

Multilayer RF Inductors---HFM Series



Features

- Compact design.
- High self resonant frequency
- High reliability.
- RoHS compliant.
- Operating temperature range $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (Including self - temperature rise).

Applications

- Communications, Computer, Remote control, etc.
- Mobile phones .
- Filters
- Navigation systems, Bluetooth, WLAN

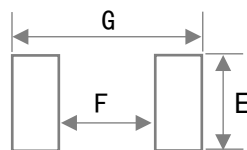
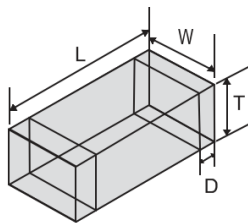
Production identification

HFM
1005
-
2N2
J

①
②
③
④

- ① Series name
- ② Size: 1.0×0.5mm
- ③ Inductance: 2.2nH
- ④ Tolerance: G = $\pm 2\%$, H = $\pm 3\%$, J = $\pm 5\%$, K = $\pm 10\%$,
B = $\pm 0.1\text{nH}$, C = $\pm 0.2\text{nH}$, S = $\pm 0.3\text{nH}$, D = $\pm 0.5\text{nH}$

Series Shape and Dimensions (Unit: mm)



Series	L(mm)	W(mm)	T(mm)	D(mm)	E(mm)	F(mm)	G(mm)	SPQ (PCS)
HFM1005	1.0 ± 0.15	0.5 ± 0.15	0.5 ± 0.15	0.25 ± 0.1	0.6 ± 0.1	0.5 ± 0.1	1.4 ± 0.1	10000
HFM1608	1.6 ± 0.2	0.8 ± 0.2	0.8 ± 0.2	0.3 ± 0.2	0.9 ± 0.1	0.8 ± 0.1	2.2 ± 0.1	4000
HFM2012	2.0 ± 0.2	1.2 ± 0.2	0.9 ± 0.2	0.5 ± 0.3	1.0 ± 0.1	1.2 ± 0.1	3.0 ± 0.1	4000

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HFW1005 Electrical Characteristics

Part Number	Inductance (nH)	Q Value (Min)	Test Freq. L/Q (MHz)	Typ. Q @ Freq. (MHz)			SRF Min. (GHz)	DCR Max (Ω)	Rated Current Max (mA)
				100	800	1000			
HFM1005-0N6_	0.6	4	100	6	35	41	10.00	0.10	800
HFM1005-1N0_	1.0	8	100	11	34	36	10.00	0.10	400
HFM1005-1N1_	1.1	8	100	11	34	36	10.00	0.10	400
HFM1005-1N2_	1.2	8	100	11	34	36	10.00	0.10	400
HFM1005-1N3_	1.3	8	100	11	34	36	10.00	0.10	400
HFM1005-1N5_	1.5	8	100	11	34	36	6.00	0.10	300
HFM1005-1N6_	1.6	8	100	11	32	35	6.00	0.10	300
HFM1005-1N8_	1.8	8	100	11	30	34	6.00	0.10	300
HFM1005-2N0_	2.0	8	100	10	29	33	6.00	0.20	300
HFM1005-2N2_	2.2	8	100	10	29	33	6.00	0.20	300
HFM1005-2N4_	2.4	8	100	10	29	32	6.00	0.20	300
HFM1005-2N7_	2.7	8	100	10	29	32	6.00	0.20	300
HFM1005-3N0_	3.0	8	100	10	29	32	6.00	0.20	300
HFM1005-3N3_	3.3	8	100	10	29	32	6.00	0.20	300
HFM1005-3N6_	3.6	8	100	10	28	31	4.00	0.20	300
HFM1005-3N9_	3.9	8	100	10	28	31	4.00	0.20	300
HFM1005-4N3_	4.3	8	100	10	28	31	4.00	0.20	300
HFM1005-4N7_	4.7	8	100	10	28	31	4.00	0.20	300
HFM1005-5N1_	5.1	8	100	10	28	30	4.00	0.30	300
HFM1005-5N6_	5.6	8	100	10	28	30	4.00	0.30	300
HFM1005-6N2_	6.2	8	100	10	27	30	3.90	0.30	300
HFM1005-6N8_	6.8	8	100	10	27	30	3.90	0.30	300
HFM1005-7N5_	7.5	8	100	10	27	30	3.70	0.40	300
HFM1005-8N2_	8.2	8	100	10	27	30	3.60	0.40	300
HFM1005-9N1_	9.1	8	100	10	27	30	3.40	0.40	300
HFM1005-10N_	10	8	100	10	27	30	3.20	0.40	300
HFM1005-12N_	12	8	100	10	26	29	2.70	0.50	300
HFM1005-15N_	15	8	100	10	26	28	2.30	0.50	300
HFM1005-18N_	18	8	100	10	25	27	2.10	0.60	300
HFM1005-20N_	20	8	100	10	25	26	2.00	0.60	300
HFM1005-22N_	22	8	100	10	25	25	1.90	0.60	300
HFM1005-27N_	27	8	100	10	25	23	1.60	0.70	300
HFM1005-33N_	33	8	100	10	22	22	1.30	0.80	200
HFM1005-39N_	39	8	100	10	22	19	1.20	1.00	200
HFM1005-43N_	43	8	100	10	21	16	1.10	1.10	200
HFM1005-47N_	47	8	100	10	21	16	1.00	1.10	200
HFM1005-56N_	56	8	100	10	18	13	0.75	1.20	200

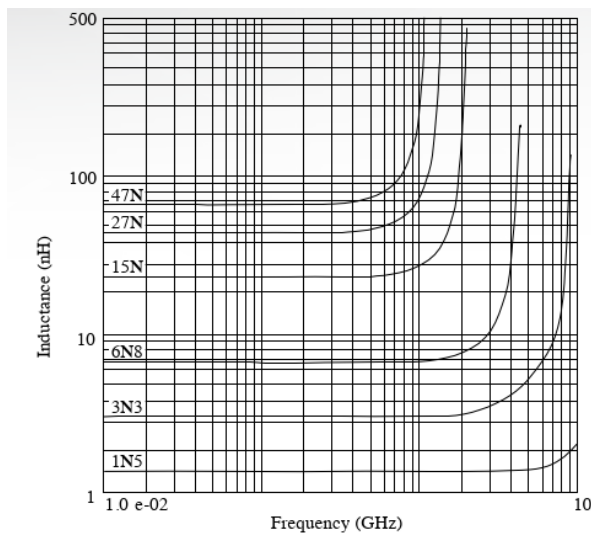
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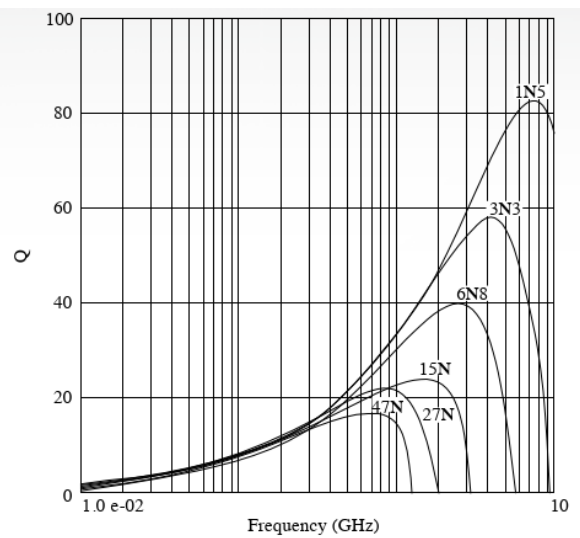
HFW1005 Electrical Characteristics

Part Number	Inductance (nH)	Q Value (Min)	Test Freq. L/Q (MHz)	Typ. Q @ Freq. (MHz)			SRF Min. (GHz)	DCR Max (Ω)	Rated Current Max (mA)
				100	800	1000			
HFM1005-68N_	68	8	100	10	18	9	0.75	1.40	180
HFM1005-82N_	82	8	100	10	13	-	0.75	2.40	150
HFM1005-R10_	100	8	100	10	12	-	0.70	2.60	150
HFM1005-R12_	120	8	100	10	-	-	0.60	2.80	150
HFM1005-R15_	150	8	100	10	-	-	0.55	3.20	100
HFM1005-R18_	180	8	100	10	-	-	0.50	3.70	100
HFM1005-R22_	220	8	100	12	-	-	0.45	4.00	100
HFM1005-R27_	270	8	100	12	-	-	0.40	4.50	100
HFM1005-R30_	300	8	100	12	-	-	0.40	4.50	100
HFM1005-R33_	330	6	50	8	-	-	0.35	7.00	50
HFM1005-R36_	360	6	50	8	-	-	0.30	7.50	50

HFM1005 Typical Electrical Graphs



Q vs. Frequency



Inductance vs. Frequency

Multilayer RF Inductors---HFM Series



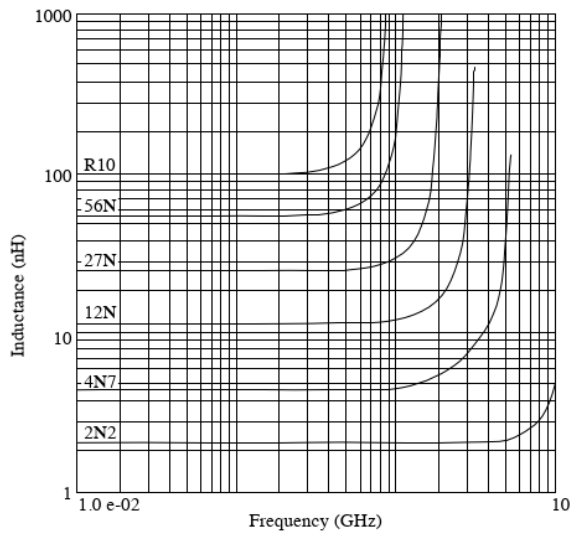
HFW1608 Electrical Characteristics

Part Number	Inductance (nH)	Q Value (Min)	Test Freq. L/Q (MHz)	Typ. Q @ Freq. (MHz)			SRF Min. (GHz)	DCR Max(Ω)	Rated Current Max (mA)
				100	800	1000			
HFM1608-1N0_	1.0	8	100	13	70	80	10.00	0.05	500
HFM1608-1N2_	1.2	8	100	13	60	70	10.00	0.05	500
HFM1608-1N5_	1.5	8	100	13	47	68	6.00	0.10	500
HFM1608-1N8_	1.8	8	100	13	45	61	6.00	0.10	500
HFM1608-2N2_	2.2	8	100	13	45	60	6.00	0.10	500
HFM1608-2N7_	2.7	10	100	13	44	55	6.00	0.12	500
HFM1608-3N3_	3.3	10	100	13	43	50	6.00	0.15	500
HFM1608-3N9_	3.9	10	100	13	43	50	6.00	0.16	500
HFM1608-4N7_	4.7	10	100	13	43	50	6.00	0.20	500
HFM1608-5N6_	5.6	10	100	14	42	48	5.00	0.25	500
HFM1608-6N8_	6.8	10	100	14	43	50	5.00	0.30	500
HFM1608-8N2_	8.2	10	100	14	43	48	4.50	0.35	500
HFM1608-10N_	10	12	100	15	45	50	3.50	0.40	300
HFM1608-12N_	12	12	100	18	48	50	3.00	0.45	300
HFM1608-15N_	15	12	100	18	48	50	2.30	0.50	300
HFM1608-18N_	18	12	100	16	48	51	2.20	0.55	300
HFM1608-22N_	22	12	100	16	45	48	2.00	0.60	300
HFM1608-27N_	27	12	100	16	45	45	1.70	0.65	300
HFM1608-33N_	33	12	100	16	45	41	1.50	0.70	300
HFM1608-39N_	39	12	100	17	40	48	1.40	0.70	300
HFM1608-47N_	47	12	100	17	35	35	1.20	0.70	300
HFM1608-56N_	56	12	100	17	35	30	1.10	0.75	300
HFM1608-68N_	68	12	100	17	30	20	0.90	0.85	300
HFM1608-82N	82	8	100	15	22	-	0.80	1.00	300
HFM1608-R10_	100	8	100	15	16	-	0.70	1.20	300
HFM1608-R12_	120	8	50	15	-	-	0.60	1.40	200
HFM1608-R15_	150	8	50	15	-	-	0.50	1.60	200
HFM1608-R18_	180	8	50	15	-	-	0.40	1.90	200
HFM1608-R22_	220	8	50	15	-	-	0.35	2.40	200
HFM1608-R27_	270	8	50	16	-	-	0.35	2.60	150
HFM1608-R33_	330	8	50	16	-	-	0.35	2.80	150
HFM1608-R39_	390	8	50	16	-	-	0.30	3.20	150
HFM1608-R43_	430	8	50	16	-	-	0.28	3.40	150
HFM1608-R47_	470	8	50	15	-	-	0.25	3.60	150
HFM1608-R56_	560	8	50	15	-	-	0.25	4.00	100
HFM1608-R68_	680	8	50	15	-	-	0.25	4.50	100

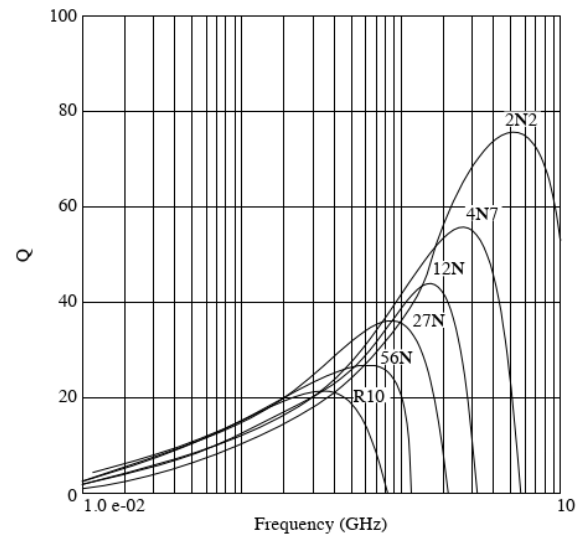
Multilayer RF Inductors---HFM Series



HFM1608 Typical Electrical Graphs



Q vs. Frequency



Inductance vs. Frequency