

SMD Type Ultra High Current Power Inductors

SMPI 0603HW-Series-K01

1. Features

1. Lowest height in this package footprint.
2. Shielded construction.
3. Lowest DCR/ μ H, in this package size.
4. Handles high transient current spikes without saturation.
5. Ultra low buzz noise, due to composite construction.
6. Frequency up to 5MHz.
7. 100% Lead(Pb) & Halogen-Free and RoHS compliant.

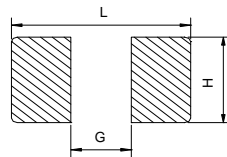
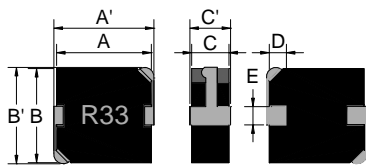


2. Applications

Excellent for power line DC-DC conversion applications used in power switching, personal computers and other handheld electronic equipment.

3. Dimensions

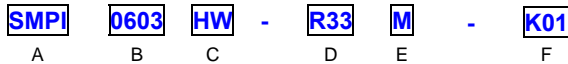
Recommended PC Board Pattern



Chip size	L(mm)	G(mm)	H(mm)
SMPI 0603	8.7	3.7	3.5

Series	A(mm)	A'(mm)	B(mm)	B'(mm)	C(mm)	C'(mm)	D(mm)	E(mm)
SMPI 0603	6.86 \pm 0.5	7.8 max.	6.47 \pm 0.5	7.0 max.	3.0 max.	3.2 max.	1.6 \pm 0.5	2.1 \pm 0.5

4. Part Numbering



- A: Series
- B: Dimension AxC
- C: Type
- D: Inductance R33=0.33 μ H
- E: Inductance Tolerance M= \pm 20%; Coating Black, Marking White
- F: Control S/N

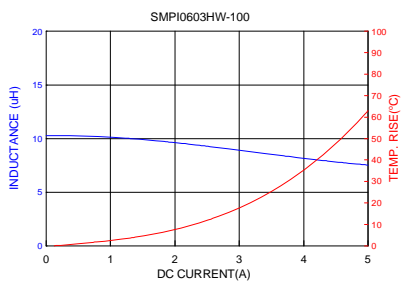
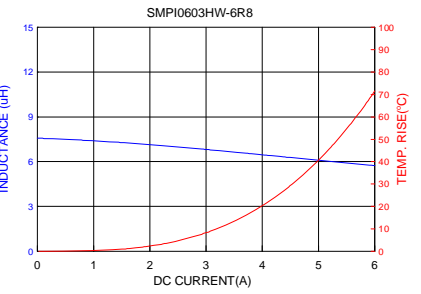
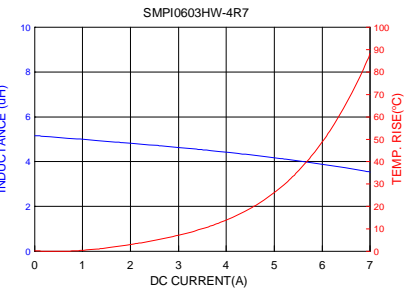
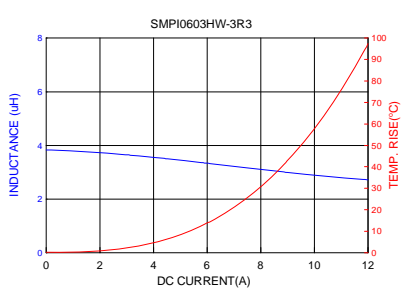
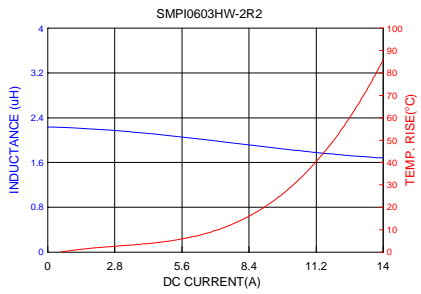
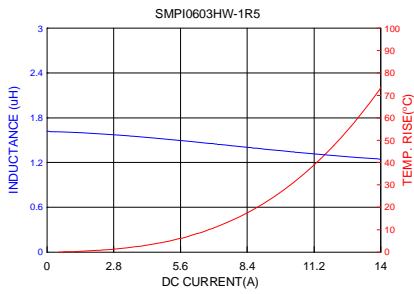
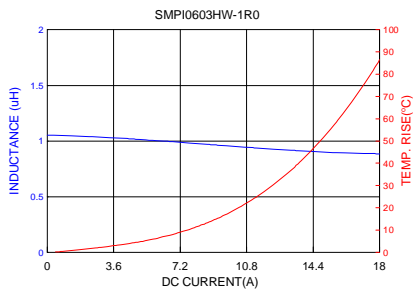
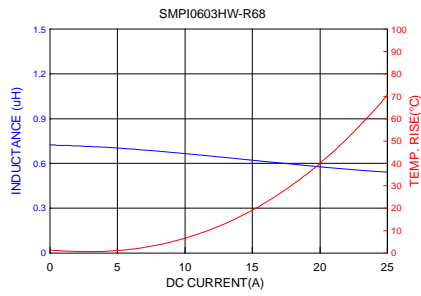
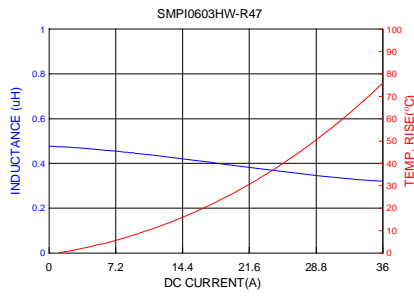
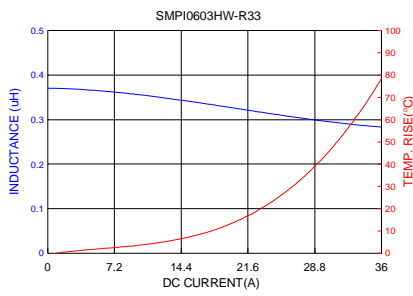
5. Specification

Part Number	Inductance L0 (μ H) \pm 20% @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (m Ω) max.
SMPI 0603HW-R33M-K01	0.33	20.0	30	3.9
SMPI 0603HW-R47M-K01	0.47	17.5	26	4.2
SMPI 0603HW-R68M-K01	0.68	15.5	23	5.5
SMPI 0603HW-1R0M-K01	1.0	11.0	16	10
SMPI 0603HW-1R5M-K01	1.5	9.0	14	15
SMPI 0603HW-2R2M-K01	2.2	8.0	12	20
SMPI 0603HW-3R3M-K01	3.3	6.0	10	30
SMPI 0603HW-4R7M-K01	4.7	5.5	6.5	40
SMPI 0603HW-6R8M-K01	6.8	4.5	6.0	60
SMPI 0603HW-100M-K01	10.0	3.0	4.5	105

Note:

1. Test frequency : L0: 100KHz/1.0V
2. All test data referenced to 20 $^{\circ}$ C ambient.
3. Testing Instrument : L: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately Δ T40 $^{\circ}$ C without core loss.
5. Saturation Current (I_{sat}) will cause L0 to drop approximately 20%
6. The part temperature (ambient + temp rise) should not exceed 125 $^{\circ}$ 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.
7. Special inquiries besides the above common used types can be met on your requirement.

6. Typical Performance Curves



SMD Type Ultra High Current Power Inductors

SMPI 0624HW-series-K01

1. Features

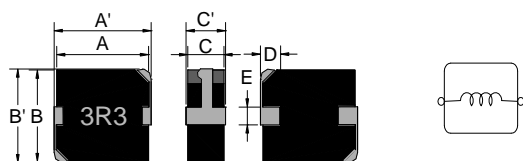
1. Lowest height in this package footprint.
2. Shielded construction.
3. Lowest DCR/ μ H, in this package size.
4. Handles high transient current spikes without saturation.
5. Ultra low buzz noise, due to composite construction.
6. Frequency up to 5MHz.
7. 100% Lead(Pb)-Free and RoHS compliant.



2. Applications

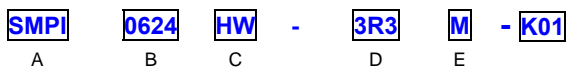
Excellent for power line DC-DC conversion applications used in power switching, personal computers and other handheld electronic equipment.

3. Dimensions



Series	A(mm)	A'(mm)	B(mm)	B'(mm)	C(mm)	C'(mm)	D(mm)	E(mm)
SMPI 0624	6.86±0.5	7.8 max.	6.47±0.5	7.0 max.	2.4 max.	2.5 max.	1.6±0.5	2.1±0.5

4. Part Numbering



- A: Series
 - B: Dimension
 - C: Type
 - D: Inductance
 - E: Inductance Tolerance
 - F: Control S/N
- Ax C
- 3R3=3.3uH
- M=±20% , Coating black

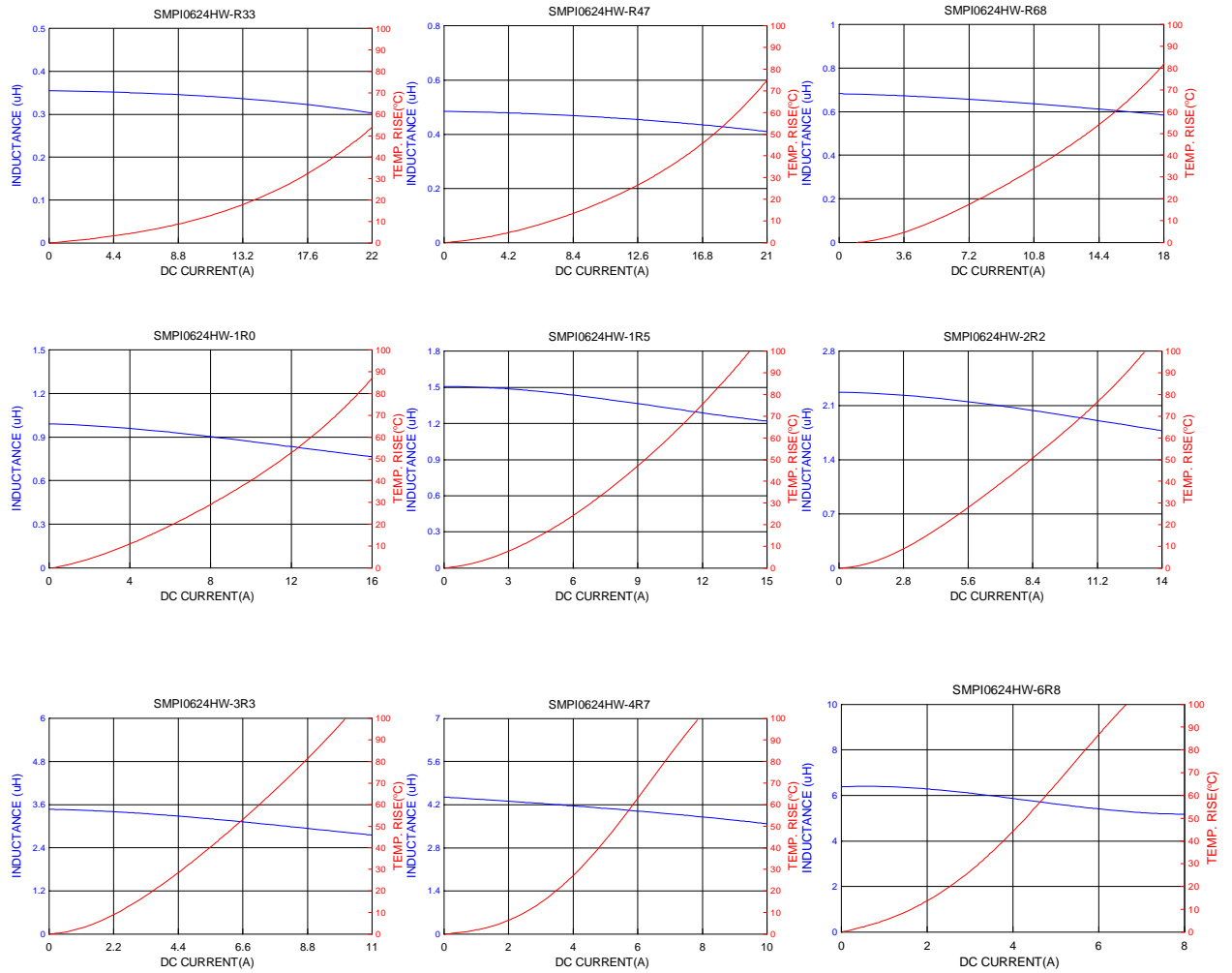
5. Specification

Part Number	Thickness C(mm)	Inductance L0 (μ H)±20% @ 0 Adc	I rms (A) Typ.	I sat (A) Typ.	DCR (m Ω) max.
SMPI 0624HW-R33M-K01	2.4	0.33	18	22	4.1
SMPI 0624HW-R47M-K01	2.4	0.47	13.5	21	6.5
SMPI 0624HW-R68M-K01	2.4	0.68	11	18	9.4
SMPI 0624HW-1R0M-K01	2.4	1.0	9.0	16	14
SMPI 0624HW-1R5M-K01	2.4	1.5	7.5	15	21
SMPI 0624HW-2R2M-K01	2.4	2.2	6.5	14	30
SMPI 0624HW-3R3M-K01	2.4	3.3	5.0	11	39
SMPI 0624HW-4R7M-K01	2.4	4.7	4.5	10	63
SMPI 0624HW-6R8M-K01	2.4	6.8	3.5	8	65

Note:

1. Test frequency : 100KHz / 0.25Vdc
2. All test data referenced to 20°C ambient.
3. Testing Instrument : L: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately Δ T40°C without core loss.
5. Saturation Current (Isat) will cause L0 to drop approximately 20%.
6. 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. Typical Performance Curves



SMD Type Ultra High Current Power Inductors

SMPI 1004HW-SERIES-K01

1. Features

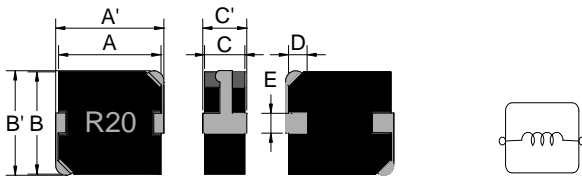
1. Lowest height in this package footprint.
2. Shielded construction.
3. Lowest DCR/ μH , in this package size.
4. Handles high transient current spikes without saturation.
5. Ultra low buzz noise, due to composite construction.
6. Frequency up to 5MHz.
7. 100% Lead(Pb)-Free and RoHS compliant.



2. Applications

1. PDA/Notebook/Desktop/VGA Card/Server applications.
2. High current POL converters.
3. Low profile, high current power supplies.
4. Battery powered devices.
5. DC/DC converters in distributed power systems.
6. DC/DC converter for Field Programmable Gate Array (FPGA).

3. Dimensions



Series	A(mm)	A'(mm)	B(mm)	B'(mm)	C(mm)	C'(mm)	D(mm)	E(mm)
SMPI 1004	10.2±0.5	11.8 max.	10.0±0.5	10.5 max.	4.0 max.	4.2 max.	2.2±0.5	2.9±0.5

4. Part Numbering



- A: Series
 - B: Dimension
 - C: Type
 - D: Inductance
 - E: Inductance Tolerance
 - F: Control S/N
- AxC
- R20=0.20 μH
- M=±20%

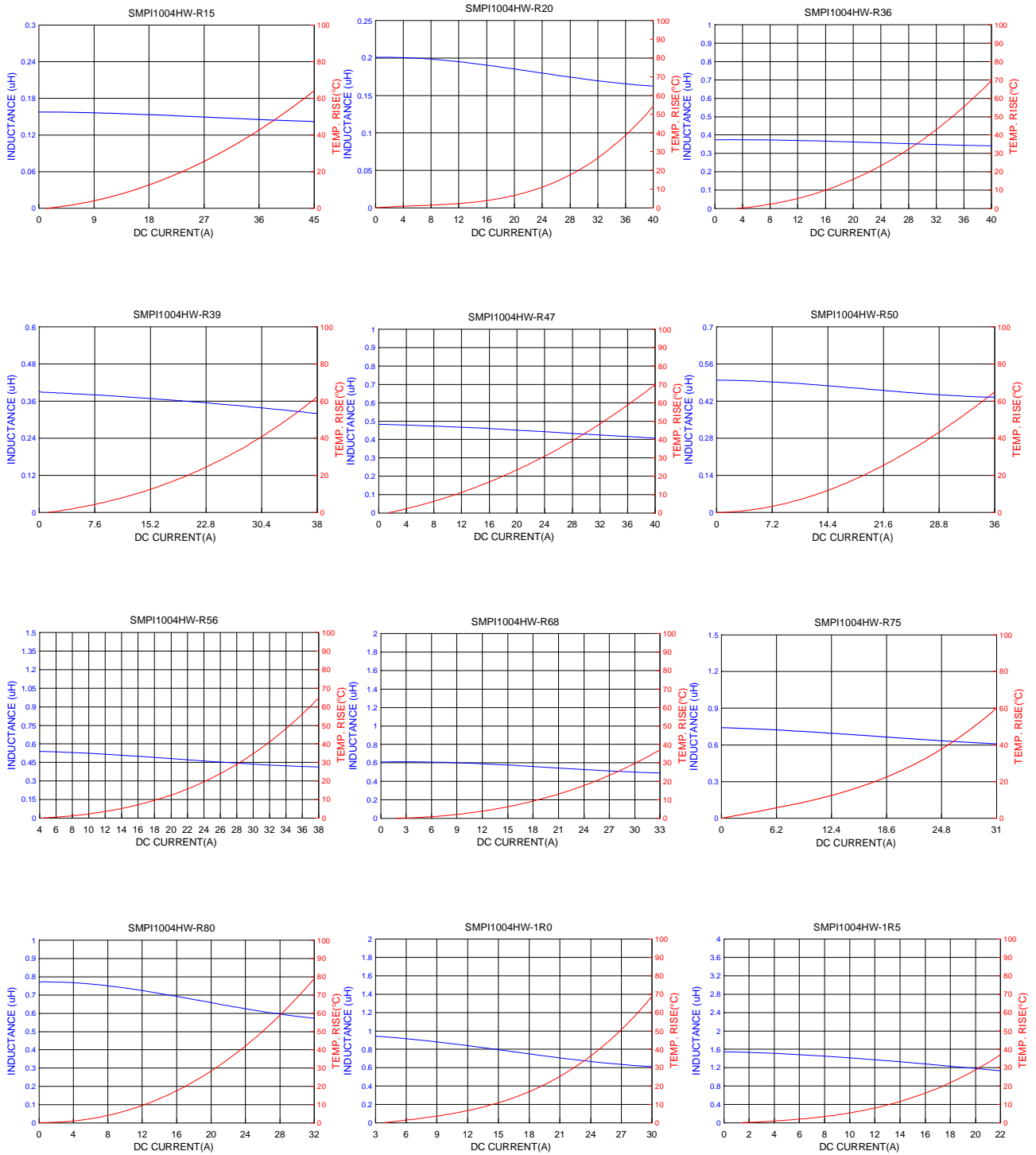
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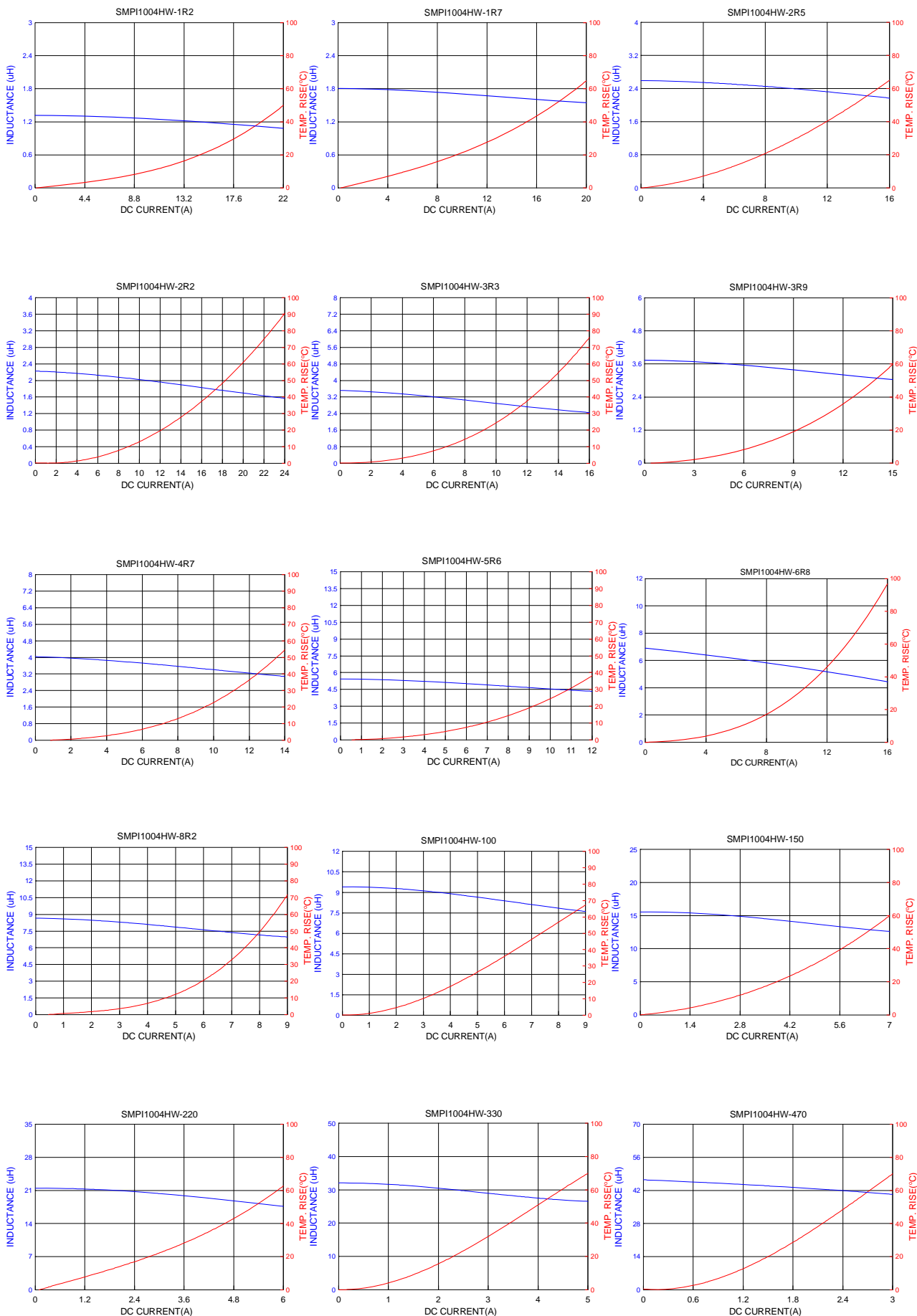
Part Number	Thickness C(mm) max.	Inductance L0 (uH)±20% @ 0 Adc	I rms (A) typ.	I sat (A) typ.	DCR (mΩ) max.
SMPI 1004HW-R15M-K01	4.0	0.15	34	45	1.3
SMPI 1004HW-R20M-K01	4.0	0.20	32	40	1.0
SMPI 1004HW-R36M-K01	4.0	0.36	28	40	1.4
SMPI 1004HW-R39M-K01	4.0	0.39	24	38	1.4
SMPI 1004HW-R47M-K01	4.0	0.47	26	38	1.6
SMPI 1004HW-R50M-K01	4.0	0.50	23	36	1.9
SMPI 1004HW-R56M-K01	4.0	0.56	25	36	1.9
SMPI 1004HW-R68M-K01	4.0	0.68	23	32	2.4
SMPI 1004HW-R75M-K01	4.0	0.75	22	31	2.5
SMPI 1004HW-R80M-K01	4.0	0.80	21	30	3.0
SMPI 1004HW-1R0M-K01	4.0	1.0	20	28	3.5
SMPI 1004HW-1R2M-K01	4.0	1.2	18	22	4.7
SMPI 1004HW-1R5M-K01	4.0	1.5	12	20	7.5
SMPI 1004HW-1R7M-K01	4.0	1.7	15	20	7.5
SMPI 1004HW-2R2M-K01	4.0	2.2	11.5	16.5	8.56
SMPI 1004HW-2R5M-K01	4.0	2.5	11.5	16.0	8.70
SMPI 1004HW-3R3M-K01	4.0	3.3	10.0	14.0	10.0
SMPI 1004HW-3R9M-K01	4.0	3.9	9.0	15.0	12.0
SMPI 1004HW-4R7M-K01	4.0	4.7	8.00	13.0	13.5
SMPI 1004HW-5R6M-K01	4.0	5.6	7.00	12.0	16.0
SMPI 1004HW-6R8M-K01	4.0	6.8	6.5	11	24.0
SMPI 1004HW-8R2M-K01	4.0	8.2	5.00	8.0	32.5
SMPI 1004HW-100M-K01	4.0	10	5.00	9.0	35
SMPI 1004HW-150M-K01	4.0	15	5.00	7.0	57
SMPI 1004HW-220M-K01	4.0	22	3.5	6.0	61.5
SMPI 1004HW-330M-K01	4.0	33	3.00	5.0	86.5
SMPI 1004HW-470M-K01	4.0	47	2.00	3.0	160

Note:

1. Test frequency :L0:100KHz / 1.0Vdc
2. All test data referenced to 20°C ambient.
3. Testing Instrument : L: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (I rms) will cause the coil temperature rise approximately $\Delta T40^{\circ}\text{C}$ without core loss.
5. Saturation Current (Isat) will cause L0 to drop approximately 20%
6. 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.
7. Special inquiries besides the above common used types can be met on your requirement.

6. Typical Performance Curves





SMD Type Ultra High Current Power Inductors

SMPI 1203HW-Series-K01

1. Features

1. Lowest height in this package footprint.
2. Shielded construction.
3. Lowest DCR/ μ H, in this package size.
4. Handles high transient current spikes without saturation.
5. Ultra low buzz noise, due to composite construction.
6. Frequency up to 5MHz.
7. 100% Lead(Pb) & Halogen-Free and RoHS compliant.

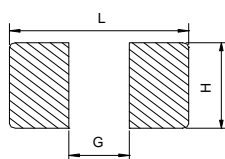
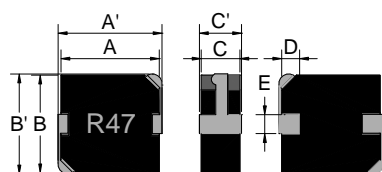


2. Applications

Excellent for power line DC-DC conversion applications used in power switching, personal computers and other handheld electronic equipment.

3. Dimensions

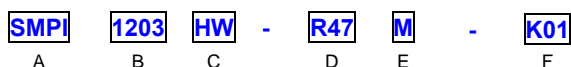
Recommended PC Board Pattern



Chip size	L(mm)	G(mm)	H(mm)
SMPI 1203	15.0	7.0	4.5

Series	A(mm)	A'(mm)	B(mm)	B'(mm)	C(mm)	C'(mm)	D(mm)	E(mm)
SMPI 1203	12.7 \pm 0.3	13.9 max.	12.7 \pm 0.3	13.5 max.	3.5 max.	3.7 max.	2.5 \pm 0.5	3.0 \pm 0.5

4. Part Numbering



- A: Series
- B: Dimension AxC
- C: Type
- D: Inductance R47=0.47 μ H
- E: Inductance Tolerance M= \pm 20%, Coating Black, Marking White
- F: Control S/N

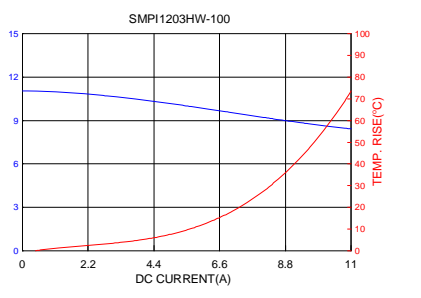
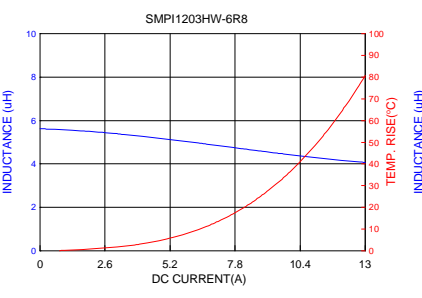
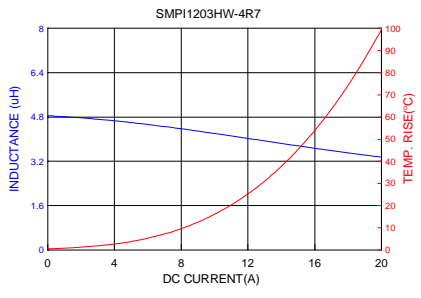
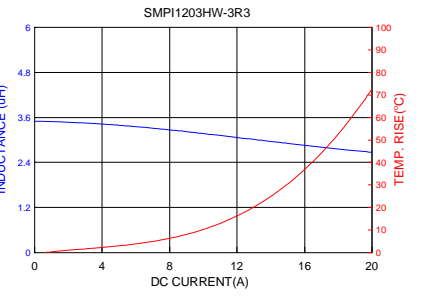
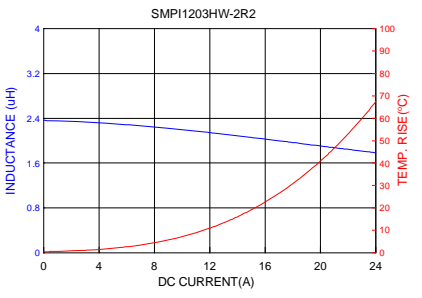
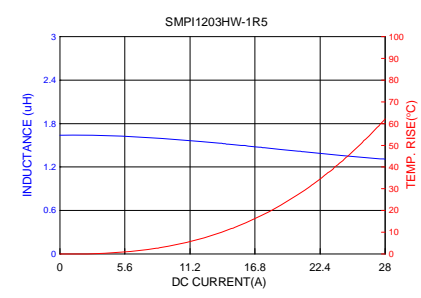
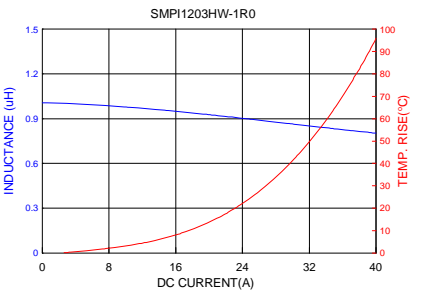
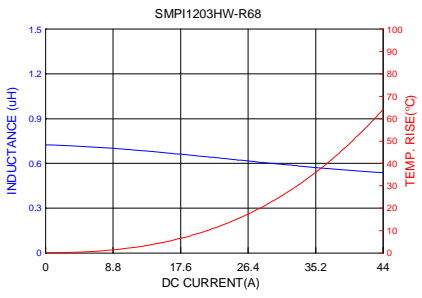
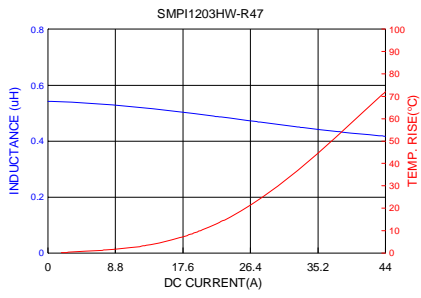
5. Specification

Part Number	Inductance L0 (μ H) \pm 20% @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (m Ω) max.
SMPI 1203HW-R47M-K01	0.47	32	44	2
SMPI 1203HW-R68M-K01	0.68	28	40	2.5
SMPI 1203HW-1R0M-K01	1.00	24	36	3.5
SMPI 1203HW-1R5M-K01	1.50	19	28	5.5
SMPI 1203HW-2R2M-K01	2.20	16	20	8
SMPI 1203HW-3R3M-K01	3.30	12	18	12
SMPI 1203HW-4R7M-K01	4.70	10	16	15
SMPI 1203HW-6R8M-K01	6.80	9.0	13	22
SMPI 1203HW-100M-K01	10.0	7.0	9.5	34

Note:

1. Test frequency : L0:100KHz /1. 0V
2. All test data referenced to 20 $^{\circ}$ C ambient.
3. Testing Instrument : L/Q: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately Δ T40 $^{\circ}$ C without core loss.
5. Saturation Current (Isat) will cause L0 to drop approximately 20%.
6. The part temperature (ambient + temp rise) should not exceed 125 $^{\circ}$ 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.
7. Special inquiries besides the above common used types can be met on your requirement.

6. Typical Performance Curves



SMD Type Ultra High Current Power Inductors

SMPI 1205PW-Series-K01

1. Features

1. Lowest height in this package footprint.
2. Shielded construction.
3. Lowest DCR/ μ H, in this package size.
4. Handles high transient current spikes without saturation.
5. Ultra low buzz noise, due to composite construction.
6. Frequency up to 5MHz.
7. 100% Lead(Pb) & Halogen-Free and RoHS compliant.

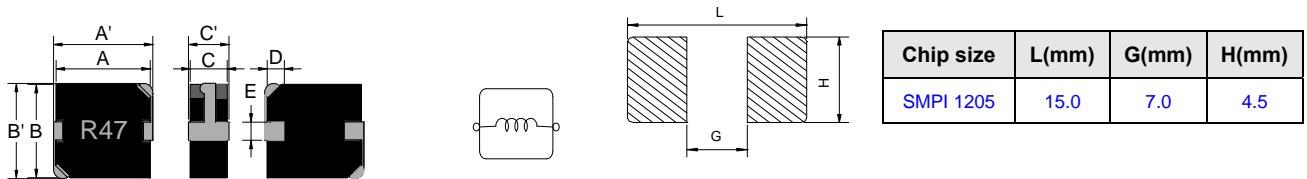


2. Applications

Excellent for power line DC-DC conversion applications used in power switching, personal computers and other handheld electronic equipment.

3. Dimensions

Recommended PC Board Pattern



Chip size	L(mm)	G(mm)	H(mm)
SMPI 1205	15.0	7.0	4.5

Series	A(mm)	A'(mm)	B(mm)	B'(mm)	C(mm)	C'(mm)	D(mm)	E(mm)
SMPI 1205	12.7 \pm 0.3	14.5 max.	12.7 \pm 0.3	13.8 max.	5.0 max.	5.2 max.	2.5 \pm 0.5	3.0 \pm 0.5

4. Part Numbering



- A: Series
 - B: Dimension
 - C: Type
 - D: Inductance
 - E: Inductance Tolerance
 - F: Control S/N
- AxC
- R47=0.47 μ H
- M= \pm 20%, Coating Black, Marking White

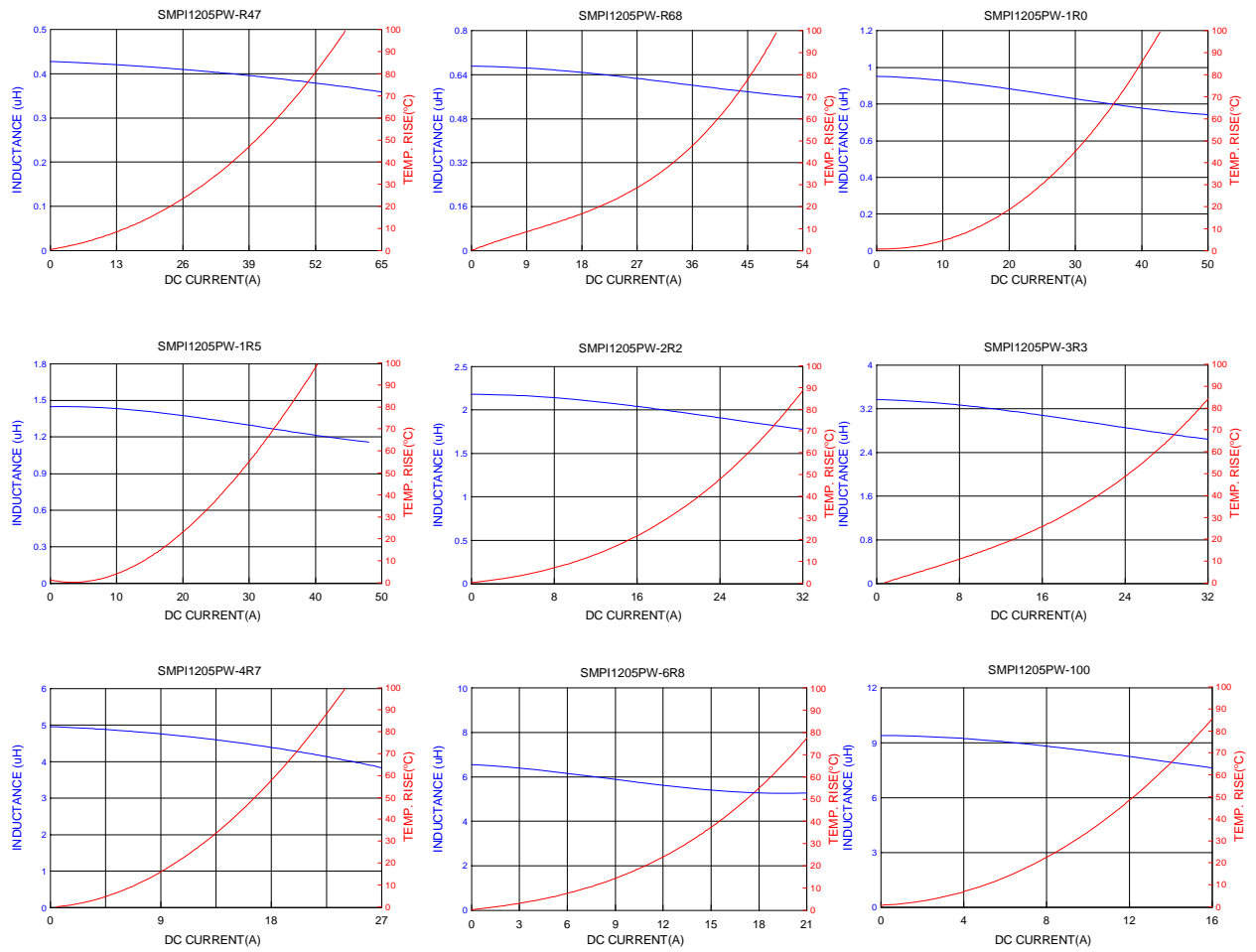
5. Specification

Part Number	Inductance L0 (μ H) \pm 20% @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (m Ω) max.
SMPI 1205PW-R47M-K01	0.47	38	65	1.3
SMPI 1205PW-R68M-K01	0.68	34	54	1.7
SMPI 1205PW-1R0M-K01	1.00	29	50	2.5
SMPI 1205PW-1R5M-K01	1.50	23	48	4.1
SMPI 1205PW-2R2M-K01	2.20	20	32	5.5
SMPI 1205PW-3R3M-K01	3.30	15	32	9.2
SMPI 1205PW-4R7M-K01	4.70	12	27	15.0
SMPI 1205PW-6R8M-K01	6.80	11	21	18.5
SMPI 1205PW-100M-K01	10.0	9	16	25.5

Note:

1. Test frequency : L0:100KHz / 1.0V
2. All test data referenced to 20 $^{\circ}$ C ambient.
3. Testing Instrument : L: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δ T40 $^{\circ}$ C without core loss.
5. Saturation Current (Isat) will cause L0 to drop approximately 20%
6. The part temperature (ambient + temp rise) should not exceed 125 $^{\circ}$ 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.
7. Special inquiries besides the above common used types can be met on your requirement.

6. Typical Performance Curves



SMD Type Ultra High Current Power Inductors

SMPI 1207HW-Series-K01

1. Features

1. Lowest height in this package footprint.
2. Shielded construction.
3. Lowest DCR/ μ H, in this package size.
4. Handles high transient current spikes without saturation.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.

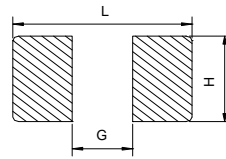
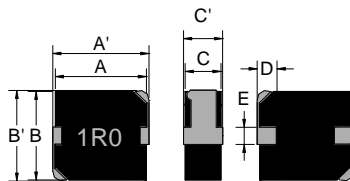


2. Applications

Excellent for power line DC-DC conversion applications used in power switching, personal computers and other handheld electronic equipment.

3. Dimensions

Recommended PC Board Pattern



Chip size	L(mm)	G(mm)	H(mm)
SMPI 1207	15.0	7.0	4.5

Series	A(mm)	A'(mm)	B(mm)	B'(mm)	C(mm)	C'(mm)	D(mm)	E(mm)
SMPI 1207	12.9 max.	13.7 max.	12.9 max.	13.7 max.	6.5 typ.	7.0 max.	2.5 \pm 0.5	3.0 \pm 0.5

4. Part Numbering



A: Series
 B: Dimension
 C: Type
 D: Inductance
 E: Inductance Tolerance
 F: Control S/N

AxC
 1R0=1.0 uH
 M= \pm 20% ; Coating Black; Marking White

5. Specification

Part Number	Inductance L0 (uH) \pm 20% @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (m Ω) max.
SMPI 1207HW-R32M-K01	0.32	46	65	0.9
SMPI 1207HW-R47M-K01	0.47	41	65	1.2
SMPI 1207HW-R68M-K01	0.68	35	60	1.6
SMPI 1207HW-1R0M-K01	1.0	32	50	2.1
SMPI 1207HW-1R5M-K01	1.5	27	48	2.6
SMPI 1207HW-1R8M-K01	1.8	24	41	3.2
SMPI 1207HW-2R2M-K01	2.2	22	40	4.2
SMPI 1207HW-3R3M-K01	3.3	18	35	6.8
SMPI 1207HW-4R7M-K01	4.7	15	30	11.2
SMPI 1207HW-5R6M-K01	5.6	14	26.5	10
SMPI 1207HW-6R8M-K01	6.8	12	21	14
SMPI 1207HW-8R2M-K01	8.2	11	17	15.5
SMPI 1207HW-100M-K01	10.0	10	16	16.8

Note:

1. Test frequency: L: 100KHz / 1.0V, Q: 1MHz/1.0V
2. All test data referenced to 20 $^{\circ}$ C ambient.
3. Testing Instrument: L: HP4284A, CH11025, CH3302, CH1320, CH1320S LCR METER / Rdc: CH16502, Agilent33420A MICRO OHMMETER.
1. Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately Δ T₄₀ $^{\circ}$ C without core loss.
4. Saturation Current (I_{sat}) will cause L0 to drop approximately 20%
5. The part temperature (ambient + temp rise) should not exceed 125 $^{\circ}$ 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.
7. Special inquiries besides the above common used types can be met on your requirement.

6. Typical Performance Curves

