

### ML2012 Series

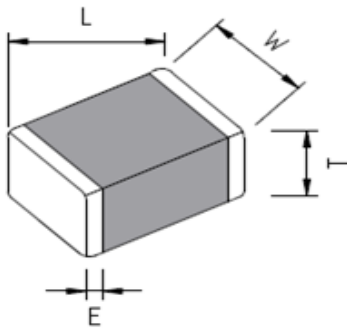
#### Features :

- Produced from magnetic material and with multilayer technology, not containing any wire windings.
- Dimensions are unified for automatic mounting.
- No cross coupling between inductors due to magnetic shield and is suitable for high density printed circuit boards.
- Monolithic structure for high reliability.
- Excellent solderability and high heat resistance for either flow or reflow soldering.
- Operating temperature range of -40°C to +85°C
- Storage temperature range of -10°C to +40°C

#### Applications :

- Circuit where a stable ground is unavailable.
- Various automotive electronics.
- Mother board, tablet PC, laptop, desktop computer and peripheral equipment.
- Digital communication equipment.
- Various electronic equipment.

#### Shapes And Dimensions : (Unit :mm)



| L          | W           | T | E       |
|------------|-------------|---|---------|
| 2.0 ± 0.15 | 1.25 ± 0.15 | * | 0.2~0.8 |

\*Please refer to the detailed figures shown in the ML2012 series table.

#### Part Number Code :

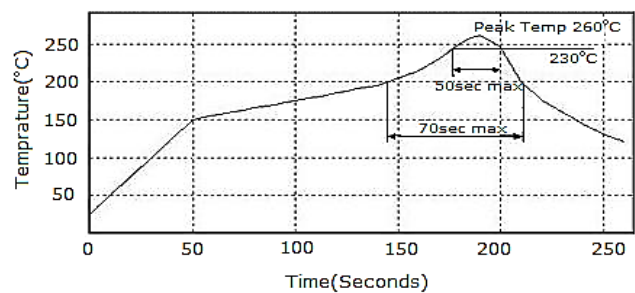
**ML 2012 1N5 K -E**

①      ②      ③      ④      ⑤

- 1 : Product Series
- 2 : Dimensions L x W
- 3 : Inductance Value
- 4 : Inductance Tolerance
- 5 : Lead-Free

#### Reflow Profile :

Peak Temp : 260°C  
Max time above 230°C 50sec  
Max time above 200°C 70sec



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| Part No.   | Inductance (μH) | Tolerance | Q Min. | Test Freq. (MHz) | SRF (GHz) Min. | DCR (Ω) Max. | Rated Current (mA) Max. | Thickness (mm) |
|------------|-----------------|-----------|--------|------------------|----------------|--------------|-------------------------|----------------|
| ML2012-47N | 0.047           | M         | 15     | 320              | 320            | 0.20         | 300                     | 0.85 ± 0.2     |
| ML2012-68N | 0.068           | M         | 15     | 280              | 280            | 0.20         | 300                     | 0.85 ± 0.2     |
| ML2012-82N | 0.082           | M         | 15     | 255              | 255            | 0.20         | 300                     | 0.85 ± 0.2     |
| ML2012-R10 | 0.100           | M / K     | 20     | 235              | 235            | 0.30         | 250                     | 0.85 ± 0.2     |
| ML2012-R12 | 0.120           | M / K     | 20     | 220              | 220            | 0.30         | 250                     | 0.85 ± 0.2     |
| ML2012-R15 | 0.150           | M / K     | 20     | 200              | 200            | 0.40         | 250                     | 0.85 ± 0.2     |
| ML2012-R18 | 0.180           | M / K     | 20     | 185              | 185            | 0.40         | 250                     | 0.85 ± 0.2     |
| ML2012-R22 | 0.220           | M / K     | 20     | 170              | 170            | 0.50         | 250                     | 0.85 ± 0.2     |
| ML2012-R27 | 0.270           | M / K     | 20     | 150              | 150            | 0.50         | 250                     | 0.85 ± 0.2     |
| ML2012-R33 | 0.330           | M / K     | 20     | 145              | 145            | 0.55         | 250                     | 0.85 ± 0.2     |
| ML2012-R39 | 0.390           | M / K     | 25     | 135              | 135            | 0.65         | 200                     | 0.85 ± 0.2     |
| ML2012-R47 | 0.470           | M / K     | 25     | 125              | 125            | 0.65         | 200                     | 0.85 ± 0.2     |
| ML2012-R56 | 0.560           | M / K     | 25     | 115              | 115            | 0.75         | 150                     | 0.85 ± 0.2     |
| ML2012-R68 | 0.680           | M / K     | 25     | 105              | 105            | 0.80         | 150                     | 0.85 ± 0.2     |
| ML2012-R82 | 0.820           | M / K     | 25     | 100              | 100            | 1.00         | 150                     | 0.85 ± 0.2     |
| ML2012-1R0 | 1.000           | M / K     | 45     | 75               | 75             | 0.40         | 50                      | 0.85 ± 0.2     |
| ML2012-1R2 | 1.200           | M / K     | 45     | 65               | 65             | 0.50         | 50                      | 0.85 ± 0.2     |
| ML2012-1R5 | 1.500           | M / K     | 45     | 60               | 60             | 0.50         | 50                      | 0.85 ± 0.2     |
| ML2012-1R8 | 1.800           | M / K     | 45     | 55               | 55             | 0.60         | 50                      | 0.85 ± 0.2     |
| ML2012-2R2 | 2.200           | M / K     | 45     | 50               | 50             | 0.65         | 30                      | 0.85 ± 0.2     |
| ML2012-2R7 | 2.700           | M / K     | 45     | 45               | 45             | 0.75         | 30                      | 1.25 ± 0.2     |
| ML2012-3R3 | 3.300           | M / K     | 45     | 41               | 41             | 0.80         | 30                      | 1.25 ± 0.2     |
| ML2012-3R9 | 3.900           | M / K     | 45     | 38               | 38             | 0.90         | 30                      | 1.25 ± 0.2     |
| ML2012-4R7 | 4.700           | M / K     | 45     | 35               | 35             | 1.00         | 30                      | 1.25 ± 0.2     |
| ML2012-5R6 | 5.600           | M / K     | 50     | 32               | 32             | 0.90         | 15                      | 1.25 ± 0.2     |
| ML2012-6R8 | 6.800           | M / K     | 50     | 29               | 29             | 1.00         | 15                      | 1.25 ± 0.2     |
| ML2012-8R2 | 8.200           | M / K     | 50     | 4                | 26             | 1.10         | 15                      | 1.25 ± 0.2     |
| ML2012-100 | 10.000          | M / K     | 50     | 2                | 24             | 1.15         | 15                      | 1.25 ± 0.2     |
| ML2012-120 | 12.000          | M / K     | 50     | 2                | 22             | 1.25         | 15                      | 1.25 ± 0.2     |
| ML2012-150 | 15.000          | M / K     | 30     | 1                | 19             | 0.80         | 5                       | 1.25 ± 0.2     |
| ML2012-180 | 18.000          | M / K     | 30     | 1                | 18             | 0.90         | 5                       | 1.25 ± 0.2     |
| ML2012-220 | 22.000          | M / K     | 30     | 1                | 16             | 1.10         | 5                       | 1.25 ± 0.2     |
| ML2012-270 | 27.000          | M / K     | 30     | 1                | 14             | 1.15         | 5                       | 1.25 ± 0.2     |
| ML2012-330 | 33.000          | M / K     | 30     | 1                | 13             | 1.25         | 5                       | 1.25 ± 0.2     |
| ML2012-390 | 39.000          | M / K     | 35     | 1                | 8              | 2.90         | 4                       | 1.25 ± 0.2     |

Inductance tolerance : N±30% M±20% L±15% K±10% J±5%