

Ceramic Wirewound RF Inductor (AEC-Q200)



AISC-Q1008 Series

Request Samples



Check Inventory



2.92 x 2.79 x 2.13 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 Inductance Code | L (nH) | Tolerance | Q | Q Test | SRF | DCR | IDC |
|--------------------------------|--------|-----------|-----|---------------|--------------|---------------------|-------------|
| | | | Min | Freq (MHz) | Min (GHz) | Max (Ω) | Max (mA) |
| 3N3 | 3.3 | J, K | 50 | 1500 | 4.000 | 0.15 | 1000 |
| 4N7 | 4.7 | J, K | 50 | 1500 | 4.000 | 0.15 | 1000 |
| 5N6 | 5.6 | J, K | 50 | 1500 | 4.000 | 0.15 | 1000 |
| 10N | 10 | G, J, K | 50 | 500 | 4.100 | 0.08 | 1000 |
| 12N | 12 | G, J, K | 50 | 500 | 3.300 | 0.09 | 1000 |
| 15N | 15 | G, J, K | 50 | 500 | 2.500 | 0.11 | 1000 |
| 18N | 18 | G, J, K | 50 | 350 | 2.400 | 0.12 | 1000 |
| 22N | 22 | G, J, K | 55 | 350 | 2.400 | 0.12 | 1000 |
| 24N | 24 | G, J, K | 55 | 350 | 1.900 | 0.13 | 1000 |
| 27N | 27 | G, J, K | 55 | 350 | 1.600 | 0.13 | 1000 |
| 30N | 30 | G, J, K | 60 | 350 | 1.600 | 0.14 | 1000 |
| 33N | 33 | G, J, K | 60 | 350 | 1.600 | 0.14 | 1000 |
| 36N | 36 | G, J, K | 60 | 350 | 1.600 | 0.15 | 1000 |
| 39N | 39 | G, J, K | 60 | 350 | 1.500 | 0.15 | 1000 |
| 47N | 47 | G, J, K | 65 | 350 | 1.500 | 0.16 | 1000 |
| 51N | 51 | G, J, K | 65 | 350 | 1.300 | 0.18 | 1000 |
| 56N | 56 | G, J, K | 65 | 350 | 1.300 | 0.18 | 1000 |
| 62N | 62 | G, J, K | 65 | 350 | 1.250 | 0.20 | 1000 |
| 68N | 68 | G, J, K | 65 | 350 | 1.300 | 0.20 | 1000 |
| 75N | 75 | G, J, K | 60 | 350 | 1.100 | 0.21 | 1000 |
| 82N | 82 | G, J, K | 60 | 350 | 1.000 | 0.22 | 1000 |
| 91N | 91 | G, J, K | 50 | 350 | 1.000 | 0.45 | 1000 |
| R10 | 100 | G, J, K | 60 | 350 | 1.000 | 0.56 | 650 |
| R12 | 120 | G, J, K | 60 | 350 | 0.950 | 0.63 | 650 |
| R15 | 150 | G, J, K | 45 | 100 | 0.850 | 0.70 | 800 |
| R16 | 160 | G, J, K | 45 | 100 | 0.800 | 0.75 | 650 |
| R18 | 180 | G, J, K | 45 | 100 | 0.750 | 0.77 | 620 |

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Electrical Specifications (Cont'd)

| Part Number Inductance Code | L (nH) | Tolerance | Q | Q Test | SRF | DCR | IDC |
|--------------------------------|--------|-----------|-----|--------|-------|------|------|
| | | | Min | Freq | Min | Max | Max |
| | | | | (MHz) | (GHz) | (Ω) | (mA) |
| R22 | 220 | G, J, K | 45 | 100 | 0.700 | 0.84 | 500 |
| R24 | 240 | G, J, K | 45 | 100 | 0.650 | 0.88 | 500 |
| R27 | 270 | G, J, K | 45 | 100 | 0.600 | 0.91 | 690 |
| R30 | 300 | G, J, K | 45 | 100 | 0.585 | 1.00 | 450 |
| R33 | 330 | G, J, K | 45 | 100 | 0.570 | 1.05 | 450 |
| R36 | 360 | G, J, K | 45 | 100 | 0.530 | 1.10 | 470 |
| R39 | 390 | G, J, K | 45 | 100 | 0.500 | 1.12 | 630 |
| R43 | 430 | G, J, K | 45 | 100 | 0.480 | 1.15 | 470 |
| R47 | 470 | G, J, K | 45 | 100 | 0.450 | 1.19 | 470 |
| R56 | 560 | G, J, K | 45 | 100 | 0.415 | 1.33 | 580 |
| R62 | 620 | G, J, K | 45 | 100 | 0.375 | 1.40 | 300 |
| R68 | 680 | G, J, K | 45 | 100 | 0.375 | 1.47 | 540 |
| R75 | 750 | G, J, K | 45 | 100 | 0.360 | 1.54 | 360 |
| R82 | 820 | G, J, K | 45 | 100 | 0.350 | 1.61 | 400 |
| R91 | 910 | G, J, K | 35 | 50 | 0.320 | 1.68 | 380 |
| 1R0 | 1000 | G, J, K | 35 | 50 | 0.290 | 1.75 | 370 |
| 1R2 | 1200 | G, J, K | 35 | 50 | 0.250 | 2.00 | 310 |
| 1R5 | 1500 | G, J, K | 28 | 50 | 0.200 | 2.30 | 330 |
| 1R8 | 1800 | G, J, K | 28 | 50 | 0.160 | 2.60 | 300 |
| 2R2 | 2200 | G, J, K | 28 | 50 | 0.160 | 2.80 | 280 |
| 2R7 | 2700 | G, J, K | 22 | 25 | 0.140 | 3.20 | 290 |
| 3R3 | 3300 | G, J, K | 22 | 25 | 0.110 | 3.40 | 290 |
| 3R9 | 3900 | G, J, K | 18 | 25 | 0.100 | 3.60 | 260 |
| 4R7 | 4700 | G, J, K | 18 | 25 | 0.090 | 4.00 | 260 |
| 5R6 | 5600 | G, J, K | 16 | 7.96 | 0.020 | 4.00 | 240 |
| 6R8 | 6800 | G, J, K | 15 | 7.96 | 0.040 | 4.90 | 200 |
| 8R2 | 8200 | G, J, K | 15 | 7.96 | 0.025 | 6.00 | 170 |
| 103 | 10000 | G, J, K | 15 | 7.96 | 0.020 | 9.00 | 150 |
| 123 | 12000 | G, J, K | 15 | 7.96 | 0.018 | 10.5 | 130 |
| 153 | 15000 | G, J, K | 15 | 7.96 | 0.015 | 11.5 | 120 |

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°C to $+125^{\circ}\text{C}$

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

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

AISC-Q1008 Series is **RoHS Compliant and Pb free**



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REVISION Initial Release :

11/21/2023

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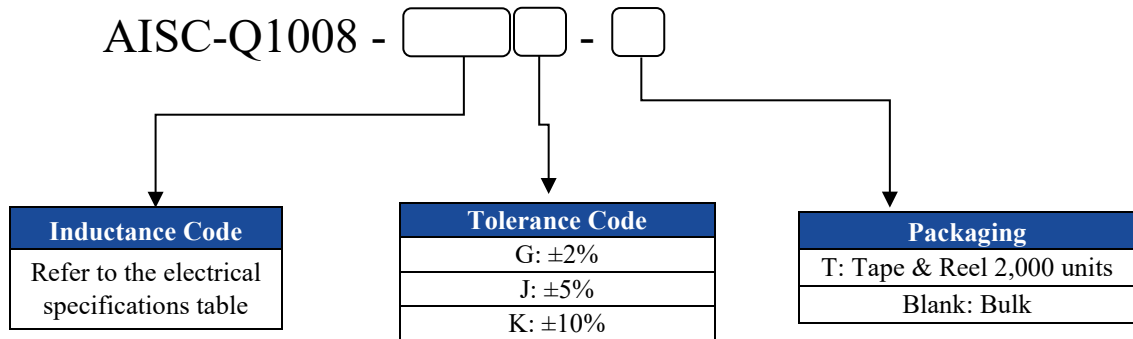


AISC-Q1008 Series

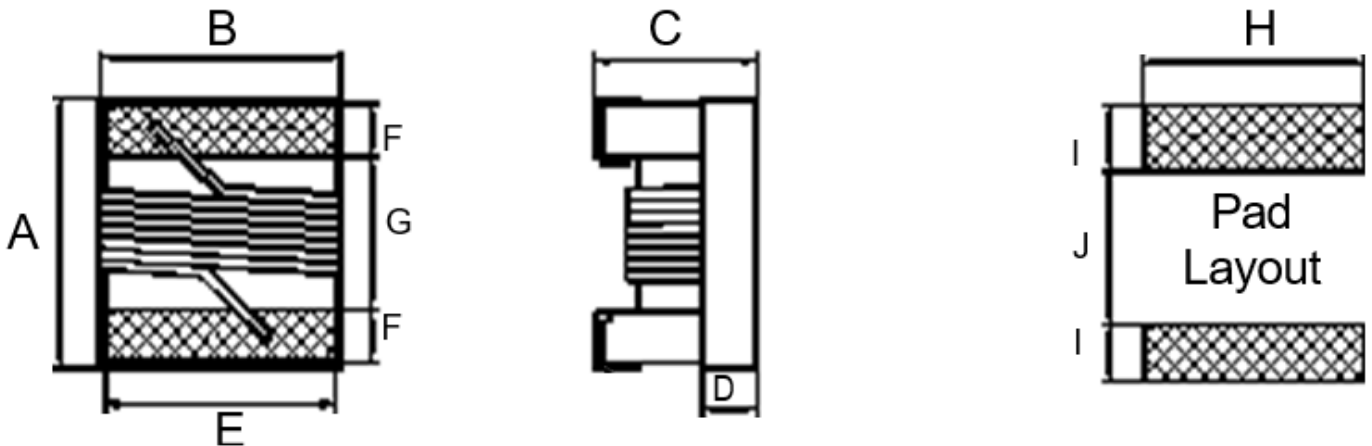
Request Samples  Check Inventory 

2.92 x 2.79 x 2.13 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 | 2.13 | 0.65 | 2.03 | 0.51 | 1.52 | 2.54 | 1.02 | 1.27 |

Dimensions: mm

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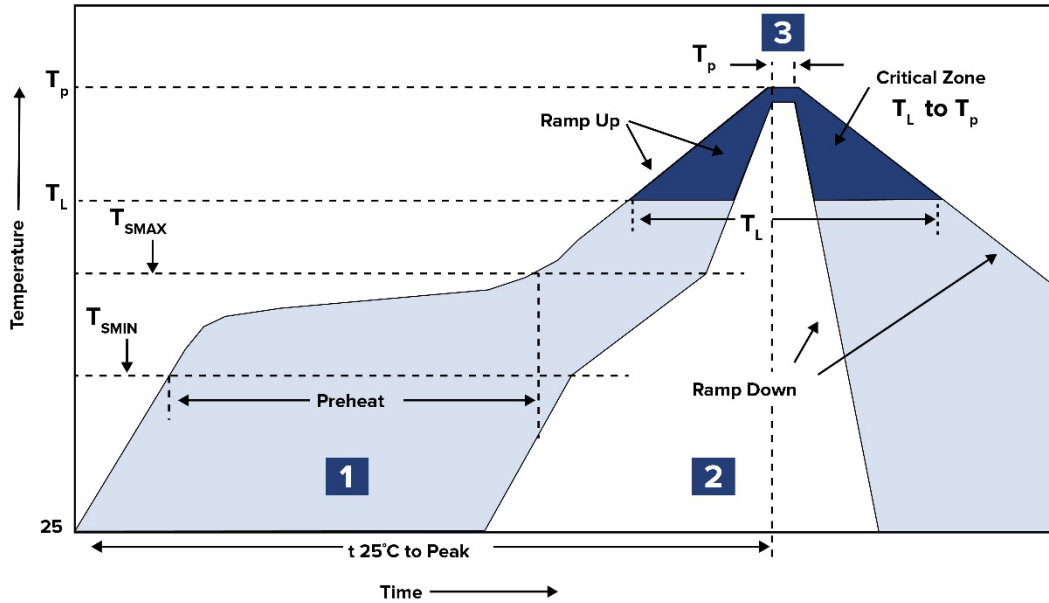


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Reflow Profile



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

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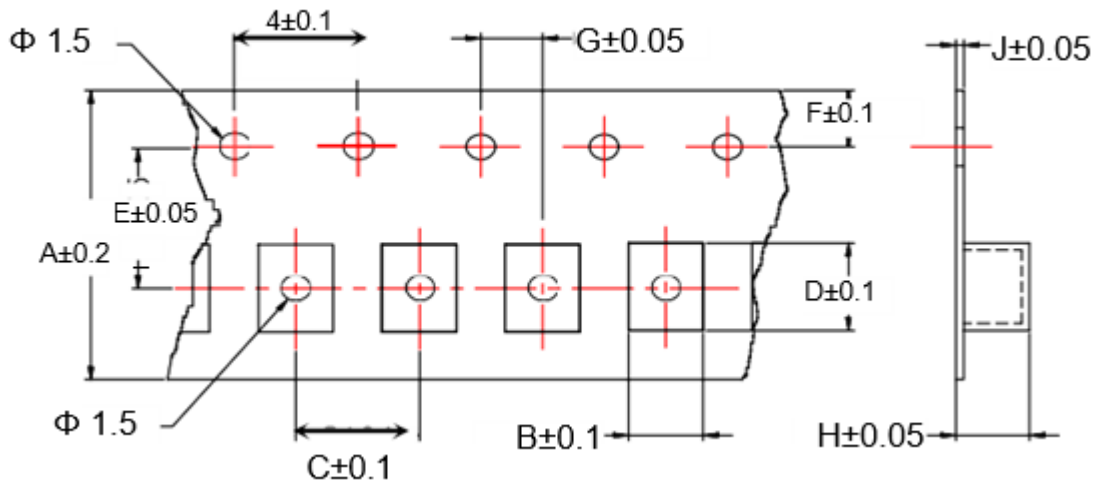
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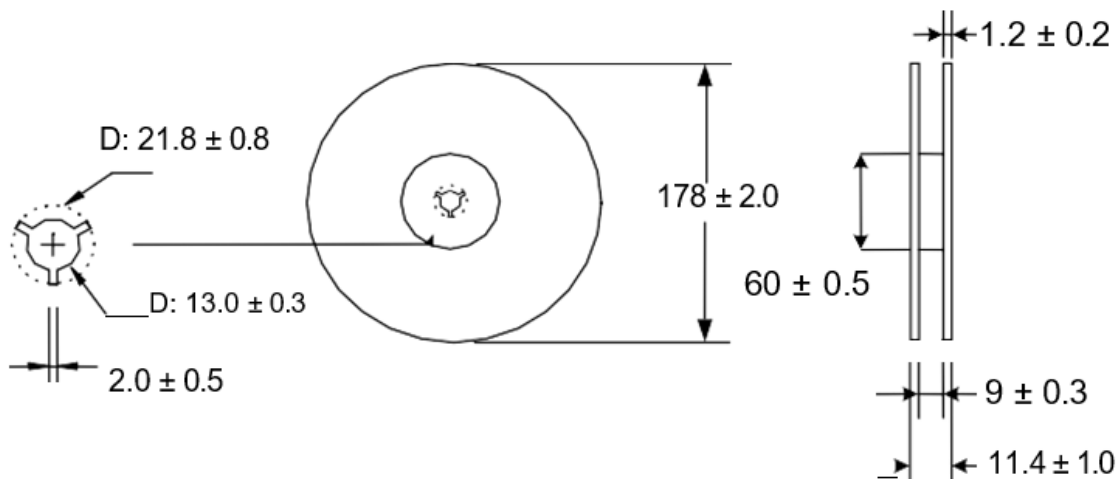
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Packaging

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

ATTENTION: Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



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