

ECN/PCN No.: M1246

### For Manufacturer

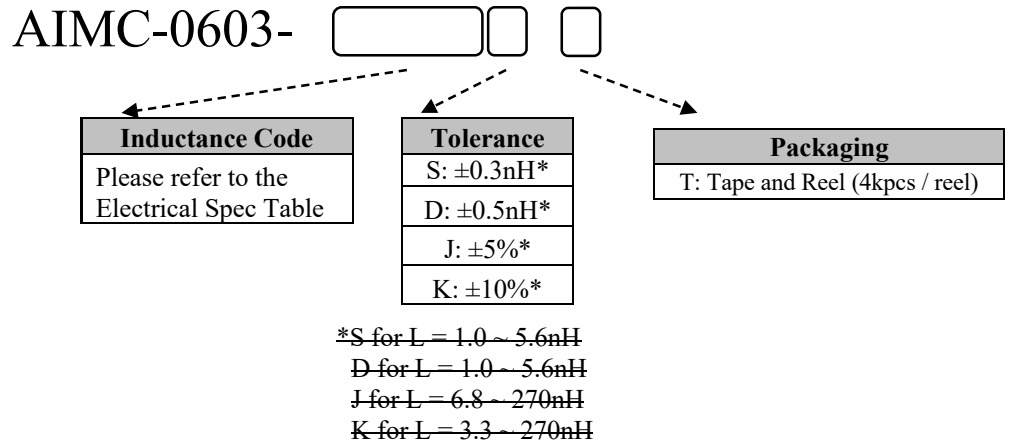
<b>Product Description:</b> Multilayer Ceramic Chip Inductor	<b>Abracon Part Number / Part Series:</b> AIMC-0603 Series	<input type="checkbox"/> Documentation only	<input checked="" type="checkbox"/> Series
		<input checked="" type="checkbox"/> ECN	<input type="checkbox"/> Part Number
		<input type="checkbox"/> EOL	
<b>Affected Revision:</b> F	<b>New Revision:</b> G	<b>Application:</b>	<input type="checkbox"/> Safety
			<input checked="" type="checkbox"/> Non-Safety

**Prior to Change:**

#### Key Electrical Specifications

Part No.	L(nH)	Tolerance	Q (MIN)	L,Q Test Freq.	SRF(MHz)	DCR(Ω)	Ir(mA)
				(MHz)	(min)	(max)	(max)
AIMC-0603-1N0	1.0	S, D	8	100	10000	0.05	500
AIMC-0603-1N2	1.2	S, D	8	100	10000	0.05	500
AIMC-0603-1N5	1.5	S, D	8	100	6000	0.10	500
AIMC-0603-1N8	1.8	S, D	8	100	6000	0.10	500
AIMC-0603-2N2	2.2	S, D	8	100	6000	0.10	500
AIMC-0603-2N7	2.7	S, D	10	100	6000	0.12	500
AIMC-0603-3N3	3.3	S, D, K	10	100	6000	0.15	500
AIMC-0603-3N9	3.9	S, D, K	10	100	6000	0.16	500
AIMC-0603-4N7	4.7	S, D, K	10	100	5500	0.20	500
AIMC-0603-5N6	5.6	S, D, K	10	100	4500	0.25	500
AIMC-0603-6N8	6.8	J, K	10	100	4000	0.30	500
AIMC-0603-8N2	8.2	J, K	10	100	3600	0.35	500
AIMC-0603-10N	10	J, K	12	100	3400	0.40	300
AIMC-0603-12N	12	J, K	12	100	2800	0.45	300
AIMC-0603-15N	15	J, K	12	100	2300	0.50	300
AIMC-0603-18N	18	J, K	12	100	2100	0.55	300
AIMC-0603-22N	22	J, K	12	100	1700	0.60	300
AIMC-0603-27N	27	J, K	12	100	1500	0.65	300
AIMC-0603-33N	33	J, K	12	100	1300	0.70	300
AIMC-0603-39N	39	J, K	12	100	1100	0.70	300
AIMC-0603-47N	47	J, K	12	100	1000	0.70	300
AIMC-0603-56N	56	J, K	12	100	900	0.75	300
AIMC-0603-68N	68	J, K	12	100	700	0.85	300
AIMC-0603-82N	82	J, K	8	100	600	1.00	300
AIMC-0603-R10	100	J, K	8	100	600	1.20	300
AIMC-0603-R12	120	J, K	8	50	500	1.40	200
AIMC-0603-R15	150	J, K	8	50	500	1.60	200
AIMC-0603-R18	180	J, K	8	50	400	1.90	200
AIMC-0603-R22	220	J, K	8	50	350	2.40	200
AIMC-0603-R27	270	J, K	8	50	350	2.60	150

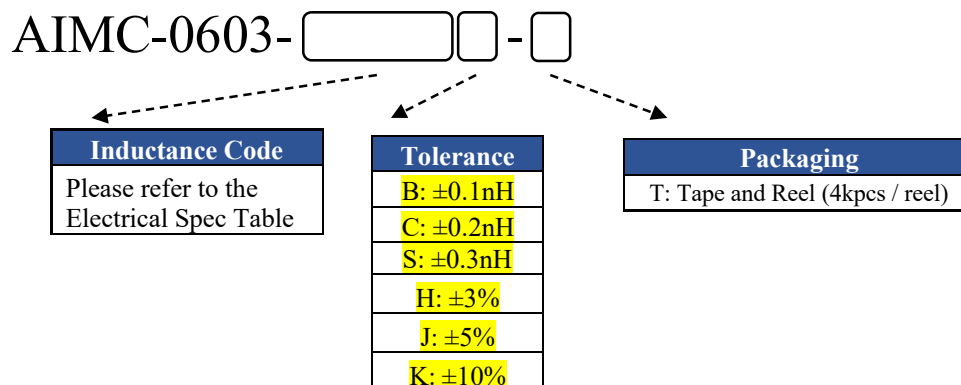
**2.0 Part Number Identification**



**After Change:**
**Key Electrical Specifications**

Part No.	L(nH)	Tolerance	Q (Typ.)	L,Q Test Freq.	SRF(MHz)	DCR( $\Omega$ )	Ir(mA)
				(MHz)			
AIMC-0603-1N0	1.0	B, C, S, D	13	100	10000	0.05	500
AIMC-0603-1N2	1.2	B, C, S, D	13	100	10000	0.05	500
AIMC-0603-1N5	1.5	B, C, S, D	13	100	6000	0.10	500
AIMC-0603-1N8	1.8	B, C, S, D	13	100	6000	0.10	500
AIMC-0603-2N2	2.2	B, C, S, D	13	100	6000	0.10	500
AIMC-0603-2N7	2.7	B, C, S, D	13	100	6000	0.12	500
AIMC-0603-3N3	3.3	B, C, S, D, K	13	100	6000	0.15	500
AIMC-0603-3N9	3.9	B, C, S, D, K	13	100	6000	0.16	500
AIMC-0603-4N7	4.7	B, C, S, D, K	13	100	6000	0.20	500
AIMC-0603-5N6	5.6	B, C, S, D, K	14	100	5000	0.25	500
AIMC-0603-6N8	6.8	H, J, K	14	100	5000	0.30	500
AIMC-0603-8N2	8.2	H, J, K	14	100	4500	0.35	500
AIMC-0603-10N	10	H, J, K	15	100	3500	0.40	300
AIMC-0603-12N	12	H, J, K	18	100	3000	0.45	300
AIMC-0603-15N	15	H, J, K	18	100	2300	0.50	300
AIMC-0603-18N	18	H, J, K	16	100	2200	0.55	300
AIMC-0603-22N	22	H, J, K	16	100	2000	0.60	300
AIMC-0603-27N	27	H, J, K	16	100	1700	0.65	300
AIMC-0603-33N	33	H, J, K	16	100	1500	0.70	300
AIMC-0603-39N	39	H, J, K	17	100	1400	0.70	300
AIMC-0603-47N	47	H, J, K	17	100	1200	0.70	300
AIMC-0603-56N	56	H, J, K	17	100	1100	0.75	300
AIMC-0603-68N	68	H, J, K	17	100	900	0.85	300
AIMC-0603-82N	82	H, J, K	15	100	800	1.00	300
AIMC-0603-R10	100	H, J, K	15	100	700	1.20	300
AIMC-0603-R12	120	H, J, K	15	50	600	1.40	200
AIMC-0603-R15	150	H, J, K	15	50	500	1.60	200
AIMC-0603-R18	180	H, J, K	15	50	400	1.90	200
AIMC-0603-R22	220	H, J, K	15	50	350	2.40	200
AIMC-0603-R27	270	H, J, K	16	50	350	2.60	150
AIMC-0603-R33	330	H, J, K	16	50	350	2.80	150
AIMC-0603-R39	390	H, J, K	16	50	300	3.20	150
AIMC-0603-R43	430	H, J, K	16	50	280	3.40	150
AIMC-0603-R47	470	H, J, K	15	50	250	3.60	150

### 3.0 Part Number Identification



**Cause/Reason for Change:** Adding R33,R39,R43,R47 to the series. Adding B, C tolerance and removing D, K tolerances for parts from 1N0 to 5N6. Adding H tolerance for parts from 6N8 to R47. Updating to the Q, SRF value.

**Change Plan**

<b>Effective Date:</b>	<b>Additional Remarks:</b>
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**Change Declaration:** The change does not affect form or fit of the devices. Refer to ([ECN-Partial EOL M1246 AIMC-0603 series https://abracon.com/downloads/ECN-PCN/Partial-ECN-EOL-M1246-AIMC-0603.pdf](https://abracon.com/downloads/ECN-PCN/Partial-ECN-EOL-M1246-AIMC-0603.pdf)) for the removed part numbers.

<b>Issued Date:</b> 7/29/2021	<b>Issued By:</b> Ahmed Alamin	<b>Issued Department:</b> Engineering
<b>Approval:</b> Syed Raza Engineering VP	<b>Approval:</b> Reuben Quintanilla Quality Director	<b>Approval:</b> Ying Huang Purchasing Director

**For Abracon EOL only**

<b>Last Time Buy (if applicable):</b>	<b>Alternate Part Number / Part Series:</b>
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<b>Additional Approval:</b>	<b>Additional Approval:</b>	<b>Additional Approval:</b>
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**Customer Approval (If Applicable)**

**Qualification Status:**

Approved  Not accepted

*Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.*

<b>Customer Part Number:</b>	<b>Customer Project:</b>
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<b>Company Name:</b>	<b>Company Representative:</b>	<b>Representative Signature:</b>
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**Customer Remarks:**



# Multilayer Ceramic Chip Inductor



## AIMC-0603 Series

Request Samples



Check Inventory



1.6 x 0.8 x 0.8 mm  
**RoHS/RoHS II Compliant**  
 MSL Level = N/A

### Features

- High self-resonant frequency
- Multilayer monolithic construction yields high reliability
- Excellent solderability & heat resistance for reflow soldering

### Applications

- Bluetooth
- Mobile phones such as GSM, CDMA, PDC
- High frequency telecommunication circuits
- Other high frequency circuit general use

### Standard Specifications

Part No.	L(nH)	Tolerance	Q (Typ.)	L,Q Test Freq.	SRF(MHz)	DCR( $\Omega$ )	Ir(mA)
				(MHz)	(min)	(max)	(max)
AIMC-0603-1N0	1.0	B, C, S	13	100	10000	0.05	500
AIMC-0603-1N2	1.2	B, C, S	13	100	10000	0.05	500
AIMC-0603-1N5	1.5	B, C, S	13	100	6000	0.10	500
AIMC-0603-1N8	1.8	B, C, S	13	100	6000	0.10	500
AIMC-0603-2N2	2.2	B, C, S	13	100	6000	0.10	500
AIMC-0603-2N7	2.7	B, C, S	13	100	6000	0.12	500
AIMC-0603-3N3	3.3	B, C, S	13	100	6000	0.15	500
AIMC-0603-3N9	3.9	B, C, S	13	100	6000	0.16	500
AIMC-0603-4N7	4.7	B, C, S	13	100	6000	0.20	500
AIMC-0603-5N6	5.6	B, C, S	14	100	5000	0.25	500
AIMC-0603-6N8	6.8	H, J, K	14	100	5000	0.30	500
AIMC-0603-8N2	8.2	H, J, K	14	100	4500	0.35	500
AIMC-0603-10N	10	H, J, K	15	100	3500	0.40	300
AIMC-0603-12N	12	H, J, K	18	100	3000	0.45	300
AIMC-0603-15N	15	H, J, K	18	100	2300	0.50	300
AIMC-0603-18N	18	H, J, K	16	100	2200	0.55	300
AIMC-0603-22N	22	H, J, K	16	100	2000	0.60	300
AIMC-0603-27N	27	H, J, K	16	100	1700	0.65	300
AIMC-0603-33N	33	H, J, K	16	100	1500	0.70	300
AIMC-0603-39N	39	H, J, K	17	100	1400	0.70	300
AIMC-0603-47N	47	H, J, K	17	100	1200	0.70	300
AIMC-0603-56N	56	H, J, K	17	100	1100	0.75	300
AIMC-0603-68N	68	H, J, K	17	100	900	0.85	300
AIMC-0603-82N	82	H, J, K	15	100	800	1.00	300
AIMC-0603-R10	100	H, J, K	15	100	700	1.20	300
AIMC-0603-R12	120	H, J, K	15	50	600	1.40	200
AIMC-0603-R15	150	H, J, K	15	50	500	1.60	200
AIMC-0603-R18	180	H, J, K	15	50	400	1.90	200
AIMC-0603-R22	220	H, J, K	15	50	350	2.40	200
AIMC-0603-R27	270	H, J, K	16	50	350	2.60	150
AIMC-0603-R33	330	H, J, K	16	50	350	2.80	150
AIMC-0603-R39	390	H, J, K	16	50	300	3.20	150
AIMC-0603-R43	430	H, J, K	16	50	280	3.40	150
AIMC-0603-R47	470	H, J, K	15	50	250	3.60	150

# Multilayer Ceramic Chip Inductor



**AIMC-0603 Series**

Request Samples



Check Inventory



**1.6 x 0.8 x 0.8 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = N/A**

Parameters	
Abracon P/N	AIMC-0603-xxx Series
Operating temperature	-55°C ~ +125°C
Storage temperature	-10°C~+40°C and RH 70% (Max.)

## Test Conditions

**L, Q:** E4991A Impedance Analyzer or equivalent, 50mV, test frequency refers to table 1.0

**DCR:** HP4338B or equivalent

**SRF:** E4991A Impedance analyzer, E5071C Network analyzer or equivalent

**Ir:** DC Power Supplier, Current Meter, Thermometer.  $\Delta L/L$  (initial)  $\geq -5\%$  or  $\Delta T \leq 20^\circ\text{C}$

**Unless otherwise specified**

**Temperature:**  $20 \pm 15^\circ\text{C}$

**Humidity:**  $65 \pm 20\%$

**Atmospheric Pressure:** 86 to 106 kPa

## Part Number Identification

AIMC-0603-   -

Inductance Code
Please refer to the Electrical Spec Table

Tolerance
B: $\pm 0.1\text{nH}$
C: $\pm 0.2\text{nH}$
S: $\pm 0.3\text{nH}$
H: $\pm 3\%$
J: $\pm 5\%$
K: $\pm 10\%$

Packaging
T: Tape and Reel (4kpcs / reel)

# Multilayer Ceramic Chip Inductor



**AIMC-0603 Series**

Request Samples

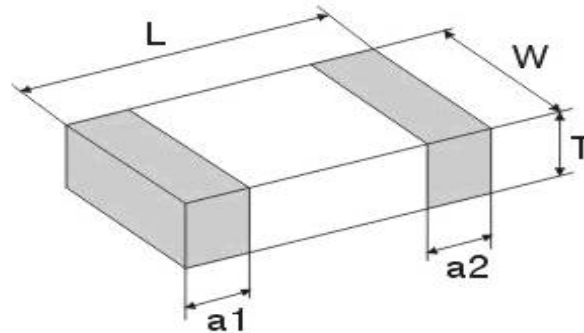


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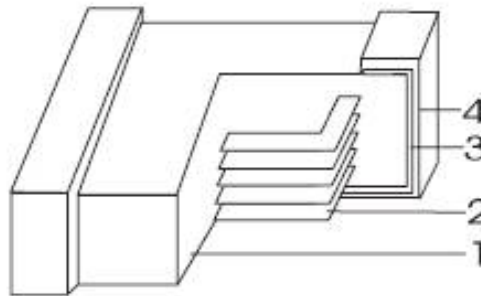


**1.6 x 0.8 x 0.8 mm**  
**RoHS/RoHS II Compliant**  
 MSL Level = N/A

## Mechanical Dimensions & Materials



Series	L	W	T	a1,a2
AIMC-0603	1.60±0.20	0.80±0.15	0.80±0.15	0.30±0.20
	[0.063±0.008]	[0.031±0.006]	[0.031±0.006]	[0.012±0.008]



	Part Name	Material
1	Base Material	Ceramic Material
2	Internal Conductor	Ag
3	Terminal Electrode	Ag
4	Terminal Electrode	Ni-Sn

Dimension: mm [inch]



# Multilayer Ceramic Chip Inductor



AIMC-0603 Series

Request Samples

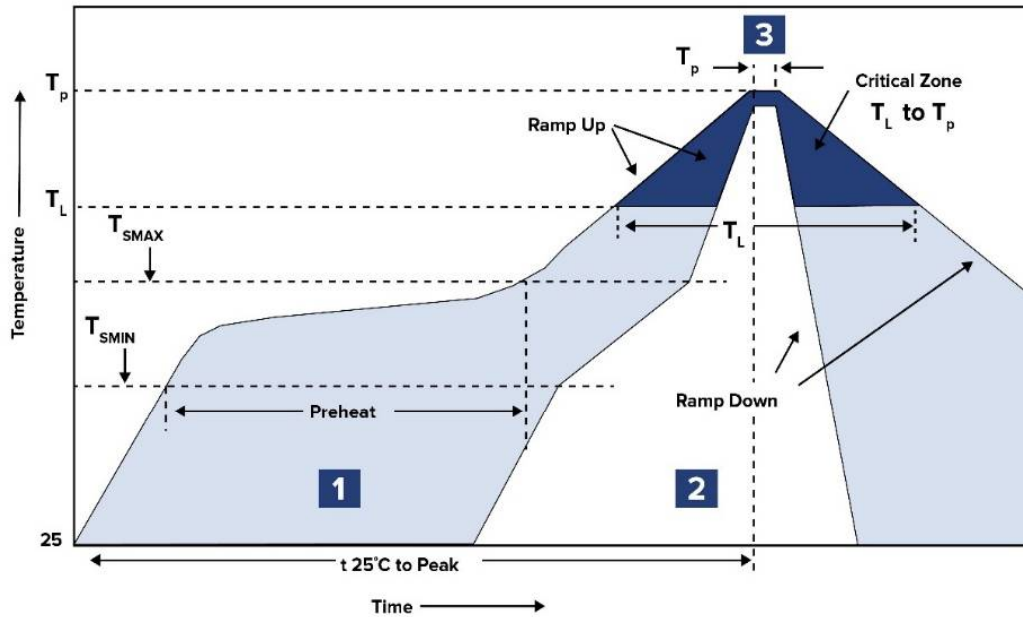


Check Inventory



1.6 x 0.8 x 0.8 mm  
RoHS/RoHS II Compliant  
MSL Level = N/A

## 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 ~ 90 sec.
3	Peak heat	$T_P$ 260°C±5°C	10 sec. MAX

# Multilayer Ceramic Chip Inductor



**AIMC-0603 Series**

Request Samples



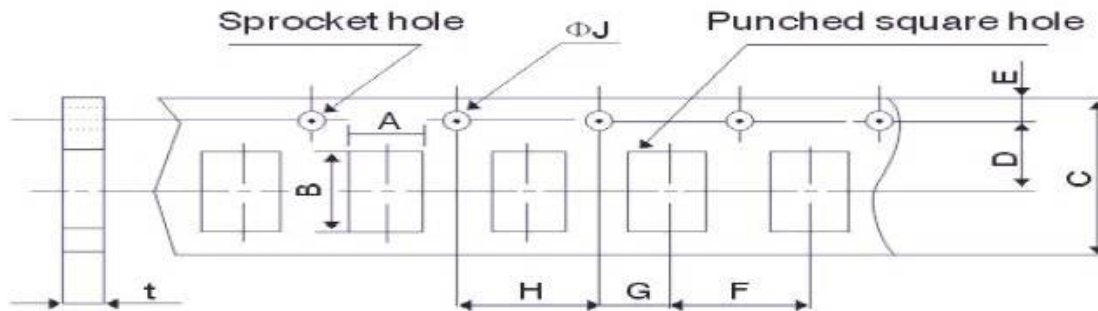
Check Inventory



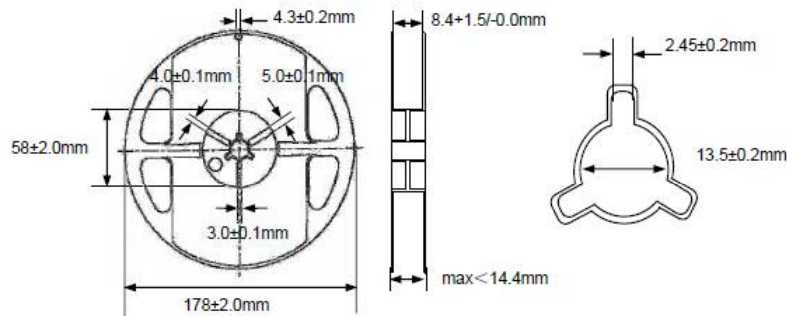
**1.6 x 0.8 x 0.8 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = N/A**

## Packing

**T: 4,000pcs / reel**

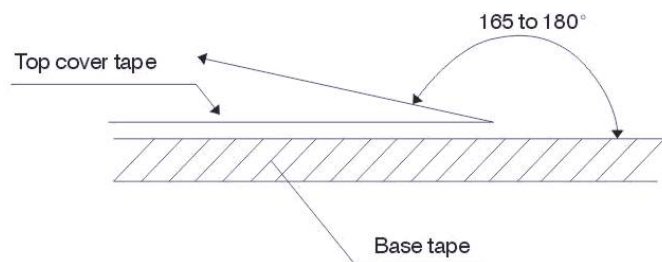


Codes	A	B	C	D	E	F	G	H	ΦJ	t(max)
AIMC-0603	1.0±0.2	1.8±0.25	8.0±0.3	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.1	1.5+0.1/-0	1.1



## Peeling strength of cover tape

0.3~0.7N (30gf~70gf)



Test condition:

- 1) peel angle: 165°~180° vs. carrier tape.
- 2) peel speed: 300 mm/min±10%.

**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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 For terms and conditions of sales, please visit:  
[www.abracon.com](http://www.abracon.com)

**REVISED: 08-09-19**

ABRACON IS  
 ISO9001-2015  
 CERTIFIED

Affected MPN"s	Type Of Change
AIMC-0603-1N0S-T	Spec. Change
AIMC-0603-1N2S-T	Spec. Change
AIMC-0603-1N5S-T	Spec. Change
AIMC-0603-1N8S-T	Spec. Change
AIMC-0603-2N2S-T	Spec. Change
AIMC-0603-2N7S-T	Spec. Change
AIMC-0603-3N3S-T	Spec. Change
AIMC-0603-3N9S-T	Spec. Change
AIMC-0603-4N7S-T	Spec. Change
AIMC-0603-5N6S-T	Spec. Change
AIMC-0603-6N8J-T	Spec. Change
AIMC-0603-8N2J-T	Spec. Change
AIMC-0603-10NJ-T	Spec. Change
AIMC-0603-12NJ-T	Spec. Change
AIMC-0603-15NJ-T	Spec. Change
AIMC-0603-18NJ-T	Spec. Change
AIMC-0603-22NJ-T	Spec. Change
AIMC-0603-27NJ-T	Spec. Change
AIMC-0603-33NJ-T	Spec. Change
AIMC-0603-39NJ-T	Spec. Change
AIMC-0603-47NJ-T	Spec. Change
AIMC-0603-56NJ-T	Spec. Change
AIMC-0603-68NJ-T	Spec. Change
AIMC-0603-82NJ-T	Spec. Change
AIMC-0603-R10J-T	Spec. Change
AIMC-0603-R12J-T	Spec. Change
AIMC-0603-R15J-T	Spec. Change
AIMC-0603-R18J-T	Spec. Change
AIMC-0603-R22J-T	Spec. Change
AIMC-0603-R27J-T	Spec. Change
AIMC-0603-6N8K-T	Spec. Change
AIMC-0603-8N2K-T	Spec. Change
AIMC-0603-10NK-T	Spec. Change
AIMC-0603-12NK-T	Spec. Change
AIMC-0603-15NK-T	Spec. Change
AIMC-0603-18NK-T	Spec. Change
AIMC-0603-22NK-T	Spec. Change
AIMC-0603-27NK-T	Spec. Change
AIMC-0603-33NK-T	Spec. Change
AIMC-0603-39NK-T	Spec. Change
AIMC-0603-47NK-T	Spec. Change
AIMC-0603-56NK-T	Spec. Change
AIMC-0603-68NK-T	Spec. Change
AIMC-0603-82NK-T	Spec. Change
AIMC-0603-R10K-T	Spec. Change
AIMC-0603-R12K-T	Spec. Change

AIMC-0603-R15K-T	Spec. Change
AIMC-0603-R18K-T	Spec. Change
AIMC-0603-R22K-T	Spec. Change
AIMC-0603-R27K-T	Spec. Change
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AIMC-0603-1N0C-T	Added to series
AIMC-0603-1N2B-T	Added to series
AIMC-0603-1N2C-T	Added to series
AIMC-0603-1N5B-T	Added to series
AIMC-0603-1N5C-T	Added to series
AIMC-0603-1N8B-T	Added to series
AIMC-0603-1N8C-T	Added to series
AIMC-0603-2N2B-T	Added to series
AIMC-0603-2N2C-T	Added to series
AIMC-0603-2N7B-T	Added to series
AIMC-0603-2N7C-T	Added to series
AIMC-0603-3N3B-T	Added to series
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AIMC-0603-3N9B-T	Added to series
AIMC-0603-3N9C-T	Added to series
AIMC-0603-4N7B-T	Added to series
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AIMC-0603-18NH-T	Added to series
AIMC-0603-22NH-T	Added to series
AIMC-0603-27NH-T	Added to series
AIMC-0603-33NH-T	Added to series
AIMC-0603-39NH-T	Added to series
AIMC-0603-47NH-T	Added to series
AIMC-0603-56NH-T	Added to series
AIMC-0603-68NH-T	Added to series
AIMC-0603-82NH-T	Added to series
AIMC-0603-R10H-T	Added to series
AIMC-0603-R12H-T	Added to series
AIMC-0603-R15H-T	Added to series
AIMC-0603-R18H-T	Added to series
AIMC-0603-R22H-T	Added to series
AIMC-0603-R27H-T	Added to series
AIMC-0603-R33H-T	Added to series
AIMC-0603-R33J-T	Added to series
AIMC-0603-R33K-T	Added to series

AIMC-0603-R39H-T	Added to series
AIMC-0603-R39J-T	Added to series
AIMC-0603-R39K-T	Added to series
AIMC-0603-R43H-T	Added to series
AIMC-0603-R43J-T	Added to series
AIMC-0603-R43K-T	Added to series
AIMC-0603-R47H-T	Added to series
AIMC-0603-R47J-T	Added to series
AIMC-0603-R47K-T	Added to series