

## Cautions and Warnings

Please be noted that this spec is only for reference if you have projects designed with the product number listed in. If you are looking for new project design-in, please find BSCQ Series specification/datasheet on Chilisin website. Or you may find our sales contact for more information on old part number at your convenience. Appreciated your attention and understanding.

**Note:** Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

## CHQ Series



CHQ Series supports miniaturized devices. Its low inductance, high precision and high Q enables easy impedance matching at both RF and IF circuits and compact high frequency circuit designing.

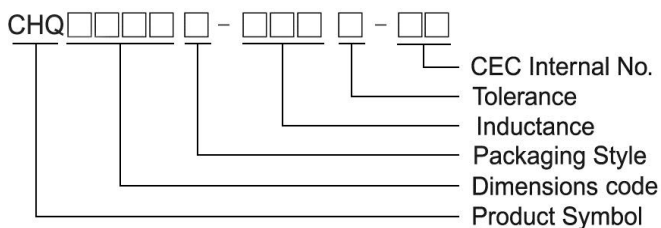
### Features

- Excellent high frequency application
- High Q factor and SRF value
- Miniaturization
- Tight tolerance
- Wide inductance range

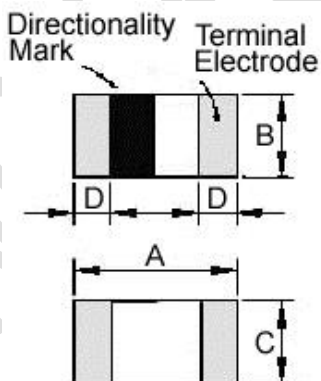
### Applications

- RF matching circuit requiring Q value
- Bluetooth, WLAN, UWB, digital TV tuners and high-frequency circuit and module

### Product Identification



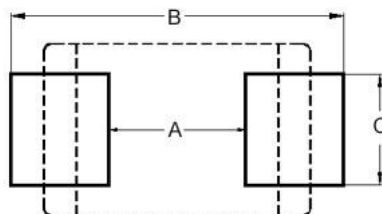
### Shape and Dimensions



Dimensions in mm

TYPE	A	B	C	D
CHQ0603	0.6±0.03	0.3±0.03	0.3±0.03	0.15±0.05
CHQ1005	1.0±0.10	0.5±0.10	0.5±0.10	0.25±0.10

### Recommended Pattern



Dimensions in mm

TYPE	A	B	C
CHQ0603	0.3	0.75 ~ 1.05	0.3
CHQ1005	0.4	1.2 ~ 1.4	0.5

# SMD Ceramic Multilayer Chip Inductors – CHQ Series

## Electrical Characteristics

Part Number	Inductance (nH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	Q Typical					SRF (MHz) Min	RDC (Ω) Max	IDC (mA) Max
					500 MHz	800 MHz	1.8 GHz	2.0 GHz	2.4 GHz			
CHQ0603T-0N6□-HU	0.6	±0.1nH/±0.2nH/±0.3nH	14	500	>35	>47	>75	>80	>88	10000	0.06	900
CHQ0603T-0N7□-HU	0.7	±0.1nH/±0.2nH/±0.3nH	14	500	>35	>47	>75	>80	>88	10000	0.06	900
CHQ0603T-0N8□-HU	0.8	±0.1nH/±0.2nH/±0.3nH	14	500	>35	>47	>75	>80	>88	10000	0.06	900
CHQ0603T-0N9□-HU	0.9	±0.1nH/±0.2nH/±0.3nH	14	500	>35	>47	>75	>80	>88	10000	0.06	900
CHQ0603T-1N0□-HU	1.0	±0.1nH/±0.2nH/±0.3nH	14	500	>35	>47	>75	>80	>88	10000	0.07	850
CHQ0603T-1N1□-HU	1.1	±0.1nH/±0.2nH/±0.3nH	14	500	>35	>47	>75	>80	>88	10000	0.07	850
CHQ0603T-1N2□-HU	1.2	±0.1nH/±0.2nH/±0.3nH	14	500	35	47	75	80	88	10000	0.08	800
CHQ0603T-1N3□-HU	1.3	±0.1nH/±0.2nH/±0.3nH	14	500	32	43	70	74	82	10000	0.09	760
CHQ0603T-1N4□-HU	1.4	±0.1nH/±0.2nH/±0.3nH	14	500	29	39	63	67	75	10000	0.12	640
CHQ0603T-1N5□-HU	1.5	±0.1nH/±0.2nH/±0.3nH	14	500	27	36	59	62	69	10000	0.15	600
CHQ0603T-1N6□-HU	1.6	±0.1nH/±0.2nH/±0.3nH	14	500	25	33	54	57	63	10000	0.19	510
CHQ0603T-1N7□-HU	1.7	±0.1nH/±0.2nH/±0.3nH	14	500	25	32	52	54	61	10000	0.11	680
CHQ0603T-1N8□-HU	1.8	±0.1nH/±0.2nH/±0.3nH	14	500	25	32	51	53	59	10000	0.12	640
CHQ0603T-1N9□-HU	1.9	±0.1nH/±0.2nH/±0.3nH	14	500	24	31	50	53	58	10000	0.13	620
CHQ0603T-2N0□-HU	2.0	±0.1nH/±0.2nH/±0.3nH	14	500	24	31	50	53	58	10000	0.15	600
CHQ0603T-2N1□-HU	2.1	±0.1nH/±0.2nH/±0.3nH	14	500	24	31	50	53	58	10000	0.16	550
CHQ0603T-2N2□-HU	2.2	±0.1nH/±0.2nH/±0.3nH	14	500	24	31	50	53	58	10000	0.20	500
CHQ0603T-2N3□-HU	2.3	±0.1nH/±0.2nH/±0.3nH	14	500	24	31	49	52	58	10000	0.24	460
CHQ0603T-2N4□-HU	2.4	±0.1nH/±0.2nH/±0.3nH	14	500	22	28	45	48	53	10000	0.26	430
CHQ0603T-2N5□-HU	2.5	±0.1nH/±0.2nH/±0.3nH	14	500	22	29	46	49	54	10000	0.28	415
CHQ0603T-2N6□-HU	2.6	±0.1nH/±0.2nH/±0.3nH	14	500	21	27	44	46	51	10000	0.30	405
CHQ0603T-2N7□-HU	2.7	±0.1nH/±0.2nH/±0.3nH	14	500	20	26	41	43	48	10000	0.32	400
CHQ0603T-2N8□-HU	2.8	±0.1nH/±0.2nH/±0.3nH	14	500	20	26	41	43	47	9500	0.20	500
CHQ0603T-2N9□-HU	2.9	±0.1nH/±0.2nH/±0.3nH	14	500	20	26	41	43	47	9300	0.22	480
CHQ0603T-3N0□-HU	3.0	±0.1nH/±0.2nH/±0.3nH	14	500	20	26	41	43	47	9100	0.24	460
CHQ0603T-3N1□-HU	3.1	±0.1nH/±0.2nH/±0.3nH	14	500	20	26	41	43	47	8900	0.25	450
CHQ0603T-3N2□-HU	3.2	±0.1nH/±0.2nH/±0.3nH	14	500	20	26	40	43	47	8700	0.28	415
CHQ0603T-3N3□-HU	3.3	±0.1nH/±0.2nH/±0.3nH	14	500	20	26	40	43	47	8600	0.28	415
CHQ0603T-3N4□-HU	3.4	±0.1nH/±0.2nH/±0.3nH	14	500	20	25	40	43	47	8400	0.29	410
CHQ0603T-3N5□-HU	3.5	±0.1nH/±0.2nH/±0.3nH	14	500	20	25	40	42	46	8200	0.30	405
CHQ0603T-3N6□-HU	3.6	±0.1nH/±0.2nH/±0.3nH	14	500	19	25	40	42	46	8100	0.32	400
CHQ0603T-3N7□-HU	3.7	±0.1nH/±0.2nH/±0.3nH	14	500	19	25	40	42	46	8000	0.36	370
CHQ0603T-3N8□-HU	3.8	±0.1nH/±0.2nH/±0.3nH	14	500	19	25	39	41	45	7800	0.40	355
CHQ0603T-3N9□-HU	3.9	±0.1nH/±0.2nH/±0.3nH	14	500	19	25	39	41	45	7700	0.41	350
CHQ0603T-4N3□-HU	4.3	±0.2nH/±0.3nH	14	500	18	24	37	39	43	6500	0.48	320
CHQ0603T-4N7□-HU	4.7	±0.2nH/±0.3nH	14	500	19	24	37	39	42	6400	0.42	350
CHQ0603T-5N1□-HU	5.1	±0.2nH/±0.3nH	14	500	19	24	37	39	42	6100	0.45	330
CHQ0603T-5N6□-HU	5.6	±0.2nH/±0.3nH	14	500	18	24	36	37	41	5500	0.47	325
CHQ0603T-6N2□-HU	6.2	±0.2nH/±0.3nH	14	500	18	23	35	36	39	5100	0.52	305
CHQ0603T-6N8□-HU	6.8	3 / 5	14	500	18	23	35	36	39	4800	0.55	305
CHQ0603T-7N5□-HU	7.5	3 / 5	14	500	18	23	34	35	38	4600	0.55	305
CHQ0603T-8N2□-HU	8.2	3 / 5	14	500	17	22	33	34	36	4300	0.57	290
CHQ0603T-9N1□-HU	9.1	3 / 5	14	500	17	22	33	34	36	4000	0.65	270
CHQ0603T-10N□-HU	10	3 / 5	14	500	17	22	33	34	36	3800	0.85	230
CHQ0603T-12N□-HU	12	3 / 5	14	500	17	22	31	32	33	3300	0.85	230
CHQ0603T-15N□-HU	15	3 / 5	14	500	17	21	28	29	29	2600	0.89	220
CHQ0603T-18N□-HU	18	3 / 5	14	500	16	21	26	26	25	2300	1.05	205
CHQ0603T-22N□-HU	22	3 / 5	14	500	16	21	26	26	24	1900	1.29	190

**Note:** When ordering, please specify tolerance code. Tolerance : B=±0.1nH , C=±0.2nH , S=±0.3nH , H=±3% , J=±5%

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value
- Residual impedance of short chip : 0.48nH
- Measure Equipment :

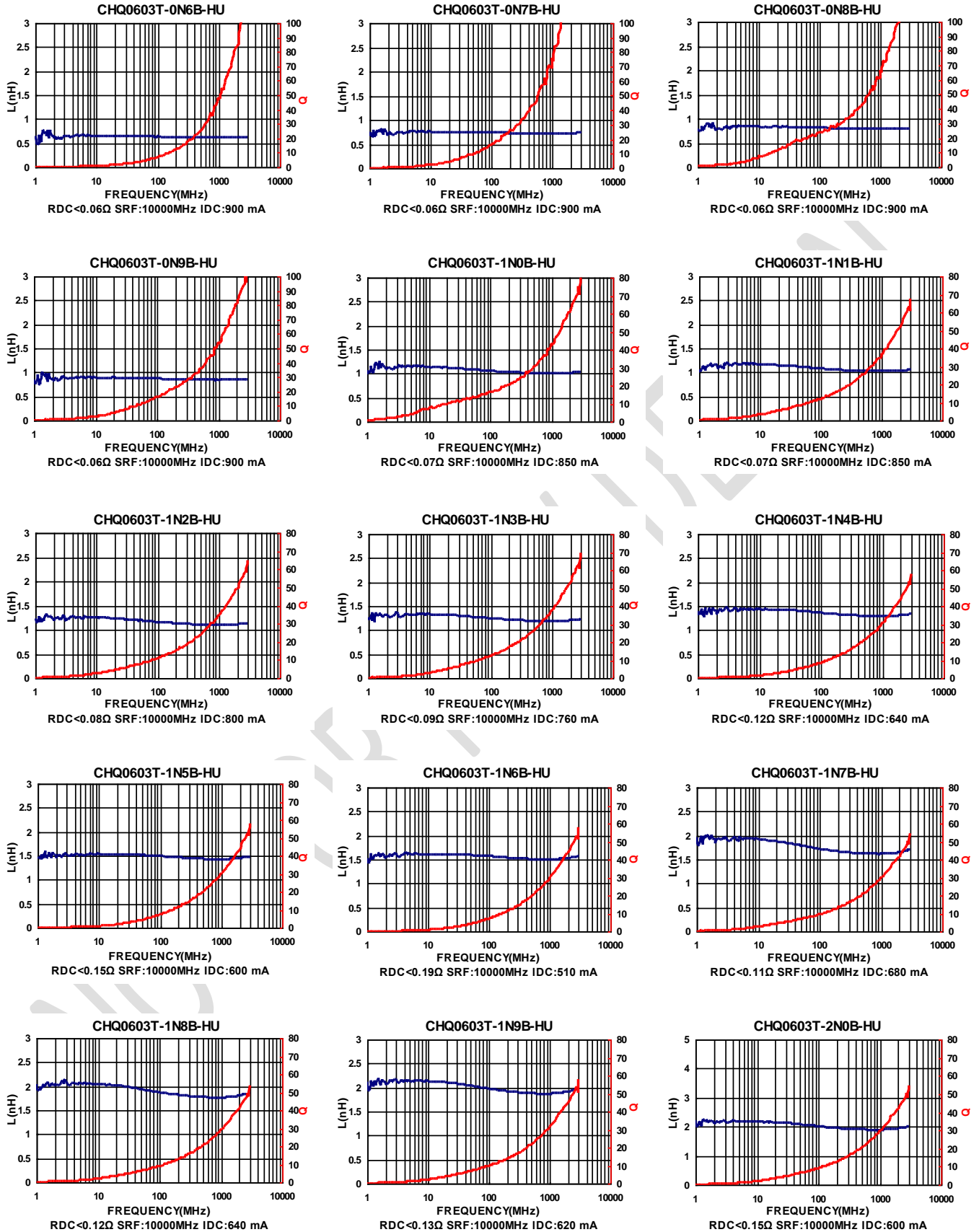
L & Q : Agilent E4991A+Agilent 16197A

SRF : Agilent E4991A or HP19196C

RDC : HP4338B or CHEN HWA 502

# SMD Ceramic Multilayer Chip Inductors – CHQ Series

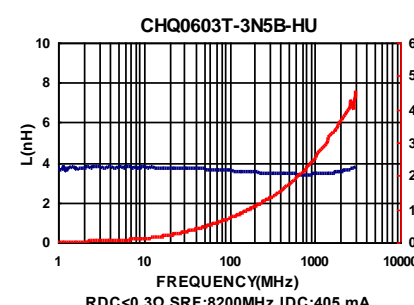
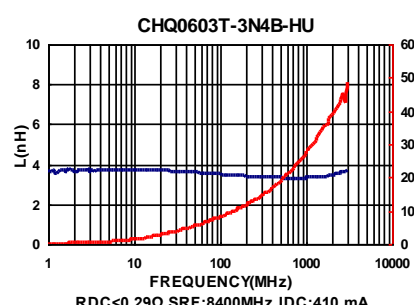
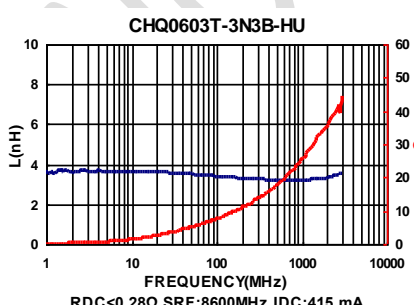
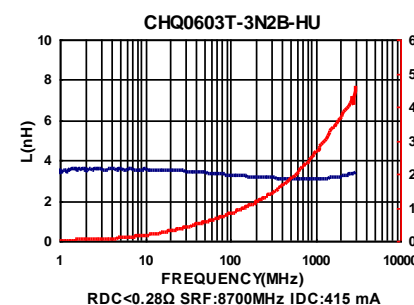
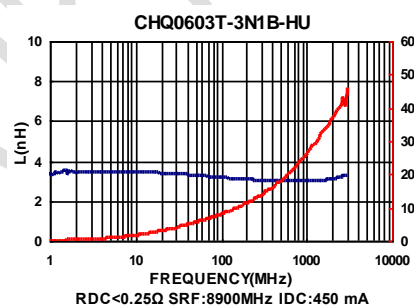
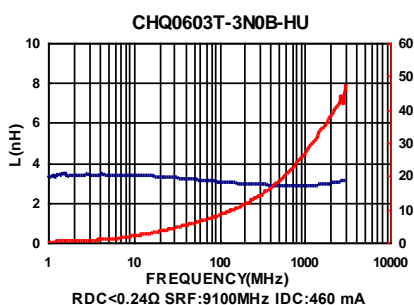
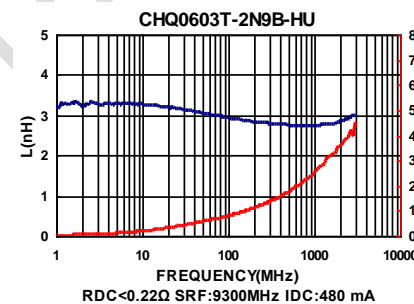
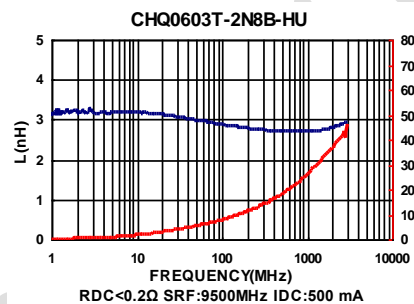
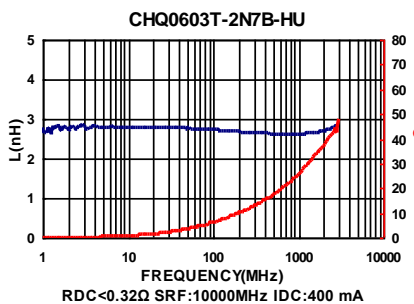
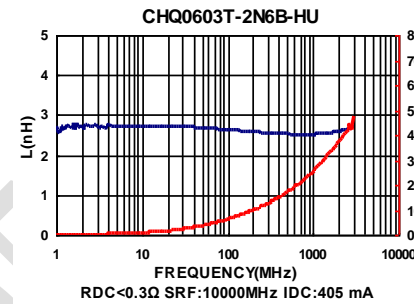
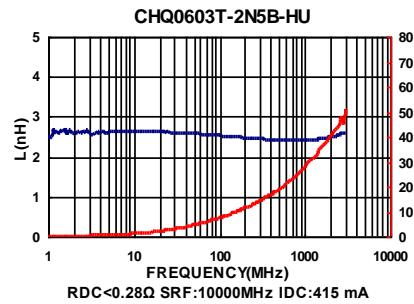
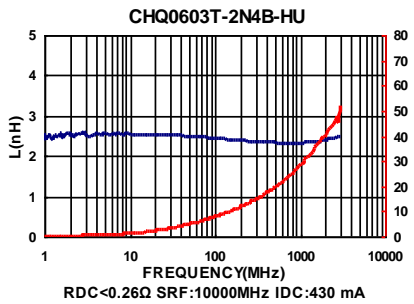
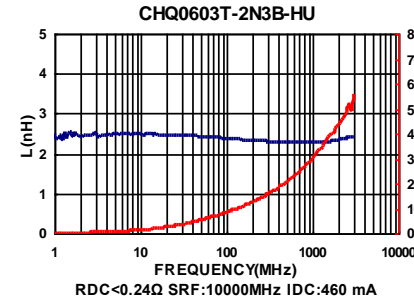
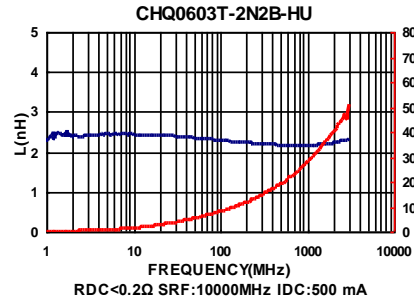
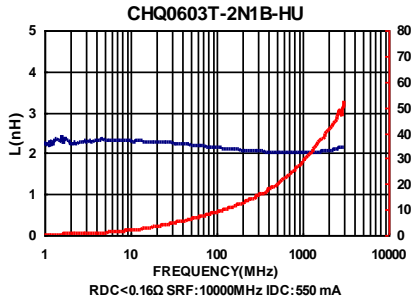
Test Instruments : Agilent E4991A Material/Impedance Analyzer



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# SMD Ceramic Multilayer Chip Inductors – CHQ Series

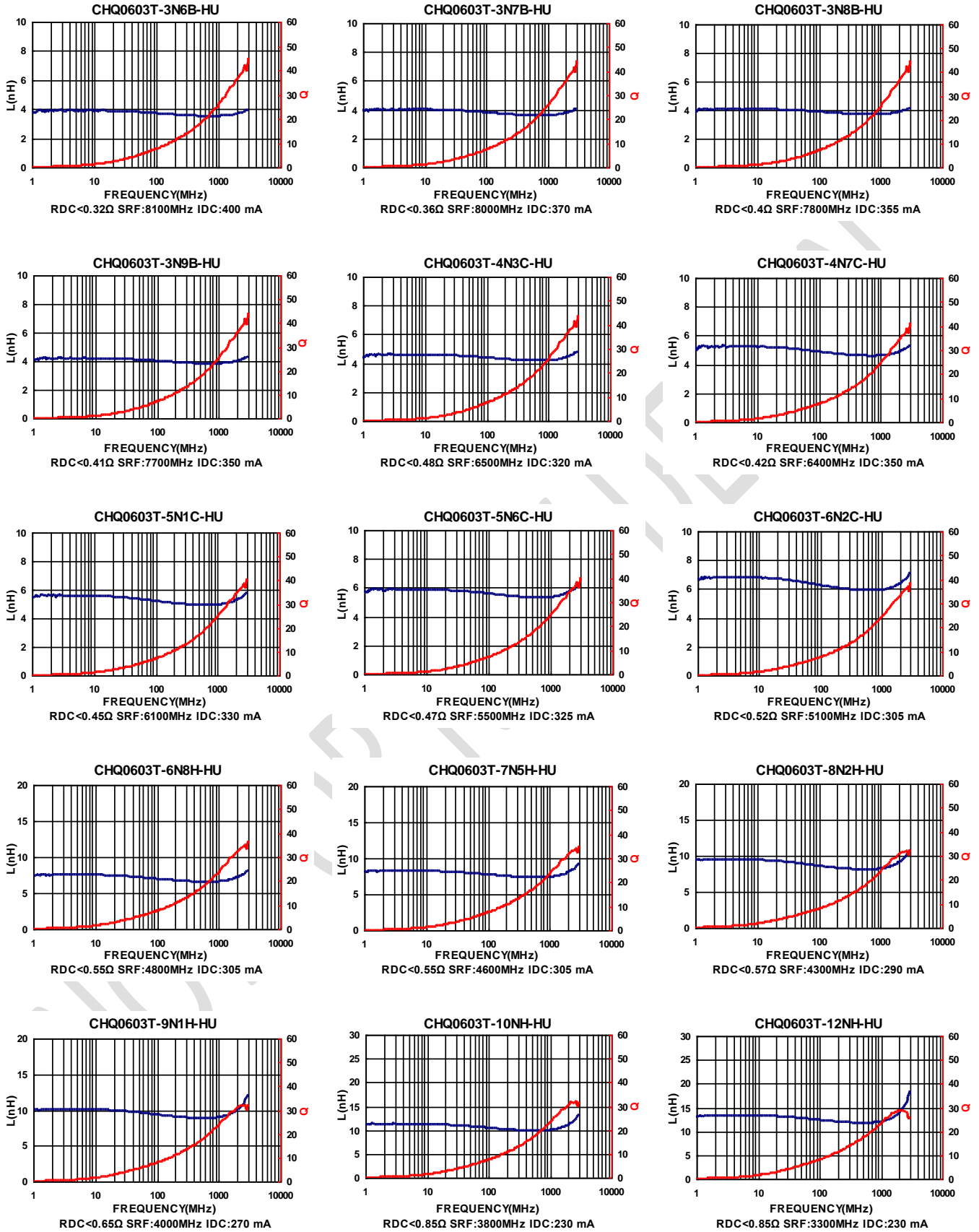
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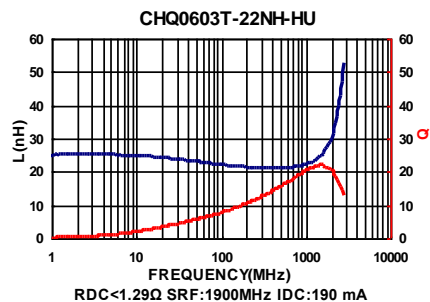
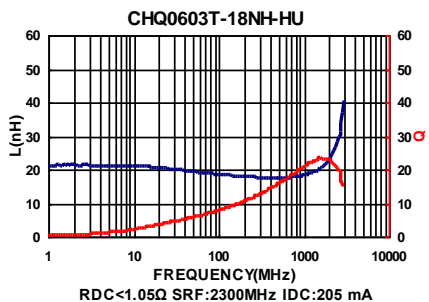
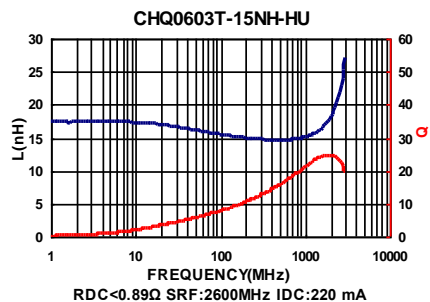
# SMD Ceramic Multilayer Chip Inductors – CHQ Series

Test Instruments : Agilent E4991A Material/Impedance Analyzer



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Test Instruments : Agilent E4991A Material/Impedance Analyzer



NOT FOR NEW DESIGN

# SMD Ceramic Multilayer Chip Inductors – CHQ Series

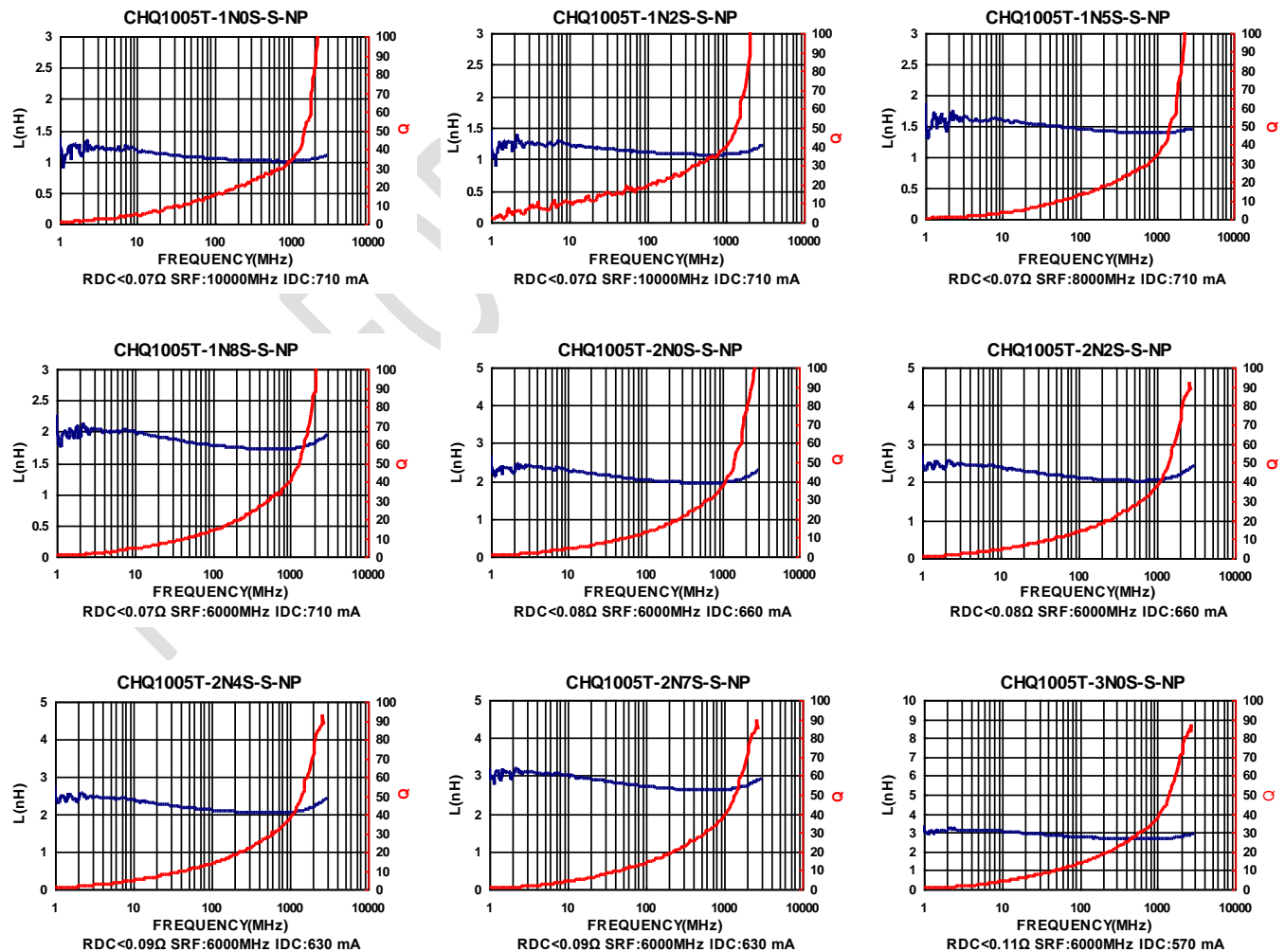
## Electrical Characteristics

Part Number	Inductance (nH)	Tolerance (±%)	Test Frequency (MHz)	Q		SRF (MHz) Min	RDC (Ω) Max	IDC (mA) Max
				Min 100MHz	Typ 250MHz			
CHQ1005T-1N0□-S-NP	1.0	±0.3nH	100	8	23	10000	0.07	710
CHQ1005T-1N2□-S-NP	1.2	±0.3nH	100	8	23	10000	0.07	710
CHQ1005T-1N5□-S-NP	1.5	±0.3nH	100	8	20	8000	0.07	710
CHQ1005T-1N8□-S-NP	1.8	±0.3nH	100	8	20	6000	0.07	710
CHQ1005T-2N0□-S-NP	2.0	±0.3nH	100	8	20	6000	0.08	660
CHQ1005T-2N2□-S-NP	2.2	±0.3nH	100	8	20	6000	0.08	660
CHQ1005T-2N4□-S-NP	2.4	±0.3nH	100	8	18	6000	0.09	630
CHQ1005T-2N7□-S-NP	2.7	±0.3nH	100	8	18	6000	0.09	630
CHQ1005T-3N0□-S-NP	3.0	±0.3nH	100	8	18	6000	0.11	570
CHQ1005T-3N3□-S-NP	3.3	±0.3nH	100	8	18	6000	0.12	540
CHQ1005T-3N6□-S-NP	3.6	±0.3nH	100	8	18	5000	0.14	500
CHQ1005T-3N9□-S-NP	3.9	±0.3nH	100	8	18	4000	0.15	490

**Note:** When ordering, please specify tolerance code. Tolerance : S=±0.3nH

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- IDC : Applied the current to coils, the inductance shall be less than 10% initial value
- Residual impedance of short chip : 0.19nH(Inductance ≤ 4.3nH) or 0.48nH(Inductance > 4.3nH)
- Measure Equipment :  
L & Q : Agilent E4991A+Agilent 16197A  
SRF : Agilent E4991A or HP19196C  
RDC : HP4338B or CHEN HWA 502

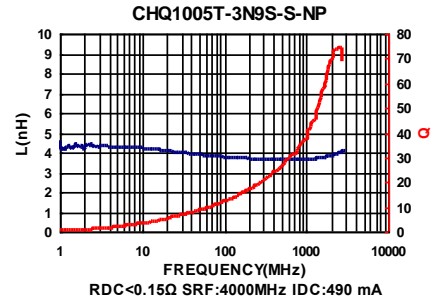
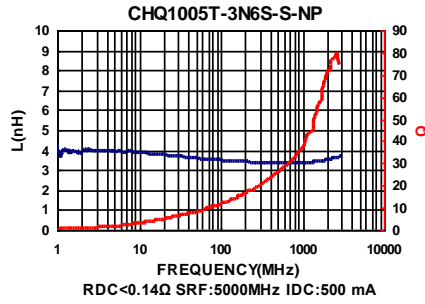
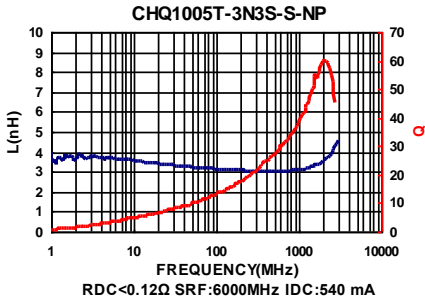
**Test Instruments :** Agilent E4991A Material/Impedance Analyzer





# SMD Ceramic Multilayer Chip Inductors – CHQ Series

Test Instruments : Agilent E4991A Material/Impedance Analyzer



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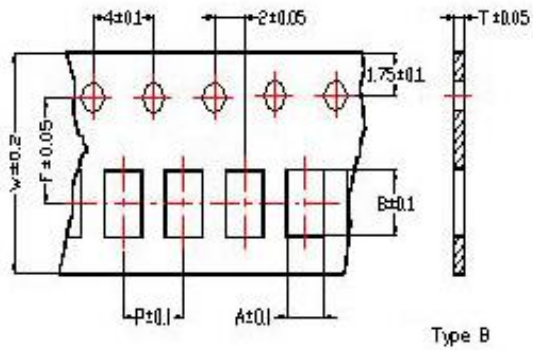
**Test Instruments** : Agilent E4991A Material/Impedance Analyzer

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## Packaging Specifications

### Tape Dimensions

Figure A



### Tape Material

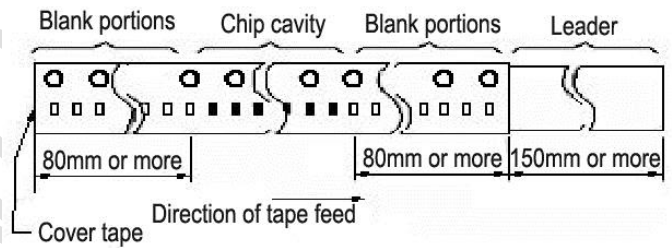
Figure A

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



Figure B

Carrier tape : Paper  
Cover tape : Polyethylene



Dimensions in mm

TYPE	Tape Dimensions							Tape Material	Reel Dimensions				Quantity PCS / Reel
	A	B	T	W	P	F	A		B	C	D		
CHQ0603	0.37	0.67	0.42	8	2	3.5	A	B	180	60	13	1.5	15000
CHQ1005	0.62	1.12	0.60	8	2	3.5	A	A	178	60	12	1.5	10000

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[CR32NP-8R2MC](#) [CR43NP-390KC](#) [CR43NP-560KC](#) [CR43NP-680KC](#) [CR54NP-181KC](#) [CR54NP-470LC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#)

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