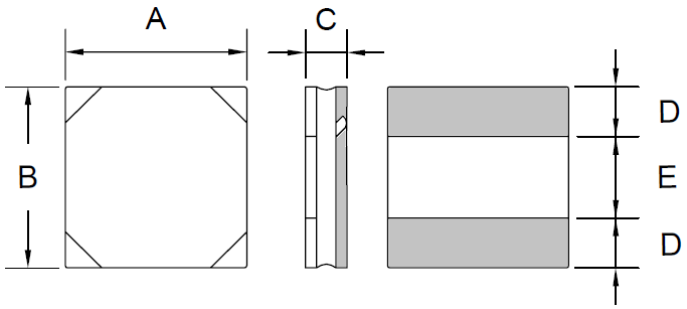
Power Inductor

AHP3010HV-SERIES

1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability test meet AEC-Q200
4. Operating temperature-55~+125℃ (Including self - temperature rise)

2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP3010HV	3.0±0.2	3.0±0.2	1.0max.	1.0 ref.	1.0 ref.

Units: mm

3. Part Numbering

AHP	3010	H	V	-	2R2	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free
D: Category Code V=Vehicle
E: Inductance 2R2=2.2uH
F: Inductance Tolerance M=±20%

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) typ.	DCR (Ω) max.	I sat (A) typ.	I sat (A) Max.	I rms (A) typ.	I rms (A) Max.
AHP3010HV-R47M	0.47	±20%	1V/1M	0.033	0.039	6.80	5.80	4.00	3.50
AHP3010HV-R68M	0.68	±20%	1V/1M	0.048	0.058	6.00	5.00	3.80	3.00
AHP3010HV-1R0M	1.0	±20%	1V/1M	0.068	0.080	5.30	4.60	3.00	2.50
AHP3010HV-1R5M	1.5	±20%	1V/1M	0.087	0.100	4.00	3.50	2.80	2.30
AHP3010HV-2R2M	2.2	±20%	1V/1M	0.115	0.135	3.20	2.70	2.30	2.00
AHP3010HV-3R3M	3.3	±20%	1V/1M	0.210	0.238	2.50	2.20	1.80	1.50
AHP3010HV-4R7M	4.7	±20%	1V/1M	0.265	0.315	2.20	1.90	1.60	1.30
AHP3010HV-6R8M	6.8	±20%	1V/1M	0.300	0.360	1.70	1.40	1.30	1.10
AHP3010HV-100M	10	±20%	1V/1M	0.360	0.420	1.30	1.10	1.10	1.00

Note:

Isat：Based on inductance change （△L/L0：≦30%）@ ambient temp. 25℃

Irms：Based on temperature rise （△T：40℃.）Max

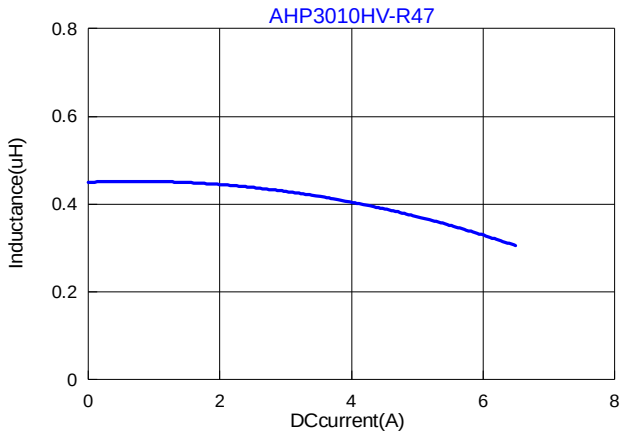
Measurement board data

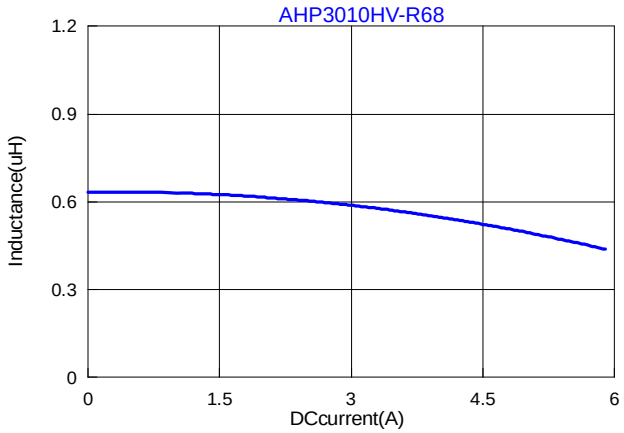
Material : FR4

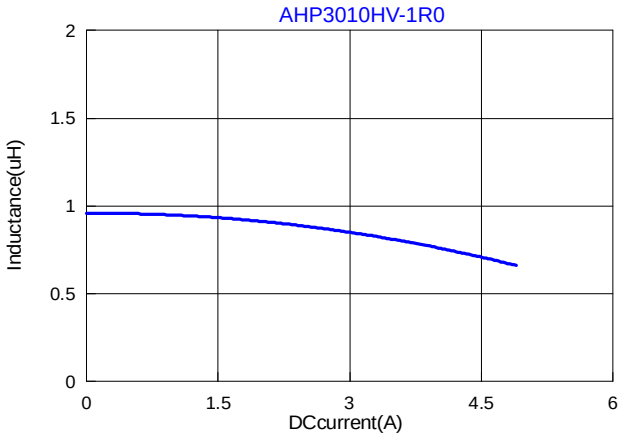
Board dimensions : 100 X 50 X 1.6t mm

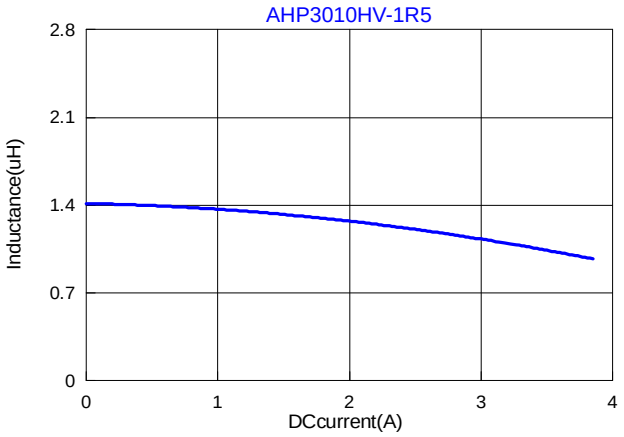
Pattern dimensions: 45 X 30 mm (Double side board)

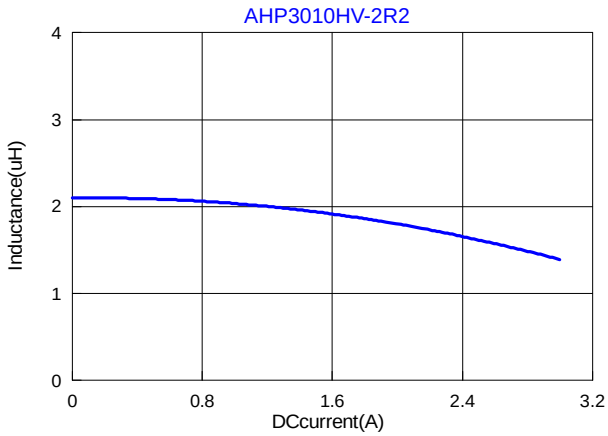
Pattern thickness : 50 μm

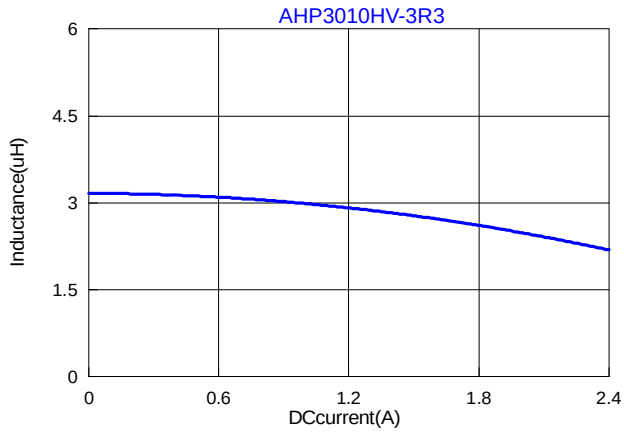




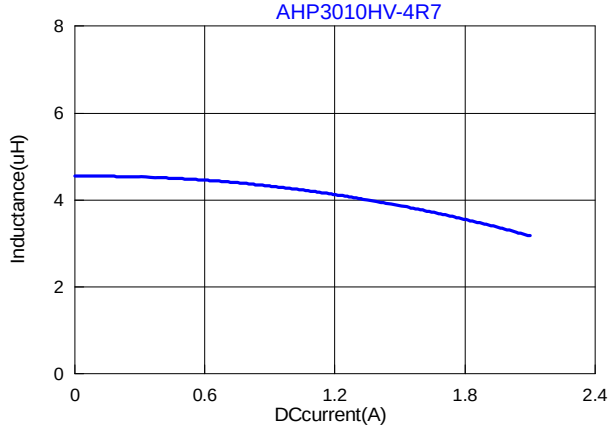




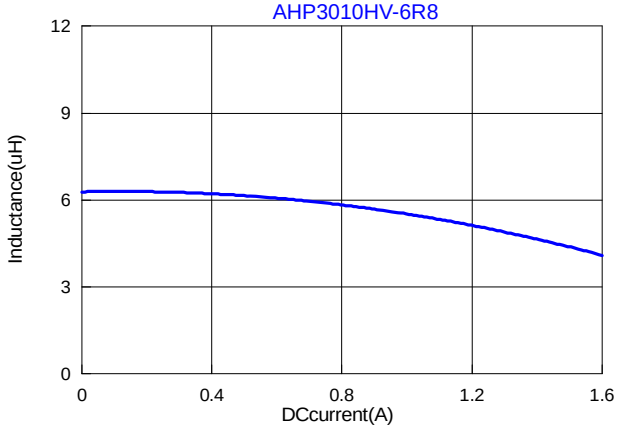




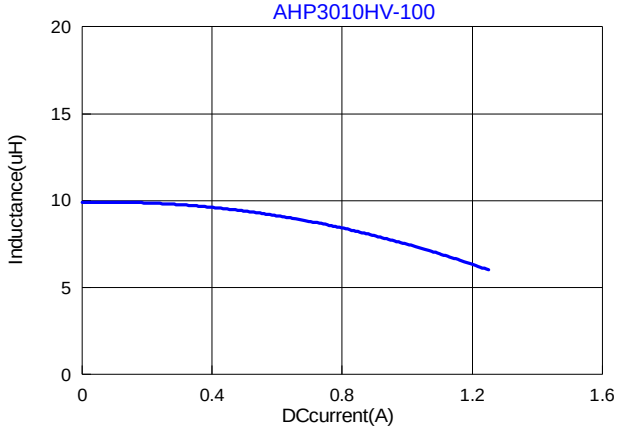
AHP3010HV-4R7



AHP3010HV-6R8



AHP3010HV-100



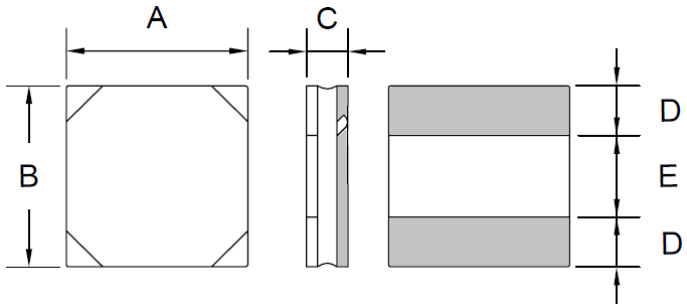
Power Inductor

AHP3012HV-SERIES

1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability tests comply with AEC-Q200
4. Operating temperature-55~+125℃ (Including self - temperature rise)

2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP3012HV	3.0±0.2	3.0±0.2	1.2max.	1.0 ref.	1.0 ref.

Units: mm

3. Part Numbering

AHP	3012	H	V	-	1R0	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free
D: Category Code V=Vehicle
E: Inductance 1R0=1.0uH
F: Inductance Tolerance M=±20%

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) typ.	DCR (Ω) Max.	I sat (A) typ.	I sat (A) Max.	I rms (A) typ.	I rms (A) Max.
AHP3012HV-R33M	0.33	±20%	1V/1M	0.020	0.024	9.00	7.00	5.50	4.50
AHP3012HV-R47M	0.47	±20%	1V/1M	0.025	0.030	7.50	6.50	5.20	4.20
AHP3012HV-R68M	0.68	±20%	1V/1M	0.032	0.038	6.50	5.50	4.50	3.70
AHP3012HV-1R0M	1.0	±20%	1V/1M	0.042	0.049	5.20	4.50	4.00	3.50
AHP3012HV-1R5M	1.5	±20%	1V/1M	0.060	0.072	4.50	4.00	3.50	3.00
AHP3012HV-2R2M	2.2	±20%	1V/1M	0.090	0.108	3.60	3.00	2.80	2.30
AHP3012HV-3R3M	3.3	±20%	1V/1M	0.130	0.156	3.00	2.50	2.10	1.70
AHP3012HV-4R7M	4.7	±20%	1V/1M	0.180	0.216	2.60	2.30	1.80	1.50
AHP3012HV-6R8M	6.8	±20%	1V/1M	0.250	0.300	2.20	1.90	1.50	1.30
AHP3012HV-100M	10.0	±20%	1V/1M	0.290	0.350	1.50	1.30	1.40	1.20

Note:

Isat：Based on inductance change （△L/L0：≦30%）@ ambient temp. 25℃

Irms：Based on temperature rise （△T：40℃.）Max

Measurement board data

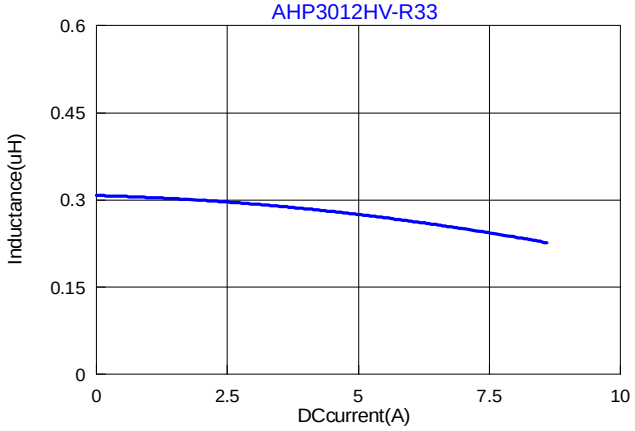
Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

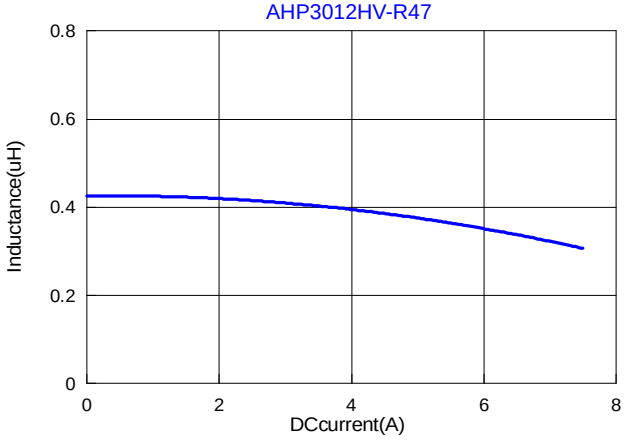
Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50 μm

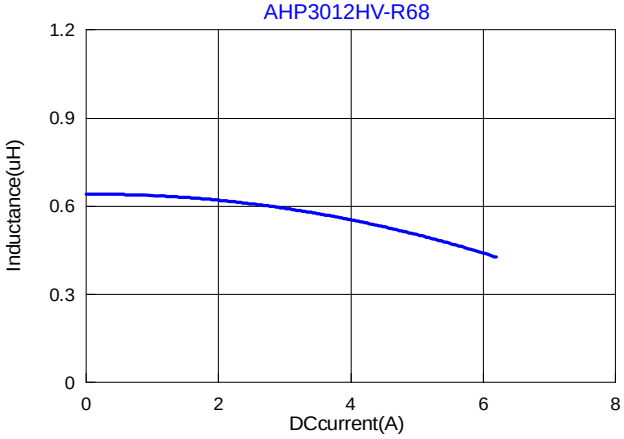
AHP3012HV-R33



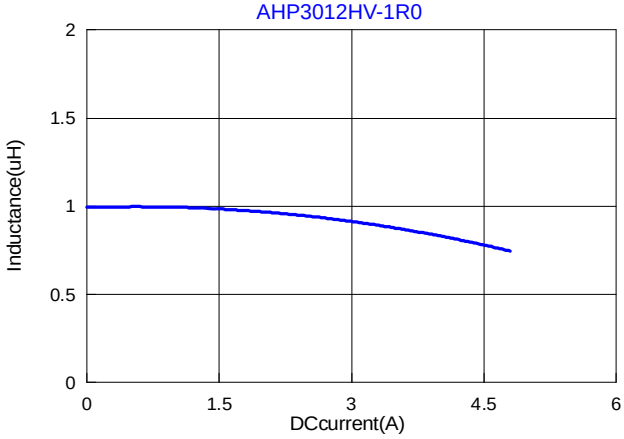
AHP3012HV-R47



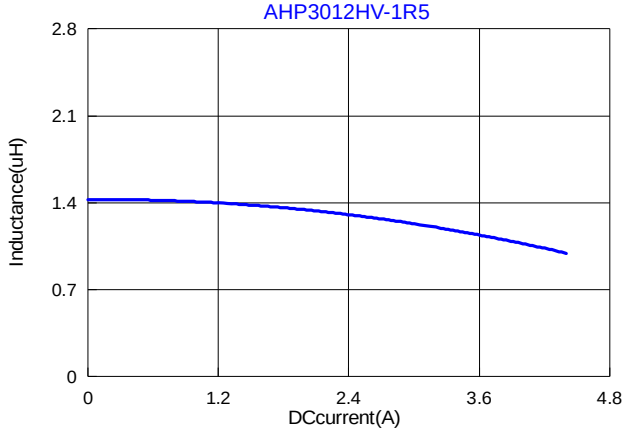
AHP3012HV-R68



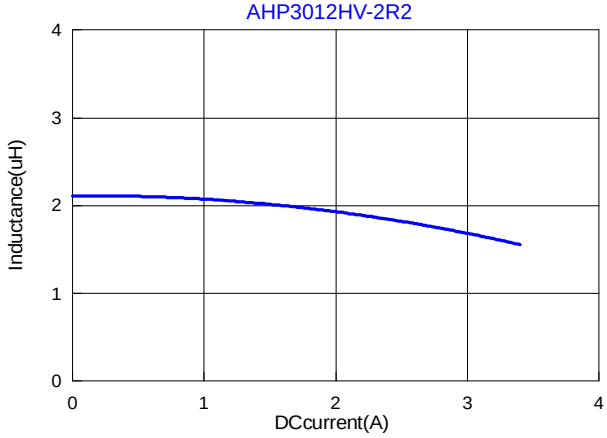
AHP3012HV-1R0



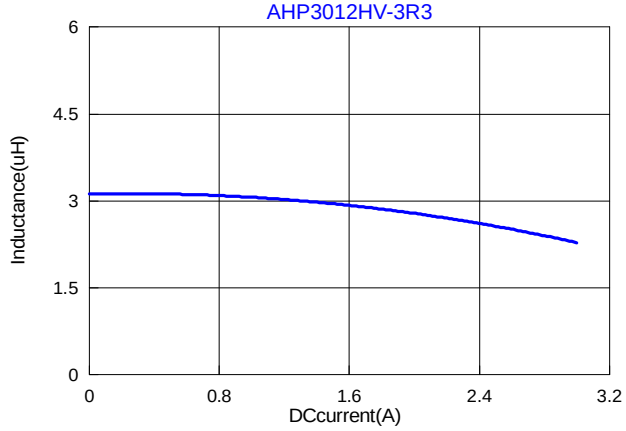
AHP3012HV-1R5



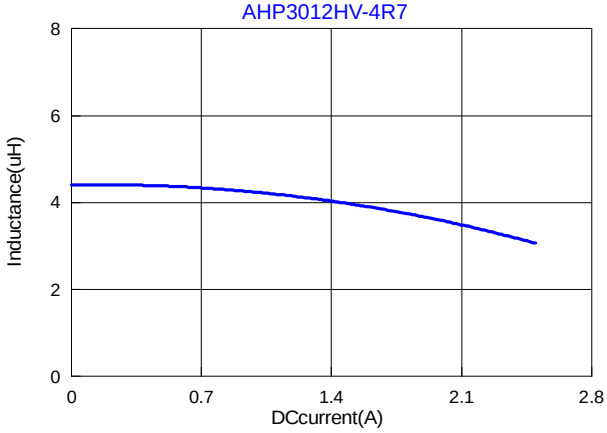
AHP3012HV-2R2



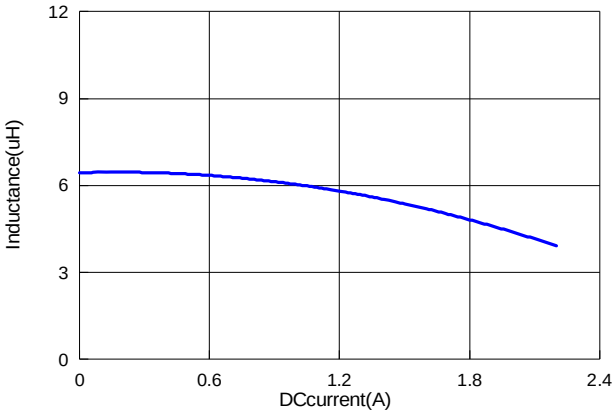
AHP3012HV-3R3



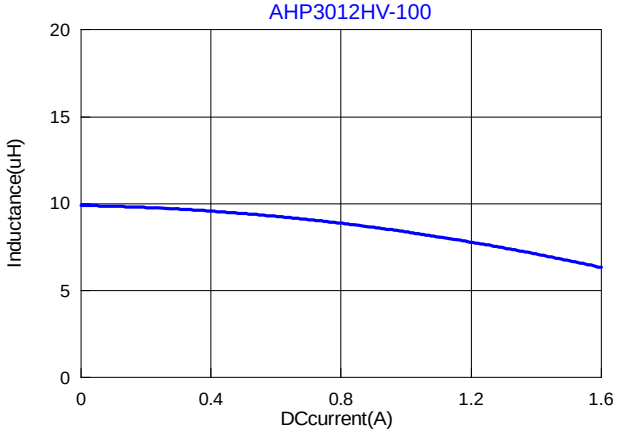
AHP3012HV-4R7



AHP3012HV-6R8



AHP3012HV-100



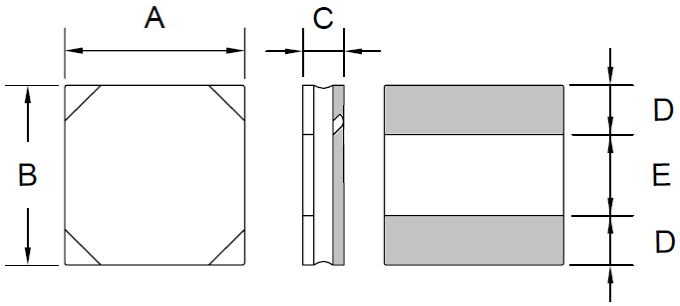
Power Inductor

AHP4010HV-SERIES

1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability tests comply with AEC-Q200
4. Operating temperature-55~+125℃ (Including self - temperature rise)

2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP4010HV	4.0±0.2	4.0±0.2	1.0 max.	1.4±0.25	1.2±0.25

Units: mm

3. Part Numbering

AHP	4010	H	V	-	4R7	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free
D: Category Code V=Vehicle
E: Inductance 4R7=4.7uH
F: Inductance Tolerance M=±20%

4. Specification

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) tpy.	DCR (Ω) Max.	I sat (A)typ.	I sat (A)Max.	I rms (A)typ.	I rms (A)Max.
AHP4010HV-R47M	0.47	±20%	1V100K	0.038	0.045	8.00	7.00	4.50	4.00
AHP4010HV-R68M	0.68	±20%	1V100K	0.050	0.060	7.00	6.00	4.00	3.50
AHP4010HV-1R0M	1.0	±20%	1V100K	0.059	0.069	6.00	5.00	3.50	3.20
AHP4010HV-1R5M	1.5	±20%	1V100K	0.062	0.075	4.00	3.50	3.50	3.00
AHP4010HV-2R2M	2.2	±20%	1V100K	0.075	0.090	3.10	2.60	3.00	2.50
AHP4010HV-3R3M	3.3	±20%	1V100K	0.115	0.140	2.80	2.30	2.50	2.00
AHP4010HV-4R7M	4.7	±20%	1V100K	0.200	0.240	2.50	2.00	2.10	1.70
AHP4010HV-6R8M	6.8	±20%	1V100K	0.300	0.360	2.10	1.80	1.60	1.40
AHP4010HV-100M	10.0	±20%	1V100K	0.440	0.510	1.80	1.50	1.40	1.20

Note:

Isat：Based on inductance change （△L/L0：≦30%）@ ambient temp. 25℃

Irms：Based on temperature rise （△T：40℃.）Max

Measurement board data

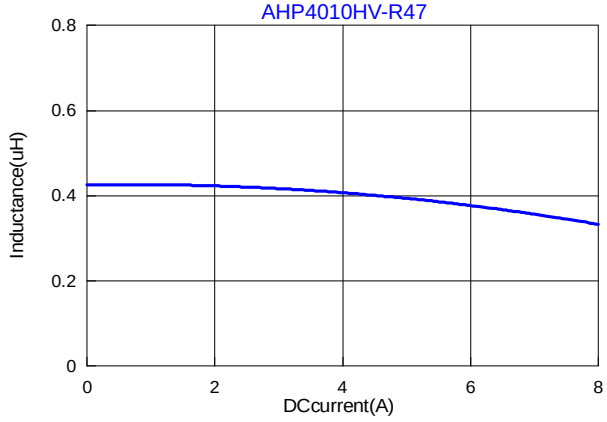
Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

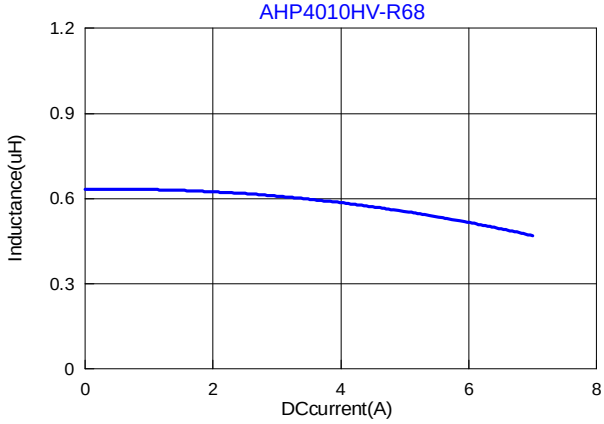
Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50 μm

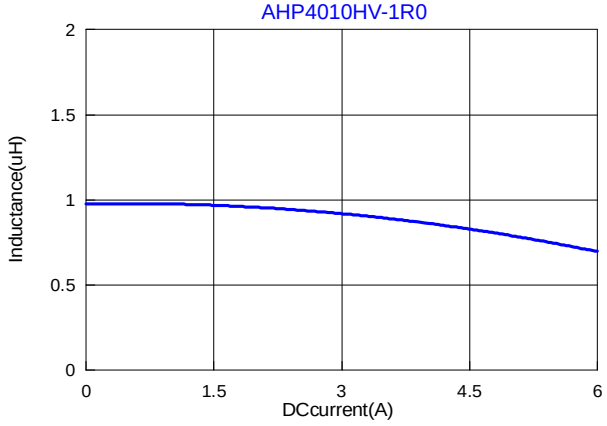
AHP4010HV-R47



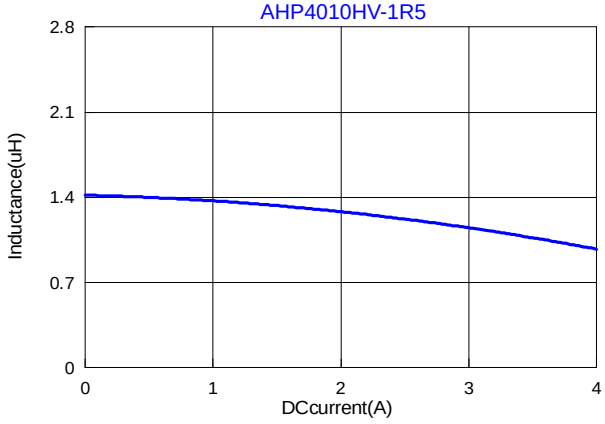
AHP4010HV-R68



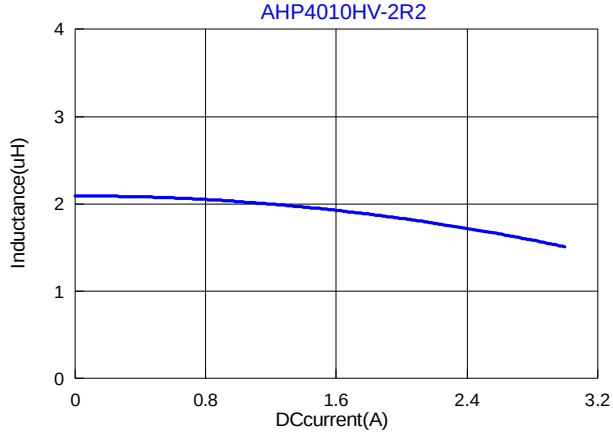
AHP4010HV-1R0



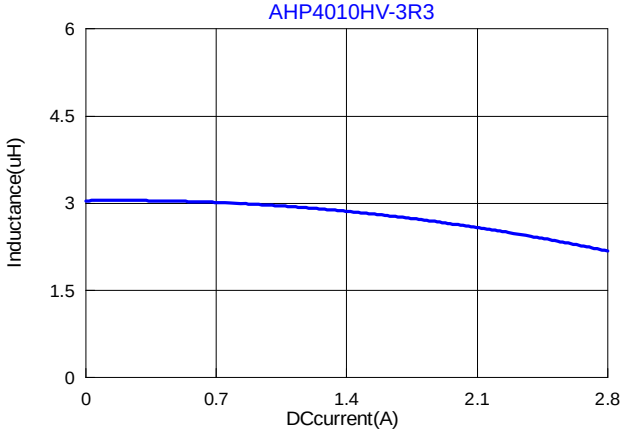
AHP4010HV-1R5



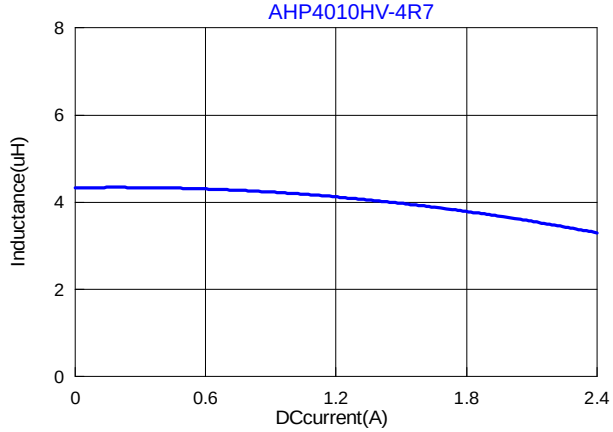
AHP4010HV-2R2



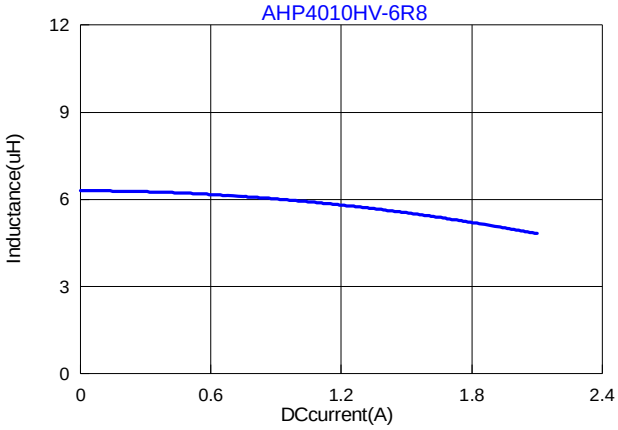
AHP4010HV-3R3



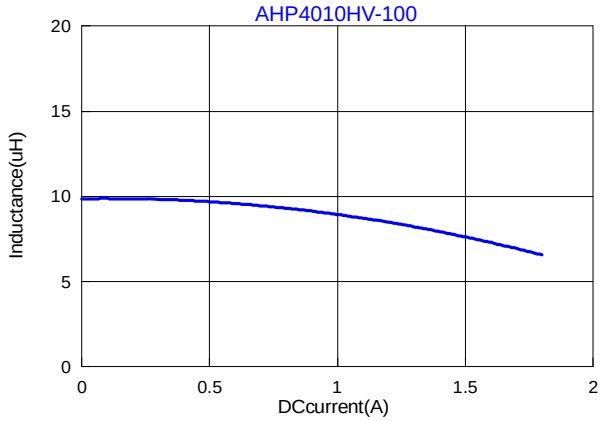
AHP4010HV-4R7



AHP4010HV-6R8



AHP4010HV-100



Power Inductor

AHP4012HV-SERIES

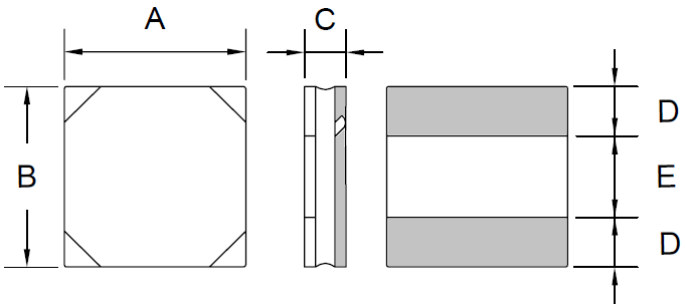
1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability test meet AEC-Q200
4. Operating temperature-55~+125℃ (Including self - temperature rise)

Halogen-free

RoHS

2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP4012HV	4.0±0.2	4.0±0.2	1.2 max.	1.4±0.25	1.2±0.25

Units: mm

3. Part Numbering

AHP	4012	H	V	-	1R0	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free
D: Category Code — V=Vehicle
E: Inductance — 1R0=1.0uH
F: Inductance Tolerance — M=±20%

4. Specification

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) typ.	DCR (Ω) Max.	I sat (A)typ.	I sat (A)Max.	I rms (A)typ.	I rms (A)Max.
AHP4012HV-R47M	0.47	±20%	1V100K	0.028	0.033	10.00	8.00	6.00	5.00
AHP4012HV-R68M	0.68	±20%	1V100K	0.036	0.043	8.00	7.00	5.00	4.00
AHP4012HV-1R0M	1.0	±20%	1V100K	0.040	0.050	6.50	5.50	3.80	3.50
AHP4012HV-1R5M	1.5	±20%	1V100K	0.050	0.060	5.60	4.70	3.70	3.30
AHP4012HV-2R2M	2.2	±20%	1V100K	0.065	0.078	4.50	4.00	3.40	3.00
AHP4012HV-3R3M	3.3	±20%	1V100K	0.100	0.120	4.00	3.30	2.80	2.50
AHP4012HV-4R7M	4.7	±20%	1V100K	0.125	0.145	3.00	2.70	2.30	2.00
AHP4012HV-6R8M	6.8	±20%	1V100K	0.150	0.180	2.20	1.90	2.10	1.80
AHP4012HV-100M	10.0	±20%	1V100K	0.280	0.330	2.00	1.70	1.60	1.40

Note:

Isat：Based on inductance change （△L/L0：≦30%）@ ambient temp. 25℃

Irms：Based on temperature rise （△T：40℃.）Max

Measurement board data

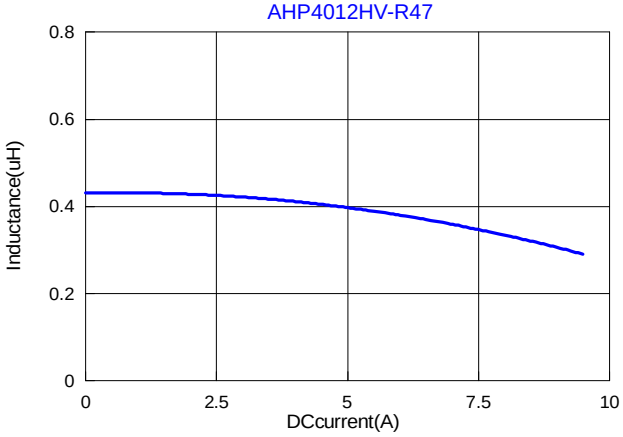
Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

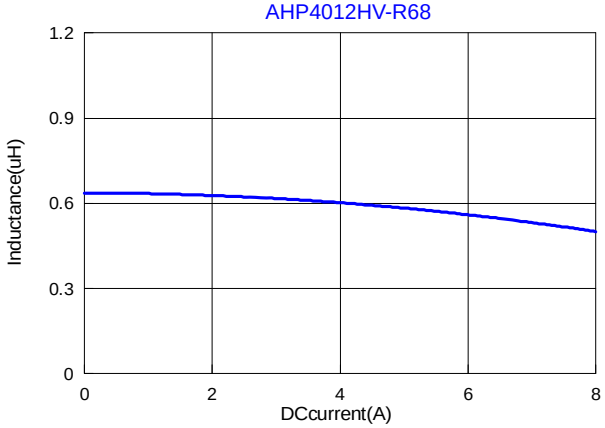
Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50 μm

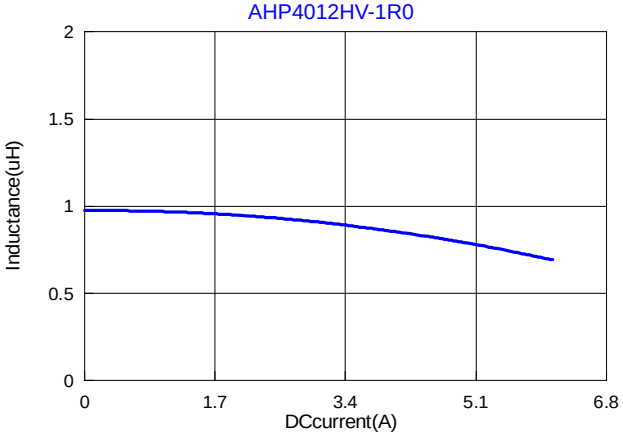
AHP4012HV-R47



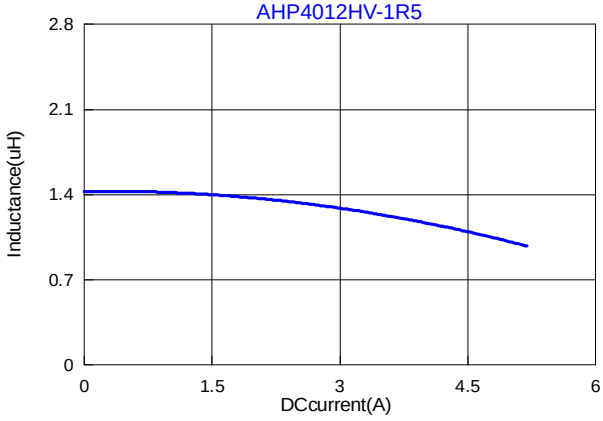
AHP4012HV-R68



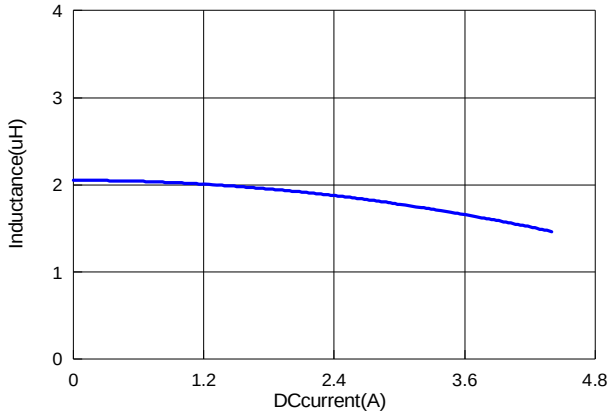
AHP4012HV-1R0



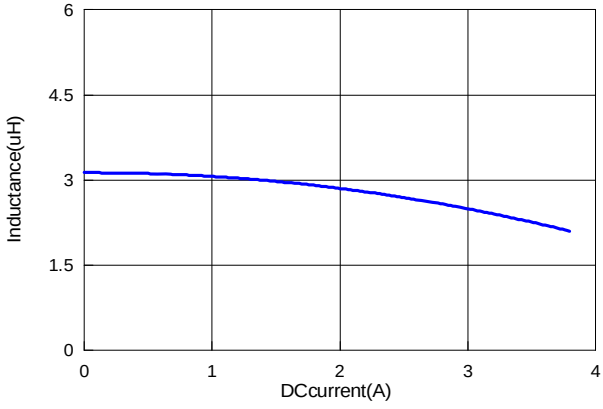
AHP4012HV-1R5



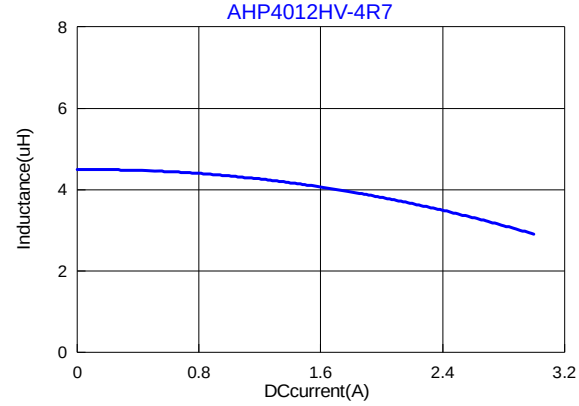
AHP4012HV-2R2



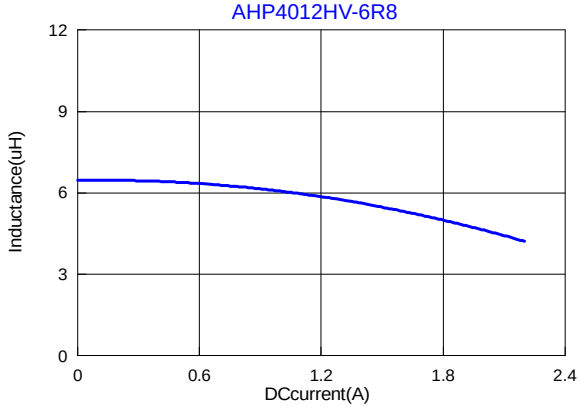
AHP4012HV-3R3



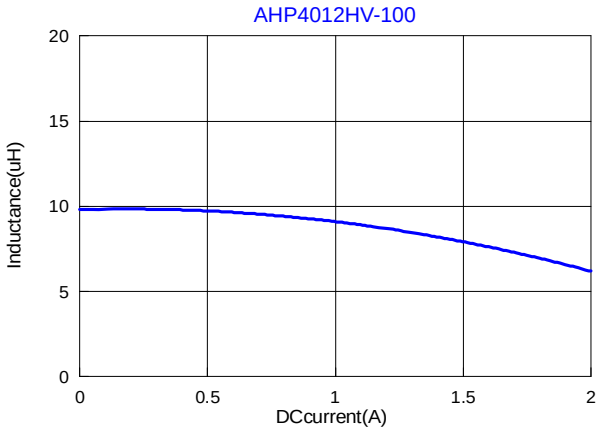
AHP4012HV-4R7



AHP4012HV-6R8



AHP4012HV-100



Power Inductor

AHP201610NV-SERIES

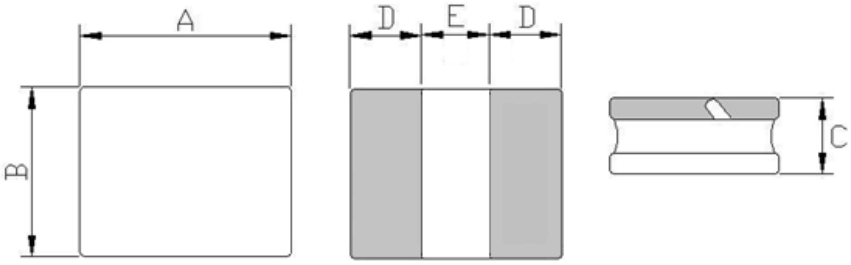
1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability tests comply with AEC-Q200
4. Operating temperature-40~+125℃ (Including self - temperature rise)

Halogen-free

RoHS

2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP201610NV	2.0 -0.1/+0.2	1.6 -0.1/+0.2	1.0Max	0.50 ref.	1.00 ref.

Units: mm

3. Part Numbering

AHP	201610	N	V	-	R47	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free — Material
D: Category Code — V=Vehicle
E: Inductance — R47=0.47uH
F: Inductance Tolerance — M=±20%

4. Specification

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) typ.	DCR (Ω) Max.	I sat (A) typ.	I sat (A) Max.	I rms (A) typ	I rms (A) MAX
AHP201610NV-R47M	0.47	±20	1V/1M	0.032	0.038	5.00	4.00	4.50	4.00
AHP201610NV-R68M	0.68	±20	1V/1M	0.036	0.044	3.30	2.90	3.80	3.40
AHP201610NV-1R0M	1.0	±20	1V/1M	0.058	0.070	3.00	2.50	3.10	2.80
AHP201610NV-1R5M	1.5	±20	1V/1M	0.105	0.125	2.70	2.40	2.30	2.00
AHP201610NV-2R2M	2.2	±20	1V/1M	0.110	0.130	2.10	1.70	2.10	1.90

Note:

Isat：Based on inductance change （△L/L0：≦30%）@ ambient temp. 25℃

Irms：Based on temperature rise （△T：40℃.）Max

Measurement board data

Irms1

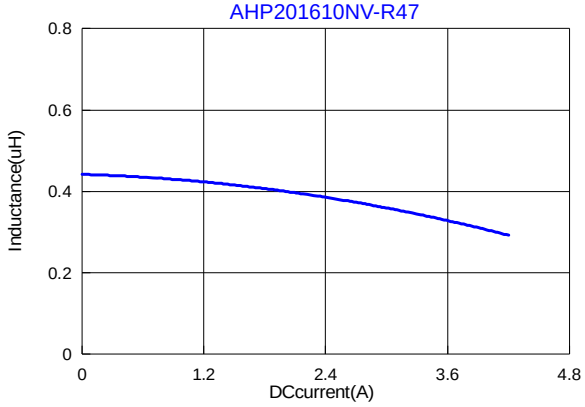
Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

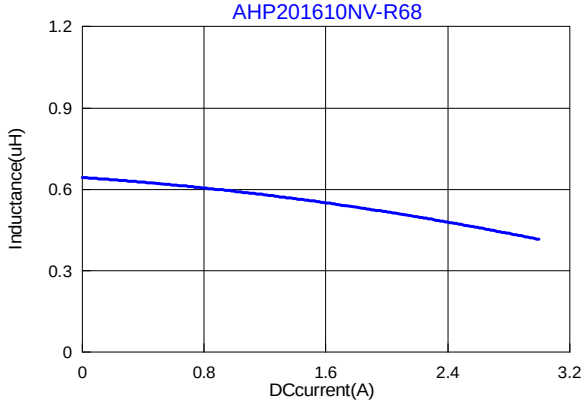
Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50 μm

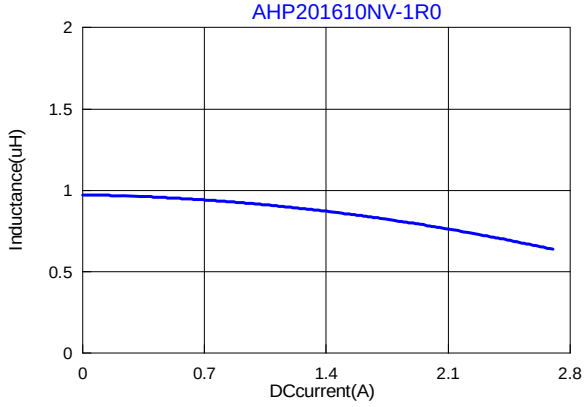
AHP201610NV-R47



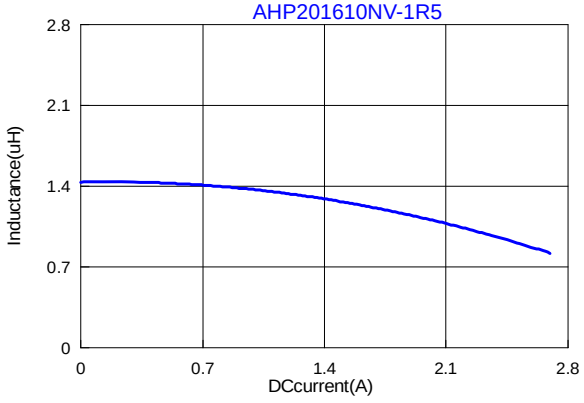
AHP201610NV-R68



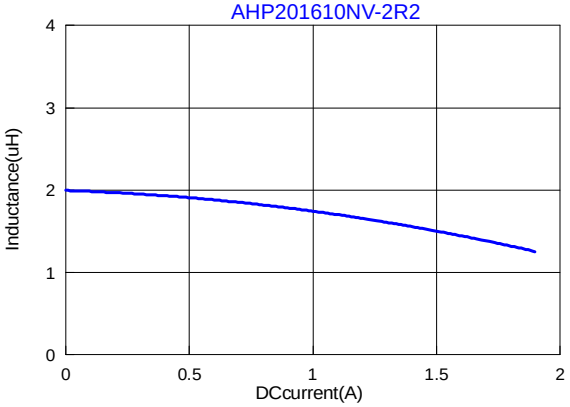
AHP201610NV-1R0



AHP201610NV-1R5



AHP201610NV-2R2



Power Inductor

AHP252010NV-SERIES

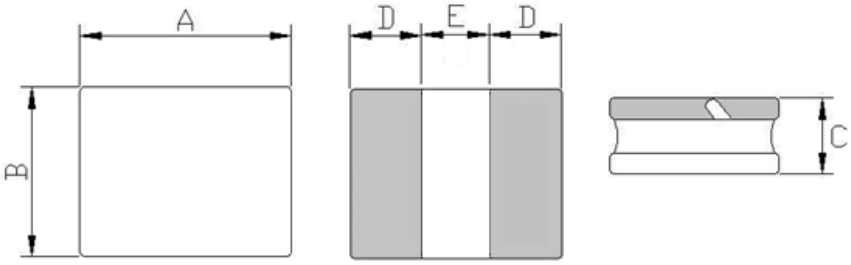
1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability tests comply with AEC-Q200
4. Operating temperature-40~+125℃ (Including self - temperature rise)

Halogen-free

RoHS

2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP252010NV	2.5 ± 0.2	2.0 ± 0.2	1.0Max	0.75 ref.	1.00 ref.

Units: mm

3. Part Numbering

AHP	252010	N	V	-	2R2	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free — Material
D: Category Code — V=Vehicle
E: Inductance — 2R2=2.2uH
F: Inductance Tolerance — M=±20%

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) typ.	DCR (Ω) Max.	I sat (A) typ.	I sat (A) Max.	I rms (A) typ	I rms (A) MAX
AHP252010NV-R24M	0.24	±20	1V/1M	0.022	0.028	7.00	6.00	4.50	4.00
AHP252010NV-R33M	0.33	±20	1V/1M	0.023	0.029	5.50	4.80	4.30	3.80
AHP252010NV-R47M	0.47	±20	1V/1M	0.030	0.036	5.20	4.50	4.00	3.50
AHP252010NV-R68M	0.68	±20	1V/1M	0.038	0.045	4.00	3.50	3.50	3.00
AHP252010NV-1R0M	1.0	±20	1V/1M	0.053	0.063	3.50	3.10	3.00	2.50
AHP252010NV-1R5M	1.5	±20	1V/1M	0.080	0.096	3.00	2.60	2.50	2.00
AHP252010NV-2R2M	2.2	±20	1V/1M	0.105	0.126	2.20	1.90	2.10	1.80
AHP252010NV-3R3M	3.3	±20	1V/1M	0.195	0.235	1.90	1.60	1.40	1.20
AHP252010NV-4R7M	4.7	±20	1V/1M	0.230	0.276	1.60	1.30	1.30	1.10

Note:

Isat：Based on inductance change （△L/L0：≦30%）@ ambient temp. 25℃

Irms：Based on temperature rise （△T：40℃.）Max

Measurement board data

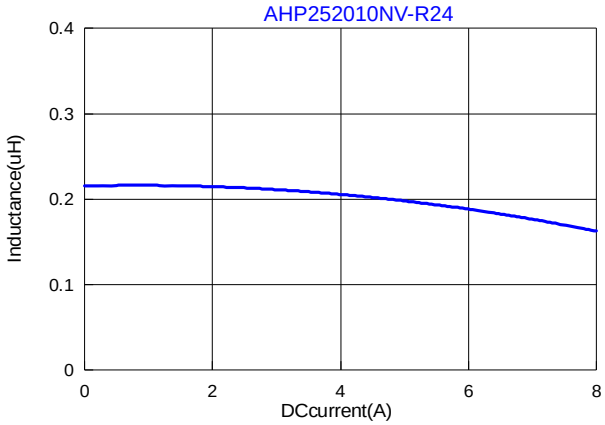
Irms1

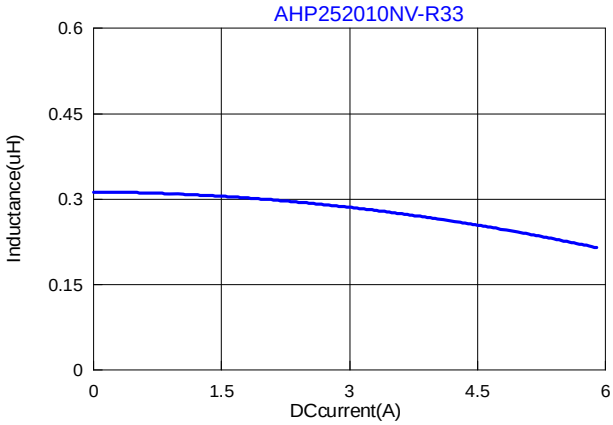
Material : FR4

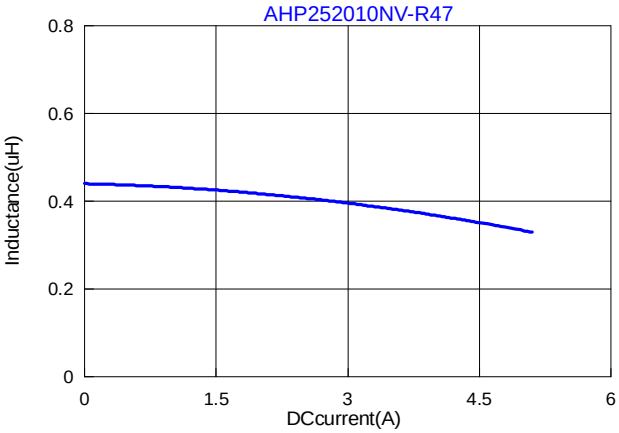
Board dimensions : 100 X 50 X 1.6t mm

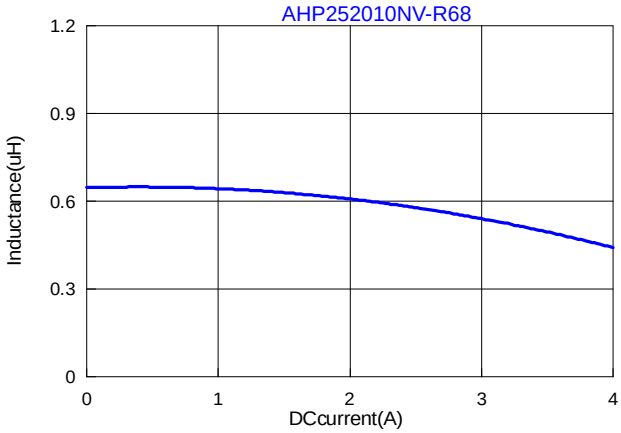
Pattern dimensions: 45 X 30 mm (Double side board)

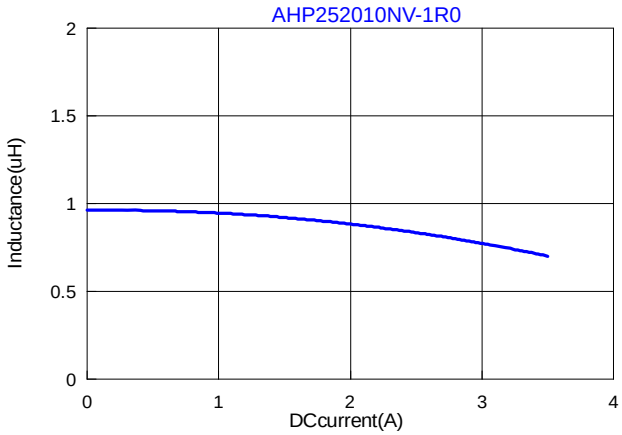
Pattern thickness : 50 μm

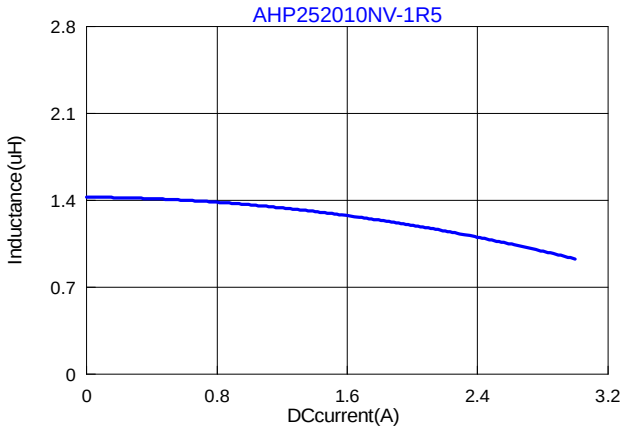




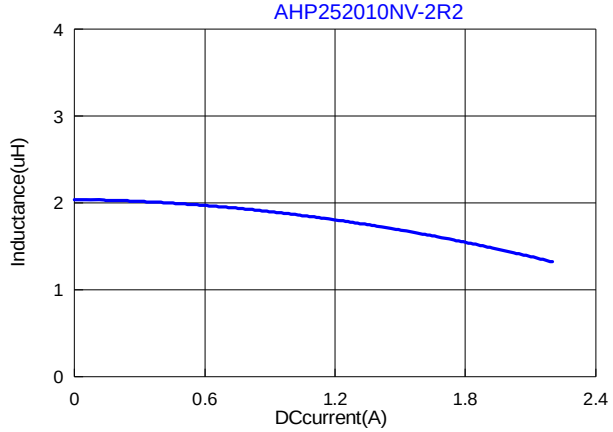




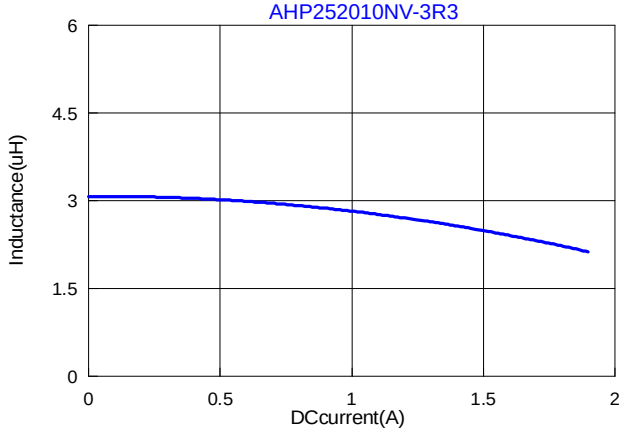




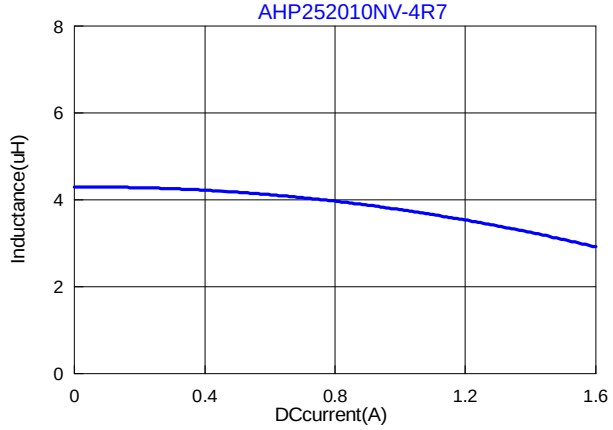
AHP252010NV-2R2



AHP252010NV-3R3



AHP252010NV-4R7



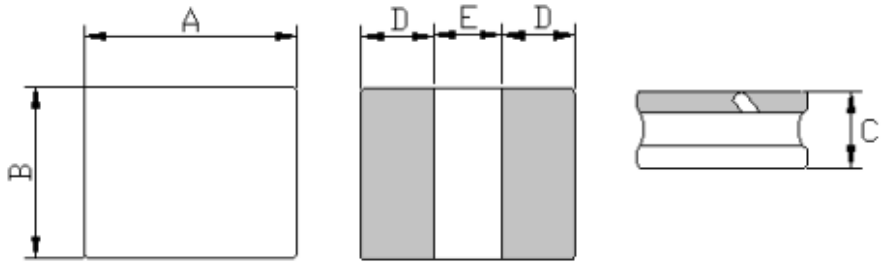
Power Inductor

AHP252012HV-SERIES

1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability tests comply with AEC-Q200
4. Operating temperature-40~+125℃ (Including self - temperature rise)

2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP252012HV	2.5 -0.1/+0.2	2.0 -0.1/+0.2	1.2Max	0.75 ref.	1.00 ref.

Units: mm

3. Part Numbering

AHP	252012	H	V	-	R47	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free — Material
D: Category Code — V=Vehicle
E: Inductance — R47=0.47uH
F: Inductance Tolerance — M=±20%

4. Specification

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) typ.	DCR (Ω) Max.	I sat (A) typ.	I sat (A) Max.	I rms (A) typ	I rms (A) MAX
AHP252012HV-R24M	0.24	±20	1V/1M	0.011	0.015	7.80	6.50	7.00 (1) 7.50 (2)	6.00 (1) 6.50 (2)
AHP252012HV-R33M	0.33	±20	1V/1M	0.017	0.023	7.00	6.00	5.80 (1) 6.30 (2)	4.80 (1) 5.20 (2)
AHP252012HV-R47M	0.47	±20	1V/1M	0.021	0.027	6.50	5.50	5.00 (1) 5.50 (2)	4.20 (1) 4.70 (2)
AHP252012HV-R68M	0.68	±20	1V/1M	0.030	0.037	6.00	5.00	4.50 (1) 5.00 (2)	3.90 (1) 4.20 (2)
AHP252012HV-1R0M	1.0	±20	1V/1M	0.036	0.044	4.50	3.80	4.00 (1) 4.50 (2)	3.50 (1) 4.00 (2)
AHP252012HV-1R5M	1.5	±20	1V/1M	0.050	0.060	3.80	3.20	3.50 (1) 4.00 (2)	3.00 (1) 3.50 (2)
AHP252012HV-2R2M	2.2	±20	1V/1M	0.070	0.084	2.60	2.20	2.60 (1) 3.00 (2)	2.20 (1) 2.50 (2)
AHP252012HV-3R3M	3.3	±20	1V/1M	0.115	0.140	2.30	2.00	2.00 (1) 2.20 (2)	1.80 (1) 2.00 (2)
AHP252012HV-4R7M	4.7	±20	1V/1M	0.125	0.150	1.70	1.50	1.70 (1) 1.90 (2)	1.50 (1) 1.70 (2)

Note:

Isat：Based on inductance change （△L/L0：≦30%）@ ambient temp. 25℃

Irms：Based on temperature rise （△T：40℃.）Max

Measurement board data

Irms1

Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50 μm

Irms2

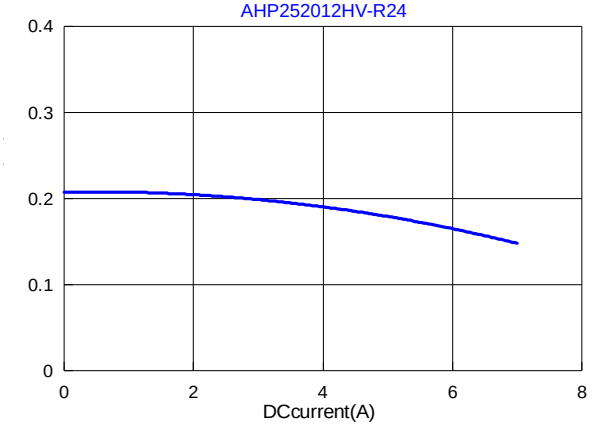
Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

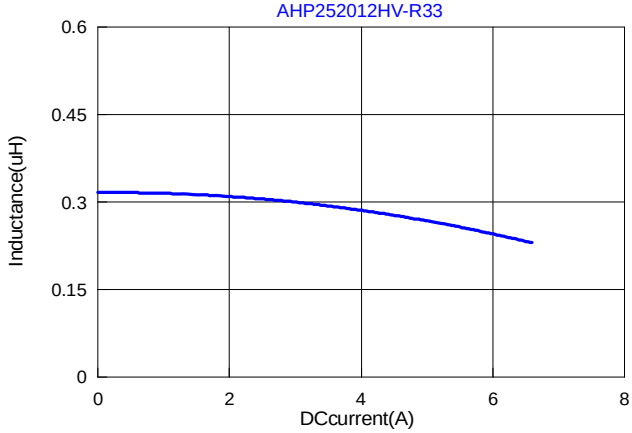
Pattern dimensions: 45 X 45 mm (Double side board)

Pattern thickness : 70 μm

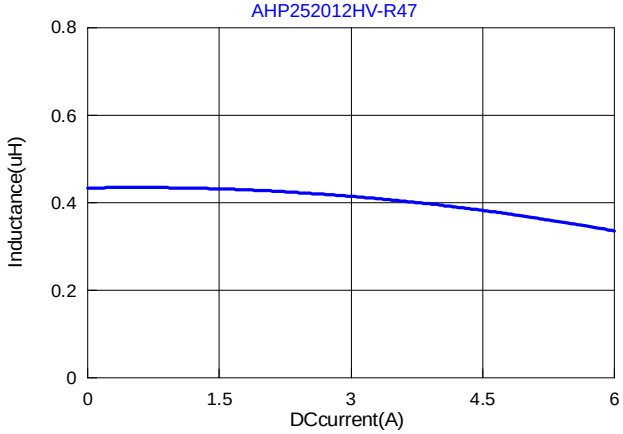
AHP252012HV-R24



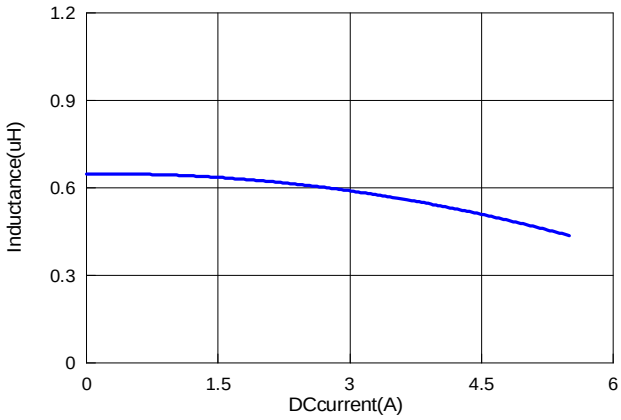
AHP252012HV-R33



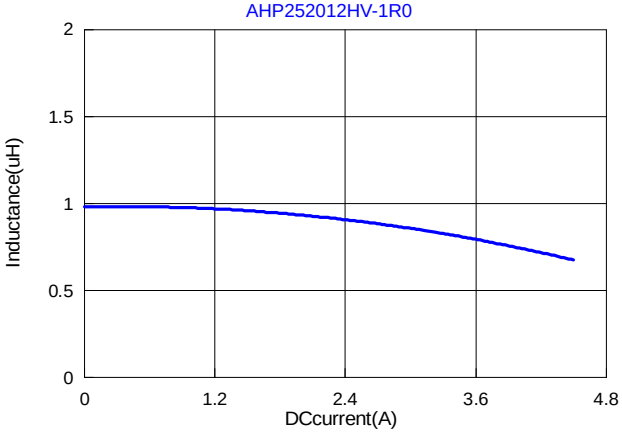
AHP252012HV-R47



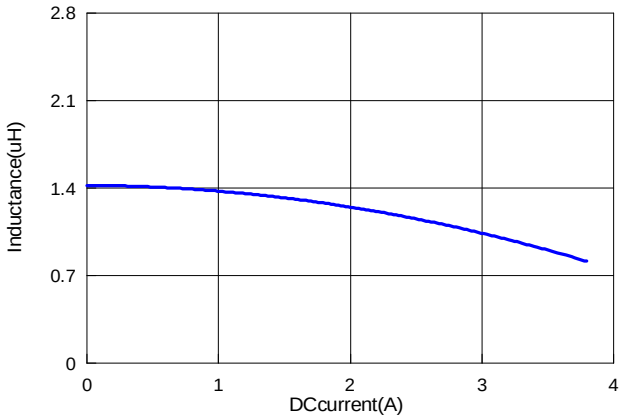
AHP252012HV-R68

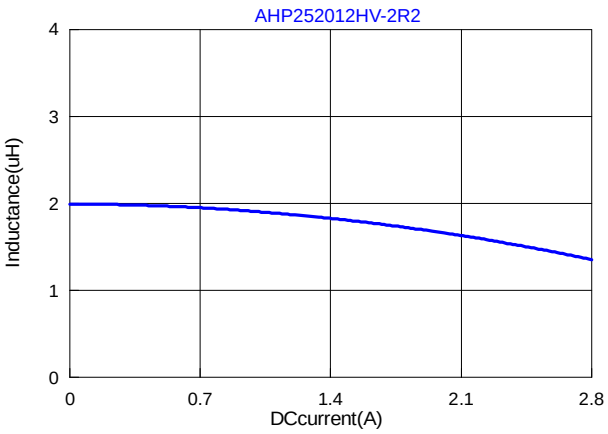


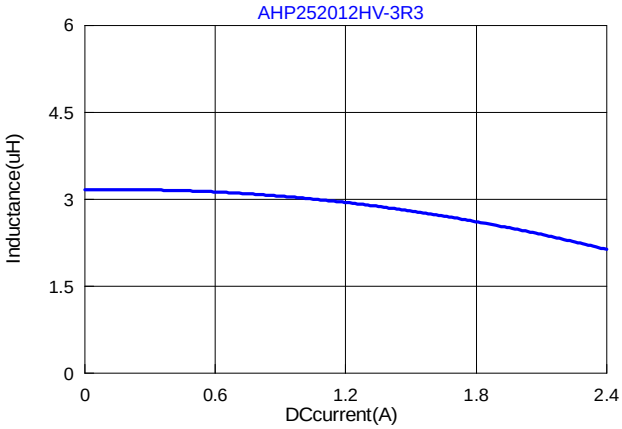
AHP252012HV-1R0

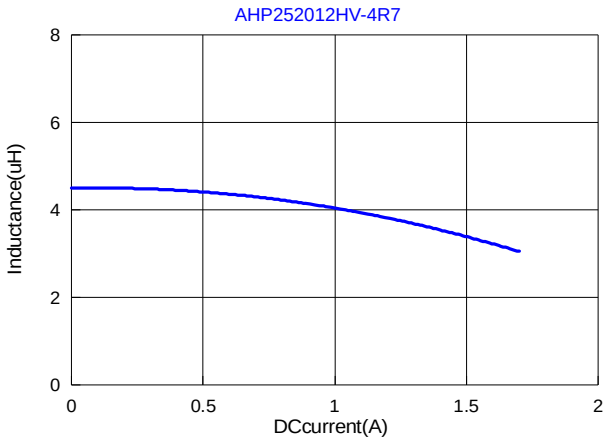


AHP252012HV-1R5




AHP252012HV-2R2
Inductance(uH)
DCcurrent(A)
0
1
2
3
4
0
0.7
1.4
2.1
2.8


AHP252012HV-3R3
Inductance(uH)
DCcurrent(A)
0
1.5
3
4.5
6
0
0.6
1.2
1.8
2.4


AHP252012HV-4R7
Inductance(uH)
DCcurrent(A)
0
2
4
6
8
0
0.5
1
1.5
2