



# Wire Wound Chip Ferrite Inductor

# HSWL- FS Series



### FEATURES

- ◆ Small chip suitable for surface mounting
- ◆ Large inductance with ferrite material

### APPLICATIONS

- ◆ Mobile phones, video cameras and other electronic devices

## PRODUCT IDENTIFICATION

**HSWL** = **F** **S** **1005** **T** **18N** **J** **F** **XX**  
 A B C D E F G H I

A

Type	
HSWL	Wire Wound Chip Inductor

B

Material
F=ferrite

C

Feature type	
S	standard

D

External Dimensions (L×W) (mm)
1005 [0402]
1608 [0603]

E

Packing	
T	Tape & Reel

F

Nominal Inductance	
Example	Nominal Value
18N	18nH
R13	130nH

G

Inductance Tolerance	
J	±5%
K	±10%
M	±20%

H

Hazardous Substance Free Products
F

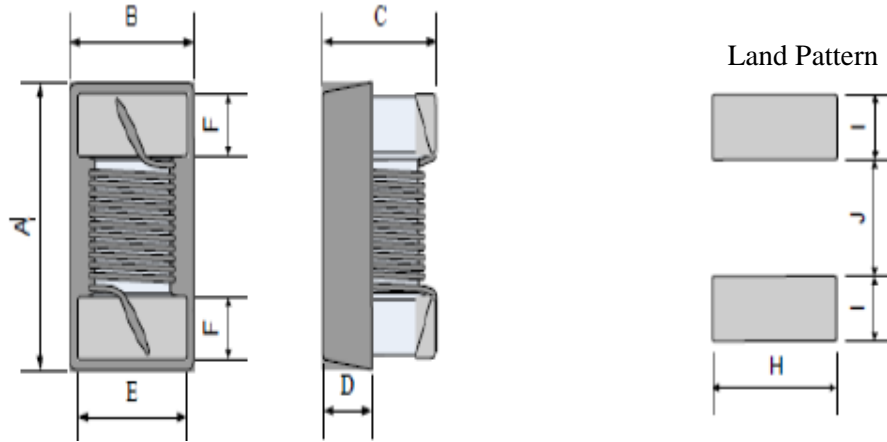
I

Internal code
XX

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**SHAPE AND DIMENSIONS**



Unit: mm

Series	A	B	C	D Typ.	E	F	H Typ.	I Typ.	J Typ.
HSWL- FS1005	1.1±0.1	0.6±0.1	0.6±0.1	0.25	0.5±0.1	0.2±0.1	0.65	0.35	0.50
HSWL- FS1608	1.7±0.2	1.1±0.2	0.9±0.2	0.38	0.76±0.1	0.3±0.1	1.02	0.64	0.64

**SPECIFICATIONS**

**HSWL- FS1005-M01 TYPE**

Part Number	Inductance	Tolerance	L Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units	nH	-	MHz	Ω	mA	MHz
Symbol	L	-	Freq.	DCR	I <sub>r</sub>	S.R.F
HSWL- FS1005T18N□M01FXX	18	J,K,M	100	0.046	1400	3000
HSWL- FS1005T20N□M01FXX	20	J,K,M	100	0.028	2200	3000
HSWL- FS1005T33N□M01FXX	33	J,K,M	100	0.065	1300	1800
HSWL- FS1005T34N□M01FXX	34	J,K,M	100	0.036	1800	2500
HSWL- FS1005T48N□M01FXX	48	J,K,M	100	0.078	1100	1400
HSWL- FS1005T53NJM01FXX	53	J,K,M	100	0.060	1300	2000
HSWL- FS1005T68N□M01FXX	68	J,K,M	100	0.120	820	1300
HSWL- FS1005T70N□M01FXX	70	J,K,M	100	0.120	820	1300
HSWL- FS1005T77NJM01FXX	77	J,K,M	100	0.090	1100	2000
HSWL- FS1005T96N□M01FXX	96	J,K,M	100	0.160	730	1100
HSWL- FS1005TR11JM01FXX	106	J,K,M	100	0.144	850	1500
HSWL- FS1005TR13□M01FXX	130	J,K,M	100	0.230	640	1000
HSWL- FS1005TR14JM01FXX	160	J,K,M	100	0.216	650	1000
HSWL- FS1005TR16□M01FXX	180	J,K,M	100	0.330	480	900
HSWL- FS1005TR20□M01FXX	200	J,K,M	100	0.470	390	800

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## HSWL- FS Series

### SPECIFICATIONS

#### HSWL- FS1005-M01 TYPE

Part Number	Inductance	Tolerance	L Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units Symbol	nH L	- -	MHz Freq.	$\Omega$ DCR	mA Ir	MHz S.R.F
HSWL- FS1005TR22□M01FXX	220	J,K,M	100	0.470	450	1100
HSWL- FS1005TR27□M01FXX	270	J,K,M	100	0.520	420	730
HSWL- FS1005TR33□M01FXX	330	J,K,M	100	0.560	390	520
HSWL- FS1005TR39□M01FXX	390	J,K,M	100	0.620	370	350
HSWL- FS1005TR42□M01FXX	420	J,K,M	10	0.62	370	320
HSWL- FS1005TR47□M01FXX	470	J,K,M	10	0.660	350	380
HSWL- FS1005TR56□M01FXX	560	K,M	10	0.710	300	300

#### HSWL- FS1005 TYPE

Part Number	Inductance	Tolerance	L Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units Symbol	nH L	- -	MHz Freq.	$\Omega$ DCR	mA Ir	MHz S.R.F
HSWL- FS1005T20N□FXX	20	J,K,M	7.9	0.050	1600	2600
HSWL- FS1005T22N□FXX	22	J,K,M	7.9	0.065	1300	2500
HSWL- FS1005T33N□FXX	33	J,K,M	7.9	0.060	1400	2300
HSWL- FS1005T36N□FXX	36	J,K,M	7.9	0.075	1300	2300
HSWL- FS1005T39N□FXX	39	J,K,M	7.9	0.115	830	2200
HSWL- FS1005T51N□FXX	51	J,K,M	7.9	0.070	1100	1930
HSWL- FS1005T56N□FXX	56	J,K,M	7.9	0.095	1000	1900
HSWL- FS1005T72N□FXX	72	J,K,M	7.9	0.100	1000	1650
HSWL- FS1005T78N□FXX	78	J,K,M	7.9	0.130	970	1600
HSWL- FS1005TR10□FXX	100	J,K,M	7.9	0.160	900	1400
HSWL- FS1005TR14□FXX	140	J,K,M	7.9	0.260	630	1220
HSWL- FS1005TR18□FXX	180	J,K,M	7.9	0.280	560	1150
HSWL- FS1005TR20□FXX	200	J,K,M	7.9	0.440	400	1000
HSWL- FS1005TR22□FXX	220	J,K,M	7.9	0.530	380	1150
HSWL- FS1005TR25□FXX	250	J,K,M	7.9	0.450	520	900
HSWL- FS1005TR27□FXX	270	J,K,M	7.9	0.550	360	860
HSWL- FS1005TR30□FXX	300	J,K,M	7.9	0.410	420	860
HSWL- FS1005TR33□FXX	330	J,K,M	7.9	0.560	350	820
HSWL- FS1005TR36□FXX	360	J,K,M	7.9	0.575	360	810
HSWL- FS1005TR39□FXX	390	J,K,M	7.9	0.750	300	760
HSWL- FS1005TR42□FXX	420	J,K,M	7.9	0.700	340	700
HSWL- FS1005TR47□FXX	470	J,K,M	7.9	0.730	310	650
HSWL- FS1005TR56□FXX	560	J,K,M	7.9	0.920	200	600

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**SPECIFICATIONS**

**HSWL- FS1608 TYPE**

Part Number	Inductance	Tolerance	L Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant Frequency
Units Symbol	nH L	- -	MHz Freq.	$\Omega$ DCR	mA Ir	MHz S.R.F
HSWL- FS1608T47N□FXX	47	J,K,M	7.9	0.06	1200	2350
HSWL- FS1608T51N□FXX	51	J,K,M	7.9	0.07	1050	2300
HSWL- FS1608TR10□FXX	100	K,M	7.9	0.11	850	1370
HSWL- FS1608TR12□FXX	120	J,K,M	7.9	0.18	670	1340
HSWL- FS1608TR15□FXX	150	J,K,M	7.9	0.12	820	1260
HSWL- FS1608TR18□FXX	180	J,K,M	7.9	0.19	670	1060
HSWL- FS1608TR20□FXX	200	J,K,M	7.9	0.14	740	1030
HSWL- FS1608TR22□FXX	220	J,K,M	7.9	0.20	650	850
HSWL- FS1608TR24□FXX	240	J,K,M	7.9	0.17	690	800
HSWL- FS1608TR25□FXX	250	J,K,M	7.9	0.17	690	910
HSWL- FS1608TR27□FXX	270	J,K,M	7.9	0.24	630	780
HSWL- FS1608TR33□FXX	330	J,K,M	7.9	0.29	510	730
HSWL- FS1608TR39□FXX	390	J,K,M	7.9	0.33	490	750
HSWL- FS1608TR47□FXX	470	J,K,M	7.9	0.37	470	670
HSWL- FS1608TR50□FXX	500	J,K,M	7.9	0.45	410	610
HSWL- FS1608TR56□FXX	560	J,K,M	7.9	0.51	380	590
HSWL- FS1608TR62□FXX	620	J,K,M	7.9	0.48	390	570
HSWL- FS1608TR65□FXX	650	J,K,M	7.9	0.61	350	550
HSWL- FS1608TR68□FXX	680	J,K,M	7.9	0.77	310	520
HSWL- FS1608TR78□FXX	780	J,K,M	7.9	0.83	300	480
HSWL- FS1608TR82□FXX	820	J,K,M	7.9	0.88	290	500
HSWL- FS1608T1R0□FXX	1000	J,K,M	7.9	0.94	280	410
HSWL- FS1608T1R2□FXX	1200	J,K,M	7.9	1.10	260	370
HSWL- FS1608T1R5□FXX	1500	J,K,M	7.9	1.30	240	340
HSWL- FS1608T1R8□FXX	1800	J,K,M	7.9	1.40	230	190
HSWL- FS1608T2R2□FXX	2200	J,K,M	7.9	1.50	220	120
HSWL- FS1608T2R7□FXX	2700	J,K,M	7.9	1.60	210	70
HSWL- FS1608T3R3□FXX	3300	J,K,M	7.9	1.80	200	60
HSWL- FS1608T3R9□FXX	3900	J,K,M	7.9	1.90	190	50
HSWL- FS1608T4R7□FXX	4700	J,K,M	7.9	2.70	160	50
HSWL- FS1608T5R6□FXX	5600	J,K,M	7.9	3.00	150	40
HSWL- FS1608T6R8□FXX	6800	J,K,M	7.9	4.00	130	40
HSWL- FS1608T7R8□FXX	7800	J,K,M	7.9	4.40	120	40
HSWL- FS1608T8R2□FXX	8200	J,K,M	7.9	4.50	110	40
HSWL- FS1608T100□FXX	10000	J,K,M	2.5	5.00	100	30
HSWL- FS1608T150□FXX	15000	J,K,M	2.5	9.50	90	20
HSWL- FS1608T180□FXX	18000	J,K,M	2.5	10.40	80	20
HSWL- FS1608T220□FXX	22000	J,K,M	2.5	11.40	70	20

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**SPECIFICATIONS**

**HSWL- FS1608-M01 TYPE**

Part Number	Inductance	Tolerance	L Test Freq.	Max. DC Resistance	Max. Rated Current	Min. Self-resonant
Units Symbol	nH L	- -	MHz Freq.	$\Omega$ DCR	mA Ir	MHz S.R.F
HSWL- FS1608T4N9□M01FXX	4.9	J,K,M	10	0.015	2600	2300
HSWL- FS1608T15N□M01FXX	15	J,K,M	10	0.025	2200	2000
HSWL- FS1608T33N□M01FXX	33	J,K,M	10	0.035	1700	1800
HSWL- FS1608T55N□M01FXX	55	J,K,M	10	0.045	1500	1600
HSWL- FS1608T85N□M01FXX	85	J,K,M	10	0.060	1400	1380
HSWL- FS1608TR10□M01FXX	100	K,M	10	0.100	1000	1260
HSWL- FS1608TR12□M01FXX	120	J,K,M	10	0.085	1100	1200
HSWL- FS1608TR16□M01FXX	160	J,K,M	10	0.100	1000	900
HSWL- FS1608TR21□M01FXX	210	J,K,M	10	0.150	800	720
HSWL- FS1608TR27□M01FXX	270	J,K,M	10	0.160	750	660
HSWL- FS1608TR33□M01FXX	330	J,K,M	10	0.250	630	600
HSWL- FS1608TR39□M01FXX	390	J,K,M	10	0.280	620	570
HSWL- FS1608TR47□M01FXX	470	J,K,M	10	0.450	500	555
HSWL- FS1608TR56□M01FXX	560	J,K,M	10	0.480	450	540
HSWL- FS1608TR65□M01FXX	650	J,K,M	10	0.520	430	510

※□: Please specify the inductance tolerance code (J=±5%, K=±10%, M=±20%).

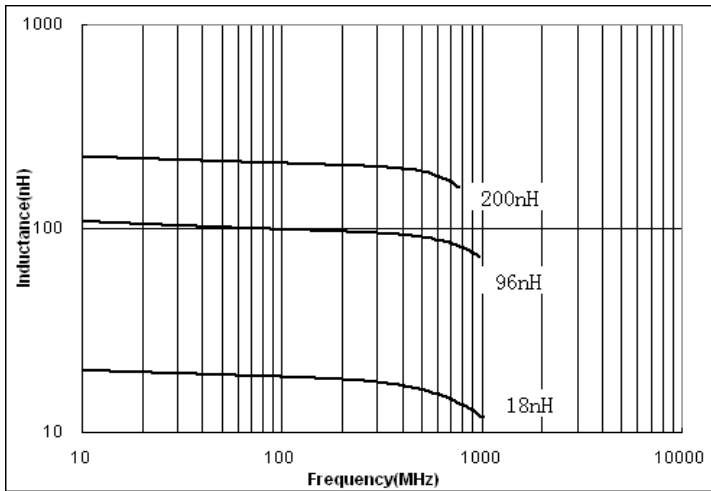
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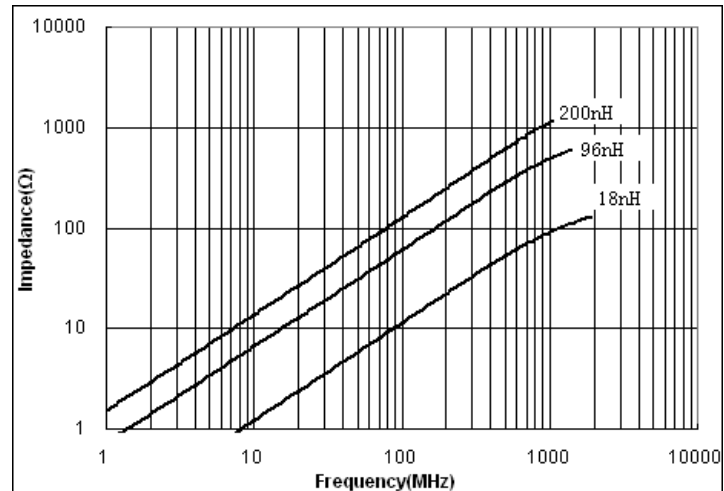
**TYPICAL ELECTRICAL CHARACTERISTICS**

**HSWL- FS1005 TYPE**

Inductance vs. Frequency Characteristics

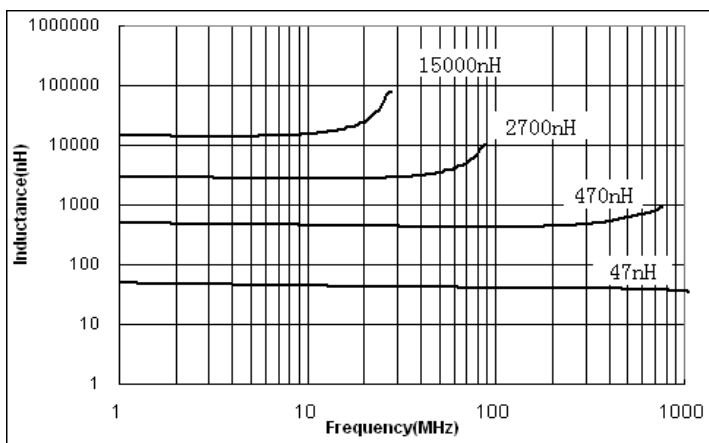


Impedance vs. Frequency Characteristics

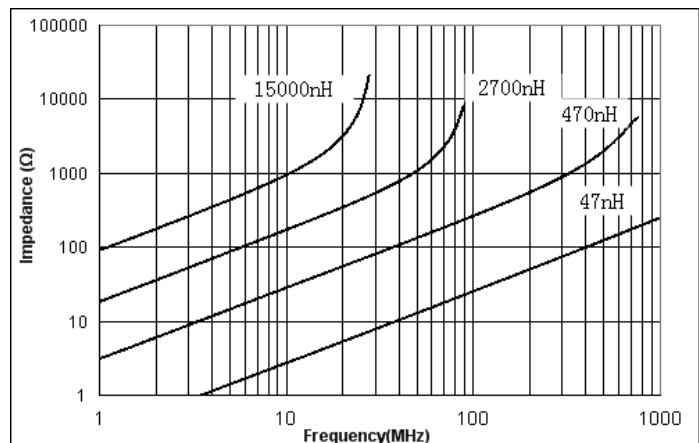


**HSWL- FS1608 TYPE**

Inductance vs. Frequency Characteristics



Impedance vs. Frequency Characteristics



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