

# High Q Ceramic Wirewound RF Inductor (AEC-Q200)



## AISC-Q1008HQ Series

Request Samples



Check Inventory



2.92 x 2.79 x 2.03 mm

RoHS/RoHS II Compliant

MSL Level = 1

### Features

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 (grade 1) qualified
- Ceramic base with high SRF
- Excellent DCR and current carrying characteristics.
- Ultra-compact inductors
- Tight tolerance down to  $\pm 2\%$

### Applications

- Automotive applications
- Bluetooth, W-LAN, Broadband Network
- Impedance matching networks
- Filtering for high frequency communication circuits
- Video cameras, displays, and other electronic devices.

### Electrical Specifications

| Part Number<br>Inductance Code | L (nH) | Tolerance | Q   | Q Test        | SRF          | DCR                 | IDC         |
|--------------------------------|--------|-----------|-----|---------------|--------------|---------------------|-------------|
|                                |        |           | Min | Freq<br>(MHz) | Min<br>(GHz) | Max<br>( $\Omega$ ) | Max<br>(mA) |
| 3N0                            | 3.0    | J, K      | 70  | 1500          | 6.00         | 0.04                | 1600        |
| 3N9                            | 3.9    | J, K      | 75  | 1500          | 6.00         | 0.05                | 1600        |
| 4N1                            | 4.1    | J, K      | 75  | 1500          | 6.00         | 0.05                | 1600        |
| 7N8                            | 7.8    | J, K      | 75  | 500           | 3.80         | 0.05                | 1600        |
| 10N                            | 10     | G, J, K   | 60  | 500           | 3.60         | 0.06                | 1600        |
| 12N                            | 12     | G, J, K   | 70  | 500           | 2.80         | 0.06                | 1500        |
| 18N                            | 18     | G, J, K   | 62  | 350           | 2.70         | 0.07                | 1400        |
| 22N                            | 22     | G, J, K   | 62  | 350           | 2.05         | 0.07                | 1400        |
| 33N                            | 33     | G, J, K   | 75  | 350           | 1.70         | 0.09                | 1300        |
| 39N                            | 39     | G, J, K   | 75  | 350           | 1.30         | 0.09                | 1300        |
| 47N                            | 47     | G, J, K   | 75  | 350           | 1.45         | 0.12                | 1200        |
| 56N                            | 56     | G, J, K   | 75  | 350           | 1.23         | 0.12                | 1200        |
| 68N                            | 68     | G, J, K   | 80  | 350           | 1.15         | 0.13                | 1100        |
| 82N                            | 82     | G, J, K   | 80  | 350           | 1.06         | 0.16                | 1100        |
| R10                            | 100    | G, J, K   | 50  | 350           | 0.82         | 0.16                | 1000        |
| R12                            | 120    | G, J, K   | 50  | 100           | 0.82         | 0.16                | 1000        |

### Test Conditions:

Inductance, Q, SRF: HP4286/E4982A

DCR: Micro-Ohm meter (Gom-801G)/E4982A

IDC: Applied the current to coils, the temperature of coil increases  $\Delta T 15^{\circ}\text{C}$  ( $T_a = 25^{\circ}\text{C}$ ).

**Operating Temperature:**  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

**Components Storage Temperature:**  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

**Tape and Reel packaging Temperature:**  $15 \sim 28^{\circ}\text{C}$ ;  $< 80\%$  RH

**AISC-Q1008HQ is AEC-Q200 Qualified**

**AISC-Q1008HQ Series is RoHS Compliant and Pb free.**



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**11/21/2023**

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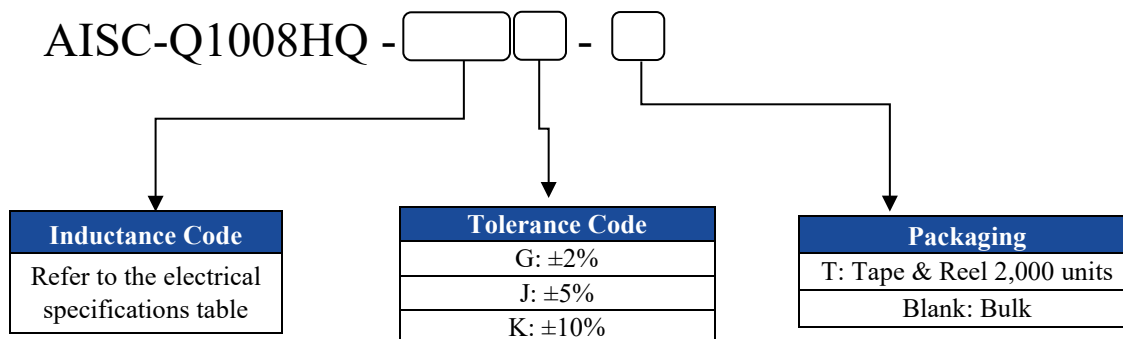


Check Inventory

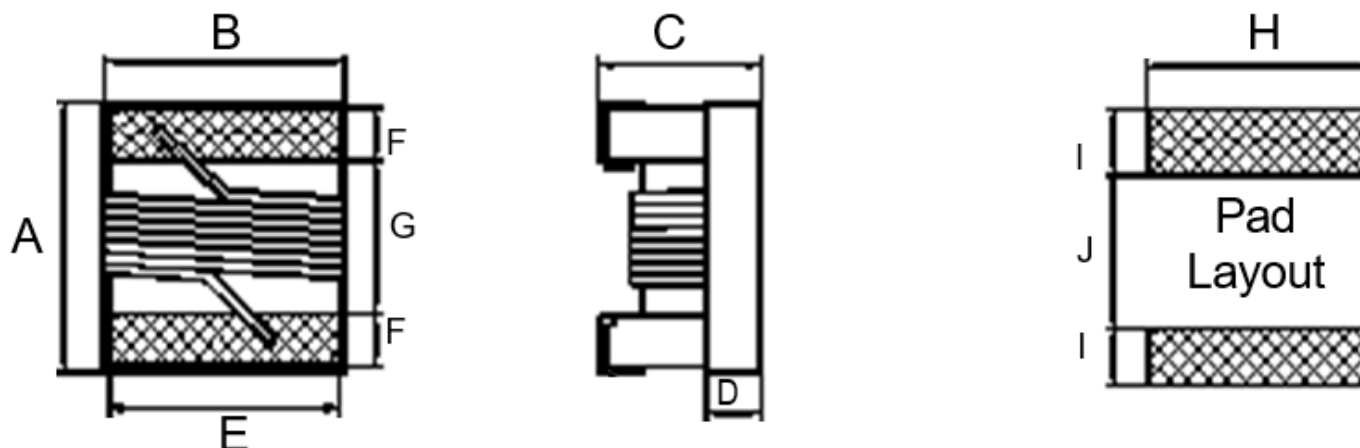


2.92 x 2.79 x 2.03 mm  
**RoHS/RoHS II Compliant**  
MSL Level = 1

## Part Number Identification



## Mechanical Dimensions



| A    | B    | C    | D    | E    | F    | G    | H    | I    | J    |
|------|------|------|------|------|------|------|------|------|------|
| 2.92 | 2.79 | 2.03 | 0.65 | 2.03 | 0.51 | 1.52 | 2.54 | 1.02 | 1.27 |

Dimensions: mm

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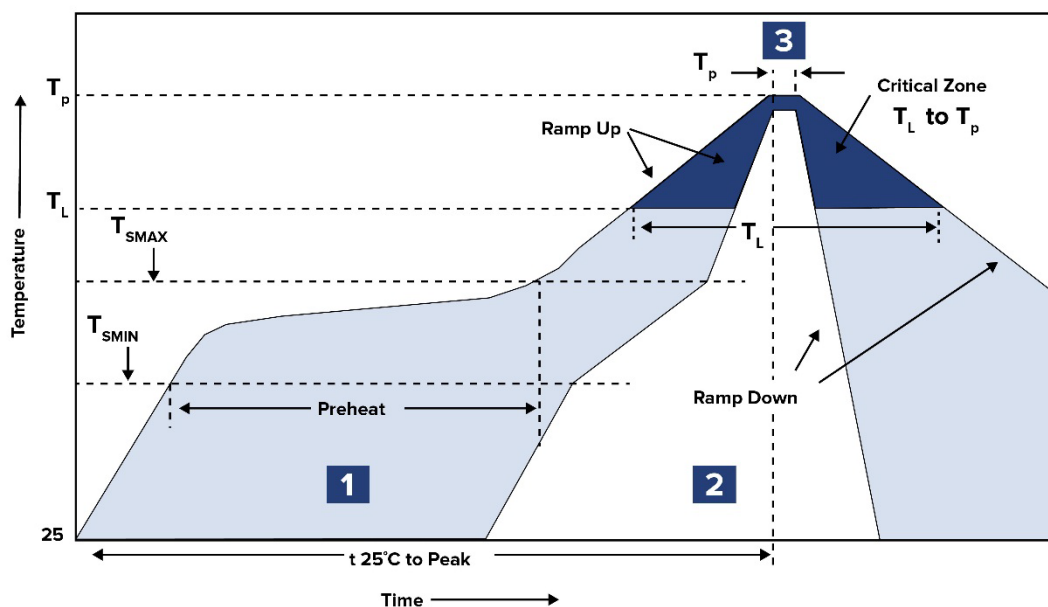


Check Inventory



2.92 x 2.79 x 2.03 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

## Reflow Profile



| Zone | Description | Temperature                               | Times         |
|------|-------------|-------------------------------------------|---------------|
| 1    | Preheat     | $T_{SMIN} \sim T_{SMAX}$<br>150°C ~ 180°C | 90 ~ 120 sec. |
| 2    | Reflow      | $T_L$<br>220°C                            | 40 ~ 60 sec.  |
| 3    | Peak heat   | $T_P$<br>260°C±5°C                        | 10 sec. MAX   |

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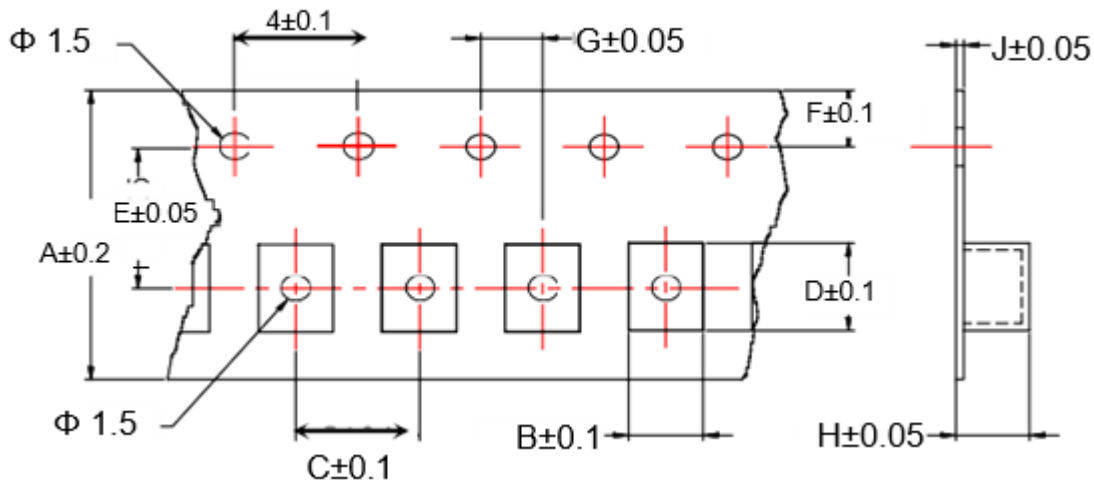
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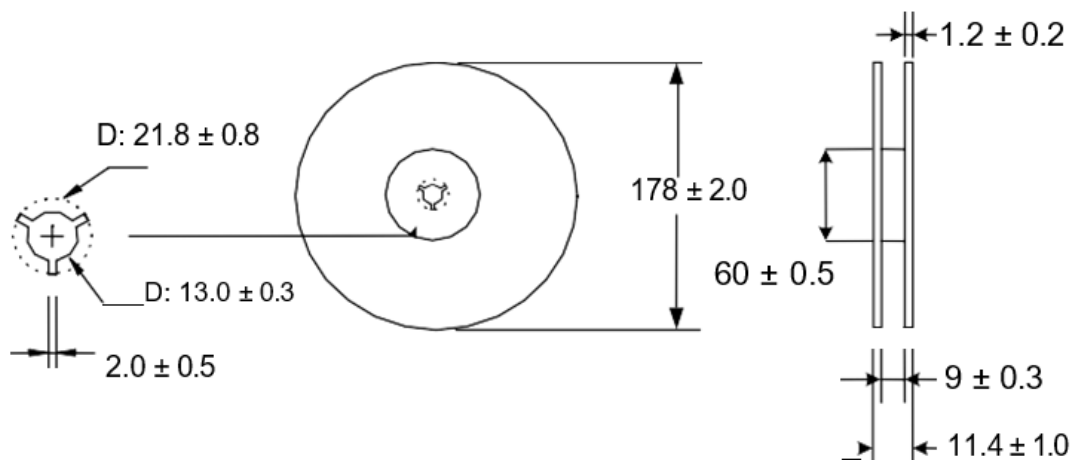
2.92 x 2.79 x 2.03 mm  
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## Packaging

**T: Tape & Reel: 2,000 pcs/reel**



| A   | B    | C   | D    | E   | F    | G   | H    | J    |
|-----|------|-----|------|-----|------|-----|------|------|
| 8.0 | 2.70 | 4.0 | 2.80 | 3.5 | 1.75 | 2.0 | 2.00 | 0.23 |



**Dimensions: mm**

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