FEATURES

HFI chip inductors are Mag Layers line of high frequency ceramic chip inductors. We have developed highly reliable and versatile chip inductors that will meet your high frequency design requirements.

- **High Frequency Range**
  HFI chip inductors have a ceramic material construction that extends the effective frequency range to 10GHz.
- **Multiple Size Availability**
  HFI chip inductors are available in three compact sizes: 060303,100505, 160808 and 201209.
- **High Q characteristics**
  H-series HFI chip inductors exhibit higher Q at high frequency.

APPLICATIONS

HFI chip inductors can be used in a variety of electronics including:

- Cellular Phones
- Pager
- High-Speed Communication Devices
- WALN and RF module

PRODUCT IDENTIFICATION

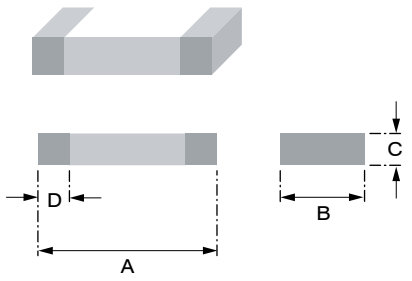
❶ ❷ ❸ ❹ ❺

HFI - 160808 - 1N2 S □□

❶ Product Code
❷ Dimensions (in mm)
❸ Inductance Code
❹ Tolerance Code
❺ Pattern Code

Code	Tolerance
G	±2%
J	±5%
K	±10%
C	±0.2nH
S	±0.3nH

PRODUCT DIMENSIONS



NOTE: Dimension in mm (inch)

PRODUCT NO.	A	B	C	D
HFI-201209 (0805)	2.0±0.20 (0.079±0.008)	1.2±0.20 (0.047±0.008)	0.9±0.20 (0.035±0.008)	0.5±0.30 (0.020±0.012)
HFI-160808 (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±0.20 (0.012±0.008)
HFI-100505 (0402)	1.0±0.10 (0.039±0.004)	0.5±0.10 (0.020±0.004)	0.5±0.10 (0.020±0.004)	0.25±0.10 (0.010±0.004)
HFI-060303 (0201)	0.6±0.03 (0.024±0.001)	0.33max. (0.012max.)	0.33max. (0.012max.)	0.15±0.05 (0.006±0.002)

PRODUCT SPECIFICATIONS

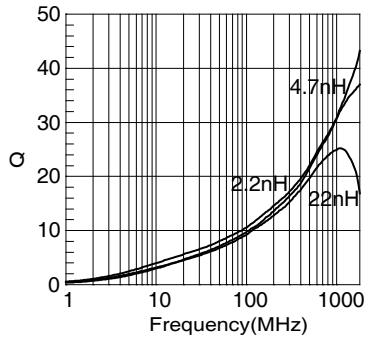
PART NUMBER	Inductance (nH) at 100 MHz	Tolerance	Q Min.	Q Typical			S.R.F.(MHz) Min.	R_{DC} (Ω) Max.	Rated Current (mA) Max.
			100 MHz	100 MHz	500 MHz	800 MHz			
HFI-060303-0N3□	0.3	C	4	5	13	18	10000	0.07	250
HFI-060303-0N4□	0.4	C	4	5	13	18	10000	0.07	250
HFI-060303-0N5□	0.5	C	4	5	13	18	10000	0.08	250
HFI-060303-0N6□	0.6	C	4	5	13	18	10000	0.08	250
HFI-060303-0N7□	0.7	C	4	5	13	18	10000	0.09	250
HFI-060303-0N8□	0.8	C	4	5	13	18	10000	0.10	250
HFI-060303-0N9□	0.9	C	4	5	13	18	10000	0.10	250
HFI-060303-1N0□	1.0	C,S	4	5	15	19	10000	0.14	250
HFI-060303-1N1□	1.1	C,S	4	6	15	20	10000	0.14	250
HFI-060303-1N2□	1.2	C,S	4	6	15	20	10000	0.14	250
HFI-060303-1N3□	1.3	C,S	4	6	15	20	10000	0.14	250
HFI-060303-1N5□	1.5	C,S	4	6	15	20	10000	0.18	230
HFI-060303-1N6□	1.6	C,S	4	6	15	20	10000	0.18	230
HFI-060303-1N8□	1.8	C,S	4	6	15	20	10000	0.19	200
HFI-060303-2N0□	2.0	C,S	4	6	15	20	8800	0.20	200
HFI-060303-2N2□	2.2	C,S	4	6	15	20	8800	0.22	200
HFI-060303-2N4□	2.4	C,S	4	6	15	20	8300	0.24	200
HFI-060303-2N7□	2.7	C,S	5	6	16	20	7700	0.25	200
HFI-060303-3N0□	3.0	C,S	5	6	16	20	7200	0.28	180
HFI-060303-3N3□	3.3	C,S,K	5	6	16	20	6700	0.30	180
HFI-060303-3N6□	3.6	C,S,K	5	6	16	20	6400	0.30	170
HFI-060303-3N9□	3.9	C,S,K	5	7	16	20	6000	0.30	170
HFI-060303-4N3□	4.3	C,S,K	5	7	16	20	5700	0.40	150
HFI-060303-4N7□	4.7	C,S,K	5	7	16	20	5300	0.40	150
HFI-060303-5N1□	5.1	C,S,K	5	7	16	20	5000	0.40	150
HFI-060303-5N6□	5.6	C,S,K	5	7	16	20	4200	0.40	150
HFI-060303-6N2□	6.2	G,J,K	5	7	16	20	3800	0.44	150
HFI-060303-6N8□	6.8	G,J,K	5	7	16	20	3500	0.50	150
HFI-060303-7N5□	7.5	G,J,K	5	7	15	20	3300	0.53	150
HFI-060303-8N2□	8.2	G,J,K	5	7	15	20	3200	0.55	150
HFI-060303-9N1□	9.1	G,J,K	5	6	15	20	3000	0.62	150
HFI-060303-10N□	10	G,J,K	5	7	15	19	2800	0.65	150
HFI-060303-12N□	12	G,J,K	5	7	14	18	2400	0.70	100
HFI-060303-15N□	15	G,J,K	5	7	14	18	2200	0.80	100
HFI-060303-18N□	18	G,J,K	5	7	14	18	2100	0.90	100

PRODUCT SPECIFICATIONS

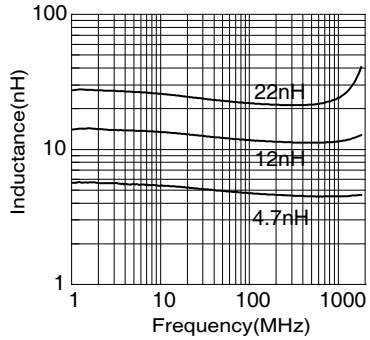
PART NUMBER	Inductance (nH) at 100 MHz	Tolerance	Q Min.	Q Typical			S.R.F.(MHz) Min.	R_{DC} (Ω) Max.	Rated Current (mA) Max.
			100 MHz	100 MHz	500 MHz	800 MHz			
HFI-060303-22N□	2.2	G,J,K	5	7	14	18	1800	1.20	100
HFI-060303-27N□	27	G,J,K	4	6	14	16	1800	1.80	50
HFI-060303-33N□	33	G,J,K	4	6	12	14	1700	2.10	50
HFI-060303-39N□	39	G,J,K	4	6	12	14	1500	2.40	50
HFI-060303-47N□	47	G,J,K	4	6	11	13	1300	2.80	50

TYPICAL ELECTRICAL CHARACTERISTIC CURVES

Q vs. Freq. Characteristics



Inductance vs. Freq. Characteristics



PRODUCT SPECIFICATIONS

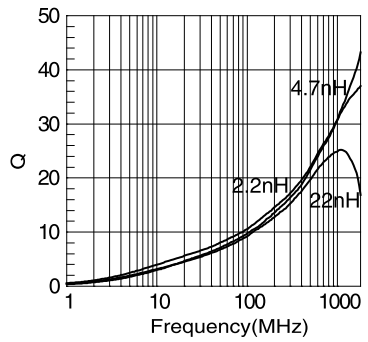
PART NUMBER	INDUCTANCE (nH) AT 100 MHz	Q Min.	Q Typical	S.R.F.(MHz) Min.	R_{DC} (Ω) Max.	I_{DC} (mA) Max.
		100MHz	800 MHz			
HFI-100505-1N0□	1.0	8	43	10000	0.12	300
HFI-100505-1N1□	1.1					
HFI-100505-1N2□	1.2					
HFI-100505-1N3□	1.3			6000	0.13	
HFI-100505-1N5□	1.5					
HFI-100505-1N6□	1.6		41		0.14	
HFI-100505-1N8□	1.8					
HFI-100505-2N0□	2.0		36		0.16	
HFI-100505-2N2□	2.2					
HFI-100505-2N4□	2.4				0.17	
HFI-100505-2N7□	2.7		38			
HFI-100505-3N0□	3.0		37		0.19	
HFI-100505-3N3□	3.3					
HFI-100505-3N6□	3.6		32	5000	0.22	
HFI-100505-3N9□	3.9			4000		
HFI-100505-4N3□	4.3				0.24	
HFI-100505-4N7□	4.7		37			
HFI-100505-5N1□	5.1		35		0.27	
HFI-100505-5N6□	5.6					
HFI-100505-6N2□	6.2		34	3900	0.32	
HFI-100505-6N8□	6.8					
HFI-100505-7N5□	7.5			3700	0.35	
HFI-100505-8N2□	8.2			3500	0.37	
HFI-100505-9N1□	9.1		31	3400	0.40	
HFI-100505-10N□	10.0			3200	0.42	
HFI-100505-12N□	12.0			2600	0.50	
HFI-100505-15N□	15.0		30	2300	0.55	
HFI-100505-18N□	18.0			2000	0.65	
HFI-100505-22N□	22.0			1600	0.80	
HFI-100505-27N□	27.0		28	1400	0.90	
HFI-100505-33N□	33.0		26	1200	1.00	200
HFI-100505-39N□	39.0		24	1100	1.20	
HFI-100505-47N□	47.0		23	900	1.30	

PRODUCT SPECIFICATIONS

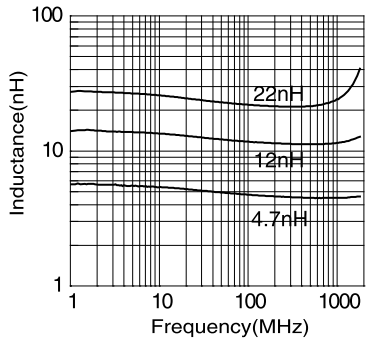
PART NUMBER	Inductance (nH) at 100 MHz	Q Min.	Q Typical	S.R.F.(MHz) Min.	R_{DC} (Ω) Max.	Rated Current (mA) Max.
		100 MHz	800 MHz			
HFI-100505-56N□	56.0	8	21	750	1.40	200
HFI-100505-68N□	68.0		19			180
HFI-100505-82N□	82.0		16	600	1.60	150
HFI-100505-R10□	100.0		-			100
HFI-100505-R12□	120.0		-			

TYPICAL ELECTRICAL CHARACTERISTIC CURVES

Q vs. Freq. Characteristics



Inductance vs. Freq. Characteristics

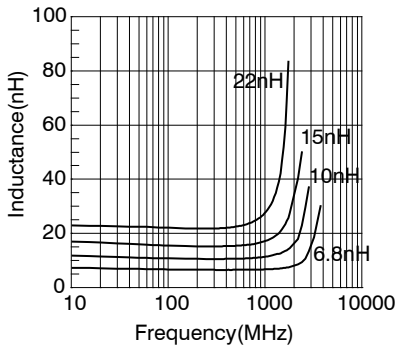


PRODUCT SPECIFICATIONS

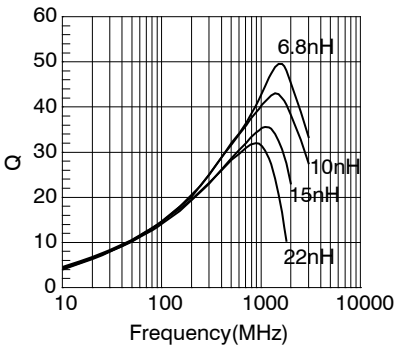
PART NUMBER	INDUCTANCE (nH) AT 100 MHz	Q Min.	Q Typical	S.R.F.(MHz) Min.	R_{DC} (Ω) Max.	I_{DC} (mA) Max.
		100MHz	800 MHz			
HFI-160808-1N0□	1.0	8	47	6000	0.10	1000
HFI-160808-1N2□	1.2					
HFI-160808-1N5□	1.5					
HFI-160808-1N8□	1.8		55			
HFI-160808-2N2□	2.2	10	49			
HFI-160808-2N7□	2.7		48		0.13	
HFI-160808-3N3□	3.3		51			
HFI-160808-3N9□	3.9		48		0.15	
HFI-160808-4N7□	4.7			4000	0.20	
HFI-160808-5N6□	5.6		46		0.23	600
HFI-160808-6N8□	6.8		48		0.25	
HFI-160808-8N2□	8.2		50	3500	0.28	
HFI-160808-10N□	10.0	12	47	3200	0.30	
HFI-160808-12N□	12.0		45	2600	0.35	
HFI-160808-15N□	15.0		48	2300	0.40	
HFI-160808-18N□	18.0		47	2000	0.45	
HFI-160808-22N□	22.0		49	1600	0.50	
HFI-160808-27N□	27.0		47	1400	0.55	
HFI-160808-33N□	33.0		46	1200	0.60	
HFI-160808-39N□	39.0			1100	0.65	500
HFI-160808-47N□	47.0		39	900	0.70	
HFI-160808-56N□	56.0		37		0.75	
HFI-160808-68N□	68.0		36	700	0.85	400
HFI-160808-82N□	82.0		29	600	0.95	300
HFI-160808-R10□	100.0		16		1.0	
HFI-160808-R12□	120.0 at 50MHz	*8	17	500	1.20	
HFI-160808-R15□	150.0 at 50MHz		-			
HFI-160808-R18□	180.0 at 50MHz		-	400	1.30	
HFI-160808-R22□	220.0 at 50MHz		-		1.50	
HFI-160808-R27□	270.0 at 50MHz		-			

TYPICAL ELECTRICAL CHARACTERISTIC CURVES

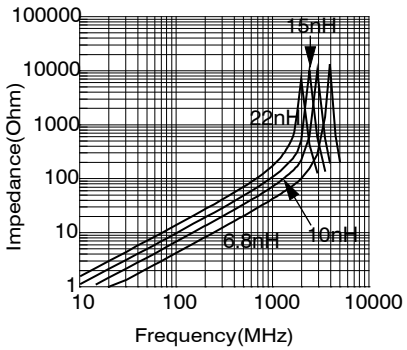
Inductance vs. Freq. Characteristics



Q vs. Freq. Characteristics



Impedance vs. Freq. Characteristics

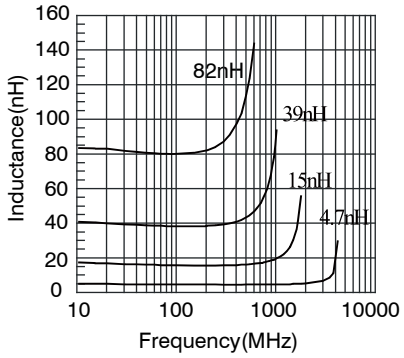


PRODUCT SPECIFICATIONS

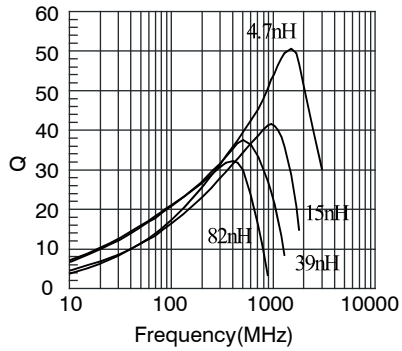
PART NUMBER	INDUCTANCE (nH) AT 100 MHz	Q Min.	Q Typical	S.R.F.(MHz) Min.	R_{DC} (Ω) Max.	I_{DC} (mA) Max.
		100MHz *50MHz	800 MHz			
HFI-201209-1N5□	1.5	10	61	4000	0.10	300
HFI-201209-1N8□	1.8		55			
HFI-201209-2N2□	2.2		53			
HFI-201209-2N7□	2.7	12	56			
HFI-201209-3N3□	3.3		47		0.13	
HFI-201209-3N9□	3.9		54		0.15	
HFI-201209-4N7□	4.7		55	3500	0.20	
HFI-201209-5N6□	5.6	15	60	3200	0.23	
HFI-201209-6N8□	6.8		63	2800	0.25	
HFI-201209-8N2□	8.2			2400	0.28	
HFI-201209-10N□	10.0		60	2100	0.30	
HFI-201209-12N□	12.0			1900	0.35	
HFI-201209-15N□	15.0		63	1600	0.40	
HFI-201209-18N□	18.0			1500	0.45	
HFI-201209-22N□	22.0	18	60	1400	0.50	
HFI-201209-27N□	27.0		58	1300	0.55	
HFI-201209-33N□	33.0		55	1200	0.60	
HFI-201209-39N□	39.0		47	1000	0.65	
HFI-201209-47N□	47.0		43	900	0.70	
HFI-201209-56N□	56.0		39	800	0.75	
HFI-201209-68N□	68.0		30	700	0.80	
HFI-201209-82N□	82.0		-	600	0.90	
HFI-201209-R10□	100.0		-			
HFI-201209-R12□	120.0 at 50 MHz	*13	-	500	0.95	
HFI-201209-R15□	150.0 at 50 MHz		-		1.00	
HFI-201209-R18□	180.0at 50 MHz		-	400	1.10	
HFI-201209-R22□	220.0 at 50 MHz	*12	-	350	1.20	
HFI-201209-R27□	270.0 at 50 MHz		-	300	1.30	
HFI-201209-R33□	330.0 at 50 MHz		-	250	1.40	
HFI-201209-R39□	390.0 at 50 MHz	*10	-		1.30	
HFI-201209-R47□	470.0 at 50 MHz		-	200	1.50	

TYPICAL ELECTRICAL CHARACTERISTIC CURVES

Inductance vs. Freq. Characteristics



Q vs. Freq. Characteristics



Impedance vs. Freq. Characteristics