

Multilayer Chip Ceramic Inductor - SDCL0603Q-02 Series

Operating Temp. : SDCL0603Q-02 series: -55°C~+125°C



FEATURES

- Monolithic structure for high reliability
- High self-resonant frequency
- Excellent solderability and high heat resistance
- High Q factor

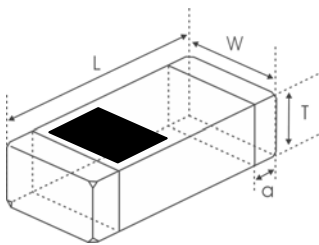
APPLICATIONS

- RF circuit in telecommunication and other equipments

PRODUCT IDENTIFICATION

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------|---|------|-----------------------|--|--------------------------------|--|-------------|---------|--|----------------------|--|---|--|--|--------------------|--|---------|---------------|-----|-------|-----|------|--------------|--|---|----------------------|--|---|--------|---|--------|---|--------|---|-----|---|-----|---|-----|---|---------|--|---|-------------|--|-------------|--|----|--|
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr><th colspan="2">Type</th></tr> <tr><td>SDCL</td><td>Chip Ceramic Inductor</td></tr> </table> | Type | | SDCL | Chip Ceramic Inductor | <table border="1"> <tr><th colspan="2">External Dimensions (L×W) (mm)</th></tr> <tr><td>0603 [0201]</td><td>0.6×0.3</td></tr> </table> | External Dimensions (L×W) (mm) | | 0603 [0201] | 0.6×0.3 | <table border="1"> <tr><th colspan="2">Characteristics Code</th></tr> <tr><td colspan="2">Q</td></tr> </table> | Characteristics Code | | Q | | <table border="1"> <tr><th colspan="2">Nominal Inductance</th></tr> <tr><th>Example</th><th>Nominal Value</th></tr> <tr><td>3N9</td><td>3.9nH</td></tr> <tr><td>10N</td><td>10nH</td></tr> <tr><td colspan="2">※R=小数点, N=nH</td></tr> </table> | Nominal Inductance | | Example | Nominal Value | 3N9 | 3.9nH | 10N | 10nH | ※R=小数点, N=nH | | <table border="1"> <tr><th colspan="2">Inductance Tolerance</th></tr> <tr><td>B</td><td>±0.1nH</td></tr> <tr><td>C</td><td>±0.2nH</td></tr> <tr><td>S</td><td>±0.3nH</td></tr> <tr><td>G</td><td>±2%</td></tr> <tr><td>H</td><td>±3%</td></tr> <tr><td>J</td><td>±5%</td></tr> </table> | Inductance Tolerance | | B | ±0.1nH | C | ±0.2nH | S | ±0.3nH | G | ±2% | H | ±3% | J | ±5% | <table border="1"> <tr><th colspan="2">Packing</th></tr> <tr><td>T</td><td>Tape & Reel</td></tr> </table> | Packing | | T | Tape & Reel | <table border="1"> <tr><th colspan="2">Serial Code</th></tr> <tr><td colspan="2">02</td></tr> </table> | Serial Code | | 02 | |
| Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SDCL | Chip Ceramic Inductor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| External Dimensions (L×W) (mm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0603 [0201] | 0.6×0.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Characteristics Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Q | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Inductance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Example | Nominal Value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3N9 | 3.9nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10N | 10nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ※R=小数点, N=nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inductance Tolerance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | ±0.1nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | ±0.2nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | ±0.3nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | ±2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | ±3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | ±5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Packing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T | Tape & Reel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Serial Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SHAPE AND DIMENSIONS



| Type | L | W | T | a |
|--------------|-------------|-------------|-------------|--------------|
| SDCL0603Q-02 | 0.6±0.05 | 0.3±0.05 | 0.3±0.05 | 0.12±0.05 |
| [0201] | [.024±.002] | [.012±.002] | [.012±.002] | [.0048±.002] |

Unit: mm [inch]

SPECIFICATIONS

SDCL0603Q-02 TYPE

| Part Number | Inductance | Min. Quality Factor | L, Q Test Freq. L/Q | Typical Q @ Freq. (GHz) | | | | | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current | Thickness |
|------------------|------------|---------------------|---------------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|-------------|
| | | | | 0.5 | 0.8 | 1.8 | 2.0 | 2.4 | | | | |
| Units | nH | - | MHz | - | | | | | MHz | Ω | mA | mm [inch] |
| Symbol | L | Q | Freq | Q | | | | | S.RF | DCR | I _r | T |
| SDCL0603Q0N6□T02 | 0.6 | 13 | 500 | >24 | >32 | >54 | >57 | >65 | 10000 | 0.06 | 600 | 0.3±0.05 |
| SDCL0603Q0N7□T02 | 0.7 | 13 | 500 | >24 | >32 | >54 | >57 | >65 | 10000 | 0.06 | 550 | [.012±.002] |

SPECIFICATIONS

SDCL0603Q-02 TYPE

| Part Number | Inductance | Min. Quality Factor | L, Q Test Freq. L/Q | Typical Q @ Freq. (GHz) | | | | | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current | Thickness |
|------------------|------------|---------------------|---------------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|-------------------------|
| | | | | 0.5 | 0.8 | 1.8 | 2.0 | 2.4 | | | | |
| Units | nH | - | MHz | - | | | | | MHz | Ω | mA | mm [inch] |
| Symbol | L | Q | Freq | Q | | | | | SRF | DCR | Ir | T |
| SDCL0603Q0N8□T02 | 0.8 | 13 | 500 | >24 | >32 | >54 | >57 | >65 | 10000 | 0.07 | 550 | 0.3±0.05 [.012±.002] |
| SDCL0603Q0N9□T02 | 0.9 | 13 | 500 | >24 | >32 | >54 | >57 | >65 | 10000 | 0.07 | 550 | |
| SDCL0603Q1N0□T02 | 1.0 | 13 | 500 | 24 | 32 | 54 | 57 | 65 | 10000 | 0.08 | 520 | |
| SDCL0603Q1N1□T02 | 1.1 | 13 | 500 | 19 | 26 | 45 | 47 | 55 | 10000 | 0.11 | 440 | |
| SDCL0603Q1N2□T02 | 1.2 | 13 | 500 | 19 | 25 | 43 | 44 | 52 | 10000 | 0.12 | 420 | |
| SDCL0603Q1N3□T02 | 1.3 | 13 | 500 | 19 | 25 | 40 | 42 | 47 | 10000 | 0.12 | 420 | |
| SDCL0603Q1N4□T02 | 1.4 | 13 | 500 | 19 | 24 | 39 | 41 | 47 | 10000 | 0.11 | 440 | |
| SDCL0603Q1N5□T02 | 1.5 | 13 | 500 | 19 | 24 | 39 | 41 | 46 | 10000 | 0.12 | 420 | |
| SDCL0603Q1N6□T02 | 1.6 | 13 | 500 | 19 | 24 | 39 | 41 | 46 | 10000 | 0.13 | 410 | |
| SDCL0603Q1N7□T02 | 1.7 | 13 | 500 | 19 | 24 | 39 | 41 | 46 | 10000 | 0.15 | 380 | |
| SDCL0603Q1N8□T02 | 1.8 | 13 | 500 | 19 | 24 | 39 | 41 | 46 | 10000 | 0.15 | 380 | |
| SDCL0603Q1N9□T02 | 1.9 | 13 | 500 | 18 | 24 | 38 | 40 | 45 | 10000 | 0.18 | 350 | |
| SDCL0603Q2N0□T02 | 2.0 | 13 | 500 | 17 | 24 | 38 | 39 | 44 | 10000 | 0.23 | 300 | |
| SDCL0603Q2N1□T02 | 2.1 | 13 | 500 | 17 | 24 | 37 | 39 | 44 | 10000 | 0.24 | 300 | |
| SDCL0603Q2N2□T02 | 2.2 | 13 | 500 | 17 | 24 | 38 | 40 | 43 | 10000 | 0.25 | 290 | |
| SDCL0603Q2N3□T02 | 2.3 | 13 | 500 | 17 | 24 | 37 | 39 | 43 | 10000 | 0.20 | 330 | |
| SDCL0603Q2N4□T02 | 2.4 | 13 | 500 | 17 | 23 | 36 | 38 | 42 | 10000 | 0.22 | 310 | |
| SDCL0603Q2N5□T02 | 2.5 | 13 | 500 | 17 | 23 | 35 | 36 | 40 | 9600 | 0.20 | 330 | |
| SDCL0603Q2N6□T02 | 2.6 | 13 | 500 | 17 | 22 | 34 | 35 | 39 | 9400 | 0.20 | 330 | |
| SDCL0603Q2N7□T02 | 2.7 | 13 | 500 | 17 | 22 | 34 | 35 | 39 | 9200 | 0.22 | 310 | |
| SDCL0603Q2N8□T02 | 2.8 | 13 | 500 | 17 | 22 | 34 | 35 | 39 | 8900 | 0.24 | 300 | |
| SDCL0603Q2N9□T02 | 2.9 | 13 | 500 | 17 | 22 | 34 | 35 | 39 | 8800 | 0.26 | 280 | |
| SDCL0603Q3N0□T02 | 3.0 | 13 | 500 | 17 | 22 | 34 | 35 | 39 | 8600 | 0.26 | 280 | |
| SDCL0603Q3N1□T02 | 3.1 | 13 | 500 | 17 | 22 | 34 | 35 | 39 | 8500 | 0.28 | 270 | |
| SDCL0603Q3N2□T02 | 3.2 | 13 | 500 | 17 | 22 | 33 | 35 | 39 | 8200 | 0.28 | 270 | |
| SDCL0603Q3N3□T02 | 3.3 | 13 | 500 | 18 | 23 | 34 | 36 | 40 | 8100 | 0.30 | 270 | |
| SDCL0603Q3N4□T02 | 3.4 | 13 | 500 | 17 | 23 | 33 | 35 | 39 | 8000 | 0.30 | 270 | |
| SDCL0603Q3N5□T02 | 3.5 | 13 | 500 | 17 | 23 | 33 | 35 | 39 | 7900 | 0.34 | 250 | |
| SDCL0603Q3N6□T02 | 3.6 | 13 | 500 | 16 | 23 | 33 | 35 | 39 | 7700 | 0.38 | 240 | |
| SDCL0603Q3N7□T02 | 3.7 | 13 | 500 | 16 | 23 | 33 | 35 | 38 | 7600 | 0.40 | 230 | |
| SDCL0603Q3N8□T02 | 3.8 | 13 | 500 | 16 | 22 | 33 | 35 | 38 | 7500 | 0.42 | 230 | |
| SDCL0603Q3N9□T02 | 3.9 | 13 | 500 | 16 | 22 | 33 | 35 | 38 | 7400 | 0.42 | 230 | |
| SDCL0603Q4N3□T02 | 4.3 | 13 | 500 | 16 | 21 | 32 | 34 | 37 | 6800 | 0.44 | 220 | |
| SDCL0603Q4N7□T02 | 4.7 | 13 | 500 | 16 | 22 | 33 | 35 | 38 | 6200 | 0.45 | 220 | |
| SDCL0603Q5N1□T02 | 5.1 | 13 | 500 | 17 | 22 | 34 | 36 | 38 | 5900 | 0.46 | 210 | |
| SDCL0603Q5N6□T02 | 5.6 | 13 | 500 | 16 | 21 | 33 | 34 | 37 | 5500 | 0.46 | 210 | |
| SDCL0603Q6N2□T02 | 6.2 | 13 | 500 | 18 | 23 | 34 | 35 | 37 | 5100 | 0.48 | 210 | |
| SDCL0603Q6N8□T02 | 6.8 | 13 | 500 | 17 | 22 | 32 | 33 | 35 | 4900 | 0.50 | 200 | |
| SDCL0603Q7N5□T02 | 7.5 | 13 | 500 | 16 | 21 | 31 | 33 | 34 | 4700 | 0.50 | 200 | |
| SDCL0603Q8N2□T02 | 8.2 | 13 | 500 | 16 | 21 | 31 | 32 | 34 | 4300 | 0.56 | 190 | |
| SDCL0603Q9N1□T02 | 9.1 | 13 | 500 | 16 | 20 | 30 | 31 | 32 | 4100 | 0.72 | 170 | |
| SDCL0603Q10N□T02 | 10 | 13 | 500 | 16 | 20 | 28 | 29 | 31 | 3800 | 0.80 | 160 | |
| SDCL0603Q12N□T02 | 12 | 13 | 500 | 16 | 20 | 27 | 28 | 28 | 3400 | 0.80 | 160 | |
| SDCL0603Q15N□T02 | 15 | 13 | 500 | 15 | 19 | 24 | 24 | 23 | 2600 | 0.85 | 160 | |
| SDCL0603Q18N□T02 | 18 | 13 | 500 | 15 | 19 | 23 | 24 | 22 | 2300 | 1.00 | 140 | |
| SDCL0603Q22N□T02 | 22 | 13 | 500 | 15 | 19 | 22 | 23 | 20 | 1900 | 1.20 | 130 | |
| SDCL0603Q27N□T02 | 27 | 13 | 500 | 15 | 19 | 15 | 13 | 8 | 1800 | 1.60 | 120 | |
| SDCL0603Q33N□T02 | 33 | 11 | 300 | 14 | 15 | 8 | 5 | - | 1800 | 2.20 | 110 | |



Specifications subject to change without notice. Please check our website for latest information. Revised 2015/03/15

SPECIFICATIONS

SDCL0603Q-02 TYPE

| Part Number | Inductance | Min. Quality Factor | L, Q Test Freq. L/Q | Typical Q @ Freq. (GHz) | | | | | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current | Thickness |
|------------------|------------|---------------------|---------------------|-------------------------|-----|-----|-----|-----|------------------------------|--------------------|--------------------|-------------------------|
| | | | | 0.5 | 0.8 | 1.8 | 2.0 | 2.4 | | | | |
| Units | nH | - | MHz | - | | | | | MHz | Ω | mA | mm [inch] |
| Symbol | L | Q | Freq | Q | | | | | SRF | DCR | I _r | T |
| SDCL0603Q39N□T02 | 39 | 11 | 300 | 14 | 15 | 6 | - | - | 1600 | 2.30 | 100 | 0.3±0.05 [.012±.002] |
| SDCL0603Q47N□T02 | 47 | 11 | 300 | 14 | 15 | - | - | - | 1500 | 2.60 | 100 | |
| SDCL0603Q56N□T02 | 56 | 11 | 300 | 13 | 13 | - | - | - | 1400 | 2.80 | 80 | |
| SDCL0603Q68N□T02 | 68 | 11 | 300 | 13 | 11 | - | - | - | 1200 | 3.20 | 80 | |
| SDCL0603Q82N□T02 | 82 | 10 | 300 | 12 | 10 | - | - | - | 1100 | 3.80 | 70 | |
| SDCL0603QR10□T02 | 100 | 10 | 300 | 12 | 10 | - | - | - | 1000 | 4.00 | 60 | |
| SDCL0603QR12□T02 | 120 | 9 | 300 | 12 | 8 | - | - | - | 1000 | 5.00 | 50 | |

※□: Please specify the inductance tolerance. For $L \leq 6.2\text{nH}$, choose $B = \pm 0.1\text{nH}$, $C = \pm 0.2\text{nH}$ or $S = \pm 0.3\text{nH}$; For $L > 6.2\text{nH}$, choose $G = \pm 2\%$, $H = \pm 3\%$ or $J = \pm 5\%$.

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