

# SQC Series

## SMD Wire Wound Chip Inductors

### APPLICATIONS

Personal Computers  
Disk Drives and Computer Peripherals  
Pagers, Cordless Phones  
DC Power Supply Circuits

### OUTLINE

These miniature chip inductors, SQC Series, wound on a special ferrite core and are excellent to be used as choke coil in DC power supply circuits.

### FEATURES

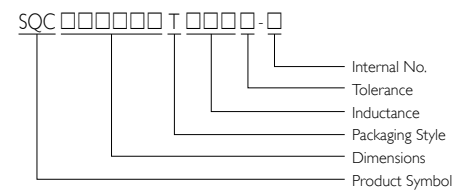
Low DC resistance, high current capacity, and high impedance characteristics.  
Excellent solder heat resistance. Both flow and reflow soldering methods can be employed.

### SHAPES AND DIMENSIONS

| TYPE      | A         | B         | C           | E   | F   | G   |
|-----------|-----------|-----------|-------------|-----|-----|-----|
| SQC201609 | 2.0 ± 0.2 | 1.6 ± 0.2 | 0.95 ± 0.05 | 1.0 | 0.8 | 1.0 |
| SQC321618 | 3.2 ± 0.3 | 1.6 ± 0.2 | 1.8 ± 0.2   | 1.2 | 1.3 | 1.5 |
| SQC322517 | 3.2 ± 0.3 | 2.5 ± 0.2 | 1.55 ± 0.15 | 1.2 | 1.3 | 2.0 |
| SQC322520 | 3.2 ± 0.3 | 2.5 ± 0.2 | 2.0 ± 0.2   | 1.2 | 1.3 | 2.0 |
| SQC453226 | 4.5 ± 0.3 | 3.6 ± 0.2 | 2.6 ± 0.2   | 2.0 | 1.5 | 3.0 |

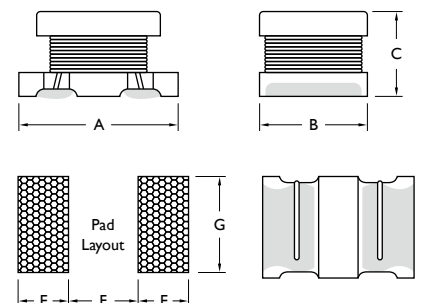


### PRODUCT IDENTIFICATION



- Packaging: T = Tape and Reel
- Internal No.: N = Lead-Free

Unit: mm





## ELECTRICAL CHARACTERISTICS SQC201609

| PART NO.          | IMPEDANCE<br>( $\mu$ H) | TOLERANCE<br>( $\pm$ %) | TEST<br>FREQUENCY<br>(MHz) | SRF<br>(MHz) Min. | DC<br>RESISTANCE<br>( $\Omega$ ) $\pm$ 30% | RATED<br>CURRENT<br>(mA) Max. |
|-------------------|-------------------------|-------------------------|----------------------------|-------------------|--------------------------------------------|-------------------------------|
| SQC201609T-1R0□-N | 1.0                     | 20                      | I                          | 100               | 0.30                                       | 485                           |
| SQC201609T-1R5□-N | 1.5                     | 20                      | I                          | 95                | 0.40                                       | 445                           |
| SQC201609T-2R2□-N | 2.2                     | 20                      | I                          | 70                | 0.48                                       | 425                           |
| SQC201609T-3R3□-N | 3.3                     | 20                      | I                          | 65                | 0.60                                       | 375                           |
| SQC201609T-4R7□-N | 4.7                     | 20                      | I                          | 60                | 0.80                                       | 300                           |
| SQC201609T-5R6□-N | 5.6                     | 20                      | I                          | 60                | 0.90                                       | 280                           |
| SQC201609T-6R8□-N | 6.8                     | 20                      | I                          | 55                | 1.00                                       | 255                           |
| SQC201609T-8R2□-N | 8.2                     | 20                      | I                          | 50                | 1.10                                       | 235                           |
| SQC201609T-100□-N | 10                      | 10 / 20                 | I                          | 48                | 1.20                                       | 225                           |
| SQC201609T-120□-N | 12                      | 10 / 20                 | I                          | 44                | 1.40                                       | 210                           |
| SQC201609T-150□-N | 15                      | 10 / 20                 | I                          | 40                | 1.60                                       | 200                           |
| SQC201609T-180□-N | 18                      | 10 / 20                 | I                          | 35                | 1.80                                       | 190                           |
| SQC201609T-220□-N | 22                      | 10 / 20                 | I                          | 30                | 2.10                                       | 185                           |
| SQC201609T-270□-N | 27                      | 10 / 20                 | I                          | 30                | 2.50                                       | 180                           |
| SQC201609T-330□-N | 33                      | 10 / 20                 | I                          | 28                | 2.80                                       | 160                           |
| SQC201609T-390□-N | 39                      | 10 / 20                 | I                          | 24                | 4.40                                       | 125                           |
| SQC201609T-470□-N | 47                      | 10 / 20                 | I                          | 18                | 5.10                                       | 120                           |
| SQC201609T-560□-N | 56                      | 10 / 20                 | I                          | 17                | 5.70                                       | 110                           |
| SQC201609T-680□-N | 68                      | 10 / 20                 | I                          | 14                | 6.60                                       | 100                           |
| SQC201609T-820□-N | 82                      | 10 / 20                 | I                          | 14                | 7.50                                       | 90                            |

Note:

Tolerance: K =  $\pm$  10%, M =  $\pm$  20%

Tolerance of Inductance: 1.0  $\mu$ H to 8.2  $\mu$ H  $\pm$  20%, 10  $\mu$ H to 82  $\mu$ H  $\pm$  10%

Test Instruments: L/Q- HP4284A

SRF- HP4287A

RDC- CH502BC

IDC- Self temperature rise shall be limited to 40 °C Max. Inductance drop 30% typ.

Soldering Heat: 260 °C 10 sec. after 150 °C Preheat Cycle for 4 Min.

Operating Temperature Range: -40 °C to +85 °C

## ELECTRICAL CHARACTERISTICS SQC321618

| PART NO.          | IMPEDANCE<br>( $\mu$ H) | TOLERANCE<br>( $\pm$ %) | TEST<br>FREQUENCY<br>(MHz) | SRF<br>(MHz) Min. | DC<br>RESISTANCE<br>( $\Omega$ ) Max. | RATED<br>CURRENT<br>(mA) Max. |
|-------------------|-------------------------|-------------------------|----------------------------|-------------------|---------------------------------------|-------------------------------|
| SQC321618T-R12□-N | 0.12                    | 20                      | I                          | 250               | 0.112                                 | 970                           |
| SQC321618T-R22□-N | 0.22                    | 20                      | I                          | 250               | 0.140                                 | 850                           |
| SQC321618T-R47□-N | 0.47                    | 20                      | I                          | 180               | 0.210                                 | 700                           |
| SQC321618T-1R0□-N | 1.00                    | 20                      | I                          | 100               | 0.364                                 | 510                           |
| SQC321618T-2R2□-N | 2.20                    | 20                      | I                          | 50                | 0.533                                 | 430                           |
| SQC321618T-4R7□-N | 4.70                    | 10 / 20                 | I                          | 31                | 0.845                                 | 340                           |
| SQC321618T-100□-N | 10.0                    | 5 / 10                  | I                          | 20                | 1.690                                 | 230                           |
| SQC321618T-220□-N | 22.0                    | 5 / 10                  | I                          | 14                | 3.900                                 | 160                           |
| SQC321618T-470□-N | 47.0                    | 5 / 10                  | I                          | 10                | 10.40                                 | 100                           |
| SQC321618T-101□-N | 100                     | 5 / 10                  | I                          | 7                 | 15.60                                 | 80                            |

Note:

Tolerance: J =  $\pm$  5%, K =  $\pm$  10%, M =  $\pm$  20%

Test Instruments: L/Q- HP4192A LF Impedance Analyzer

SRF- HP4291A RF Impedance Analyzer

RDC- CH502BC

IDC- Self temperature rise shall be limited to 35 °C Max. Inductance drop 10% typ.

Soldering Heat: 260 °C 10 sec. after 150 °C Preheat Cycle for 4 Min.

Operating Temperature Range: -25 °C to +85 °C

## ELECTRICAL CHARACTERISTICS SQC322517

| PART NO.          | IMPEDANCE<br>( $\mu$ H) | TOLERANCE<br>( $\pm$ %) | TEST<br>FREQUENCY<br>(MHz) | SRF<br>(MHz) Min. | DC<br>RESISTANCE<br>( $\Omega$ ) $\pm$ 30% | RATED<br>CURRENT<br>(mA) Max. |
|-------------------|-------------------------|-------------------------|----------------------------|-------------------|--------------------------------------------|-------------------------------|
| SQC322517T-2R2□-N | 2.20                    | 20                      | I                          | 64                | 0.097                                      | 790                           |
| SQC322517T-3R3□-N | 3.30                    | 20                      | I                          | 50                | 0.120                                      | 710                           |
| SQC322517T-6R8□-N | 6.80                    | 20                      | I                          | 32                | 0.250                                      | 540                           |
| SQC322517T-100□-N | 10.0                    | 10 / 20                 | I                          | 26                | 0.300                                      | 350                           |
| SQC322517T-220□-N | 22.0                    | 10 / 20                 | I                          | 19                | 0.710                                      | 250                           |
| SQC322517T-101□-N | 100                     | 10 / 20                 | I                          | 10                | 3.500                                      | 100                           |

Note:

Tolerance: K =  $\pm$  10%, M =  $\pm$  20%

Tolerance of Inductance: 2.2  $\mu$ H to 6.8  $\mu$ H  $\pm$  20%, 10  $\mu$ H to 100  $\mu$ H  $\pm$  10%

Test Instruments: L/Q- HP4284A

SRF- HP4287A

RDC- CH502BC

IDC- Self temperature rise shall be limited to 35 °C Max. Inductance drop 10% typ.

Soldering Heat: 260 °C 10 sec. after 150 °C Preheat Cycle for 4 Min.

Operating Temperature Range: -25 °C to +85 °C



## ELECTRICAL CHARACTERISTICS SQC322520

| PART NO.          | IMPEDANCE<br>( $\mu$ H) | TOLERANCE<br>( $\pm$ %) | TEST<br>FREQUENCY | SRF<br>(MHz) Min. | DC<br>RESISTANCE<br>( $\Omega$ ) $\pm$ 30% | RATED<br>CURRENT<br>(mA) Max. |
|-------------------|-------------------------|-------------------------|-------------------|-------------------|--------------------------------------------|-------------------------------|
| SQC322520T-1R0□-N | 1.00                    | 20                      | 1 MHz             | 96                | 0.09                                       | 1,000                         |
| SQC322520T-2R2□-N | 2.20                    | 20                      | 1 MHz             | 64                | 0.13                                       | 600                           |
| SQC322520T-4R7□-N | 4.70                    | 20                      | 1 MHz             | 43                | 0.20                                       | 450                           |
| SQC322520T-100□-N | 10.0                    | 20                      | 1 MHz             | 26                | 0.44                                       | 300                           |
| SQC322520T-220□-N | 22.0                    | 10 / 20                 | 1 MHz             | 19                | 0.71                                       | 250                           |
| SQC322520T-470□-N | 47.0                    | 10 / 20                 | 1 MHz             | 15                | 1.30                                       | 170                           |
| SQC322520T-101□-N | 100                     | 10 / 20                 | 1 MHz             | 10                | 3.50                                       | 100                           |
| SQC322520T-221□-N | 220                     | 10 / 20                 | 1 MHz             | 6.8               | 8.40                                       | 70                            |
| SQC322520T-331□-N | 330                     | 10 / 20                 | 1 MHz             | 5.6               | 10.0                                       | 60                            |
| SQC322520T-391□-N | 390                     | 10 / 20                 | 1 MHz             | 5.0               | 17.0                                       | 60                            |
| SQC322520T-471□-N | 470                     | 10 / 20                 | 1 KHz             | 5.0               | 19.0                                       | 60                            |
| SQC322520T-561□-N | 560                     | 10 / 20                 | 1 KHz             | 5.0               | 22.0                                       | 60                            |

## ELECTRICAL CHARACTERISTICS SQC453226

| PART NO.          | IMPEDANCE<br>( $\mu$ H) | TOLERANCE<br>( $\pm$ %) | TEST<br>FREQUENCY | SRF<br>(MHz) Min. | DC<br>RESISTANCE<br>( $\Omega$ ) Max. | RATED<br>CURRENT<br>(mA) Max. |
|-------------------|-------------------------|-------------------------|-------------------|-------------------|---------------------------------------|-------------------------------|
| SQC453226T-1R0□-N | 1.00                    | 20                      | 1 MHz             | 100               | 0.08                                  | 1,080                         |
| SQC453226T-1R5□-N | 1.50                    | 20                      | 1 MHz             | 85                | 0.09                                  | 1,000                         |
| SQC453226T-2R2□-N | 2.20                    | 20                      | 1 MHz             | 60                | 0.11                                  | 900                           |
| SQC453226T-3R3□-N | 3.30                    | 20                      | 1 MHz             | 47                | 0.13                                  | 800                           |
| SQC453226T-4R7□-N | 4.70                    | 10 / 20                 | 1 MHz             | 35                | 0.15                                  | 750                           |
| SQC453226T-6R8□-N | 6.80                    | 10 / 20                 | 1 MHz             | 30                | 0.20                                  | 720                           |
| SQC453226T-100□-N | 10.0                    | 5 / 10                  | 1 MHz             | 23                | 0.24                                  | 650                           |
| SQC453226T-150□-N | 15.0                    | 5 / 10                  | 1 MHz             | 20                | 0.32                                  | 570                           |
| SQC453226T-220□-N | 22.0                    | 5 / 10                  | 1 MHz             | 15                | 0.60                                  | 420                           |
| SQC453226T-330□-N | 33.0                    | 5 / 10                  | 1 MHz             | 12                | 1.00                                  | 310                           |
| SQC453226T-470□-N | 47.0                    | 5 / 10                  | 1 MHz             | 10                | 1.10                                  | 280                           |
| SQC453226T-680□-N | 68.0                    | 5 / 10                  | 1 MHz             | 8.4               | 1.70                                  | 220                           |
| SQC453226T-101□-N | 100                     | 5 / 10                  | 1 MHz             | 6.8               | 2.20                                  | 190                           |
| SQC453226T-151□-N | 150                     | 5 / 10                  | 1 MHz             | 5.5               | 3.50                                  | 130                           |
| SQC453226T-221□-N | 220                     | 5 / 10                  | 1 MHz             | 4.5               | 4.00                                  | 110                           |
| SQC453226T-331□-N | 330                     | 5 / 10                  | 1 MHz             | 3.6               | 6.80                                  | 100                           |
| SQC453226T-471□-N | 470                     | 5 / 10                  | 1 KHz             | 3.0               | 8.50                                  | 90                            |

Note:

Tolerance: J =  $\pm$  5%, K =  $\pm$  10%, M =  $\pm$  20%

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SRF- HP4291A RF Impedance Analyzer

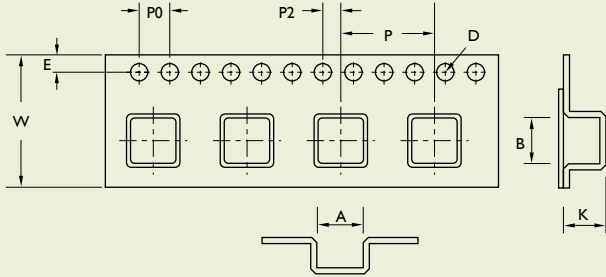
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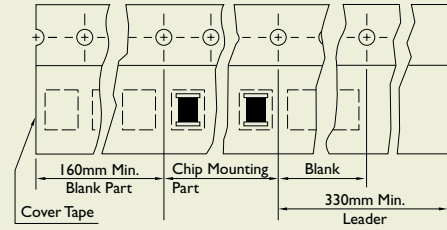
## TAPE DIMENSIONS



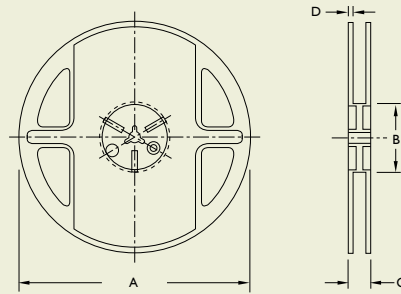
## TAPE MATERIAL

Carrier Tape: Polystyrene

Cover Tape: Polyethylene



## REEL DIMENSIONS



Dimensions: mm

| TYPE      | TAPE DIMENSIONS |      |      |      |      |    |   |    |    | REEL DIMENSIONS |    |      |     | QUANTITY/<br>REEL |
|-----------|-----------------|------|------|------|------|----|---|----|----|-----------------|----|------|-----|-------------------|
|           | A               | B    | K    | D    | E    | W  | P | P0 | P2 | A               | B  | C    | D   |                   |
| SQC201609 | 1.90            | 2.30 | 1.10 | 1.55 | 1.75 | 8  | 4 | 4  | 2  | 178             | 60 | 9.0  | 1.5 | 3,000             |
| SQC321618 | 1.85            | 3.55 | 2.05 | 1.50 | 1.75 | 8  | 4 | 4  | 2  | 178             | 60 | 9.0  | 1.5 | 2,000             |
| SQC322517 | 2.85            | 3.56 | 1.80 | 1.55 | 1.75 | 8  | 4 | 4  | 2  | 178             | 60 | 9.0  | 1.5 | 2,000             |
| SQC322520 | 2.90            | 3.60 | 2.25 | 1.50 | 1.75 | 8  | 4 | 4  | 2  | 178             | 60 | 9.0  | 1.5 | 2,000             |
| SQC453226 | 3.60            | 4.90 | 3.00 | 1.50 | 1.75 | 12 | 8 | 4  | 2  | 178             | 60 | 13.2 | 1.5 | 500               |