

# Wire Wound SMD Power Inductors – FRH-B Series

Operating Temperature: -40°C~+105°C (Including Self-heating)



## FEATURES

- Various high power inductors are superior to be high saturation
- Suitable for surface mounting equipment

## APPLICATIONS

- Power supply choke for small electrical equipments such as VTR, LCD display, Notebook, communication equipment, and so on.

## PRODUCT IDENTIFICATION

**FRH**

①

**0602**

②

**B**

③

**-3R3**

④

**N**

⑤

**T**

⑥

①	Type
FRH	Wire Wound SMD Type Power Inductors (With Metallic Base)

②	External Dimensions
0602~1207	

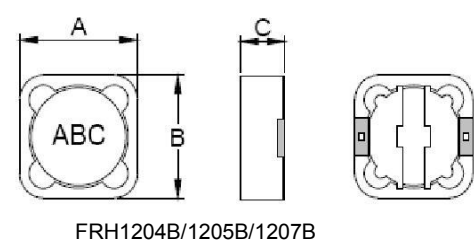
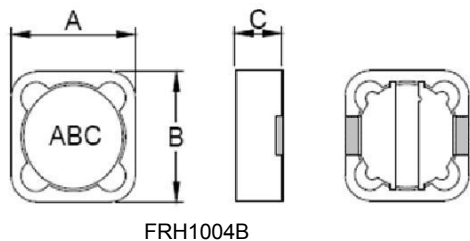
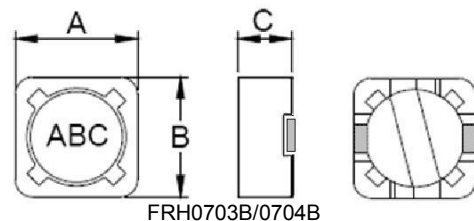
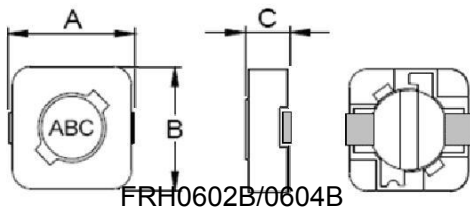
③	Configuration
B	B Type Base

④	Nominal Inductance	
Example	Nominal Value	
3R3	3.3μH	
100	10μH	
101	100μH	

⑤	Inductance Tolerance	
M	±20%	
N	±30%	

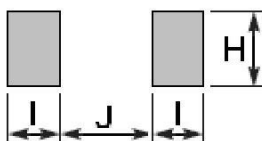
⑥	Packing	
T	Tape Carrier Package	

## SHAPE AND DIMENSIONS



## SHAPE AND DIMENSIONS

### Recommended Land Pattern



Unit: mm

Series	A max.	B max.	C max.	l typ.	J typ.	H typ.
FRH0602B	7.0	6.8	3.0	1.4	4.6	1.9
FRH0604B	7.0	6.8	5.0	1.4	4.6	1.9
FRH0703B	7.8	7.8	4.0	1.6	4.8	2.2
FRH0704B	7.8	7.8	5.0	1.6	4.8	2.2
FRH1004B	10.5	10.5	5.0	2.0	6.8	4.4
FRH1204B	12.5	12.5	5.0	2.9	7.0	5.4
FRH1205B	12.5	12.5	6.0	2.9	7.0	5.4
FRH1207B	12.5	12.5	8.0	2.9	7.0	5.4

## SPECIFICATIONS

### FRH0602B TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	$I_r$
FRH0602B-3R3NT	3.3±30%	100k, 0.3V	0.068	1.94
FRH0602B-4R7NT	4.7±30%	100k, 0.3V	0.080	1.63
FRH0602B-5R6NT	5.6±30%	100k, 0.3V	0.096	1.40
FRH0602B-100MT	10±20%	1k, 0.3V	0.150	1.10
FRH0602B-120MT	12±20%	1k, 0.3V	0.200	1.00
FRH0602B-150MT	15±20%	1k, 0.3V	0.230	0.90
FRH0602B-180MT	18±20%	1k, 0.3V	0.270	0.80
FRH0602B-220MT	22±20%	1k, 0.3V	0.340	0.74
FRH0602B-270MT	27±20%	1k, 0.3V	0.380	0.66
FRH0602B-330MT	33±20%	1k, 0.3V	0.450	0.59
FRH0602B-390MT	39±20%	1k, 0.3V	0.490	0.54
FRH0602B-470MT	47±20%	1k, 0.3V	0.690	0.50
FRH0602B-560MT	56±20%	1k, 0.3V	0.780	0.46
FRH0602B-680MT	68±20%	1k, 0.3V	1.070	0.42
FRH0602B-820MT	82±20%	1k, 0.3V	1.210	0.38
FRH0602B-101MT	100±20%	1k, 0.3V	1.390	0.34
FRH0602B-121MT	120±20%	1k, 0.3V	1.900	0.31
FRH0602B-151MT	150±20%	1k, 0.3V	2.180	0.28
FRH0602B-181MT	180±20%	1k, 0.3V	2.770	0.26
FRH0602B-221MT	220±20%	1k, 0.3V	3.120	0.23
FRH0602B-271MT	270±20%	1k, 0.3V	4.380	0.22
FRH0602B-331MT	330±20%	1k, 0.3V	4.940	0.19

## SPECIFICATIONS

### FRH0604B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH0604B-100MT	10±20%	1k, 0.3V	0.120	1.35
FRH0604B-120MT	12±20%	1k, 0.3V	0.130	1.20
FRH0604B-150MT	15±20%	1k, 0.3V	0.180	1.10
FRH0604B-180MT	18±20%	1k, 0.3V	0.240	1.00
FRH0604B-220MT	22±20%	1k, 0.3V	0.270	0.91
FRH0604B-270MT	27±20%	1k, 0.3V	0.300	0.82
FRH0604B-330MT	33±20%	1k, 0.3V	0.330	0.75
FRH0604B-390MT	39±20%	1k, 0.3V	0.370	0.69
FRH0604B-470MT	47±20%	1k, 0.3V	0.520	0.62
FRH0604B-560MT	56±20%	1k, 0.3V	0.560	0.58
FRH0604B-680MT	68±20%	1k, 0.3V	0.630	0.52
FRH0604B-820MT	82±20%	1k, 0.3V	0.710	0.47
FRH0604B-101MT	100±20%	1k, 0.3V	1.030	0.43
FRH0604B-121MT	120±20%	1k, 0.3V	1.150	0.39
FRH0604B-151MT	150±20%	1k, 0.3V	1.680	0.35
FRH0604B-181MT	180±20%	1k, 0.3V	1.870	0.32
FRH0604B-221MT	220±20%	1k, 0.3V	2.080	0.29
FRH0604B-271MT	270±20%	1k, 0.3V	2.370	0.26
FRH0604B-331MT	330±20%	1k, 0.3V	2.670	0.23
FRH0604B-391MT	390±20%	1k, 0.3V	2.940	0.22
FRH0604B-471MT	470±20%	1k, 0.3V	3.930	0.20

### FRH0703B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH0703B-2R2NT	2.2±30%	100k, 0.3V	0.025	3.00
FRH0703B-3R3NT	3.3±30%	100k, 0.3V	0.035	2.50
FRH0703B-4R7NT	4.7±30%	100k, 0.3V	0.031	2.00
FRH0703B-100MT	10±20%	1k, 0.3V	0.072	1.68
FRH0703B-120MT	12±20%	1k, 0.3V	0.098	1.52
FRH0703B-150MT	15±20%	1k, 0.3V	0.130	1.33
FRH0703B-180MT	18±20%	1k, 0.3V	0.140	1.20
FRH0703B-220MT	22±20%	1k, 0.3V	0.190	1.07
FRH0703B-270MT	27±20%	1k, 0.3V	0.210	0.96
FRH0703B-330MT	33±20%	1k, 0.3V	0.240	0.91
FRH0703B-390MT	39±20%	1k, 0.3V	0.320	0.77
FRH0703B-470MT	47±20%	1k, 0.3V	0.360	0.76
FRH0703B-560MT	56±20%	1k, 0.3V	0.470	0.68
FRH0703B-680MT	68±20%	1k, 0.3V	0.520	0.61
FRH0703B-820MT	82±20%	1k, 0.3V	0.690	0.57
FRH0703B-101MT	100±20%	1k, 0.3V	0.790	0.50
FRH0703B-121MT	120±20%	1k, 0.3V	0.890	0.49
FRH0703B-151MT	150±20%	1k, 0.3V	1.270	0.43
FRH0703B-181MT	180±20%	1k, 0.3V	1.450	0.39
FRH0703B-221MT	220±20%	1k, 0.3V	1.650	0.35
FRH0703B-271MT	270±20%	1k, 0.3V	2.310	0.32
FRH0703B-331MT	330±20%	1k, 0.3V	2.620	0.28
FRH0703B-391MT	390±20%	1k, 0.3V	2.940	0.26
FRH0703B-471MT	470±20%	1k, 0.3V	4.180	0.24
FRH0703B-561MT	560±20%	1k, 0.3V	4.670	0.22

## SPECIFICATIONS

### FRH0704B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH0704B-100MT	10±20%	1k, 0.3V	0.049	1.84
FRH0704B-120MT	12±20%	1k, 0.3V	0.058	1.71
FRH0704B-150MT	15±20%	1k, 0.3V	0.081	1.47
FRH0704B-180MT	18±20%	1k, 0.3V	0.091	1.31
FRH0704B-220MT	22±20%	1k, 0.3V	0.110	1.23
FRH0704B-270MT	27±20%	1k, 0.3V	0.150	1.12
FRH0704B-330MT	33±20%	1k, 0.3V	0.170	0.96
FRH0704B-390MT	39±20%	1k, 0.3V	0.230	0.91
FRH0704B-470MT	47±20%	1k, 0.3V	0.260	0.88
FRH0704B-560MT	56±20%	1k, 0.3V	0.350	0.75
FRH0704B-680MT	68±20%	1k, 0.3V	0.380	0.69
FRH0704B-820MT	82±20%	1k, 0.3V	0.430	0.61
FRH0704B-101MT	100±20%	1k, 0.3V	0.610	0.60
FRH0704B-121MT	120±20%	1k, 0.3V	0.660	0.52
FRH0704B-151MT	150±20%	1k, 0.3V	0.880	0.46
FRH0704B-181MT	180±20%	1k, 0.3V	0.980	0.42
FRH0704B-221MT	220±20%	1k, 0.3V	1.170	0.36
FRH0704B-271MT	270±20%	1k, 0.3V	1.640	0.34
FRH0704B-331MT	330±20%	1k, 0.3V	1.860	0.32
FRH0704B-391MT	390±20%	1k, 0.3V	2.850	0.29
FRH0704B-471MT	470±20%	1k, 0.3V	3.010	0.26
FRH0704B-561MT	560±20%	1k, 0.3V	3.620	0.23

### FRH1004B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH1004B-2R2NT	2.2±30%	100k, 0.3V	0.018	4.00
FRH1004B-3R8NT	3.8±30%	100k, 0.3V	0.028	3.50
FRH1004B-4R7NT	4.7±30%	100k, 0.3V	0.035	3.20
FRH1004B-6R8NT	6.8±30%	100k, 0.3V	0.044	2.80
FRH1004B-100MT	10±20%	1k, 0.3V	0.050	2.40
FRH1004B-120MT	12±20%	1k, 0.3V	0.054	2.25
FRH1004B-150MT	15±20%	1k, 0.3V	0.061	2.00
FRH1004B-180MT	18±20%	1k, 0.3V	0.084	1.80
FRH1004B-220MT	22±20%	1k, 0.3V	0.094	1.65
FRH1004B-270MT	27±20%	1k, 0.3V	0.110	1.45
FRH1004B-330MT	33±20%	1k, 0.3V	0.150	1.35
FRH1004B-390MT	39±20%	1k, 0.3V	0.170	1.20
FRH1004B-470MT	47±20%	1k, 0.3V	0.210	1.10
FRH1004B-560MT	56±20%	1k, 0.3V	0.230	1.00
FRH1004B-820MT	82±20%	1k, 0.3V	0.360	0.84
FRH1004B-101MT	100±20%	1k, 0.3V	0.410	0.76
FRH1004B-121MT	120±20%	1k, 0.3V	0.450	0.70
FRH1004B-151MT	150±20%	1k, 0.3V	0.640	0.63
FRH1004B-181MT	180±20%	1k, 0.3V	0.840	0.57
FRH1004B-221MT	220±20%	1k, 0.3V	0.960	0.52
FRH1004B-271MT	270±20%	1k, 0.3V	1.070	0.47
FRH1004B-331MT	330±20%	1k, 0.3V	1.370	0.43
FRH1004B-391MT	390±20%	1k, 0.3V	1.550	0.39
FRH1004B-471MT	470±20%	1k, 0.3V	1.740	0.36

## SPECIFICATIONS

### FRH1204B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH1204B-1R0NT	1.0±30%	100k, 0.3V	0.010	7.00
FRH1204B-2R2NT	2.2±30%	100k, 0.3V	0.014	5.70
FRH1204B-3R3NT	3.3±30%	100k, 0.3V	0.015	5.20
FRH1204B-4R7NT	4.7±30%	100k, 0.3V	0.018	4.90
FRH1204B-5R6NT	5.6±30%	100k, 0.3V	0.020	4.50
FRH1204B-6R8NT	6.8±30%	100k, 0.3V	0.023	4.20
FRH1204B-8R2NT	8.2±30%	100k, 0.3V	0.026	4.00
FRH1204B-100MT	10±20%	1k, 0.3V	0.028	3.80
FRH1204B-120MT	12±20%	1k, 0.3V	0.038	3.50
FRH1204B-150MT	15±20%	1k, 0.3V	0.050	3.20
FRH1204B-180MT	18±20%	1k, 0.3V	0.057	3.10
FRH1204B-220MT	22±20%	1k, 0.3V	0.066	2.90
FRH1204B-270MT	27±20%	1k, 0.3V	0.080	2.80
FRH1204B-330MT	33±20%	1k, 0.3V	0.097	2.70
FRH1204B-390MT	39±20%	1k, 0.3V	0.132	2.10
FRH1204B-470MT	47±20%	1k, 0.3V	0.160	1.90
FRH1204B-560MT	56±20%	1k, 0.3V	0.190	1.80
FRH1204B-680MT	68±20%	1k, 0.3V	0.220	1.50
FRH1204B-820MT	82±20%	1k, 0.3V	0.260	1.30
FRH1204B-101MT	100±20%	1k, 0.3V	0.310	1.20
FRH1204B-121MT	120±20%	1k, 0.3V	0.380	1.10
FRH1204B-151MT	150±20%	1k, 0.3V	0.530	0.95
FRH1204B-181MT	180±20%	1k, 0.3V	0.620	0.85
FRH1204B-221MT	220±20%	1k, 0.3V	0.700	0.80
FRH1204B-271MT	270±20%	1k, 0.3V	0.870	0.60
FRH1204B-331MT	330±20%	1k, 0.3V	0.990	0.50
FRH1204B-471MT	470±20%	1k, 0.3V	1.100	0.25

### FRH1205B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH1205B-1R0NT	1.0±30%	100k, 0.3V	0.010	8.00
FRH1205B-2R2NT	2.2±30%	100k, 0.3V	0.014	7.80
FRH1205B-2R4NT	2.4±30%	100k, 0.3V	0.014	7.50
FRH1205B-3R3NT	3.3±30%	100k, 0.3V	0.014	6.80
FRH1205B-4R7NT	4.7±30%	100k, 0.3V	0.020	5.60
FRH1205B-5R8NT	5.8±30%	100k, 0.3V	0.020	5.20
FRH1205B-8R2NT	8.2±30%	100k, 0.3V	0.021	4.40
FRH1205B-100MT	10±20%	1k, 0.3V	0.025	4.00
FRH1205B-120MT	12±20%	1k, 0.3V	0.027	3.50
FRH1205B-150MT	15±20%	1k, 0.3V	0.030	3.30
FRH1205B-180MT	18±20%	1k, 0.3V	0.034	3.00
FRH1205B-220MT	22±20%	1k, 0.3V	0.043	2.80
FRH1205B-270MT	27±20%	1k, 0.3V	0.051	2.30
FRH1205B-330MT	33±20%	1k, 0.3V	0.057	2.10
FRH1205B-390MT	39±20%	1k, 0.3V	0.068	2.00
FRH1205B-470MT	47±20%	1k, 0.3V	0.075	1.80
FRH1205B-560MT	56±20%	1k, 0.3V	0.110	1.70
FRH1205B-680MT	68±20%	1k, 0.3V	0.120	1.50
FRH1205B-820MT	82±20%	1k, 0.3V	0.140	1.40
FRH1205B-101MT	100±20%	1k, 0.3V	0.160	1.30
FRH1205B-121MT	120±20%	1k, 0.3V	0.170	1.10

## SPECIFICATIONS

### FRH1205B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH1205B-151MT	150±20%	1k, 0.3V	0.230	1.00
FRH1205B-181MT	180±20%	1k, 0.3V	0.290	0.90
FRH1205B-221MT	220±20%	1k, 0.3V	0.400	0.80
FRH1205B-271MT	270±20%	1k, 0.3V	0.460	0.75
FRH1205B-331MT	330±20%	1k, 0.3V	0.510	0.68
FRH1205B-391MT	390±20%	1k, 0.3V	0.690	0.65
FRH1205B-471MT	470±20%	1k, 0.3V	0.770	0.58
FRH1205B-561MT	560±20%	1k, 0.3V	0.860	0.54
FRH1205B-681MT	680±20%	1k, 0.3V	1.200	0.48
FRH1205B-821MT	820±20%	1k, 0.3V	1.340	0.43
FRH1205B-102MT	1000±20%	1k, 0.3V	1.800	0.40

### FRH1207B TYPE

Part Number	Inductance	L Test Condition L	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
FRH1207B-1R0NT	1.0±30%	100k, 0.3V	0.009	10.00
FRH1207B-2R2NT	2.2±30%	100k, 0.3V	0.012	8.00
FRH1207B-2R7NT	2.7±30%	100k, 0.3V	0.013	8.00
FRH1207B-3R3NT	3.3±30%	100k, 0.3V	0.013	8.00
FRH1207B-3R9NT	3.9±30%	100k, 0.3V	0.013	7.50
FRH1207B-4R7NT	4.7±30%	100k, 0.3V	0.016	6.80
FRH1207B-6R1NT	6.1±30%	100k, 0.3V	0.018	6.60
FRH1207B-6R8NT	6.8±30%	100k, 0.3V	0.019	6.60
FRH1207B-7R6NT	7.6±30%	100k, 0.3V	0.020	5.90
FRH1207B-8R2NT	8.2±30%	100k, 0.3V	0.020	5.60
FRH1207B-100MT	10±20%	1k, 0.3V	0.021	5.40
FRH1207B-120MT	12±20%	1k, 0.3V	0.024	4.90
FRH1207B-150MT	15±20%	1k, 0.3V	0.033	4.50
FRH1207B-180MT	18±20%	1k, 0.3V	0.039	3.90
FRH1207B-220MT	22±20%	1k, 0.3V	0.043	3.60
FRH1207B-270MT	27±20%	1k, 0.3V	0.046	3.40
FRH1207B-330MT	33±20%	1k, 0.3V	0.065	3.00
FRH1207B-390MT	39±20%	1k, 0.3V	0.073	2.75
FRH1207B-470MT	47±20%	1k, 0.3V	0.100	2.50
FRH1207B-560MT	56±20%	1k, 0.3V	0.110	2.35
FRH1207B-680MT	68±20%	1k, 0.3V	0.140	2.10
FRH1207B-820MT	82±20%	1k, 0.3V	0.160	1.95
FRH1207B-101MT	100±20%	1k, 0.3V	0.220	1.70
FRH1207B-121MT	120±20%	1k, 0.3V	0.250	1.60
FRH1207B-151MT	150±20%	1k, 0.3V	0.280	1.42
FRH1207B-181MT	180±20%	1k, 0.3V	0.350	1.30
FRH1207B-221MT	220±20%	1k, 0.3V	0.390	1.16
FRH1207B-271MT	270±20%	1k, 0.3V	0.560	1.06
FRH1207B-331MT	330±20%	1k, 0.3V	0.640	0.95
FRH1207B-391MT	390±20%	1k, 0.3V	0.700	0.88
FRH1207B-471MT	470±20%	1k, 0.3V	0.980	0.79
FRH1207B-561MT	560±20%	1k, 0.3V	1.070	0.73
FRH1207B-681MT	680±20%	1k, 0.3V	1.460	0.67
FRH1207B-821MT	820±20%	1k, 0.3V	1.640	0.60
FRH1207B-102MT	1000±20%	1k, 0.3V	1.820	0.55

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