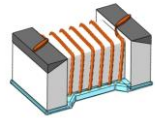


# Wire Wound Chip Ceramic Inductor - MWSD-C Series

Operating Temp. : -40℃~+125℃



## FEATURES

- Small chip suitable for surface mounting
- High Q value and high self-resonant frequency with ceramic material
- Tight inductance tolerance and high reliability
- Single-sided package, thinner than SDWL-C series

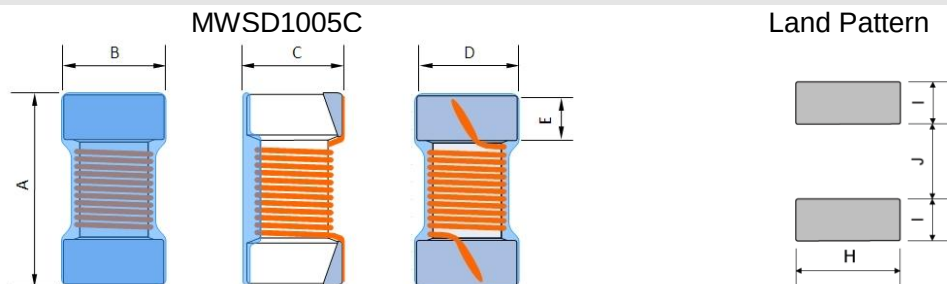
## APPLICATIONS

- High frequency circuit in telecommunication and other equipments
- Mobile phones such as GSM, CDMA, TD-LTE, FDD-LTE, PDC, 5G NR, etc.
- Bluetooth, W-LAN, Broadband network

## PRODUCT IDENTIFICATION

| <u>MWSD</u><br>①   |                          | <u>1005</u><br>②     | <u>C</u><br>③ | <u>10N</u><br>④ | <u>S</u><br>⑤ | <u>I</u><br>⑥ |
|--------------------|--------------------------|----------------------|---------------|-----------------|---------------|---------------|
| Type               |                          | External Dimensions  |               | Material Code   |               |               |
| MWSD               | Wire Wound Chip Inductor | 1005 [0402]          |               | C Ceramic       |               |               |
| Nominal Inductance |                          | Inductance Tolerance |               | Packing         |               |               |
| Example            | Nominal Value            | B                    | ±0.1nH        | B Bulk Package  |               |               |
| 4N7                | 4.7nH                    | C                    | ±0.2nH        | T Tape & Reel   |               |               |
| 10N                | 10nH                     | S                    | ±0.3nH        |                 |               |               |
| R10                | 100nH                    | D                    | ±0.5nH        |                 |               |               |
|                    |                          | G                    | ±2%           |                 |               |               |
|                    |                          | H                    | ±3%           |                 |               |               |
|                    |                          | J                    | ±5%           |                 |               |               |

## SHAPE AND DIMENSIONS



Unit: mm

| Series    | A       | B       | C        | D       | E       | H REF. | I REF. | J REF. |
|-----------|---------|---------|----------|---------|---------|--------|--------|--------|
| MWSD1005C | 1.1±0.1 | 0.6±0.1 | 0.55±0.1 | 0.5±0.1 | 0.2±0.1 | 0.65   | 0.35   | 0.50   |

## SPECIFICATIONS

### MWSD1005C TYPE

| Part Number    | Inductance | Tolerance   | Min. Quality Factor | L/Q Test Freq. | Max. DC Resistanc | Max. Rated Current | Min. Self-resonant Frequency |
|----------------|------------|-------------|---------------------|----------------|-------------------|--------------------|------------------------------|
| Units          | nH         | -           | -                   | MHz            | $\Omega$          | mA                 | MHz                          |
| Symbol         | L          | -           | Q                   | Freq.          | DCR               | Ir                 | S.R.F                        |
| MWSD1005C0N8□T | 0.8        | B,C,S,D,K   | 14                  | 250            | 0.035             | 1000               | >6000                        |
| MWSD1005C1N0□T | 1.0        | B,C,S,D,K   | 10                  | 250            | 0.085             | 650                | >6000                        |
| MWSD1005C1N8□T | 1.8        | B,C,S,D,J,K | 20                  | 250            | 0.043             | 950                | >6000                        |
| MWSD1005C1N9□T | 1.9        | B,C,S,D,J,K | 20                  | 250            | 0.043             | 950                | >6000                        |
| MWSD1005C2N0□T | 2.0        | B,C,S,D,J,K | 23                  | 250            | 0.043             | 950                | >6000                        |
| MWSD1005C2N2□T | 2.2        | B,C,S,D,J,K | 22                  | 250            | 0.058             | 820                | >6000                        |
| MWSD1005C2N4□T | 2.4        | B,C,S,D,J,K | 18                  | 250            | 0.091             | 650                | >6000                        |
| MWSD1005C2N7□T | 2.7        | B,C,S,D,J,K | 24                  | 250            | 0.050             | 900                | >6000                        |
| MWSD1005C3N0□T | 3.0        | S,D,K       | 24                  | 250            | 0.063             | 790                | >6000                        |
| MWSD1005C3N3□T | 3.3        | B,C,S,D,J,K | 24                  | 250            | 0.063             | 790                | >6000                        |
| MWSD1005C3N6□T | 3.6        | B,C,S,D,J,K | 24                  | 250            | 0.063             | 790                | >6000                        |
| MWSD1005C3N9□T | 3.9        | B,C,S,D,J,K | 24                  | 250            | 0.063             | 790                | >6000                        |
| MWSD1005C4N1□T | 4.1        | B,C,S,D,J,K | 22                  | 250            | 0.070             | 700                | >6000                        |
| MWSD1005C4N3□T | 4.3        | B,C,S,D,J,K | 22                  | 250            | 0.070             | 750                | >6000                        |
| MWSD1005C4N7□T | 4.7        | B,C,S,D,J,K | 20                  | 250            | 0.120             | 570                | >6000                        |
| MWSD1005C5N1□T | 5.1        | B,C,S,D,J,K | 23                  | 250            | 0.100             | 620                | >6000                        |
| MWSD1005C5N6□T | 5.6        | B,C,S,D,J,K | 25                  | 250            | 0.078             | 710                | >6000                        |
| MWSD1005C5N8□T | 5.8        | B,C,S,D,J,K | 25                  | 250            | 0.078             | 710                | >6000                        |
| MWSD1005C6N2□T | 6.2        | B,C,S,D,J,K | 25                  | 250            | 0.078             | 710                | >6000                        |
| MWSD1005C6N8□T | 6.8        | G,H,J,K     | 24                  | 250            | 0.105             | 610                | 6000                         |
| MWSD1005C7N5□T | 7.5        | G,H,J,K     | 25                  | 250            | 0.12              | 570                | 6000                         |
| MWSD1005C8N2□T | 8.2        | G,H,J,K     | 25                  | 250            | 0.11              | 590                | 5500                         |
| MWSD1005C8N7□T | 8.7        | G,H,J,K     | 25                  | 250            | 0.11              | 590                | 5500                         |
| MWSD1005C9N0□T | 9.0        | G,H,J,K     | 25                  | 250            | 0.11              | 590                | 5500                         |
| MWSD1005C9N1□T | 9.1        | G,H,J,K     | 25                  | 250            | 0.11              | 590                | 5500                         |
| MWSD1005C10N□T | 10         | G,H,J,K     | 24                  | 250            | 0.15              | 510                | 5500                         |
| MWSD1005C11N□T | 11         | G,H,J,K     | 26                  | 250            | 0.12              | 570                | 5500                         |
| MWSD1005C12N□T | 12         | G,H,J,K     | 26                  | 250            | 0.12              | 570                | 5500                         |
| MWSD1005C13N□T | 13         | G,H,J,K     | 24                  | 250            | 0.18              | 460                | 5000                         |
| MWSD1005C14N□T | 14         | G,H,J,K     | 26                  | 250            | 0.21              | 430                | 5000                         |
| MWSD1005C15N□T | 15         | G,H,J,K     | 26                  | 250            | 0.21              | 430                | 5000                         |
| MWSD1005C16N□T | 16         | G,H,J,K     | 25                  | 250            | 0.28              | 370                | 4500                         |
| MWSD1005C18N□T | 18         | G,H,J,K     | 25                  | 250            | 0.28              | 370                | 4500                         |
| MWSD1005C19N□T | 19         | G,H,J,K     | 26                  | 250            | 0.24              | 400                | 4000                         |
| MWSD1005C20N□T | 20         | G,H,J,K     | 26                  | 250            | 0.24              | 400                | 4000                         |
| MWSD1005C22N□T | 22         | G,H,J,K     | 25                  | 250            | 0.36              | 330                | 4000                         |
| MWSD1005C23N□T | 23         | G,H,J,K     | 25                  | 250            | 0.36              | 330                | 3800                         |
| MWSD1005C24N□T | 24         | G,H,J,K     | 25                  | 250            | 0.36              | 330                | 3500                         |
| MWSD1005C27N□T | 27         | G,H,J,K     | 25                  | 250            | 0.38              | 320                | 3500                         |
| MWSD1005C30N□T | 30         | G,H,J,K     | 25                  | 250            | 0.38              | 320                | 3300                         |
| MWSD1005C33N□T | 33         | G,H,J,K     | 24                  | 250            | 0.55              | 260                | 3200                         |
| MWSD1005C36N□T | 36         | G,H,J,K     | 25                  | 250            | 0.60              | 250                | 3100                         |
| MWSD1005C38N□T | 38         | G,H,J,K     | 25                  | 250            | 0.60              | 250                | 3000                         |
| MWSD1005C39N□T | 39         | G,H,J,K     | 25                  | 250            | 0.60              | 250                | 3000                         |
| MWSD1005C43N□T | 43         | G,H,J,K     | 25                  | 250            | 0.68              | 240                | 3000                         |
| MWSD1005C47N□T | 47         | G,H,J,K     | 25                  | 250            | 0.95              | 200                | 2900                         |
| MWSD1005C51N□T | 51         | G,H,J,K     | 25                  | 250            | 0.95              | 200                | 2850                         |
| MWSD1005C56N□T | 56         | G,H,J,K     | 25                  | 250            | 1.05              | 190                | 2800                         |
| MWSD1005C62N□T | 62         | G,H,J,K     | 25                  | 250            | 1.05              | 190                | 2600                         |
| MWSD1005C68N□T | 68         | G,H,J,K     | 25                  | 250            | 1.35              | 170                | 2500                         |
| MWSD1005C75N□T | 75         | G,H,J,K     | 24                  | 250            | 1.75              | 140                | 2400                         |

## SPECIFICATIONS

### MWSD1005C TYPE

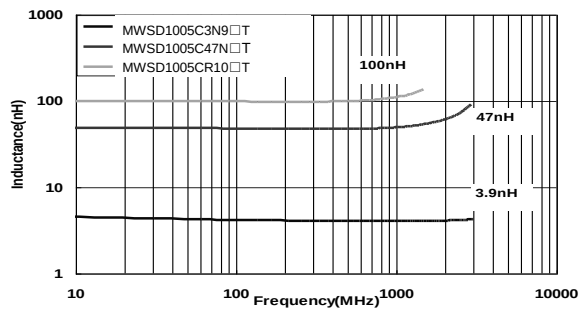
| Part Number    | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Max. DC Resistanc | Max. Rated Current | Min. Self-resonant Frequency |
|----------------|------------|-----------|---------------------|----------------|-------------------|--------------------|------------------------------|
| Units          | nH         | -         | -                   | MHz            | $\Omega$          | mA                 | MHz                          |
| Symbol         | L          | -         | Q                   | Freq.          | DCR               | I <sub>r</sub>     | S.R.F                        |
| MWSD1005C82N□T | 82         | G,H,J,K   | 25                  | 250            | 1.90              | 140                | 2300                         |
| MWSD1005C91N□T | 91         | G,H,J,K   | 25                  | 250            | 1.95              | 140                | 2100                         |
| MWSD1005C96N□T | 96         | G,H,J,K   | 24                  | 250            | 2.06              | 130                | 1500                         |
| MWSD1005CR10□T | 100        | G,H,J,K   | 24                  | 250            | 2.06              | 130                | 1500                         |
| MWSD1005CR11□T | 110        | G,H,J,K   | 25                  | 250            | 2.38              | 120                | 1200                         |
| MWSD1005CR12□T | 120        | J,K       | 25                  | 250            | 2.66              | 110                | 1000                         |

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

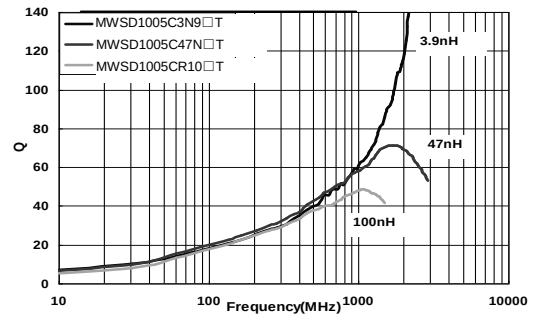
## TYPICAL ELECTRICAL CHARACTERISTICS

### MWSD1005C TYPE

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics



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