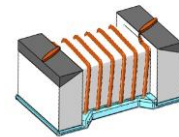


Wire Wound Chip Ceramic Inductor - MWSD-C-M Series

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
- Single-sided package, thinner than SDWL-C-M series

APPLICATIONS

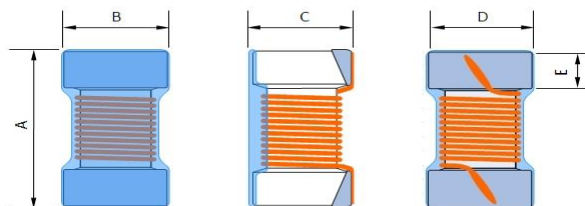
- High frequency circuit in telecommunication and other equipments
- Mobile phones and other electronic devices
- Bluetooth, W-LAN, Broadband network

PRODUCT IDENTIFICATION

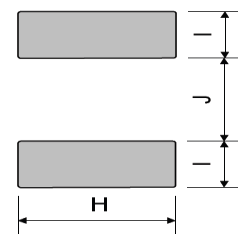
| MWSD ① | 1005 ② | C ③ | 10N ④ | S ⑤ | T ⑥ | M01 ⑦ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|-----------------|---------------|--------------------------|---|-------|---------------------|------|-------------|-------|--|--|----------------------|--|---|---------|--|--------|---------|--------|---|--------------|---|-------------|---|-----|---|-----|---|--|---------------|--|---------|---------------|
| <table border="1"> <tr><th colspan="2">Type</th></tr> <tr><td>MWSD</td><td>Wire Wound Chip Inductor</td></tr> </table> | | Type | | MWSD | Wire Wound Chip Inductor | <table border="1"> <tr><th colspan="2">External Dimensions</th></tr> <tr><td colspan="2">1005 [0402]</td></tr> </table> | | External Dimensions | | 1005 [0402] | | <table border="1"> <tr><th colspan="2">Material Code</th></tr> <tr><td>C</td><td>Ceramic</td></tr> </table> | | Material Code | | C | Ceramic | <table border="1"> <tr><th colspan="2">Packing</th></tr> <tr><td>B</td><td>Bulk Package</td></tr> <tr><td>T</td><td>Tape & Reel</td></tr> </table> | | Packing | | B | Bulk Package | T | Tape & Reel | | | | | | | | | | |
| Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MWSD | Wire Wound Chip Inductor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| External Dimensions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1005 [0402] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | Ceramic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Packing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | Bulk Package | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T | Tape & Reel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr><th colspan="2">Nominal Inductance</th></tr> <tr><th>Example</th><th>Nominal Value</th></tr> <tr><td>4N7</td><td>4.7nH</td></tr> <tr><td>10N</td><td>10nH</td></tr> <tr><td>R10</td><td>100nH</td></tr> </table> | | Nominal Inductance | | Example | Nominal Value | 4N7 | 4.7nH | 10N | 10nH | R10 | 100nH | <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>D</td><td>±0.5nH</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 | D | ±0.5nH | G | ±2% | H | ±3% | J | ±5% | <table border="1"> <tr><th colspan="2">Internal Code</th></tr> <tr><td>M01/M11</td><td>Internal Code</td></tr> </table> | | Internal Code | | M01/M11 | Internal Code |
| Nominal Inductance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Example | Nominal Value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4N7 | 4.7nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10N | 10nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R10 | 100nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inductance Tolerance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | ±0.1nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | ±0.2nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | ±0.3nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | ±0.5nH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | ±2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | ±3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | ±5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Internal Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M01/M11 | Internal Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SHAPE AND DIMENSIONS

MWSD1005C-M



Land Pattern



Unit: mm

| Series | A | B | C | D | E | H REF. | I REF. | J REF. |
|-------------|---------|---------|----------|---------|---------|--------|--------|--------|
| MWSD1005C-M | 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 -M01 TYPE

| Part Number | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|-------------------|------------|-----------|---------------------|----------------|------------------------------|--------------------|--------------------|
| Units | nH | - | - | MHz | MHz | Ω | mA |
| Symbol | L | - | Q | Freq. | S.R.F | DCR | I _r |
| MWSD1005C1N5□TM01 | 1.5 | B,C,D | 10 | 100/250 | >6000 | 0.03 | 1000 |
| MWSD1005C1N6□TM01 | 1.6 | C,D | 10 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C1N7□TM01 | 1.7 | C,D | 10 | 100/250 | >6000 | 0.10 | 640 |
| MWSD1005C1N8□TM01 | 1.8 | C,D | 10 | 100/250 | >6000 | 0.16 | 460 |
| MWSD1005C2N4□TM01 | 2.4 | B,C,D | 20 | 100/250 | >6000 | 0.05 | 850 |
| MWSD1005C2N5□TM01 | 2.5 | B,C,D | 20 | 100/250 | >6000 | 0.05 | 850 |
| MWSD1005C2N6□TM01 | 2.6 | B,C,D | 20 | 100/250 | >6000 | 0.05 | 850 |
| MWSD1005C2N7□TM01 | 2.7 | B,C,D | 20 | 100/250 | >6000 | 0.05 | 850 |
| MWSD1005C2N8□TM01 | 2.8 | B,C,D | 20 | 100/250 | >6000 | 0.05 | 850 |
| MWSD1005C2N9□TM01 | 2.9 | B,C,D | 20 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C3N0□TM01 | 3.0 | B,C,D | 20 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C3N1□TM01 | 3.1 | B,C,D | 20 | 100/250 | >6000 | 0.13 | 570 |
| MWSD1005C3N2□TM01 | 3.2 | B,C,D | 15 | 100/250 | >6000 | 0.17 | 500 |
| MWSD1005C3N9□TM01 | 3.9 | C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N1□TM01 | 4.1 | B,C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N3□TM01 | 4.3 | B,C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N4□TM01 | 4.4 | B,C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N5□TM01 | 4.5 | B,C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N6□TM01 | 4.6 | B,C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N7□TM01 | 4.7 | B,C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N8□TM01 | 4.8 | B,C,D | 25 | 100/250 | >6000 | 0.07 | 750 |
| MWSD1005C4N9□TM01 | 4.9 | B,C,D | 25 | 100/250 | >6000 | 0.12 | 600 |
| MWSD1005C5N0□TM01 | 5.0 | B,C,D | 25 | 100/250 | >6000 | 0.12 | 600 |
| MWSD1005C5N1□TM01 | 5.1 | B,C,D | 25 | 100/250 | >6000 | 0.12 | 600 |
| MWSD1005C5N8□TM01 | 5.8 | B,C,D | 25 | 100/250 | >6000 | 0.12 | 700 |
| MWSD1005C6N2□TM01 | 6.2 | B,C,D | 25 | 100/250 | >6000 | 0.09 | 700 |
| MWSD1005C6N3□TM01 | 6.3 | B,C,D | 25 | 100/250 | 6000 | 0.09 | 700 |
| MWSD1005C6N4□TM01 | 6.4 | B,C,D | 25 | 100/250 | 6000 | 0.09 | 700 |
| MWSD1005C6N5□TM01 | 6.5 | B,C,D | 25 | 100/250 | 6000 | 0.09 | 700 |
| MWSD1005C6N6□TM01 | 6.6 | B,C,D | 25 | 100/250 | 6000 | 0.09 | 700 |
| MWSD1005C6N7□TM01 | 6.7 | B,C,D | 25 | 100/250 | 6000 | 0.09 | 700 |
| MWSD1005C6N8□TM01 | 6.8 | G,H,J | 25 | 100/250 | 6000 | 0.09 | 700 |
| MWSD1005C6N9□TM01 | 6.9 | G,H,J | 25 | 100/250 | 6000 | 0.13 | 570 |
| MWSD1005C7N0□TM01 | 7.0 | G,H,J | 25 | 100/250 | 6000 | 0.13 | 570 |
| MWSD1005C7N1□TM01 | 7.1 | G,H,J | 25 | 100/250 | 6000 | 0.13 | 570 |
| MWSD1005C7N2□TM01 | 7.2 | G,H,J | 25 | 100/250 | 6000 | 0.13 | 570 |
| MWSD1005C7N3□TM01 | 7.3 | G,H,J | 25 | 100/250 | 6000 | 0.13 | 570 |
| MWSD1005C7N5□TM01 | 7.5 | G,H,J | 25 | 100/250 | 6000 | 0.13 | 570 |
| MWSD1005C8N2□TM01 | 8.2 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C8N6□TM01 | 8.6 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C8N7□TM01 | 8.7 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C8N8□TM01 | 8.8 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C8N9□TM01 | 8.9 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N0□TM01 | 9.0 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N1□TM01 | 9.1 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N2□TM01 | 9.2 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N3□TM01 | 9.3 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N4□TM01 | 9.4 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N5□TM01 | 9.5 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N6□TM01 | 9.6 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N7□TM01 | 9.7 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |

SPECIFICATIONS

MWSD1005C-M01 TYPE

| Part Number | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|-------------------|------------|-----------|---------------------|----------------|------------------------------|--------------------|--------------------|
| Units | nH | - | - | MHz | MHz | Ω | mA |
| Symbol | L | - | Q | Freq. | S.R.F | DCR | Ir |
| MWSD1005C9N8□TM01 | 9.8 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C9N9□TM01 | 9.9 | G,H,J | 25 | 100/250 | 5500 | 0.14 | 540 |
| MWSD1005C10N□TM01 | 10 | G,H,J | 25 | 100/250 | 5500 | 0.17 | 500 |
| MWSD1005C11N□TM01 | 11 | G,H,J | 30 | 100/250 | 5500 | 0.14 | 500 |
| MWSD1005C12N□TM01 | 12 | G,H,J | 30 | 100/250 | 5500 | 0.14 | 500 |
| MWSD1005C13N□TM01 | 13 | G,H,J | 25 | 100/250 | 5000 | 0.21 | 430 |
| MWSD1005C15N□TM01 | 15 | G,H,J | 30 | 100/250 | 5000 | 0.16 | 460 |
| MWSD1005C16N□TM01 | 16 | G,H,J | 25 | 100/250 | 4500 | 0.24 | 370 |
| MWSD1005C18N□TM01 | 18 | G,H,J | 25 | 100/250 | 4500 | 0.27 | 370 |
| MWSD1005C19N□TM01 | 19 | G,H,J | 25 | 100/250 | 4500 | 0.27 | 370 |
| MWSD1005C20N□TM01 | 20 | G,H,J | 25 | 100/250 | 4000 | 0.27 | 370 |
| MWSD1005C22N□TM01 | 22 | G,H,J | 25 | 100/250 | 4000 | 0.30 | 310 |
| MWSD1005C23N□TM01 | 23 | G,H,J | 25 | 100/250 | 3800 | 0.30 | 310 |
| MWSD1005C24N□TM01 | 24 | G,H,J | 25 | 100/250 | 3500 | 0.52 | 280 |
| MWSD1005C27N□TM01 | 27 | G,H,J | 25 | 100/250 | 3500 | 0.52 | 280 |
| MWSD1005C30N□TM01 | 30 | G,H,J | 25 | 100/250 | 3300 | 0.58 | 270 |
| MWSD1005C33N□TM01 | 33 | G,H,J | 25 | 100/250 | 3200 | 0.63 | 260 |
| MWSD1005C36N□TM01 | 36 | G,H,J | 25 | 100/250 | 3100 | 0.63 | 260 |
| MWSD1005C39N□TM01 | 39 | G,H,J | 25 | 100/250 | 3000 | 0.70 | 250 |
| MWSD1005C40N□TM01 | 40 | G,H,J | 25 | 100/250 | 3000 | 0.70 | 250 |
| MWSD1005C43N□TM01 | 43 | G,H,J | 25 | 100/250 | 3000 | 0.70 | 250 |
| MWSD1005C47N□TM01 | 47 | G,H,J | 25 | 100/200 | 2900 | 1.08 | 210 |
| MWSD1005C51N□TM01 | 51 | G,H,J | 25 | 100/200 | 2850 | 1.08 | 210 |
| MWSD1005C56N□TM01 | 56 | G,H,J | 25 | 100/200 | 2800 | 1.17 | 200 |
| MWSD1005C62N□TM01 | 62 | G,H,J | 20 | 100/200 | 2600 | 1.82 | 145 |
| MWSD1005C68N□TM01 | 68 | G,H,J | 20 | 100/200 | 2500 | 1.96 | 140 |
| MWSD1005C72N□TM01 | 72 | G,H,J | 20 | 100/150 | 2500 | 2.10 | 135 |
| MWSD1005C75N□TM01 | 75 | G,H,J | 20 | 100/150 | 2400 | 2.10 | 135 |
| MWSD1005C82N□TM01 | 82 | G,H,J | 20 | 100/150 | 2300 | 2.24 | 130 |
| MWSD1005C91N□TM01 | 91 | G,H,J | 20 | 100/150 | 2100 | 2.38 | 125 |
| MWSD1005CR10□TM01 | 100 | G,H,J | 20 | 100/150 | 1500 | 2.52 | 120 |
| MWSD1005CR12□TM01 | 120 | G,H,J | 20 | 100/150 | 1000 | 2.66 | 110 |

MWSD1005C-M11 TYPE

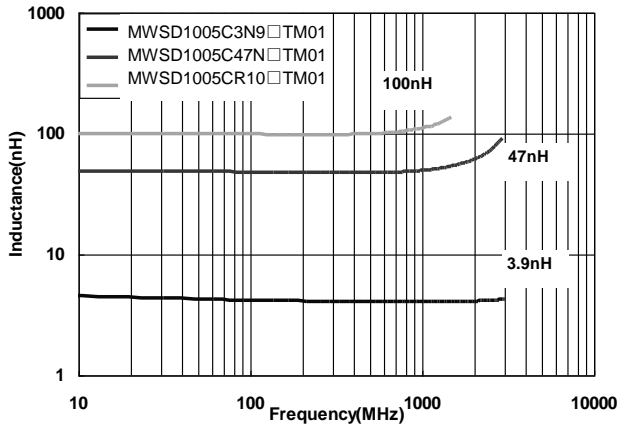
| Part Number | Inductance | Tolerance | Min. Quality Factor | L/Q Test Freq. | Min. Self-resonant Frequency | Max. DC Resistance | Max. Rated Current |
|-------------------|------------|-----------|---------------------|----------------|------------------------------|--------------------|--------------------|
| Units | nH | - | - | MHz | MHz | Ω | mA |
| Symbol | L | - | Q | Freq. | S.R.F | DCR | Ir |
| MWSD1005C1N3□TM11 | 1.3 | C,D | 20 | 100/250 | >6000 | 0.017 | 1200 |
| MWSD1005C2N2□TM11 | 2.2 | C,D | 25 | 100/250 | >6000 | 0.027 | 1000 |
| MWSD1005C2N4□TM11 | 2.4 | C,D | 25 | 100/250 | >6000 | 0.027 | 1000 |
| MWSD1005C3N3□TM11 | 3.3 | C,D | 30 | 100/250 | >6000 | 0.040 | 900 |
| MWSD1005C3N4□TM11 | 3.4 | C,D | 30 | 100/250 | >6000 | 0.040 | 900 |
| MWSD1005C3N6□TM11 | 3.6 | C,D | 30 | 100/250 | >6000 | 0.040 | 900 |
| MWSD1005C3N9□TM11 | 3.9 | C,D | 30 | 100/250 | >6000 | 0.040 | 900 |
| MWSD1005C4N7□TM11 | 4.7 | C,D | 30 | 100/250 | >6000 | 0.051 | 800 |
| MWSD1005C5N1□TM11 | 5.1 | D | 30 | 100/250 | >6000 | 0.051 | 800 |
| MWSD1005C5N6□TM11 | 5.6 | C,D | 30 | 100/250 | >6000 | 0.051 | 800 |

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

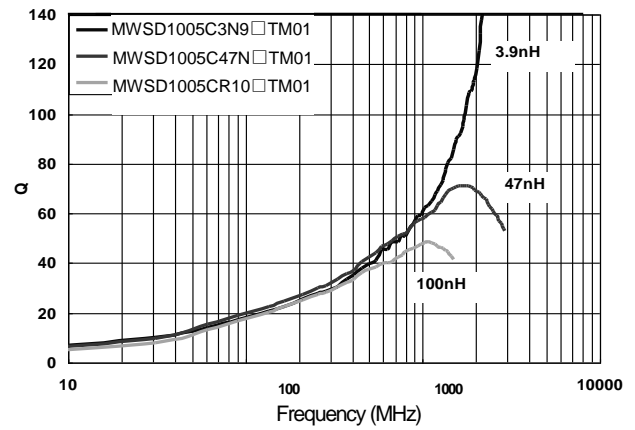
TYPICAL ELECTRICAL CHARACTERISTICS

MWSD1005C-M TYPE

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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