

HIGH FREQUENCY MULTILAYER CHIP INDUCTORS

T Y P E H K

FEATURES

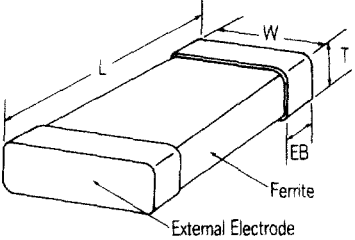
- Multilayer inductor made of advanced ceramics with low-resistivity silver used as internal conductors provides excellent Q and SRF characteristics.
- Designed to address surface mount inductor needs for applications above 100 MHz.
- Multilayer block structure ensures outstanding reliability, high productivity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

APPLICATIONS

- Portable telephones, PHS and pagers
- Miscellaneous high-frequency circuits
- EMI countermeasure in high-frequency circuits.

DIMENSIONS

Unit : mm (inch)

	Type	L	W	T	EB
	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)	0.8±0.15 (0.031 ± 0.006)	0.8±0.15 (0.031±0.006)	0.3±0.2 (0.012±0.008)
	HK2125 (0805)	2.0 ^{+0.3} _{-0.1} (0.079 ^{+0.012} _{-0.004})	1.25±0.2 (0.049±0.008)	0.85±0.2 1.0 ^{+0.2} _{-0.3} (0.033±0.008) (0.039 ^{+0.008} _{-0.012})	0.5±0.3 (0.020±0.012)

ORDERING INFORMATION

HK	1608	10N	J	—	T
Type	Size	Inductance Example	Tolerance		Tape & Reel Packaging
	1005 (0402)	3N3 = 3.3 nH	S = ±0.3 nH		1005 10,000/Reel
	1608 (0603)	10N = 10 nH	J = ±5%		1608 4,000/Reel
	2125 (0805)	R22 = 220 nH	K = ±10%		2125 4,000/Reel

OPERATING TEMPERATURE

1005	-55~125°C
1608 2125	-40~+85°C

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 (Ω)		Rated Current [mA] max.	Thickness [mm] [inch]
				100	300	500	800	1000	min.	Typ.	max.			
HK1005 1N0S	1.0±0.3nH	8	100	11	20	26	34	39	4000	>13000	0.12		300	0.50±0.05 (0.020±0.002)
HK1005 1N2S	1.2±0.3nH	8	100	11	20	26	34	39	4000	>13000	0.12		300	
HK1005 1N5S	1.5±0.3nH	8	100	11	20	26	34	39	4000	>13000	0.13		300	
HK1005 1N8S	1.8±0.3nH	8	100	11	18	24	30	35	4000	11000	0.14		300	
HK1005 2N2S	2.2±0.3nH	8	100	10	17	24	29	35	4000	10000	0.16		300	
HK1005 2N7S	2.7±0.3nH	8	100	10	17	23	29	34	4000	9000	0.17		300	
HK1005 3N3□	3.3±10% or 0.3nH	8	100	10	17	23	28	34	4000	8000	0.19		300	
HK1005 3N9□	3.9±10% or 0.3nH	8	100	10	17	23	28	33	4000	7000	0.22		300	
HK1005 4N7□	4.7±10% or 0.3nH	8	100	10	17	23	28	33	4000	6000	0.24		300	
HK1005 5N6□	5.6±10% or 0.3nH	8	100	10	17	22	28	33	4000	5700	0.27		300	
HK1005 6N8□	6.8±10% or ±5%	8	100	10	16	22	27	33	3900	5500	0.32		250	
HK1005 8N2□	8.2±10% or ±5%	8	100	10	17	22	28	32	3600	4900	0.37		250	
HK1005 10N□	10.0±10% or ±5%	8	100	10	17	22	30	32	3200	4300	0.42		250	
HK1005 12N□	12.0±10% or ±5%	8	100	11	18	24	31	34	2700	3900	0.50		250	
HK1005 15N□	15.0±10% or ±5%	8	100	11	18	24	30	33	2300	3500	0.55		250	
HK1005 18N□	18.0±10% or ±5%	8	100	11	18	24	30	32	2100	3100	0.65		200	
HK1005 22N□	22.0±10% or ±5%	8	100	11	18	24	30	31	1900	2800	0.80		200	
HK1005 27N□	27.0±10% or ±5%	8	100	11	18	23	27	29	1600	2300	0.90		200	
HK1005 33N□	33.0±10% or ±5%	8	100	11	18	22	25	25	1300	1900	1.00		200	
HK1005 39N□	39.0±10% or ±5%	8	100	11	18	22	24	23	1200	1700	1.20		150	
HK1005 47N□	47.0±10% or ±5%	8	100	11	18	21	23	21	1000	1500	1.30		150	
HK1005 56N□	56.0±10% or ±5%	8	100	11	18	20	21	19	750	1300	1.40		150	

□ Please specify the inductance tolerance code.

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 1N5S	1.5±0.3nH	8	100	14	26	34	47	50	4000	>13000	0.10	0.03	300	0.8±0.15 (0.031±0.006)
HK1608 1N8S	1.8±0.3nH	8	100	10	18	24	30	34	4000	>13000	0.10	0.06	300	
HK1608 2N2S	2.2±0.3nH	8	100	12	22	29	37	40	4000	12000	0.10	0.06	300	
HK1608 2N7S	2.7±0.3nH	10	100	13	24	32	41	45	4000	11000	0.10	0.06	300	
HK1608 3N3□	3.3±10% or ±0.3nH	10	100	14	25	33	42	47	4000	9000	0.12	0.06	300	
HK1608 3N9□	3.9±10% or ±0.3nH	10	100	13	25	33	42	46	4000	8000	0.14	0.07	300	
HK1608 4N7□	4.7±10% or ±0.3nH	10	100	13	25	33	42	47	4000	6500	0.16	0.08	300	
HK1608 5N6□	5.6±10% or ±0.3nH	10	100	14	25	33	42	46	4000	5800	0.18	0.09	300	
HK1608 6N8□	6.8±10% or ±5%	10	100	14	25	33	43	47	4000	5600	0.22	0.11	300	
HK1608 8N2□	8.2±10% or ±5%	10	100	14	26	34	44	48	3500	5200	0.24	0.13	300	
HK1608 10N□	10±10% or ±5%	12	100	14	26	34	43	47	3400	4600	0.26	0.16	300	
HK1608 12N□	12±10% or ±5%	12	100	14	27	35	45	49	2600	4000	0.28	0.17	300	
HK1608 15N□	15±10% or ±5%	12	100	15	28	37	46	51	2300	3400	0.32	0.20	300	
HK1608 18N□	18±10% or ±5%	12	100	15	27	36	44	48	2000	3000	0.35	0.21	300	
HK1608 22N□	22±10% or ±5%	12	100	16	28	36	44	47	1600	2900	0.40	0.25	300	
HK1608 27N□	27±10% or ±5%	12	100	16	29	37	45	46	1400	2200	0.45	0.28	300	
HK1608 33N□	33±10% or ±5%	12	100	17	31	40	46	47	1200	1800	0.55	0.35	300	
HK1608 39N□	39±10% or ±5%	12	100	18	31	39	44	44	1100	1600	0.60	0.38	300	
HK1608 47N□	47±10% or ±5%	12	100	17	28	34	35	34	900	1600	0.70	0.45	300	
HK1608 56N□	56±10% or ±5%	12	100	17	28	34	34	31	900	1400	0.75	0.50	300	
HK1608 68N□	68±10% or ±5%	12	100	18	29	34	30	22	700	1200	0.85	0.55	300	
HK1608 82N□	82±10% or ±5%	12	100	18	28	33	27	—	600	1100	0.95	0.60	300	
HK1608 R10□	100±10% or ±5%	12	100	18	27	28	16	—	600	1000	1.00	0.65	300	
HK1608 R12□	120±10% or ±5%	8	50	16	24	23	—	—	500	800	1.20	0.68	300	
HK1608 R15□	150±10% or ±5%	8	50	13	19	16	—	—	500	800	1.20	0.73	300	
HK1608 R18□	180±10% or ±5%	8	50	13	18	12	—	—	400	700	1.30	0.85	300	
HK1608 R22□	220±10% or ±5%	8	50	12	16	—	—	—	400	600	1.50	0.95	300	

□ Please specify the inductance tolerance code.

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HK2125 ELECTRICAL SPECIFICATIONS

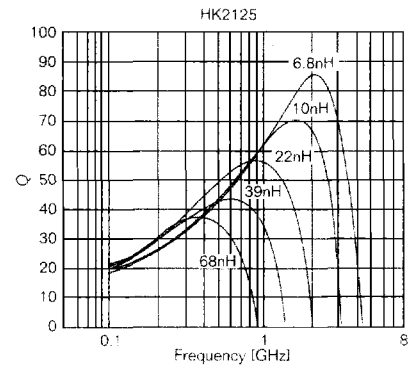
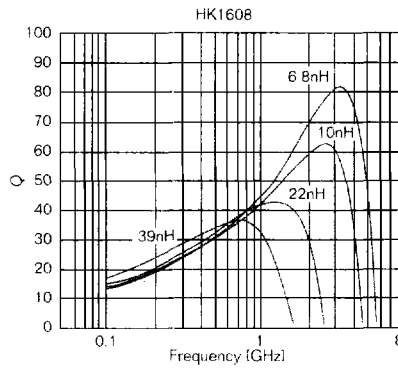
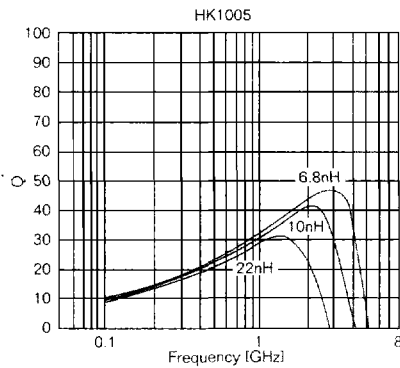
Ordering Code	Inductance (nH)	Q min.	LQ Measuring Frequency [MHz]	Q (Typical) Frequency [MHz]					Self-resonant Frequency [MHz]		DC. Resistance (Ω)		Rated Current [mA] max.	Thickness [mm] (inch)
				100	300	500	800	1000	min.	Typ.	max.	Typ.		
HK2125 1N5S	1.5±0.3nH	10	100	21	39	57	61	68	4000	>6000	0.10	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	1.00 ^{+0.2} _{-0.3} (0.039 ^{+0.008} _{-0.012})
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.

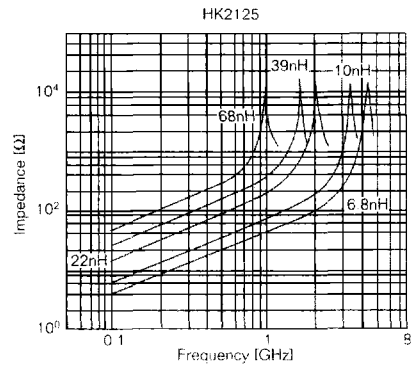
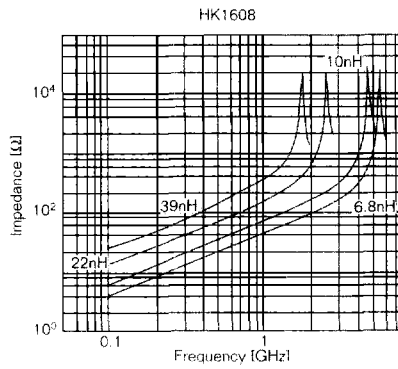
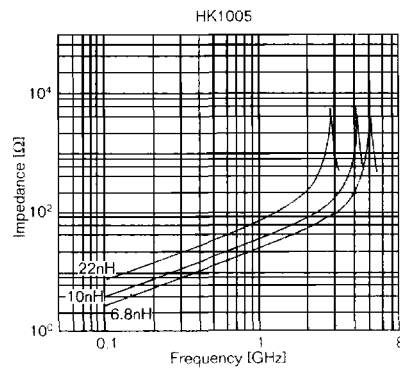
HIGH FREQUENCY MULTILAYER CHIP INDUCTORS — TYPE HK

ELECTRICAL CHARACTERISTICS

Q-Characteristics (Measured by HP8719C)



Impedance-vs-Frequency Characteristics (Measured by HP8719C)



Inductance-vs-Frequency Characteristics (Measured by HP8719C)

