

High Current Power Inductors AWSIHH Series



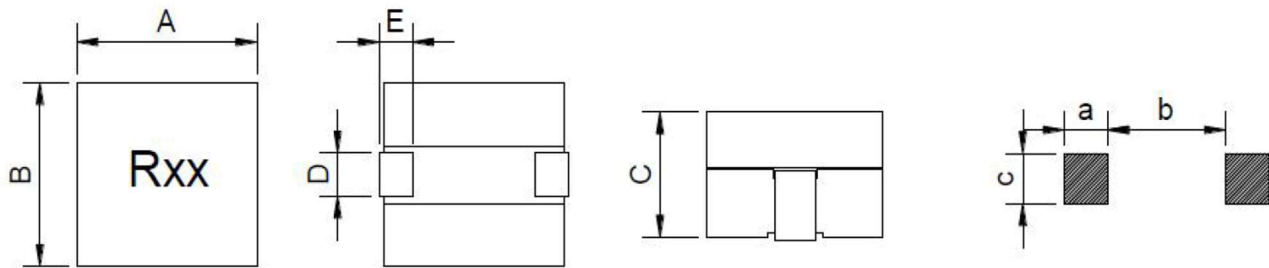
Product features

- DC-DC converter work frequency up to 2MHz
- Low core loss, Low EMI.
- Magnetically shielded
- High current, Ultra-Low DCR, high efficiency.
- Current ranges from 12A to 120A
- Inductance range from 22nH to 680nH.
- 100% Lead (Pb)-Free and RoHS compliant.
- Operating temperature -40+125°C

Applications

- Server/Desktop/PDA/Graphic Cards/Notebook/Telecom Switches and Routers.
- Multi-Phase synchronous Buck Voltage regulators
- CPU/RAM power suppliers
- Power PCs
- Filters

Dimensions (mm) AWSIHH Series



Series	A	B	C	D	E	a	b	c
AWSIHH040404	3.8 ± 0.3	3.8 ± 0.3	3.8 ± 0.3	1.4 ± 0.2	1.2 ± 0.3	1.9	1.8	0.9
AWSIHH060605	7.0 ± 0.5	6.6 ± 0.5	5.0 ± 0.5	1.5 ± 0.2	2.5 ± 0.3	3.1	2.1	3.8
AWSIHH070705	7.0 ± 0.5	6.6 ± 0.5	5.0 ± 0.5	2.5 ± 0.2	1.5 ± 0.3	3.1	2.1	3.8
AWSIHH070707	7.0 ± 0.5	7.0 ± 0.5	7.0 ± 0.5	2.0 ± 0.2	1.8 ± 0.3	2.6	2.4	2.8
AWSIHH100705	10.0 ± 0.5	6.6 ± 0.5	4.8 ± 0.5	2.7 ± 0.2	1.2 ± 0.3	3.5	2.0	6.5
AWSIHH100707	10.3 ± 0.5	7.0 ± 0.5	7.2 ± 0.5	1.7 ± 0.2	2.7 ± 0.3	2.3	3.3	4.3
AWSIHH100875	9.8 ± 0.5	7.8 ± 0.5	7.3 ± 0.5	2.0 ± 0.2	2.4 ± 0.3	2.6	3.0	4.5
AWSIHH131305	13.0 ± 0.5	12.7 ± 0.5	5.0 ± 0.5	5.0 ± 0.2	2.0 ± 0.3	5.6	2.6	8.4
AWSIHH131308	13.3 ± 0.5	12.7 ± 0.5	7.9 ± 0.5	5.08 ± 0.2	2.54 ± 0.3	5.9	3.3	7.3
AWSIHH131309	14.0 ± 0.5	12.8 ± 0.5	9.0 ± 0.5	3.0 ± 0.2	2.4 ± 0.3	3.8	3.2	8.2

Specifications AWSIHH040404

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH040404-22NM-R32	22 ± 20%	0.32 ± 5%	40	19
AWSIHH040404-65NL-R32	65 ± 15%		24	
AWSIHH040404-R10L-R32	100 ± 15%		17	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. I_{dc}: DC current (A) that will cause an approximate ΔT of 40°C
4. I_{sat} : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH060605

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH060605-R10L-R28	100 ± 15%	0.28 ± 10%	37	30
AWSIHH060605-R15L-R28	150 ± 15%		33	
AWSIHH060605-R20L-R28	200 ± 15%		20	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. I_{dc}: DC current (A) that will cause an approximate ΔT of 40°C
4. I_{sat} : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH070705

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH070705-72NL-R23	72 ± 15%	0.235 ± 7%	60	30
AWSIHH070705-R10L-R26	100 ± 15%	0.26 ± 7%	50	30
AWSIHH070705-R15L-R26	150 ± 15%	0.26 ± 7%	33	30
AWSIHH070705-R22L-R26	220 ± 15%	0.26 ± 7%	18	30

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. Idc: DC current (A) that will cause an approximate ΔT of 40°C
4. Isat : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH070707

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH070707-R12L-R29	120 ± 15%	0.29 ± 7%	48	35
AWSIHH070707-R16L-R29	160 ± 15%		41	
AWSIHH070707-R22L-R29	220 ± 15%		29	
AWSIHH070707-R33L-R29	330 ± 15%		12	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. I_{dc}: DC current (A) that will cause an approximate ΔT of 40°C
4. I_{sat} : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH100705

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH100705-82NL-R32	82 ± 15%	0.325 ± 7%	95	31
AWSIHH100705-R12L-R32	120 ± 15%		60	
AWSIHH100705-R15L-R32	150 ± 15%		42	
AWSIHH100705-R22L-R32	220 ± 15%		30	

Notes:

5. All test data is reference to 25°C ambient.
6. Test Condition:100KHz,1.0Vrms.
7. Idc: DC current (A) that will cause an approximate ΔT of 40°C
8. Isat : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH100707

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH100707-R12L-R29	120 ± 15%	0.29 ± 10%	80	55
AWSIHH100707-R15L-R29	150 ± 15%		65	
AWSIHH100707-R22L-R29	220 ± 15%		50	
AWSIHH100707-R33L-R37	330 ± 15%	0.37 ± 7%	28	37
AWSIHH100707-R40L-R37	400 ± 15%		21	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. Idc: DC current (A) that will cause an approximate ΔT of 40°C
4. Isat : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH100875

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH100875-R15L-R29	150 ± 15%	0.29 ± 7%	76	50
AWSIHH100875-R30L-R29	300 ± 15%		28	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. Idc: DC current (A) that will cause an approximate ΔT of 40°C
4. Isat : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH131305

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH131305-R22L-R15	220 ± 15%	0.155 ± 7%	42	50
AWSIHH131305-R28L-R15	280 ± 15%		30	
AWSIHH131305-R33L-R15	330 ± 15%		26	
AWSIHH131305-R40L-R15	400 ± 15%		20	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. I_{dc}: DC current (A) that will cause an approximate ΔT of 40°C
4. I_{sat} : DC current (A) that will cause L0 to drop approximately 20%

Specifications AWSIHH131308

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH131308-R11L-R32	110 ± 15%	0.32 ± 10%	120	45
AWSIHH131308-R15L-R32	150 ± 15%		100	
AWSIHH131308-R21L-R32	210 ± 15%		70	
AWSIHH131308-R32L-R32	320 ± 15%		50	
AWSIHH131308-R44L-R32	440 ± 15%		35	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. I_{dc}: DC current (A) that will cause an approximate ΔT of 40°C
4. I_{sat} : DC current (A) that will cause L0 to drop approximately 20%

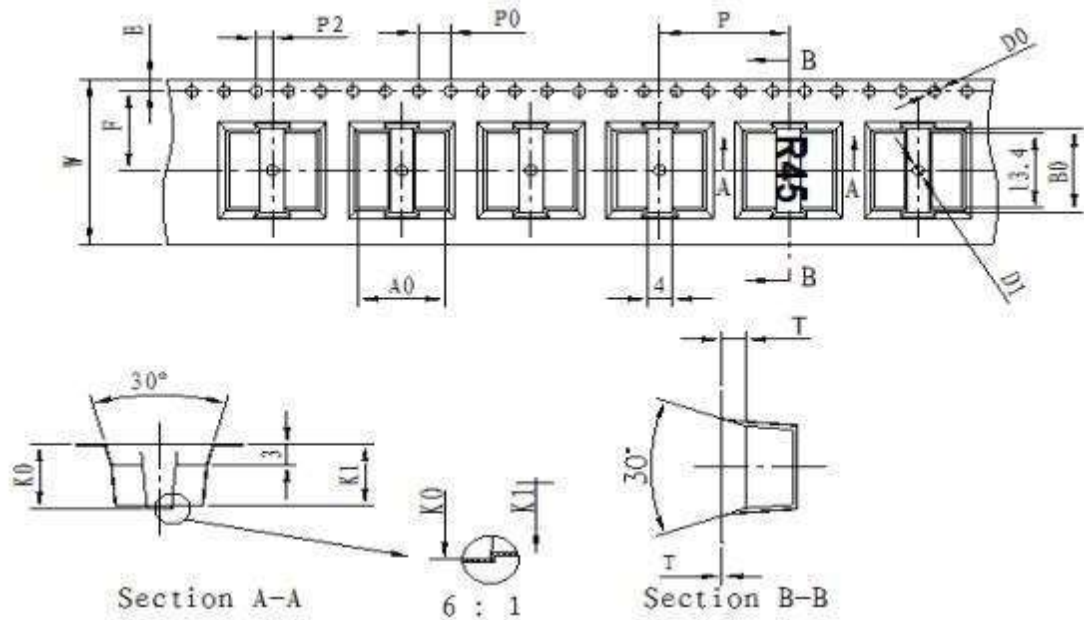
Specifications AWSIHH131309

Part Number	Inductance (nH) 100KHz/1V	DCR(mΩ) @25°C	I-sat (Typ) (A) 80% L0@25°C	I-DC (Typ) (A) ΔT40°C
AWSIHH131309-R30L-R25	300 ± 15%	0.25 ± 10%	60	45
AWSIHH131309-R36L-R25	360 ± 15%		52	
AWSIHH131309-R45L-R25	450 ± 15%		43	
AWSIHH131309-R53L-R25	530 ± 15%		34	
AWSIHH131309-R68L-R25	680 ± 15%		24	

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. I_{dc}: DC current (A) that will cause an approximate ΔT of 40°C
4. I_{sat} : DC current (A) that will cause L0 to drop approximately 20%

Packaging Dimensions



Unit: mm

Series	Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	T(mm)	W(mm)	PCS/REEL
AWSIHH040404	4.1±0.1	3.5±0.1	4.1±0.1	8.0±0.1	0.35±0.05	16.0±0.3	1800
AWSIHH060605	8.6±0.1	8.6±0.1	5.4±0.1	16.0±0.1	0.4±0.05	16.0±0.3	1000
AWSIHH070705	7.0±0.1	7.2±0.1	5.4±0.1	12.0±0.1	0.4±0.05	16.0±0.3	1000
AWSIHH070707	7.4±0.1	7.5±0.1	7.4±0.1	16.0±0.1	0.4±0.05	24.0±0.3	500
AWSIHH100705	7.6±0.1	11.5±0.1	5.7±0.1	12.0±0.1	0.4±0.05	24.0±0.3	1000
AWSIHH100707	7.4±0.1	10.6±0.1	7.6±0.1	12.0±0.1	0.4±0.05	24.0±0.3	640
AWSIHH100875	8.0±0.1	9.5±0.1	7.7±0.1	12.0±0.1	0.4±0.05	24.0±0.3	700
AWSIHH131305	14.2±0.1	14.3±0.1	5.7±0.1	20.0±0.1	0.4±0.05	24.0±0.3	500
AWSIHH131308	13.0±0.1	13.5±0.1	8.1±0.1	16.0±0.1	0.4±0.05	24.0±0.3	450
AWSIHH131309	13.2±0.1	14.7±0.1	9.4±0.1	20.0±0.1	0.4±0.05	24.0±0.3	300