

# HIGH FREQUENCY MULTILAYER CHIP INDUCTORS

## T Y P E H K

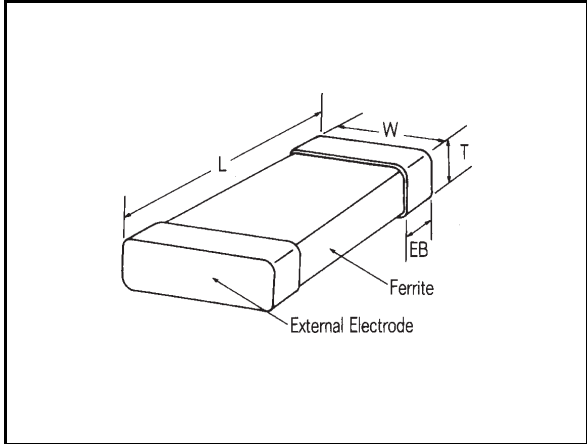
### FEATURES

Multilayer inductor made of advanced ceramics with low-resistivity silver used as internal conductors provides excellent Q and SRF characteristics. Designed to address surface mount inductor needs for applications above 100MHz. Multilayer block structure ensures outstanding reliability, high productivity and product quality.

### APPLICATIONS

Portable Telephones, PHS and W-LAN  
Miscellaneous high-frequency circuits.  
EMI countermeasure in high-frequency circuits

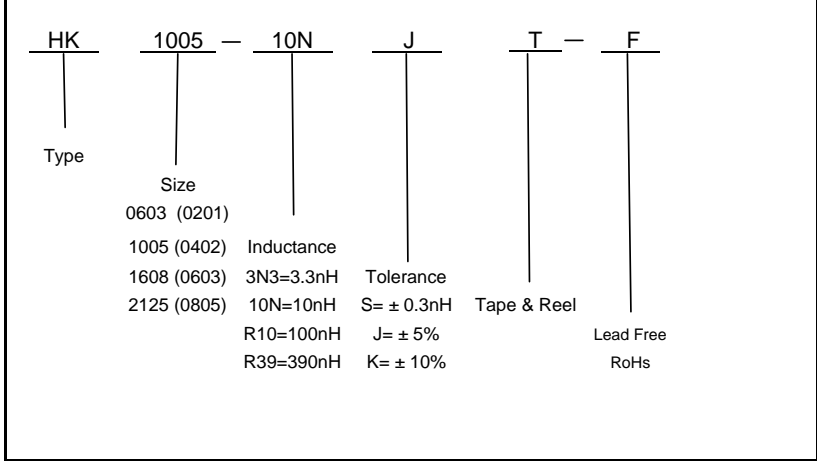
### DIMENSIONS



Unit : mm (Inch)

Type	L	W	T	EB
HK0603 (0201)	0.6±0.03 (0.024±0.001)	0.30±0.03 (0.012±0.001)	0.30±0.03 (0.012±0.001)	0.15±0.05 (0.006±0.002)
HK1005 (0402)	1.00±0.05 (0.039±0.002)	0.50±0.05 (0.020±0.002)	0.50±0.05 (0.020±0.002)	0.25±0.10 (0.010±0.004)
HK1608 (0603)	1.6±0.15 (0.063±0.006)	0.80±0.15 (0.031±0.006)	0.80±0.15 (0.031±0.006)	0.30±0.2 (0.012±0.008)
HK2125 (0805)	2.0 <sup>+0.3</sup> <sub>-0.1</sub> (0.079 <sup>+0.012</sup> <sub>-0.004</sub> )	1.25±0.2 (0.049±0.008)	0.85±0.2 1.0 <sup>+0.2</sup> <sub>-0.3</sub> (0.033±0.008) (0.039 <sup>+0.008</sup> <sub>-0.012</sub> )	0.5±0.3 (0.020±0.012)

### ORDERING INFORMATION



### SPECIFICATIONS

Operating Temperature	0603 : -55 to +125°C
	1005 : -55 to +125°C
	1608 : -40 to +85°C
	2125 : -40 to +85°C

### TAPE AND REEL PACKING

0603 -- 15000 Pcs/Reel
1005 -- 10000 Pcs/Reel
1608 -- 4000 Pcs/Reel
2125 -- 4000 / 3000 Pcs/Reel **

\*\* Changes depends on the inductance values.  
\*\* Please contact us for specific reel quantity.



# HIGH FREQUENCY MULTILAYER CHIP INDUCTORS — TYPE HK

## HK0603 ELECTRICAL SPECIFICATIONS

Ordering Code	Inductance (nH)	Q min.	LQ Measuring Frequency [Mhz]	Q (Typical) Frequency [MHz]					Self-resonant Frequency [MHz]		DC. Resistance (Ω)		Rated Current [mA] max. -55 ~ +125°C	Thickness [mm] (inch)
				100	300	500	800	1000	min.	Typ.	max.	Typ.		
HK0603 1N0S	1.0±0.3nH	4	100	6	12	17	22	27	10000	>13000	0.14	0.088	250	0.30±0.03 (0.012±0.001)
HK0603 1N2S	1.2±0.3nH	4	100	6	12	16	21	25	10000	>13000	0.14	0.089	250	
HK0603 1N5S	1.5±0.3nH	4	100	6	12	15	20	23	10000	>13000	0.18	0.11	230	
HK0603 1N8S	1.8±0.3nH	4	100	6	12	15	20	23	10000	>13000	0.19	0.12	200	
HK0603 2N0S	2.0±0.3nH	4	100	6	12	15	20	22	10000	>13000	0.20	0.13	200	
HK0603 2N2S	2.2±0.3nH	4	100	6	12	15	20	22	8800	12500	0.22	0.14	200	
HK0603 2N4S	2.4±0.3nH	4	100	6	12	15	20	22	8300	11700	0.24	0.15	200	
HK0603 2N7S	2.7±0.3nH	5	100	7	12	15	20	22	7700	11000	0.25	0.16	200	
HK0603 3N0S	3.0±0.3nH	5	100	7	12	15	20	22	7200	11000	0.28	0.18	180	
HK0603 3N3□	3.3±10% or 0.3nH	5	100	7	12	15	20	22	6700	9600	0.30	0.19	180	
HK0603 3N6□	3.6±10% or 0.3nH	5	100	7	12	15	20	22	6400	9100	0.30	0.20	170	
HK0603 3N9□	3.9±10% or 0.3nH	5	100	7	12	15	20	22	6000	8600	0.30	0.20	170	
HK0603 4N3□	4.3±10% or 0.3nH	5	100	7	12	15	19	21	5700	8100	0.40	0.22	150	
HK0603 4N7□	4.7±10% or 0.3nH	5	100	7	12	15	19	21	5300	7600	0.40	0.24	150	
HK0603 5N1□	5.1±10% or 0.3nH	5	100	7	12	15	19	21	5000	7100	0.40	0.26	150	
HK0603 5N6□	5.6±10% or 0.3nH	5	100	7	12	15	19	21	4600	6600	0.40	0.27	150	
HK0603 6N2□	6.2±10% or 0.3nH	5	100	7	11	14	18	20	4200	6100	0.44	0.29	150	
HK0603 6N8□	6.8±10% or ±5%	5	100	7	11	14	18	20	3900	5600	0.48	0.30	150	
HK0603 7N5□	7.5±10% or ±5%	5	100	7	11	14	18	19	3600	5300	0.53	0.34	150	
HK0603 8N2□	8.2±10% or ±5%	5	100	7	11	14	18	19	3400	4900	0.55	0.34	150	
HK0603 9N1□	9.1±10% or ±5%	5	100	7	11	14	17	18	3200	4600	0.62	0.40	150	
HK0603 10N□	10.0±10% or ±5%	5	100	7	11	14	17	18	2900	4200	0.63	0.41	150	
HK0603 12N□	12.0±10% or ±5%	5	100	7	11	14	17	18	2700	3800	0.70	0.45	100	
HK0603 15N□	15.0±10% or ±5%	5	100	7	11	13	16	17	2300	3300	0.80	0.50	100	
HK0603 18N□	18.0±10% or ±5%	5	100	7	11	13	16	17	2100	3000	0.90	0.57	100	
HK0603 22N□	22.0±10% or ±5%	5	100	7	11	13	15	16	1800	2600	1.20	0.71	100	
HK0603 27N□	27.0±10% or ±5%	4	100	6	10	12	14	15	1800	2600	1.80	1.11	50	
HK0603 33N□	33.0±10% or ±5%	4	100	6	10	12	14	14	1700	2400	2.10	1.33	50	
HK0603 39N□	39.0±10% or ±5%	4	100	6	10	12	13	12	1500	2100	2.40	1.51	50	
HK0603 47N□	47.0±10% or ±5%	4	100	6	10	11	12	11	1300	1800	2.80	1.74	50	
HK0603 56N□	56.0±10% or ±5%	4	100	6	10	11	11	10	1100	1600	3.00	1.85	50	
HK0603 68N□	68.0±10% or ±5%	4	100	6	10	11	11	10	1100	1500	3.00	2.30	50	
HK0603 82N□	82.0±10% or ±5%	4	100	6	10	11	10	8	1000	1400	3.50	2.60	50	
HK0603 R10□	100.0±10% or ±5%	4	100	6	9	10	9	6	900	1200	4.00	3.00	40	

□ Please specify the inductance tolerance code.

# HIGH FREQUENCY MULTILAYER CHIP INDUCTORS — TYPE HK

## HK1005 ELECTRICAL SPECIFICATIONS

Ordering Code	Inductance (nH)	Q min.	LQ Measuring Frequency [Mhz]	Q (Typical) Frequency [MHz]					Self-resonant Frequency [MHz]		DC. Resistance ( $\Omega$ )		Rated Current [mA] max.	Rated Current [mA] max.	Thickness [mm] (inch)
				100	300	500	800	1000	min.	Typ.	max.	Typ.	-55 ~ +125°C	-55 ~ +85°C	
HK1005 1N0S	1.0±0.3nH	8	100	11	25	34	43	52	10000	>13000	0.08	0.04	300	900	0.50±0.05 (0.020±0.002)
HK1005 1N2S	1.2±0.3nH	8	100	11	25	35	44	52	10000	>13000	0.09	0.04	300	900	
HK1005 1N5S	1.5±0.3nH	8	100	11	24	33	44	48	6000	>13000	0.10	0.05	300	850	
HK1005 1N8S	1.8±0.3nH	8	100	11	23	30	36	42	6000	11000	0.12	0.06	300	700	
HK1005 2N0S	2.0±0.3nH	8	100	11	21	27	34	39	6000	10500	0.12	0.06	300	700	
HK1005 2N2S	2.2±0.3nH	8	100	10	18	25	31	36	6000	10000	0.13	0.07	300	700	
HK1005 2N4S	2.4±0.3nH	8	100	10	18	24	31	35	6000	9500	0.13	0.07	300	650	
HK1005 2N7S	2.7±0.3nH	8	100	10	18	24	31	34	6000	9000	0.13	0.08	300	650	
HK1005 3N0S	3.0±0.3nH	8	100	10	18	24	31	35	6000	8500	0.16	0.09	300	600	
HK1005 3N3□	3.3±10% or 0.3nH	8	100	10	18	24	31	35	6000	8000	0.16	0.10	300	550	
HK1005 3N6□	3.6±10% or 0.3nH	8	100	10	18	24	31	35	5000	7500	0.20	0.11	300	500	
HK1005 3N9□	3.9±10% or 0.3nH	8	100	10	18	24	31	35	4000	7000	0.21	0.12	300	500	
HK1005 4N3□	4.3±10% or 0.3nH	8	100	10	18	24	31	35	4000	6500	0.20	0.12	300	500	
HK1005 4N7□	4.7±10% or 0.3nH	8	100	10	18	24	31	34	4000	6000	0.21	0.12	300	500	
HK1005 5N1□	5.1±10% or 0.3nH	8	100	10	18	24	31	34	4000	5800	0.21	0.13	300	450	
HK1005 5N6□	5.6±10% or 0.3nH	8	100	10	18	24	30	35	4000	5700	0.23	0.15	300	430	
HK1005 6N2□	6.2±10% or 0.3nH	8	100	10	18	24	30	34	3900	5600	0.25	0.16	300	430	
HK1005 6N8□	6.8±10% or ±5%	8	100	10	18	23	29	32	3900	5500	0.25	0.17	300	430	
HK1005 7N5□	7.5±10% or ±5%	8	100	10	18	23	29	32	3700	5200	0.25	0.18	300	400	
HK1005 8N2□	8.2±10% or ±5%	8	100	10	18	23	29	31	3600	4900	0.28	0.21	300	380	
HK1005 9N1□	9.1±10% or ±5%	8	100	10	18	23	29	31	3400	4500	0.30	0.22	300	360	
HK1005 10N□	10.0±10% or ±5%	8	100	10	18	23	29	31	3200	4300	0.31	0.23	300	340	
HK1005 12N□	12.0±10% or ±5%	8	100	11	18	23	29	31	2700	3900	0.40	0.28	300	330	
HK1005 15N□	15.0±10% or ±5%	8	100	11	18	23	28	30	2300	3500	0.46	0.31	300	320	
HK1005 18N□	18.0±10% or ±5%	8	100	11	18	23	28	30	2100	3100	0.55	0.35	300	310	
HK1005 22N□	22.0±10% or ±5%	8	100	11	17	22	26	27	1900	2800	0.60	0.42	300	300	
HK1005 27N□	27.0±10% or ±5%	8	100	11	17	21	25	26	1600	2300	0.70	0.47	300	300	
HK1005 33N□	33.0±10% or ±5%	8	100	11	16	20	23	22	1300	1900	0.80	0.50	200	250	
HK1005 39N□	39.0±10% or ±5%	8	100	11	16	20	23	21	1200	1700	0.90	0.52	200	250	
HK1005 47N□	47.0±10% or ±5%	8	100	11	16	19	21	18	1000	1500	1.00	0.58	200	230	
HK1005 56N□	56.0±10% or ±5%	8	100	11	16	18	18	16	750	1300	1.00	0.61	200	220	
HK1005 68N□	68.0±10% or ±5%	8	100	11	15	17	18	11	750	1200	1.20	0.70	180	200	
HK1005 82N□	82.0±10% or ±5%	8	100	10	14	16	15	6	600	1100	1.30	0.81	150	200	
HK1005 R10□	100.0±10% or ±5%	8	100	10	14	14	12	--	600	1000	1.50	0.94	150	200	
HK1005 R12□	120.0±10% or ±5%	8	100	10	12	10	--	--	600	800	1.60	1.10	150	200	
HK1005 R15□	150.0±10% or ±5%	8	100	12	17	17	--	--	550	920	3.20	2.57	140	200	
HK1005 R18□	180.0±10% or ±5%	8	100	12	16	--	--	--	500	810	3.70	2.97	130	200	
HK1005 R22□	220.0±10% or ±5%	8	100	12	16	--	--	--	450	700	4.20	3.29	120	200	
HK1005 R27□	270.0±10% or ±5%	8	100	12	14	--	--	--	400	600	4.80	3.92	110	200	

□Please specify the inductance tolerance code.

# HIGH FREQUENCY MULTILAYER CHIP INDUCTORS — TYPE HK

## HK1608 ELECTRICAL SPECIFICATIONS

Ordering Code	Inductance (nH)	Q min.	LQ Measuring Frequency [MHz]	Q (Typical) Frequency [MHz]					Self-resonant Frequency [MHz]		DC. Resistance (Ω)		Rated Current [mA] max.	Thickness [mm] (inch)
				100	300	500	800	1000	min.	Typ.	max.	Typ.		
HK1608 1N0S	1.0±0.3nH	8	100	14	30	40	70	90	10000	>13000	0.05	0.015	300	0.8±0.15 (0.031±0.006)
HK1608 1N2S	1.2±0.3nH	8	100	14	30	40	70	90	10000	>13000	0.05	0.015	300	
HK1608 1N5S	1.5±0.3nH	8	100	14	26	34	47	50	6000	>13000	0.10	0.030	300	
HK1608 1N8S	1.8±0.3nH	8	100	10	18	24	30	34	6000	>13000	0.10	0.060	300	
HK1608 2N2S	2.2±0.3nH	8	100	12	22	29	37	40	6000	12000	0.10	0.060	300	
HK1608 2N7S	2.7±0.3nH	10	100	13	24	32	41	45	6000	11000	0.10	0.060	300	
HK1608 3N3□	3.3±10% or 0.3nH	10	100	14	25	33	42	47	6000	9000	0.12	0.060	300	
HK1608 3N9□	3.9±10% or 0.3nH	10	100	13	25	33	42	46	6000	8000	0.14	0.070	300	
HK1608 4N7□	4.7±10% or 0.3nH	10	100	13	25	33	42	47	4000	6500	0.16	0.080	300	
HK1608 5N6□	5.6±10% or 0.3nH	10	100	14	25	33	42	46	4000	5800	0.18	0.090	300	
HK1608 6N8□	6.8±10% or ±5%	10	100	14	25	33	43	47	4000	5600	0.22	0.110	300	
HK1608 8N2□	8.2±10% or ±5%	10	100	14	26	34	44	48	3500	5200	0.24	0.130	300	
HK1608 10N□	10±10% or ±5%	12	100	14	26	34	43	47	3400	4600	0.26	0.160	300	
HK1608 12N□	12±10% or ±5%	12	100	14	27	35	45	49	2600	4000	0.28	0.170	300	
HK1608 15N□	15±10% or ±5%	12	100	15	28	37	46	51	2300	3400	0.32	0.200	300	
HK1608 18N□	18±10% or ±5%	12	100	15	27	36	44	48	2000	3000	0.35	0.210	300	
HK1608 22N□	22±10% or ±5%	12	100	16	28	36	44	47	1600	2900	0.40	0.250	300	
HK1608 27N□	27±10% or ±5%	12	100	16	29	37	45	46	1400	2200	0.45	0.280	300	
HK1608 33N□	33±10% or ±5%	12	100	17	31	40	46	47	1200	1800	0.55	0.350	300	
HK1608 39N□	39±10% or ±5%	12	100	18	31	39	44	44	1100	1600	0.60	0.380	300	
HK1608 47N□	47±10% or ±5%	12	100	17	28	34	35	34	900	1600	0.70	0.450	300	
HK1608 56N□	56±10% or ±5%	12	100	17	28	34	34	31	900	1400	0.75	0.500	300	
HK1608 68N□	68±10% or ±5%	12	100	18	29	34	30	22	700	1200	0.85	0.550	300	
HK1608 82N□	82±10% or ±5%	12	100	18	28	33	27	--	600	1100	0.95	0.600	300	
HK1608 R10□	100±10% or ±5%	12	100	18	27	28	16	--	600	1000	1.00	0.650	300	
HK1608 R12□	120±10% or ±5%	8	50	16	24	23	--	--	500	800	1.20	0.680	300	
HK1608 R15□	150±10% or ±5%	8	50	13	19	16	--	--	500	800	1.20	0.730	300	
HK1608 R18□	180±10% or ±5%	8	50	13	18	12	--	--	400	700	1.30	0.850	300	
HK1608 R22□	220±10% or ±5%	8	50	12	16	--	--	--	400	600	1.50	0.950	300	
HK1608 R27□	270±10% or ±5%	8	50	14	15	--	--	--	400	550	1.90	1.340	150	
HK1608 R33□	330±10% or ±5%	8	50	14	--	--	--	--	350	480	2.10	1.530	150	
HK1608 R39□	390±10% or ±5%	8	50	13	--	--	--	--	350	410	2.30	1.720	150	
HK1608 R47□	470±10% or ±5%	8	50	13	--	--	--	--	350	360	2.60	2.040	150	

□Please specify the inductance tolerance code.

# HIGH FREQUENCY MULTILAYER CHIP INDUCTORS — TYPE HK

## HK2125 ELECTRICAL SPECIFICATIONS

Ordering Code	Inductance (nH)	Q min.	LQ Measuring Frequency [Mhz]	Q (Typical) Frequency [MHz]					Self-resonant Frequency [MHz]		DC. Resistance (Ω)		Rated Current [mA] max.	Thickness [mm] (inch)
				100	300	500	800	1000	min.	Typ.	max.	typ.		
HK2125 1N5S	1.5±0.3nH	10	100	21	39	57	61	68	4000	>6000	0.10	0.02	300	0.85±0.2 (0.033±0.008)
HK2125 1N8S	1.8±0.3nH	10	100	18	35	49	55	59	4000	>6000	0.10	0.02	300	
HK2125 2N2S	2.2±0.3nH	10	100	18	33	46	53	58	4000	>6000	0.10	0.03	300	
HK2125 2N7S	2.7±0.3nH	12	100	19	36	50	56	60	4000	>6000	0.10	0.03	300	
HK2125 3N3□	3.3±10% or 0.3nH	12	100	16	29	40	47	51	4000	>6000	0.13	0.04	300	
HK2125 3N9□	3.9±10% or 0.3nH	12	100	18	33	46	54	60	4000	>6000	0.15	0.05	300	
HK2125 4N7□	4.7±10% or 0.3nH	12	100	18	34	46	55	60	3500	>6000	0.20	0.05	300	
HK2125 5N6□	5.6±10% or 0.3nH	15	100	20	38	51	60	66	3200	5400	0.23	0.05	300	
HK2125 6N8□	6.8±10% or ±5%	15	100	20	39	52	63	69	2800	4200	0.25	0.06	300	
HK2125 8N2□	8.2±10% or ±5%	15	100	21	40	54	63	70	2400	3700	0.28	0.07	300	
HK2125 10N□	10±10% or ±5%	15	100	20	38	51	60	67	2100	3100	0.30	0.09	300	
HK2125 12N□	12±10% or ±5%	15	100	21	39	52	60	67	1900	3000	0.35	0.10	300	
HK2125 15N□	15±10% or ±5%	15	100	22	42	55	63	72	1600	2600	0.40	0.11	300	
HK2125 18N□	18±10% or ±5%	15	100	24	44	57	63	72	1500	2300	0.45	0.13	300	
HK2125 22N□	22±10% or ±5%	18	100	23	43	55	60	69	1400	2100	0.50	0.16	300	
HK2125 27N□	27±10% or ±5%	18	100	23	42	53	58	68	1300	1800	0.55	0.17	300	
HK2125 33N□	33±10% or ±5%	18	100	24	43	54	55	60	1200	1700	0.60	0.19	300	
HK2125 39N□	39±10% or ±5%	18	100	23	41	50	47	47	1000	1400	0.65	0.25	300	
HK2125 47N□	47±10% or ±5%	18	100	23	41	49	43	41	900	1200	0.70	0.26	300	
HK2125 56N□	56±10% or ±5%	18	100	23	42	48	39	38	800	1100	0.75	0.28	300	
HK2125 68N□	68±10% or ±5%	18	100	25	42	45	30	--	700	900	0.80	0.33	300	
HK2125 82N□	82±10% or ±5%	18	100	24	41	41	--	--	600	800	0.90	0.37	300	
HK2125 R10□	100±10% or ±5%	18	100	23	37	37	--	--	600	800	0.90	0.40	300	
HK2125 R12□	120±10% or ±5%	13	50	22	33	29	--	--	500	700	0.95	0.43	300	
HK2125 R15□	150±10% or ±5%	13	50	22	34	26	--	--	500	700	1.00	0.46	300	
HK2125 R18□	180±10% or ±5%	13	50	23	34	20	--	--	400	600	1.10	0.50	300	
HK2125 R22□	220±10% or ±5%	12	50	20	23	--	--	--	350	550	1.20	0.75	300	
HK2125 R27□	270±10% or ±5%	12	50	20	19	--	--	--	300	480	1.30	0.85	300	
HK2125 R33□	330±10% or ±5%	12	50	22	15	--	--	--	250	400	1.40	0.90	300	
HK2125 R39□	390±10% or ±5%	10	50	17	12	--	--	--	250	400	1.30	0.85	300	
HK2125 R47□	470±10% or ±5%	10	50	17	--	--	--	--	200	350	1.50	0.95	300	

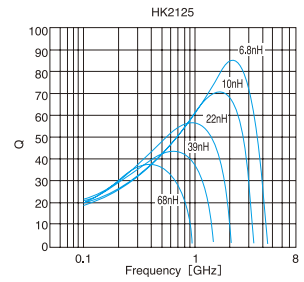
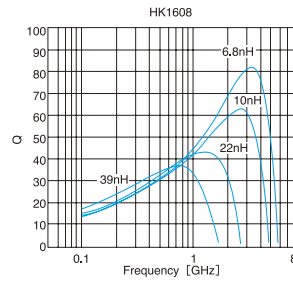
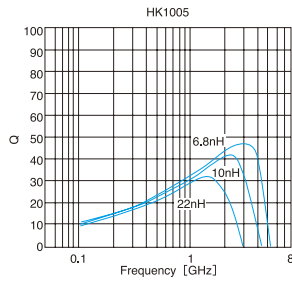
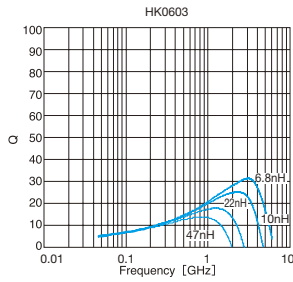
□Please specify the inductance tolerance code.



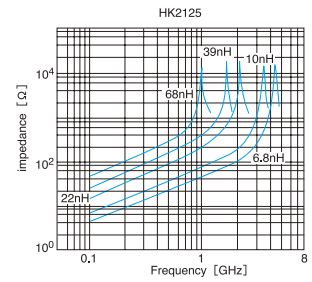
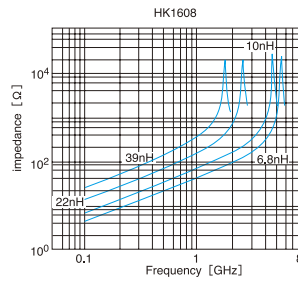
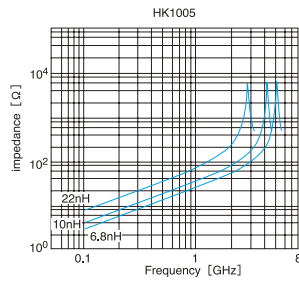
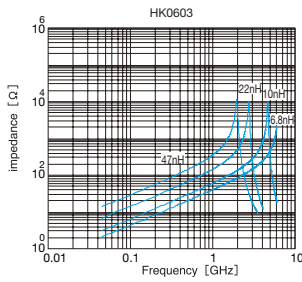
# HIGH FREQUENCY MULTILAYER CHIP INDUCTORS — TYPE HK

## ELECTRICAL SPECIFICATIONS

### Q-Characteristics (Measured by HP8719C)



### Impedance-vs-Frequency characteristics (Measured by HP8719C)



### Inductance-vs-Frequency characteristics (Measured by HP8719C)

