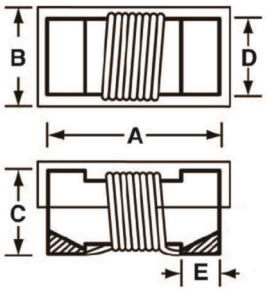
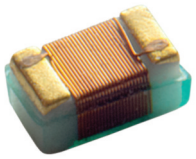
SERIES C0402

Capped Surface Mount Chip Inductors





Actual Size (Max.)

Physical Parameters

	Inches	Millimeters
A	0.047 Max.	1.194 Max.
B	0.030 Max.	0.726 Max.
C	0.030 Max.	0.762 Max.
D	0.020 (Ref. Only)	0.508 (Ref. Only)
E	0.010 (Ref. Only)	0.254 (Ref. Only)

Operating Temperature Range –40°C to +125°C

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

Core Material / Termination
Al_2O_3 / Sintered MoMn / Electroplated Ni / Electroplated Au Finish (RoHS)
Termination: 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 Compliant 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.

DASH NUMBER*	NOMINAL INDUCTANCE (nH) ±5%	Q MINIMUM	INDUCTANCE & Q TEST FREQUENCY (MHz)	SRF MINIMUM (GHz)	DC RESISTANCE MAXIMUM (OHMS)	CURRENT RATING MAXIMUM (mA)
SERIES C0402						
-1N00	1.00	*	250	12.7	0.045	1360
-1N20	1.20	*	250	12.9	0.090	740
-1N80	1.80	*	250	12.0	0.070	1040
-1N90	1.90	*	250	11.3	0.070	1040
-2N00	1.93	*	250	11.1	0.070	1040
-2N20	2.20	*	250	10.8	0.070	960
-2N40	2.40	*	250	10.5	0.068	790
-2N70	2.70	*	250	10.4	0.120	640
-3N30	3.30	*	250	7.0	0.066	840
-3N60	3.60	*	250	6.8	0.066	840
-3N90	3.90	*	250	6.0	0.066	840
-4N30	4.30	*	250	6.0	0.091	700
-4N70	4.70	*	250	4.7	0.130	640
-5N10	5.10	*	250	4.8	0.083	800
-5N60	5.60	*	250	4.8	0.083	760
-6N20	6.20	*	250	4.8	0.083	760
-6N80	6.80	*	250	4.8	0.083	680
-7N50	7.50	*	250	4.8	0.100	680
-8N20	8.20	*	250	4.4	0.100	680
-8N70	8.70	*	250	4.1	0.200	480
-9N00	9.00	*	250	4.1	0.100	681
-9N50	9.50	*	250	4.0	0.200	480
-10N0	10.00	*	250	3.9	0.200	480
-11N0	11.00	*	250	3.6	0.120	640
-12N0	12.00	*	250	3.6	0.120	640
-13N0	13.00	*	250	3.4	0.210	440
-15N0	15.00	*	250	3.2	0.170	560
-16N0	16.00	*	250	3.1	0.220	560
-18N0	18.00	*	250	3.1	0.230	420
-19N0	19.00	*	250	3.0	0.200	480
-20N0	20.00	*	250	3.0	0.250	420
-22N0	22.00	*	250	2.8	0.300	400
-23N0	23.00	*	250	2.7	0.300	400
-24N0	24.00	*	250	2.7	0.300	400
-27N0	27.00	*	250	2.4	0.300	400
-30N0	30.00	*	250	2.3	0.300	400
-33N0	33.00	*	250	2.3	0.300	400
-36N0	36.00	*	250	2.3	0.440	320
-39N0	39.00	*	250	2.1	0.550	200
-40N0	40.00	*	250	2.2	0.440	320
-43N0	43.00	*	250	2.0	0.810	100
-47N0	47.00	*	250	2.1	0.830	150
-51N0	51.00	*	250	1.7	0.820	100
-56N0	56.00	*	250	1.7	0.970	100
-68N0	68.00	*	250	1.6	1.120	100
-82N0	82.00	*	250	1.2	1.550	50
-100N	100.00	*	250	1.1	2.000	30
-120N	120.00	*	250	1.1	2.200	50

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

*Contact Delevan engineering for Q minimum values

How To Order:

C0402	C	-8N20	G	1	S	Z
(A)	(B)	(C)	(D)	(E)	(F)	(G)

(A) Inductor Series (C0402)
(B) Substrate Material (C = Ceramic)
(C) Inductance Value (-1N00 through -120N)
(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)

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SERIES C0402

Capped Surface Mount Chip Inductors

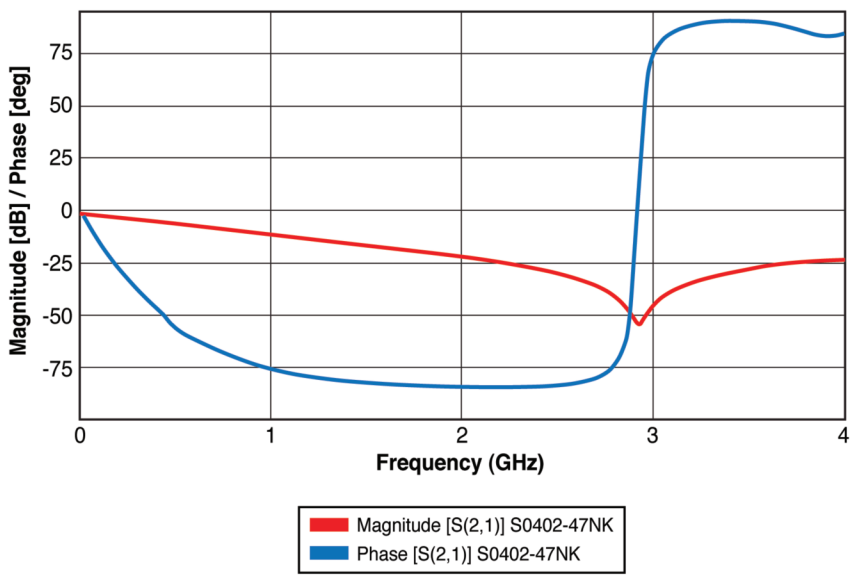
C0402 Test Plan Options

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)	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

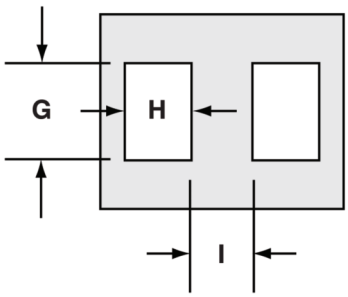
1/ Continually monitor continuity during the entire final cycle to verify no intermittent conditions.

S-Parameters (Typical)



Suggested Land Pattern

Delevan Series	G		H		I	
	Inches	mm	Inches	mm	Inches	mm
C0402 Series	0.026	0.660	0.014	0.356	0.018	0.457



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

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