

## FEATURES

- Small chip suitable for surface mounting .
- Large inductance with ferrite material .
- Operating Temperature: -40°C~+85°C .
- RoHS, Halogen Free and REACH Compliance.



## APPLICATIONS

- Mobile phones and other electronic devices
- Bluetooth modules and TWS earphones

## PART NUMBERING

|       |             |                     |              |                    |                      |           |              |             |
|-------|-------------|---------------------|--------------|--------------------|----------------------|-----------|--------------|-------------|
| A     | HW          | 1608                | FE           | 4R7                | K                    | T         | F            | □□          |
| ①     | ②           | ③                   | ④            | ⑤                  | ⑥                    | ⑦         | ⑧            | ⑨           |
| Grade | Series Name | External Dimensions | Feature Type | Nominal inductance | Inductance tolerance | Packaging | HSF Products | Design Code |

| ① Grade |            |
|---------|------------|
| A       | Grade Code |

| ② Series Name |                          |
|---------------|--------------------------|
| HW            | Wire Wound Chip Inductor |

| ③ External Dimensions |        |
|-----------------------|--------|
| 1608                  | [0603] |
| 2012                  | [0805] |

| ④ Feature Type |              |
|----------------|--------------|
| FE             | Ferrite core |

| ⑤ Nominal inductance |                         |
|----------------------|-------------------------|
| Code (example)       | Nominal inductance [μH] |
| 4R7                  | 4.7                     |
| 100                  | 10                      |
| 220                  | 22                      |

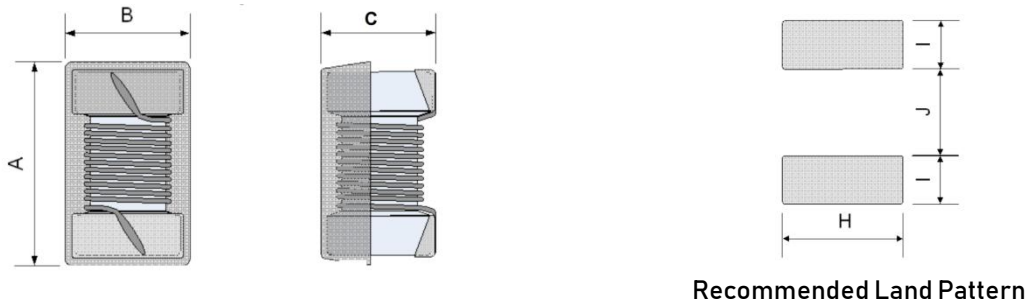
| ⑦ Packaging |             |
|-------------|-------------|
| T           | Tape & Reel |

| ⑧ HSF Products |                                   |
|----------------|-----------------------------------|
| F              | Hazardous Substance Free Products |

| ⑥ Inductance tolerance |                      |
|------------------------|----------------------|
| Code (example)         | Inductance tolerance |
| J                      | ±5%                  |
| K                      | ±10%                 |
| M                      | ±20%                 |

| ⑨ Design Code |                           |
|---------------|---------------------------|
| □□            | Standard product is blank |
| -M            | With color point Marking  |

**Dimensions & Recommended Land Pattern**



Unit: mm

| Series    | Dimensions |        |        | Recommended Land Pattern |        |        |
|-----------|------------|--------|--------|--------------------------|--------|--------|
|           | A Max.     | B Max. | C Max. | I Typ.                   | H Typ. | J Typ. |
| AHW1608FE | 1.80       | 1.25   | 1.10   | 0.64                     | 1.02   | 0.64   |
| AHW2012FE | 2.40       | 1.73   | 1.55   | 1.02                     | 1.78   | 0.76   |

● The 1608FE and 2012FE with color point Marking can be provided upon customer's request.

**Electrical Characteristics**

● AHW1608FE Series

| Part Number     | Inductance | L/Q Test Freq. | Quality Factor | Self-resonant Frequency | DC Resistance | Heat Rating Current |
|-----------------|------------|----------------|----------------|-------------------------|---------------|---------------------|
|                 |            |                |                | Typ.                    | Max.          | Typ.                |
| Units           | μH         | MHz            | -              | MHz                     | Ω             | mA                  |
| Symbol          | L          | Freq.          | Q              | S.R.F                   | DCR           | I <sub>rms</sub>    |
| AHW1608FE1R0KTF | 1          | 7.9            | 16             | 250                     | 0.41          | 700                 |
| AHW1608FE1R5KTF | 1.5        | 7.9            | 16             | 160                     | 0.52          | 600                 |
| AHW1608FE1R8KTF | 1.8        | 7.9            | 16             | 121                     | 0.56          | 580                 |
| AHW1608FE2R2KTF | 2.2        | 7.9            | 16             | 103                     | 0.72          | 580                 |
| AHW1608FE2R7KTF | 2.7        | 7.9            | 16             | 72                      | 0.81          | 500                 |
| AHW1608FE3R9KTF | 3.9        | 7.9            | 16             | 61                      | 1.08          | 460                 |
| AHW1608FE4R7KTF | 4.7        | 7.9            | 16             | 51                      | 0.97          | 420                 |
| AHW1608FE5R6KTF | 5.6        | 7.9            | 16             | 47                      | 1.43          | 380                 |
| AHW1608FE6R8KTF | 6.8        | 7.9            | 16             | 43                      | 1.95          | 340                 |
| AHW1608FE100KTF | 10         | 2.5            | 14             | 36                      | 2.40          | 280                 |
| AHW1608FE120KTF | 12         | 2.5            | 14             | 32                      | 2.96          | 260                 |
| AHW1608FE150KTF | 15         | 2.5            | 14             | 29                      | 3.38          | 220                 |
| AHW1608FE220KTF | 22         | 2.5            | 14             | 24                      | 4.69          | 200                 |
| AHW1608FE270KTF | 27         | 2.5            | 14             | 20                      | 6.76          | 140                 |
| AHW1608FE330KTF | 33         | 2.5            | 14             | 15                      | 8.58          | 120                 |

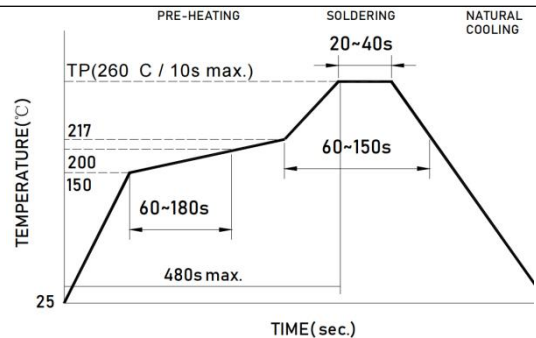
## Electrical Characteristics

## ● AHW2012FE Series

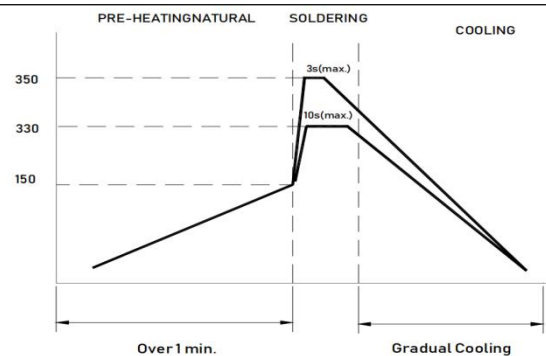
| Part Number     | Inductance | L/Q<br>Test<br>Freq. | Quality<br>Factor | Self-resonant<br>Frequency | DC<br>Resistance | Heat Rating<br>Current |
|-----------------|------------|----------------------|-------------------|----------------------------|------------------|------------------------|
|                 |            |                      |                   | Typ.                       | Max.             | Typ.                   |
| Units           | μH         | MHz                  | -                 | MHz                        | Ω                | mA                     |
| Symbol          | L          | Freq.                | Q                 | S.R.F                      | DCR              | Irms                   |
| AHW2012FER68KTF | 0.68       | 7.9                  | 14                | 765                        | 0.19             | 1480                   |
| AHW2012FE1R0KTF | 1          | 7.9                  | 14                | 208                        | 0.17             | 1350                   |
| AHW2012FE1R2KTF | 1.2        | 7.9                  | 14                | 208                        | 0.17             | 1180                   |
| AHW2012FE1R5KTF | 1.5        | 7.9                  | 14                | 130                        | 0.22             | 1080                   |
| AHW2012FE1R8KTF | 1.8        | 7.9                  | 14                | 112                        | 0.26             | 1060                   |
| AHW2012FE2R2KTF | 2.2        | 7.9                  | 12                | 80                         | 0.31             | 1040                   |
| AHW2012FE3R3KTF | 3.3        | 7.9                  | 12                | 50                         | 0.36             | 870                    |
| AHW2012FE4R7KTF | 4.7        | 7.9                  | 14                | 51                         | 0.56             | 840                    |
| AHW2012FE5R6KTF | 5.6        | 7.9                  | 12                | 42                         | 0.65             | 640                    |
| AHW2012FE6R8KTF | 6.8        | 7.9                  | 14                | 35                         | 0.88             | 700                    |
| AHW2012FE8R2KTF | 8.2        | 7.9                  | 13                | 33                         | 0.94             | 570                    |
| AHW2012FE100KTF | 10         | 2.5                  | 14                | 25                         | 1.17             | 560                    |
| AHW2012FE120KTF | 12         | 2.5                  | 14                | 30                         | 1.50             | 390                    |
| AHW2012FE150KTF | 15         | 2.5                  | 15                | 28                         | 1.82             | 380                    |
| AHW2012FE180KTF | 18         | 2.5                  | 15                | 27                         | 2.01             | 360                    |
| AHW2012FE220KTF | 22         | 2.5                  | 15                | 20                         | 2.29             | 340                    |
| AHW2012FE470KTF | 47         | 2.5                  | 14                | 15                         | 4.42             | 280                    |

## Soldering Conditions

- Preheat circuit and products to 150 °C
- 260 °C tip temperature (max)
- Reflow times: no more than 2 times
- Solder paste thickness: the best 0.08mm is, but max is 0.1mm



- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 3 sec.



## Note:

This series product is not applies in automotive or related products. Otherwise, we will shall not bear than the resulting all the problems of quality and responsibility.

Please be sure to request approval specifications that provide further details of the products. Kindly not that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without APV approval.

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