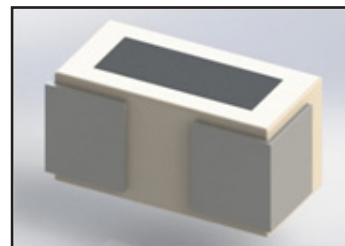


FEATURES

- EIA 01005 & 0201 SIZES
- HIGH Q AND HIGH SRF CHARACTERISTICS
- FOR RF -WIRELESS & GNSS-GPS APPLICATIONS
- HIGH RELIABLE MONOLITHIC CONSTRUCTION
- REFLOW SOLDERING APPLICABLE
- PACKAGE FOR AUTOMATIC PICK-PLACE
- RoHS & REACH COMPLIANT

NML-HQ → **NML-SQ**
(High Q) (Ultra High Q)



SPECIFICATIONS

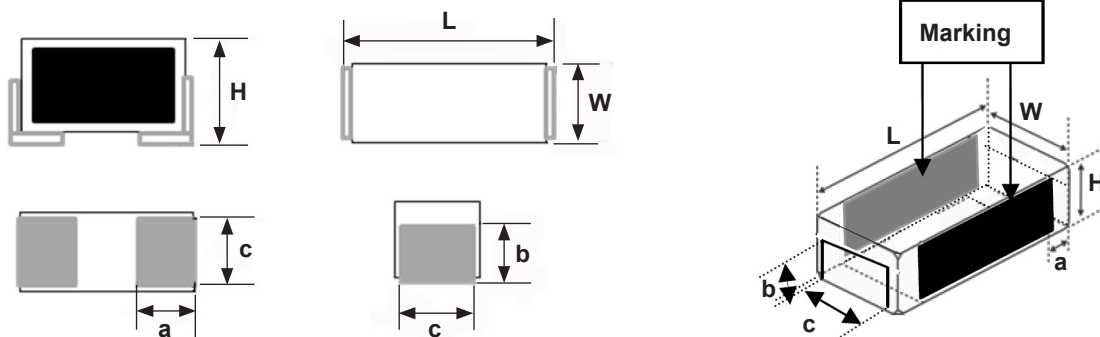
Series	Case size	Inductance Range	Tolerance	Temperature Range
NML-SQ01	01005	0.2 ~ 4.2nH	±0.1nH (B), ±0.2nH (C), ±0.3nH (D)	-55°C ~ +125°C
		4.3 ~ 56nH	±3% (H), ±5% (J)	
NML-SQ02	0201	0.6 ~ 4.2nH	±0.1nH (B), ±0.2nH (C), ±0.3nH (D)	55°C ~ +125°C
		6.8nH ~ 150nH	±3% (H), ±5% (J)	

See Specifications Tables for Q Factor, Self Resonant Frequency, DC Resistance and DC Current Ratings

Note: Extended values, tolerances, and enhanced versions are available please contact NIC for more details.

DIMENSIONS (mm)

Case Size	L	W	H	a	b	c
01005	0.40±0.02	0.20±0.02	0.30±0.02	0.14±0.03	0.14±0.03	0.17±0.03
0201	0.60±0.03	0.30±0.03	0.40±0.02	0.15±0.03	0.20±0.03	0.25±0.03



Marking for visual orientation

PART NUMBER SYSTEM

NML-SQ 02 B 2N2 TR 600 F

- Series
- Case Size Code: 01 = 01005, 02 = 0201
- Tolerance Code: B = ±0.1nH, C = ±0.2nH, D = ±0.3nH, H = ±3%, J = ±5%
- Inductance Value in nH ("N" denotes decimal point)
- Packaging: TR = Tape & Reel
- Current Rating in mA
- RoHS compliant

NML-SQ SERIES 01005 CASE SIZE STANDARD VALUES & SPECIFICATIONS

NIC P/N	'L' Inductance (nH)	Tol.	'Q' Factor (min.)	L & Q Test Frequency (MHz)	Typical Q (MHz)					SRF MHz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
					500	800	1800	2000	2400			
NML-SQ01_0N2TR1000F	0.2	B, C, D	-	500	-	-	-	-	-	17000	0.010	1000
NML-SQ01_0N3TR1000F	0.3	B, C, D	-	500	-	-	-	-	-	17000	0.015	1000
NML-SQ01_0N4TR1000F	0.4	B, C, D	-	500	-	-	-	-	-	17000	0.03	1000
NML-SQ01_0N5TR1000F	0.5	B, C, D	-	500	-	-	-	-	-	17000	0.04	1000
NML-SQ01_0N6TR950F	0.6	B, C, D	14	500	28	31	44	48	55	17000	0.05	950
NML-SQ01_0N7TR900F	0.7	B, C, D	14	500	25	29	41	44	51	15500	0.05	900
NML-SQ01_0N8TR900F	0.8	B, C, D	14	500	23	27	39	43	48	15500	0.05	900
NML-SQ01_0N9TR900F	0.9	B, C, D	14	500	21	25	37	40	45	14600	0.05	900
NML-SQ01_1N0TR900F	1.0	B, C, D	14	500	20	24	36	39	44	13200	0.05	900
NML-SQ01_1N1TR850F	1.1	B, C, D	14	500	22	26	40	42	48	13000	0.07	850
NML-SQ01_1N2TR800F	1.2	B, C, D	14	500	20	25	37	40	46	13000	0.07	800
NML-SQ01_1N3TR700F	1.3	B, C, D	14	500	21	26	39	42	48	12700	0.08	700
NML-SQ01_1N4TR700F	1.4	B, C, D	14	500	21	25	38	42	47	12700	0.08	700
NML-SQ01_1N5TR700F	1.5	B, C, D	14	500	20	25	37	40	46	12700	0.08	700
NML-SQ01_1N6TR700F	1.6	B, C, D	14	500	19	23	35	37	42	11000	0.08	700
NML-SQ01_1N7TR700F	1.7	B, C, D	14	500	20	24	37	39	44	11000	0.08	700
NML-SQ01_1N8TR700F	1.8	B, C, D	14	500	22	28	43	46	50	10200	0.08	700
NML-SQ01_1N9TR700F	1.9	B, C, D	14	500	24	30	46	50	55	10200	0.08	700
NML-SQ01_2N0TR700F	2.0	B, C, D	14	500	22	27	41	44	48	10100	0.10	700
NML-SQ01_2N1TR650F	2.1	B, C, D	14	500	24	29	45	48	54	10100	0.10	650
NML-SQ01_2N2TR500F	2.2	B, C, D	14	500	22	27	42	45	49	9800	0.20	500
NML-SQ01_2N3TR450F	2.3	B, C, D	14	500	24	30	46	50	55	9800	0.20	450
NML-SQ01_2N4TR450F	2.4	B, C, D	14	500	20	25	39	42	46	9500	0.20	450
NML-SQ01_2N5TR450F	2.5	B, C, D	14	500	19	24	39	42	46	9500	0.20	450
NML-SQ01_2N6TR450F	2.6	B, C, D	14	500	19	24	39	42	46	9500	0.20	450
NML-SQ01_2N7TR450F	2.7	B, C, D	14	500	20	25	39	41	45	8800	0.20	450
NML-SQ01_2N8TR450F	2.8	B, C, D	14	500	19	25	40	44	47	8800	0.20	450
NML-SQ01_2N9TR450F	2.9	B, C, D	14	500	19	25	40	44	47	8800	0.20	450
NML-SQ01_3N0TR450F	3.0	B, C, D	14	500	20	26	40	43	46	8500	0.20	450
NML-SQ01_3N1TR400F	3.1	B, C, D	14	500	20	25	41	43	45	8500	0.25	400
NML-SQ01_3N2TR400F	3.2	B, C, D	14	500	20	26	41	44	47	8500	0.25	400
NML-SQ01_3N3TR400F	3.3	B, C, D	14	500	20	26	42	44	48	8200	0.25	400
NML-SQ01_3N4TR400F	3.4	B, C, D	14	500	20	26	42	44	48	8200	0.30	400
NML-SQ01_3N5TR350F	3.5	B, C, D	14	500	20	26	42	44	48	8200	0.30	350
NML-SQ01_3N6TR350F	3.6	B, C, D	14	500	20	27	42	44	48	8200	0.30	350
NML-SQ01_3N7TR350F	3.7	B, C, D	14	500	19	25	41	43	49	8200	0.35	350
NML-SQ01_3N8TR350F	3.8	B, C, D	14	500	18	23	37	39	43	8200	0.35	350
NML-SQ01_3N9TR350F	3.9	B, C, D	14	500	19	24	37	39	42	7700	0.35	350
NML-SQ01_4N0TR350F	4.0	B, C, D	14	500	18	24	38	41	44	6900	0.35	350
NML-SQ01_4N1TR350F	4.1	B, C, D	14	500	19	24	38	41	44	6900	0.35	350
NML-SQ01_4N2TR350F	4.2	B, C, D	14	500	18	23	37	39	45	6900	0.35	350
NML-SQ01_4N3TR350F	4.3	H, J	14	500	19	24	37	39	42	6900	0.35	350
NML-SQ01_4N7TR350F	4.7	H, J	14	500	18	23	36	38	41	6700	0.35	350
NML-SQ01_5N1TR350F	5.1	H, J	14	500	18	24	36	38	41	6600	0.35	350
NML-SQ01_5N6TR300F	5.6	H, J	14	500	18	24	35	37	40	6100	0.40	300
NML-SQ01_6N2TR300F	6.2	H, J	14	500	17	22	32	34	37	6000	0.40	300
NML-SQ01_6N8TR300F	6.8	H, J	14	500	17	22	33	35	37	5700	0.40	300
NML-SQ01_7N5TR300F	7.5	H, J	14	500	17	23	34	36	38	5600	0.50	300
NML-SQ01_8N2TR300F	8.2	H, J	14	500	17	21	30	31	33	5100	0.50	300
NML-SQ01_9N1TR300F	9.1	H, J	14	500	17	22	31	32	33	4900	0.50	300
NML-SQ01_10NTR250F	10	H, J	14	500	17	22	32	33	34	4900	0.60	250

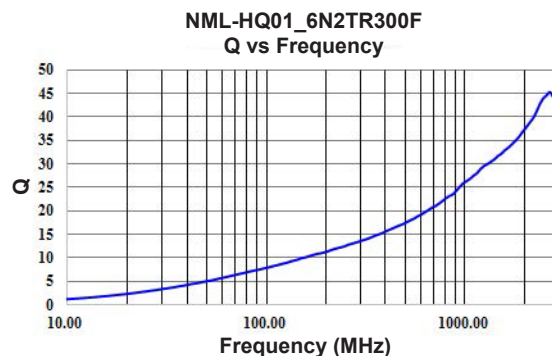
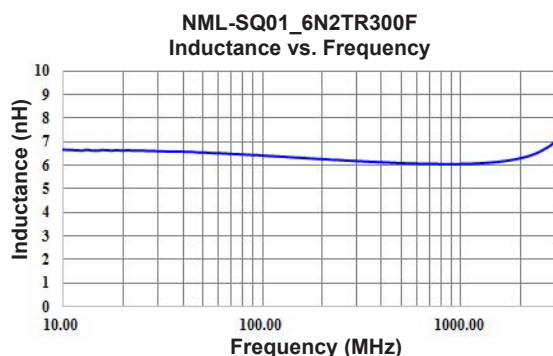
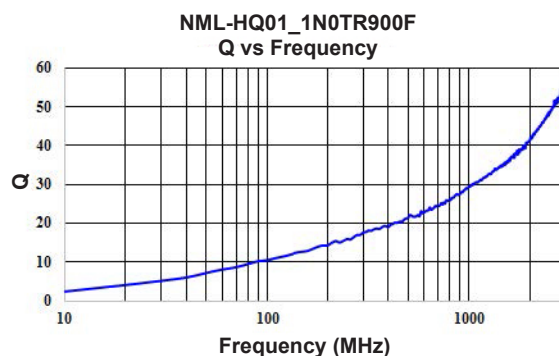
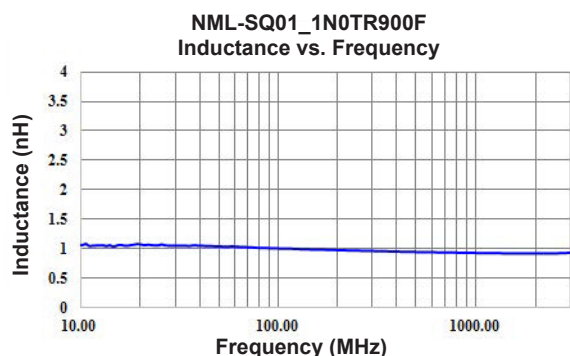
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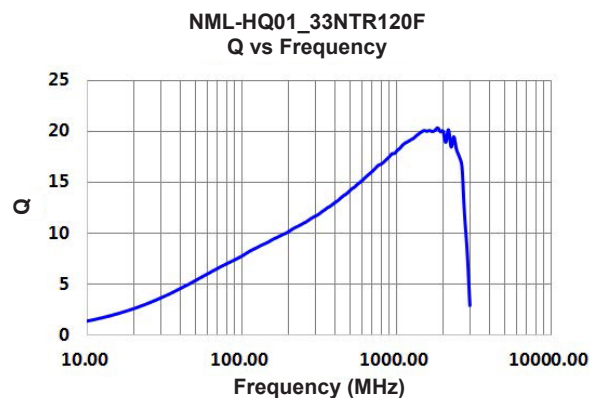
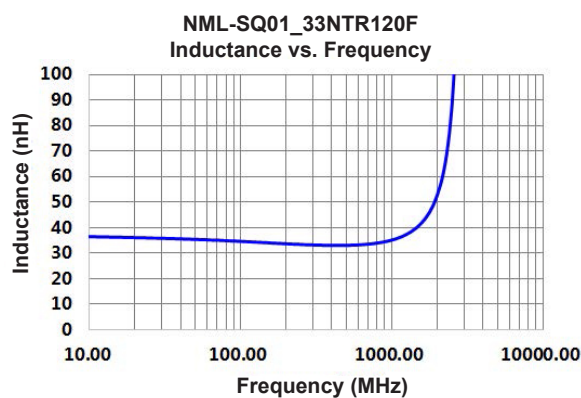
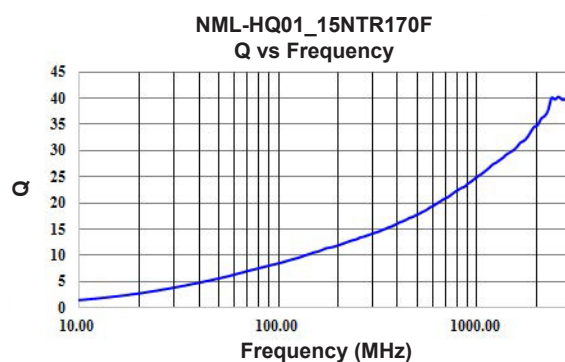
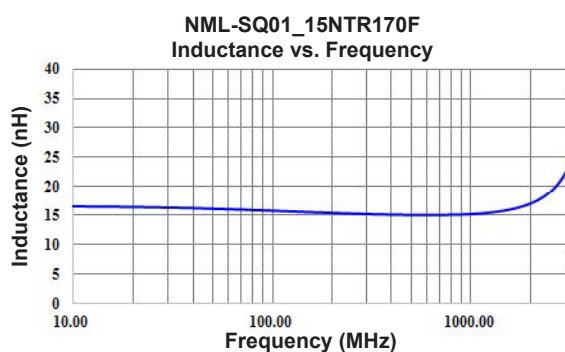
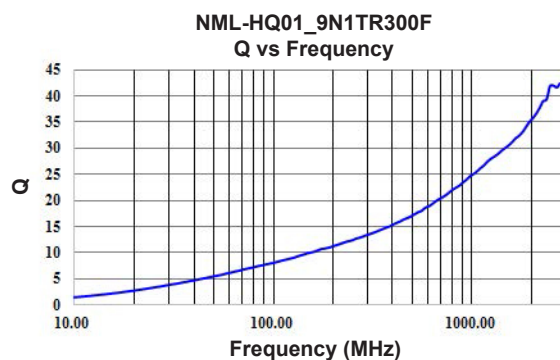
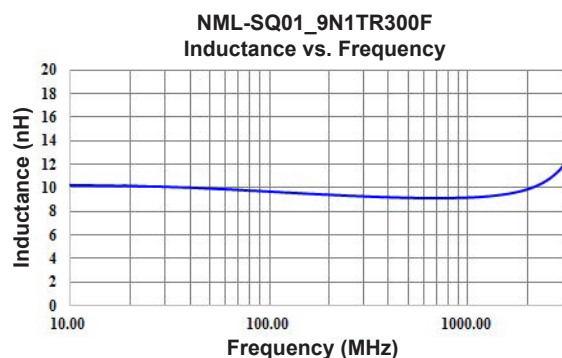


NML-SQ SERIES 01005 CASE SIZE STANDARD VALUES & SPECIFICATIONS

NIC P/N	'L' Inductance (nH)	Tol.	'Q' Factor (min.)	L & Q Test Frequency (MHz)	Typical Q (MHz)					SRF MHz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
					500	800	1800	2000	2400			
NML-SQ01_11NTR250F	11	H, J	14	500	15	20	30	31	33	4000	0.80	250
NML-SQ01_12NTR230F	12	H, J	14	500	17	21	30	31	32	4000	0.82	230
NML-SQ01_13NTR210F	13	H, J	14	500	15	20	30	31	32	4000	0.99	210
NML-SQ01_15NTR170F	15	H, J	12	500	17	21	29	30	30	4000	1.53	170
NML-SQ01_16NTR170F	16	H, J	12	500	16	20	29	30	29	4000	1.53	170
NML-SQ01_18NTR160F	18	H, J	12	500	17	21	29	29	29	3700	1.63	160
NML-SQ01_20NTR140F	20	H, J	12	500	16	19	25	24	23	3000	2.26	140
NML-SQ01_22NTR140F	22	H, J	12	500	16	19	25	24	22	3000	2.26	140
NML-SQ01_24NTR120F	24	H, J	12	500	15	18	23	21	20	2900	2.60	120
NML-SQ01_27NTR120F	27	H, J	12	500	15	18	22	20	17	2900	2.60	120
NML-SQ01_30NTR120F	30	H, J	10	500	13	16	18	19	20	2600	3.20	120
NML-SQ01_33NTR120F	33	H, J	10	300	13	16	20	19	20	2600	3.20	120
NML-SQ01_36NTR110F	36	H, J	10	300	13	15	16	15	12	2400	3.60	110
NML-SQ01_39NTR120F	39	H, J	10	300	13	15	16	15	10	2400	3.60	120
NML-SQ01_43NTR100F	43	H, J	8	300	12	14	13	12	7	2100	4.00	100
NML-SQ01_47NTR100F	47	H, J	8	300	12	14	13	11	6	2100	4.00	100
NML-SQ01_51NTR100F	51	H, J	8	300	12	14	11	9	4	1900	4.20	100
NML-SQ01_56NTR100F	56	H, J	8	300	12	14	10	8	-	1900	4.20	100

NML-SQ01 TYPICAL PERFORMANCE CURVES





NML-SQ SERIES 0201 CASE SIZE STANDARD VALUES & SPECIFICATIONS

NIC P/N	'L' Inductance (nH)	Tol.	'Q' Factor (min.)	L & Q Test Frequency (MHz)	Typical Q (MHz)					SRF MHz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
					500	800	1800	2000	2400			
NML-SQ02_0N6TR1100F	0.6	B, C, D	20	500	-	-	-	-	-	20000	0.04	1100
NML-SQ02_0N7TR1100F	0.7	B, C, D	20	500	-	-	-	-	-	20000	0.04	1100
NML-SQ02_0N8TR1100F	0.8	B, C, D	20	500	-	-	-	-	-	18000	0.04	1100
NML-SQ02_0N9TR1100F	0.9	B, C, D	20	500	-	-	-	-	-	18000	0.04	1100
NML-SQ02_1N0TR1100F	1.0	B, C, D	20	500	47	60	92	99	110	16000	0.04	1100
NML-SQ02_1N1TR1100F	1.1	B, C, D	20	500	46	58	90	95	104	14000	0.04	1100
NML-SQ02_1N2TR1100F	1.2	B, C, D	20	500	45	56	88	92	100	13000	0.04	1100
NML-SQ02_1N3TR1100F	1.3	B, C, D	20	500	45	56	88	93	102	13000	0.04	1100
NML-SQ02_1N4TR1100F	1.4	B, C, D	20	500	42	55	89	95	103	12000	0.04	1100
NML-SQ02_1N5TR1000F	1.5	B, C, D	20	500	42	54	86	90	100	12000	0.05	1000
NML-SQ02_1N6TR1000F	1.6	B, C, D	20	500	41	52	80	83	92	10000	0.05	1000
NML-SQ02_1N7TR800F	1.7	B, C, D	20	500	39	49	75	79	86	10000	0.07	800
NML-SQ02_1N8TR800F	1.8	B, C, D	20	500	38	45	72	75	81	10000	0.08	800
NML-SQ02_1N9TR600F	1.9	B, C, D	20	500	36	46	71	74	81	10000	0.12	600
NML-SQ02_2N0TR600F	2.0	B, C, D	20	500	36	45	68	70	77	9000	0.12	600
NML-SQ02_2N1TR600F	2.1	B, C, D	20	500	36	45	67	71	76	9000	0.12	600
NML-SQ02_2N2TR600F	2.2	B, C, D	20	500	36	45	67	69	76	9000	0.12	600
NML-SQ02_2N3TR600F	2.3	B, C, D	20	500	37	46	68	71	76	9000	0.12	600
NML-SQ02_2N4TR600F	2.4	B, C, D	20	500	39	48	72	75	82	9000	0.12	600
NML-SQ02_2N5TR600F	2.5	B, C, D	20	500	38	47	70	73	80	9000	0.12	600
NML-SQ02_2N6TR600F	2.6	B, C, D	20	500	35	43	64	66	72	9000	0.12	600
NML-SQ02_2N7TR600F	2.7	B, C, D	20	500	36	44	65	68	73	9000	0.12	600
NML-SQ02_2N8TR600F	2.8	B, C, D	20	500	34	43	63	65	70	8000	0.12	600
NML-SQ02_2N9TR600F	2.9	B, C, D	20	500	36	45	65	66	72	8000	0.12	600
NML-SQ02_3N0TR600F	3.0	B, C, D	20	500	36	44	65	66	72	8000	0.12	600
NML-SQ02_3N1TR500F	3.1	B, C, D	20	500	34	42	62	64	69	7500	0.17	500
NML-SQ02_3N2TR500F	3.2	B, C, D	20	500	33	42	63	66	72	7000	0.17	500
NML-SQ02_3N3TR500F	3.3	B, C, D	20	500	34	45	73	77	89	7000	0.17	500
NML-SQ02_3N4TR500F	3.4	B, C, D	20	500	33	41	59	61	66	7000	0.17	500
NML-SQ02_3N5TR500F	3.5	B, C, D	20	500	33	41	59	61	65	7000	0.17	500
NML-SQ02_3N6TR500F	3.6	B, C, D	20	500	32	42	59	61	65	7000	0.17	500
NML-SQ02_3N7TR500F	3.7	B, C, D	20	500	32	40	59	60	65	7000	0.17	500
NML-SQ02_3N8TR500F	3.8	B, C, D	20	500	31	38	60	62	70	7000	0.17	500
NML-SQ02_3N9TR500F	3.9	B, C, D	20	500	30	39	61	64	72	7000	0.17	500
NML-SQ02_4N0TR500F	4.0	B, C, D	20	500	33	41	59	61	66	7000	0.17	500
NML-SQ02_4N1TR500F	4.1	B, C, D	20	500	30	38	56	58	62	7000	0.17	500
NML-SQ02_4N2TR500F	4.2	B, C, D	20	500	31	39	57	59	63	7000	0.17	500
NML-SQ02_4N3TR500F	4.3	H, J	20	500	32	40	58	59	64	7000	0.17	500
NML-SQ02_4N7TR400F	4.7	H, J	20	500	31	39	58	58	63	7000	0.25	400
NML-SQ02_5N1TR400F	5.1	H, J	20	500	32	39	55	56	59	5500	0.25	400
NML-SQ02_5N6TR400F	5.6	H, J	20	500	32	40	56	57	57	5500	0.25	400
NML-SQ02_6N2TR400F	6.2	H, J	20	500	29	36	51	52	55	5500	0.25	400
NML-SQ02_6N8TR400F	6.8	H, J	20	500	29	36	50	51	53	5500	0.30	400
NML-SQ02_7N5TR400F	7.5	H, J	20	500	28	36	50	52	53	4500	0.30	400
NML-SQ02_8N2TR300F	8.2	H, J	20	500	29	37	51	51	52	4500	0.40	300
NML-SQ02_9N1TR300F	9.1	H, J	20	500	27	35	48	50	51	4500	0.40	300
NML-SQ02_10NTR300F	10	H, J	20	500	28	36	48	49	47	4500	0.40	300
NML-SQ02_11NTR300F	11	H, J	20	500	28	36	48	49	47	4000	0.50	300
NML-SQ02_12NTR300F	12	H, J	20	500	29	36	48	49	48	4000	0.50	300
NML-SQ02_13NTR300F	13	H, J	20	500	28	35	45	46	43	4000	0.50	300
NML-SQ02_15NTR300F	15	H, J	20	500	27	34	41	40	37	3500	0.70	300

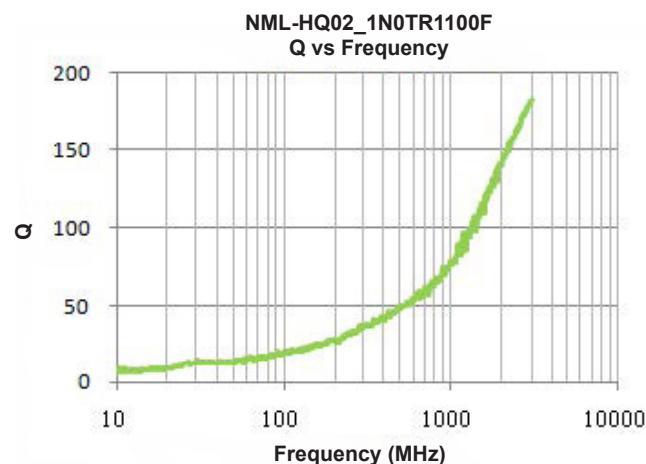
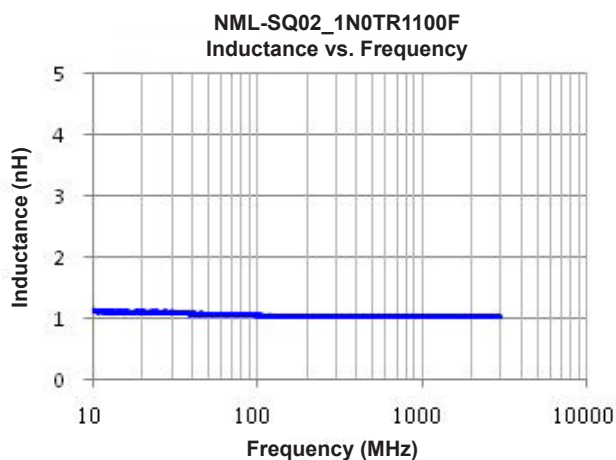
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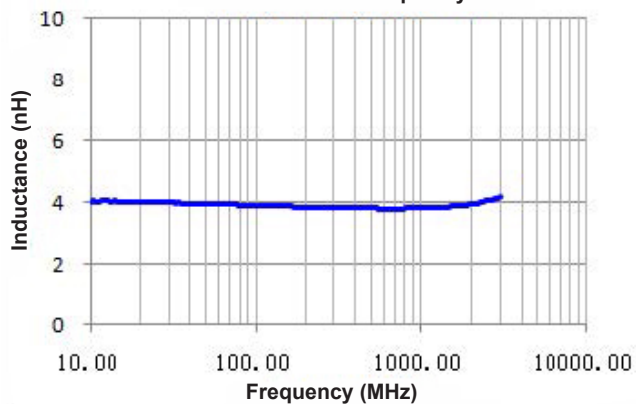
NML-SQ SERIES 0201 CASE SIZE STANDARD VALUES & SPECIFICATIONS

NIC P/N	'L' Inductance (nH)	Tol.	'Q' Factor (min.)	L & Q Test Frequency (MHz)	Typical Q (MHz)					SRF MHz (min.)	DC Resistance (ohms) Max.	Rated DC Current (mA) Max.
					500	800	1800	2000	2400			
NML-SQ02_16NTR250F	16	H, J	20	500	27	34	41	40	36	3500	0.80	250
NML-SQ02_18NTR250F	18	H, J	20	500	28	35	41	39	35	3500	0.80	250
NML-SQ02_20NTR250F	20	H, J	20	500	26	33	38	37	30	3000	0.80	250
NML-SQ02_22NTR250F	22	H, J	20	500	25	31	35	33	29	3000	0.82	250
NML-SQ02_24NTR170F	24	H, J	15	500	27	32	32	29	22	2000	1.60	170
NML-SQ02_27NTR170F	27	H, J	15	500	25	30	29	25	17	2000	1.60	170
NML-SQ02_30NTR150F	30	H, J	12	500	27	31	26	21	11	1700	2.00	150
NML-SQ02_33NTR150F	33	H, J	12	300	26	31	23	19	8	1700	2.00	150
NML-SQ02_36NTR150F	36	H, J	12	300	24	28	20	13	-	1500	2.00	150
NML-SQ02_39NTR150F	39	H, J	12	300	25	29	17	11	-	1500	2.00	150
NML-SQ02_43NTR130F	43	H, J	12	300	25	28	15	10	-	1300	2.50	130
NML-SQ02_47NTR130F	47	H, J	12	300	25	28	14	7	-	1300	2.50	130
NML-SQ02_51NTR130F	51	H, J	12	300	25	29	12	6	-	1200	2.50	130
NML-SQ02_56NTR130F	56	H, J	12	300	24	27	10	2	-	1200	2.50	130
NML-SQ02_62NTR100F	62	H, J	12	300	22	25	7	1	-	1100	5.00	100
NML-SQ02_68NTR100F	68	H, J	12	300	21	24	2	-	-	1100	5.00	100
NML-SQ02_75NTR100F	75	H, J	10	300	22	24	1	-	-	1100	5.00	100
NML-SQ02_82NTR100F	82	H, J	10	300	20	20	-	-	-	1000	5.00	100
NML-SQ02_91NTR80F	91	H, J	10	300	19	19	-	-	-	1000	7.00	80
NML-SQ02_R10TR80F	100	H, J	10	300	18	17	-	-	-	900	7.00	80
NML-SQ02_R11TR80F	110	H, J	10	300	19	18	-	-	-	900	8.00	80
NML-SQ02_R12TR80F	120	H, J	10	300	18	17	-	-	-	800	8.00	80
NML-SQ02_R13TR80F	130	H, J	7	100	16	14	-	-	-	700	8.00	80
NML-SQ02_R15TR80F	150	H, J	7	100	17	13	-	-	-	700	8.00	80

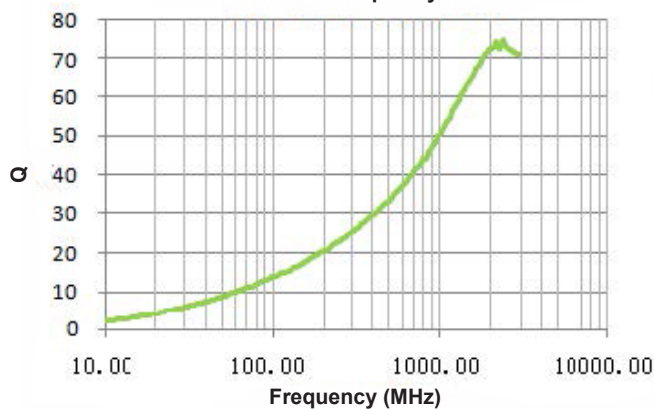
NML-SQ02 TYPICAL PERFORMANCE CURVES



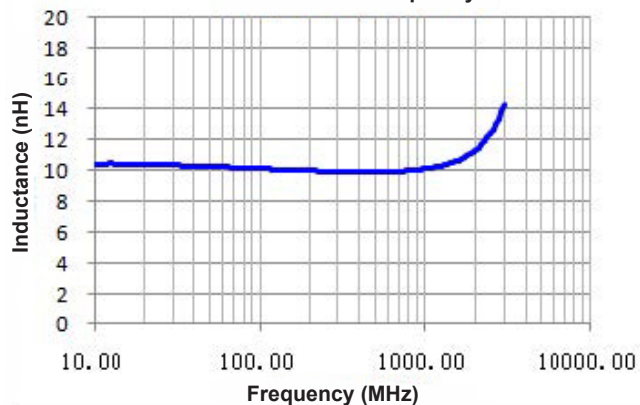
NML-SQ02_3N9TR900F
Inductance vs. Frequency



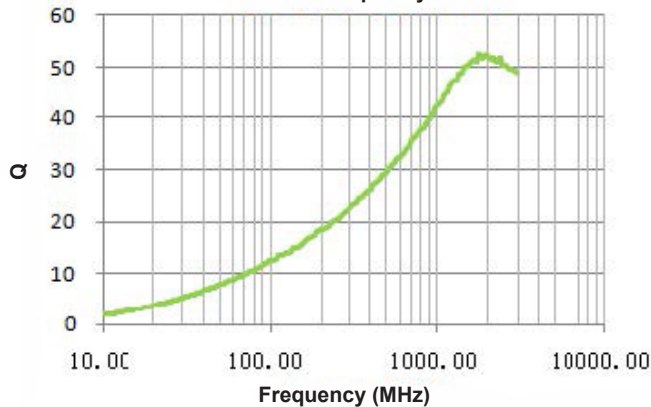
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Q vs Frequency



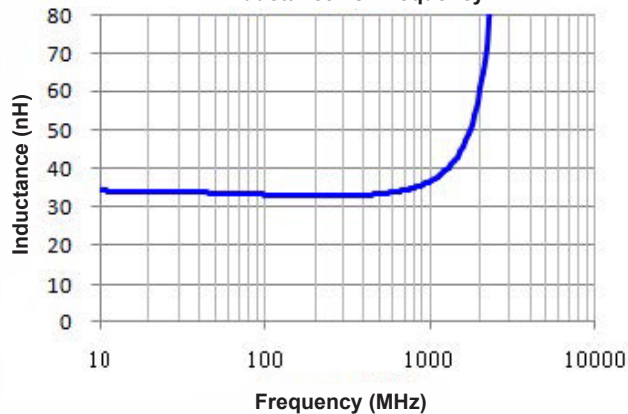
NML-SQ02_10NTR300F
Inductance vs. Frequency



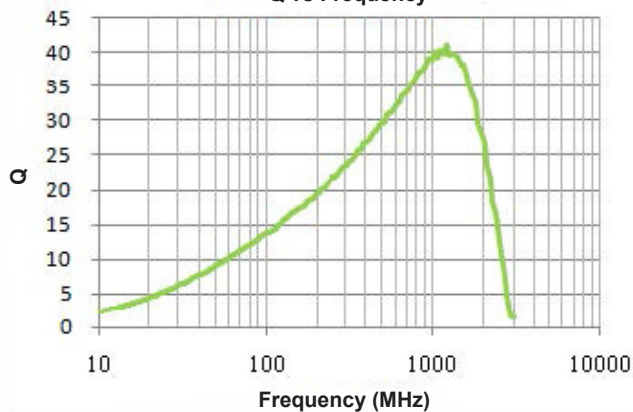
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Q vs Frequency

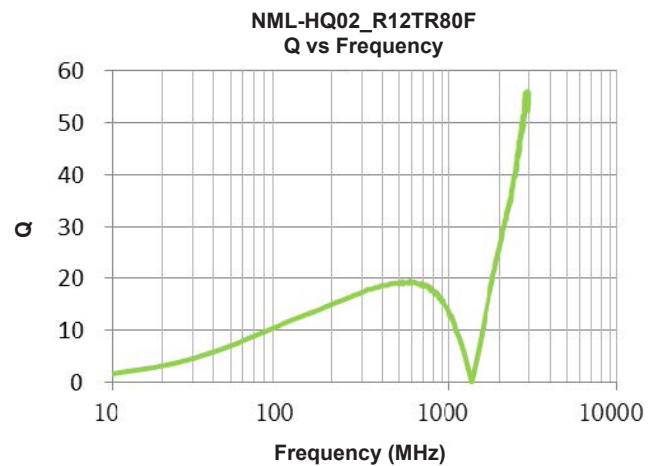
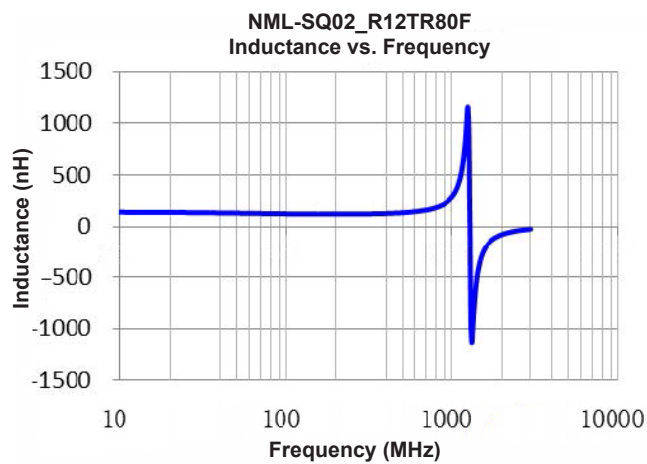
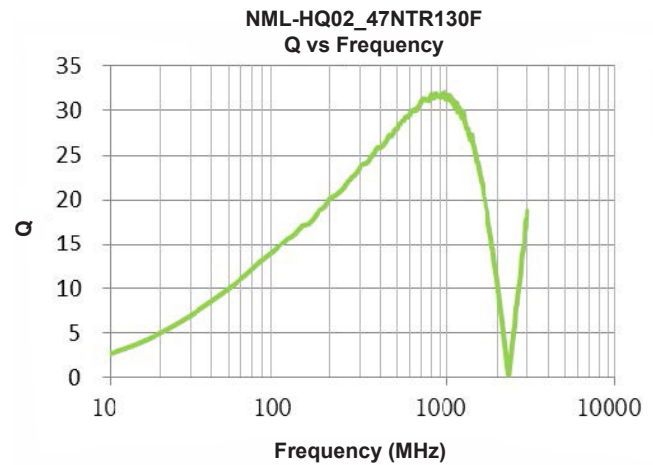
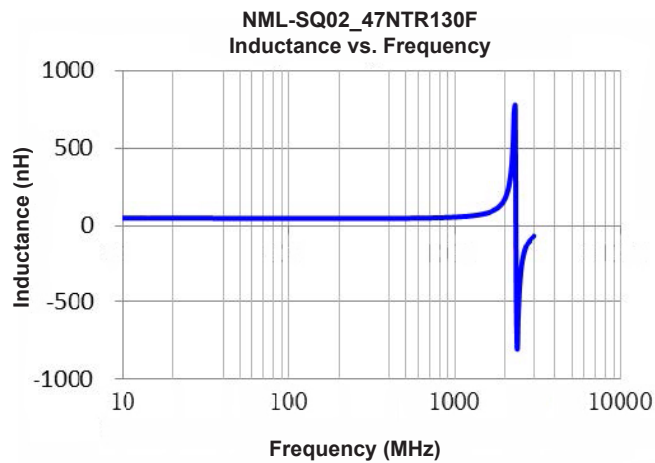


NML-SQ02_33NTR150F
Inductance vs. Frequency

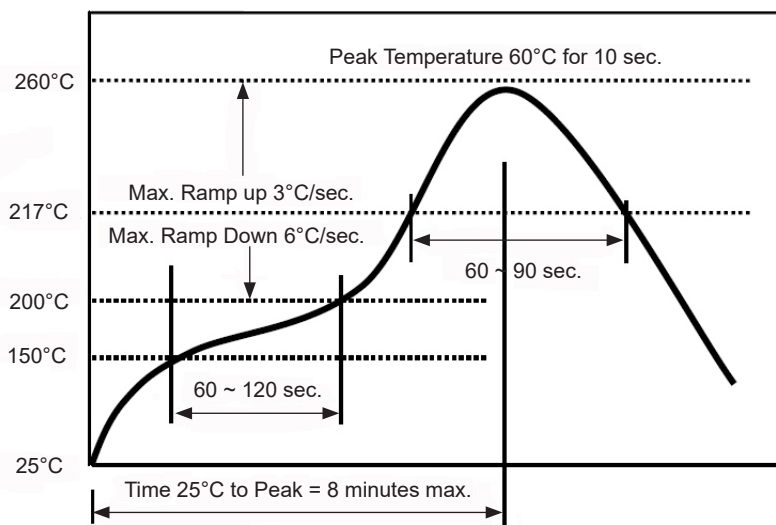
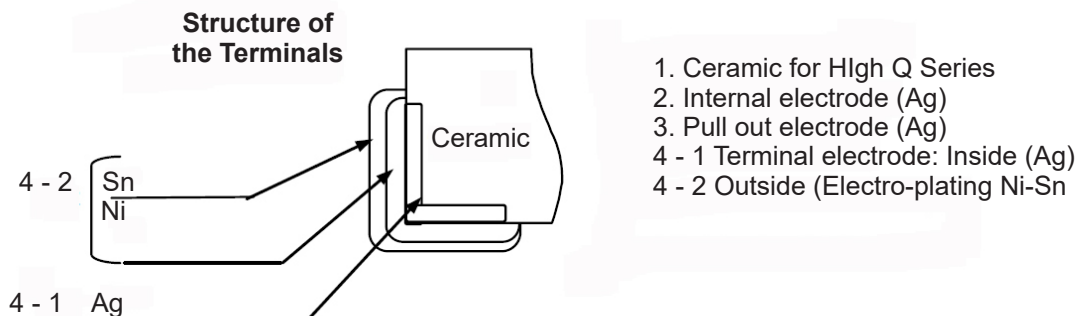
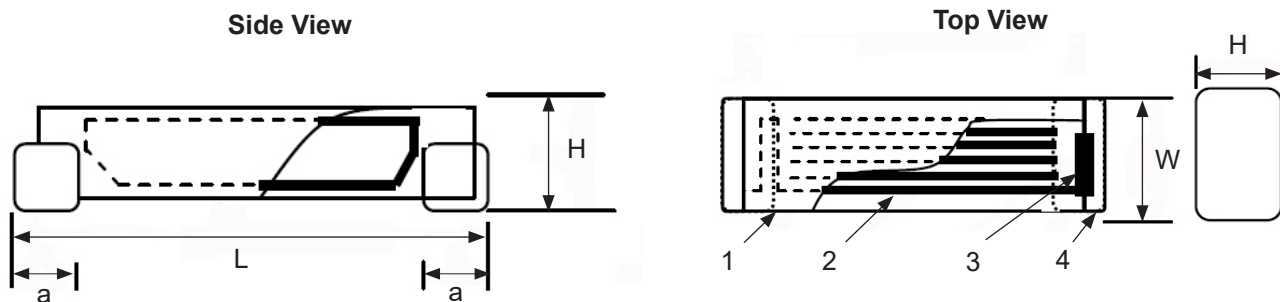


NML-HQ02_33NTR150F
Q vs Frequency



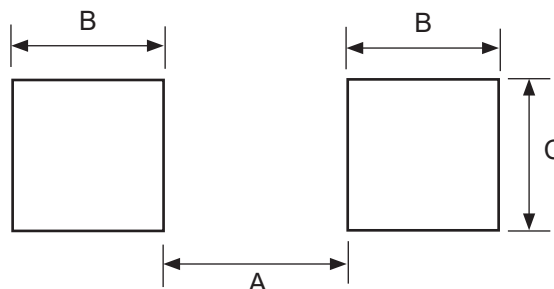


COMPONENT CONSTRUCTION DETAILS



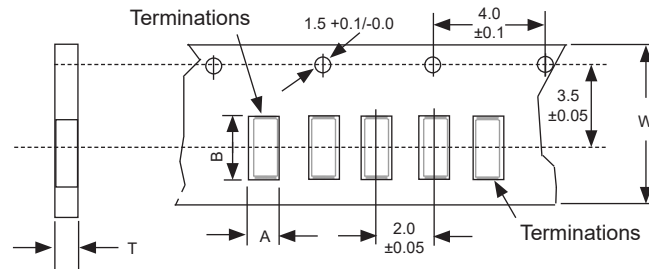
LAND PATTERN DIMENSIONS (mm)

Case Size	A	B	C
01005	0.15 ~ 0.19	0.18 ~ 0.22	0.18 ~ 0.22
0201	0.20 ~ 0.30	0.25 ~ 0.35	0.25 ~ 0.35



PUNCHED CARRIER DIMENSIONS (mm)

Case Size	A	B	T	W	QTY/REEL
01005	0.24 ± 0.20	0.44 ± 0.20	0.35 max.	8.0 ± 0.3	15,000
0201	0.36 ± 0.20	0.68 ± 0.20	0.50 max.	8.0 ± 0.3	15,000



REEL DIMENSIONS (mm):

