

Ceramic Wirewound RF Inductor (AEC-Q200)



AISC-Q0603 Series

Request Samples



Check Inventory



1.80 x 1.12 x 1.02 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)	(Ω)	(mA)
1N6	1.6	J, K	24	35	55	250	12.5	0.030	700
1N8	1.8	J, K	16	35	50	250	12.5	0.045	700
2N2	2.2	J, K	15	41	64	250	6.00	0.100	700
2N3	2.3	J, K	16	32	40	250	>4.00	0.140	700
3N3	3.3	G, J, K	22	47	65	250	>6.00	0.080	700
3N6	3.6	G, J, K	22	49	65	250	5.80	0.063	700
3N9	3.9	G, J, K	22	49	67	250	>6.00	0.080	700
4N3	4.3	G, J, K	22	49	67	250	5.80	0.063	700
4N5	4.5	G, J, K	20	55	92	250	5.80	0.120	700
4N7	4.7	G, J, K	25	53	67	250	5.80	0.120	700
5N1	5.1	G, J, K	20	47	56	250	5.80	0.160	700
5N6	5.6	G, J, K	20	56	77	250	5.80	0.170	700
6N2	6.2	G, J, K	25	60	85	250	5.80	0.110	700
6N3	6.3	G, J, K	25	41	61	250	5.80	0.110	700
6N8	6.8	G, J, K	27	60	81	250	5.80	0.110	700
7N5	7.5	G, J, K	28	60	65	250	4.80	0.106	700
8N2	8.2	G, J, K	27	64	81	250	4.80	0.110	700
8N7	8.7	G, J, K	28	62	58	250	4.80	0.109	700
9N1	9.1	G, J, K	35	70	80	250	4.80	0.130	700
9N5	9.5	G, J, K	28	59	61	250	5.40	0.135	700
10N	10	G, J, K	31	66	83	250	4.80	0.130	700
11N	11	G, J, K	31	53	56	250	4.00	0.086	700
12N	12	G, J, K	35	72	83	250	4.00	0.130	700
15N	15	G, J, K	35	64	89	250	4.00	0.170	700
16N	16	G, J, K	35	55	52	250	3.30	0.110	700
17N	17	G, J, K	35	56	44	250	3.20	0.170	700



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REVISION Initial Release :
11/21/2023

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Part Number Inductance Code	L (nH)	Tolerance	Q			L/Q Test	SRF	DCR	IDC
			Min	900MHz	1.7GHz	Freq	Min	Max	Max
						(MHz)	(GHz)	(Ω)	(mA)
18N	18	G, J, K	35	70	69	250	3.10	0.170	700
20N	20	G, J, K	40	80	30	250	3.00	0.190	700
22N	22	G, J, K	38	73	71	250	3.00	0.190	700
23N	23	G, J, K	38	71	71	250	2.85	0.190	700
24N	24	G, J, K	38	45	40	250	2.80	0.130	700
27N	27	G, J, K	40	74	65	250	2.80	0.220	600
30N	30	G, J, K	40	47	28	250	2.80	0.150	600
33N	33	G, J, K	40	67	42	250	2.30	0.220	600
36N	36	G, J, K	37	47	24	250	2.30	0.250	600
39N	39	G, J, K	40	60	40	250	2.20	0.250	600
43N	43	G, J, K	38	44	21	200	2.00	0.280	600
47N	47	G, J, K	38	62	35	200	2.00	0.280	600
51N	51	G, J, K	38	69	34	200	1.90	0.280	600
56N	56	G, J, K	38	56	26	200	1.90	0.310	600
62N	62	G, J, K	37	40	10	200	1.80	0.340	600
68N	68	G, J, K	37	54	21	200	1.70	0.340	600
72N	72	G, J, K	34	53	20	150	1.70	0.490	600
82N	82	G, J, K	34	54	21	150	1.70	0.540	400
91N	91	G, J, K	30	50	6	150	1.70	0.500	400
R10	100	G, J, K	34	49	13	150	1.40	0.580	400
R11	110	G, J, K	32	43	15	150	1.35	0.610	300
R12	120	G, J, K	32	39	8	150	1.30	0.650	300
R13	130	G, J, K	30	60	-	150	1.40	0.720	300
R14	140	G, J, K	28	80	-	100	1.30	0.870	280
R15	150	G, J, K	28	25	-	100	1.30	0.950	280
R16	160	G, J, K	25	20	-	100	1.30	1.400	280
R18	180	G, J, K	25	22	-	100	1.25	1.400	250
R22	220	G, J, K	25	21	-	100	1.20	1.600	250
R26	260	G, J, K	25	21	-	100	1.00	2.000	200
R27	270	G, J, K	25	19	-	100	0.90	2.100	200
R28	280	G, J, K	25	18	-	100	1.00	2.400	100
R30	300	G, J, K	25	21	-	100	0.75	2.500	150
R33	330	G, J, K	25	20	-	100	0.90	3.800	100
R39	390	G, J, K	25	29	-	100	0.90	4.350	100
R47	470	G, J, K	23	-	-	100	0.60	3.600	80



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Electrical Specifications (Cont'd)

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 $+125^{\circ}\text{C}$

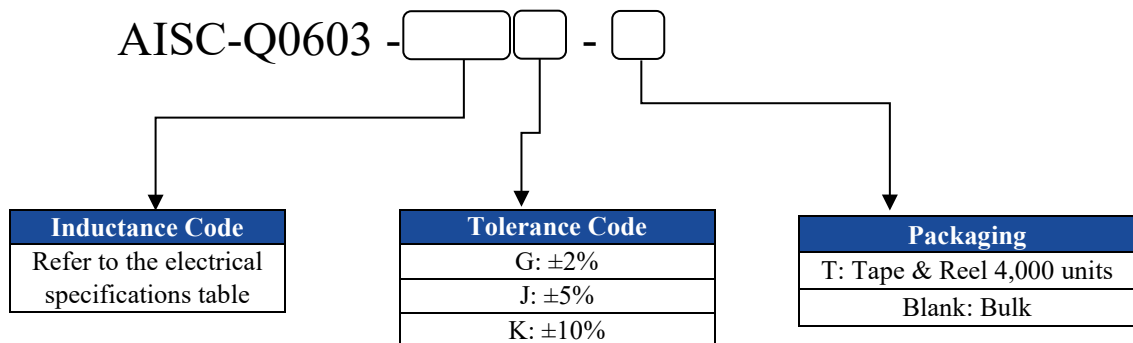
Components Storage Temperature: -40°C to $+125^{\circ}\text{C}$

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

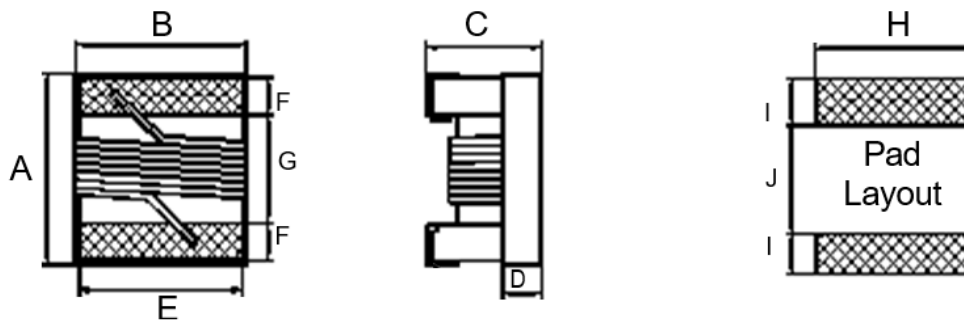
AISC-Q0603 is AEC-Q200 Qualified

AISC-Q0603 Series is RoHS Compliant and Pb free

Part Number Identification



Mechanical Dimensions



A	B	C	D	E	F	G	H	I	J
1.80 max	1.12 max	1.02 max	0.38 max	0.76	0.33	0.86	1.02	0.64	0.64

Dimensions: mm



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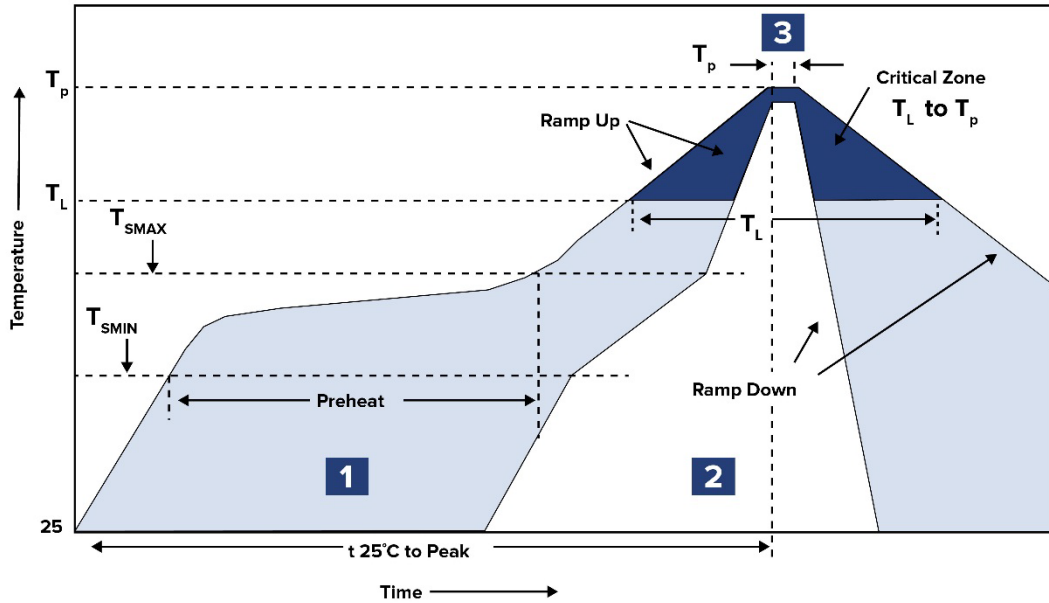


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Reflow Profile



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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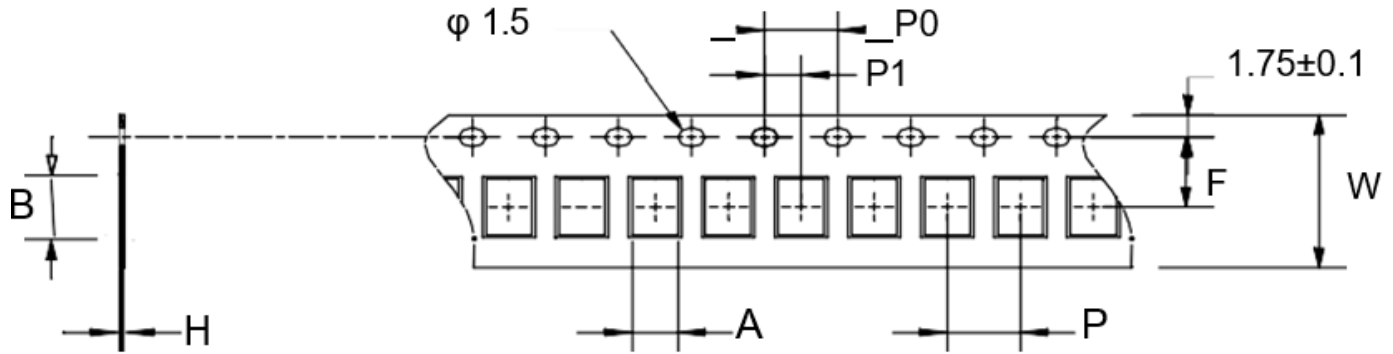
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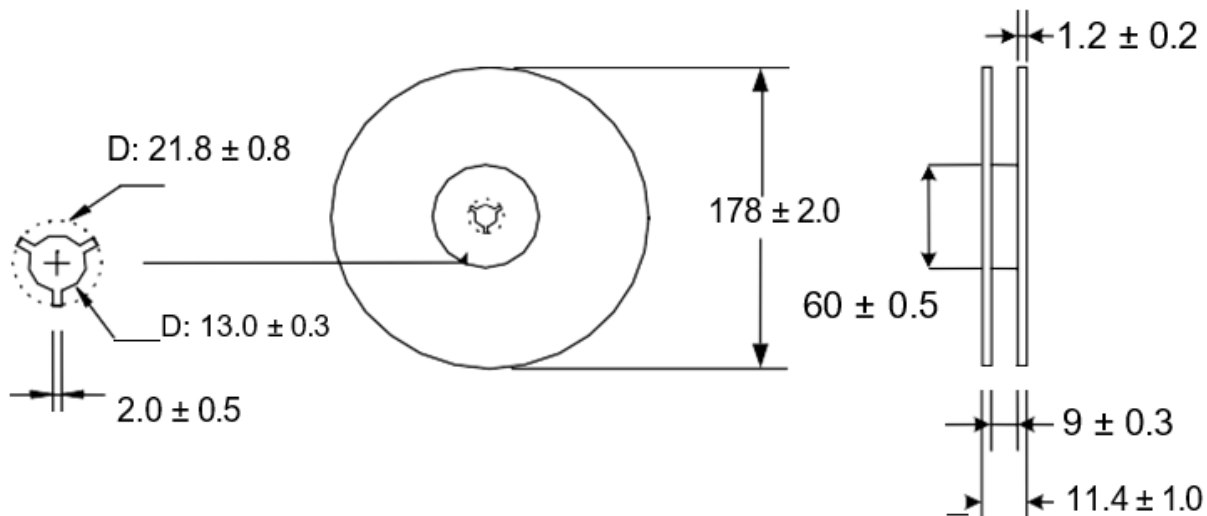
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Packaging

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



A	B	H	F	P	P0	P1	W
1.35	1.95	0.95	3.50	4.00	4.00	2.00	8.00



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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