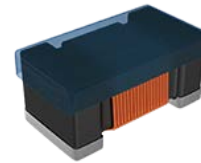


# Wire Wound Chip Ferrite Inductor - WL-FS Series

Operating Temp. : -40°C~+85°C



## FEATURES

- Small chip suitable for surface mounting
- Large inductance with ferrite material

## APPLICATIONS

- Mobile phones, video cameras and other electronic devices

## PRODUCT IDENTIFICATION

**WL**

①

**1608**

②

**F**

③

**S**

④

**18N**

⑤

**J**

⑥

**T**

⑦

**F**

⑧

□□□

⑨

①

|      |                          |
|------|--------------------------|
| Type |                          |
| WL   | Wire Wound Chip Inductor |

②

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

③

|               |         |
|---------------|---------|
| Material Code |         |
| F             | Ferrite |

④

|              |          |
|--------------|----------|
| Feature Type |          |
| S            | Standard |

⑤

|                    |               |
|--------------------|---------------|
| Nominal Inductance |               |
| Example            | Nominal Value |
| 18N                | 18nH          |
| R13                | 130nH         |

⑥

|                      |      |
|----------------------|------|
| Inductance Tolerance |      |
| J                    | ±5%  |
| K                    | ±10% |
| M                    | ±20% |

⑦

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

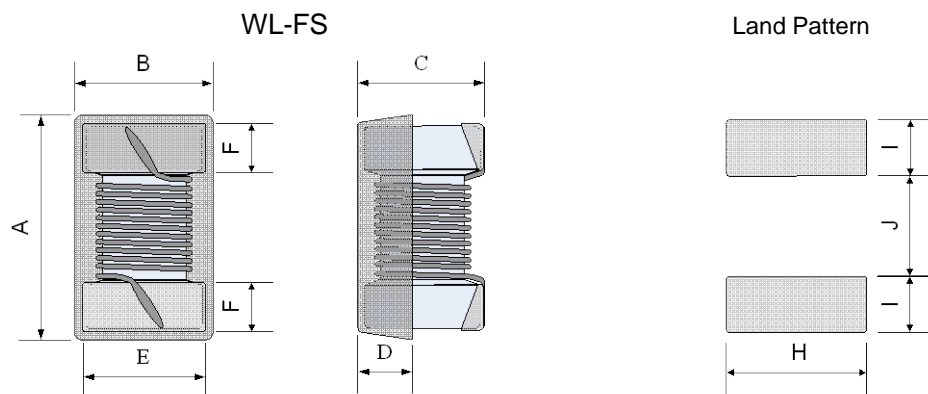
⑧

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

⑨

|                             |             |
|-----------------------------|-------------|
| Design Code                 |             |
| □□□                         | Design Code |
| * Standard product is blank |             |

## SHAPE AND DIMENSIONS



Unit: mm

| Series       | A       | B        | C       | D Typ. | E        | F       | H Typ. | I Typ. | J Typ. |
|--------------|---------|----------|---------|--------|----------|---------|--------|--------|--------|
| WL1608FS     | 1.7±0.2 | 0.95±0.2 | 0.8±0.2 | 0.38   | 0.76±0.1 | 0.3±0.1 | 1.02   | 0.64   | 0.64   |
| WL1608FS-M01 | 1.7±0.2 | 0.95±0.2 | 0.8±0.2 | 0.38   | 0.76±0.1 | 0.3±0.1 | 1.02   | 0.64   | 0.64   |

## SPECIFICATIONS

### WL1005FS TYPE

| Part Number    | Inductance | Tolerance | L Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|----------------|------------|-----------|--------------|--------------------|--------------------|------------------------------|
| Units          | nH         | -         | MHz          | $\Omega$           | mA                 | MHz                          |
| Symbol         | L          | -         | Freq.        | DCR                | I <sub>r</sub>     | S.R.F                        |
| WL1005FS20N□TF | 20         | J,K,M     | 7.9          | 0.050              | 1600               | 2600                         |
| WL1005FS22N□TF | 22         | J,K,M     | 7.9          | 0.065              | 1300               | 2500                         |
| WL1005FS33N□TF | 33         | J,K,M     | 7.9          | 0.060              | 1400               | 2300                         |
| WL1005FS36N□TF | 36         | J,K,M     | 7.9          | 0.075              | 1300               | 2300                         |
| WL1005FS39N□TF | 39         | J,K,M     | 7.9          | 0.115              | 830                | 2200                         |
| WL1005FS51N□TF | 51         | J,K,M     | 7.9          | 0.070              | 1100               | 1930                         |
| WL1005FS56N□TF | 56         | J,K,M     | 7.9          | 0.095              | 1000               | 1900                         |
| WL1005FS72N□TF | 72         | J,K,M     | 7.9          | 0.100              | 1000               | 1650                         |
| WL1005FS78N□TF | 78         | J,K,M     | 7.9          | 0.130              | 970                | 1600                         |
| WL1005FSR10□TF | 100        | J,K,M     | 7.9          | 0.160              | 900                | 1400                         |
| WL1005FSR14□TF | 140        | J,K,M     | 7.9          | 0.260              | 630                | 1220                         |
| WL1005FSR18□TF | 180        | J,K,M     | 7.9          | 0.280              | 560                | 1150                         |
| WL1005FSR20□TF | 200        | J,K,M     | 7.9          | 0.440              | 400                | 1000                         |
| WL1005FSR22□TF | 220        | J,K,M     | 7.9          | 0.530              | 380                | 1150                         |
| WL1005FSR25□TF | 250        | J,K,M     | 7.9          | 0.450              | 520                | 900                          |
| WL1005FSR27□TF | 270        | J,K,M     | 7.9          | 0.550              | 360                | 860                          |
| WL1005FSR30□TF | 300        | J,K,M     | 7.9          | 0.410              | 420                | 860                          |
| WL1005FSR33□TF | 330        | J,K,M     | 7.9          | 0.560              | 350                | 820                          |
| WL1005FSR36□TF | 360        | J,K,M     | 7.9          | 0.575              | 360                | 810                          |
| WL1005FSR39□TF | 390        | J,K,M     | 7.9          | 0.750              | 300                | 760                          |
| WL1005FSR42□TF | 420        | J,K,M     | 7.9          | 0.700              | 340                | 700                          |
| WL1005FSR47□TF | 470        | J,K,M     | 7.9          | 0.730              | 310                | 650                          |
| WL1005FSR56□TF | 560        | J,K,M     | 7.9          | 0.920              | 200                | 600                          |

### WL1005FS-M01 TYPE

| Part Number       | Inductance | Tolerance | L Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|-------------------|------------|-----------|--------------|--------------------|--------------------|------------------------------|
| Units             | nH         | -         | MHz          | $\Omega$           | mA                 | MHz                          |
| Symbol            | L          | -         | Freq.        | DCR                | I <sub>r</sub>     | S.R.F                        |
| WL1005FS18N□TFM01 | 18         | J,K,M     | 100          | 0.046              | 1400               | 3000                         |
| WL1005FS20N□TFM01 | 20         | J,K,M     | 100          | 0.028              | 2200               | 3000                         |
| WL1005FS33N□TFM01 | 33         | J,K,M     | 100          | 0.065              | 1300               | 1800                         |
| WL1005FS34N□TFM01 | 34         | J,K,M     | 100          | 0.036              | 1800               | 2500                         |
| WL1005FS48N□TFM01 | 48         | J,K,M     | 100          | 0.078              | 1100               | 1400                         |
| WL1005FS53N□TFM01 | 53         | J,K,M     | 100          | 0.060              | 1300               | 2000                         |
| WL1005FS68N□TFM01 | 68         | J,K,M     | 100          | 0.120              | 820                | 1300                         |
| WL1005FS70N□TFM01 | 70         | J,K,M     | 100          | 0.120              | 820                | 1300                         |
| WL1005FS77N□TFM01 | 77         | J,K,M     | 100          | 0.090              | 1100               | 2000                         |
| WL1005FS96N□TFM01 | 96         | J,K,M     | 100          | 0.160              | 730                | 1100                         |
| WL1005FSR11□TFM01 | 106        | J,K,M     | 100          | 0.144              | 850                | 1500                         |
| WL1005FSR13□TFM01 | 130        | J,K,M     | 100          | 0.230              | 640                | 1000                         |
| WL1005FSR14□TFM01 | 140        | J,K,M     | 100          | 0.216              | 650                | 1000                         |
| WL1005FSR16□TFM01 | 160        | J,K,M     | 100          | 0.330              | 480                | 900                          |
| WL1005FSR18□TFM01 | 180        | J,K,M     | 100          | 0.312              | 560                | 1000                         |

## SPECIFICATIONS

### WL1005FS-M01 TYPE

| Part Number       | Inductance | Tolerance | L Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|-------------------|------------|-----------|--------------|--------------------|--------------------|------------------------------|
| Units             | nH         | -         | MHz          | $\Omega$           | mA                 | MHz                          |
| Symbol            | L          | -         | Freq.        | DCR                | I <sub>r</sub>     | S.R.F                        |
| WL1005FSR20□TFM01 | 200        | J,K,M     | 100          | 0.470              | 390                | 800                          |
| WL1005FSR22□TFM01 | 220        | J,K,M     | 100          | 0.470              | 450                | 1100                         |
| WL1005FSR27□TFM01 | 270        | J,K,M     | 100          | 0.520              | 420                | 730                          |
| WL1005FSR33□TFM01 | 330        | J,K,M     | 100          | 0.560              | 390                | 520                          |
| WL1005FSR39□TFM01 | 390        | J,K,M     | 100          | 0.620              | 370                | 350                          |
| WL1005FSR42□TFM01 | 420        | J,K,M     | 10           | 0.620              | 370                | 320                          |
| WL1005FSR47□TFM01 | 470        | J,K,M     | 10           | 0.660              | 350                | 380                          |
| WL1005FSR56□TFM01 | 560        | K,M       | 10           | 0.710              | 300                | 300                          |

### WL1608FS TYPE

| Part Number    | Inductance | Tolerance | L Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|----------------|------------|-----------|--------------|--------------------|--------------------|------------------------------|
| Units          | nH         | -         | MHz          | $\Omega$           | mA                 | MHz                          |
| Symbol         | L          | -         | Freq.        | DCR                | I <sub>r</sub>     | S.R.F                        |
| WL1608FS47N□TF | 47         | K,M       | 7.9          | 0.06               | 1200               | 2350                         |
| WL1608FS51N□TF | 51         | J,K,M     | 7.9          | 0.07               | 1050               | 2300                         |
| WL1608FSR10□TF | 100        | K,M       | 7.9          | 0.11               | 850                | 1370                         |
| WL1608FSR12□TF | 120        | J,K,M     | 7.9          | 0.18               | 670                | 1340                         |
| WL1608FSR15□TF | 150        | J,K,M     | 7.9          | 0.12               | 820                | 1260                         |
| WL1608FSR18□TF | 180        | J,K,M     | 7.9          | 0.19               | 670                | 1060                         |
| WL1608FSR20□TF | 200        | J,K,M     | 7.9          | 0.14               | 740                | 1030                         |
| WL1608FSR22□TF | 220        | J,K,M     | 7.9          | 0.20               | 650                | 850                          |
| WL1608FSR24□TF | 240        | J,K,M     | 7.9          | 0.17               | 690                | 800                          |
| WL1608FSR25□TF | 250        | J,K,M     | 7.9          | 0.17               | 690                | 910                          |
| WL1608FSR27□TF | 270        | J,K,M     | 7.9          | 0.24               | 630                | 780                          |
| WL1608FSR33□TF | 330        | J,K,M     | 7.9          | 0.29               | 510                | 730                          |
| WL1608FSR39□TF | 390        | J,K,M     | 7.9          | 0.33               | 490                | 750                          |
| WL1608FSR47□TF | 470        | K,M       | 7.9          | 0.37               | 470                | 670                          |
| WL1608FSR50□TF | 500        | J,K,M     | 7.9          | 0.45               | 410                | 610                          |
| WL1608FSR56□TF | 560        | J,K,M     | 7.9          | 0.51               | 380                | 590                          |
| WL1608FSR62□TF | 620        | J,K,M     | 7.9          | 0.48               | 390                | 570                          |
| WL1608FSR65□TF | 650        | J,K,M     | 7.9          | 0.61               | 350                | 550                          |
| WL1608FSR68□TF | 680        | J,K,M     | 7.9          | 0.77               | 310                | 520                          |
| WL1608FSR78□TF | 780        | J,K,M     | 7.9          | 0.83               | 300                | 480                          |
| WL1608FSR82□TF | 820        | J,K,M     | 7.9          | 0.88               | 290                | 500                          |
| WL1608FS1R0□TF | 1000       | J,K,M     | 7.9          | 0.94               | 280                | 410                          |
| WL1608FS1R2□TF | 1200       | J,K,M     | 7.9          | 1.10               | 260                | 370                          |
| WL1608FS1R5□TF | 1500       | J,K,M     | 7.9          | 1.30               | 240                | 340                          |
| WL1608FS1R8□TF | 1800       | J,K,M     | 7.9          | 1.40               | 230                | 190                          |
| WL1608FS2R2□TF | 2200       | J,K,M     | 7.9          | 1.50               | 220                | 120                          |
| WL1608FS2R7□TF | 2700       | J,K,M     | 7.9          | 1.60               | 210                | 70                           |
| WL1608FS3R3□TF | 3300       | J,K,M     | 7.9          | 1.80               | 200                | 60                           |
| WL1608FS3R9□TF | 3900       | J,K,M     | 7.9          | 1.90               | 190                | 50                           |
| WL1608FS4R7□TF | 4700       | J,K,M     | 7.9          | 2.70               | 160                | 50                           |
| WL1608FS5R6□TF | 5600       | J,K,M     | 7.9          | 3.00               | 150                | 40                           |
| WL1608FS6R8□TF | 6800       | J,K,M     | 7.9          | 4.00               | 130                | 40                           |

## SPECIFICATIONS

### WL1608FS TYPE

| Part Number    | Inductance | Tolerance | L Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|----------------|------------|-----------|--------------|--------------------|--------------------|------------------------------|
| Units          | nH         | -         | MHz          | $\Omega$           | mA                 | MHz                          |
| Symbol         | L          | -         | Freq.        | DCR                | I <sub>r</sub>     | S.R.F                        |
| WL1608FS7R8□TF | 7800       | J,K,M     | 7.9          | 4.40               | 120                | 40                           |
| WL1608FS8R2□TF | 8200       | J,K,M     | 7.9          | 4.50               | 110                | 40                           |
| WL1608FS100□TF | 10000      | J,K,M     | 2.5          | 5.00               | 100                | 30                           |
| WL1608FS150□TF | 15000      | J,K,M     | 2.5          | 9.50               | 90                 | 20                           |
| WL1608FS180□TF | 18000      | J,K,M     | 2.5          | 10.40              | 80                 | 20                           |
| WL1608FS220□TF | 22000      | J,K,M     | 2.5          | 11.40              | 70                 | 20                           |

### WL1608FS-M01 TYPE

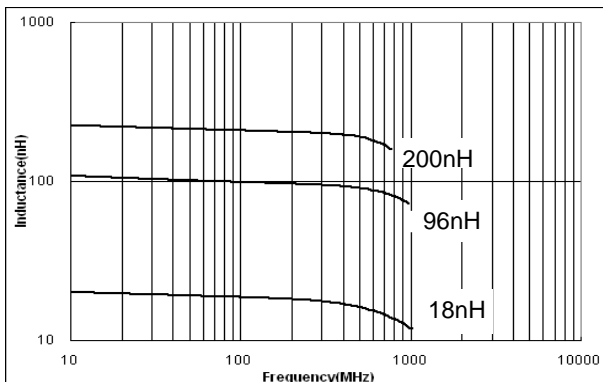
| Part Number       | Inductance | Tolerance | L Test Freq. | Max. DC Resistance | Max. Rated Current | Min. Self-resonant Frequency |
|-------------------|------------|-----------|--------------|--------------------|--------------------|------------------------------|
| Units             | nH         | -         | MHz          | $\Omega$           | mA                 | MHz                          |
| Symbol            | L          | -         | Freq.        | DCR                | I <sub>r</sub>     | S.R.F                        |
| WL1608FS4N9□TFM01 | 4.9        | D,K,M     | 10           | 0.015              | 2600               | 2300                         |
| WL1608FS15N□TFM01 | 15         | J,K,M     | 10           | 0.025              | 2200               | 2000                         |
| WL1608FS33N□TFM01 | 33         | J,K,M     | 10           | 0.035              | 1700               | 1800                         |
| WL1608FS55N□TFM01 | 55         | J,K,M     | 10           | 0.045              | 1500               | 1600                         |
| WL1608FS85N□TFM01 | 85         | J,K,M     | 10           | 0.060              | 1400               | 1380                         |
| WL1608FSR10□TFM01 | 100        | K,M       | 10           | 0.100              | 1000               | 1260                         |
| WL1608FSR12□TFM01 | 120        | J,K,M     | 10           | 0.085              | 1100               | 1200                         |
| WL1608FSR16□TFM01 | 160        | J,K,M     | 10           | 0.100              | 1000               | 900                          |
| WL1608FSR21□TFM01 | 210        | J,K,M     | 10           | 0.150              | 800                | 720                          |
| WL1608FSR27□TFM01 | 270        | J,K,M     | 10           | 0.160              | 750                | 660                          |
| WL1608FSR33□TFM01 | 330        | J,K,M     | 10           | 0.250              | 630                | 600                          |
| WL1608FSR39□TFM01 | 390        | J,K,M     | 10           | 0.280              | 620                | 570                          |
| WL1608FSR47□TFM01 | 470        | J,K,M     | 10           | 0.450              | 500                | 555                          |
| WL1608FSR56□TFM01 | 560        | J,K,M     | 10           | 0.480              | 450                | 540                          |
| WL1608FSR65□TFM01 | 650        | J,K,M     | 10           | 0.520              | 430                | 510                          |

※ □: Please specify the inductance tolerance code (D=±0.5nH, J=±5%, K=±10%, M=±20%).

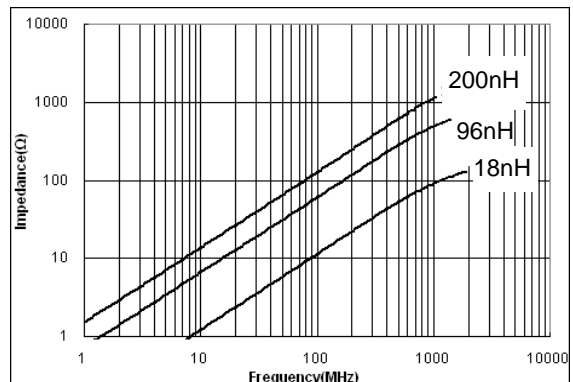
## TYPICAL ELECTRICAL CHARACTERISTICS

### WL1005FS TYPE

Inductance vs. Frequency Characteristics



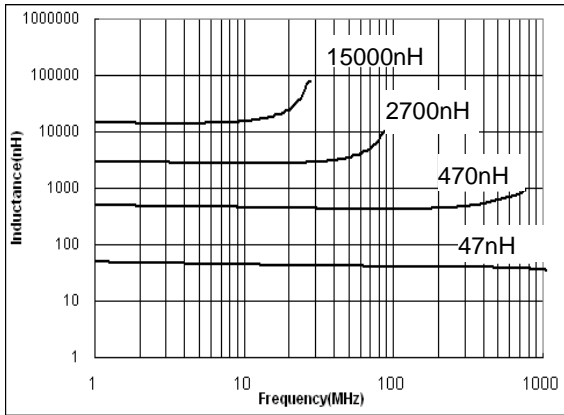
Impedance vs. Frequency Characteristics



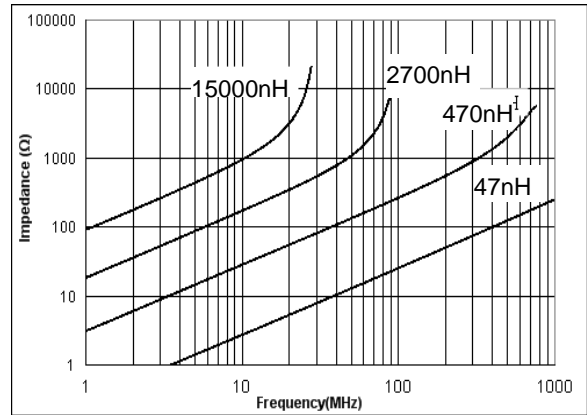
# TYPICAL ELECTRICAL CHARACTERISTICS

WL1608FS TYPE

Inductance vs. Frequency Characteristics



Impedance vs. Frequency Characteristics



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