

# Automotive Multilayer Ceramic Chip Inductor



AIMC-Q0201HQ

Request Samples



Check Inventory



0.60 x 0.30 x 0.3 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  $\pm 0.1\text{nH}$

## 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 ( $\Omega$ ) max.	Rated Current (mA) max.
AIMC-Q0201HQ-0N6	0.6	B, C	14	500	20.00	0.07	850
AIMC-Q0201HQ-0N7	0.7	B, C	14	500	20.00	0.08	800
AIMC-Q0201HQ-0N8	0.8	B, C	14	500	18.00	0.08	800
AIMC-Q0201HQ-0N9	0.9	B, C	14	500	18.00	0.10	750
AIMC-Q0201HQ-1N0	1.0	B, C, S	14	500	17.00	0.10	750
AIMC-Q0201HQ-1N1	1.1	B, C, S	14	500	17.00	0.10	750
AIMC-Q0201HQ-1N2	1.2	B, C, S	14	500	17.00	0.10	750
AIMC-Q0201HQ-1N3	1.3	B, C, S	14	500	17.00	0.15	600
AIMC-Q0201HQ-1N4	1.4	B, C, S	14	500	16.00	0.15	600
AIMC-Q0201HQ-1N5	1.5	B, C, S	14	500	15.00	0.15	600
AIMC-Q0201HQ-1N6	1.6	B, C, S	14	500	15.00	0.15	600
AIMC-Q0201HQ-1N7	1.7	B, C, S	14	500	15.00	0.15	600
AIMC-Q0201HQ-1N8	1.8	B, C, S	14	500	15.00	0.15	600
AIMC-Q0201HQ-1N9	1.9	B, C, S	14	500	12.50	0.15	600
AIMC-Q0201HQ-2N0	2.0	B, C, S	14	500	12.50	0.15	600
AIMC-Q0201HQ-2N1	2.1	B, C, S	14	500	11.00	0.15	600
AIMC-Q0201HQ-2N2	2.2	B, C, S	14	500	11.00	0.15	600
AIMC-Q0201HQ-2N3	2.3	B, C, S	14	500	10.00	0.20	500
AIMC-Q0201HQ-2N4	2.4	B, C, S	14	500	10.00	0.20	500
AIMC-Q0201HQ-2N5	2.5	B, C, S	14	500	10.00	0.20	500
AIMC-Q0201HQ-2N6	2.6	B, C, S	14	500	10.00	0.20	500
AIMC-Q0201HQ-2N7	2.7	B, C, S	14	500	10.00	0.20	500
AIMC-Q0201HQ-2N8	2.8	B, C, S	14	500	9.50	0.20	500
AIMC-Q0201HQ-2N9	2.9	B, C, S	14	500	9.50	0.20	500



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**MSL Level = 1**

## Electrical Specifications (Cont'd)

Part Number	Inductance (nH)	Tolerance	Quality Factor min.	L/Q Freq. (MHz)	SRF (GHz) min.	DCR (Ω) max.	Rated Current (mA) max.
AIMC-Q0201HQ-3N0	3.0	B, C, S	14	500	9.50	0.25	450
AIMC-Q0201HQ-3N1	3.1	B, C, S	14	500	8.00	0.25	450
AIMC-Q0201HQ-3N2	3.2	B, C, S	14	500	8.00	0.25	450
AIMC-Q0201HQ-3N3	3.3	B, C, S	14	500	8.00	0.25	450
AIMC-Q0201HQ-3N4	3.4	B, C, S	14	500	7.00	0.25	450
AIMC-Q0201HQ-3N5	3.5	B, C, S	14	500	7.00	0.25	450
AIMC-Q0201HQ-3N6	3.6	B, C, S	14	500	6.00	0.30	400
AIMC-Q0201HQ-3N7	3.7	B, C, S	14	500	6.00	0.30	400
AIMC-Q0201HQ-3N8	3.8	B, C, S	14	500	6.00	0.30	400
AIMC-Q0201HQ-3N9	3.9	B, C, S	14	500	5.70	0.30	400
AIMC-Q0201HQ-4N0	4.0	B, C, S	14	500	5.30	0.40	350
AIMC-Q0201HQ-4N1	4.1	B, C, S	14	500	5.30	0.40	350
AIMC-Q0201HQ-4N2	4.2	B, C, S	14	500	5.30	0.40	350
AIMC-Q0201HQ-4N3	4.3	H, J, S	14	500	5.30	0.40	350
AIMC-Q0201HQ-4N7	4.7	H, J, S	14	500	4.40	0.40	350
AIMC-Q0201HQ-5N1	5.1	H, J, S	14	500	4.20	0.40	350
AIMC-Q0201HQ-5N6	5.6	H, J, S	14	500	4.00	0.40	350
AIMC-Q0201HQ-6N2	6.2	H, J	14	500	4.00	0.60	300
AIMC-Q0201HQ-6N8	6.8	H, J	14	500	3.90	0.60	300
AIMC-Q0201HQ-7N5	7.5	H, J	14	500	3.70	0.60	300
AIMC-Q0201HQ-8N2	8.2	H, J	14	500	3.60	0.70	250
AIMC-Q0201HQ-9N1	9.1	H, J	14	500	3.30	0.70	250
AIMC-Q0201HQ-10N	10	H, J	14	500	3.20	0.70	250
AIMC-Q0201HQ-11N	11	H, J	14	500	2.90	0.80	250
AIMC-Q0201HQ-12N	12	H, J	12	500	2.90	0.70	250
AIMC-Q0201HQ-13N	13	H, J	12	500	2.60	0.80	250
AIMC-Q0201HQ-15N	15	H, J	12	500	2.60	0.70	250
AIMC-Q0201HQ-16N	16	H, J	12	500	2.20	0.95	200

### 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-Q0201HQ is AEC-Q200 qualified.**

**AIMC-Q0201HQ Series is RoHS Compliant and Pb free.**



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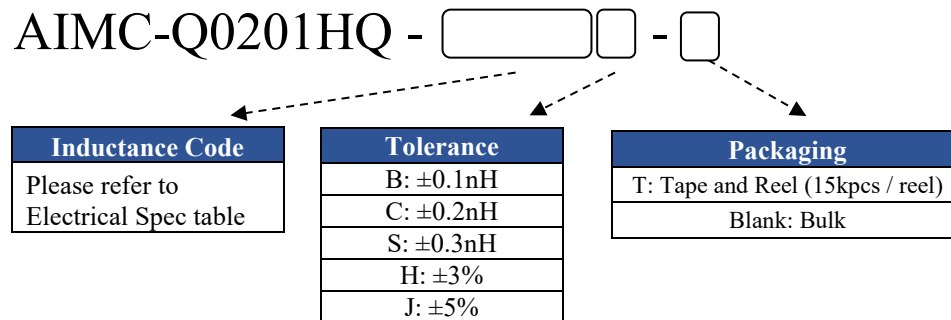


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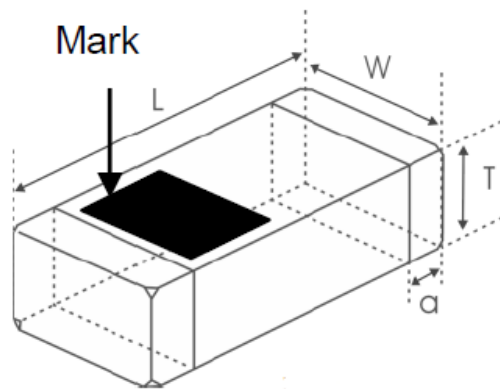


**0.60 x 0.30 x 0.3 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Part Identification



## Mechanical Specifications



Series	L	W	T	a
AIMC-Q0201HQ	0.60 $\pm$ 0.02	0.30 $\pm$ 0.03	0.30 $\pm$ 0.03	0.10~0.20
	[0.024 $\pm$ 0.001]	[0.012 $\pm$ 0.001]	[0.012 $\pm$ 0.001]	[0.004~0.008]

Dimension: mm [inch]



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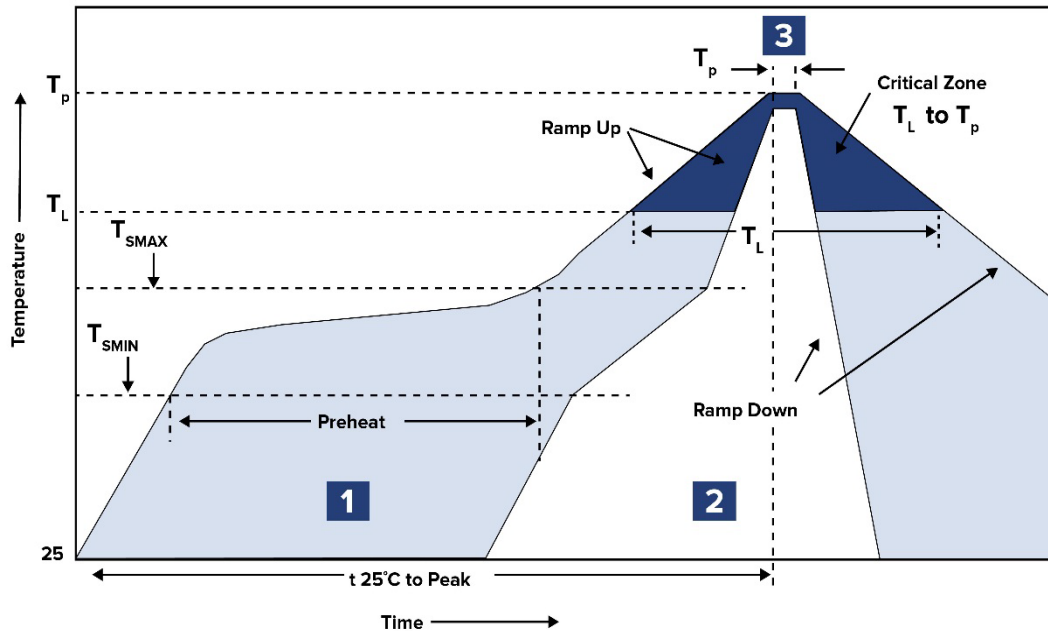


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## Reflow Profile



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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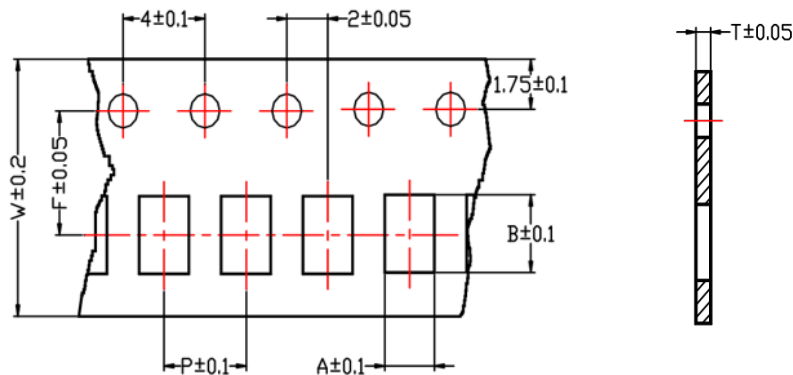
Check Inventory



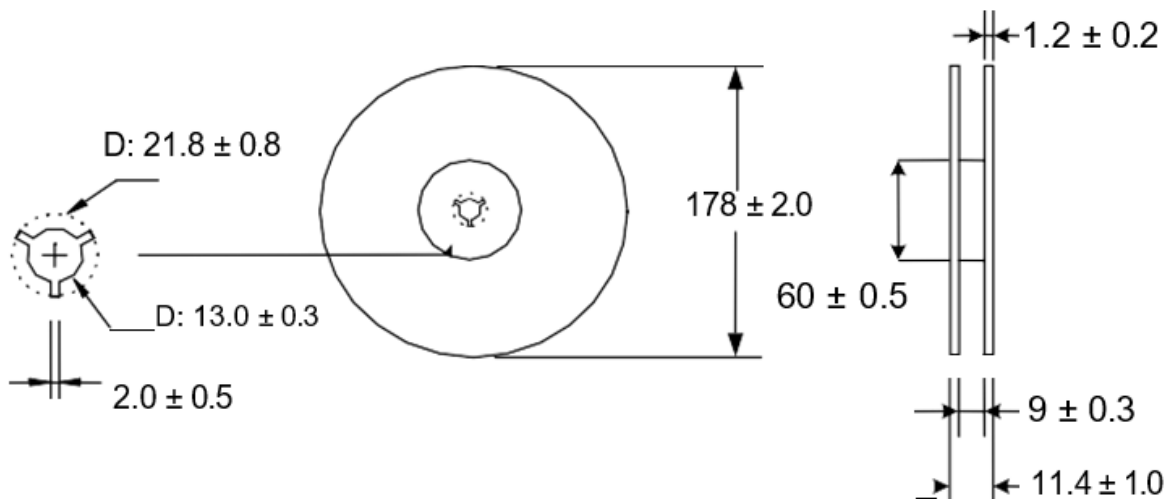
**0.60 x 0.30 x 0.3 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Packaging

**Tape & Reel: 15,000 pcs/reel**



Codes	A	B	T	W	P	F
AIMC-Q0201HQ	0.36	0.66	0.42	8.0	2.0	3.5



**Dimension: 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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