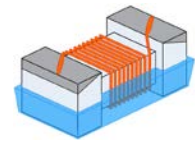


# Wire Wound Chip Ceramic Inductor - SDWL-C-M Series

Operating Temp. : -40°C~+125°C



## FEATURES

- Small chip suitable for surface mounting
- High Q value and high self-resonant frequency with ceramic material
- Tight inductance tolerance and high reliability

## APPLICATIONS

- High frequency circuit in telecommunication and other equipments
- Mobile phones such as GSM, CDMA, PDC, etc.
- Bluetooth, W-LAN, Broadband network

## PRODUCT IDENTIFICATION

**SDWL**    **1608**    **C**    **10N**    **J**    **S**    **T**    **F**    **M01**  
 ①                      ②                      ③                      ④                      ⑤                      ⑥                      ⑦                      ⑧                      ⑨

①

| Type |                          |
|------|--------------------------|
| SDWL | Wire Wound Chip Inductor |

②

| External Dimensions |
|---------------------|
| 1608 [0603]         |

③

| Material Code |         |
|---------------|---------|
| C             | Ceramic |

④

| Nominal Inductance |               |
|--------------------|---------------|
| Example            | Nominal Value |
| 4N7                | 4.7nH         |
| 10N                | 10nH          |
| R10                | 100nH         |

⑤

| Inductance Tolerance |        |
|----------------------|--------|
| B                    | ±0.1nH |
| C                    | ±0.2nH |
| S                    | ±0.3nH |
| D                    | ±0.5nH |
| G                    | ±2%    |
| H                    | ±3%    |
| J                    | ±5%    |

⑥

| Feature Type |                                     |
|--------------|-------------------------------------|
| S            | Sn Plating<br>Five-faces<br>Coating |

⑦

| Packing |             |
|---------|-------------|
| T       | Tape & Reel |

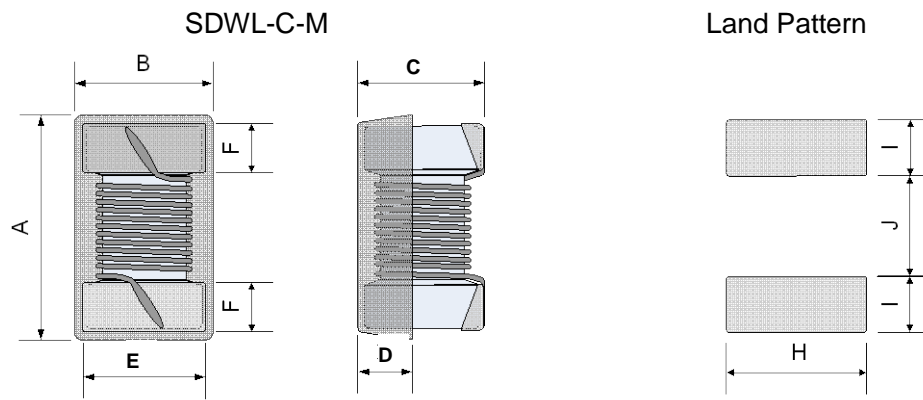
⑧

| Hazardous Substance Free Products |
|-----------------------------------|
| F                                 |

⑨

| Internal Code |               |
|---------------|---------------|
| M01/M11       | Internal Code |

## SHAPE AND DIMENSIONS



Unit: mm

| Series      | A       | B       | C       | D Typ. | E        | F       | H Typ. | I Typ. | J Typ. |
|-------------|---------|---------|---------|--------|----------|---------|--------|--------|--------|
| SDWL1608C-M | 1.6±0.2 | 0.9±0.2 | 0.8±0.2 | 0.38   | 0.8±0.15 | 0.3±0.1 | 1.02   | 0.64   | 0.64   |

## SPECIFICATIONS

### SDWL1608C-M01 TYPE

| Part Number         | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|---------------------|------------|-----------|---------------------|----------------|--------------------|--------------------|------------------------------|
| Units               | nH         | -         | -                   | MHz            | Ω                  | mA                 | MHz                          |
| Symbol              | L          | -         | Q                   | Freq.          | DCR                | I <sub>r</sub>     | S.R.F                        |
| SDWL1608C2N2□STFM01 | 2.2        | C,D       | 16                  | 100/250        | 0.049              | 700                | 6000                         |
| SDWL1608C3N6□STFM01 | 3.6        | C,D       | 25                  | 100/250        | 0.059              | 850                | 6000                         |
| SDWL1608C3N9□STFM01 | 3.9        | C,D       | 35                  | 100/250        | 0.059              | 850                | 6000                         |
| SDWL1608C4N3□STFM01 | 4.3        | C,D       | 35                  | 100/250        | 0.059              | 850                | 6000                         |
| SDWL1608C4N5□STFM01 | 4.5        | C,D       | 35                  | 100/250        | 0.059              | 850                | 6000                         |
| SDWL1608C4N7□STFM01 | 4.7        | C,D       | 35                  | 100/250        | 0.059              | 850                | 6000                         |
| SDWL1608C5N6□STFM01 | 5.6        | C,D       | 35                  | 100/250        | 0.082              | 750                | 6000                         |
| SDWL1608C6N2□STFM01 | 6.2        | C,D       | 35                  | 100/250        | 0.082              | 750                | 6000                         |
| SDWL1608C6N8□STFM01 | 6.8        | C,D       | 35                  | 100/250        | 0.082              | 750                | 6000                         |
| SDWL1608C7N5□STFM01 | 7.5        | C,D       | 35                  | 100/250        | 0.082              | 750                | 6000                         |
| SDWL1608C8N2□STFM01 | 8.2        | C,D       | 35                  | 100/250        | 0.11               | 650                | 6000                         |
| SDWL1608C8N7□STFM01 | 8.7        | C,D       | 35                  | 100/250        | 0.11               | 650                | 6000                         |
| SDWL1608C9N1□STFM01 | 9.1        | C,D       | 35                  | 100/250        | 0.11               | 650                | 6000                         |
| SDWL1608C9N5□STFM01 | 9.5        | C,D       | 35                  | 100/250        | 0.11               | 650                | 6000                         |
| SDWL1608C10N□STFM01 | 10         | G,H,J     | 35                  | 100/250        | 0.11               | 650                | 6000                         |
| SDWL1608C11N□STFM01 | 11         | G,H,J     | 35                  | 100/250        | 0.11               | 650                | 6000                         |
| SDWL1608C12N□STFM01 | 12         | G,H,J     | 35                  | 100/250        | 0.13               | 600                | 6000                         |

# SPECIFICATIONS

## SDWL1608C-M01 TYPE

| Part Number         | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|---------------------|------------|-----------|---------------------|----------------|--------------------|--------------------|------------------------------|
| Units               | nH         | -         | -                   | MHz            | $\Omega$           | mA                 | MHz                          |
| Symbol              | L          | -         | Q                   | Freq.          | DCR                | I <sub>r</sub>     | S.R.F                        |
| SDWL1608C13N□STFM01 | 13         | G,H,J     | 35                  | 100/250        | 0.13               | 600                | 6000                         |
| SDWL1608C15N□STFM01 | 15         | G,H,J     | 40                  | 100/250        | 0.13               | 600                | 6000                         |
| SDWL1608C16N□STFM01 | 16         | G,H,J     | 40                  | 100/250        | 0.16               | 550                | 5500                         |
| SDWL1608C18N□STFM01 | 18         | G,H,J     | 40                  | 100/250        | 0.16               | 550                | 5500                         |
| SDWL1608C20N□STFM01 | 20         | G,H,J     | 40                  | 100/250        | 0.16               | 550                | 4900                         |
| SDWL1608C22N□STFM01 | 22         | G,H,J     | 40                  | 100/250        | 0.17               | 500                | 4600                         |
| SDWL1608C24N□STFM01 | 24         | G,H,J     | 40                  | 100/250        | 0.21               | 500                | 3800                         |
| SDWL1608C27N□STFM01 | 27         | G,H,J     | 40                  | 100/250        | 0.21               | 440                | 3700                         |
| SDWL1608C30N□STFM01 | 30         | G,H,J     | 40                  | 100/250        | 0.23               | 420                | 3300                         |
| SDWL1608C33N□STFM01 | 33         | G,H,J     | 40                  | 100/250        | 0.23               | 420                | 3200                         |
| SDWL1608C36N□STFM01 | 36         | G,H,J     | 40                  | 100/250        | 0.26               | 400                | 2900                         |
| SDWL1608C39N□STFM01 | 39         | G,H,J     | 40                  | 100/250        | 0.26               | 400                | 2800                         |
| SDWL1608C43N□STFM01 | 43         | G,H,J     | 40                  | 100/200        | 0.29               | 380                | 2700                         |
| SDWL1608C47N□STFM01 | 47         | G,H,J     | 38                  | 100/200        | 0.29               | 380                | 2600                         |
| SDWL1608C51N□STFM01 | 51         | G,H,J     | 38                  | 100/200        | 0.33               | 370                | 2500                         |
| SDWL1608C56N□STFM01 | 56         | G,H,J     | 38                  | 100/200        | 0.35               | 360                | 2400                         |
| SDWL1608C62N□STFM01 | 62         | G,H,J     | 38                  | 100/200        | 0.51               | 280                | 2300                         |
| SDWL1608C68N□STFM01 | 68         | G,H,J     | 38                  | 100/200        | 0.38               | 340                | 2200                         |
| SDWL1608C72N□STFM01 | 72         | G,H,J     | 34                  | 100/150        | 0.56               | 270                | 2100                         |
| SDWL1608C75N□STFM01 | 75         | G,H,J     | 34                  | 100/150        | 0.56               | 270                | 2050                         |
| SDWL1608C82N□STFM01 | 82         | G,H,J     | 34                  | 100/150        | 0.60               | 250                | 2000                         |
| SDWL1608C91N□STFM01 | 91         | G,H,J     | 34                  | 100/150        | 0.64               | 230                | 1900                         |
| SDWL1608CR10□STFM01 | 100        | G,H,J     | 34                  | 100/150        | 0.68               | 220                | 1800                         |
| SDWL1608CR11□STFM01 | 110        | G,H,J     | 32                  | 100/150        | 1.2                | 200                | 1700                         |
| SDWL1608CR12□STFM01 | 120        | G,H,J     | 32                  | 100/150        | 1.3                | 180                | 1600                         |
| SDWL1608CR13□STFM01 | 130        | G,H,J     | 32                  | 100/150        | 1.4                | 170                | 1450                         |
| SDWL1608CR15□STFM01 | 150        | G,H,J     | 32                  | 100/150        | 1.5                | 160                | 1400                         |
| SDWL1608CR16□STFM01 | 160        | G,H,J     | 32                  | 100/150        | 2.1                | 150                | 1350                         |
| SDWL1608CR18□STFM01 | 180        | G,H,J     | 25                  | 100            | 2.2                | 140                | 1300                         |
| SDWL1608CR20□STFM01 | 200        | G,H,J     | 25                  | 100            | 2.4                | 120                | 1250                         |
| SDWL1608CR22□STFM01 | 220        | G,H,J     | 25                  | 100            | 2.5                | 120                | 1200                         |
| SDWL1608CR27□STFM01 | 270        | G,H,J     | 30                  | 100            | 3.4                | 110                | 960                          |
| SDWL1608CR33□STFM01 | 330        | G,H,J     | 30                  | 100            | 5.5                | 85                 | 800                          |
| SDWL1608CR39□STFM01 | 390        | G,H,J     | 30                  | 100            | 6.2                | 80                 | 800                          |
| SDWL1608CR47□STFM01 | 470        | G,H,J     | 30                  | 100            | 7.0                | 75                 | 700                          |

## SDWL1608C-M11 TYPE

| Part Number         | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|---------------------|------------|-----------|---------------------|----------------|--------------------|--------------------|------------------------------|
| Units               | nH         | -         | -                   | MHz            | $\Omega$           | mA                 | MHz                          |
| Symbol              | L          | -         | Q                   | Freq.          | DCR                | I <sub>r</sub>     | S.R.F                        |
| SDWL1608C2N2□STFM11 | 2.2        | C,D       | 18                  | 100/250        | 0.018              | 1400               | >6000                        |
| SDWL1608C3N9□STFM11 | 3.9        | C,D       | 38                  | 100/250        | 0.032              | 1000               | >6000                        |
| SDWL1608C5N6□STFM11 | 5.6        | C,D       | 38                  | 100/250        | 0.045              | 900                | >6000                        |
| SDWL1608C6N8□STFM11 | 6.8        | C,D       | 38                  | 100/250        | 0.045              | 900                | >6000                        |
| SDWL1608C8N2□STFM11 | 8.2        | S,D       | 38                  | 100/250        | 0.058              | 800                | >6000                        |



Specifications subject to change without notice. Please check our website for latest information. Revised 2019/04/01

# SPECIFICATIONS

## SDWL1608C-M11 TYPE

| Part Number         | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|---------------------|------------|-----------|---------------------|----------------|--------------------|--------------------|------------------------------|
| Units               | nH         | -         | -                   | MHz            | $\Omega$           | mA                 | MHz                          |
| Symbol              | L          | -         | Q                   | Freq.          | DCR                | I <sub>r</sub>     | S.R.F                        |
| SDWL1608C10N□STFM11 | 10         | G,H,J     | 38                  | 100/250        | 0.070              | 800                | 5000                         |
| SDWL1608C12N□STFM11 | 12         | G,H,J     | 38                  | 100/250        | 0.071              | 750                | 5000                         |
| SDWL1608C15N□STFM11 | 15         | G,H,J     | 42                  | 100/250        | 0.085              | 700                | 4500                         |
| SDWL1608C18N□STFM11 | 18         | G,H,J     | 42                  | 100/250        | 0.085              | 700                | 3500                         |
| SDWL1608C22N□STFM11 | 22         | G,H,J     | 42                  | 100/250        | 0.099              | 640                | 3200                         |
| SDWL1608C27N□STFM11 | 27         | G,H,J     | 42                  | 100/250        | 0.116              | 590                | 2800                         |
| SDWL1608C33N□STFM11 | 33         | J         | 42                  | 100/250        | 0.132              | 550                | 2500                         |

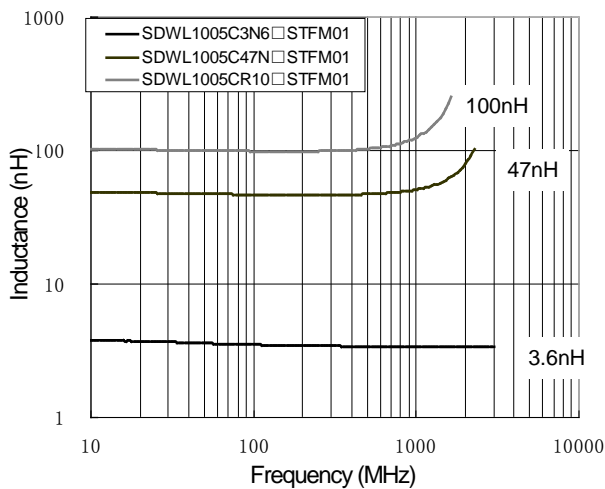
※□: Please specify the inductance tolerance code (B=±0.1nH,C=±0.2nH, S=±0.2nH,D=±0.5nH,G=±2%,H=±3%,J=±5%).

※: Please refer to "Measurement Notice For RF Inductors".

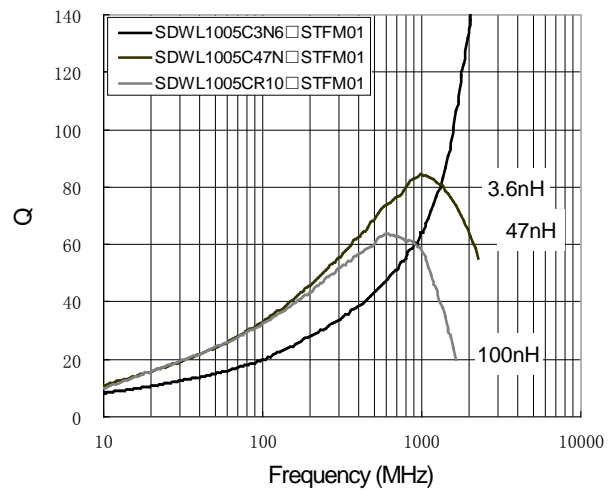
# TYPICAL ELECTRICAL CHARACTERISTICS

## SDWL1005C-M TYPE

Inductance vs. Frequency Characteristics

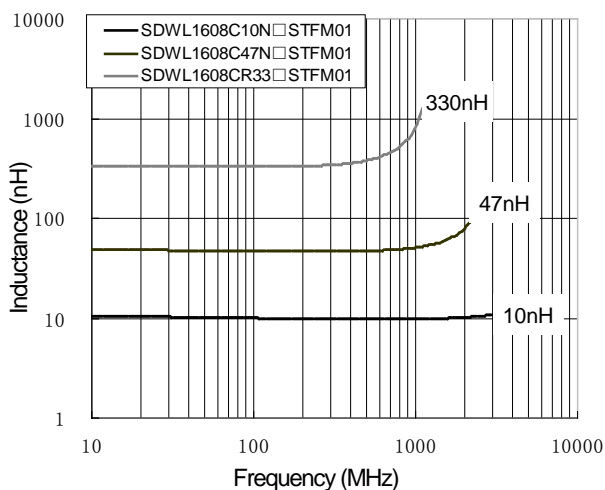


Q vs. Frequency Characteristics

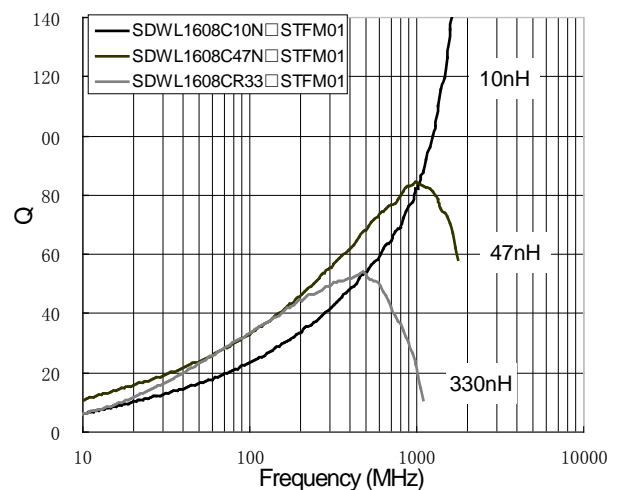


## SDWL1608C-M TYPE

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics



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