

Cautions and Warnings

Please be noted that this spec is only for reference if you have projects designed with the product number listed in. If you are looking for new project design-in, please find BSCL Series specification/datasheet on Chilisin website. Or you may find our sales contact for more information on old part number at your convenience. Appreciated your attention and understanding.

Note: Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

SMD Multilayer Ferrite Chip Inductors – CL Series

Electrical Characteristics

| Part Number | Inductance (μ H) | Tolerance (\pm %) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | IDC (mA) Max |
|------------------|--------------------------|-------------------------|----------|----------------------------|------------------|-------------------------|-----------------|
| CL160808T-10N□-N | 0.010 | 20 | 15 | 50 | 300 | 0.2 | 50 |
| CL160808T-33N□-N | 0.033 | 20 | 15 | 50 | 270 | 0.2 | 50 |
| CL160808T-47N□-N | 0.047 | 20 | 15 | 50 | 260 | 0.3 | 50 |
| CL160808T-56N□-N | 0.056 | 20 | 15 | 50 | 255 | 0.3 | 50 |
| CL160808T-68N□-N | 0.068 | 20 | 15 | 50 | 250 | 0.3 | 50 |
| CL160808T-82N□-N | 0.082 | 20 | 15 | 50 | 245 | 0.3 | 50 |
| CL160808T-R10□-N | 0.10 | 20 / 15 / 10 | 25 | 25 | 240 | 0.5 | 50 |
| CL160808T-R12□-N | 0.12 | 20 / 15 / 10 | 25 | 25 | 205 | 0.5 | 50 |
| CL160808T-R15□-N | 0.15 | 20 / 15 / 10 | 25 | 25 | 180 | 0.6 | 50 |
| CL160808T-R18□-N | 0.18 | 20 / 15 / 10 | 25 | 25 | 165 | 0.6 | 50 |
| CL160808T-R22□-N | 0.22 | 20 / 15 / 10 | 25 | 25 | 150 | 0.8 | 50 |
| CL160808T-R27□-N | 0.27 | 20 / 15 / 10 | 25 | 25 | 136 | 0.8 | 50 |
| CL160808T-R33□-N | 0.33 | 20 / 15 / 10 | 25 | 25 | 125 | 0.85 | 35 |
| CL160808T-R39□-N | 0.39 | 20 / 15 / 10 | 25 | 25 | 110 | 1.00 | 35 |
| CL160808T-R47□-N | 0.47 | 20 / 15 / 10 | 25 | 25 | 105 | 1.35 | 35 |
| CL160808T-R56□-N | 0.56 | 20 / 15 / 10 | 25 | 25 | 95 | 1.50 | 35 |
| CL160808T-R68□-N | 0.68 | 20 / 15 / 10 | 25 | 25 | 85 | 1.70 | 35 |
| CL160808T-R82□-N | 0.82 | 20 / 15 / 10 | 25 | 25 | 75 | 2.10 | 35 |
| CL160808T-1R0□-N | 1.0 | 20 / 15 / 10 | 35 | 10 | 65 | 0.60 | 25 |
| CL160808T-1R2□-N | 1.2 | 20 / 15 / 10 | 35 | 10 | 60 | 0.80 | 25 |
| CL160808T-1R5□-N | 1.5 | 20 / 15 / 10 | 35 | 10 | 55 | 0.80 | 25 |
| CL160808T-1R8□-N | 1.8 | 20 / 15 / 10 | 35 | 10 | 50 | 0.95 | 25 |
| CL160808T-2R2□-N | 2.2 | 20 / 15 / 10 | 35 | 10 | 45 | 1.00 | 15 |
| CL160808T-2R7□-N | 2.7 | 20 / 15 / 10 | 35 | 10 | 40 | 1.15 | 15 |
| CL160808T-3R3□-N | 3.3 | 20 / 15 / 10 | 35 | 10 | 38 | 1.30 | 15 |
| CL160808T-3R9□-N | 3.9 | 20 / 15 / 10 | 35 | 10 | 36 | 1.50 | 15 |
| CL160808T-4R7□-N | 4.7 | 20 / 15 / 10 | 35 | 10 | 33 | 1.60 | 15 |
| CL160808T-5R6□-N | 5.6 | 20 / 15 / 10 | 35 | 4 | 22 | 1.10 | 5 |
| CL160808T-6R8□-N | 6.8 | 20 / 15 / 10 | 35 | 4 | 20 | 1.30 | 5 |
| CL160808T-8R2□-N | 8.2 | 20 / 15 / 10 | 30 | 4 | 18 | 1.50 | 5 |
| CL160808T-100□-N | 10 | 20 / 15 / 10 | 30 | 2 | 17 | 1.70 | 5 |
| CL160808T-120□-N | 12 | 20 / 15 / 10 | 30 | 2 | 15 | 1.80 | 3 |
| CL160808T-150□-N | 15 | 20 / 15 / 10 | 20 | 1 | 14 | 1.50 | 1 |
| CL160808T-220□-N | 22 | 20 / 15 / 10 | 20 | 1 | 11 | 1.70 | 1 |

Note: When ordering, please specify tolerance code. Tolerance : K= \pm 10% , L= \pm 15% , M= \pm 20%

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value
- Measure Equipment :
 - L & Q : HP4291A
 - SRF : Agilent HP8753D/Agilent E4991A
 - RDC : HP4338B or CHEN HWA 502

SMD Multilayer Ferrite Chip Inductors – CL Series

Electrical Characteristics

| Part Number | Inductance (μ H) | Tolerance (\pm %) | Q Min | Test Frequency (MHz) | SRF MHz) Min | RDC (Ω) Max | IDC (mA) Max |
|------------------|--------------------------|-------------------------|----------|-------------------------|-----------------|-------------------------|-----------------|
| CL201209T-22N□-N | 0.022 | 20 | 20 | 50 | 320 | 0.20 | 300 |
| CL201209T-33N□-N | 0.033 | 20 / 15 | 20 | 50 | 320 | 0.20 | 300 |
| CL201209T-47N□-N | 0.047 | 20 / 15 | 20 | 50 | 320 | 0.20 | 300 |
| CL201209T-56N□-N | 0.056 | 20 / 15 | 20 | 50 | 320 | 0.20 | 300 |
| CL201209T-68N□-N | 0.068 | 20 / 15 | 20 | 50 | 280 | 0.20 | 300 |
| CL201209T-82N□-N | 0.082 | 20 / 15 | 20 | 50 | 255 | 0.20 | 300 |
| CL201209T-R10□-N | 0.10 | 20 / 15 / 0 | 25 | 25 | 235 | 0.30 | 250 |
| CL201209T-R12□-N | 0.12 | 20 / 15 / 10 | 25 | 25 | 220 | 0.30 | 250 |
| CL201209T-R15□-N | 0.15 | 20 / 15 / 10 | 25 | 25 | 200 | 0.40 | 250 |
| CL201209T-R18□-N | 0.18 | 20 / 15 / 10 | 25 | 25 | 185 | 0.40 | 250 |
| CL201209T-R22□-N | 0.22 | 20 / 15 / 10 | 25 | 25 | 170 | 0.50 | 250 |
| CL201209T-R27□-N | 0.27 | 20 / 15 / 10 | 25 | 25 | 150 | 0.50 | 250 |
| CL201209T-R33□-N | 0.33 | 20 / 15 / 10 | 25 | 25 | 145 | 0.55 | 250 |
| CL201209T-R39□-N | 0.39 | 20 / 15 / 10 | 25 | 25 | 135 | 0.65 | 250 |
| CL201209T-R47□-N | 0.47 | 20 / 15 / 10 | 25 | 25 | 125 | 0.65 | 250 |
| CL201209T-R56□-N | 0.56 | 20 / 15 / 10 | 25 | 25 | 115 | 0.75 | 150 |
| CL201209T-R68□-N | 0.68 | 20 / 15 / 10 | 25 | 25 | 105 | 0.80 | 150 |
| CL201209T-R82□-N | 0.82 | 20 / 15 / 10 | 25 | 25 | 100 | 1.00 | 150 |
| CL201209T-1R0□-N | 1.0 | 20 / 15 / 10 | 45 | 10 | 75 | 0.40 | 50 |
| CL201209T-1R2□-N | 1.2 | 20 / 15 / 10 | 45 | 10 | 65 | 0.50 | 50 |
| CL201209T-1R5□-N | 1.5 | 20 / 15 / 10 | 45 | 10 | 60 | 0.50 | 50 |
| CL201209T-1R8□-N | 1.8 | 20 / 15 / 10 | 45 | 10 | 55 | 0.60 | 50 |
| CL201209T-2R2□-N | 2.2 | 20 / 15 / 10 | 45 | 10 | 50 | 0.65 | 30 |

Note: When ordering, please specify tolerance code. Tolerance : K= \pm 10% , L= \pm 15% , M= \pm 20%

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value
- Measure Equipment :
L & Q : HP4291A
SRF : Agilent HP8753D/Agilent E4991A
RDC : HP4338B or CHEN HWA 502

SMD Multilayer Ferrite Chip Inductors – CL Series

Electrical Characteristics

| Part Number | Inductance (μH) | Tolerance ($\pm\%$) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | IDC (mA) Max |
|------------------|---------------------------------|--------------------------|----------|-------------------------|------------------|-------------------------|-----------------|
| CL201212T-2R7□-N | 2.7 | 20 / 15 / 10 | 45 | 10 | 45 | 0.75 | 30 |
| CL201212T-3R3□-N | 3.3 | 20 / 15 / 10 | 45 | 10 | 41 | 0.80 | 30 |
| CL201212T-3R9□-N | 3.9 | 20 / 15 / 10 | 45 | 10 | 38 | 0.90 | 30 |
| CL201212T-4R7□-N | 4.7 | 20 / 15 / 10 | 45 | 10 | 35 | 1.00 | 30 |
| CL201212T-5R6□-N | 5.6 | 20 / 15 / 10 | 45 | 4 | 32 | 0.90 | 15 |
| CL201212T-6R8□-N | 6.8 | 20 / 15 / 10 | 45 | 4 | 29 | 1.00 | 15 |
| CL201212T-8R2□-N | 8.2 | 20 / 15 / 10 | 45 | 4 | 26 | 1.10 | 15 |
| CL201212T-100□-N | 10 | 20 / 15 / 10 | 45 | 2 | 24 | 1.10 | 15 |
| CL201212T-120□-N | 12 | 20 / 15 / 10 | 45 | 2 | 22 | 1.20 | 15 |
| CL201212T-150□-N | 15 | 20 / 15 / 10 | 30 | 1 | 19 | 0.80 | 5 |
| CL201212T-180□-N | 18 | 20 / 15 / 10 | 30 | 1 | 18 | 0.90 | 5 |
| CL201212T-220□-N | 22 | 20 / 15 / 10 | 30 | 1 | 16 | 1.1 | 5 |

Note: When ordering, please specify tolerance code. Tolerance : K= $\pm 10\%$, L= $\pm 15\%$, M= $\pm 20\%$

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
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SMD Multilayer Ferrite Chip Inductors – CL Series

Electrical Characteristics

| Part Number | Inductance (μ H) | Tolerance (\pm %) | Q Min | Test Frequency (MHz) | SRF (MHz) Min | RDC (Ω) Max | IDC (mA) Max |
|------------------|--------------------------|-------------------------|----------|----------------------------|------------------|-------------------------|-----------------|
| CL321611T-47N□-N | 0.047 | 20 | 20 | 50 | 320 | 0.15 | 300 |
| CL321611T-56N□-N | 0.056 | 20 | 20 | 50 | 280 | 0.25 | 300 |
| CL321611T-68N□-N | 0.068 | 20 | 20 | 50 | 280 | 0.25 | 300 |
| CL321611T-82N□-N | 0.082 | 20 | 20 | 50 | 250 | 0.25 | 300 |
| CL321611T-R10□-N | 0.10 | 20 / 15 / 10 | 25 | 25 | 235 | 0.25 | 250 |
| CL321611T-R12□-N | 0.12 | 20 / 15 / 10 | 25 | 25 | 220 | 0.30 | 250 |
| CL321611T-R15□-N | 0.15 | 20 / 15 / 10 | 25 | 25 | 200 | 0.30 | 250 |
| CL321611T-R18□-N | 0.18 | 20 / 15 / 10 | 25 | 25 | 185 | 0.40 | 250 |
| CL321611T-R22□-N | 0.22 | 20 / 15 / 10 | 25 | 25 | 170 | 0.40 | 250 |
| CL321611T-R27□-N | 0.27 | 20 / 15 / 10 | 25 | 25 | 150 | 0.50 | 250 |
| CL321611T-R33□-N | 0.33 | 20 / 15 / 10 | 25 | 25 | 145 | 0.60 | 250 |
| CL321611T-R39□-N | 0.39 | 20 / 15 / 10 | 25 | 25 | 135 | 0.50 | 200 |
| CL321611T-R47□-N | 0.47 | 20 / 15 / 10 | 25 | 25 | 125 | 0.60 | 200 |
| CL321611T-R56□-N | 0.56 | 20 / 15 / 10 | 25 | 25 | 115 | 0.70 | 150 |
| CL321611T-R68□-N | 0.68 | 20 / 15 / 10 | 25 | 25 | 105 | 0.80 | 150 |
| CL321611T-R82□-N | 0.82 | 20 / 15 / 10 | 25 | 25 | 100 | 0.90 | 150 |
| CL321611T-1R0□-N | 1.0 | 20 / 15 / 10 | 45 | 10 | 75 | 0.40 | 100 |
| CL321611T-1R2□-N | 1.2 | 20 / 15 / 10 | 45 | 10 | 65 | 0.50 | 100 |
| CL321611T-1R5□-N | 1.5 | 20 / 15 / 10 | 45 | 10 | 60 | 0.50 | 80 |
| CL321611T-1R8□-N | 1.8 | 20 / 15 / 10 | 45 | 10 | 55 | 0.50 | 70 |
| CL321611T-2R2□-N | 2.2 | 20 / 15 / 10 | 45 | 10 | 50 | 0.60 | 60 |
| CL321611T-2R7□-N | 2.7 | 20 / 15 / 10 | 45 | 10 | 45 | 0.60 | 60 |
| CL321611T-3R3□-N | 3.3 | 20 / 15 / 10 | 45 | 10 | 41 | 0.70 | 60 |
| CL321611T-3R9□-N | 3.9 | 20 / 15 / 10 | 45 | 10 | 38 | 0.80 | 50 |
| CL321611T-4R7□-N | 4.7 | 20 / 15 / 10 | 45 | 10 | 35 | 0.90 | 50 |
| CL321611T-5R6□-N | 5.6 | 20 / 15 / 10 | 45 | 4 | 32 | 0.70 | 25 |
| CL321611T-6R8□-N | 6.8 | 20 / 15 / 10 | 45 | 4 | 29 | 0.80 | 25 |
| CL321611T-8R2□-N | 8.2 | 20 / 15 / 10 | 45 | 4 | 26 | 0.90 | 25 |
| CL321611T-100□-N | 10 | 20 / 15 / 10 | 45 | 2 | 24 | 1.00 | 25 |
| CL321611T-120□-N | 12 | 20 / 15 / 10 | 45 | 2 | 22 | 1.00 | 15 |
| CL321611T-150□-N | 15 | 20 / 15 / 10 | 35 | 1 | 19 | 0.70 | 5 |
| CL321611T-180□-N | 18 | 20 / 15 / 10 | 35 | 1 | 18 | 0.75 | 5 |
| CL321611T-220□-N | 22 | 20 / 15 / 10 | 35 | 1 | 16 | 0.90 | 5 |
| CL321611T-270□-N | 27 | 20 / 15 / 10 | 35 | 1 | 14 | 0.90 | 5 |

Note: When ordering, please specify tolerance code. Tolerance : K= \pm 10% , L= \pm 15% , M= \pm 20%

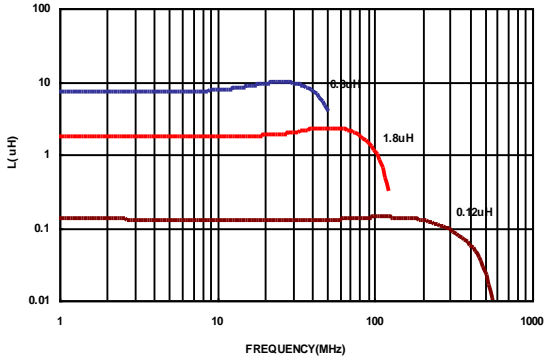
- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value
- Measure Equipment :
 - L & Q : HP4291A
 - SRF : Agilent HP8753D/Agilent E4991A
 - RDC : HP4338B or CHEN HWA 502

SMD Multilayer Ferrite Chip Inductors – CL Series

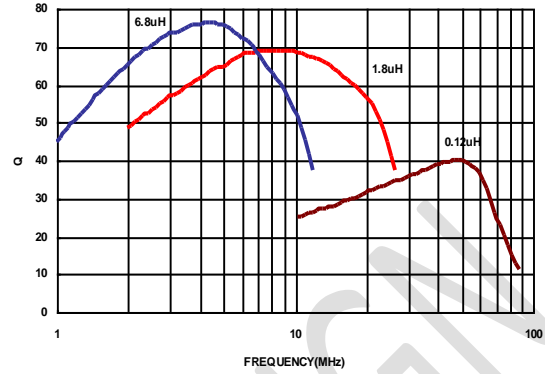
Test Instruments : Agilent E4991A Impedance / Material Analyzer

CL160808

INDUCTANCE vs. FREQUENCY CHARACTERISTICS

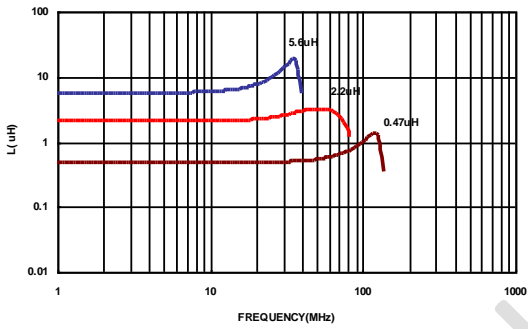


Q vs. FREQUENCY CHARACTERISTICS

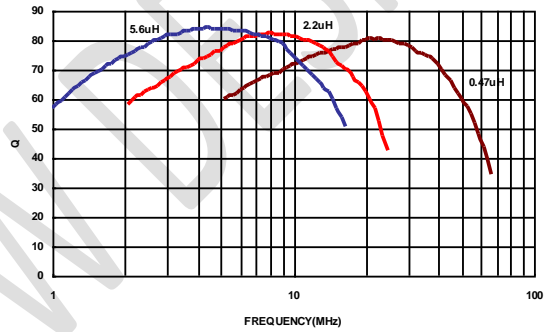


CL201209

INDUCTANCE vs. FREQUENCY CHARACTERISTICS

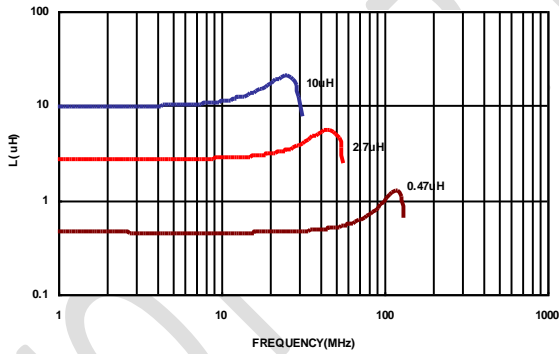


Q vs. FREQUENCY CHARACTERISTICS

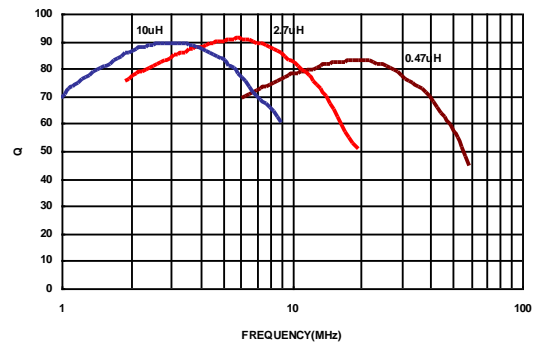


CL321611

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



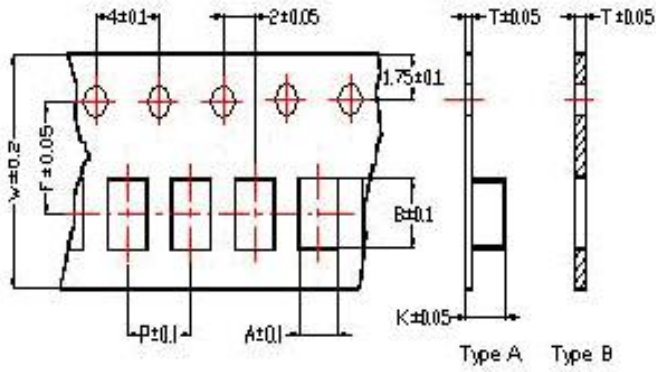
Q vs. FREQUENCY CHARACTERISTICS



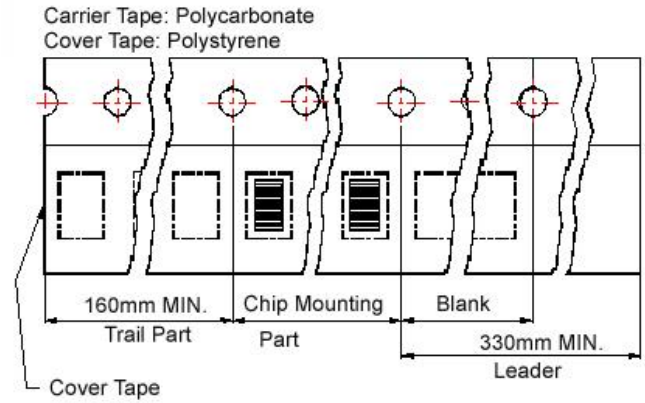
SMD Multilayer Ferrite Chip Inductors - CL Series

Packaging Specifications

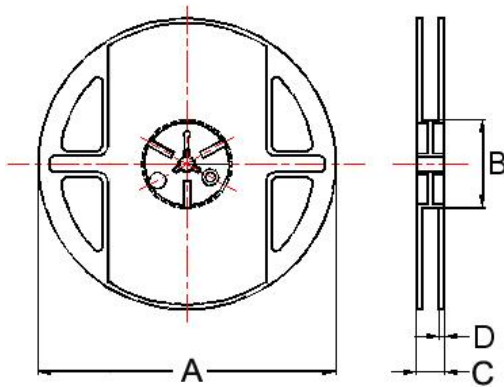
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

| TYPE | Tape Dimensions | | | | | | | | Tape | Reel Dimensions | | | | Quantity PCS / Reel |
|----------|-----------------|------|------|-----|-----|-----|------|---|------|-----------------|----|-----|------|------------------------|
| | A | B | T | W | P | F | K | A | | B | C | D | | |
| CL160808 | 1.05 | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | - | B | 178 | 60 | 12 | 1.5 | 4000 | |
| CL201209 | 1.50 | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | - | B | 178 | 60 | 12 | 1.5 | 4000 | |
| CL201212 | 1.35 | 2.25 | 0.22 | 8.0 | 4.0 | 3.5 | 1.35 | A | 178 | 60 | 12 | 1.5 | 3000 | |
| CL321611 | 1.88 | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A | 178 | 60 | 12 | 1.5 | 3000 | |

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