

FEATURES

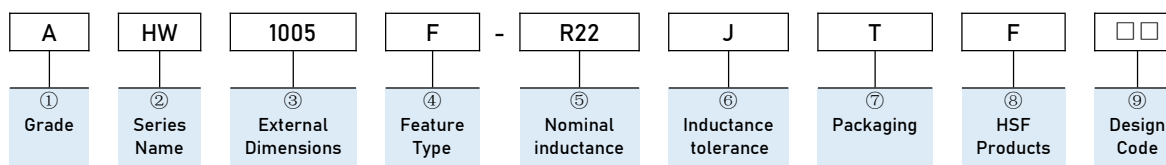
- Small chip suitable for surface mounting .
- High inductance with ferrite material .
- Operating Temperature: -40°C~+85°C .
- RoHS, Halogen Free and REACH Compliance.



APPLICATIONS

- Liquid crystal television and other electronic devices.

PART NUMBERING



① Grade	
A	Grade Code

② Series Name	
HW	Wire Wound Chip Ferrite Inductor

③ External Dimensions	
1005	[0402]
1608	[0603]
2012	[0805]
2520	[1008]
3225	[1210]
4532	[1812]

④ Feature Type	
F	Ferrite core

⑤ Nominal inductance	
Code (example)	Nominal inductance [μH]
R22	0.22
1R0	1.0
100	10

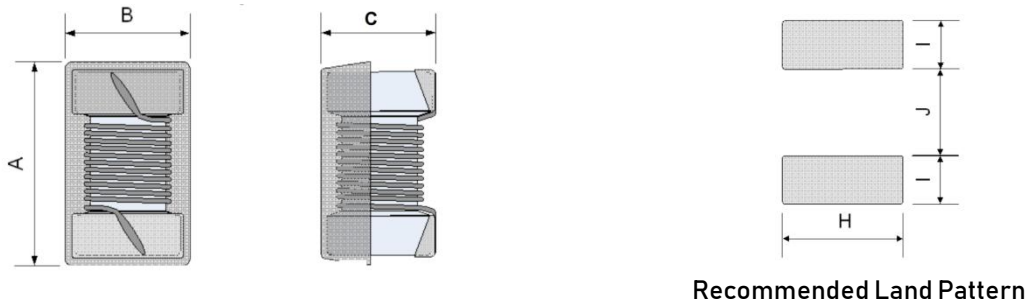
⑦ Packaging	
T	Tape & Reel

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.
AHW1005F	1.20	0.70	0.64	0.36	0.66	0.46
AHW1608F	1.80	1.25	1.10	0.64	1.02	0.64
AHW2012F	2.40	1.73	1.55	1.02	1.78	0.76
AHW2520F	2.92	2.75	2.29	1.02	2.54	1.27
AHW3225F	3.50	2.95	2.40	1.02	2.85	1.78
AHW4532F	4.80	3.40	3.15	1.15	3.05	3.00

Electrical Characteristics

● AHW1005F Series

Part Number	Inductance	L/Q Test Freq.	Self-resonant Frequency	DC Resistance	Heat Rating Current
			Min.	Max.	Max.
Units	μH	MHz	MHz	Ω	mA
Symbol	L	Freq.	S.R.F	DCR	I _{rms}
AHW1005F-78N□TF	0.078	7.9	1600	0.13	970
AHW1005F-R10□TF	0.1	7.9	1400	0.16	900
AHW1005F-R11□TF	0.11	7.9	1000	0.20	850
AHW1005F-R12□TF	0.12	7.9	1000	0.20	850
AHW1005F-R14□TF	0.14	7.9	1220	0.26	630
AHW1005F-R15□TF	0.15	7.9	1220	0.26	630
AHW1005F-R18□TF	0.18	7.9	1150	0.28	560
AHW1005F-R20□TF	0.2	7.9	1000	0.44	400
AHW1005F-R22□TF	0.22	7.9	1150	0.53	380
AHW1005F-R25□TF	0.25	7.9	900	0.90	360
AHW1005F-R27□TF	0.27	7.9	860	0.90	360
AHW1005F-R30□TF	0.3	7.9	860	0.90	360
AHW1005F-R36□TF	0.36	7.9	810	0.90	250
AHW1005F-R39□TF	0.39	7.9	760	1.00	200
AHW1005F-R47□TF	0.47	7.9	650	1.00	200
AHW1005F-R56□TF	0.56	7.9	600	1.20	200
AHW1005F-R82□TF	0.82	7.9	385	5.85	90
AHW1005F-1R0□TF	1	7.9	200	6.50	50

Electrical Characteristics

● AHW1608F Series

Part Number	Inductance	L/Q Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Max.	Max.
Units	μH	MHz	-	MHz	Ω	mA
Symbol	L	Freq.	Q	S.R.F	DCR	Irms
AHW1608F-R12□TF	0.12	7.9	12	1000	0.15	1000
AHW1608F-R18□TF	0.18	7.9	12	950	0.20	1000
AHW1608F-R22□TF	0.22	7.9	12	775	0.30	700
AHW1608F-R27□TF	0.27	7.9	12	775	0.30	700
AHW1608F-R33□TF	0.33	7.9	12	725	0.32	600
AHW1608F-R39□TF	0.39	7.9	12	620	0.51	500
AHW1608F-R47□TF	0.47	7.9	12	540	0.43	570
AHW1608F-R56□TF	0.56	7.9	12	600	0.65	400
AHW1608F-R68□TF	0.68	7.9	12	500	1.00	380
AHW1608F-R82□TF	0.82	7.9	12	500	1.30	350
AHW1608F-1R0□TF	1	7.9	12	400	0.81	330
AHW1608F-1R2□TF	1.2	7.9	12	380	1.70	320
AHW1608F-1R5□TF	1.5	7.9	12	300	1.30	310
AHW1608F-1R8□TF	1.8	7.9	12	180	2.20	300
AHW1608F-2R2□TF	2.2	7.9	12	180	2.30	280
AHW1608F-2R7□TF	2.7	7.9	12	150	2.60	250
AHW1608F-3R3□TF	3.3	7.9	12	150	2.90	230
AHW1608F-3R9□TF	3.9	7.9	12	100	2.00	200
AHW1608F-4R7□TF	4.7	7.9	12	100	4.00	200
AHW1608F-5R6□TF	5.6	7.9	12	32	2.60	240
AHW1608F-6R8□TF	6.8	7.9	12	31	3.90	200
AHW1608F-8R2□TF	8.2	7.9	12	26	4.20	190
AHW1608F-100□TF	10	2.5	12	25	4.80	180
AHW1608F-150□TF	15	2.5	10	23	8.50	170
AHW1608F-220□TF	22	2.5	10	10	12.00	100

● AHW2012F Series

Part Number	Inductance	L/Q Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Max.	Max.
Units	μH	MHz	-	MHz	Ω	mA
Symbol	L	Freq.	Q	S.R.F	DCR	Irms
AHW2012F-R12□TF	0.12	7.9	19	340	0.27	750
AHW2012F-R15□TF	0.15	7.9	19	480	0.30	720
AHW2012F-R18□TF	0.18	7.9	19	480	0.40	720
AHW2012F-R22□TF	0.22	7.9	19	480	0.40	720
AHW2012F-R39□TF	0.39	25	19	500	0.31	720
AHW2012F-R47□TF	0.47	7.9	19	500	0.31	720
AHW2012F-R56□TF	0.56	7.9	12	400	0.46	400
AHW2012F-R68□TF	0.68	7.9	19	400	0.46	590
AHW2012F-R81□TF	0.81	7.9	12	360	1.00	520
AHW2012F-1R0□TF	1	7.9	12	360	1.00	430
AHW2012F-1R2□TF	1.2	7.9	12	350	1.15	410
AHW2012F-1R5□TF	1.5	7.9	12	300	1.20	400
AHW2012F-1R8□TF	1.8	7.9	12	300	1.35	380
AHW2012F-2R2□TF	2.2	7.9	12	170	1.50	350

Electrical Characteristics

● AHW2012F Series

Part Number	Inductance	L/Q Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Max.	Max.
Units	μH	MHz	-	MHz	Ω	mA
Symbol	L	Freq.	Q	S.R.F	DCR	I _{rms}
AHW2012F-2R7□TF	2.7	7.9	12	100	1.70	320
AHW2012F-3R3□TF	3.3	7.9	12	90	1.80	300
AHW2012F-3R9□TF	3.9	7.9	12	90	1.95	280
AHW2012F-4R7□TF	4.7	7.9	12	85	2.05	250
AHW2012F-5R6□TF	5.6	7.9	12	70	2.30	240
AHW2012F-6R8□TF	6.8	7.9	12	55	2.60	220
AHW2012F-8R2□TF	8.2	7.9	12	50	3.00	180
AHW2012F-100□TF	10	2.5	10	30	2.55	150
AHW2012F-120□TF	12	2.5	10	16	3.50	100
AHW2012F-150□TF	15	2.5	10	16	4.20	100
AHW2012F-180□TF	18	2.5	10	15	4.50	95
AHW2012F-220□TF	22	2.5	10	14	6.00	80
AHW2012F-270□TF	27	2.5	10	17	10.70	60
AHW2012F-330□TF	33	2.5	10	17	10.70	60
AHW2012F-470□TF	47	2.5	10	14	13.80	55
AHW2012F-680□TF	68	2.5	8	11	17.50	40
AHW2012F-101□TF	100	1	8	5	25.00	30
AHW2012F-111□TF	110	1	8	5	26.00	20

● AHW2520F Series

Part Number	Inductance	L/Q Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Max.	Max.
Units	μH	MHz	-	MHz	Ω	mA
Symbol	L	Freq.	Q	S.R.F	DCR	I _{rms}
AHW2520F-R39□TF	0.39	7.9	12	400	0.40	500
AHW2520F-R47□TF	0.47	25	12	600	0.27	700
AHW2520F-R56□TF	0.56	7.9	12	230	0.62	700
AHW2520F-R68□TF	0.68	7.9	12	230	0.62	700
AHW2520F-R82□TF	0.82	7.9	12	230	0.62	700
AHW2520F-R90□TF	0.9	7.9	20	300	0.35	1400
AHW2520F-1R0□TF	1	7.9	18	230	0.62	700
AHW2520F-1R2□TF	1.2	7.9	18	210	0.68	650
AHW2520F-1R5□TF	1.5	7.9	18	190	0.76	630
AHW2520F-1R8□TF	1.8	7.9	18	170	0.84	600
AHW2520F-2R0□TF	2	7.9	18	160	1.10	550
AHW2520F-2R2□TF	2.2	7.9	18	150	1.10	520
AHW2520F-2R7□TF	2.7	7.9	18	135	1.28	490
AHW2520F-3R3□TF	3.3	7.9	18	120	1.46	450
AHW2520F-3R9□TF	3.9	7.9	18	105	2.30	300
AHW2520F-4R7□TF	4.7	7.9	18	90	2.00	400
AHW2520F-5R6□TF	5.6	7.9	15	80	1.80	380
AHW2520F-6R8□TF	6.8	7.9	15	70	2.00	360
AHW2520F-8R2□TF	8.2	7.9	15	65	2.65	330
AHW2520F-100□TF	10	2.5	12	60	2.95	300

Electrical Characteristics

● AHW2520F Series

Part Number	Inductance	L/Q Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Max.	Max.
Units	μH	MHz	-	MHz	Ω	mA
Symbol	L	Freq.	Q	S.R.F	DCR	Irms
AHW2520F-150□TF	15	2.5	12	30	3.70	280
AHW2520F-180□TF	18	2.5	12	26	4.00	160
AHW2520F-220□TF	22	2.5	12	22	6.14	270
AHW2520F-330□TF	33	2.5	10	12	7.00	200
AHW2520F-390□TF	39	2.5	10	16	10.00	180
AHW2520F-470□TF	47	2.5	10	10	10.70	160
AHW2520F-560□TF	56	2.5	10	8	12.00	170
AHW2520F-680□TF	68	2.5	10	6	13.50	145
AHW2520F-820□TF	82	2.5	8	6	20.00	100

● AHW3225F Series

Part Number	Inductance	L/Q Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Max.	Max.
Units	μH	MHz	-	MHz	Ω	mA
Symbol	L	Freq.	Q	S.R.F	DCR	Irms
AHW3225F-R56□TF	0.56	25	20	180	0.55	450
AHW3225F-R82□TF	0.82	7.9	20	200	0.40	450
AHW3225F-1R0□TF	1	7.9	20	200	0.40	450
AHW3225F-1R2□TF	1.2	7.9	20	200	0.40	450
AHW3225F-1R5□TF	1.5	7.9	20	200	0.40	450
AHW3225F-1R8□TF	1.8	7.9	20	195	0.80	450
AHW3225F-2R2□TF	2.2	7.9	30	175	0.80	450
AHW3225F-3R3□TF	3.3	7.9	20	150	1.20	400
AHW3225F-4R7□TF	4.7	7.9	18	60	1.30	350
AHW3225F-5R6□TF	5.6	7.9	18	50	2.00	320
AHW3225F-6R8□TF	6.8	7.9	18	35	1.50	310
AHW3225F-8R2□TF	8.2	7.9	15	33	1.60	305
AHW3225F-100□TF	10	2.5	15	30	1.00	300
AHW3225F-120□TF	12	2.5	15	25	1.80	300
AHW3225F-150□TF	15	2.5	15	22	2.00	225
AHW3225F-180□TF	18	2.5	15	22	2.05	215
AHW3225F-220□TF	22	2.5	15	20	2.40	210
AHW3225F-270□TF	27	2.5	15	20	2.80	160
AHW3225F-330□TF	33	2.5	15	15	2.90	160
AHW3225F-470□TF	47	2.5	15	10	5.20	140
AHW3225F-560□TF	56	2.5	8	8	5.60	125
AHW3225F-680□TF	68	1	6	10	13.00	100
AHW3225F-820□TF	82	1	6	10	13.00	100
AHW3225F-101□TF	100	1	6	10	13.00	100
AHW3225F-221□TF	220	1	8	2.6	30.00	65
AHW3225F-331□TF	330	1	8	2.3	35.00	55
AHW3225F-471□TF	470	1	8	2	42.00	40
AHW3225F-561□TF	560	1	8	3	60.00	10
AHW3225F-621□TF	620	1	8	2	85.00	10
AHW3225F-681□TF	680	1	6	2	90.00	10

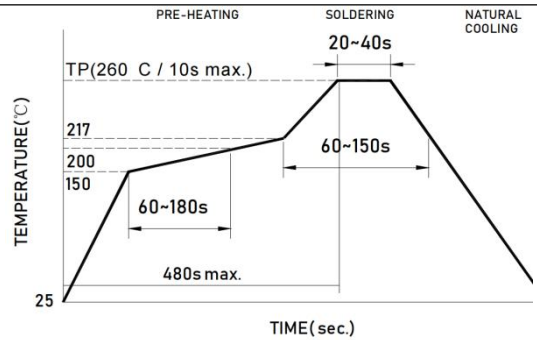
Electrical Characteristics

● AHW4532F Series

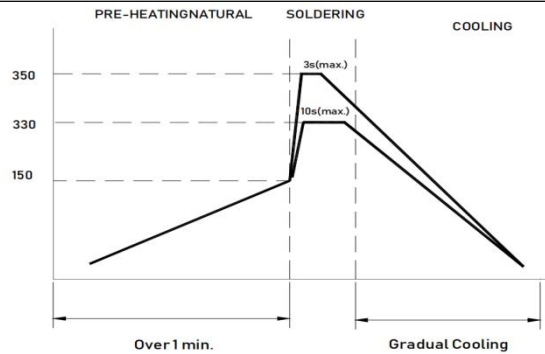
Part Number	Inductance	L/Q Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Max.	Max.
Units	μH	MHz	-	MHz	Ω	mA
Symbol	L	Freq.	Q	S.R.F	DCR	I _{rms}
AHW4532F-R33□TF	0.33	25.2	10	380	0.13	1000
AHW4532F-R56□TF	0.56	25.2	10	300	0.15	1000
AHW4532F-R82□TF	0.82	25.2	10	250	0.20	1000
AHW4532F-1R0□TF	1	7.96	15	200	0.22	1000
AHW4532F-1R2□TF	1.2	7.96	15	200	0.35	1000
AHW4532F-1R5□TF	1.5	7.96	15	180	0.32	1000
AHW4532F-1R8□TF	1.8	7.96	15	160	0.35	950
AHW4532F-2R2□TF	2.2	7.96	15	150	0.37	900
AHW4532F-2R7□TF	2.7	7.96	15	145	0.37	850
AHW4532F-3R3□TF	3.3	7.96	15	140	0.48	800
AHW4532F-3R9□TF	3.9	7.96	15	135	0.60	750
AHW4532F-4R7□TF	4.7	7.96	15	120	1.00	700
AHW4532F-5R6□TF	5.6	7.96	15	110	0.55	650
AHW4532F-6R8□TF	6.8	7.96	15	80	0.80	600
AHW4532F-8R2□TF	8.2	7.96	10	70	0.85	600
AHW4532F-100□TF	10	2.52	10	65	1.00	550
AHW4532F-120□TF	12	2.52	10	55	1.10	550
AHW4532F-150□TF	15	2.52	10	35	1.20	500
AHW4532F-180□TF	18	2.52	10	29	1.20	500
AHW4532F-220□TF	22	2.52	10	20	1.30	450
AHW4532F-270□TF	27	2.52	10	20	1.50	400
AHW4532F-330□TF	33	2.52	10	18	1.70	350
AHW4532F-390□TF	39	2.52	10	14	1.80	350
AHW4532F-470□TF	47	2.52	10	10	2.00	300
AHW4532F-560□TF	56	2.52	10	10	2.20	290
AHW4532F-680□TF	68	2.52	10	5.4	2.40	260
AHW4532F-820□TF	82	2.52	10	5.2	2.80	240
AHW4532F-101□TF	100	0.796	10	4	3.00	220
AHW4532F-121□TF	120	0.796	10	3.3	3.30	220
AHW4532F-151□TF	150	0.796	10	3	3.70	200
AHW4532F-181□TF	180	0.796	10	3	4.50	200
AHW4532F-221□TF	220	0.796	10	2.5	8.00	170
AHW4532F-271□TF	270	0.796	10	2.2	8.50	160
AHW4532F-331□TF	330	0.796	10	2	9.00	150
AHW4532F-391□TF	390	0.796	10	1.8	9.50	130
AHW4532F-471□TF	470	0.796	8	1.6	10.40	120
AHW4532F-561□TF	560	0.796	8	1.5	12.50	110
AHW4532F-681□TF	680	0.796	8	1.5	14.00	100
AHW4532F-751□TF	750	0.796	8	1.5	14.50	95
AHW4532F-821□TF	820	0.796	8	1.5	15.00	95
AHW4532F-102□TF	1000	0.252	6	1.4	16.50	90

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.

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[HCR15JTRF](#) [NIN-HCR33JTRF](#) [NIN-HDR22JTRF](#) [NIN-HDR82JTRF](#) [NIN-HK2N7STRF](#) [NIN-PA150KTR370F](#) [NIN-PB100KTR550F](#)