High Q Ceramic Wirewound RF Inductor (AEC-Q200)



AISC-Q0603HQ 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 ±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 AISC-Q0603HQ- Inductance Code	Inductance	Tolerance	Typ. Quality Factor@ 250MHz	L/Q Test Freq.	Typ. Quality Factor @ 900MHz /1.7GHz	Max. DC Resistance	Max. Rated Current	Typ. Self-resonant Frequency
Units	nH	-	-	MHz		Ω	mA	MHz
Symbol	L	-	Q	Freq.	Q	DCR	Ir	S.R.F
AISC-Q0603HQ-1N8	1.8	J, K	23	250	40/65	0.033	2100	16000
AISC-Q0603HQ-2N2	2.2	J, K	13	250	25/35	0.180	900	15000
AISC-Q0603HQ-3N0	3.0	J, K	35	250	65/85	0.024	1000	9500
AISC-Q0603HQ-3N3	3.3	J, K	32	250	67/104	0.024	1900	9600
AISC-Q0603HQ-3N6	3.6	G, J, K	40	250	70/116	0.031	1900	9700
AISC-Q0603HQ-3N9	3.9	G, J, K	35	250	68/108	0.039	1600	7500
AISC-Q0603HQ-4N3	4.3	G, J, K	30	250	58/91	0.080	1300	7500
AISC-Q0603HQ-4N7	4.7	G, J, K	26	250	48/75	0.100	1100	7900
AISC-Q0603HQ-5N1	5.1	G, J, K	40	250	84/140	0.036	1700	8900
AISC-Q0603HQ-5N6	5.6	G, J, K	48	250	87/456	0.036	1700	6600
AISC-Q0603HQ-6N0	6.0	G, J, K	49	250	94/154	0.036	1700	6000
AISC-Q0603HQ-6N8	6.8	G, J, K	42	250	88/143	0.042	1400	5800
AISC-Q0603HQ-7N2	7.2	G, J, K	48	250	96/139	0.052	1400	5400
AISC-Q0603HQ-7N5	7.5	G, J, K	41	250	81/12	0.080	1300	5300
AISC-Q0603HQ-8N2	8.2	G, J, K	46	250	96/148	0.054	1400	5900
AISC-Q0603HQ-8N7	8.7	G, J, K	46	250	97/149	0.054	1400	5500
AISC-Q0603HQ-9N1	9.1	G, J, K	40	250	76/109	0.037	1400	5100
AISC-Q0603HQ-9N5	9.5	G, J, K	49	250	98/149	0.053	1400	4900
AISC-Q0603HQ-10N	10	G, J, K	49	250	90/142	0.048	1400	4300
AISC-Q0603HQ-11N	11	G, J, K	41	250	78/108	0.058	1400	4100
AISC-Q0603HQ-12N	12	G, J, K	37	250	69/91	0.088	1100	4100
AISC-Q0603HQ-15N	15	G, J, K	48	250	83/124	0.078	1200	3600
AISC-Q0603HQ-16N	16	G, J, K	45	250	77/116	0.085	1100	3500
AISC-Q0603HQ-18N	18	G, J, K	41	250	76/100	0.066	1200	3300
AISC-Q0603HQ-22N	22	G, J, K	44	250	77/88	0.140	850	3150
AISC-Q0603HQ-23N	23	G, J, K	40	250	69/80	0.183	850	3000
AISC-Q0603HQ-24N	24	G, J, K	42	250	77/91	0.074	1100	2950

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Electrical Specifications (Cont'd)

Part Number	Inductance	Tolerance	Typ. Quality Factor @ 250MHz	L/Q Test Freq.	Typ. Quality Factor @ 900MHz/ 1.7GHz	Max. DC Resistance	Max. Rated Current	Typ. Self-resonant Frequency
Units	nH	-	-	MHz		Ω	mA	MHz
Symbol	L	-	Q	Freq.		DCR	Ir	S.R.F
AISC-Q0603HQ-27N	27	G, J, K	44	250	74/84	0.150	780	2800
AISC-Q0603HQ-30N	30	G, J, K	49	250	82/82	0.130	920	2800
AISC-Q0603HQ-33N	33	G, J, K	45	250	76/80	0.170	680	2700
AISC-Q0603HQ-36N	36	G, J, K	44	250	69/64	0.225	720	2500
AISC-Q0603HQ-39N	39	G, J, K	48	250	78/74	0.190	680	2450
AISC-Q0603HQ-43N	43	G, J, K	45	250	83/76	0.170	810	2450
AISC-Q0603HQ-47N	47	G, J, K	47	200	77/72	0.240	680	2300
AISC-Q0603HQ-51N	51	G, J, K	49	200	73/62	0.280	660	2300
AISC-Q0603HQ-56N	56	G, J, K	50	200	74/56	0.300	610	2200
AISC-Q0603HQ-68N	68	G, J, K	46	200	73/49	0.330	600	2000
AISC-Q0603HQ-72N	72	G, J, K	34	150	50/38	0.350	580	1700
AISC-Q0603HQ-75N	75	G, J, K	46	150	71/-	0.52	500	1900
AISC-Q0603HQ-82N	82	G, J, K	45	150	62/-	0.46	510	1800
AISC-Q0603HQ-91N	91	G, J, K	45	150	64/-	0.58	440	1650
AISC-Q0603HQ-R10	100	G, J, K	49	150	69/-	0.54	470	1700
AISC-Q0603HQ-R11	110	G, J, K	47	150	63/-	0.58	440	1600
AISC-Q0603HQ-R12	120	G, J, K	47	150	61/-	0.72	420	1550
AISC-Q0603HQ-R15	150	G, J, K	47	150	57/-	0.82	390	1350
AISC-Q0603HQ-R18	180	G, J, K	48	100	50/-	1.50	310	1300
AISC-Q0603HQ-R20	200	G, J, K	47	100	47/-	2.00	280	1250
AISC-Q0603HQ-R21	210	G, J, K	48	100	45/-	2.00	280	1200
AISC-Q0603HQ-R22	220	G, J, K	47	100	41/-	2.00	280	1100
AISC-Q0603HQ-R25	250	G, J, K	45	100	-/-	3.00	240	1050
AISC-Q0603HQ-R27	270	G, J, K	46	100	-/-	2.25	260	1050
AISC-Q0603HQ-R30	300	G, J, K	47	100	-/-	2.80	220	990
AISC-Q0603HQ-R33	330	G, J, K	46	100	-/-	3.60	180	930
AISC-Q0603HQ-R36	360	G, J, K	47	100	-/-	4.00	170	930
AISC-Q0603HQ-R39	390	G, J, K	47	100	-/-	4.00	170	880

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 ΔT15°C(Ta=25°C).

Operating Temperature: -40°C to +125°C

Components Storage Temperature: -40°C to +125°C

Tape and Reel packaging Temperature: 15~28°C; < 80% RH

AISC-Q0603HQ is AEC-Q200 Qualified

AISC-Q0603HQ Series is RoHS Compliant and Pb free

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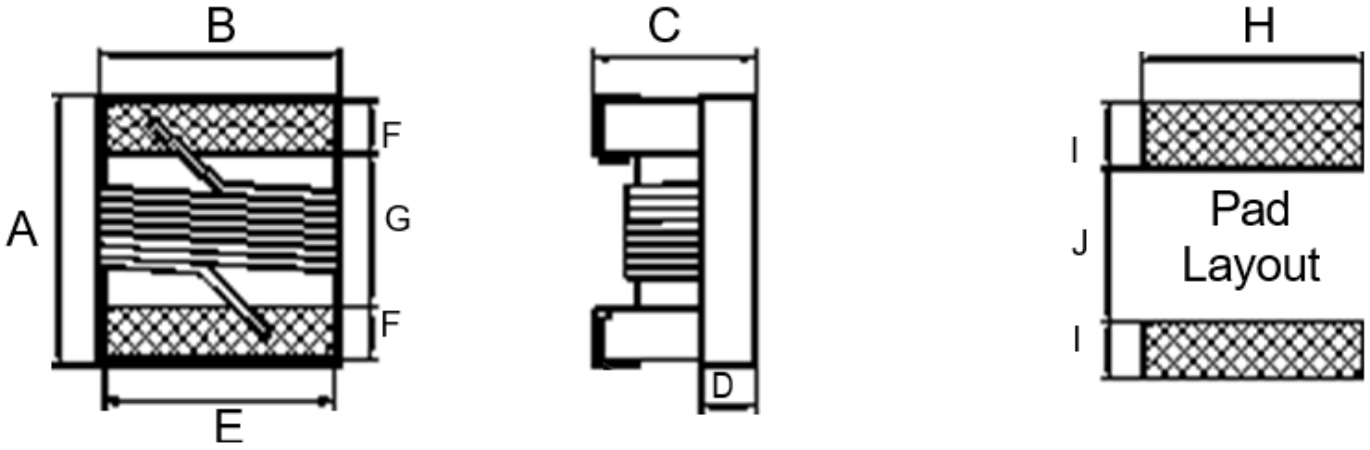
RoHS/RoHS II Compliant
MSL Level = 1

Part Number Identification

AISC-Q0603HQ - ☐☐ - ☐

Inductance Code	Tolerance Code	Packaging
Refer to the electrical specifications table	G: ±2%	T: Tape & Reel 4,000 units
	J: ±5%	Blank: Bulk
	K: ±10%	

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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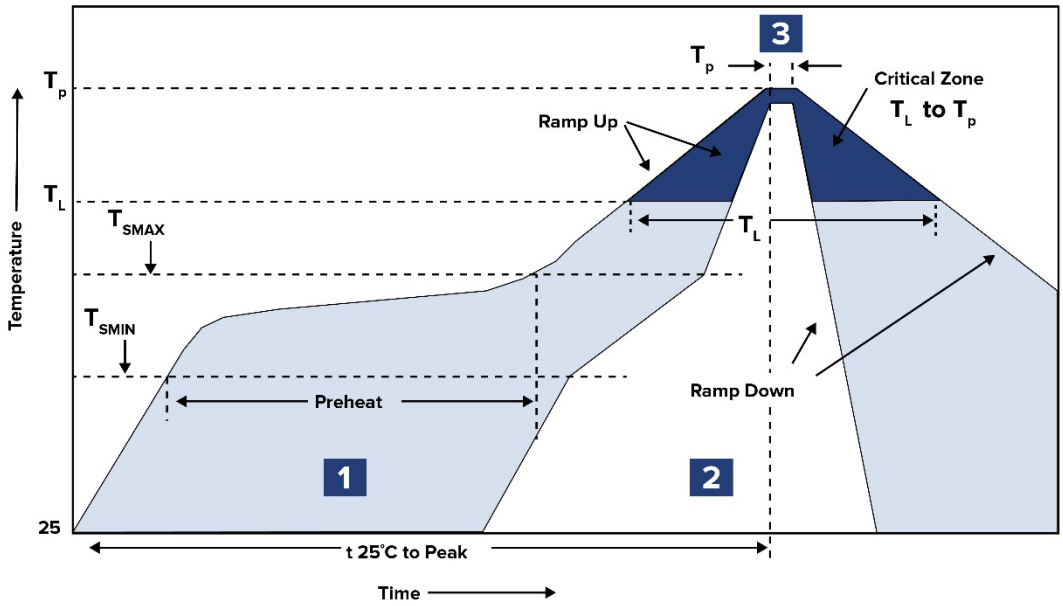
Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ 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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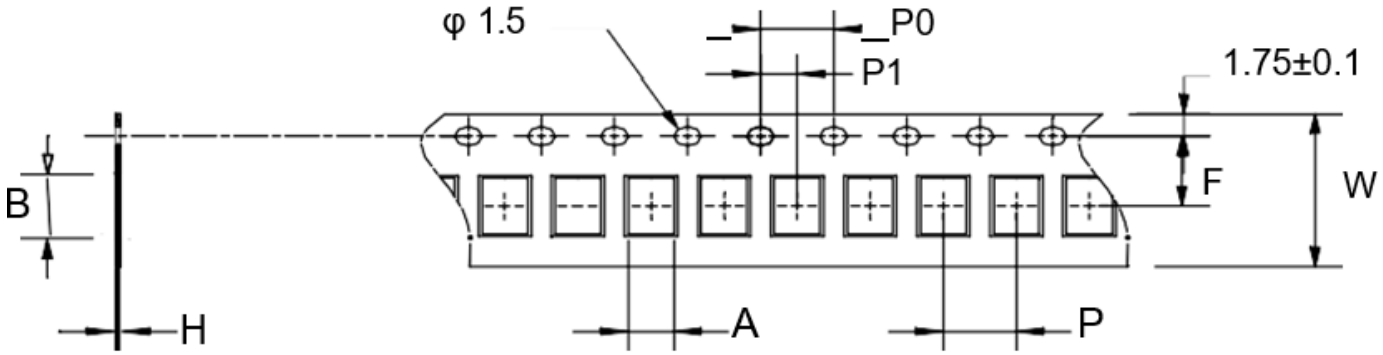
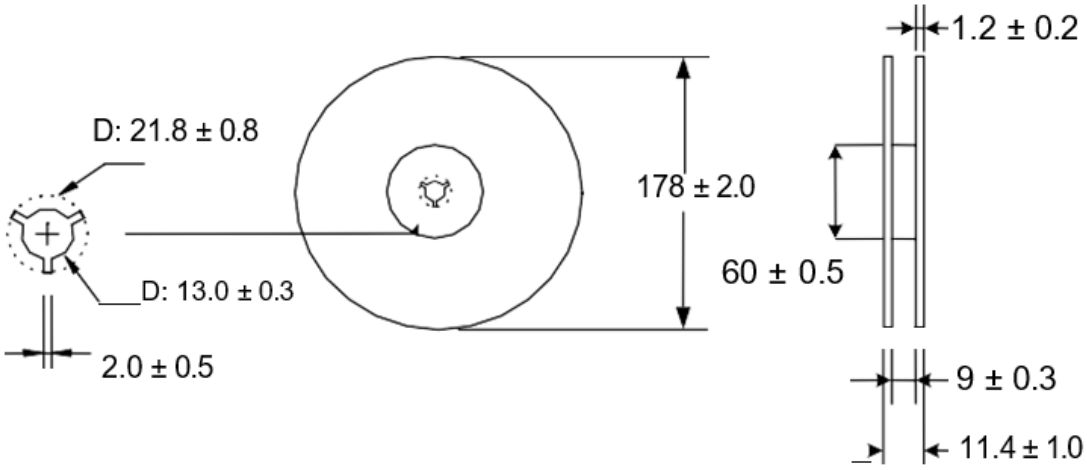
Packaging

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

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