

## FEATURES

- High Q value and high self-resonant frequency with ceramic material.
- Small chip suitable for surface mounting .
- Tight inductance tolerance and high reliability.
- Operating Temperature: -40°C~+85°C .
- RoHS, Halogen Free and REACH Compliance.



## APPLICATIONS

- Bluetooth, Broadband network,W-LAN.
- Mobile phones and other electronic devices.
- High frequency circuit in telecommunication.

## PART NUMBERING



① Grade	
A	Grade Code

② Series Name	
HW	High Frequency Wire Wound Chip Inductor

③ External Dimensions	
	1005 [0402]
	1608 [0603]
	2012 [0805]
	2520 [1008]
	3225 [1210]

④ Feature Type	
C	Ceramic core

⑤ Nominal inductance	
Code (example)	Nominal inductance [nH]
2N2	2.2nH
10N	10nH
R10	100nH

⑦ Packaging	
T	Tape & Reel

⑥ Inductance tolerance	
Code (example)	Inductance tolerance
J	±5%
K	±10%
M	±20%

⑨ Design Code	
□□	Standard product is blank

⑧ HSF Products	
F	Hazardous Substance Free Products

Dimensions & Recommended Land Pattern



Recommended Land Pattern

Unit: mm

Series	Dimensions			Recommended Land Pattern		
	A Max.	B Max.	C Max.	I Typ.	H Typ.	J Typ.
AHW1005C	1.2	0.7	0.64	0.36	0.66	0.46
AHW1608C	1.8	1.12	1.01	0.64	1.02	0.64
AHW2012C	2.29	1.73	1.55	1.02	1.78	0.76
AHW2520C	2.92	2.75	2.29	1.02	2.54	1.27
AHW3225C	3.55	2.95	2.6	1.02	2.85	1.78

Electrical Characteristics

● AHW1005C Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	Ω
Symbol	L	Freq.	I <sub>rms</sub>	Q	S.R.F	DCR
AHW1005C-1N0□TF	1	250	1360	10	12900	0.045
AHW1005C-2N2□TF	2.2	250	960	21	10800	0.090
AHW1005C-2N4□TF	2.4	250	920	22	10650	0.120
AHW1005C-2N6□TF	2.6	250	880	23	10500	0.150
AHW1005C-2N7□TF	2.7	250	860	22	10400	0.170
AHW1005C-3N3□TF	3.3	250	840	24	7000	0.076
AHW1005C-3N9□TF	3.9	250	840	24	6000	0.076
AHW1005C-4N7JTF	4.7	250	640	20	4770	0.130
AHW1005C-5N6JTF	5.6	250	760	25	4800	0.110
AHW1005C-6N8JTF	6.8	250	680	24	4800	0.120
AHW1005C-8N2JTF	8.2	250	680	25	4400	0.150
AHW1005C-10NJTF	10	250	480	24	3900	0.200
AHW1005C-12NJTF	12	250	640	26	3600	0.120
AHW1005C-15NJTF	15	250	560	26	3280	0.170
AHW1005C-18NJTF	18	250	420	25	3100	0.230
AHW1005C-20NJTF	20	250	420	26	3000	0.250
AHW1005C-22NJTF	22	250	400	25	2800	0.300
AHW1005C-27NJTF	27	250	400	25	2480	0.300
AHW1005C-33NJTF	33	250	400	24	2350	0.400
AHW1005C-39NJTF	39	250	200	25	2100	0.550
AHW1005C-47NJTF	47	250	150	25	2100	0.830
AHW1005C-56NJTF	56	250	100	25	1760	0.970
AHW1005C-68NJTF	68	250	100	25	1620	1.500

## Electrical Characteristics

## ● AHW1005C Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	$\Omega$
Symbol	L	Freq.	Irms	Q	S.R.F	DCR
AHW1005C-82NJTF	82	250	50	25	1260	1.800
AHW1005C-91NJTF	91	250	30	24	1160	2.200
AHW1005C-R10JTF	100	250	30	24	1160	2.500
AHW1005C-R12JTF	120	250	30	24	1100	2.200
AHW1005C-R15JTF	150	250	20	10	1000	4.000

## ● AHW1608 Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	$\Omega$
Symbol	L	Freq.	Irms	Q	S.R.F	DCR
AHW1608C-2N2□TF	2.2	250	700	20	6800	0.25
AHW1608C-2N4□TF	2.4	250	700	8	12500	0.25
AHW1608C-2N6□TF	2.6	250	700	21	5000	0.044
AHW1608C-2N7□TF	2.7	250	700	22	5900	0.045
AHW1608C-3N3□TF	3.3	250	700	24	5860	0.102
AHW1608C-4N7JTF	4.7	250	700	20	5800	0.116
AHW1608C-6N8JTF	6.8	250	700	27	5800	0.110
AHW1608C-8N2JTF	8.2	250	700	30	4200	0.115
AHW1608C-10NJTF	10	250	700	31	4800	0.130
AHW1608C-15NJTF	15	250	700	35	4000	0.170
AHW1608C-18NJTF	18	250	700	35	3100	0.170
AHW1608C-22NJTF	22	250	700	38	3000	0.190
AHW1608C-27NJTF	27	250	600	40	2800	0.220
AHW1608C-43NJTF	43	250	600	38	2000	0.280
AHW1608C-47NJTF	47	200	600	38	2000	0.280
AHW1608C-56NJTF	56	200	600	38	1900	0.310
AHW1608C-68NJTF	68	200	600	37	1700	0.340
AHW1608C-82NJTF	82	150	400	34	1700	0.540
AHW1608C-91NJTF	91	150	400	28	1600	0.580
AHW1608C-R10JTF	100	150	400	34	1400	0.580
AHW1608C-R12JTF	120	150	300	32	1300	0.650
AHW1608C-R15JTF	150	150	280	28	990	0.920
AHW1608C-R16JTF	160	150	280	28	990	1.250
AHW1608C-R20JTF	200	100	200	25	900	1.980
AHW1608C-R22JTF	220	100	200	25	900	2.100
AHW1608C-R24JTF	240	100	200	25	900	2.200
AHW1608C-R27JTF	270	100	170	26	830	2.160
AHW1608C-R29JTF	290	100	100	25	800	3.200
AHW1608C-R30JTF	300	100	100	25	790	2.500
AHW1608C-R33JTF	330	100	100	25	790	3.890
AHW1608C-R39JTF	390	100	100	25	780	4.350
AHW1608C-R47JTF	470	100	100	25	700	4.500
AHW1608C-R56JTF	560	100	90	23	460	5.000

## Electrical Characteristics

## ● AHW2012C Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	Ω
Symbol	L	Freq.	Irms	Q	S.R.F	DCR
AHW2012C-2N2□TF	2.2	250	800	50@1GHz	7900	0.060
AHW2012C-2N7□TF	2.7	250	800	50@1GHz	7900	0.060
AHW2012C-3N0□TF	3	250	800	40@1.5GHz	7900	0.060
AHW2012C-3N3□TF	3.3	250	600	40@1.5GHz	7900	0.080
AHW2012C-3N6□TF	3.6	250	200	20@1GHz	7900	0.200
AHW2012C-3N9□TF	3.9	250	150	20@1GHz	7900	0.200
AHW2012C-4N7JTF	4.7	250	600	35@1GHz	6200	0.080
AHW2012C-5N1JTF	5.1	250	600	50@1GHz	6200	0.080
AHW2012C-5N6JTF	5.6	250	600	65@1GHz	5900	0.080
AHW2012C-6N2JTF	6.2	250	600	65@1GHz	5900	0.080
AHW2012C-6N8JTF	6.8	250	600	50@1GHz	5600	0.110
AHW2012C-7N5JTF	7.5	250	600	50@1GHz	4800	0.140
AHW2012C-8N2JTF	8.2	250	600	50@1GHz	4400	0.12
AHW2012C-9N1JTF	9.1	250	600	60@500MHz	4300	0.100
AHW2012C-10NJTF	10	250	600	60@500MHz	4300	0.100
AHW2012C-12NJTF	12	250	600	50@500MHz	4000	0.15
AHW2012C-15NJTF	15	250	600	50@500MHz	3200	0.17
AHW2012C-16NJTF	16	250	600	50@500MHz	3200	0.17
AHW2012C-18NJTF	18	250	600	50@500MHz	3100	0.200
AHW2012C-20NJTF	20	250	500	55@500MHz	2600	0.220
AHW2012C-22NJTF	22	250	500	55@500MHz	2600	0.220
AHW2012C-23NJTF	23	250	500	50@500MHz	2400	0.220
AHW2012C-24NJTF	24	250	500	50@500MHz	2400	0.220
AHW2012C-25NJTF	25	250	500	50@500MHz	2450	0.220
AHW2012C-27NJTF	27	250	500	55@500MHz	2580	0.250
AHW2012C-30NJTF	30	250	500	55@500MHz	2400	0.250
AHW2012C-33NJTF	33	250	500	60@500MHz	2150	0.270
AHW2012C-36NJTF	36	250	500	55@500MHz	1900	0.270
AHW2012C-39NJTF	39	250	500	60@500MHz	1850	0.290
AHW2012C-43NJTF	43	200	500	60@500MHz	1800	0.340
AHW2012C-47NJTF	47	200	500	60@500MHz	1700	0.310
AHW2012C-50NJTF	50	200	500	60@500MHz	1650	0.340
AHW2012C-56NJTF	56	200	500	60@500MHz	1600	0.340
AHW2012C-62NJTF	62	200	500	60@500MHz	1450	0.360
AHW2012C-64NJTF	64	200	500	60@500MHz	1500	0.380
AHW2012C-68NJTF	68	200	500	60@500MHz	1500	0.380
AHW2012C-72NJTF	72	150	500	60@500MHz	1400	0.380
AHW2012C-75NJTF	75	150	450	60@500MHz	1400	0.400
AHW2012C-78NJTF	78	150	450	60@500MHz	1400	0.400
AHW2012C-82NJTF	82	150	400	65@500MHz	1330	0.420
AHW2012C-91NJTF	91	150	400	65@500MHz	1330	0.480
AHW2012C-R10JTF	100	150	400	65@500MHz	1250	0.460
AHW2012C-R11JTF	110	150	400	50@250MHz	1100	0.480
AHW2012C-R12JTF	120	150	400	50@250MHz	1100	0.510
AHW2012C-R13JTF	130	100	400	50@250MHz	920	0.560
AHW2012C-R14JTF	140	100	400	50@250MHz	920	0.560
AHW2012C-R15JTF	150	100	400	50@250MHz	920	0.560
AHW2012C-R16JTF	160	100	400	50@250MHz	920	0.600
AHW2012C-R18JTF	180	100	400	50@250MHz	920	0.640
AHW2012C-R20JTF	200	100	400	50@250MHz	860	0.680

## Electrical Characteristics

## ● AHW2012C Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	$\Omega$
Symbol	L	Freq.	I <sub>rms</sub>	Q	S.R.F	DCR
AHW2012C-R21JTF	210	100	400	50@250MHz	820	0.700
AHW2012C-R22JTF	220	100	400	50@250MHz	820	0.700
AHW2012C-R24JTF	240	100	350	44@250MHz	770	1.000
AHW2012C-R25JTF	250	100	350	45@250MHz	750	1.200
AHW2012C-R27JTF	270	100	350	48@250MHz	730	1.000
AHW2012C-R28JTF	280	100	350	48@250MHz	550	1.350
AHW2012C-R29JTF	290	150	310	48@250MHz	450	1.400
AHW2012C-R30JTF	300	150	310	48@250MHz	450	1.400
AHW2012C-R33JTF	330	100	310	48@250MHz	650	1.400
AHW2012C-R36JTF	360	100	300	48@250MHz	630	1.450
AHW2012C-R39JTF	390	100	290	48@250MHz	600	1.500
AHW2012C-R42JTF	420	50	250	33@100MHz	425	1.700
AHW2012C-R43JTF	430	50	250	33@100MHz	425	1.700
AHW2012C-R47JTF	470	50	250	33@100MHz	375	1.760
AHW2012C-R56JTF	560	25	230	23@50MHz	330	1.900
AHW2012C-R62JTF	620	25	210	23@50MHz	320	2.200
AHW2012C-R68JTF	680	25	190	23@50MHz	310	2.200
AHW2012C-R75JTF	750	25	180	23@50MHz	310	2.300
AHW2012C-R82JTF	820	25	180	23@50MHz	310	2.350
AHW2012C-R88JTF	880	25	180	23@50MHz	310	2.350
AHW2012C-R91JTF	910	25	170	22@50MHz	250	2.450
AHW2012C-1R0JTF	1000	25	170	20@50MHz	220	2.500
AHW2012C-1R2JTF	1200	25	150	20@25MHz	180	2.900
AHW2012C-1R5JTF	1500	25	150	20@25MHz	160	3.300
AHW2012C-1R6JTF	1600	25	150	20@25MHz	140	3.400
AHW2012C-1R8JTF	1800	25	120	20@25MHz	130	3.500
AHW2012C-2R2JTF	2200	25	120	20@25MHz	100	4.500
AHW2012C-2R7JTF	2700	25	100	18@25MHz	80	4.800
AHW2012C-3R3JTF	3300	25	50	18@25MHz	50	6.800
AHW2012C-4R7JTF	4700	25	30	18@25MHz	40	7.000

## ● AHW2520C Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	$\Omega$
Symbol	L	Freq.	I <sub>rms</sub>	Q	S.R.F	DCR
AHW2520C-22NJTF	22	50	1000	55@150MHz	2400	0.120
AHW2520C-39NJTF	39	50	1000	60@150MHz	1500	0.150
AHW2520C-47NJTF	47	50	1000	65@150MHz	1500	0.160
AHW2520C-56NJTF	56	50	1000	65@150MHz	1300	0.180
AHW2520C-68NJTF	68	50	1000	65@150MHz	1300	0.200
AHW2520C-91NJTF	91	50	650	60@150MHz	1000	0.560
AHW2520C-R10JTF	100	25	650	60@150MHz	1000	0.560
AHW2520C-R12JTF	120	25	650	60@150MHz	950	0.630
AHW2520C-R15JTF	150	25	580	45@100MHz	850	0.700
AHW2520C-R18JTF	180	25	620	45@100MHz	750	0.770
AHW2520C-R20JTF	200	25	500	45@100MHz	700	0.840
AHW2520C-R22JTF	220	25	500	45@100MHz	700	0.840
AHW2520C-R27JTF	270	25	500	45@100MHz	600	0.910

## Electrical Characteristics

## ● AHW2520C Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	Ω
Symbol	L	Freq.	Irms	Q	S.R.F	DCR
AHW2520C-R33JTF	330	25	450	45@100MHz	570	1.050
AHW2520C-R39JTF	390	25	470	45@100MHz	500	1.12
AHW2520C-R47JTF	470	25	470	45@100MHz	450	1.19
AHW2520C-R56JTF	560	25	400	45@100MHz	415	1.330
AHW2520C-R68JTF	680	25	400	45@100MHz	375	1.470
AHW2520C-R82JTF	820	25	400	45@100MHz	350	1.610
AHW2520C-R91JTF	910	25	380	35@50MHz	320	1.680
AHW2520C-1R0JTF	1000	25	370	35@50MHz	290	1.800
AHW2520C-1R2JTF	1200	7.9	310	35@50MHz	250	2.000
AHW2520C-1R5JTF	1500	7.9	330	28@50MHz	200	2.300
AHW2520C-1R8JTF	1800	7.9	300	28@50MHz	160	2.600
AHW2520C-2R2JTF	2200	7.9	280	28@50MHz	160	2.800
AHW2520C-2R7JTF	2700	7.9	290	22@25MHz	140	3.200
AHW2520C-3R3JTF	3300	7.9	290	22@25MHz	110	3.400
AHW2520C-3R9JTF	3900	7.9	260	20@25MHz	100	3.600
AHW2520C-4R7JTF	4700	7.9	260	20@7.9MHz	60	4.000
AHW2520C-5R6JTF	5600	7.9	240	16@7.9MHz	20	5.700
AHW2520C-6R8JTF	6800	7.9	200	18@7.9MHz	40	7.700
AHW2520C-8R2JTF	8200	7.9	170	18@7.9MHz	25	10.700
AHW2520C-100JTF	10000	7.9	100	18@7.9MHz	25	12.700

## ● AHW3225C Series

Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	Ω
Symbol	L	Freq.	Irms	Q	S.R.F	DCR
AHW3225C-10NJTF	10	100	1000	40@300MHZ	4000	0.080
AHW3225C-12NJTF	12	100	1000	40@300MHZ	3200	0.080
AHW3225C-15NJTF	15	100	1000	40@300MHZ	3200	0.200
AHW3225C-18NJTF	18	100	1000	50@300MHZ	2800	0.100
AHW3225C-22NJTF	22	100	1000	50@300MHZ	220	0.100
AHW3225C-27NJTF	27	100	1000	50@300MHZ	1800	0.110
AHW3225C-33NJTF	33	100	1000	55@300MHZ	1800	0.110
AHW3225C-39NJTF	39	100	1000	55@300MHZ	1500	0.120
AHW3225C-43NJTF	43	100	1000	55@300MHZ	1500	0.120
AHW3225C-47NJTF	47	100	1000	55@300MHZ	1500	0.130
AHW3225C-56NJTF	56	100	1000	55@300MHZ	1450	0.140
AHW3225C-68NJTF	68	100	900	55@300MHZ	1200	0.150
AHW3225C-82NJTF	82	100	900	55@300MHZ	1000	0.200
AHW3225C-91NJTF	91	100	1000	60@300MHZ	1100	0.200
AHW3225C-R10JTF	100	100	850	55@300MHZ	900	0.200
AHW3225C-R12JTF	120	100	800	60@300MHZ	800	0.250
AHW3225C-R15JTF	150	100	750	60@300MHZ	700	0.300
AHW3225C-R18JTF	180	50	700	60@300MHZ	650	0.300
AHW3225C-R22JTF	220	50	770	60@300MHZ	650	0.400
AHW3225C-R24JTF	240	50	630	40@300MHZ	580	0.400
AHW3225C-R27JTF	270	50	630	40@300MHZ	580	0.400
AHW3225C-R33JTF	330	50	590	45@150MHZ	580	0.580
AHW3225C-R36JTF	360	50	530	45@150MHZ	510	0.580

Electrical Characteristics

● AHW3225C Series

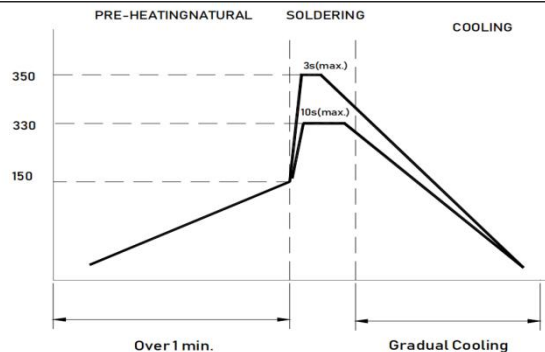
Part Number	Inductance	L/Q Test Freq.	Heat Rating Current Max.	Quality Factor	Self-resonant Frequency	DC Resistance Max.
Units	nH	MHz	mA	-	MHz	Ω
Symbol	L	Freq.	I <sub>rms</sub>	Q	S.R.F	DCR
AHW3225C-R39JTF	390	50	530	45@150MHZ	510	0.580
AHW3225C-R47JTF	470	50	490	45@150MHZ	480	1.000
AHW3225C-R56JTF	560	25	460	45@150MHZ	420	1.100
AHW3225C-R68JTF	680	25	430	45@150MHZ	400	1.200
AHW3225C-R82JTF	820	25	400	45@150MHZ	370	2.000
AHW3225C-1R0JTF	1000	25	320	45@150MHZ	340	1.850
AHW3225C-1R2JTF	1200	25	300	45@150MHZ	220	2.300
AHW3225C-1R5JTF	1500	7.9	310	20@50MHZ	160	2.700
AHW3225C-1R8JTF	1800	7.9	310	30@50MHZ	160	3.500
AHW3225C-2R2JTF	2200	7.9	310	25@50MHZ	130	2.410
AHW3225C-2R7JTF	2700	7.9	300	25@50MHZ	110	3.500
AHW3225C-3R0JTF	3000	7.9	300	20@25MHZ	110	3.500
AHW3225C-3R3JTF	3300	7.9	290	20@25MHZ	60	3.600
AHW3225C-3R9JTF	3900	7.9	290	20@25MHZ	60	4.000
AHW3225C-4R7JTF	4700	7.9	280	20@25MHZ	60	5.000
AHW3225C-5R2JTF	5200	7.9	250	15@25MHZ	50	6.000
AHW3225C-5R6JTF	5600	7.9	250	15@25MHZ	50	6.000
AHW3225C-6R8JTF	6800	7.9	230	15@7.9MHZ	40	9.000
AHW3225C-7R5JTF	7500	7.9	170	20@7.9MHZ	50	9.500
AHW3225C-8R2JTF	8200	7.9	170	20@7.9MHZ	50	9.500
AHW3225C-8R6JTF	8600	7.9	200	15@7.9MHZ	40	9.000
AHW3225C-100JTF	10000	7.9	150	15@7.9MHZ	30	10.000

Soldering Conditions

- Preheat circuit and products to 150 °C
- 260 °C tip temperature (max)
- Reflow times: no more than 2 times
- Solder paste thickness: the best 0.08mm is, but max is 0.1mm



- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 3 sec.



**Note:**

This series product is not applies in automotive or related products. Otherwise, we will shall not bear than the resulting all the problems of quality and responsibility.

Please be sure to request approval specifications that provide further details of the products. Kindly not that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without APV approval.



## X-ON Electronics

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