

Automotive Multilayer Ceramic Chip Inductor



AIMC-Q0603

Request Samples



Check Inventory



1.6 x 0.8 x 0.8 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.
- Multilayer monolithic construction yields high reliability
- Tight tolerance down to $\pm 0.3\text{nH}$

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 (nH)	Tolerance	Quality Factor min.	L/Q Freq. (MHz)	SRF (GHz) min.	DCR (Ω) max.	Rated Current (mA) max.
AIMC-Q0603-1N0	1.0	S	8	100	10.00	0.05	1000
AIMC-Q0603-1N2	1.2	S	8	100	10.00	0.05	1000
AIMC-Q0603-1N5	1.5	S	8	100	10.00	0.10	1000
AIMC-Q0603-1N8	1.8	S	8	100	10.00	0.10	1000
AIMC-Q0603-2N2	2.2	S	8	100	8.00	0.10	1000
AIMC-Q0603-2N7	2.7	S	10	100	7.00	0.13	1000
AIMC-Q0603-3N3	3.3	S	10	100	6.00	0.13	1000
AIMC-Q0603-3N9	3.9	S	10	100	6.00	0.15	1000
AIMC-Q0603-4N7	4.7	S	10	100	5.00	0.20	1000
AIMC-Q0603-5N6	5.6	S	10	100	4.00	0.23	700
AIMC-Q0603-6N8	6.8	J	10	100	4.00	0.25	700
AIMC-Q0603-8N2	8.2	J	10	100	3.50	0.28	600
AIMC-Q0603-10N	10	J	12	100	3.40	0.30	600
AIMC-Q0603-12N	12	J	12	100	2.60	0.35	600
AIMC-Q0603-15N	15	J	12	100	2.30	0.40	600
AIMC-Q0603-18N	18	J	12	100	2.00	0.45	600
AIMC-Q0603-22N	22	J	12	100	1.60	0.50	600
AIMC-Q0603-27N	27	J	12	100	1.40	0.55	600
AIMC-Q0603-33N	33	J	12	100	1.20	0.60	600
AIMC-Q0603-39N	39	J	12	100	1.10	0.65	500
AIMC-Q0603-47N	47	J	12	100	0.90	0.70	500
AIMC-Q0603-56N	56	J	12	100	0.90	0.75	500
AIMC-Q0603-68N	68	J	12	100	0.70	0.85	400
AIMC-Q0603-82N	82	J	12	100	0.60	0.95	300
AIMC-Q0603-R10	100	J	12	100	0.60	1.00	300
AIMC-Q0603-R12	120	J	8	50	0.50	1.20	300

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Electrical Specifications (Cont'd)

Test Conditions and equipment

L, Q: High Accuracy RF Impedance /Material Analyzer-E4991A+16197A

DCR: High Accuracy Milliohmmeter Agilent 4338B.

Rated Current: DC Power Supplier, Current Meter, Thermometer. $\Delta T \leq 25^{\circ}\text{C}$.

Operating Temperature: $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (including self-temperature rise)

Storage Temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$, RH 70% (Max.)

AIMC-Q0603 is AEC-Q200 qualified.

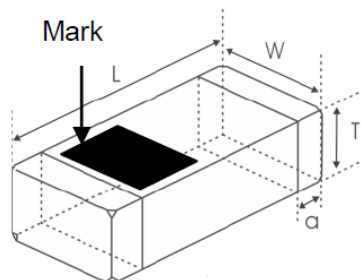
AIMC-Q0603 Series is **RoHS Compliant and Pb free**.

Part Identification

AIMC - Q0603 - -

Inductance Code	Tolerance	Packaging
Please refer to Electrical Spec table	S: $\pm 0.3\text{nH}$ J: $\pm 5\%$	T: Tape and Reel (4kpcs / reel) Blank: Bulk

Mechanical Specifications



Series	L	W	T	a
AIMC-Q0603	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	$0.20 \sim 0.60$
	[0.063±0.006]	[0.03±0.006]	[0.03±0.006]	[0.008~0.023]

Dimension: mm [inch]



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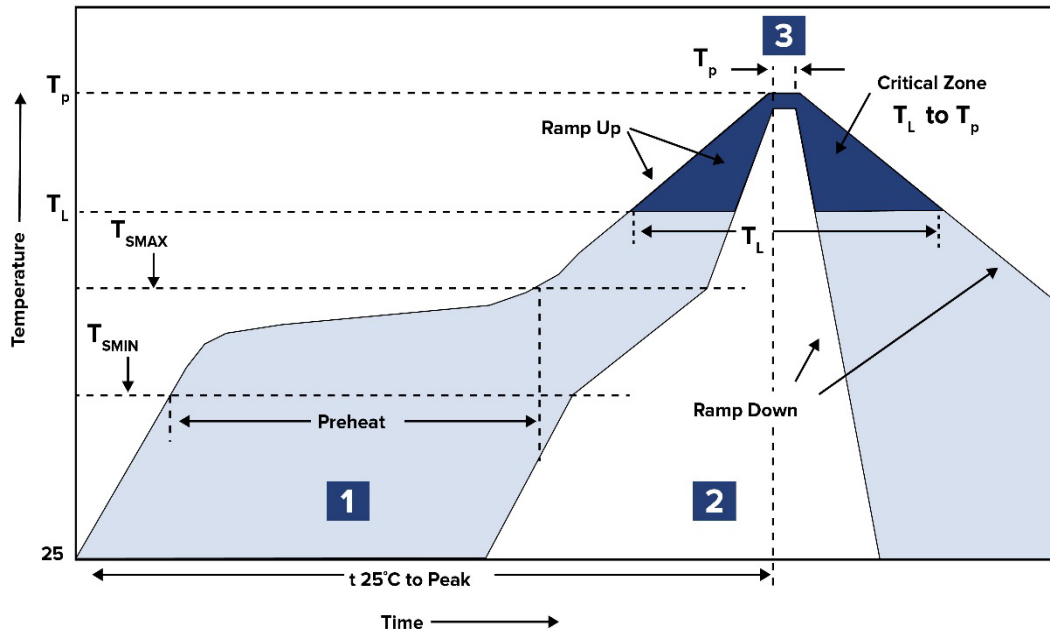


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_P 260°C	30 sec. MAX

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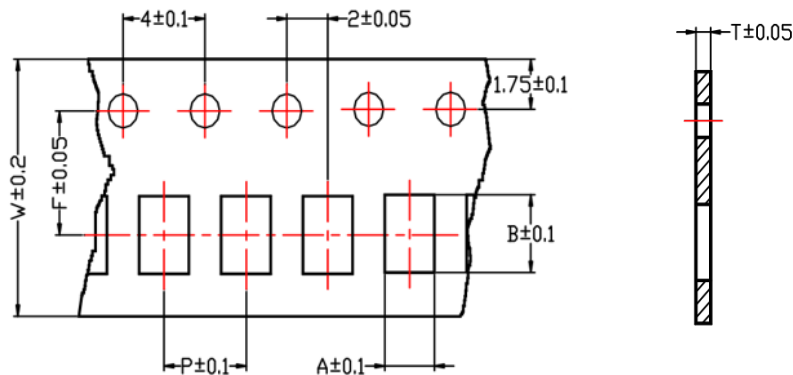
Check Inventory



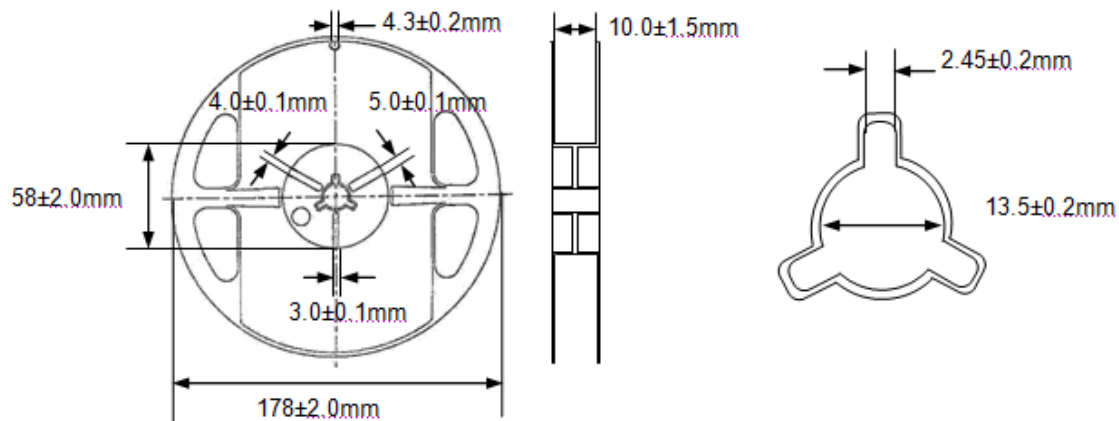
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Packaging

Tape & Reel: 4,000 pcs/reel



Codes	A	B	T	W	P	F
AIMC-Q0603	0.98	1.80	0.95	8.0	4.0	3.5



Dimension: mm

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