

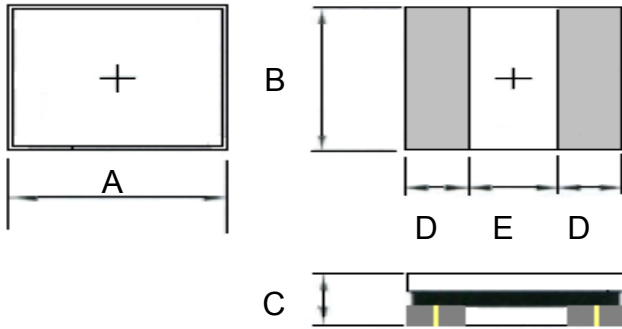
# Power Inductor

## 1. Features

- This specification applies Low Profile Power Inductors.
- 100% Lead(Pb) & Halogen-Free and RoHS compliant.



## 2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
HNR201610	2.0 -0.1/+0.2	1.6 -0.1/+0.2	1.0max.	0.60 ref.	0.80 ref.

Units: mm

## 3. Part Numbering



- A: Series
- B: Dimension
- C: Inductance                      4R7=4.7uH
- D: Inductance Tolerance            M=±20% ; Y=±30%

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) ±20%	I sat (A) typ.	I sat (A) Max.	I rms (A) typ.	I rms (A) Max.
HNR201610-R47Y	0.47	±30%	0.1V/1M	0.044	3.00	2.70	2.60	2.35
HNR201610-R68Y	0.68	±30%	0.1V/1M	0.062	2.45	2.00	2.25	2.05
HNR201610-1R0Y	1.0	±30%	0.1V/1M	0.080	1.95	1.80	1.75	1.60
HNR201610-1R5Y	1.5	±30%	0.1V/1M	0.130	1.65	1.46	1.40	1.26
HNR201610-2R2M	2.2	±20%	0.1V/1M	0.145	1.45	1.26	1.35	1.20
HNR201610-3R3M	3.3	±20%	0.1V/1M	0.245	1.05	0.90	1.05	0.95
HNR201610-4R7M	4.7	±20%	0.1V/1M	0.360	0.85	0.77	1.00	0.90
HNR201610-6R8M	6.8	±20%	0.1V/1M	0.500	0.80	0.72	0.70	0.55
HNR201610-100M	10	±20%	0.1V/1M	0.720	0.62	0.55	0.50	0.45
HNR201610-150M	15	±20%	0.1V/1M	1.400	0.50	0.45	0.40	0.36
HNR201610-180M	18	±20%	0.1V/1M	1.800	0.45	0.40	0.38	0.34
HNR201610-220M	22	±20%	0.1V/1M	2.000	0.43	0.38	0.30	0.27

Note:

# Power Inductor

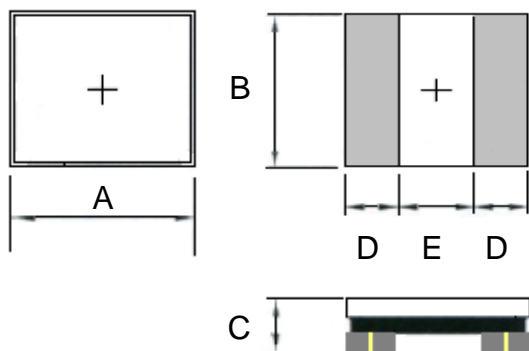
HNR252010-SERIES

## 1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



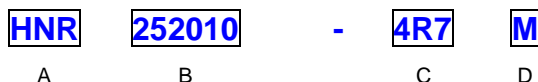
## 2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
HNR252010	2.5 -0.1/+0.3	2.0 -0.05/+0.35	1.02max.	0.85 ref.	0.80 ref.

Units: mm

## 3. Part Numbering



- A: Series
- B: Dimension
- C: Inductance                      4R7=4.7uH
- D: Inductance Tolerance          M=±20%    Y=±30%

## 4. Specification

Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) ±20%	I sat (A) typ.	I sat (A) Max.	I rms (A) typ	I rms (A) Max.
HNR252010-R47Y	0.47	±30%	0.1V/1M	0.030	2.85	2.57	2.80	2.50
HNR252010-R68Y	0.68	±30%	0.1V/1M	0.039	2.70	2.45	2.45	2.20
HNR252010-1R0Y	1.0	±30%	0.1V/1M	0.055	2.45	2.05	2.20	1.80
HNR252010-1R5Y	1.5	±30%	0.1V/1M	0.090	1.80	1.70	1.70	1.55
HNR252010-2R2M	2.2	±20%	0.1V/1M	0.114	1.60	1.55	1.55	1.40
HNR252010-3R3M	3.3	±20%	0.1V/1M	0.170	1.30	1.10	1.25	1.10
HNR252010-4R7M	4.7	±20%	0.1V/1M	0.250	1.10	0.95	1.05	0.92
HNR252010-6R8M	6.8	±20%	0.1V/1M	0.370	0.95	0.80	0.85	0.76
HNR252010-100M	10	±20%	0.1V/1M	0.470	0.75	0.65	0.75	0.67
HNR252010-150M	15	±20%	0.1V/1M	0.750	0.55	0.45	0.55	0.50
HNR252010-220M	22	±20%	0.1V/1M	1.120	0.50	0.40	0.50	0.45

Note:

- I<sub>sat</sub> : Based on inductance change (ΔL/L0 : ≤-30%) @ ambient temp. 25°C
- I<sub>rms</sub> : Based on temperature rise (ΔT : 40°C.)

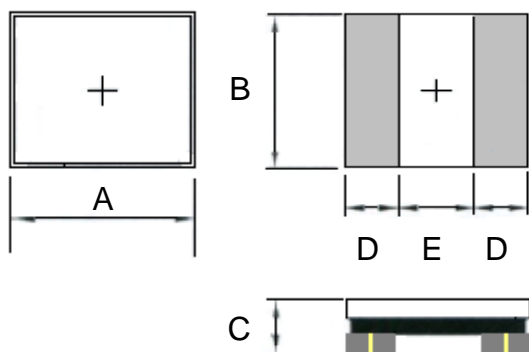
# Power Inductor

## 1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



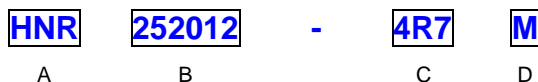
## 2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
HNR252012	2.5 -0.1/+0.3	2.0 -0.05/+0.35	1.2 max.	0.85 ref.	0.80 ref.

Units: mm

## 3. Part Numbering



- A: Series
- B: Dimension
- C: Inductance                      4R7=4.7uH
- D: Inductance Tolerance          M=±20%    Y=±30%

Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) ±20%	I sat (A) typ.	I sat (A) Max.	I rms (A) typ	I rms (A) Max.
HNR252012-R47Y	0.47	±30%	0.1V/1M	0.028	4.00	3.60	3.70	3.35
HNR252012-R68Y	0.68	±30%	0.1V/1M	0.036	3.00	2.70	3.30	3.00
HNR252012-1R0Y	1.0	±30%	0.1V/1M	0.049	2.70	2.45	2.60	2.30
HNR252012-1R5Y	1.5	±30%	0.1V/1M	0.063	2.30	2.05	2.20	1.95
HNR252012-2R2M	2.2	±20%	0.1V/1M	0.080	2.15	1.95	1.85	1.65
HNR252012-3R3M	3.3	±20%	0.1V/1M	0.120	1.70	1.50	1.45	1.30
HNR252012-4R7M	4.7	±20%	0.1V/1M	0.176	1.50	1.35	1.20	1.05
HNR252012-6R8M	6.8	±20%	0.1V/1M	0.250	1.15	1.00	1.00	0.90
HNR252012-100M	10	±20%	0.1V/1M	0.410	0.85	0.75	0.75	0.65
HNR252012-150M	15	±20%	0.1V/1M	0.540	0.63	0.56	0.60	0.54
HNR252012-220M	22	±20%	0.1V/1M	0.850	0.56	0.50	0.50	0.45

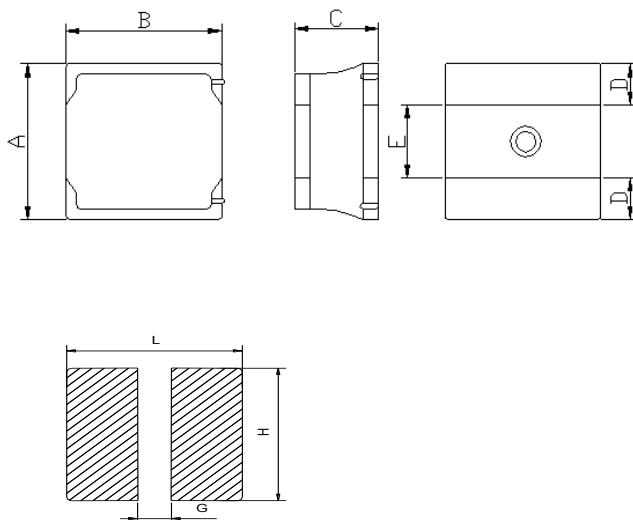
Note:

- I<sub>sat</sub> : Based on inductance change (ΔL/L0 : ≤-30%) @ ambient temp. 25°C
- I<sub>rms</sub> : Based on temperature rise (ΔT : 40°C.)

<b>Power Inductor(Lead Free)</b>		<b>Page</b>	<b>2</b>
<b>Product Name</b>	<b>HNR3010-SERIES</b>	<b>REV.</b>	<b>A</b>

### 1、Shapes and Dimensions

■ Dimension



Chip size	
A	3.0±0.2
B	3.0±0.2
C	1.0max
D	1.0ref
E	1.0ref
Land Patterns (typ.)	
L	3.2
G	1.0
H	3.2

Units: mm

- A: Series  
 B: Dimension  
 C: Inductance  
 D: Inductance Tolerance
- A/B\*C  
 2R2=2.20uh 100=10uh, 101=100uh, 102=1000uh  
 K=±10%, M=±20%, Y=±30%.  
 marking direction cannot decide polarity. Color: Black, unidirectional magnetic shielding

### 3、Electrical Characteristics

Specification					
Part Number	Test Freq. (Hz)	Inductance (uH)	DCR(Ω) ±20%	Isat(A) typ	Irms(A) typ.
HNR3010-1R0Y	0.1V/1M	1.0±30%	0.055	1.80	2.10
HNR3010-1R5Y	0.1V/1M	1.5±30%	0.070	1.50	1.90
HNR3010-2R2M	0.1V/1M	2.2±20%	0.090	1.30	1.70
HNR3010-3R3M	0.1V/1M	3.3±20%	0.130	1.10	1.50
HNR3010-4R7M	0.1V/1M	4.7±20%	0.170	0.90	1.30
HNR3010-6R8M	0.1V/1M	6.8±20%	0.260	0.77	1.00
HNR3010-100M	0.1V/1M	10±20%	0.350	0.63	0.80
HNR3010-150M	0.1V/1M	15±20%	0.510	0.54	0.70
HNR3010-220M	0.1V/1M	22±20%	0.750	0.43	0.60

Note.

\*Operating Temperature:-55~+125°C

\*Isat: Based on inductance change(ΔL/L0: ≤30%)@ambient temp .25°C

\*Irms: Based on temperature rise (ΔT:40°C)

\*Temperature Rise Test:40°C





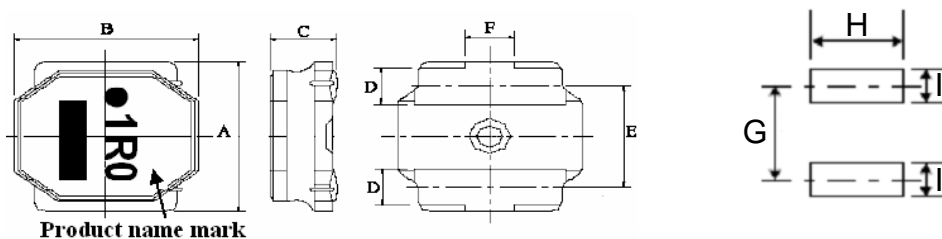


### 1. Features

- 1. This specification applies Low Profile Power Inductors.
- 2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



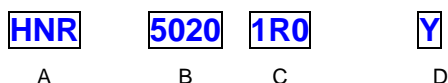
### 2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)
HNR5020	4.9±0.2	4.9±0.2	2.0 max.	1.2±0.2	3.3±0.2	1.3 typ.	3.6 ref.	4.0 ref.	1.5 ref.

Units: mm

### 3. Part Numbering



- A: Series
- B: Dimension
- C: Control S/N
- D: Inductance                      1R0=1.0uH
- E: Inductance Tolerance        M=±20% ; Y=±30%

Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	SRF (MHz) min.	DCR (Ω) ±20%	I sat (A)	I rms (A)
HNR5020-1R0Y	1.0	±30%	1V100K	81	0.021	4.00	3.60
HNR5020-1R5Y	1.5	±30%	1V100K	68	0.026	3.35	3.20
HNR5020-2R2Y	2.2	±30%	1V100K	57	0.035	2.90	2.90
HNR5020-3R3Y	3.3	±30%	1V100K	46	0.048	2.40	2.40
HNR5020-4R7M	4.7	±20%	1V100K	37	0.060	2.00	2.00
HNR5020-6R8M	6.8	±20%	1V100K	30	0.090	1.60	1.65
HNR5020-100M	10	±20%	1V100K	24	0.120	1.30	1.45
HNR5020-150M	15	±20%	1V100K	20	0.165	1.10	1.20
HNR5020-220M	22	±20%	1V100K	17	0.260	0.90	1.00

Note:

- I sat : Based on inductance change (ΔL/L0 : ≤-30%) @ ambient temp. 25°C
- I rms : Based on temperature rise (ΔT : 40°C typ.)

# Power Inductor

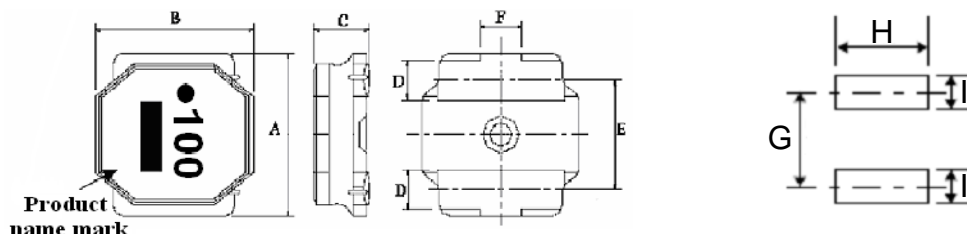
HNR5040-SERIES

## 1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



## 2. Dimension



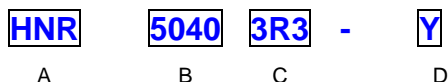
Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)
HNR5040	4.9±0.2	4.9±0.2	*1 4.1 max. *2 4.0 max.	1.2±0.2	3.3±0.2	1.3 typ.	3.6 ref.	4.0 ref.	1.5 ref.

\*1 1R5-100 Type

\*2 150-470 Type

Units: mm

## 3. Part Numbering



A: Series

B: Dimension

C: Inductance

100=10.0uH D:

D: Inductance Tolerance

M=±20% ; Y=±30%

## 4. Specification

Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	SRF (MHz) min.	DCR (Ω) ±20%	I sat (A)	I rms (A)
HNR5040-1R5Y	1.5	±30%	1V100K	60	0.017	6.40	4.50
HNR5040-2R2Y	2.2	±30%	1V100K	42	0.022	5.00	3.70
HNR5040-3R3Y	3.3	±30%	1V100K	32	0.027	4.00	3.30
HNR5040-4R7Y	4.7	±30%	1V100K	28	0.029	3.30	3.10
HNR5040-6R8M	6.8	±20%	1V100K	21	0.049	2.80	2.40
HNR5040-100M	10	±20%	1V100K	18	0.056	2.30	2.10
HNR5040-150M	15	±20%	1V100K	13	0.080	2.00	1.80
HNR5040-220M	22	±20%	1V100K	9	0.126	1.50	1.40

Note:

I<sub>sat</sub> : Based on inductance change (ΔL/L0 : ≤-30%) @ ambient temp. 25°C

I<sub>rms</sub> : Based on temperature rise (ΔT : 40°C typ.)

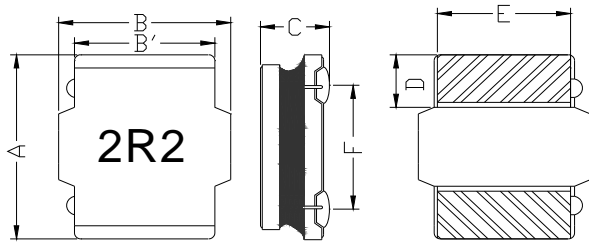


### 1. Features

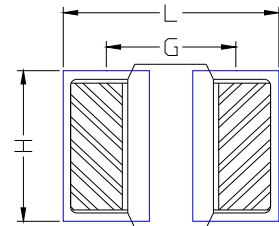
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



### 2. Dimension



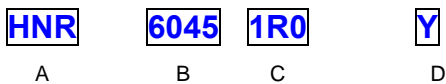
### Recommend Land pattern



Series	A(mm)	B(mm)	B'(mm)	C(mm)	D(mm)	E(mm)	F(mm)
HNR6045	6.0±0.3	6.0±0.3	4.8±0.2	4.2±0.3	1.7±0.3	4.5±0.3	4.25±0.3

L(mm)	G(mm)	H(mm)
6.5	4.25	4.8

### 3. Part Numbering



- A: Series
- B: Dimension
- C: Inductance                      100=10.0uH D:
- D: Inductance Tolerance            M=±20% ; Y=±30%

## 4. Specification

Part Number	Inductance L0 (uH) @ 0 A	Tolerance				Rated current				DCR (mΩ) @25°C  ±20%.
						Temperature current I rms (A)		Saturation current I sat (A)		
		K	L	M	Y	Typ	Max	Typ	Max	
HNR6045-1R0	1.00	/	/	±20%	±30%	8.00	7.30	13.50	12.50	10.0
HNR6045-1R2	1.20	/	/	±20%	±30%	7.50	7.00	12.50	11.50	10.5
HNR6045-1R3	1.30	/	/	±20%	±30%	7.50	7.00	12.50	11.50	10.5
HNR6045-1R5	1.50	/	/	±20%	±30%	7.00	6.60	12.00	11.00	11.7
HNR6045-2R2	2.20	/	/	±20%	±30%	6.00	5.30	9.50	8.55	15.0
HNR6045-3R3	3.30	/	/	±20%	±30%	5.00	4.50	7.80	7.30	21.0
HNR6045-4R7	4.70	/	±15%	±20%	±30%	4.50	4.00	6.80	6.20	26.0
HNR6045-6R3	6.30	/	±15%	±20%	±30%	3.80	3.50	5.90	5.30	33.0
HNR6045-5R6	5.60	/	±15%	±20%	±30%	4.10	3.70	6.40	5.70	31.0
HNR6045-6R8	6.80	/	±15%	±20%	±30%	3.60	3.30	5.70	5.15	34.0
HNR6045-100	10.0	±10%	±15%	±20%	±30%	3.20	2.60	4.60	4.20	52.0
HNR6045-150	15.0	±10%	±15%	±20%	±30%	2.80	2.20	3.80	3.30	71.0
HNR6045-180	18.0	±10%	±15%	±20%	±30%	2.60	2.10	3.40	2.90	80.0
HNR6045-220	22.0	±10%	±15%	±20%	±30%	2.30	1.90	3.30	2.70	96.0
HNR6045-330	33.0	±10%	±15%	±20%	±30%	1.80	1.50	2.50	2.10	145
HNR6045-470	47.0	±10%	±15%	±20%	±30%	1.60	1.20	2.00	1.75	200
HNR6045-560	56.0	±10%	±15%	±20%	±30%	1.40	1.00	1.80	1.65	230
HNR6045-680	68.0	±10%	±15%	±20%	±30%	1.10	0.92	1.60	1.52	305
HNR6045-820	82.0	±10%	±15%	±20%	±30%	0.98	0.88	1.50	1.40	365
HNR6045-101	100	±10%	±15%	±20%	±30%	0.92	0.82	1.33	1.25	456
HNR6045-121	120	±10%	±15%	±20%	±30%	0.85	0.79	1.20	1.10	500
HNR6045-151	150	±10%	±15%	±20%	±30%	0.75	0.70	1.10	1.00	626
HNR6045-181	180	±10%	±15%	±20%	±30%	0.68	0.60	1.00	0.90	745
HNR6045-221	220	±10%	±15%	±20%	±30%	0.60	0.50	0.88	0.77	900

## Note:

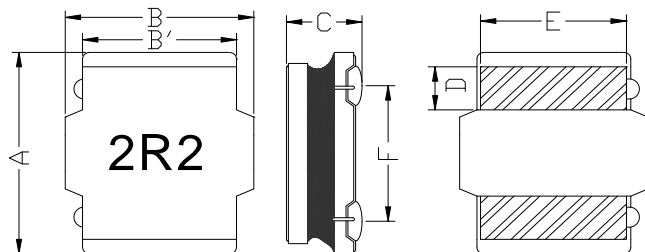
- All test data referenced to 25°C ambient, Ls:1MHz/1V.
- Testing Instrument : HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH502BC MICRO OHMMETER.
- Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C (keep 1min.).
- Saturation Current (Isat) will cause L0 to drop 30% typical. (keep quickly).
- The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.Circuit design,component,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Special inquiries besides the above common used types can be met on your requirement.

### 1. Features

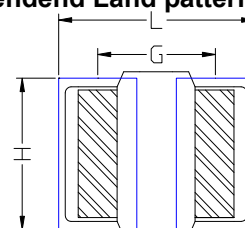
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



### 2. Dimension



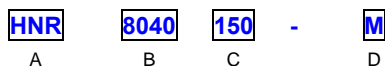
#### Recommend Land pattern



Series	A(mm)	B(mm)	B'(mm)	C(mm)	D(mm)	E(mm)	F(mm)
HNR8040	8.0±0.3	8.0±0.3	6.3±0.2	3.7±0.3	2.0±0.3	6.0±0.3	5.5±0.3

L(mm)	G(mm)	H(mm)
8.5	5.5	6.3

### 3. Part Numbering



- A: Series
  - B: Dimension
  - C: Inductance
  - D: Inductance Tolerance
- A/B\*C  
 2R2=2.20uh 100=10uh,101=100uh,102=1000uh  
 K=±10%,M=±20%,Y=±30%.  
 marking direction cannot decide polarity. Color: Black, unidirectional magnetic shielding

#### 4. Specification

Part Number	Inductance L0 (uH) @ 0 A	Tolerance	Rated current				DCR (mΩ) @25°C ±20%.
			Tempetature current I rms (A)		Saturation current I sat (A)		
			Typ	Max	Typ	Max	
HNR8040-1R0Y	1.00	±30%	8.50	8.00	13.80	13.00	8.2
HNR8040-1R4Y	1.40	±30%	8.20	7.80	11.80	11.20	10.0
HNR8040-1R5Y	1.50	±30%	8.00	7.70	11.50	11.00	10.0
HNR8040-2R2Y	2.20	±30%	7.40	6.90	9.80	9.20	11.5
HNR8040-3R3Y	3.30	±30%	6.60	6.20	8.00	7.50	15.0
HNR8040-4R7M	4.70	± 20%	5.80	5.30	6.70	6.00	19.5
HNR8040-5R6M	5.60	± 20%	5.40	5.20	6.20	5.80	22.0
HNR8040-6R8M	6.80	± 20%	5.10	5.00	5.60	5.10	25.0
HNR8040-100M	10.0	±20%	4.60	4.20	5.00	4.30	33.0
HNR8040-150M	15.0	±20%	3.60	3.20	4.00	3.60	50.0
HNR8040-220M	22.0	±20%	2.90	2.45	3.10	2.80	73.0
HNR8040-330M	33.0	±20%	2.30	2.10	2.60	2.10	100
HNR8040-470M	47.0	±20%	2.00	1.70	2.20	1.90	135
HNR8040-560M	56.0	±20%	1.75	1.60	1.90	1.60	160
HNR8040-680M	68.0	±20%	1.65	1.50	1.75	1.50	205
HNR8040-820M	82.0	±20%	1.40	1.30	1.60	1.40	230
HNR8040-101K	100	±10%	1.20	1.10	1.45	1.20	300
HNR8040-121K	120	±10%	1.10	1.00	1.30	1.10	350
HNR8040-151K	150	±10%	0.98	0.90	1.20	1.03	410
HNR8040-181K	180	±10%	0.91	0.83	1.04	0.94	490
HNR8040-221K	220	±10%	0.85	0.76	0.99	0.90	610

Note:

1. All test data referenced to 25°C ambient , Ls:1MHz/1V.
2. Testing Instrument : HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH502BC MICRO OHMMETER.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C (keep 1min.).
4. Saturation Current (Isat) will cause L0 to drop 30% typical. (keep quickly).
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.Circuit design,component,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Special inquiries besides the above common used types can be met on your requirement.