

**HWF-DS/-D Series**

**Features**

- Utilizing a miniaturized winding structure.
- These products provide low DC resistance and high current.
- Precision inductance tolerance is available.

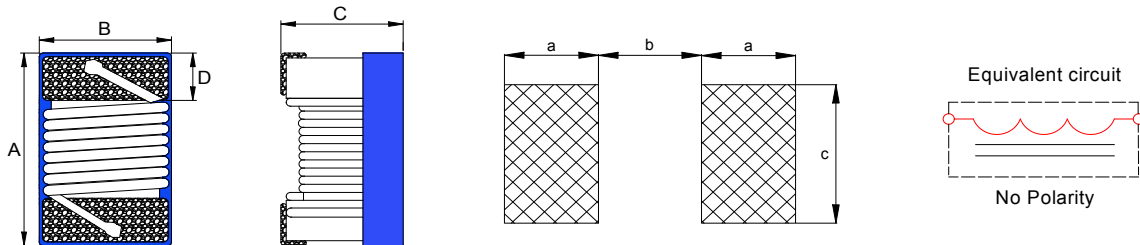
**Applications**

- Personal computer, Hard disk drives.
- xDSL modem and Cable modem.
- Digital camera and other electronic equipment.

**Test Equipment and Conditions**

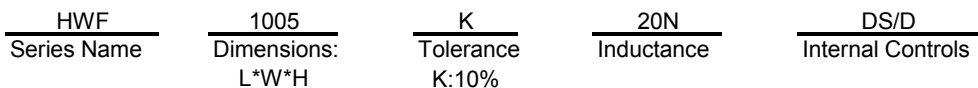
- L,Q : Agilent/HP E4991A+ Agilent/HP16197A.
- SRF : Agilent/HP E4991A+ Agilent/HP 16197A.
- Rdc : DIGITAL MILLIOHM METER Chroma 16502 or equivalent.
- Irms : DC current(A) that will cause an approximate  $\Delta T$  of 40°C.
- Operating temperature range from -40°C to 85°C (Including self - temperature rise).

**External Dimensions (Unit:m/m)**



TYPE	METRIC	A	B	C	D	a	b	c	Q'Ty/Reel
HWF1005-DS	0402	1.19Max	0.7Max	0.66Max	0.23Ref	0.36Ref	0.46Ref	0.66Ref	10000
HWF1608-DS	0603	1.80Max	1.32Max	1.20Max	0.33Ref	0.64Ref	0.64Ref	1.02Ref	4000
HWF2012-DS	0805	2.40Max	1.75Max	1.52Max	0.44Ref	1.02Ref	0.76Ref	1.78Ref	2000
HWF2520-DS	1008	2.92Max	2.7Max	2.23Max	0.50Ref	1.02Ref	1.27Ref	2.54Ref	2000
HWF3225-DS	1210	3.60Max	2.9Max	2.40Max	0.50Ref	1.02Ref	1.78Ref	2.54Ref	2000

**2. Part Number Code**



**HWF-DS Series**

Part Number	Inductance (uH)	Test Freq. (MHz)	SRF (MHz)Min.	RDC (Ω)Max.	I <sub>rms</sub> (mA)Max.
HWF1005K20NDS	0.020	7.9	2600	0.05	1600
HWF1005K22NDS	0.022	7.9	2500	0.065	1300
HWF1005K33NDS	0.033	7.9	2300	0.06	1400
HWF1005K36NDS	0.036	7.9	2300	0.075	1300
HWF1005K39NDS	0.039	7.9	2200	0.115	830
HWF1005K51NDS	0.051	7.9	1930	0.07	1100
HWF1005K56NDS	0.056	7.9	1900	0.095	1000
HWF1005K72NDS	0.072	7.9	1650	0.1	1000
HWF1005K78NDS	0.078	7.9	1600	0.13	970
HWF1005KR10DS	0.10	7.9	1400	0.16	900
HWF1005KR11DS	0.11	7.9	1000	0.2	850
HWF1005KR14DS	0.14	7.9	1220	0.26	630
HWF1005KR18DS	0.18	7.9	1150	0.28	560
HWF1005KR20DS	0.20	7.9	1000	0.44	400
HWF1005KR22DS	0.22	7.9	1150	0.53	380
HWF1005KR25DS	0.25	7.9	900	0.36	520
HWF1005KR27DS	0.27	7.9	860	0.9	360
HWF1005KR30DS	0.30	7.9	860	0.41	420
HWF1005KR33DS	0.33	7.9	820	0.56	350
HWF1005KR36DS	0.36	7.9	810	0.575	300
HWF1005KR39DS	0.39	7.9	760	1.0	300
HWF1005KR42DS	0.42	7.9	700	0.7	340
HWF1005KR47DS	0.47	7.9	650	0.73	310
HWF1005KR56DS	0.56	7.9	600	1.2	200
HWF1005KR82DS	0.82	7.9	385	5.85	90
HWF1005K1R0DS	1.00	7.9	200	6.5	50

**HWF-DS Series**

Part Number	Inductance (uH)	Test Freq. (MHz)	Q min.	SRF (MHz)Min.	RDC (Ω)Max.	Irms (mA)Max.
HWF1608K47NDS	0.047	7.9	12	1700	0.098	1500
HWF1608KR10DS	0.10	7.9	12	1150	0.13	1000
HWF1608KR15DS	0.15	7.9	12	950	0.15	1000
HWF1608KR18DS	0.18	7.9	12	950	0.2	1000
HWF1608KR20DS	0.20	7.9	12	1030	0.2	740
HWF1608KR22DS	0.22	7.9	12	775	0.3	700
HWF1608KR27DS	0.27	7.9	12	775	0.3	700
HWF1608KR33DS	0.33	7.9	12	725	0.32	600
HWF1608KR39DS	0.39	7.9	12	620	0.51	500
HWF1608KR44DS	0.44	7.9	12	620	0.65	400
HWF1608KR47DS	0.47	7.9	12	600	0.62	420
HWF1608KR51DS	0.51	7.9	12	600	0.65	400
HWF1608KR56DS	0.56	7.9	12	600	0.65	400
HWF1608KR65DS	0.65	7.9	12	510	0.52	430
HWF1608KR68DS	0.68	7.9	12	500	1.0	380
HWF1608KR75DS	0.75	7.9	12	500	1.3	350
HWF1608KR82DS	0.82	7.9	12	500	1.3	350
HWF1608K1R0DS	1.0	7.9	12	400	1.5	330
HWF1608K1R2DS	1.2	7.9	12	380	1.7	320
HWF1608K1R5DS	1.5	7.9	12	300	1.9	310
HWF1608K1R8DS	1.8	7.9	12	180	2.2	300
HWF1608K2R0DS	2.0	7.9	12	180	2.3	280
HWF1608K2R2DS	2.2	7.9	12	180	2.3	280
HWF1608K2R7DS	2.7	7.9	12	150	2.6	250
HWF1608K3R3DS	3.3	7.9	12	150	2.9	230
HWF1608K3R9DS	3.9	7.9	12	120	3.2	210
HWF1608K4R7DS	4.7	7.9	12	100	4.0	200
HWF1608K5R1DS	5.1	7.9	12	32	2.6	240
HWF1608K5R6DS	5.6	7.9	12	32	2.6	240
HWF1608K6R8DS	6.8	7.9	12	31	3.9	200
HWF1608K8R2DS	8.2	7.9	12	26	4.2	190
HWF1608K100DS	10	2.5	10	25	4.8	180

**HWF-DS Series**

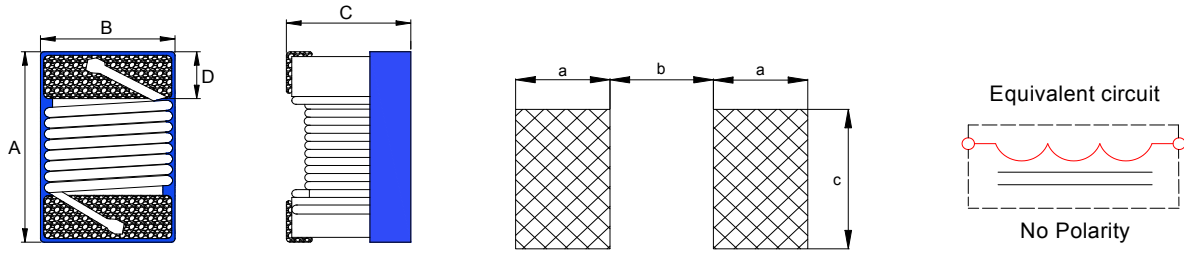
Part Number	Inductance (uH)	Test Freq. (MHz)	Q min.	SRF (MHz)Min.	RDC (Ω)Max.	Irms (mA)Max.
HWF1608K150DS	15	2.5	10	23	8.5	170
HWF1608K180DS	18	2.5	10	22	10.0	160
HWF1608K220DS	22	2.5	10	10	12.0	100
HWF2012KR10DS	0.10	7.9	19	340	0.69	500
HWF2012KR15DS	0.15	7.9	19	480	0.3	600
HWF2012KR22DS	0.22	7.9	19	480	0.4	600
HWF2012KR33DS	0.33	7.9	19	500	0.31	720
HWF2012KR39DS	0.39	7.9	19	500	0.31	720
HWF2012KR47DS	0.47	7.9	19	500	0.31	720
HWF2012KR68DS	0.68	7.9	19	400	0.46	590
HWF2012KR88DS	0.88	7.9	12	360	1.0	520
HWF2012KR91DS	0.91	7.9	12	360	1.0	500
HWF2012K1R0DS	1.0	7.9	12	360	1.0	430
HWF2012K1R2DS	1.2	7.9	12	350	1.15	410
HWF2012K1R5DS	1.5	7.9	12	300	1.2	400
HWF2012K1R8DS	1.8	7.9	12	300	1.35	380
HWF2012K2R2DS	2.2	7.9	12	170	1.5	350
HWF2012K2R7DS	2.7	7.9	12	100	1.7	320
HWF2012K3R3DS	3.3	7.9	12	90	1.8	300
HWF2012K3R9DS	3.9	7.9	12	90	1.95	280
HWF2012K4R7DS	4.7	7.9	12	85	2.05	250
HWF2012K5R6DS	5.6	7.9	12	70	2.3	240
HWF2012K6R8DS	6.8	7.9	12	55	2.6	220
HWF2012K8R0DS	8.0	7.9	12	50	3.0	180
HWF2012K8R2DS	8.2	7.9	12	50	3.0	180
HWF2012K100DS	10	2.5	10	30	3.2	150
HWF2012K120DS	12	2.5	10	17	3.5	100
HWF2012K150DS	15	2.5	10	16	4.2	100
HWF2012K220DS	22	2.5	10	14	6.0	80
HWF2012K390DS	39	2.5	10	14	10.0	60
HWF2012K470DS	47	2.5	10	14	13.8	55
HWF2012K560DS	56	2.5	10	8	14.0	30

**HWF-DS Series**

Part Number	Inductance (uH)	Test Freq. (MHz)	Q min.	SRF (MHz)Min.	RDC (Ω)Max.	Irms (mA)Max.
HWF2012K101DS	100	1	8	5	25.0	30
HWF2520KR56DS	0.56	7.9	12	230	0.62	700
HWF2520KR68DS	0.68	7.9	12	230	0.62	700
HWF2520KR82DS	0.82	7.9	12	230	0.62	700
HWF2520K1R0DS	1.0	7.9	18	230	0.62	700
HWF2520K1R2DS	1.2	7.9	18	210	0.68	650
HWF2520K1R5DS	1.5	7.9	18	190	0.76	630
HWF2520K1R8DS	1.8	7.9	18	170	0.84	600
HWF2520K2R2DS	2.2	7.9	18	150	1.10	520
HWF2520K2R7DS	2.7	7.9	18	135	1.28	490
HWF2520K3R3DS	3.3	7.9	18	120	1.46	450
HWF2520K3R9DS	3.9	7.9	18	105	1.56	420
HWF2520K4R7DS	4.7	7.9	18	90	2.00	400
HWF2520K5R6DS	5.6	7.9	15	80	1.8	380
HWF2520K6R8DS	6.8	7.9	15	70	2.00	360
HWF2520K8R2DS	8.2	7.9	15	65	2.65	330
HWF2520K100DS	10	2.5	12	60	2.95	300
HWF2520K180DS	18	2.5	12	26	4.00	160
HWF2520K220DS	22	2.5	12	22	6.14	270
HWF2520K300DS	30	2.5	10	12	6.80	200
HWF2520K330DS	33	2.5	10	12	7.00	200
HWF2520K390DS	39	2.5	10	16	10.00	170
HWF2520K470DS	47	2.5	10	10	10.70	160
HWF2520K560DS	56	2.5	10	8	12.00	170
HWF2520K680DS	68	2.5	10	6	13.50	145
HWF2520K820DS	82	2.5	8	6	20.00	100
HWF3225KR56DS	0.56	25	20	180	0.55	450
HWF3225K1R0DS	1.0	25	45	340	1.85	820
HWF3225K1R5DS	1.5	7.9	20	200	0.40	450
HWF3225K1R8DS	1.8	7.9	20	195	0.80	450
HWF3225K2R2DS	2.2	7.9	20	175	0.80	450
HWF3225K4R7DS	4.7	7.9	18	60	1.30	350
HWF3225K5R6DS	5.6	2.5	18	50	2.00	320

**HWF-DS Series**

Part Number	Inductance (uH)	Test Freq. (MHz)	Q min.	SRF (MHz)Min.	RDC (Ω)Max.	I <sub>rms</sub> (mA)Max.
HWF3225K100DS	10	2.5	15	30	1.00	300
HWF3225K150DS	15	2.5	15	22	2.00	225
HWF3225K180DS	18	2.5	15	22	2.05	215
HWF3225K220DS	22	2.5	15	20	2.40	210
HWF3225K330DS	33	2.5	15	15	2.90	160
HWF3225K470DS	47	2.5	15	10	5.20	140
HWF3225K560DS	56	2.5	8	8	5.60	125
HWF3225K680DS	68	1	6	10	13.0	100
HWF3225K820DS	82	1	6	10	13.0	100
HWF3225K101DS	100	1	6	10	13.0	100
HWF3225K121DS	120	1	6	10	13.0	100
HWF3225K151DS	150	1	10	4	20.0	80
HWF3225K181DS	180	1	8	3	14.5	70
HWF3225K201DS	200	1	8	3	30.0	65
HWF3225K221DS	220	1	8	3	30.0	65
HWF3225K271DS	270	1	8	2	33.0	60
HWF3225K331DS	330	1	8	2	35.0	55
HWF3225K471DS	470	1	8	2	42.0	40
HWF3225K561DS	560	1	8	2	60.0	10
HWF3225K621DS	620	1	8	2	85.0	10

**External Dimensions (Unit:m/m)**


TYPE	METRIC	A	B	C	D	a	b	c	Q'Ty/Reel
HWF1608-D	0603	1.80Max	1.25Max	1.20Max	0.33Ref	0.64Ref	0.64Ref	1.02Ref	4000
HWF2012-D	0805	2.40Max	1.73Max	1.52Max	0.44Ref	1.02Ref	0.76Ref	1.78Ref	2000

**HWF-D Series**

Part Number	Inductance (uH)	Test Freq. (MHz)	Q min.	SRF (MHz)Min.	RDC (Ω)Max.	I <sub>rms</sub> (mA)Max.
HWF1608K1R0D	1.0	7.9	12	390	0.41	800
HWF1608K1R5D	1.5	7.9	12	160	0.52	650
HWF1608K1R8D	1.8	7.9	12	121	0.56	550
HWF1608K2R2D	2.2	7.9	12	50	0.50	600
HWF1608K3R3D	3.3	7.9	12	66	0.91	420
HWF1608K4R7D	4.7	7.9	12	51	0.97	400
HWF1608K5R6D	5.6	7.9	12	47	1.43	380
HWF1608K6R8D	6.8	7.9	12	43	1.95	340
HWF1608K8R2D	8.2	7.9	12	40	2.18	300
HWF1608K100D	10	2.5	14	36	2.40	280
HWF1608K150D	15	2.5	12	29	3.38	200
HWF1608K220D	22	2.5	12	24	4.69	200
HWF1608K270D	27	2.5	12	20	6.76	140
HWF1608K330D	33	2.5	12	10	8.58	100
HWF1608K470D	47	2.5	10	5	12	100
HWF2012KR47D	0.47	7.9	14	850	0.10	1400
HWF2012K1R0D	1.0	7.9	14	208	0.169	1100
HWF2012K1R5D	1.5	7.9	14	130	0.22	880
HWF2012K1R8D	1.8	7.9	14	112	0.26	860
HWF2012K2R2D	2.2	7.9	12	80	0.312	740
HWF2012K3R3D	3.3	7.9	12	50	0.36	620
HWF2012K4R7D	4.7	7.9	14	51	0.559	520

**HWF-D Series**

Part Number	Inductance (uH)	Test Freq. (MHz)	Q min.	SRF (MHz)Min.	RDC (Ω)Max.	Irms (mA)Max.
HWF2012K5R6D	5.6	8	12	42	0.65	480
HWF2012K6R8D	6.8	7.9	14	35	0.88	420
HWF2012K8R2D	8.2	7.9	13	33	0.94	400
HWF2012K100D	10	2.5	14	25	1.17	290
HWF2012K150D	15	2.5	15	28	1.82	300
HWF2012K180D	18	2.5	15	27	2.01	280
HWF2012K220D	22	2.5	15	20	2.288	240
HWF2012K270D	27	2.5	15	17	2.6	220
HWF2012K330D	33	2.5	15	17	3.055	200
HWF2012K470D	47	2.5	14	15	4.42	160
HWF2012K101D	100	1.0	10	5	9.75	100
HWF2012K111D	110	1.0	10	5	9.75	100