

HP Series



Due to accurate wire winding technology, these chip inductors are designed for filtering, impedance matching, resonance and choke circuits for RF designer. Both standard series custom designs are available.

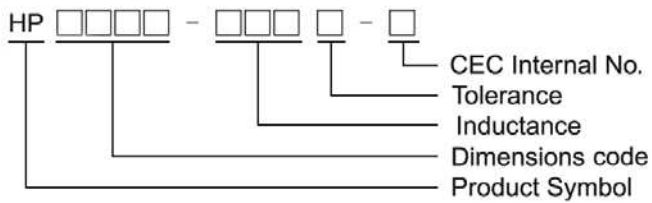
Features

- RoHS Compliant and Halogen Free
- Ceramic body and wire wound construction provide high Q and SRFs
- Higher Q and lower DCR than other inductors
- Exceptional current handling capability
- HP series is for high power and high frequency application

Applications

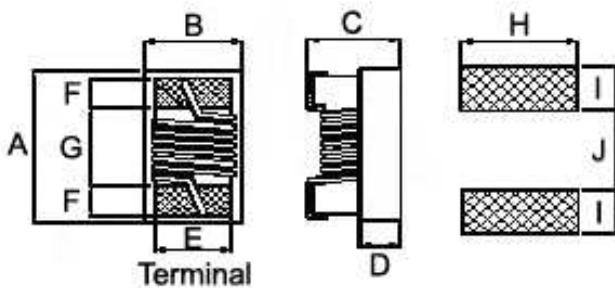
- Wireless embedded portable devices
- GPS receiver
- Base Station
- Repeater
- Set Top Box
- Cable / IP Modem
- Security system and other RF modules

Product Identification

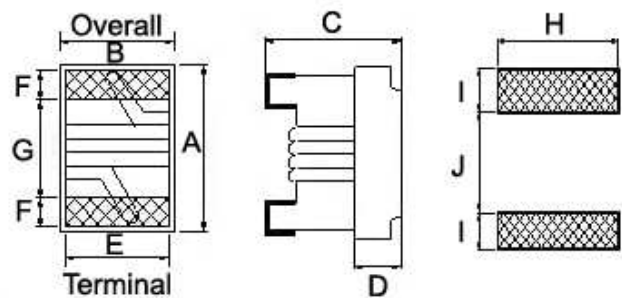


Shape and Dimensions / Recommended Pattern

HP0402



HP0603



Dimensions

	A	B	C	D	E	F	G	H	I	J
HP0402	1.1 ± 0.05	0.70 ± 0.05	0.6 ± 0.05	0.25	0.54	0.20	0.45	0.66	0.36	0.51
HP0603	1.6 ^{+0.2} _{-0.1}	1.02 ± 0.1	0.82 ^{+0.2} _{-0.1}	0.35	0.70	0.30	0.95	1.02	0.64	0.64

SMD Wire Wound Ceramic Chip Inductors - HP Series

Electrical Characteristics

Part Number	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (GHz) Min	Rdc (Ω) Max	Irms (mA) Max
HP0402-1N0□-N	1.0	250	±0.1nH	18	250	16.0	0.030	2300
HP0402-2N0□-N	2.0	250	±0.2nH	18	250	15.2	0.038	2100
HP0402-2N2□-N	2.2	250	±0.2nH	25	250	15.1	0.045	2100
HP0402-2N4□-N	2.4	250	±0.2nH	25	250	14.0	0.045	2000
HP0402-2N7□-N	2.7	250	±0.2nH	20	250	13.0	0.090	1500
HP0402-3N3□-N	3.3	250	3 / 5	20	250	12.8	0.050	1700
HP0402-3N6□-N	3.6	250	3 / 5	28	250	11.7	0.065	1700
HP0402-3N9□-N	3.9	250	3 / 5	28	250	9.50	0.065	1700
HP0402-4N3□-N	4.3	250	3 / 5	22	250	7.15	0.060	1600
HP0402-4N7□-N	4.7	250	3 / 5	18	250	6.85	0.115	1500
HP0402-5N1□-N	5.1	250	3 / 5	20	250	6.80	0.125	1200
HP0402-5N6□-N	5.6	250	3 / 5	28	250	6.80	0.070	1600
HP0402-6N2□-N	6.2	250	3 / 5	25	250	5.80	0.070	1600
HP0402-6N8□-N	6.8	250	3 / 5	25	250	5.80	0.095	1500
HP0402-7N5□-N	7.5	250	3 / 5	25	250	5.40	0.130	1400
HP0402-8N2□-N	8.2	250	3 / 5	30	250	5.40	0.080	1500
HP0402-8N7□-N	8.7	250	3 / 5	30	250	5.00	0.085	1500
HP0402-9N0□-N	9.0	250	3 / 5	28	250	5.00	0.090	1400
HP0402-9N5□-N	9.5	250	3 / 5	30	250	4.70	0.095	1400
HP0402-10N□-N	10	250	3 / 5	30	250	4.70	0.120	1300
HP0402-11N□-N	11	250	3 / 5	30	250	4.70	0.095	1400
HP0402-12N□-N	12	250	3 / 5	25	250	4.40	0.110	1200
HP0402-13N□-N	13	250	3 / 5	30	250	4.20	0.140	870
HP0402-15N□-N	15	250	3 / 5	30	250	3.90	0.130	1100
HP0402-16N□-N	16	250	3 / 5	30	250	3.70	0.150	850
HP0402-18N□-N	18	250	3 / 5	30	250	3.55	0.160	900
HP0402-19N□-N	19	250	3 / 5	30	250	3.50	0.175	850
HP0402-20N□-N	20	250	3 / 5	30	250	3.50	0.220	780
HP0402-21N□-N	21	250	3 / 5	30	250	1.70	0.360	450
HP0402-22N□-N	22	250	3 / 5	30	250	3.30	0.210	800
HP0402-23N□-N	23	250	3 / 5	30	250	3.15	0.210	700
HP0402-24N□-N	24	250	3 / 5	30	250	3.15	0.260	700
HP0402-25N□-N	25	250	3 / 5	30	250	3.15	0.310	700
HP0402-26N□-N	26	250	3 / 5	30	250	3.15	0.275	700
HP0402-27N□-N	27	250	3 / 5	30	250	3.20	0.300	450
HP0402-30N□-N	30	250	3 / 5	30	250	2.90	0.350	450
HP0402-33N□-N	33	250	3 / 5	30	250	2.80	0.380	490
HP0402-36N□-N	36	250	3 / 5	30	250	2.80	0.480	480
HP0402-37N□-N	37	250	3 / 5	30	250	2.70	0.490	470
HP0402-39N□-N	39	250	3 / 5	30	250	2.60	0.520	450
HP0402-40N□-N	40	250	3 / 5	30	250	2.60	0.520	450
HP0402-43N□-N	43	250	3 / 5	30	250	2.50	0.720	450
HP0402-47N□-N	47	250	3 / 5	30	250	2.40	0.720	420
HP0402-51N□-N	51	250	3 / 5	30	250	2.30	0.980	360

- When ordering, please specify tolerance and packaging codes.
- Tolerance : H = ±3% , J = ±5% , B = ±0.1nH , C = ±0.2nH
- L , Q : Agilent E4991A + Agilent HP16197A
- SRF : Agilent/HP8753D / Agilent/HP8722ES
- Rdc : Chroma16502
- Irms for a 15°C rise above 25°C ambient.
- Operating temperature range from -40°C to 125°C. (Including self - temperature rise)



SMD Wire Wound Ceramic Chip Inductors - HP Series

Electrical Characteristics

Part Number	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Typ	Test Frequency (MHz)	SRF (GHz) Typ	Rdc (Ω) Max	Irms (mA) Max	Color
HP0603-1N8□-N	1.8	250	5	23	250	16.0	0.033	2100	Black
HP0603-2N2□-N	2.2	250	5	13	250	15.0	0.182	900	Brown
HP0603-3N9□-N	3.9	250	5	26	250	7.50	0.062	1600	Red
HP0603-4N3□-N	4.3	250	3 / 5	26	250	7.50	0.088	1300	Orange
HP0603-4N7□-N	4.7	250	3 / 5	25	250	7.90	0.130	1100	Yellow
HP0603-6N8□-N	6.8	250	3 / 5	40	250	5.80	0.065	1400	Green
HP0603-7N2□-N	7.2	250	3 / 5	32	250	5.40	0.100	1400	Blue
HP0603-7N5□-N	7.5	250	3 / 5	32	250	5.30	0.100	1300	Violet
HP0603-11N□-N	11	250	3 / 5	41	250	4.10	0.086	1400	Gray
HP0603-15N□-N	15	250	3 / 5	42	250	3.60	0.110	1200	White
HP0603-16N□-N	16	250	3 / 5	40	250	3.50	0.125	1100	Black
HP0603-22N□-N	22	250	3 / 5	40	250	3.15	0.195	850	Brown
HP0603-23N□-N	23	250	3 / 5	40	250	3.00	0.150	850	Red
HP0603-24N□-N	24	250	3 / 5	42	250	2.95	0.125	1100	Orange
HP0603-27N□-N	27	250	3 / 5	42	250	2.80	0.200	780	Yellow
HP0603-30N□-N	30	250	3 / 5	49	250	2.80	0.130	920	Green
HP0603-33N□-N	33	250	3 / 5	45	250	2.70	0.170	680	Blue
HP0603-36N□-N	36	250	3 / 5	44	250	2.50	0.225	720	Violet
HP0603-39N□-N	39	250	3 / 5	48	250	2.45	0.190	680	Gray
HP0603-43N□-N	43	250	3 / 5	45	250	2.45	0.225	810	White
HP0603-47N□-N	47	200	3 / 5	43	250	2.30	0.240	680	Black
HP0603-51N□-N	51	200	3 / 5	42	250	2.30	0.280	660	Brown
HP0603-56N□-N	56	200	3 / 5	43	250	2.20	0.300	610	Red
HP0603-68N□-N	68	200	3 / 5	43	250	2.00	0.330	600	Orange
HP0603-72N□-N	72	150	3 / 5	37	250	1.90	0.420	550	Yellow
HP0603-75N□-N	75	150	3 / 5	37	250	1.90	0.520	500	Green
HP0603-82N□-N	82	150	3 / 5	38	250	1.80	0.460	510	Blue
HP0603-91N□-N	91	150	3 / 5	45	250	1.65	0.580	440	Violet
HP0603-R10□-N	100	150	3 / 5	49	250	1.70	0.540	470	Gray
HP0603-R11□-N	110	150	3 / 5	47	250	1.60	0.620	440	White
HP0603-R12□-N	120	150	3 / 5	47	250	1.55	0.720	420	Black
HP0603-R15□-N	150	150	3 / 5	47	250	1.35	1.150	390	Brown
HP0603-R18□-N	180	100	3 / 5	48	250	1.30	1.500	310	Red
HP0603-R20□-N	200	100	3 / 5	47	250	1.25	2.000	280	Orange
HP0603-R21□-N	210	100	3 / 5	48	250	1.20	2.000	280	Yellow
HP0603-R22□-N	220	100	3 / 5	47	250	1.10	2.000	280	Green
HP0603-R25□-N	250	100	3 / 5	45	250	1.05	3.000	240	Blue
HP0603-R27□-N	270	100	3 / 5	46	250	1.05	2.250	260	Violet
HP0603-R30□-N	300	100	3 / 5	47	250	0.99	2.800	220	Gray
HP0603-R33□-N	330	100	3 / 5	46	250	0.93	3.600	180	White
HP0603-R36□-N	360	100	3 / 5	47	250	0.93	4.000	170	Black
HP0603-R39□-N	390	100	3 / 5	47	250	0.88	4.000	170	Brown

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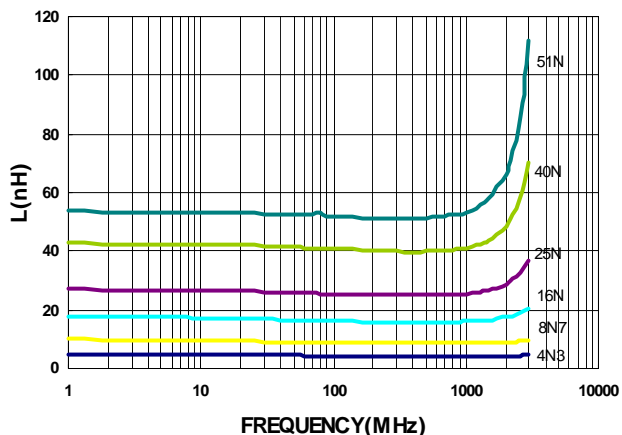


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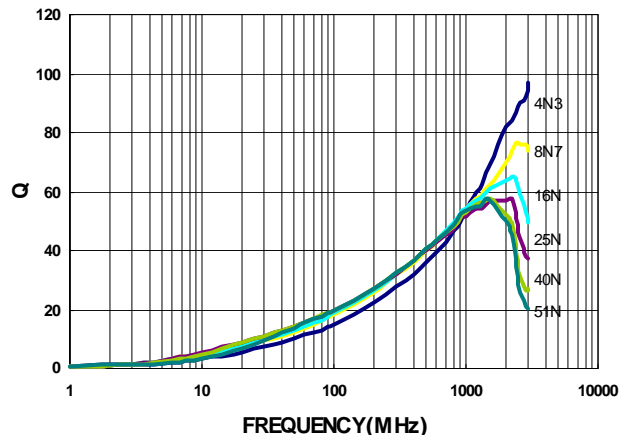
Test Instruments : Agilent E4991A Material/Impedance Analyzer

HP0402

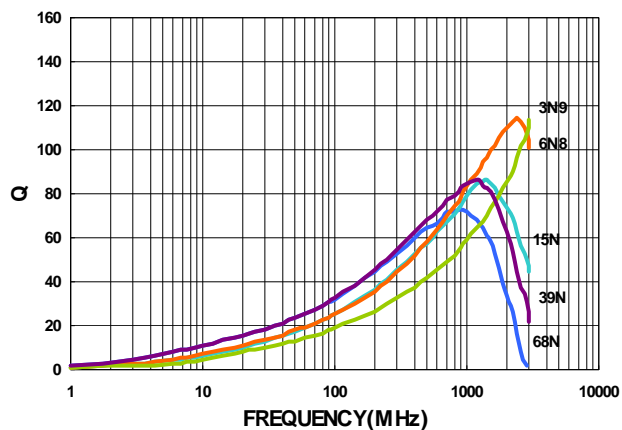
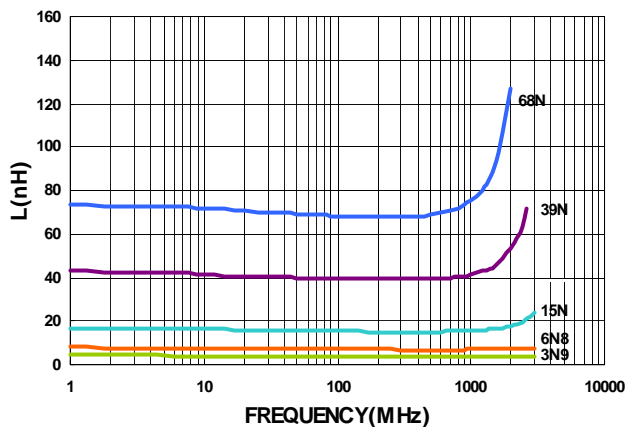
Typical **L** vs. **F** Frequency



Typical **Q** vs. **F** Frequency



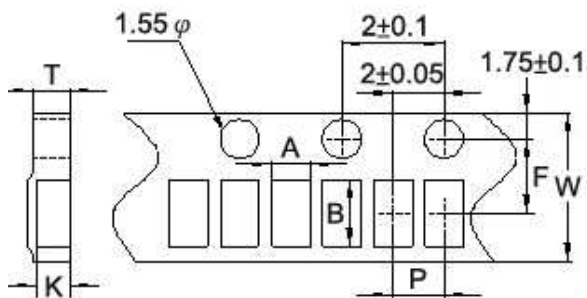
HP0603



Packaging Specifications

Tape Dimensions

Figure 1



Tape Material

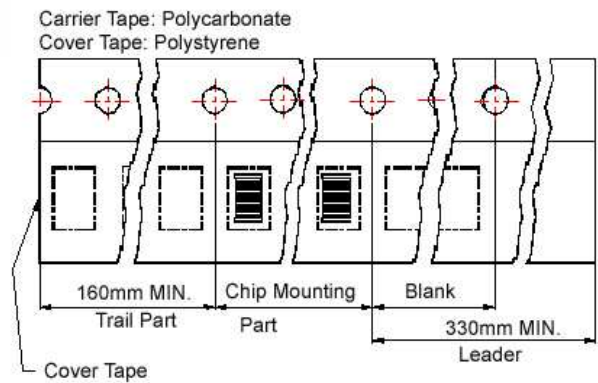
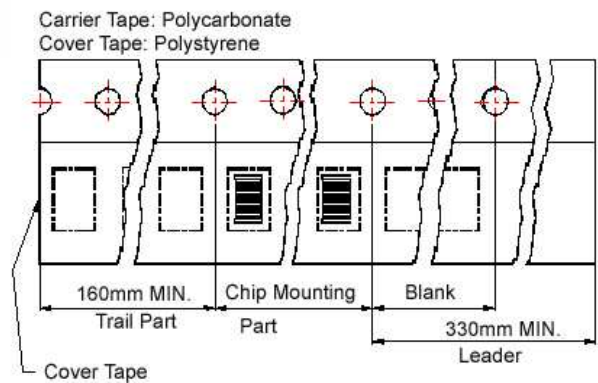
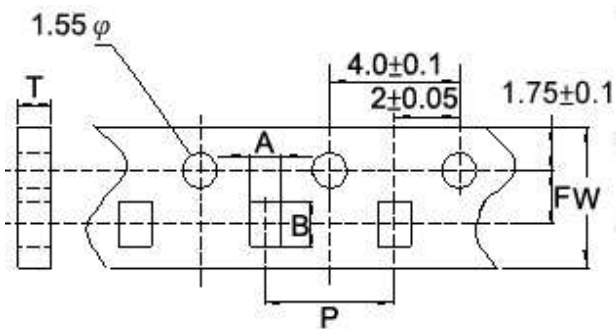
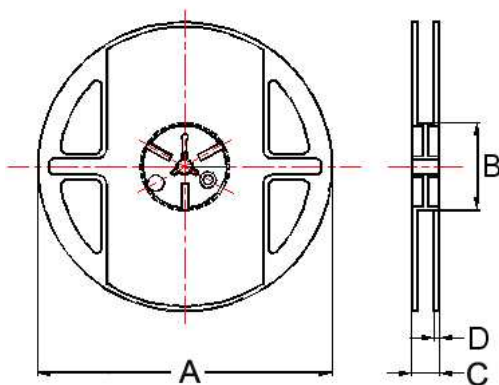


Figure 2



Reel Dimensions



Dimensions in mm

TYPE	Fig.	Tape Dimensions							Reel Dimensions				Quantity PCS / Reel
		A	B	T	W	P	F	K	A	B	C	D	
HP0402	1	0.83	1.20	0.75	8	2	3.5	0.64	178	60	12	1.5	4000
HP0603	2	1.20	1.80	0.97	8	4	3.5	-	178	60	12	1.5	4000