



CUSTOMER : STD  
PRODUCTS : Wire Wound Ceramic Chip Inductors  
PART NO : MCCL Series  
CUST P/ NO :  
DATE : 2025.04.16  
SALES DEP :  
E-MAIL :

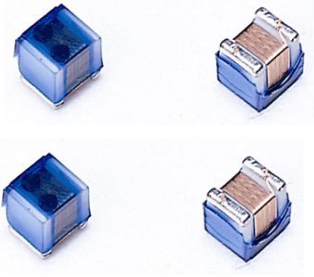
VERSION : REV.A  
CHANGE PROJECT : -  
BEFORE : -  
AFTER : -  
CHANGE DATE : -  
CUSTOMER SIGNATURE : -

|               |            |            |
|---------------|------------|------------|
| APPROVAL BY : | CHECK BY : | DRAWN BY : |
| Honey Wei     | Leo Wang   | May Gao    |





## MCCL Series



- Wire Wound Ceramic Chip Inductors
- Operating Temperature up to  $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- High Current up to 1000mA
- Environmental Lead free
- Environmental RoHS2.0 compliant
- Environmental halogen free
- Storage Temperature :  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .
- Packaging 7"Reel, Plastic tape: 8 mm wide

## FEATURES

- Ceramic core wire wound construction.
- No batch to batch variations in inductance, SRF and Q that are present in ferrite inductors.
- High Reliability due to ceramic wire wound construction.
- High frequency application
- Small footprint as well as low profile.
- The products contain no lead and also support lead-free soldering.

## Applications

- Computer and peripheral products
- Consumer electronic products
- Communication electronic products especially for pagers, Cellular phone etc.
- Small footprint as well as profile.
- Measuring instruments.

## PRODUCT IDENTIFICATION

MC CL 1608 Z 4N7 □□  
① ② ③ ④ ⑤ ⑥

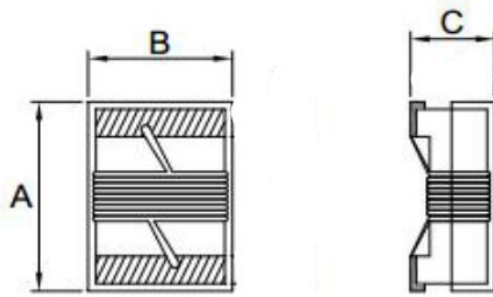
- ① Brand & Product classification
- ② Product Series NO.(CL : Wire Wound Chip Inductors)
- ③ External Dimensions.(1608 : L:1.6 × W:0.8 × H:0.8) [mm]
- ④ Separator code.
- ⑤ Nominal Inductance

| Example | Nominal Value      |
|---------|--------------------|
| 4N7     | 4.7 nH             |
| 78N     | 78.0 nH            |
| R82     | 0.82 $\mu\text{H}$ |
| 1R0     | 1.0 $\mu\text{H}$  |

- ⑥ Inductance Tolerance.( S :  $\pm 0.3\text{nH}$ , G:  $\pm 2\%$ , J:  $\pm 5\%$ , K:  $\pm 10\%$ , M:  $\pm 20\%$ )

## Mechanical & Dimensions

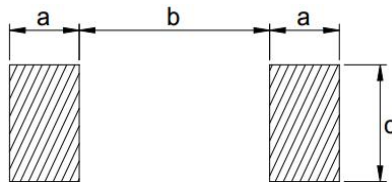
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.19 Max   |
| B    | 0.70 Max   |
| C    | 0.64 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.40 Ref   |
| b    | 0.64 Ref   |
| c    | 0.64 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1005Z1N0□□ | 1.0                             | 0.045                       | 740                      | 12.90            | 250                           | 10       |
| MCCL1005Z1N2□□ | 1.2                             | 0.150                       | 100                      | 12.90            | 250                           | 8        |
| MCCL1005Z1N3□□ | 1.3                             | 0.150                       | 100                      | 12.90            | 250                           | 8        |
| MCCL1005Z1N5□□ | 1.5                             | 0.150                       | 100                      | 12.90            | 250                           | 8        |
| MCCL1005Z1N8□□ | 1.8                             | 0.070                       | 1040                     | 12.00            | 250                           | 20       |
| MCCL1005Z1N9□□ | 1.9                             | 0.070                       | 1040                     | 11.30            | 250                           | 20       |
| MCCL1005Z2N0□□ | 2.0                             | 0.090                       | 1040                     | 11.10            | 250                           | 23       |
| MCCL1005Z2N2□□ | 2.2                             | 0.090                       | 960                      | 10.80            | 250                           | 22       |
| MCCL1005Z2N4□□ | 2.4                             | 0.090                       | 790                      | 10.50            | 250                           | 22       |
| MCCL1005Z2N7□□ | 2.7                             | 0.170                       | 200                      | 10.40            | 250                           | 12       |
| MCCL1005Z3N3□□ | 3.3                             | 0.076                       | 840                      | 7.00             | 250                           | 24       |
| MCCL1005Z3N6□□ | 3.6                             | 0.076                       | 840                      | 6.80             | 250                           | 24       |
| MCCL1005Z3N9□□ | 3.9                             | 0.076                       | 840                      | 6.00             | 250                           | 24       |
| MCCL1005Z4N1□□ | 4.1                             | 0.091                       | 700                      | 6.00             | 250                           | 22       |
| MCCL1005Z4N3□□ | 4.3                             | 0.091                       | 700                      | 6.00             | 250                           | 22       |
| MCCL1005Z4N7□□ | 4.7                             | 0.130                       | 640                      | 4.77             | 250                           | 20       |

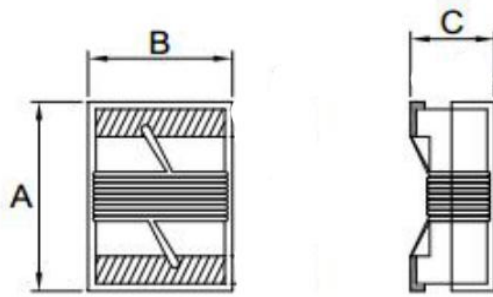
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

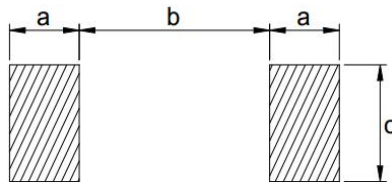
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.19 Max   |
| B    | 0.70 Max   |
| C    | 0.64 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.40 Ref   |
| b    | 0.64 Ref   |
| c    | 0.64 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1005Z5N1□□ | 5.1                             | 0.110                       | 800                      | 4.80             | 250                           | 23       |
| MCCL1005Z5N6□□ | 5.6                             | 0.110                       | 760                      | 4.80             | 250                           | 25       |
| MCCL1005Z6N2□□ | 6.2                             | 0.110                       | 760                      | 4.80             | 250                           | 25       |
| MCCL1005Z6N8□□ | 6.8                             | 0.120                       | 680                      | 4.80             | 250                           | 24       |
| MCCL1005Z7N2□□ | 7.2                             | 0.120                       | 680                      | 4.80             | 250                           | 25       |
| MCCL1005Z7N3□□ | 7.3                             | 0.120                       | 680                      | 4.80             | 250                           | 25       |
| MCCL1005Z7N5□□ | 7.5                             | 0.150                       | 680                      | 4.80             | 250                           | 25       |
| MCCL1005Z8N2□□ | 8.2                             | 0.150                       | 680                      | 4.40             | 250                           | 25       |
| MCCL1005Z8N7□□ | 8.7                             | 0.200                       | 480                      | 4.10             | 250                           | 25       |
| MCCL1005Z9N0□□ | 9.0                             | 0.150                       | 680                      | 4.16             | 250                           | 25       |
| MCCL1005Z9N1□□ | 9.1                             | 0.150                       | 680                      | 4.16             | 250                           | 25       |
| MCCL1005Z9N5□□ | 9.5                             | 0.200                       | 480                      | 4.00             | 250                           | 24       |
| MCCL1005Z10N□□ | 10.0                            | 0.200                       | 480                      | 3.90             | 250                           | 24       |
| MCCL1005Z11N□□ | 11.0                            | 0.120                       | 640                      | 3.68             | 250                           | 26       |
| MCCL1005Z12N□□ | 12.0                            | 0.120                       | 640                      | 3.60             | 250                           | 26       |
| MCCL1005Z13N□□ | 13.0                            | 0.210                       | 440                      | 3.45             | 250                           | 24       |

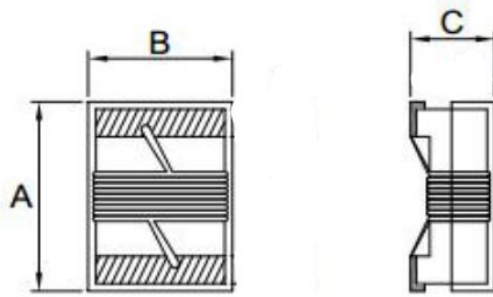
Note:

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2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

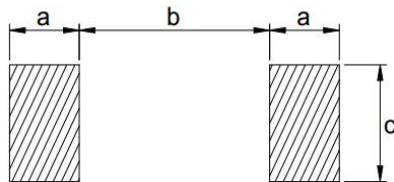
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.19 Max   |
| B    | 0.70 Max   |
| C    | 0.64 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.40 Ref   |
| b    | 0.64 Ref   |
| c    | 0.64 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1005Z15N□□ | 15.0                            | 0.17                        | 560                      | 3.28             | 250                           | 26       |
| MCCL1005Z16N□□ | 16.0                            | 0.25                        | 560                      | 3.10             | 250                           | 25       |
| MCCL1005Z18N□□ | 18.0                            | 0.23                        | 420                      | 3.10             | 250                           | 25       |
| MCCL1005Z19N□□ | 19.0                            | 0.24                        | 480                      | 3.04             | 250                           | 26       |
| MCCL1005Z20N□□ | 20.0                            | 0.25                        | 420                      | 3.00             | 250                           | 26       |
| MCCL1005Z22N□□ | 22.0                            | 0.30                        | 400                      | 2.80             | 250                           | 25       |
| MCCL1005Z23N□□ | 23.0                            | 0.30                        | 400                      | 2.72             | 250                           | 25       |
| MCCL1005Z24N□□ | 24.0                            | 0.35                        | 400                      | 2.70             | 250                           | 25       |
| MCCL1005Z27N□□ | 27.0                            | 0.40                        | 400                      | 2.48             | 250                           | 25       |
| MCCL1005Z30N□□ | 30.0                            | 0.40                        | 400                      | 2.35             | 250                           | 25       |
| MCCL1005Z33N□□ | 33.0                            | 0.45                        | 400                      | 2.35             | 250                           | 24       |
| MCCL1005Z36N□□ | 36.0                            | 0.50                        | 320                      | 2.32             | 250                           | 25       |
| MCCL1005Z39N□□ | 39.0                            | 0.55                        | 200                      | 2.10             | 250                           | 25       |
| MCCL1005Z40N□□ | 40.0                            | 0.65                        | 320                      | 2.24             | 250                           | 24       |
| MCCL1005Z43N□□ | 43.0                            | 0.81                        | 100                      | 2.03             | 250                           | 25       |
| MCCL1005Z47N□□ | 47.0                            | 0.83                        | 150                      | 2.10             | 250                           | 25       |

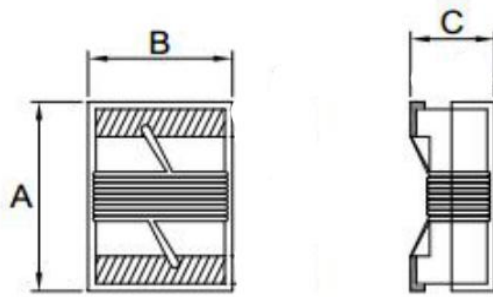
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

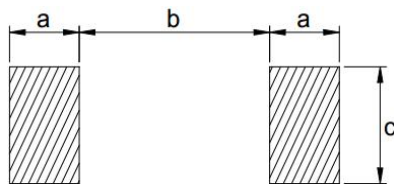
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.19 Max   |
| B    | 0.70 Max   |
| C    | 0.64 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.40 Ref   |
| b    | 0.64 Ref   |
| c    | 0.64 Ref   |

## Electrical Characteristics

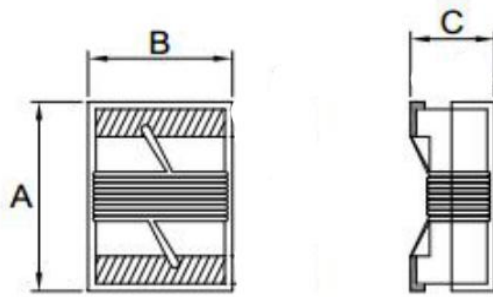
| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1005Z51N□□ | 51.0                            | 0.92                        | 100                      | 1.75             | 250                           | 25       |
| MCCL1005Z56N□□ | 56.0                            | 0.97                        | 100                      | 1.76             | 250                           | 25       |
| MCCL1005Z62N□□ | 62.0                            | 1.40                        | 100                      | 1.62             | 250                           | 25       |
| MCCL1005Z68N□□ | 68.0                            | 1.50                        | 100                      | 1.62             | 250                           | 25       |
| MCCL1005Z72N□□ | 72.0                            | 1.70                        | 50                       | 1.26             | 250                           | 25       |
| MCCL1005Z75N□□ | 75.0                            | 1.75                        | 50                       | 1.26             | 250                           | 25       |
| MCCL1005Z82N□□ | 82.0                            | 1.80                        | 50                       | 1.26             | 250                           | 25       |
| MCCL1005Z91N□□ | 91.0                            | 2.20                        | 30                       | 1.16             | 250                           | 24       |
| MCCL1005ZR10□□ | 100.0                           | 2.50                        | 30                       | 1.16             | 250                           | 24       |
| MCCL1005ZR11□□ | 110.0                           | 2.60                        | 30                       | 1.15             | 250                           | 24       |
| MCCL1005ZR12□□ | 120.0                           | 2.70                        | 30                       | 1.10             | 250                           | 24       |
|                |                                 |                             |                          |                  |                               |          |
|                |                                 |                             |                          |                  |                               |          |
|                |                                 |                             |                          |                  |                               |          |
|                |                                 |                             |                          |                  |                               |          |
|                |                                 |                             |                          |                  |                               |          |

Note:

1. Inductance is measured at 500mV .
2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

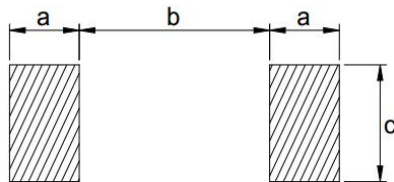
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.80 Max   |
| B    | 1.20 Max   |
| C    | 1.10 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.64 Ref   |
| b    | 0.64 Ref   |
| c    | 1.02 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1608Z1N5□□ | 1.5                             | 0.030                       | 700                      | 12500            | 250                           | 24       |
| MCCL1608Z1N6□□ | 1.6                             | 0.030                       | 700                      | 12500            | 250                           | 24       |
| MCCL1608Z1N8□□ | 1.8                             | 0.045                       | 700                      | 12500            | 250                           | 16       |
| MCCL1608Z2N0□□ | 2.0                             | 0.025                       | 100                      | 12500            | 250                           | 12       |
| MCCL1608Z2N2□□ | 2.2                             | 0.025                       | 700                      | 12500            | 100                           | 12       |
| MCCL1608Z2N7□□ | 2.7                             | 0.045                       | 700                      | 5900             | 250                           | 22       |
| MCCL1608Z3N3□□ | 3.3                             | 0.045                       | 700                      | 5900             | 250                           | 22       |
| MCCL1608Z3N6□□ | 3.6                             | 0.063                       | 700                      | 5900             | 250                           | 22       |
| MCCL1608Z3N9□□ | 3.9                             | 0.080                       | 700                      | 6900             | 250                           | 22       |
| MCCL1608Z4N3□□ | 4.3                             | 0.063                       | 700                      | 5900             | 250                           | 22       |
| MCCL1608Z4N7□□ | 4.7                             | 0.116                       | 700                      | 5800             | 250                           | 20       |
| MCCL1608Z5N1□□ | 5.1                             | 0.140                       | 700                      | 5700             | 250                           | 20       |
| MCCL1608Z5N6□□ | 5.6                             | 0.075                       | 700                      | 4760             | 250                           | 26       |
| MCCL1608Z6N2□□ | 6.2                             | 0.140                       | 700                      | 5700             | 250                           | 20       |
| MCCL1608Z6N3□□ | 6.3                             | 0.140                       | 700                      | 5700             | 250                           | 20       |
| MCCL1608Z6N8□□ | 6.8                             | 0.110                       | 700                      | 5800             | 250                           | 27       |

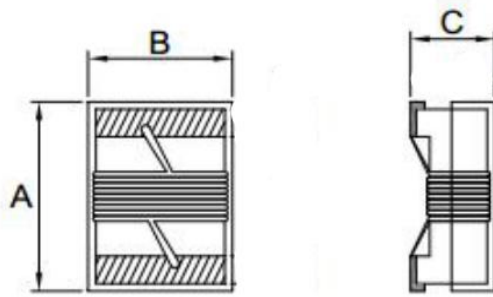
Note:

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## Mechanical & Dimensions

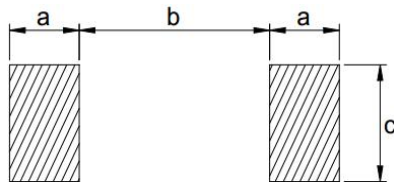
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.80 Max   |
| B    | 1.20 Max   |
| C    | 1.10 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.64 Ref   |
| b    | 0.64 Ref   |
| c    | 1.02 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1608Z7N5□□ | 7.5                             | 0.106                       | 700                      | 4800             | 250                           | 28       |
| MCCL1608Z8N0□□ | 8.0                             | 0.109                       | 700                      | 4700             | 250                           | 28       |
| MCCL1608Z8N2□□ | 8.2                             | 0.115                       | 700                      | 4200             | 250                           | 30       |
| MCCL1608Z8N7□□ | 8.7                             | 0.109                       | 700                      | 4600             | 250                           | 28       |
| MCCL1608Z9N1□□ | 9.1                             | 0.125                       | 700                      | 5400             | 100                           | 28       |
| MCCL1608Z9N5□□ | 9.5                             | 0.125                       | 700                      | 5400             | 250                           | 28       |
| MCCL1608Z10N□□ | 10.0                            | 0.130                       | 700                      | 4800             | 250                           | 31       |
| MCCL1608Z11N□□ | 11.0                            | 0.130                       | 700                      | 4000             | 250                           | 30       |
| MCCL1608Z12N□□ | 12.0                            | 0.130                       | 700                      | 4000             | 250                           | 35       |
| MCCL1608Z13N□□ | 13.0                            | 0.130                       | 700                      | 4000             | 250                           | 35       |
| MCCL1608Z15N□□ | 15.0                            | 0.170                       | 700                      | 4000             | 250                           | 35       |
| MCCL1608Z16N□□ | 16.0                            | 0.170                       | 700                      | 3300             | 250                           | 34       |
| MCCL1608Z18N□□ | 18.0                            | 0.170                       | 700                      | 3100             | 250                           | 35       |
| MCCL1608Z20N□□ | 20.0                            | 0.180                       | 700                      | 3000             | 250                           | 36       |
| MCCL1608Z22N□□ | 22.0                            | 0.190                       | 700                      | 3000             | 250                           | 38       |
| MCCL1608Z23N□□ | 23.0                            | 0.190                       | 700                      | 3000             | 250                           | 38       |

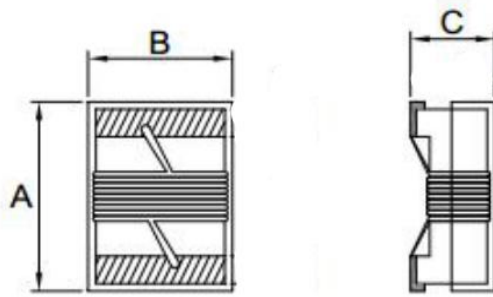
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## Mechanical & Dimensions

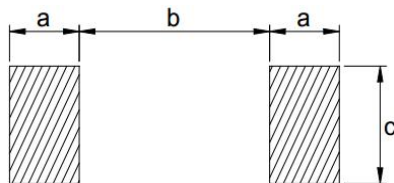
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.80 Max   |
| B    | 1.20 Max   |
| C    | 1.10 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.64 Ref   |
| b    | 0.64 Ref   |
| c    | 1.02 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1608Z24N□□ | 24.0                            | 0.135                       | 700                      | 2650             | 250                           | 36       |
| MCCL1608Z27N□□ | 27.0                            | 0.220                       | 600                      | 2800             | 250                           | 40       |
| MCCL1608Z30N□□ | 30.0                            | 0.220                       | 600                      | 2250             | 250                           | 37       |
| MCCL1608Z33N□□ | 33.0                            | 0.220                       | 600                      | 2300             | 250                           | 40       |
| MCCL1608Z36N□□ | 36.0                            | 0.250                       | 600                      | 2080             | 250                           | 37       |
| MCCL1608Z39N□□ | 39.0                            | 0.250                       | 600                      | 2200             | 250                           | 40       |
| MCCL1608Z43N□□ | 43.0                            | 0.280                       | 600                      | 2000             | 250                           | 38       |
| MCCL1608Z47N□□ | 47.0                            | 0.280                       | 600                      | 2000             | 200                           | 38       |
| MCCL1608Z51N□□ | 51.0                            | 0.270                       | 600                      | 1900             | 200                           | 35       |
| MCCL1608Z56N□□ | 56.0                            | 0.310                       | 600                      | 1900             | 200                           | 38       |
| MCCL1608Z60N□□ | 60.0                            | 0.330                       | 600                      | 1800             | 200                           | 37       |
| MCCL1608Z62N□□ | 62.0                            | 0.330                       | 600                      | 1800             | 200                           | 37       |
| MCCL1608Z68N□□ | 68.0                            | 0.340                       | 600                      | 1700             | 200                           | 37       |
| MCCL1608Z72N□□ | 72.0                            | 0.490                       | 400                      | 1700             | 150                           | 34       |
| MCCL1608Z75N□□ | 75.0                            | 0.520                       | 400                      | 1700             | 150                           | 28       |
| MCCL1608Z82N□□ | 82.0                            | 0.540                       | 400                      | 1700             | 150                           | 34       |
| MCCL1608Z85N□□ | 85.0                            | 0.58                        | 400                      | 1700             | 150                           | 34       |
| MCCL1608Z91N□□ | 91.0                            | 0.58                        | 400                      | 1600             | 150                           | 28       |

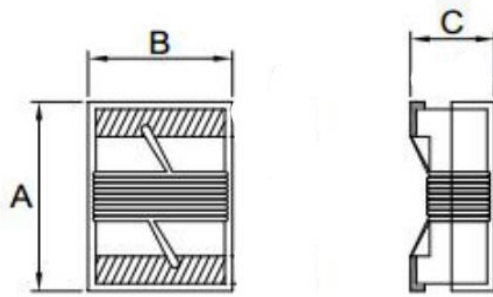
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

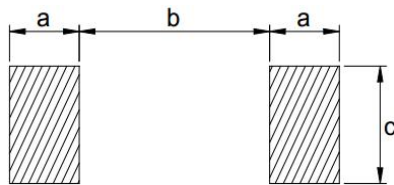
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 1.80 Max   |
| B    | 1.20 Max   |
| C    | 1.10 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 0.64 Ref   |
| b    | 0.64 Ref   |
| c    | 1.02 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|----------|
| MCCL1608ZR10□□ | 100.0                           | 0.58                        | 400                      | 1400             | 150                           | 34       |
| MCCL1608ZR11□□ | 110.0                           | 0.61                        | 300                      | 1350             | 150                           | 32       |
| MCCL1608ZR12□□ | 120.0                           | 0.65                        | 300                      | 1350             | 150                           | 32       |
| MCCL1608ZR13□□ | 130.0                           | 0.92                        | 290                      | 1150             | 150                           | 32       |
| MCCL1608ZR15□□ | 150.0                           | 0.92                        | 280                      | 990              | 150                           | 28       |
| MCCL1608ZR16□□ | 160.0                           | 1.25                        | 280                      | 990              | 150                           | 28       |
| MCCL1608ZR18□□ | 180.0                           | 1.25                        | 240                      | 990              | 100                           | 25       |
| MCCL1608ZR20□□ | 200.0                           | 1.98                        | 200                      | 900              | 100                           | 25       |
| MCCL1608ZR22□□ | 220.0                           | 2.10                        | 200                      | 900              | 100                           | 25       |
| MCCL1608ZR24□□ | 240.0                           | 2.20                        | 200                      | 900              | 100                           | 25       |
| MCCL1608ZR25□□ | 250.0                           | 2.55                        | 120                      | 882              | 100                           | 25       |
| MCCL1608ZR27□□ | 270.0                           | 2.16                        | 170                      | 830              | 100                           | 26       |
| MCCL1608ZR29□□ | 290.0                           | 3.20                        | 100                      | 800              | 100                           | 25       |
| MCCL1608ZR30□□ | 300.0                           | 2.50                        | 100                      | 790              | 100                           | 25       |
| MCCL1608ZR33□□ | 330.0                           | 3.89                        | 100                      | 790              | 100                           | 25       |
| MCCL1608ZR39□□ | 390.0                           | 4.35                        | 100                      | 780              | 100                           | 25       |
| MCCL1608ZR47□□ | 470.0                           | 4.50                        | 100                      | 700              | 100                           | 25       |
| MCCL1608ZR56□□ | 560.0                           | 5.00                        | 90                       | 460              | 100                           | 23       |

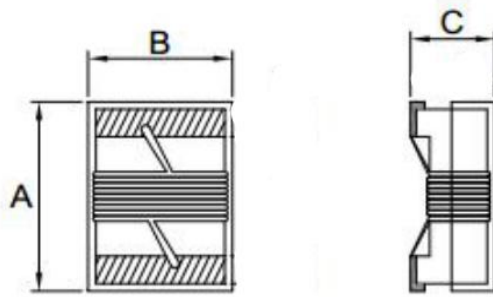
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

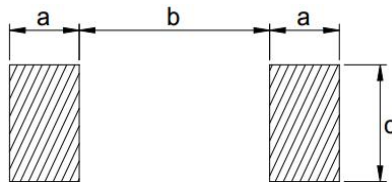
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.29 Max   |
| B    | 1.73 Max   |
| C    | 1.52 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 0.76 Ref   |
| c    | 1.78 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2012Z2N2□□ | 2.2                             | 0.06                        | 800                      | 7900             | 250                           | 50/1GHZ   |
| MCCL2012Z2N7□□ | 2.7                             | 0.06                        | 800                      | 7900             | 250                           | 50/1GHZ   |
| MCCL2012Z2N8□□ | 2.8                             | 0.06                        | 800                      | 7900             | 250                           | 40/1.5GHZ |
| MCCL2012Z2N9□□ | 2.9                             | 0.06                        | 800                      | 7900             | 250                           | 40/1.5GHZ |
| MCCL2012Z3N0□□ | 3.0                             | 0.06                        | 800                      | 7900             | 250                           | 40/1.5GHZ |
| MCCL2012Z3N3□□ | 3.0                             | 0.08                        | 600                      | 7900             | 250                           | 40/1.5GHZ |
| MCCL2012Z3N6□□ | 3.6                             | 0.10                        | 200                      | 7900             | 250                           | 20/1GHZ   |
| MCCL2012Z3N9□□ | 3.9                             | 0.11                        | 150                      | 7900             | 250                           | 20/1GHZ   |
| MCCL2012Z4N7□□ | 4.7                             | 0.08                        | 600                      | 6200             | 250                           | 35/1GHZ   |
| MCCL2012Z5N1□□ | 5.1                             | 0.08                        | 600                      | 6200             | 250                           | 50/1GHZ   |
| MCCL2012Z5N6□□ | 5.6                             | 0.08                        | 600                      | 5900             | 250                           | 65/1GHZ   |
| MCCL2012Z6N2□□ | 6.2                             | 0.08                        | 600                      | 5900             | 250                           | 65/1GHZ   |
| MCCL2012Z6N8□□ | 6.8                             | 0.11                        | 600                      | 5600             | 250                           | 50/1GHZ   |
| MCCL2012Z7N5□□ | 7.5                             | 0.14                        | 600                      | 4800             | 250                           | 50/1GHZ   |
| MCCL2012Z8N2□□ | 8.2                             | 0.12                        | 600                      | 4400             | 250                           | 50/1GHZ   |
| MCCL2012Z9N1□□ | 9.1                             | 0.10                        | 600                      | 4300             | 250                           | 60/500MH  |

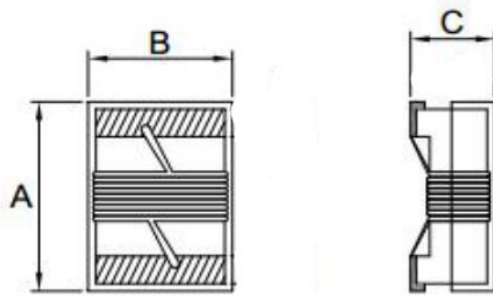
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

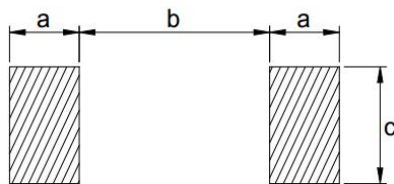
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.29 Max   |
| B    | 1.73 Max   |
| C    | 1.52 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 0.76 Ref   |
| c    | 1.78 Ref   |

## Electrical Characteristics

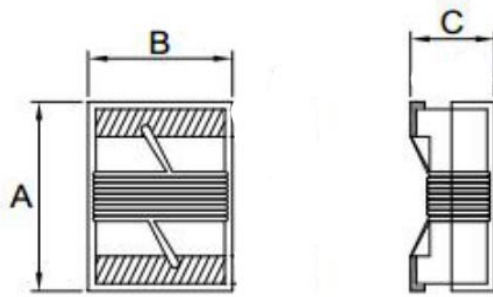
| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2012Z10N□□ | 10                              | 0.10                        | 600                      | 4300             | 250                           | 60/500MHZ |
| MCCL2012Z12N□□ | 12                              | 0.15                        | 600                      | 4000             | 250                           | 50/500MHZ |
| MCCL2012Z15N□□ | 15                              | 0.17                        | 600                      | 3200             | 250                           | 50/500MHZ |
| MCCL2012Z16N□□ | 16                              | 0.17                        | 600                      | 3200             | 250                           | 50/500MHZ |
| MCCL2012Z18N□□ | 18                              | 0.20                        | 600                      | 3100             | 250                           | 50/500MHZ |
| MCCL2012Z20N□□ | 20                              | 0.22                        | 500                      | 2600             | 250                           | 55/500MHZ |
| MCCL2012Z22N□□ | 22                              | 0.22                        | 500                      | 2600             | 250                           | 55/500MHZ |
| MCCL2012Z23N□□ | 23                              | 0.22                        | 500                      | 2400             | 250                           | 50/500MHZ |
| MCCL2012Z24N□□ | 24                              | 0.22                        | 500                      | 2400             | 250                           | 50/500MHZ |
| MCCL2012Z25N□□ | 25                              | 0.22                        | 500                      | 2450             | 250                           | 50/500MHZ |
| MCCL2012Z27N□□ | 27                              | 0.25                        | 500                      | 2580             | 250                           | 55/500MHZ |
| MCCL2012Z30N□□ | 30                              | 0.25                        | 500                      | 2400             | 250                           | 55/500MHZ |
| MCCL2012Z33N□□ | 33                              | 0.27                        | 500                      | 2150             | 250                           | 60/500MHZ |
| MCCL2012Z36N□□ | 36                              | 0.27                        | 500                      | 1900             | 250                           | 55/500MHZ |
| MCCL2012Z39N□□ | 39                              | 0.29                        | 500                      | 1850             | 250                           | 60/500MHZ |
| MCCL2012Z43N□□ | 43                              | 0.34                        | 500                      | 1800             | 200                           | 60/500MHZ |

Note:

1. Inductance is measured at 500mV .
2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

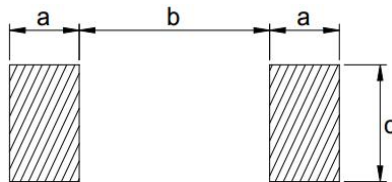
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.29 Max   |
| B    | 1.73 Max   |
| C    | 1.52 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 0.76 Ref   |
| c    | 1.78 Ref   |

## Electrical Characteristics

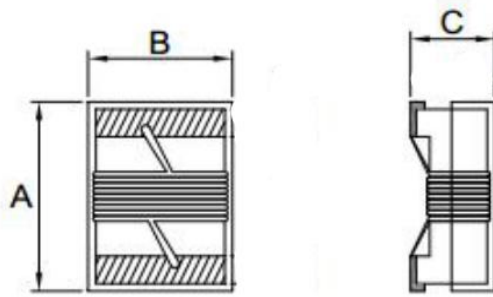
| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2012Z47N□□ | 47                              | 0.31                        | 500                      | 1700             | 200                           | 60/500MHZ |
| MCCL2012Z50N□□ | 50                              | 0.34                        | 500                      | 1650             | 200                           | 60/500MHZ |
| MCCL2012Z56N□□ | 56                              | 0.34                        | 500                      | 1600             | 200                           | 60/500MHZ |
| MCCL2012Z62N□□ | 62                              | 0.36                        | 500                      | 1450             | 200                           | 60/500MHZ |
| MCCL2012Z64N□□ | 64                              | 0.38                        | 500                      | 1500             | 200                           | 60/500MHZ |
| MCCL2012Z66N□□ | 66                              | 0.38                        | 500                      | 1500             | 200                           | 60/500MHZ |
| MCCL2012Z68N□□ | 68                              | 0.38                        | 500                      | 1500             | 200                           | 60/500MHZ |
| MCCL2012Z75N□□ | 75                              | 0.40                        | 450                      | 1400             | 150                           | 60/500MHZ |
| MCCL2012Z78N□□ | 78                              | 0.40                        | 450                      | 1400             | 150                           | 60/500MHZ |
| MCCL2012Z82N□□ | 82                              | 0.42                        | 400                      | 1330             | 150                           | 65/500MHZ |
| MCCL2012Z91N□□ | 91                              | 0.48                        | 400                      | 1330             | 150                           | 65/500MHZ |
| MCCL2012Z92N□□ | 92                              | 0.48                        | 400                      | 1330             | 150                           | 65/500MHZ |
| MCCL2012ZR10□□ | 100                             | 0.46                        | 400                      | 1250             | 150                           | 65/500MHZ |
| MCCL2012ZR11□□ | 110                             | 0.48                        | 400                      | 1100             | 150                           | 50/250MHZ |
| MCCL2012ZR12□□ | 120                             | 0.51                        | 400                      | 1100             | 150                           | 50/250MHZ |
| MCCL2012ZR14□□ | 140                             | 0.56                        | 400                      | 920              | 100                           | 50/250MHZ |

Note:

1. Inductance is measured at 500mV .
2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

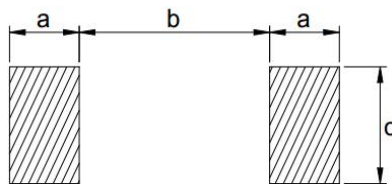
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.29 Max   |
| B    | 1.73 Max   |
| C    | 1.52 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 0.76 Ref   |
| c    | 1.78 Ref   |

## Electrical Characteristics

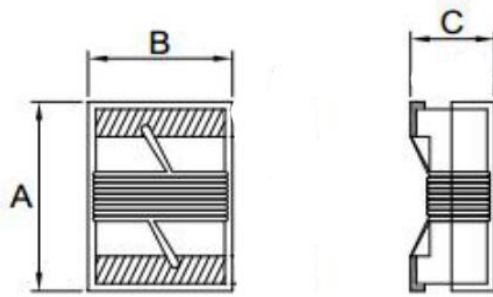
| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2012ZR15□□ | 150                             | 0.56                        | 400                      | 920              | 100                           | 50/250MHZ |
| MCCL2012ZR16□□ | 160                             | 0.60                        | 400                      | 920              | 100                           | 50/250MHZ |
| MCCL2012ZR18□□ | 180                             | 0.64                        | 400                      | 920              | 100                           | 50/250MHZ |
| MCCL2012ZR20□□ | 200                             | 0.68                        | 400                      | 860              | 100                           | 50/250MHZ |
| MCCL2012ZR22□□ | 220                             | 0.70                        | 400                      | 820              | 100                           | 50/250MHZ |
| MCCL2012ZR24□□ | 240                             | 1.00                        | 350                      | 770              | 100                           | 44/250MHZ |
| MCCL2012ZR25□□ | 250                             | 1.20                        | 350                      | 750              | 100                           | 45/250MHZ |
| MCCL2012ZR27□□ | 270                             | 1.00                        | 350                      | 730              | 100                           | 48/250MHZ |
| MCCL2012ZR28□□ | 280                             | 1.35                        | 350                      | 550              | 100                           | 48/250MHZ |
| MCCL2012ZR29□□ | 290                             | 1.40                        | 310                      | 450              | 100                           | 48/250MHZ |
| MCCL2012ZR30□□ | 300                             | 1.40                        | 310                      | 450              | 100                           | 48/250MHZ |
| MCCL2012ZR33□□ | 330                             | 1.40                        | 310                      | 650              | 100                           | 48/250MHZ |
| MCCL2012ZR36□□ | 360                             | 1.45                        | 300                      | 630              | 100                           | 48/250MHZ |
| MCCL2012ZR39□□ | 390                             | 1.50                        | 290                      | 600              | 100                           | 48/250MHZ |
| MCCL2012ZR42□□ | 420                             | 1.70                        | 250                      | 425              | 50                            | 33/100MHZ |
| MCCL2012ZR43□□ | 430                             | 1.70                        | 250                      | 425              | 50                            | 33/100MHZ |

Note:

1. Inductance is measured at 500mV .
2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

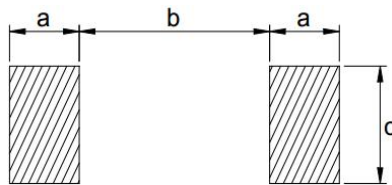
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.29 Max   |
| B    | 1.73 Max   |
| C    | 1.52 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 0.76 Ref   |
| c    | 1.78 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2012ZR47□□ | 470                             | 1.76                        | 250                      | 375              | 50                            | 33/100MHZ |
| MCCL2012ZR56□□ | 560                             | 1.90                        | 230                      | 330              | 25                            | 23/50MHZ  |
| MCCL2012ZR62□□ | 620                             | 2.20                        | 210                      | 320              | 25                            | 23/50MHZ  |
| MCCL2012ZR68□□ | 680                             | 2.20                        | 190                      | 310              | 25                            | 23/50MHZ  |
| MCCL2012ZR75□□ | 750                             | 2.30                        | 180                      | 310              | 25                            | 23/50MHZ  |
| MCCL2012ZR82□□ | 820                             | 2.35                        | 180                      | 310              | 25                            | 23/50MHZ  |
| MCCL2012ZR88□□ | 880                             | 2.35                        | 180                      | 310              | 25                            | 23/50MHZ  |
| MCCL2012ZR91□□ | 910                             | 2.45                        | 170                      | 250              | 25                            | 22/50MHZ  |
| MCCL2012Z1R0□□ | 1000                            | 2.50                        | 170                      | 220              | 25                            | 20/50MHZ  |
| MCCL2012Z1R2□□ | 1200                            | 2.90                        | 150                      | 180              | 25                            | 20/50MHZ  |
| MCCL2012Z1R5□□ | 1500                            | 3.30                        | 150                      | 160              | 25                            | 20/50MHZ  |
| MCCL2012Z1R6□□ | 1600                            | 3.40                        | 150                      | 140              | 25                            | 20/50MHZ  |
| MCCL2012Z1R8□□ | 1800                            | 3.50                        | 120                      | 130              | 25                            | 20/50MHZ  |
| MCCL2012Z2R2□□ | 2200                            | 4.50                        | 120                      | 100              | 25                            | 20/50MHZ  |
| MCCL2012Z2R7□□ | 2700                            | 4.80                        | 100                      | 80               | 25                            | 18/25MHZ  |
| MCCL2012Z3R0□□ | 3000                            | 5.00                        | 60                       | 60               | 25                            | 18/25MHZ  |
| MCCL2012Z3R3□□ | 3300                            | 6.80                        | 50                       | 50               | 25                            | 18/25MHZ  |
| MCCL2012Z4R7□□ | 4700                            | 7.00                        | 30                       | 40               | 25                            | 18/25MHZ  |

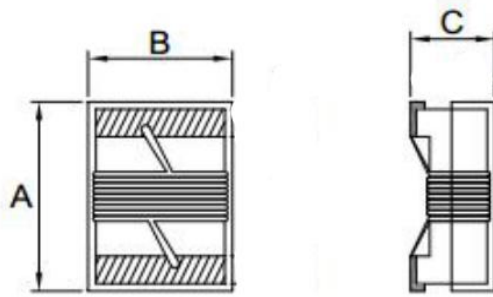
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

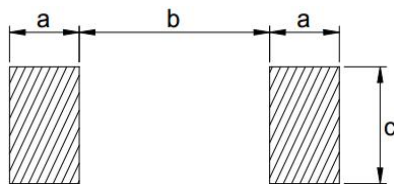
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.92 Max   |
| B    | 2.80 Max   |
| C    | 2.23 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 1.27 Ref   |
| c    | 2.54 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2520Z3N9□□ | 3.9                             | 0.08                        | 1000                     | 4100             | 50                            | 50/500MHZ |
| MCCL2520Z4N7□□ | 4.7                             | 0.08                        | 1000                     | 4100             | 50                            | 50/500MHZ |
| MCCL2520Z5N6□□ | 5.6                             | 0.20                        | 650                      | 4100             | 50                            | 30/500MHZ |
| MCCL2520Z6N2□□ | 6.2                             | 0.20                        | 400                      | 4100             | 50                            | 20/500MHZ |
| MCCL2520Z10N□□ | 10                              | 0.80                        | 1000                     | 4100             | 50                            | 50/500MHZ |
| MCCL2520Z12N□□ | 12                              | 0.09                        | 1000                     | 3300             | 50                            | 50/500MHZ |
| MCCL2520Z15N□□ | 15                              | 0.10                        | 1000                     | 2500             | 50                            | 50/500MHZ |
| MCCL2520Z18N□□ | 18                              | 0.11                        | 1000                     | 2500             | 50                            | 50/350MHZ |
| MCCL2520Z22N□□ | 22                              | 0.12                        | 1000                     | 2400             | 50                            | 55/350MHZ |
| MCCL2520Z24N□□ | 24                              | 0.13                        | 1000                     | 1600             | 50                            | 55/350MHZ |
| MCCL2520Z27N□□ | 27                              | 0.13                        | 1000                     | 1600             | 50                            | 55/350MHZ |
| MCCL2520Z33N□□ | 33                              | 0.14                        | 1000                     | 1600             | 50                            | 60/350MHZ |
| MCCL2520Z36N□□ | 36                              | 0.15                        | 1000                     | 1500             | 50                            | 60/350MHZ |
| MCCL2520Z39N□□ | 39                              | 0.15                        | 1000                     | 1500             | 50                            | 60/350MHZ |
| MCCL2520Z47N□□ | 47                              | 0.16                        | 1000                     | 1500             | 50                            | 65/350MHZ |
| MCCL2520Z51N□□ | 51                              | 0.18                        | 1000                     | 1300             | 50                            | 65/350MHZ |

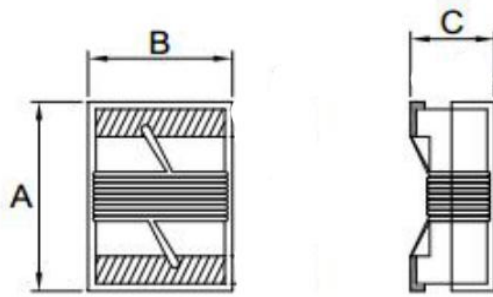
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

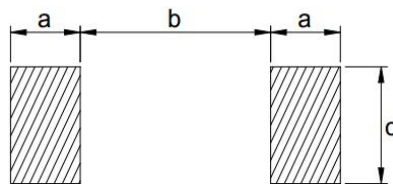
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.92 Max   |
| B    | 2.80 Max   |
| C    | 2.23 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 1.27 Ref   |
| c    | 2.54 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2520Z54N□□ | 54                              | 0.18                        | 1000                     | 1300             | 50                            | 65/350MHZ |
| MCCL2520Z56N□□ | 56                              | 0.18                        | 1000                     | 1300             | 50                            | 65/350MHZ |
| MCCL2520Z65N□□ | 65                              | 0.20                        | 1000                     | 1300             | 50                            | 65/350MHZ |
| MCCL2520Z68N□□ | 68                              | 0.20                        | 1000                     | 1300             | 50                            | 60/350MHZ |
| MCCL2520Z75N□□ | 75                              | 0.22                        | 1000                     | 1000             | 50                            | 60/350MHZ |
| MCCL2520Z82N□□ | 82                              | 0.22                        | 1000                     | 1000             | 50                            | 60/350MHZ |
| MCCL2520ZR10□□ | 100                             | 0.56                        | 650                      | 1000             | 25                            | 60/350MHZ |
| MCCL2520ZR11□□ | 110                             | 0.63                        | 650                      | 950              | 25                            | 60/350MHZ |
| MCCL2520ZR12□□ | 120                             | 0.63                        | 650                      | 950              | 25                            | 60/100MHZ |
| MCCL2520ZR15□□ | 150                             | 0.70                        | 580                      | 850              | 25                            | 45/100MHZ |
| MCCL2520ZR18□□ | 180                             | 0.77                        | 620                      | 750              | 25                            | 45/100MHZ |
| MCCL2520ZR20□□ | 200                             | 0.84                        | 500                      | 700              | 25                            | 45/100MHZ |
| MCCL2520ZR21□□ | 210                             | 0.84                        | 500                      | 700              | 25                            | 45/100MHZ |
| MCCL2520ZR22□□ | 220                             | 0.84                        | 500                      | 700              | 25                            | 45/100MHZ |
| MCCL2520ZR24□□ | 240                             | 0.84                        | 500                      | 700              | 25                            | 45/100MHZ |
| MCCL2520ZR26□□ | 260                             | 0.91                        | 500                      | 600              | 25                            | 45/100MHZ |

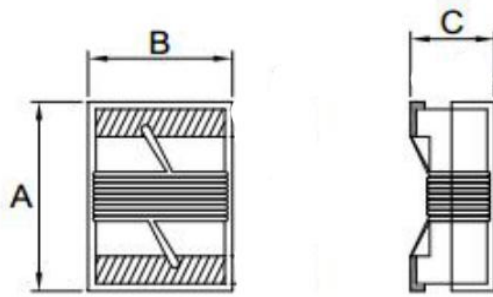
Note:

1. Inductance is measured at 500mV .

2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

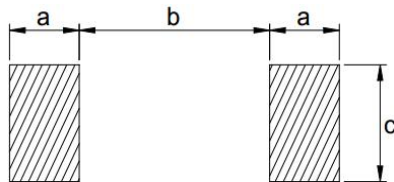
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.92 Max   |
| B    | 2.80 Max   |
| C    | 2.23 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 1.27 Ref   |
| c    | 2.54 Ref   |

## Electrical Characteristics

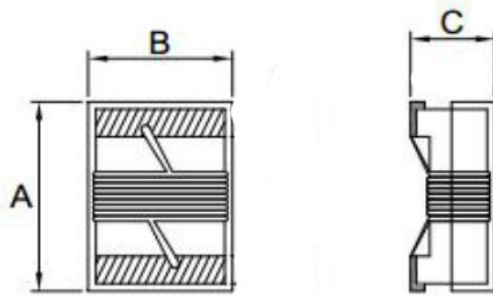
| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2520ZR27□□ | 270                             | 0.91                        | 500                      | 600              | 25                            | 45/100MHZ |
| MCCL2520ZR29□□ | 290                             | 1.05                        | 450                      | 570              | 25                            | 45/100MHZ |
| MCCL2520ZR30□□ | 300                             | 1.05                        | 450                      | 570              | 25                            | 45/100MHZ |
| MCCL2520ZR33□□ | 330                             | 1.05                        | 450                      | 570              | 25                            | 45/100MHZ |
| MCCL2520ZR35□□ | 350                             | 1.12                        | 470                      | 500              | 25                            | 45/100MHZ |
| MCCL2520ZR36□□ | 360                             | 1.12                        | 470                      | 500              | 25                            | 45/100MHZ |
| MCCL2520ZR39□□ | 390                             | 1.12                        | 470                      | 500              | 25                            | 45/100MHZ |
| MCCL2520ZR43□□ | 430                             | 1.19                        | 470                      | 450              | 25                            | 45/100MHZ |
| MCCL2520ZR47□□ | 470                             | 1.19                        | 470                      | 450              | 25                            | 45/100MHZ |
| MCCL2520ZR51□□ | 510                             | 1.33                        | 400                      | 415              | 25                            | 45/100MHZ |
| MCCL2520ZR54□□ | 540                             | 1.33                        | 400                      | 415              | 25                            | 45/100MHZ |
| MCCL2520ZR56□□ | 560                             | 1.33                        | 400                      | 415              | 25                            | 45/100MHZ |
| MCCL2520ZR62□□ | 620                             | 1.40                        | 300                      | 375              | 25                            | 45/100MHZ |
| MCCL2520ZR64□□ | 640                             | 1.40                        | 300                      | 375              | 25                            | 45/100MHZ |
| MCCL2520ZR66□□ | 660                             | 1.47                        | 400                      | 375              | 25                            | 45/100MHZ |
| MCCL2520ZR68□□ | 680                             | 1.47                        | 400                      | 375              | 25                            | 45/100MHZ |

Note:

1. Inductance is measured at 500mV .
2. The nominal DCR is measured at 20℃ ambient temperatur

## Mechanical & Dimensions

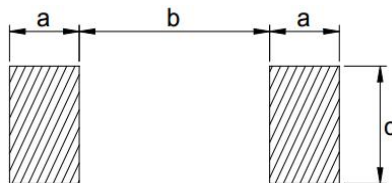
(Unit: mm)



| Code | Dimensions |
|------|------------|
| A    | 2.92 Max   |
| B    | 2.80 Max   |
| C    | 2.23 Max   |

## Recommend Land Pattern Dimensions

(Unit: mm)



| Code | Dimensions |
|------|------------|
| a    | 1.02 Ref   |
| b    | 1.27 Ref   |
| c    | 2.54 Ref   |

## Electrical Characteristics

| Part Number    | Inductance <sup>1</sup><br>(nH) | DCR <sup>2</sup><br>(Ω) Max | Rated Current<br>(mA)Max | SRF(MHz)<br>Min. | Test Frequency<br>L,Q ( MHz ) | Q<br>Min  |
|----------------|---------------------------------|-----------------------------|--------------------------|------------------|-------------------------------|-----------|
| MCCL2520ZR75□□ | 750                             | 1.54                        | 360                      | 360              | 25.0                          | 45/100MHZ |
| MCCL2520ZR82□□ | 820                             | 1.61                        | 400                      | 350              | 25.0                          | 45/100MHZ |
| MCCL2520ZR88□□ | 880                             | 1.68                        | 380                      | 320              | 25.0                          | 35/50MHZ  |
| MCCL2520ZR91□□ | 910                             | 1.68                        | 380                      | 320              | 25.0                          | 35/50MHZ  |
| MCCL2520Z1R0□□ | 1000                            | 1.75                        | 370                      | 290              | 25.0                          | 35/50MHZ  |
| MCCL2520Z1R2□□ | 1200                            | 2.00                        | 310                      | 250              | 7.9                           | 35/50MHZ  |
| MCCL2520Z1R5□□ | 1500                            | 2.30                        | 330                      | 200              | 7.9                           | 28/50MHZ  |
| MCCL2520Z1R6□□ | 1600                            | 2.30                        | 330                      | 200              | 7.9                           | 28/50MHZ  |
| MCCL2520Z1R8□□ | 1800                            | 2.60                        | 300                      | 160              | 7.9                           | 28/50MHZ  |
| MCCL2520Z2R0□□ | 2000                            | 2.80                        | 280                      | 160              | 7.9                           | 28/50MHZ  |
| MCCL2520Z2R2□□ | 2200                            | 2.80                        | 280                      | 160              | 7.9                           | 28/50MHZ  |
| MCCL2520Z2R7□□ | 2700                            | 3.20                        | 290                      | 140              | 7.9                           | 22/25MHZ  |
| MCCL2520Z3R3□□ | 3300                            | 3.40                        | 290                      | 110              | 7.9                           | 22/25MHZ  |
| MCCL2520Z3R9□□ | 3900                            | 3.60                        | 260                      | 100              | 7.9                           | 20/25MHZ  |
| MCCL2520Z4R7□□ | 4700                            | 4.00                        | 260                      | 60               | 7.9                           | 20/7.9MHZ |
| MCCL2520Z5R6□□ | 5600                            | 5.70                        | 240                      | 20               | 7.9                           | 16/7.9MHZ |
| MCCL2520Z6R8□□ | 6800                            | 7.70                        | 40                       | 200              | 7.9                           | 18/7.9MHZ |
| MCCL2520Z8R2□□ | 8200                            | 10.70                       | 25                       | 170              | 7.9                           | 18/7.9MHZ |
| MCCL2520Z100□□ | 10000                           | 12.70                       | 25                       | 100              | 7.9                           | 18/7.9MHZ |

Note:

1. Inductance is measured at 500mV .

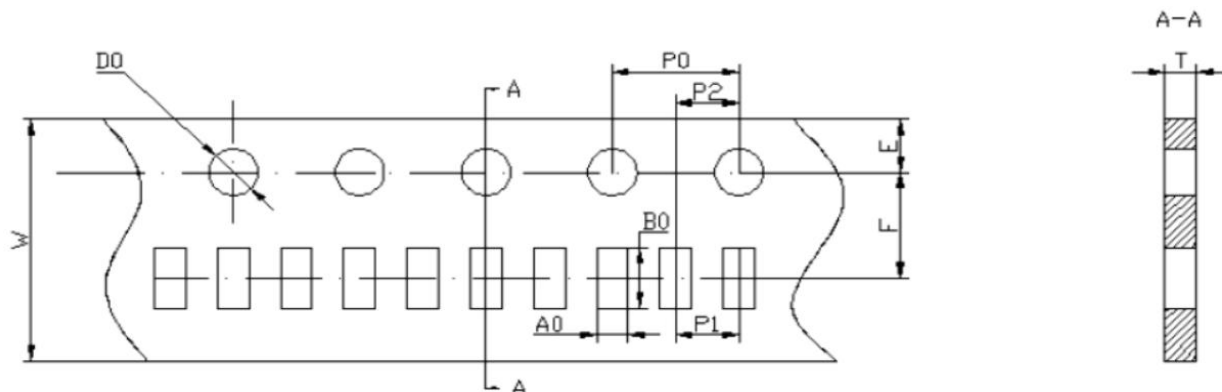
2. The nominal DCR is measured at 20℃ ambient temperatur



## Packaging

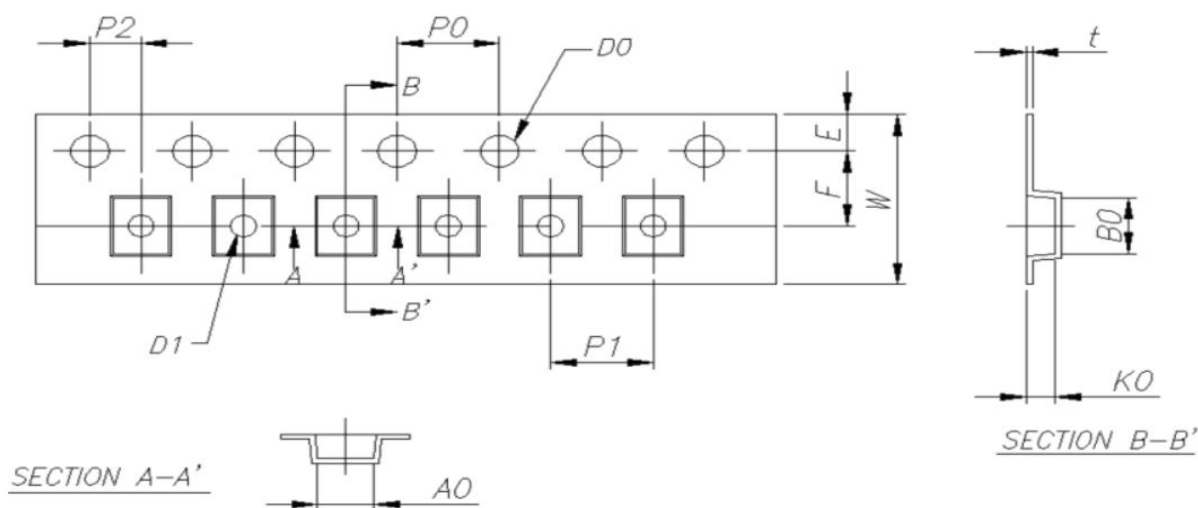
### Tape Dimension:

Material of taping is paper



| P/N      | Ao       | Bo       | T        | E        | F       | D        | P1      | P2      | W       | P0      |
|----------|----------|----------|----------|----------|---------|----------|---------|---------|---------|---------|
| MCCL1005 | 0.74±0.1 | 1.23±0.1 | 0.60±0.1 | 1.75±0.1 | 3.5±0.1 | 1.55±0.1 | 2.0±0.1 | 2.0±0.1 | 8.0±0.3 | 4.0±0.1 |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |

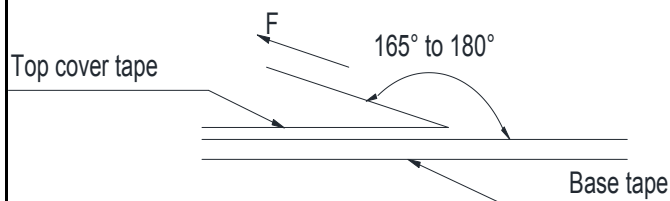
Material of taping is plastic



| P/N      | Ao       | Bo       | K0       | E        | F       | D        | P1      | P2      | W       | P0      |
|----------|----------|----------|----------|----------|---------|----------|---------|---------|---------|---------|
| MCCL1608 | 1.25±0.1 | 1.83±0.1 | 0.95±0.1 | 1.75±0.1 | 3.5±0.1 | 1.55±0.1 | 2.0±0.1 | 2.0±0.1 | 8.0±0.3 | 4.0±0.1 |
| MCCL2012 | 1.85±0.1 | 2.50±0.1 | 1.45±0.1 | 1.75±0.1 | 3.5±0.1 | 1.55±0.1 | 2.0±0.1 | 2.0±0.1 | 8.0±0.3 | 4.0±0.1 |
| MCCL2520 | 2.73±0.1 | 2.90±0.1 | 2.34±0.1 | 1.75±0.1 | 3.5±0.1 | 1.55±0.1 | 2.0±0.1 | 2.0±0.1 | 8.0±0.3 | 4.0±0.1 |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |
|          |          |          |          |          |         |          |         |         |         |         |

## Packaging

### Tearing Off Force:



| The force tearing off cobe tape is 10 to 130 g.f      |                      |                    |                           |
|-------------------------------------------------------|----------------------|--------------------|---------------------------|
| in the arrow direction under the following conditions |                      |                    |                           |
| Room Temp<br>(°C)                                     | Room Humidity<br>(%) | Room atrn<br>(hPa) | Teaming Speed<br>(mm/min) |
| 5~35                                                  | 45~85                | 860~1060           | 300                       |

### ※Storage Conditions

1. Temperature and humidity conditions:  
-40°C ~ +85°C and 70% RH.
2. Recommended products should be used within 6 months form the time of delivery.
3. The packaging material should be kept where no chlorine or sulfur exists in the air.

### ※Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

## Recommended Soldering Conditions

Figure 1. Re-flow Soldering

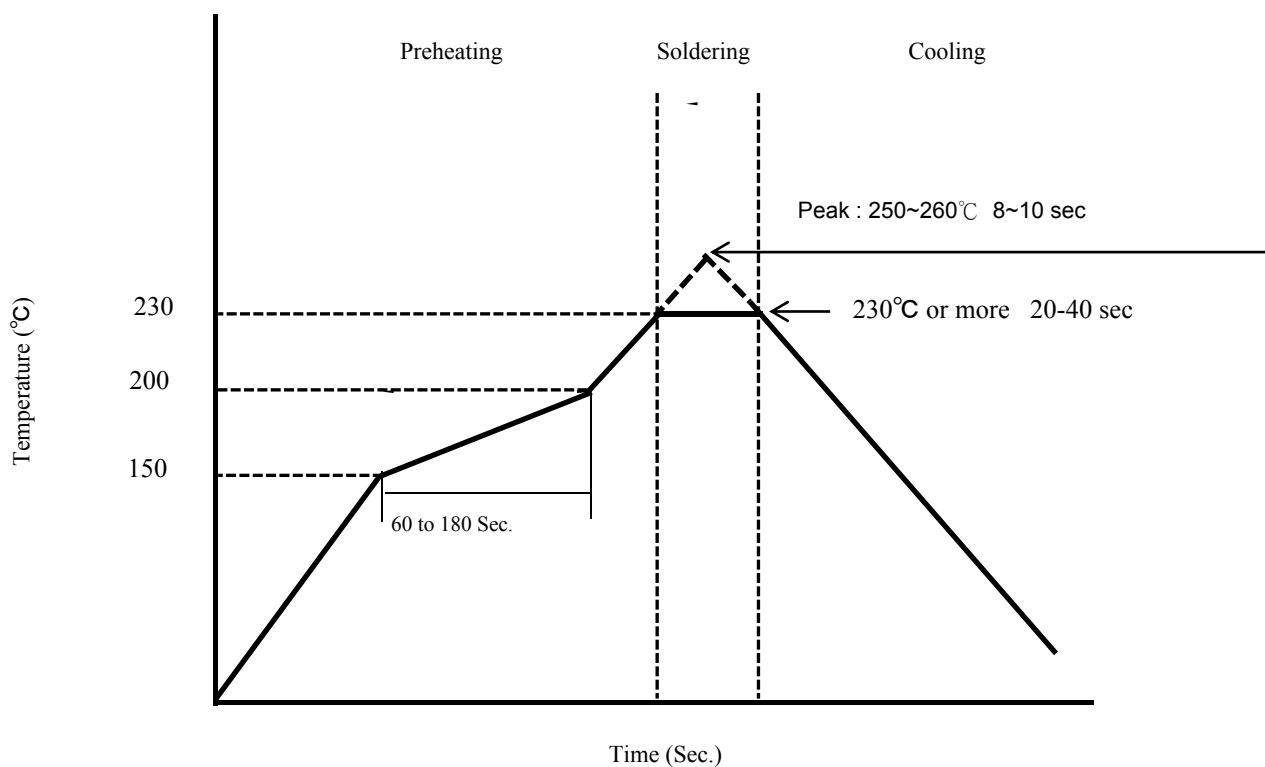
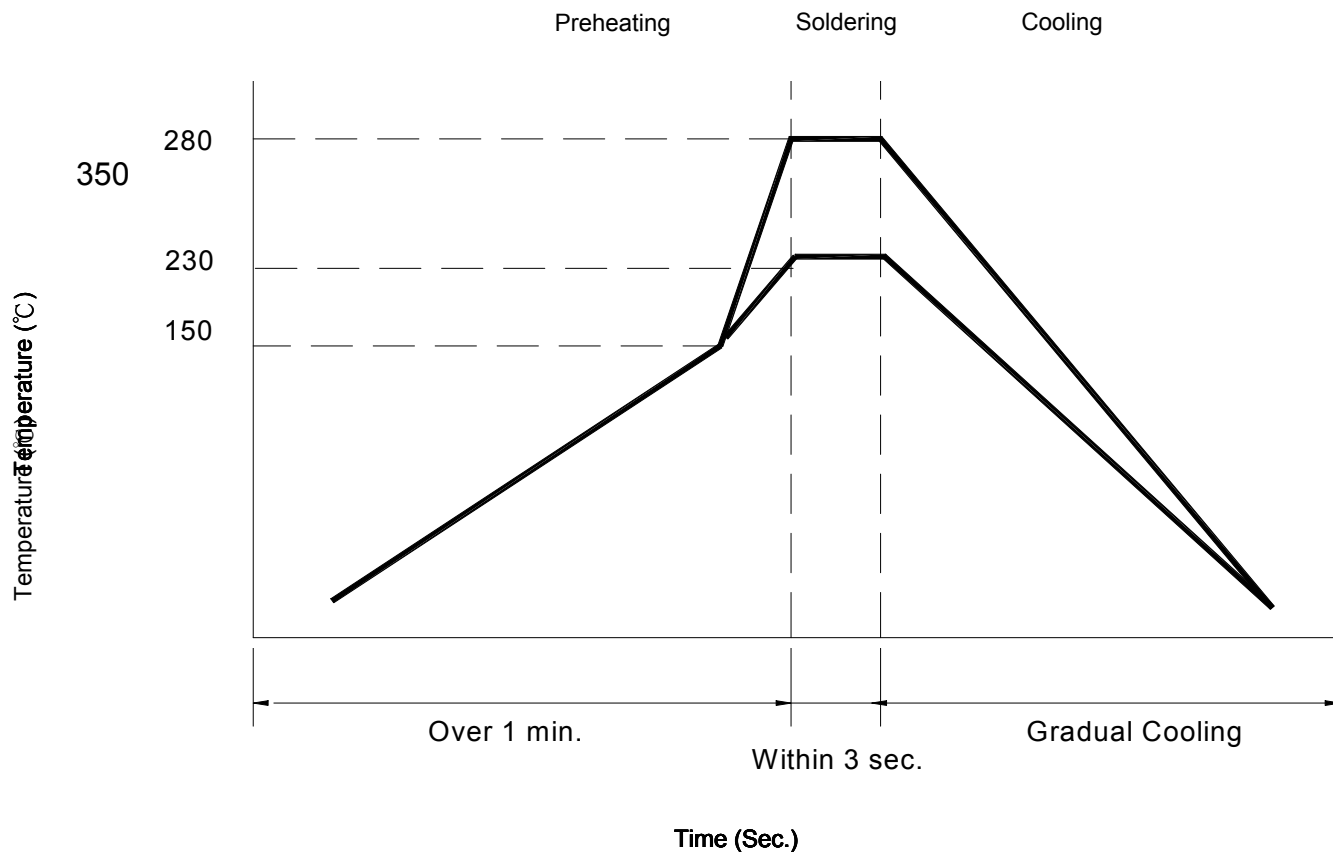
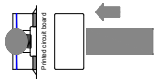


Figure 2. Hand Soldering



## Reliability and Testing Conditions

| Item                                   | Specification                                                                                                     | Conditions                                                                                                                                                                                                                                                                                                                                                                                                    |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------|--------------|---|--------|----|---|------------------|----------|---|--------|----|---|------------------|----------|
| Operating temperature range            | -40℃ ~+125℃                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                               |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Storage temperature and humidity range | -40℃ ~+85℃ , 70% RH Max                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                               |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Solderability                          | More than 90% of the terminal electrode should be covered with solder.                                            | <ul style="list-style-type: none"> <li>- Preheat: 150 ℃ , 60 sec</li> <li>- Solder: Sn96.5%-Ag3%-Cu0.5%</li> <li>- Temperature: 245±5℃</li> <li>- Flux for lead free: Rosin 9.5%</li> <li>- Dip time: 4±1 sec</li> <li>- Depth: completely cover the termination</li> </ul>                                                                                                                                   |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Resistance to Soldering Heat           | Inductance within ±20% of initial value.<br>No disconnection or short circuit.<br>The appearance shall not break. | <ul style="list-style-type: none"> <li>- Solder technique simulation: SMD</li> <li>- Temperature (℃): 260 ± 5 (solder temp)</li> <li>- Time (s): 10 ± 1</li> <li>- Temperature ramp / immersion and emersion rate: 25 mm/s ± 6 mm/s</li> <li>- Number of heat cycles: 1</li> </ul>                                                                                                                            |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Resistance to High Temperature         | Inductance within ±20% of initial value.<br>No disconnection or short circuit.<br>The appearance shall not break. | After 500 hours in 125±3℃ and 24±4 hour drying under normal condition.                                                                                                                                                                                                                                                                                                                                        |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Resistance to Low Temperature          | Inductance within ±20% of initial value.<br>No disconnection or short circuit.<br>The appearance shall not break. | After 500 hours in -40±2℃ and 24±4 hour drying under normal condition.                                                                                                                                                                                                                                                                                                                                        |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Resistance to Humidity                 | Inductance within ±20% of initial value.<br>No disconnection or short circuit.<br>The appearance shall not break. | After 500 hours in 60±2℃ , 90%~95%RH, and 24±4 hour drying under normal condition.                                                                                                                                                                                                                                                                                                                            |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Thermal shock                          | Inductance within ±20% of initial value.<br>No disconnection or short circuit.<br>The appearance shall not break. | <p>After 30 cycles of following condition.</p> <table border="1"> <thead> <tr> <th>Step</th><th>Temperature (℃)</th><th>Times (min.)</th></tr> </thead> <tbody> <tr> <td>1</td><td>-40±2℃</td><td>30</td></tr> <tr> <td>2</td><td>Room Temperature</td><td>Within 3</td></tr> <tr> <td>3</td><td>125±3℃</td><td>30</td></tr> <tr> <td>4</td><td>Room Temperature</td><td>Within 3</td></tr> </tbody> </table> | Step | Temperature (℃) | Times (min.) | 1 | -40±2℃ | 30 | 2 | Room Temperature | Within 3 | 3 | 125±3℃ | 30 | 4 | Room Temperature | Within 3 |
| Step                                   | Temperature (℃)                                                                                                   | Times (min.)                                                                                                                                                                                                                                                                                                                                                                                                  |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| 1                                      | -40±2℃                                                                                                            | 30                                                                                                                                                                                                                                                                                                                                                                                                            |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| 2                                      | Room Temperature                                                                                                  | Within 3                                                                                                                                                                                                                                                                                                                                                                                                      |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| 3                                      | 125±3℃                                                                                                            | 30                                                                                                                                                                                                                                                                                                                                                                                                            |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| 4                                      | Room Temperature                                                                                                  | Within 3                                                                                                                                                                                                                                                                                                                                                                                                      |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Vibration Test                         | Inductance within ±10% of initial value and appearance shall not break.                                           | After vibration for 1hour, In each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P Amplitudes.                                                                                                                                                                                                                                                                                          |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Terminal strength                      | The terminal electrode and must not be damaged                                                                    | <p>Solder a chip to test substrate, and then laterally apply a force(&lt; 1005:2N , ≤2012:5N , &gt; 2012:10N) in the arrow direction, Duration :5.0s</p>                                                                                                                                                                 |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |
| Drop Test                              | Inductance within ±10% of initial value and appearance shall not break.                                           | Drop 3 times on a concrete floor from a height of 75cm                                                                                                                                                                                                                                                                                                                                                        |      |                 |              |   |        |    |   |                  |          |   |        |    |   |                  |          |