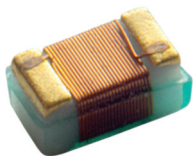
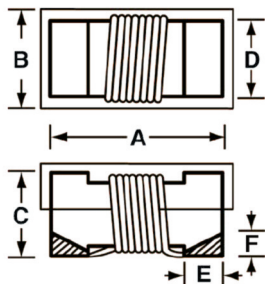


# SERIES C0603

## Capped Surface Mount Chip Inductors

DASH NUMBER\*  
 NOMINAL INDUCTANCE (nH) ±5%  
 Q MINIMUM  
 INDUCTANCE & Q TEST FREQUENCY (MHz)  
 SRF MINIMUM (GHz)  
 DC RESISTANCE MAXIMUM (OHMS)  
 CURRENT RATING MAXIMUM (mA)



← Actual Size (Max.)

### Physical Parameters

	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)
F	0.008 (Ref. Only)	0.20 (Ref. Only)

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

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

### Core Material / Termination

Al<sub>2</sub>O<sub>3</sub> / Sintered MoMn / Electroplated Ni /  
 Electroplated Au Finish (RoHS)  
 Termination Options: Au Finish (RoHS)

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

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

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

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

### Dielectric Withstanding Voltage (DWV)

200 Vrms at Sea Level  
 80 Vrms at 70,000 feet altitude

**Insulation Resistance (IR) at 100 Vdc** 1000 Mohms Min.

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

**Substrate Material** Ceramic

**Outgassing Material Per;** MIL-STD-883 Method 5011  
 and NASA-RP-1124 ASTM E595

### Manufactured in Cleanroom

- ISO 7(@0.5 micron) Air Cleanliness Classification
- Room Presurization
- HEPA Filter Leak Testing

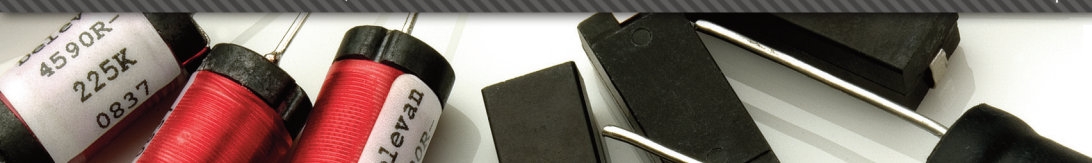
**Made in the U.S.A.**

SERIES C0603						
-1N60	1.60	20	250	8.50	0.06	1000
-1N80	1.80	22	250	8.50	0.07	1000
-2N20	2.20	13	250	6.00	0.25	400
-3N30	3.30	22	250	6.00	0.07	1000
-3N60	3.60	22	250	6.00	0.07	1000
-3N90	3.90	22	250	6.00	0.07	1000
-4N30	4.30	22	250	6.00	0.09	885
-4N70	4.70	22	250	6.00	0.09	885
-5N10	5.10	20	250	5.70	0.14	700
-5N60	5.60	22	250	5.80	0.10	840
-6N80	6.80	30	250	5.80	0.10	840
-7N50	7.50	28	250	4.80	0.14	700
-8N20	8.20	30	250	4.20	0.14	700
-8N70	8.70	30	250	5.20	0.14	700
-9N50	9.50	28	250	4.80	0.15	700
-10N0	10.00	31	250	4.80	0.16	665
-11N0	11.00	30	250	4.00	0.13	700
-12N0	12.00	35	250	4.00	0.13	700
-15N0	15.00	35	250	4.00	0.17	645
-16N0	16.00	35	250	3.10	0.17	645
-18N0	18.00	35	250	3.10	0.17	645
-22N0	22.00	35	250	3.00	0.19	610
-23N0	23.00	35	250	2.85	0.19	610
-24N0	24.00	35	250	2.65	0.19	610
-27N0	27.00	37	250	2.80	0.22	565
-30N0	30.00	37	250	2.25	0.22	565
-33N0	33.00	37	250	2.30	0.22	565
-36N0	36.00	37	250	2.08	0.25	540
-39N0	39.00	38	250	2.20	0.24	540
-43N0	43.00	38	250	2.00	0.28	500
-47N0	47.00	38	200	2.00	0.28	500
-51N0	51.00	35	200	1.90	0.30	475
-56N0	56.00	38	200	1.90	0.31	475
-68N0	68.00	37	200	1.70	0.36	440
-72N0	72.00	34	150	1.70	0.49	400
-82N0	82.00	34	150	1.70	0.54	360
-100N	100.00	34	150	1.40	0.75	300
-110N	110.00	32	150	1.30	0.61	300
-120N	120.00	32	150	1.30	0.79	300
-150N	150.00	28	150	1.00	1.14	245
-180N	180.00	25	150	1.00	0.77	235
-200N	200.00	25	150	0.90	1.98	200
-210N	210.00	24	150	0.90	2.06	200
-220N	220.00	23	150	0.70	1.70	200
-250N	250.00	19	100	0.60	3.55	120
-270N	270.00	21	100	0.60	2.10	195
-330N	330.00	19	100	0.40	3.89	100
-390N	390.00	19	100	0.30	4.35	100

Inductance Tolerance Options  
 M (± 20%), K (± 10%), J (± 5%), H (± 3%), G (± 2%), F (± 1%)

**How To Order:**  
**C0603 C -8N20 G 1 S Z**  
 (A) (B) (C) (D) (E) (F) (G)

(A) Inductor Series (C0603)  
 (B) Substrate Material (C = Ceramic)  
 (C) Inductance Value (-1N60 through -390N)  
 (D) Inductance Tolerance (M, K, J, H, G, F)  
 (E) Termination Finish (1 = Au Finish (RoHS))  
 (F) Test Plan Screening (S, C, B, D, E, U, Y)  
 (G) Test Report (Blank = Pass/Fail Report)  
 (Z = Serialized Test Report)



# SERIES C0603

## Capped Surface Mount Chip Inductors

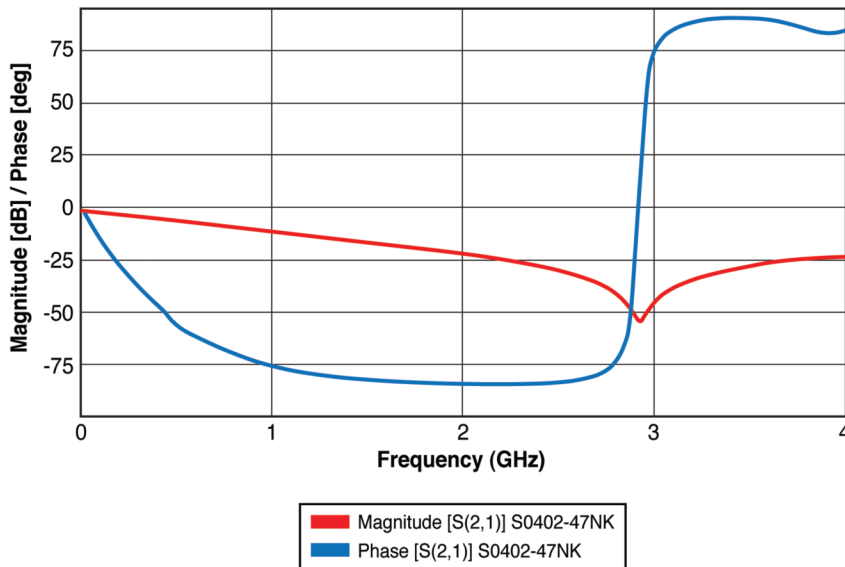
### C0603 Test Plan Options

Ordering Option Code		S	C	B	D	E	U	Y
Screening Level		MIL-STD-981 Class "S"	MIL-STD-981 Class "S" Modified	MIL-STD-981 Class "B"	MIL-STD-981 Class "B" Modified	High Temp	Burn-In	Commercial
Test	Method							
Thermal Shock	MIL-PRF-83446	25 Cycles 1/ (-55°C to +125°C)	25 Cycles (-55°C to +125°C)	25 Cycles 1/ (-55°C to +125°C)	25 Cycles (-55°C to +125°C)	5 Cycles (-55°C to +175°C)		
No-Load Burn-In	MIL-STD-981	125°C (96 hours)	125°C (96 hours)	125°C (96 hours)	125°C (96 hours)	200°C (96 hours)	•	
Dielectric Withstanding Voltage	MIL-PRF-83446	200 Vrms		200 Vrms				
Insulation Resistance	MIL-PRF-83446	1000 Mohms		1000 Mohms				
Electrical Characteristics: L, Q, DCR, SRF	MIL-PRF-83446	•	•	•	•	•	•	•
Radiographic Inspection	MIL-STD-981	•						
Visual & Dimensional Examination (external)	MIL-PRF-83446	•		•	•		•	•
* Electrical Characteristics (initial): L, Q, DCR, SRF	MIL-PRF-83446	•	•					
* Low Temperature Operation	MIL-PRF-83446	•	•					
* Temperature Rise	MIL-PRF-83446	•				•		
* Overload	MIL-PRF-83446	•	•			•		
* Moisture Resistance	MIL-PRF-83446	•						
* Electrical Characteristics: L and Q	MIL-PRF-83446	•	•					
* High Temperature Exposure	MIL-PRF-83446	•	•					
* Electrical Characteristics (final): L, Q, DCR, SRF	MIL-PRF-83446	•	•					
* Bond Strength	MIL-PRF-83446	•	•					
* Visual & Mechanical Examination (external)	MIL-PRF-83446	•	•					
* Visual & Mechanical Examination (internal)	MIL-STD-981	•						
* Solderability	MIL-PRF-83446	•	•					
* Electrical Characteristics (initial): L, Q, DCR, SRF	MIL-PRF-83446	•	•					
* Life	MIL-PRF-83446	2000 Hours (90°C Ambient)	500 Hours (90°C Ambient)			500 Hours (175°C Ambient)		
* Dielectric Withstanding Voltage	MIL-PRF-83446	80 Vrms	80 Vrms					
* Insulation Resistance	MIL-PRF-83446	1000 Mohms	1000 Mohms					
* Electrical Characteristics (final): L, Q, DCR, SRF	MIL-PRF-83446	•	•					
* Visual & Mechanical Examination (external)	MIL-PRF-83446	•	•					
Mechanical Shock/Vibration	MIL-STD-883					•		

\*Destructive Test Units Required

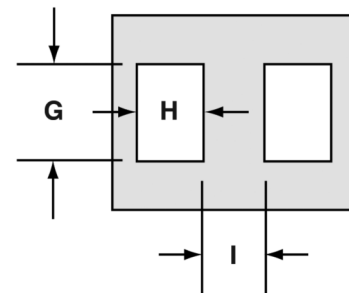
1/ Continually monitor continuity during the entire final cycle to verify no intermittent conditions.

### S-Parameters (Typical)



### Suggested Land Pattern

Delevan Series	G		H		I	
	Inches	mm	Inches	mm	Inches	mm
C0603 Series	0.040	1.016	0.025	0.635	0.050	1.270



All product specifications and data contained herein are subject to change without notice to improve reliability, function, performance, design or otherwise.