

TESTING  
LEVEL 1

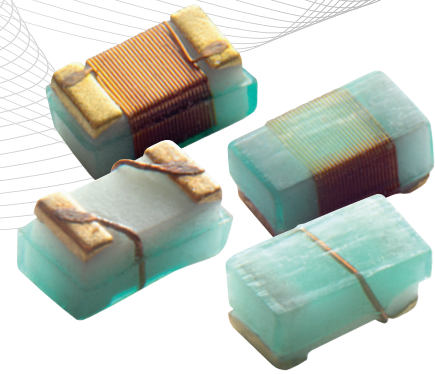
TEMPERATURE  
RANGE -40/+125

ROHS  
COMPLIANT

HALOGEN  
FREE

# C0603 Series

Chip Inductors, Open Construction  
Commercial Applications



## Features and Benefits

- Manufactured & Tested in the USA by an AS9100C certified company for a high level of reliability.
- High-temperature Ceramic Cores & Magnet Wire provide excellent temperature stability and mechanical ruggedness.
- High Q & Ultra High SRF values enable stable inductor functionality into multi GHz range.
- Low AC & DC resistance, minimizing voltage drops and dissipated power to increase efficiency.
- Small package size to minimize board space.

## Parameters

**Current Rating at 90°C Ambient 35°C Rise**

**Operating Temperature Range -40°C to +125°C**

**Part Storage Temperature Range -40° C to +125°C**

**Maximum Power Dissipation at 90° C 0.100 W**

**Electrical Characteristics** Measured at +25°C

**Inductance** Measured at 1VAC with no DC Current Testing

**DWV** 200 Vrms at Sea Level

80 Vrms at 70,000 feet altitude

**IR at 100 Vdc** 1000 Mohms Min.

**Weight/Mass** 0.008 Grams (0.00028 ounces) Maximum

## Core Material / Termination Finish

Al<sub>2</sub>O<sub>3</sub> / MoMn / Ni / Au

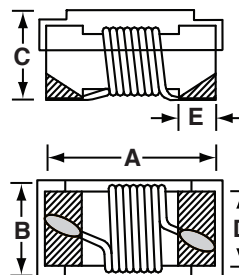
## Testing Level 1★

Electrical Characteristics L, Q, DCR

Inductance and Q are tested using Keysight E4982A, or equivalent, with test fixture HP16197A or equivalent.

Country of Origin: USA

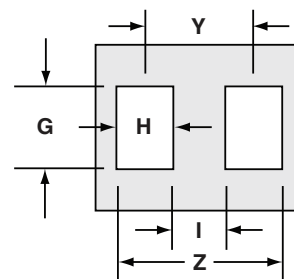
## Dimensions



	Inches	Millimeters
A	0.071 Max.	1.80 Max.
B	0.047 Max.	1.19 Max.
C	0.040 Max.	1.02 Max.
D	0.030 (Ref. Only)	0.76 (Ref. Only)
E	0.018 (Ref. Only)	0.44 (Ref. Only)

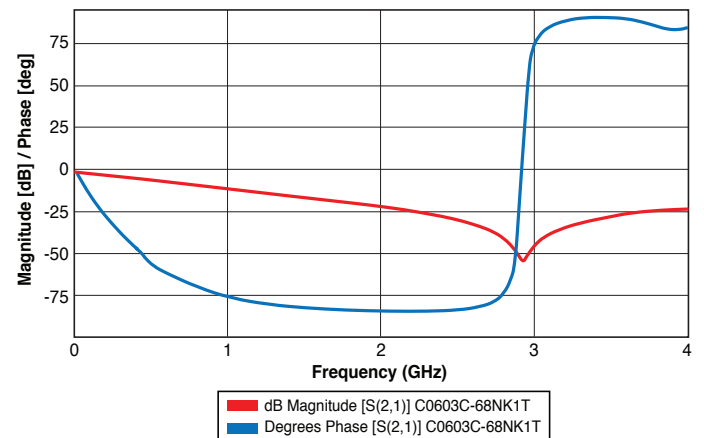
Dimensions A and C are over terminals

## Suggested Land Pattern



	Inches	Millimeters
Z	0.075	1.905
I	0.025	0.635
G	0.040	1.016
H	0.025	0.635
Y	0.050	1.270

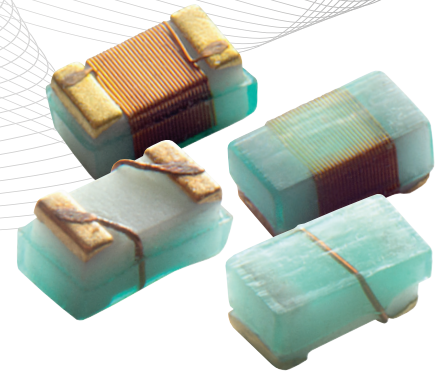
## S-Parameters (Typical)



TESTING  
LEVEL 1TEMPERATURE  
RANGE -40/+125ROHS  
COMPLIANTHALOGEN  
FREE

# C0603 Series

## Chip Inductors, Open Construction Commercial Applications



Part Number Prefix	Inductance (nH)	Percentage Tolerance (+/-)	Test Freq (MHz)	Q (Min.)	900 MHz		1.7 GHz		SRF Min (GHz)	DCR Max (Ohms)	I <sub>rms</sub> (mA)
					L (Est.)*	Q (Est.)*	L (Est.)*	Q (Est.)*			
C0603C-1N60	1.6	5	250 MHz	20	1.7	49	1.7	63	8.50	0.06	1000
C0603C-1N80	1.8	5	250 MHz	22	1.6	35	1.7	50	8.50	0.07	1000
C0603C-2N20	2.2	5	250 MHz	13	2.2	31	2.2	44	6.00	0.25	400
C0603C-3N30	3.3	5, 2	250 MHz	22	3.3	75	3.4	88	6.00	0.07	1000
C0603C-3N60	3.6	5, 2	250 MHz	22	3.7	53	3.7	65	6.00	0.07	1000
C0603C-3N90	3.9	5, 2	250 MHz	22	4.0	49	4.0	67	6.00	0.07	1000
C0603C-4N30	4.3	5, 2	250 MHz	22	4.3	50	4.3	70	6.00	0.09	885
C0603C-4N70	4.7	5, 2	250 MHz	22	4.7	47	4.8	57	6.00	0.09	885
C0603C-5N10	5.1	5, 2	250 MHz	20	4.9	47	5.0	56	5.70	0.14	700
C0603C-5N60	5.6	5, 2	250 MHz	22	5.8	63	6.1	80	5.80	0.10	840
C0603C-6N80	6.8	5, 2	250 MHz	30	6.8	60	7.1	81	5.80	0.10	840
C0603C-7N50	7.5	5, 2	250 MHz	28	7.7	60	7.8	65	4.80	0.14	700
C0603C-8N20	8.2	5, 2	250 MHz	30	8.3	82	8.4	87	4.20	0.14	700
C0603C-8N70	8.7	5, 2	250 MHz	30	8.9	62	9.3	58	5.20	0.14	700
C0603C-9N50	9.5	5, 2	250 MHz	28	9.7	59	9.9	61	4.80	0.15	700
C0603C-10N0	10	5, 2	250 MHz	31	10.0	66	10.6	83	4.80	0.16	665
C0603C-11N0	11	5, 2	250 MHz	30	11.0	53	11.5	56	4.00	0.13	700
C0603C-12N0	12	5, 2	250 MHz	35	12.3	72	13.5	83	4.00	0.13	700
C0603C-15N0	15	5, 2	250 MHz	35	15.4	64	16.8	89	4.00	0.17	645
C0603C-16N0	16	5, 2	250 MHz	35	16.2	55	17.3	52	3.10	0.17	645
C0603C-18N0	18	5, 2	250 MHz	35	18.7	70	21.4	69	3.10	0.17	645
C0603C-22N0	22	5, 2	250 MHz	35	22.8	73	26.1	71	3.00	0.19	610
C0603C-23N0	23	5, 2	250 MHz	35	24.1	71	28.0	67	2.85	0.19	610
C0603C-24N0	24	5, 2	250 MHz	35	24.5	45	28.7	39	2.65	0.19	610
C0603C-27N0	27	5, 2	250 MHz	37	29.2	74	34.6	65	2.80	0.22	565
C0603C-30N0	30	5, 2	250 MHz	37	31.4	47	39.9	28	2.25	0.22	565
C0603C-33N0	33	5, 2	250 MHz	37	36.0	67	49.5	42	2.30	0.22	565
C0603C-36N0	36	5, 2	250 MHz	37	39.4	47	52.7	24	2.08	0.25	540
C0603C-39N0	39	5, 2	250 MHz	38	42.7	60	60.2	40	2.20	0.24	540
C0603C-43N0	43	5, 2	250 MHz	38	47.0	44	64.9	21	2.00	0.28	500
C0603C-47N0	47	5, 2	200 MHz	38	52.2	62	77.2	35	2.00	0.28	500
C0603C-51N0	51	5, 2	200 MHz	35	55.5	69	82.2	34	1.90	0.30	475
C0603C-56N0	56	5, 2	200 MHz	38	62.5	56	97.0	26	1.90	0.31	475
C0603C-68N0	68	5, 2	200 MHz	37	80.5	54	168.0	21	1.70	0.36	440
C0603C-72N0	72	5, 2	150 MHz	34	82.0	53	135.0	20	1.70	0.49	400
C0603C-82N0	82	5, 2	150 MHz	34	96.2	54	177.0	21	1.70	0.54	360
C0603C-100N	100	5, 2	150 MHz	34	124.0	49	—	—	1.40	0.75	300
C0603C-110N	110	5, 2	150 MHz	32	138.0	43	—	—	1.30	0.61	300
C0603C-120N	120	5, 2	150 MHz	32	166.0	39	—	—	1.30	0.79	300
C0603C-150N	150	5, 2	150 MHz	28	250.0	25	—	—	1.00	1.14	245
C0603C-180N	180	5, 2	150 MHz	25	305.0	22	—	—	1.00	0.77	235
C0603C-200N	200	5, 2	150 MHz	25	—	—	—	—	0.90	1.98	200
C0603C-210N	210	5, 2	150 MHz	24	—	—	—	—	0.90	2.06	200
C0603C-220N	220	5, 2	150 MHz	23	—	—	—	—	0.70	1.70	200
C0603C-250N	250	5, 2	100 MHz	19	—	—	—	—	0.60	3.55	120
C0603C-270N	270	5, 2	100 MHz	21	—	—	—	—	0.60	2.10	195
C0603C-330N	330	5, 2	100 MHz	19	—	—	—	—	0.40	3.89	100
C0603C-390N	390	5, 2	100 MHz	19	—	—	—	—	0.30	4.35	100

\*Testing data at 900 MHz and 1.7 GHz  
are product estimates



TESTING LEVEL 1



TEMPERATURE RANGE -40/+125



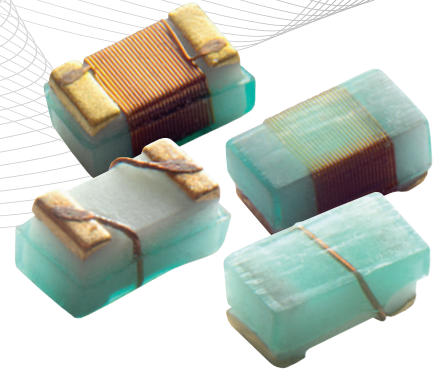
ROHS COMPLIANT



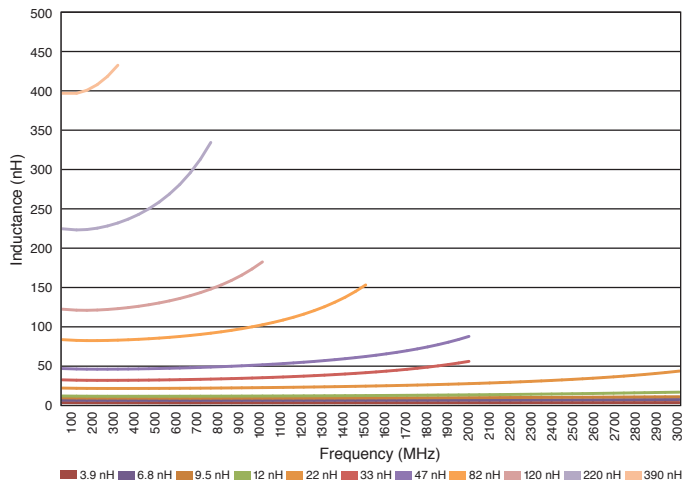
HALOGEN FREE

# C0603 Series

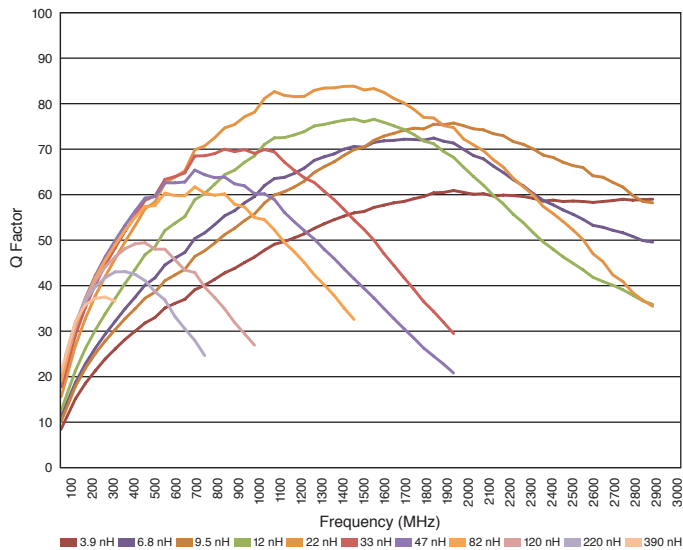
Chip Inductors, Open Construction  
Commercial Applications



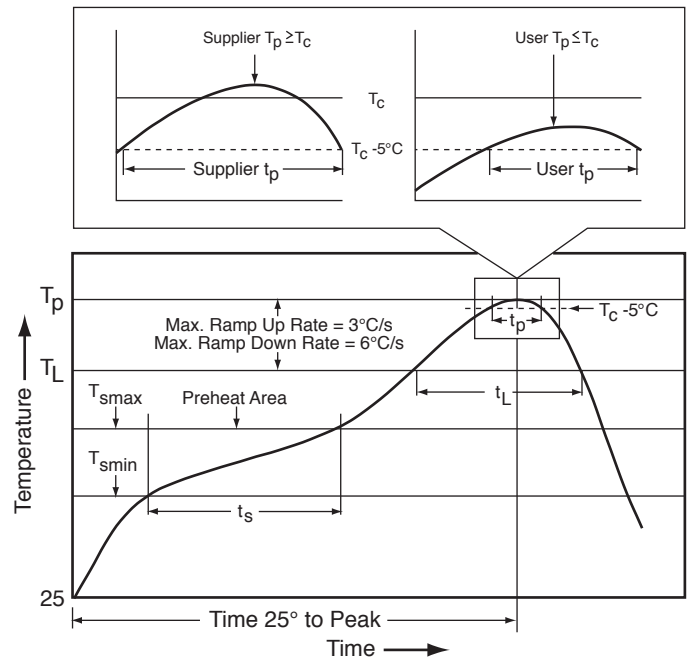
## L Versus Frequency

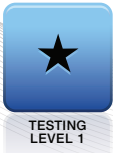


## Q Versus Frequency



## Solder Profile



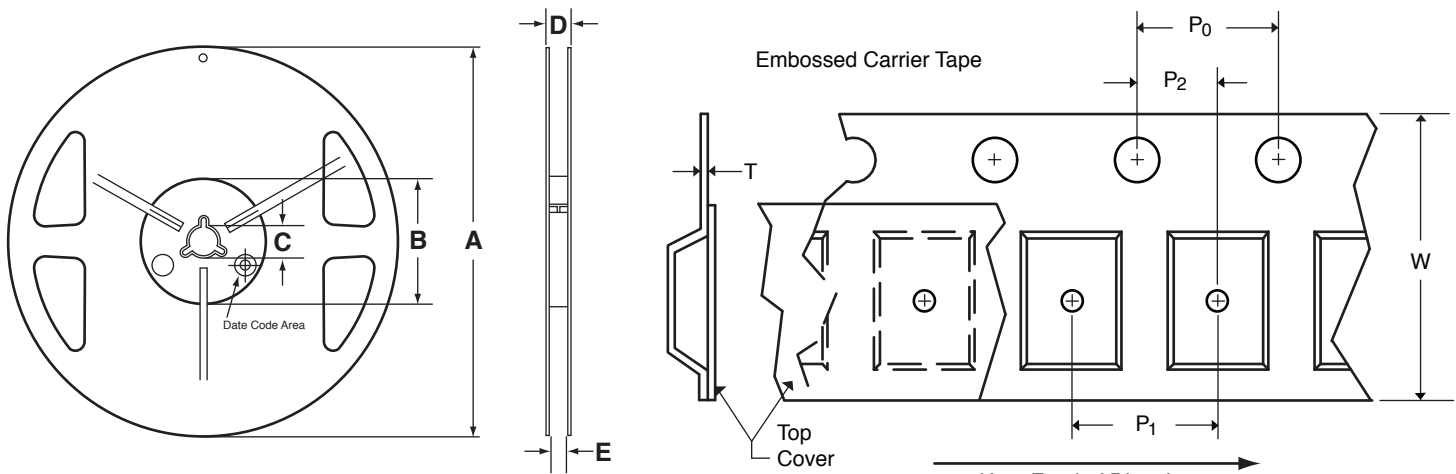


# C0603 Series

Chip Inductors, Open Construction  
Commercial Applications



## Tape and Reel Specifications



Parts	Reel Dimensions (mm)				
7" (178mm)	A	B	C	D	E
2000	180 ± 1	60 ± 1	13 ± 0.2	11.4 ± 1	9 + 1/-0

Tape Dimensions (mm)					
W	P <sub>1</sub>	P <sub>0</sub>	P <sub>2</sub>	H	T
8.0	4.0	4.0	2.0	NA	0.25

## Individual Reel Marking

Each individual reel will be marked with the Part Number, Delevan Cage Code, and Date/Lot Code.

Reel Marking Example:  
C0603C-220NJ1T2  
99800  
1508A

## How To Order

<b>C0603</b>	<b>C</b>	<b>—</b>	<b>10N0</b>	<b>J</b>	<b>1</b>	<b>T</b>
<b>Inductor Series</b>	<b>Substrate</b> C = Ceramic		<b>Inductance</b> Tolerance is 4 significant digits with N indicating a decimal point	<b>Tolerance</b> G = 2% J = 5%	<b>Termination Finish</b> 1 = Gold over Nickel (solderable/weldable)	<b>Packaging Option</b> T1 = Tape & Reel, 100 Min, 100 Mult T2 = Tape & Reel, 500 Min, 500 Mult T3 = Tape & Reel, 1000 Min, 1000 Mult T4 = Tape & Reel, 100 Min, 1 Mult



270 Quaker Rd., East Aurora NY 14052 • Phone 716-652-3600 • E-mail: apisales@delevan.com • www.delevan.com

All product specifications and data contained herein are subject to change without notice to improve reliability, function, performance, design or otherwise. This product may not be used in medical or high risk applications without prior API Delevan consent.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [RF inductors - SMD category](#):*

*Click to view products by [Delevan manufacturer](#):*

Other Similar products are found below :

[MHL1ECTTP82NJ](#) [MHL1ECTTP8N2J](#) [CIH10T12NJNC](#) [B82498B1332J000](#) [B82498B3121J000](#) [0805WL220GT](#) [1008WL101GT](#)  
[0805WL681GT](#) [IWC0402D27NR-3G](#) [IWC0603F68NR-3G](#) [IWC0402AR10R-3G](#) [0603WL470JT](#) [IWC0402D33NR-3G](#) [IWC0603F47NR-3G](#)  
[0805WL151JT](#) [IWC0402A68NR-3G](#) [IWC0402AR12R-3G](#) [IWC0402A82NR-3G](#) [IWC0402B39NR-3G](#) [IWC0603CR12R-3G](#)  
[IWC0603AR33R-3G](#) [IWC0603BR18R-3G](#) [IWC0603F39NR-3G](#) [IWC0603BR22R-3G](#) [IWC0402A47NR-3G](#) [IWC0603AR27R-3G](#)  
[IWC0603F27NR-3G](#) [IWC1008DR68R-3G](#) [IWC1008FR12R-3G](#) [IWC1008FR18R-3G](#) [IWC1008J33NR-3G](#) [IWC1008J82NR-3G](#)  
[IWC1008DR47R-3G](#) [IWC1008J18NR-3G](#) [IWC0805E22NR-3G](#) [IWC1008DR82R-3G](#) [IWC0805E33NR-3G](#) [IWC1008J68NR-3G](#)  
[IWC0805D82NR-3G](#) [IWC0805DR10R-3G](#) [IWC0805E39NR-3G](#) [IWC1008DR39R-3G](#) [IWC0805DR15R-3G](#) [IWC1008J39NR-3G](#)  
[IWC1008J27NR-3G](#) [IWC0805DR18R-3G](#) [IWC0805E68NR-3G](#) [IWC1008ER27R-3G](#) [IWC1008FR10R-3G](#) [IWC1008J22NR-3G](#)