolerances available upon request

For complete environmental specifications, please refer to pages 208-209.

applications and ratings (continued)

| Part Designation | Inductance L (μH) | Minimum Q | L.Q. Test Frequency (MHz) | Self Resonant Frequency Typical (MHz) | DC Resistance Maximum (Ω) | Allowable DC Current Maximum (mA) | Operating Temperature Range | | |
|------------------|-------------------|-----------|---------------------------|---------------------------------------|---------------------------|-----------------------------------|-----------------------------|------|-----|
| MCL2AJTTE5R6* | 5.6 | 50 | 4 | 32 | 0.90 | 15 | -55°C to +125°C | | |
| MCL2AJTTE6R8* | 6.8 | | | 29 | 1.00 | | | | |
| MCL2AJTTE8R2* | 8.2 | | | 26 | 1.10 | | | | |
| MCL2AJTTE100* | 10 | | 2 | 24 | 1.15 | | | | |
| MCL2BHTTE047M | 0.047 | 20 | 50 | 320 | 0.15 | 300 | -55°C to +125°C | | |
| MCL2BHTTE068M | 0.068 | | | 280 | 0.25 | | | | |
| MCL2BHITTER10* | 0.10 | | | 25 | 235 | | | 0.30 | 250 |
| MCL2BHITTER12* | 0.12 | | 220 | | | | | | |
| MCL2BHITTER15* | 0.15 | | 200 | | | | | | |
| MCL2BHITTER18* | 0.18 | | 185 | | 0.40 | | | | |
| MCL2BHITTER22* | 0.22 | | 170 | | | | | | |
| MCL2BHITTER27* | 0.27 | | 150 | | 0.50 | | | | |
| MCL2BHITTER33* | 0.33 | | 145 | | 0.60 | | | | |
| MCL2BHITTER39* | 0.39 | | 25 | 10 | 135 | 0.50 | | 200 | |
| MCL2BHITTER47* | 0.47 | 125 | | | 0.60 | | | | |
| MCL2BHITTER56* | 0.56 | 115 | | | 0.70 | 150 | | | |
| MCL2BHITTER68* | 0.68 | 105 | | | 0.80 | | | | |
| MCL2BHITTER82* | 0.82 | 100 | | | 0.90 | | | | |
| MCL2BJTTE1R0* | 1.0 | 45 | | | 10 | 75 | | 0.40 | 100 |
| MCL2BJTTE1R2* | 1.2 | | | | | 65 | | 0.50 | |
| MCL2BJTTE1R5* | 1.5 | | | | | 60 | | | |
| MCL2BJTTE1R8* | 1.8 | | 55 | | | | | | |
| MCL2BJTTE2R2* | 2.2 | | 50 | 0.60 | | 50 | | | |
| MCL2BJTTE2R7* | 2.7 | | 45 | | | | | | |
| MCL2BJTTE3R3* | 3.3 | | 41 | | | | | | |
| MCL2BJTTE3R9* | 3.9 | | 38 | | | | 0.80 | | |
| MCL2BJTTE4R7* | 4.7 | | 35 | 0.85 | | 25 | | | |
| MCL2BJTTE5R6* | 5.6 | | 4 | 32 | | | 0.90 | | |
| MCL2BJTTE6R8* | 6.8 | 29 | | | | | | | |
| MCL2BJTTE8R2* | 8.2 | 26 | | | | | | | |
| MCL2BJTTE100* | 10 | 2 | 24 | 1.00 | 15 | | | | |
| MCL2BJTTE120* | 12 | | 22 | 1.05 | | | | | |
| MCL2BJTTE150* | 15 | | 19 | 0.70 | | | | | |
| MCL2BJTTE220* | 22 | 30 | 1 | 16 | 0.90 | 5 | | | |
| MCL2BJTTE330* | 33 | | | 0.4 | 13 | | 1.05 | | |

* Add tolerance character (K, M) - Other tolerances available upon request

For complete environmental specifications, please refer to pages 208-209.