

# Ceramic Wirewound RF Inductor (AEC-Q200)



**AISC-Q0402 Series**

Request Samples



Check Inventory



1.27 x 0.76 x 0.61 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			L/Q Test	SRF	DCR	IDC
			Min	900MHz	1.7GHz	Freq	Min	Max	Max
						(MHz)	(GHz)	( $\Omega$ )	(mA)
1N0	1.0	K	16	77	69	250	12.70	0.045	1360
1N9	1.9	C, D, J, K	16	68	82	250	11.30	0.070	1040
2N0	2.0	K	16	54	75	250	11.10	0.070	1040
2N2	2.2	J, K	19	59	100	250	10.80	0.070	960
2N4	2.4	K	15	51	68	250	10.50	0.070	790
2N7	2.7	J, K	16	42	61	250	10.40	0.120	640
3N3	3.3	K	19	65	87	250	7.00	0.066	840
3N6	3.6	J, K	19	45	71	250	6.80	0.066	840
3N9	3.9	J, K	19	50	75	250	5.80	0.066	840
4N3	4.3	J, K	18	47	71	250	6.00	0.091	700
4N7	4.7	J, K	18	48	68	250	4.70	0.130	640
5N1	5.1	G, J, K	20	56	82	250	4.80	0.083	800
5N6	5.6	J, K	20	54	81	250	4.80	0.083	760
6N2	6.2	J, K	20	52	76	250	4.80	0.083	760
6N8	6.8	G, J, K	20	63	78	250	4.80	0.083	680
7N5	7.5	G, J, K	22	60	88	250	4.80	0.104	680
8N2	8.2	J, K	22	57	84	250	4.40	0.104	680
8N7	8.7	J, K	18	54	73	250	4.10	0.200	480
9N0	9.0	J, K	22	62	78	250	4.16	0.104	680
9N5	9.5	J, K	18	54	69	250	4.00	0.200	480
10N	10	G, J, K	21	50	67	250	3.90	0.195	480

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## Electrical Specifications (Cont'd)

Part Number Inductance Code	L (nH)	Tolerance	Q			L/Q Test Freq (MHz)	SRF Min (GHz)	DCR Max (Ω)	IDC Max (mA)
			Min	900MHz	1.7GHz				
11N	11	G, J, K	24	52	78	250	3.68	0.120	640
12N	12	G, J, K	24	53	71	250	3.60	0.120	640
13N	13	G, J, K	24	51	57	250	3.45	0.210	440
15N	15	G, J, K	24	55	77	250	3.28	0.172	560
16N	16	G, J, K	24	46	47	250	3.10	0.220	560
18N	18	G, J, K	25	57	62	250	3.10	0.230	420
19N	19	G, J, K	24	50	67	250	3.04	0.202	480
20N	20	G, J, K	25	52	53	250	3.00	0.250	420
22N	22	G, J, K	25	53	53	250	2.80	0.300	400
23N	23	G, J, K	24	49	64	250	2.72	0.300	400
24N	24	G, J, K	25	51	50	250	2.70	0.300	400
27N	27	G, J, K	24	49	63	250	2.48	0.300	400
30N	30	G, J, K	25	46	39	250	2.35	0.350	400
33N	33	G, J, K	24	31	32	250	2.35	0.350	400
36N	36	G, J, K	24	44	53	250	2.32	0.440	320
39N	39	G, J, K	25	47	45	250	2.10	0.550	200
40N	40	G, J, K	24	44	33	250	2.24	0.500	320
43N	43	G, J, K	25	46	34	250	2.03	0.810	100
47N	47	G, J, K	25	38	37	250	2.10	0.830	150
51N	51	G, J, K	25	47	37	250	1.75	0.820	100
56N	56	G, J, K	25	49	40	250	1.76	0.970	100
68N	68	G, J, K	22	45	38	250	1.62	1.120	100
82N	82	G, J, K	22	-	-	250	1.26	1.550	50
R10	100	G, J, K	22	-	-	250	1.16	2.000	30
R12	120	G, J, K	20	-	-	250	>1.80	2.660	50

### 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  $\Delta T15^{\circ}\text{C}$  ( $T_a=25^{\circ}\text{C}$ ).

**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-Q0402 is AEC-Q200 Qualified**

**AISC-Q0402 Series is RoHS Compliant and Pb free**



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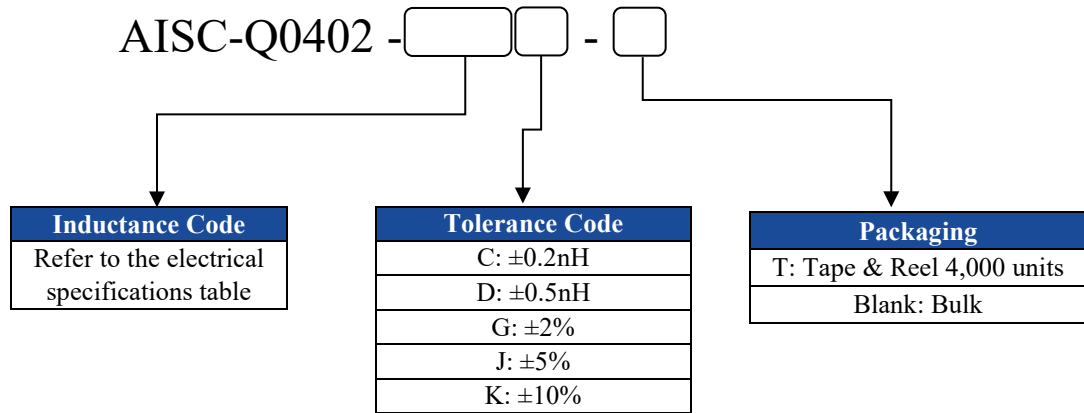


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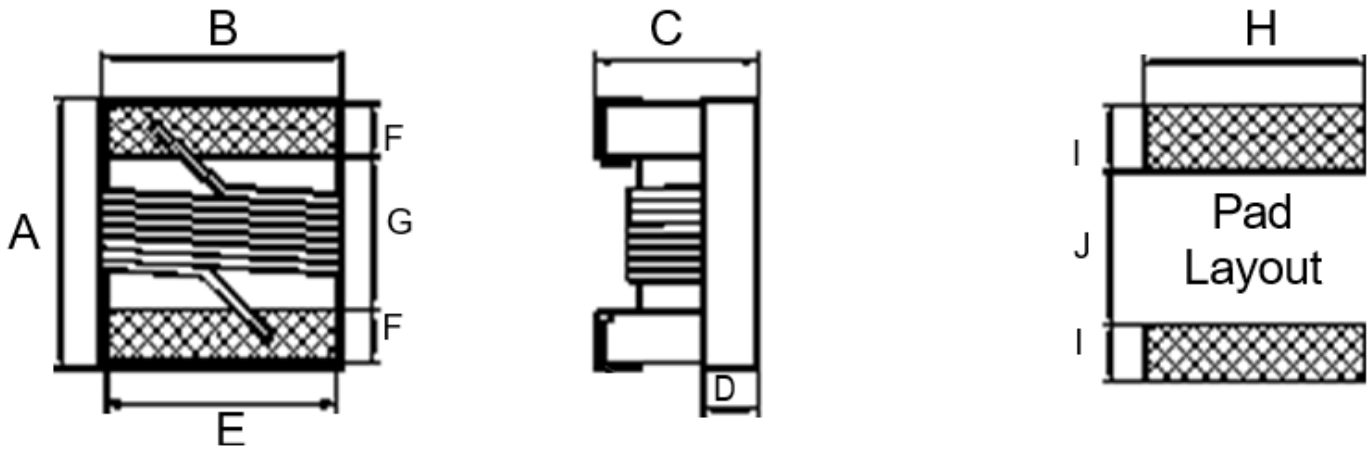


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**RoHS/RoHS II Compliant**  
 MSL Level = 1

## Part Number Identification



## Mechanical Dimensions



A	B	C	D	E	F	G	H	I	J
1.27 max	0.76 max	0.61 max	0.15	0.51	0.23	0.56	0.66	0.5	0.46

Dimensions: mm



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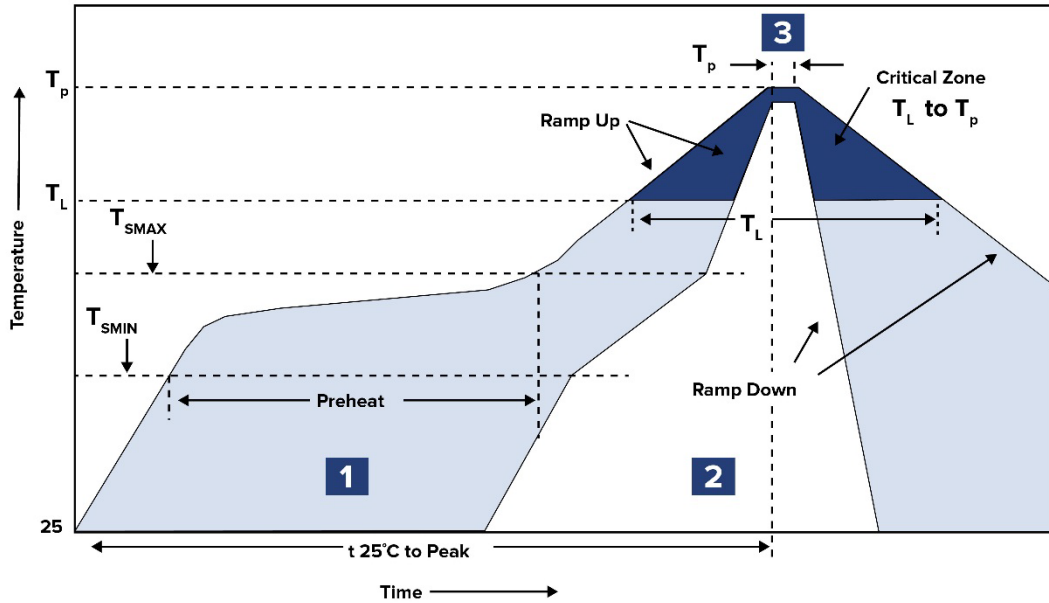


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T <sub>SMIN</sub> ~ T <sub>SMAX</sub> 150°C ~ 180°C	90 ~ 120 sec.
2	Reflow	T <sub>L</sub> 220°C	40 ~ 60 sec.
3	Peak heat	T <sub>p</sub> 260°C±°C	10 sec. MAX

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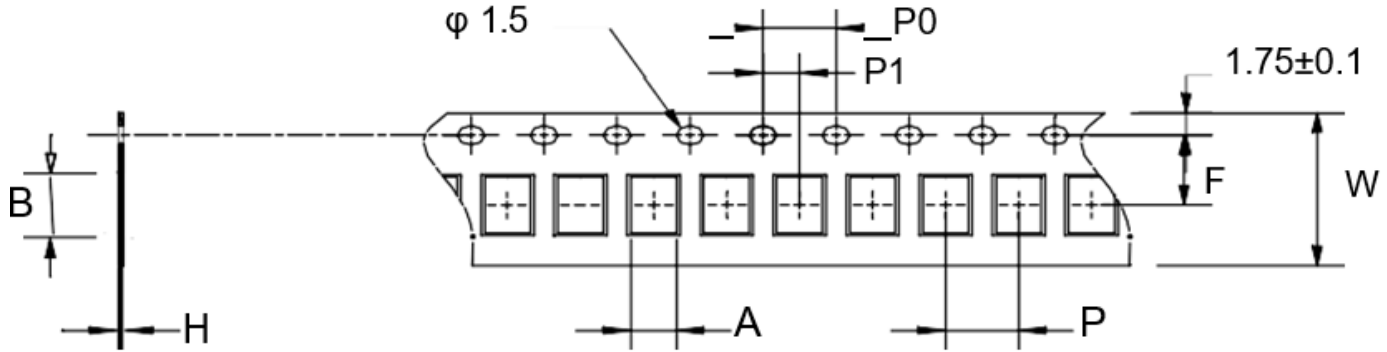
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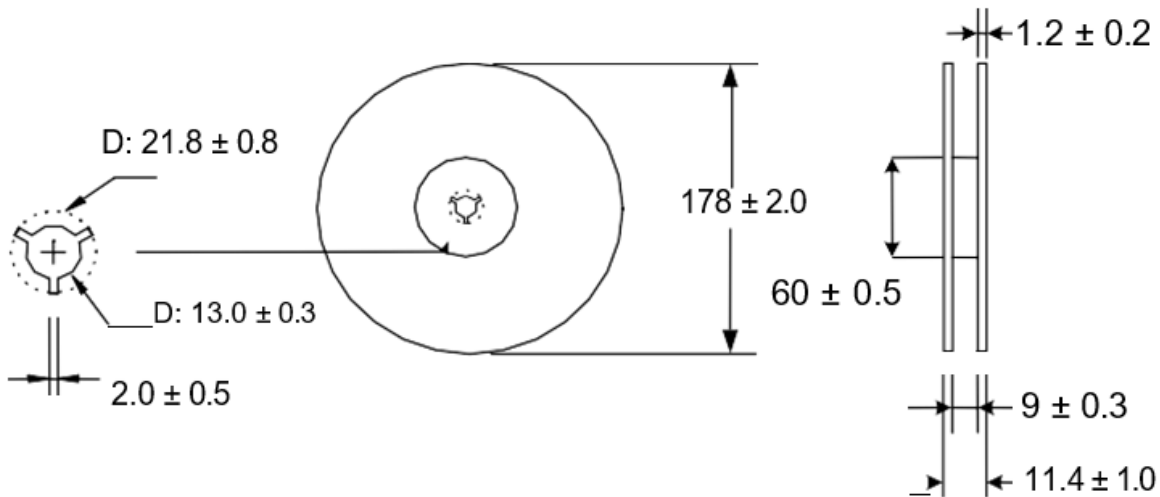
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## Packaging

T: Tape & Reel: 4,000 pcs/reel



A	B	H	F	P	P0	P1	W
0.81	1.23	0.73	3.50	2.0	4.0	2.0	8.0



Dimensions: mm

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