

**Features:**

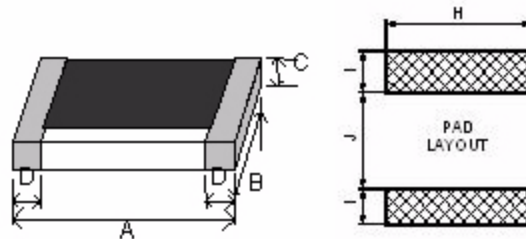
- Provides tight tolerances and excellent Q values
- Tight physical dimension tolerances
- Stable inductance in high frequency circuits (~10GHz)
- For inductance values outside those listed in the datasheet contact factory
- Find environmental information and packaging specs in related supplemental documents

**Applications:**

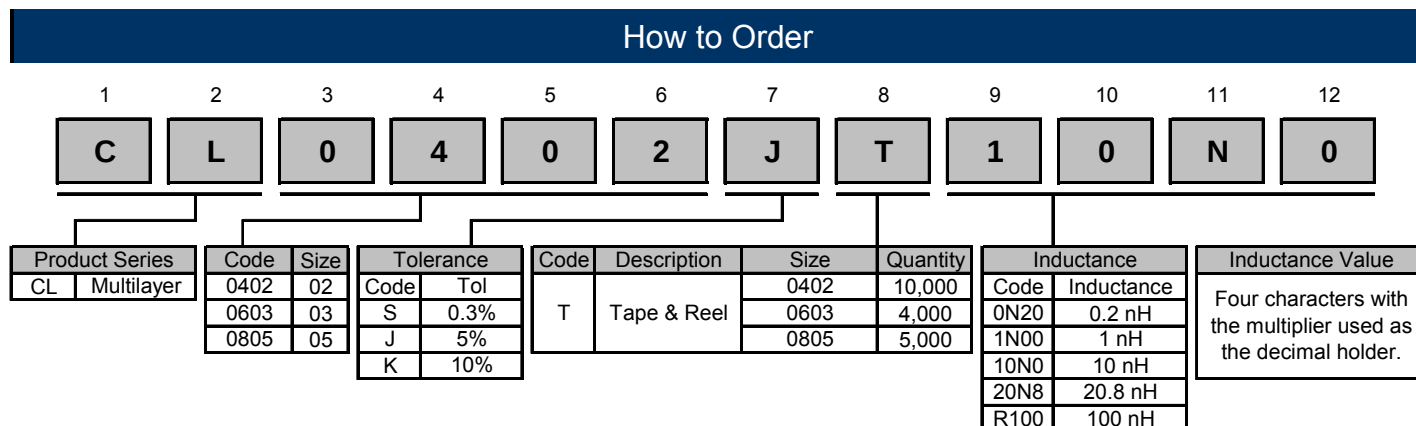
- Cellular phones
- Pagers
- GPS receiver
- Bluetooth module
- EMI countermeasures for HF circuit
- RF transceiver modules
- Wireless LAN
- Communication appliances



| Inductance and Current Ranges |            |              |
|-------------------------------|------------|--------------|
| CL02                          | 1 ~ 100 nH | 300 ~ 100 mA |
| CL03                          | 1 ~ 100 nH | 500 ~ 300 mA |
| CL05                          | 1 ~ 100 nH | 300 mA       |



| Mechanical Specifications - Standard |                             |                             |                             |                             |               |               |               |              |
|--------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|---------------|---------------|--------------|
| Type / Code                          | A                           | B                           | C                           | D                           | H             | I             | J             | Unit         |
| CL02                                 | 0.04 ± 0.004<br>1 ± 0.1     | 0.02 ± 0.004<br>0.5 ± 0.1   | 0.02 ± 0.004<br>0.5 ± 0.1   | 0.008 ± 0.004<br>0.2 ± 0.1  | 0.026<br>0.66 | 0.02<br>0.5   | 0.018<br>0.46 | inches<br>mm |
| CL03                                 | 0.063 ± 0.006<br>1.6 ± 0.15 | 0.032 ± 0.006<br>0.8 ± 0.15 | 0.032 ± 0.006<br>0.8 ± 0.15 | 0.014 ± 0.004<br>0.35 ± 0.1 | 0.04<br>1.02  | 0.025<br>0.64 | 0.025<br>0.64 | inches<br>mm |
| CL05                                 | 0.079 ± 0.008<br>2 ± 0.15   | 0.047 ± 0.008<br>1.2 ± 0.2  | 0.035 ± 0.008<br>0.9 ± 0.2  | 0.02 ± 0.004<br>0.5 ± 0.1   | 0.07<br>1.78  | 0.04<br>1.02  | 0.03<br>0.76  | inches<br>mm |



Legacy Part Number (before January 3, 2011):

| SEI Type |             | Dimensions |      | Tolerance |           | Packaging | Inductance |            |
|----------|-------------|------------|------|-----------|-----------|-----------|------------|------------|
| CL       |             | 02         |      | J         |           | T         | 10N        |            |
| Type     | Description | Code       | EIA  | Code      | Tolerance |           | Code       | Inductance |
| CL       | Multilayer  | 02         | 0402 | S         | ±0.3 nH   |           | 0N2        | 0.2 nH     |
|          |             | 03         | 0603 | J         | ±5%       |           | 1N0        | 1 nH       |
|          |             | 05         | 0805 | k         | ±10%      |           | 10N        | 10 nH      |
|          |             |            |      |           |           |           | 20N8       | 20.8 nH    |
|          |             |            |      |           |           |           | R10        | 100 nH     |

### Electrical Characteristics – CL02

| Part Number | L (nH) | Q Factor Min. | Test Freq (MHz) | Tolerance (nH or %) | SRF (GHz) | DCR (Ω) Max | I DC (mA) Max | Q Typical (MHz) |     |     |
|-------------|--------|---------------|-----------------|---------------------|-----------|-------------|---------------|-----------------|-----|-----|
|             |        |               |                 |                     |           |             |               | 100             | 500 | 800 |
| CL02-T1N0   | 1      | 8             | 100             | ±0.3nH              | 10.00     | 0.12        | 300           | 11              | 33  | 37  |
| CL02-T1N2   | 1.2    | 8             | 100             | ±0.3nH              | 10.00     | 0.12        | 300           | 11              | 29  | 26  |
| CL02-T1N5   | 1.5    | 8             | 100             | ±0.3nH              | 6.00      | 0.13        | 300           | 12              | 29  | 40  |
| CL02-T1N8   | 1.8    | 8             | 100             | ±0.3nH              | 6.00      | 0.14        | 300           | 11              | 26  | 34  |
| CL02-T2N2   | 2.2    | 8             | 100             | ±0.3nH              | 6.00      | 0.16        | 300           | 11              | 26  | 36  |
| CL02-T2N7   | 2.7    | 8             | 100             | ±0.3nH              | 6.00      | 0.17        | 300           | 12              | 29  | 38  |
| CL02-T3N3   | 3.3    | 8             | 100             | ±0.3nH, 5%, 10%     | 6.00      | 0.19        | 300           | 11              | 28  | 37  |
| CL02-T3N9   | 3.9    | 8             | 100             | ±0.3nH, 5%, 10%     | 4.00      | 0.22        | 300           | 11              | 26  | 32  |
| CL02-T4N7   | 4.7    | 8             | 100             | ±0.3nH, 5%, 10%     | 4.00      | 0.24        | 300           | 12              | 28  | 37  |
| CL02-T5N6   | 5.6    | 8             | 100             | ±0.3nH, 5%, 10%     | 4.00      | 0.27        | 300           | 11              | 26  | 35  |
| CL02-T6N8   | 6.8    | 8             | 100             | 5%, 10%             | 3.90      | 0.32        | 300           | 11              | 26  | 34  |
| CL02-T8N2   | 8.2    | 8             | 100             | 5%, 10%             | 3.50      | 0.37        | 300           | 12              | 26  | 36  |
| CL02-T10N   | 10     | 8             | 100             | 5%, 10%             | 3.20      | 0.42        | 300           | 11              | 25  | 31  |
| CL02-T12N   | 12     | 8             | 100             | 5%, 10%             | 2.60      | 0.50        | 300           | 11              | 25  | 31  |
| CL02-T15N   | 15     | 8             | 100             | 5%, 10%             | 2.30      | 0.55        | 300           | 11              | 24  | 30  |
| CL02-T18N   | 18     | 8             | 100             | 5%, 10%             | 2.00      | 0.65        | 300           | 11              | 24  | 30  |
| CL02-T22N   | 22     | 8             | 100             | 5%, 10%             | 1.60      | 0.80        | 300           | 12              | 24  | 30  |
| CL02-T27N   | 27     | 8             | 100             | 5%, 10%             | 1.40      | 0.90        | 300           | 11              | 24  | 28  |
| CL02-T33N   | 33     | 8             | 100             | 5%, 10%             | 1.20      | 1.00        | 200           | 12              | 23  | 26  |
| CL02-T39N   | 39     | 8             | 100             | 5%, 10%             | 1.10      | 1.20        | 150           | 11              | 21  | 24  |
| CL02-T47N   | 47     | 8             | 100             | 5%, 10%             | 0.90      | 1.30        | 150           | 11              | 21  | 23  |
| CL02-T56N   | 56     | 8             | 100             | 5%, 10%             | 0.75      | 2.00        | 150           | 12              | 21  | 21  |
| CL02-T68N   | 68     | 8             | 100             | 5%, 10%             | 0.75      | 2.20        | 100           | 11              | 19  | 19  |
| CL02-T82N   | 82     | 8             | 100             | 5%, 10%             | 0.60      | 2.50        | 100           | 10              | 19  | 16  |
| CL02-TR10   | 100    | 8             | 100             | 5%, 10%             | 0.60      | 2.50        | 100           | 10              | 18  | -   |

### Electrical Characteristics – CL 03

| Part Number | L (nH) | Q Factor Min. | Test Freq (MHz) | Tolerance (nH or %) | SRF (GHz) | DCR (Ω) Max | I DC (mA) Max | Q Typical (MHz) |     |     |
|-------------|--------|---------------|-----------------|---------------------|-----------|-------------|---------------|-----------------|-----|-----|
|             |        |               |                 |                     |           |             |               | 100             | 500 | 800 |
| CL03-T1N0   | 1      | 8             | 100             | ±0.3nH              | 6.00      | 0.10        | 500           | 15              | 36  | 49  |
| CL03-T1N2   | 1.2    | 8             | 100             | ±0.3nH              | 6.00      | 0.10        | 500           | 15              | 36  | 49  |
| CL03-T1N5   | 1.5    | 8             | 100             | ±0.3nH              | 6.00      | 0.10        | 500           | 14              | 34  | 47  |
| CL03-T1N8   | 1.8    | 8             | 100             | ±0.3nH              | 6.00      | 0.10        | 500           | 17              | 40  | 55  |
| CL03-T2N2   | 2.2    | 8             | 100             | ±0.3nH              | 6.00      | 0.10        | 500           | 15              | 38  | 49  |
| CL03-T2N7   | 2.7    | 8             | 100             | ±0.3nH              | 6.00      | 0.10        | 500           | 14              | 37  | 48  |
| CL03-T3N3   | 3.3    | 10            | 100             | ±0.3nH, 5%, 10%     | 6.00      | 0.13        | 500           | 16              | 40  | 51  |
| CL03-T3N9   | 3.9    | 10            | 100             | ±0.3nH, 5%, 10%     | 6.00      | 0.15        | 500           | 14              | 36  | 48  |
| CL03-T4N7   | 4.7    | 10            | 100             | ±0.3nH, 5%, 10%     | 4.00      | 0.20        | 500           | 14              | 37  | 48  |
| CL03-T5N6   | 5.6    | 10            | 100             | ±0.3nH, 5%, 10%     | 4.00      | 0.23        | 500           | 14              | 36  | 46  |
| CL03-T6N8   | 6.8    | 10            | 100             | 5%, 10%             | 3.75      | 0.25        | 500           | 15              | 37  | 48  |
| CL03-T8N2   | 8.2    | 10            | 100             | 5%, 10%             | 3.30      | 0.28        | 500           | 16              | 39  | 50  |
| CL03-T10N   | 10     | 12            | 100             | 5%, 10%             | 3.00      | 0.30        | 300           | 16              | 37  | 47  |
| CL03-T12N   | 12     | 12            | 100             | 5%, 10%             | 2.60      | 0.35        | 300           | 15              | 36  | 45  |
| CL03-T15N   | 15     | 12            | 100             | 5%, 10%             | 2.30      | 0.40        | 300           | 16              | 38  | 48  |
| CL03-T18N   | 18     | 12            | 100             | 5%, 10%             | 2.00      | 0.45        | 300           | 17              | 38  | 47  |
| CL03-T22N   | 22     | 12            | 100             | 5%, 10%             | 1.60      | 0.50        | 300           | 18              | 40  | 49  |
| CL03-T27N   | 27     | 12            | 100             | 5%, 10%             | 1.40      | 0.55        | 300           | 18              | 40  | 47  |
| CL03-T33N   | 33     | 12            | 100             | 5%, 10%             | 1.20      | 0.60        | 300           | 17              | 40  | 46  |
| CL03-T39N   | 39     | 12            | 100             | 5%, 10%             | 1.10      | 0.65        | 300           | 19              | 40  | 46  |
| CL03-T47N   | 47     | 12            | 100             | 5%, 10%             | 0.90      | 0.70        | 300           | 17              | 36  | 39  |
| CL03-T56N   | 56     | 12            | 100             | 5%, 10%             | 0.90      | 0.75        | 300           | 18              | 36  | 37  |
| CL03-T68N   | 68     | 12            | 100             | 5%, 10%             | 0.70      | 0.85        | 300           | 18              | 35  | 36  |
| CL03-T82N   | 82     | 12            | 100             | 5%, 10%             | 0.60      | 1.00        | 300           | 18              | 33  | 29  |
| CL03-TR10   | 100    | 12            | 100             | 5%, 10%             | 0.60      | 1.20        | 300           | 18              | 28  | 16  |

**Electrical Characteristics – CL05**

| Part Number | L (nH) | Q Factor Min. | Test Freq (MHz) | Tolerance (nH or %) | SRF (GHz) | DCR (Ω) Max | I DC (mA) Max |
|-------------|--------|---------------|-----------------|---------------------|-----------|-------------|---------------|
| CL05-T1N0   | 1      | 10            | 100             | ±0.3nH              | 6.00      | 0.10        | 300           |
| CL05-T1N2   | 1.2    | 10            | 100             | ±0.3nH              | 6.00      | 0.10        | 300           |
| CL05-T1N5   | 1.5    | 10            | 100             | ±0.3nH              | 6.00      | 0.10        | 300           |
| CL05-T1N8   | 1.8    | 10            | 100             | ±0.3nH              | 6.00      | 0.10        | 300           |
| CL05-T2N2   | 2.2    | 10            | 100             | ±0.3nH              | 6.00      | 0.10        | 300           |
| CL05-T2N7   | 2.7    | 12            | 100             | ±0.3nH              | 6.00      | 0.10        | 300           |
| CL05-T3N3   | 3.3    | 12            | 100             | ±0.3nH, 5%, 10%     | 6.00      | 0.13        | 300           |
| CL05-T3N9   | 3.9    | 12            | 100             | ±0.3nH, 5%, 10%     | 5.40      | 0.15        | 300           |
| CL05-T4N7   | 4.7    | 12            | 100             | ±0.3nH, 5%, 10%     | 4.50      | 0.20        | 300           |
| CL05-T5N6   | 5.6    | 12            | 100             | ±0.3nH, 5%, 10%     | 4.00      | 0.23        | 300           |
| CL05-T6N8   | 6.8    | 15            | 100             | 5%, 10%             | 3.65      | 0.25        | 300           |
| CL05-T8N2   | 8.2    | 15            | 100             | 5%, 10%             | 3.00      | 0.28        | 300           |
| CL05-T10N   | 10     | 15            | 100             | 5%, 10%             | 2.50      | 0.30        | 300           |
| CL05-T12N   | 12     | 15            | 100             | 5%, 10%             | 2.45      | 0.35        | 300           |
| CL05-T15N   | 15     | 15            | 100             | 5%, 10%             | 2.00      | 0.40        | 300           |
| CL05-T18N   | 18     | 15            | 100             | 5%, 10%             | 1.75      | 0.45        | 300           |
| CL05-T22N   | 22     | 15            | 100             | 5%, 10%             | 1.70      | 0.50        | 300           |
| CL05-T27N   | 27     | 15            | 100             | 5%, 10%             | 1.55      | 0.55        | 300           |
| CL05-T33N   | 33     | 15            | 100             | 5%, 10%             | 1.35      | 0.60        | 300           |
| CL05-T39N   | 39     | 18            | 100             | 5%, 10%             | 1.30      | 0.65        | 300           |
| CL05-T47N   | 47     | 18            | 100             | 5%, 10%             | 1.20      | 0.70        | 300           |
| CL05-T56N   | 56     | 18            | 100             | 5%, 10%             | 1.15      | 0.75        | 300           |
| CL05-T68N   | 68     | 18            | 100             | 5%, 10%             | 1.00      | 0.80        | 300           |
| CL05-T82N   | 82     | 18            | 100             | 5%, 10%             | 0.85      | 0.90        | 300           |
| CL05-TR10   | 100    | 18            | 100             | 5%, 10%             | 0.73      | 1.00        | 300           |