HEI Series

The HEI Series is designed specifically to enhance both PFM and PWM application performance.Q(Rac) value at light load and the RDC value at heavy load are both exceptional. Furthermore, the saturated current performance is also optimal, helping to reduce the ripple current and enhance the efficiency.

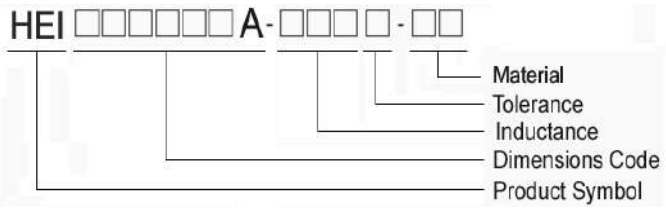
Features

- RoHS, Halogen Free and REACH Compliance
- High Efficiency
- Excellent Q, RDC and saturation current
- Low profile and miniature size down to 1.6*0.8*0.8mm

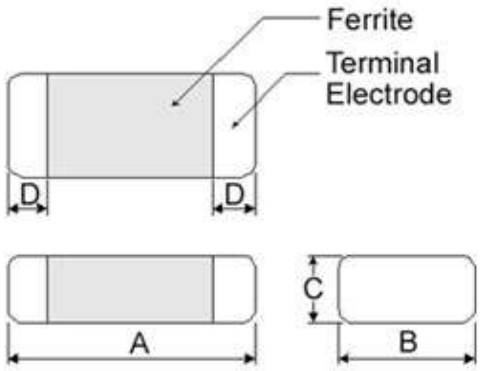
Applications

- Smartphones, tablets and wearable devices
- HDD, SSD and PC peripheral devices
- DSC, camcorders
- PND
- DC/DC converters

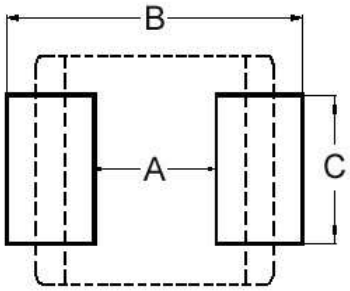
Product Identification



Shape and Dimensions



Recommended Pattern



Dimensions in mm

TYPE	A	B	C	D
160808A	1.6±0.2	0.80±0.2	0.8Max	0.3±0.2
201208A	2.0±0.2	1.25±0.2	0.8Max	0.5±0.3
201210A	2.0±0.2	1.25±0.2	1.0Max	0.5±0.3
201608A	2.0±0.2	1.60±0.2	0.8Max	0.5±0.3
201610A	2.0±0.2	1.60±0.2	1.0Max	0.5±0.3
252010A	2.5±0.3	2.00±0.3	1.0Max	0.6±0.3
252012A	2.5±0.3	2.00±0.3	1.2Max	0.6±0.3
322510A	3.2±0.3	2.50±0.3	1.0Max	0.5±0.3
322512A	3.2±0.3	2.50±0.3	1.2Max	0.5±0.3
322525A	3.2±0.3	2.50±0.3	2.50±0.3	0.5±0.3

Dimensions in mm

TYPE	A	B	C
160808A	0.7~0.8	1.8~2.0	0.8~1.1
201208A	0.8~1.2	2.3~2.9	1.0~1.45
201210A	0.8~1.2	2.3~2.9	1.0~1.45
201608A	0.7	2.3	1.8
201610A	0.7	2.3	1.8
252010A	1.2	2.8	2.3
252012A	1.2	2.8	2.3
322510A	1.7	3.5	2.8
322512A	1.7	3.5	2.8
322525A	1.7	3.5	2.8

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI160808A-R24M-Q8	0.24	20	2	54(47)	3.2(3.6)	2.6(3.0)
HEI160808A-R33M-Q8	0.33	20	2	75(62)	3.0(3.4)	2.2(2.6)
HEI160808A-R47M-Q8	0.47	20	2	100(87)	2.2(2.6)	1.6(2.0)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 20VDC
- Measure Equipment：

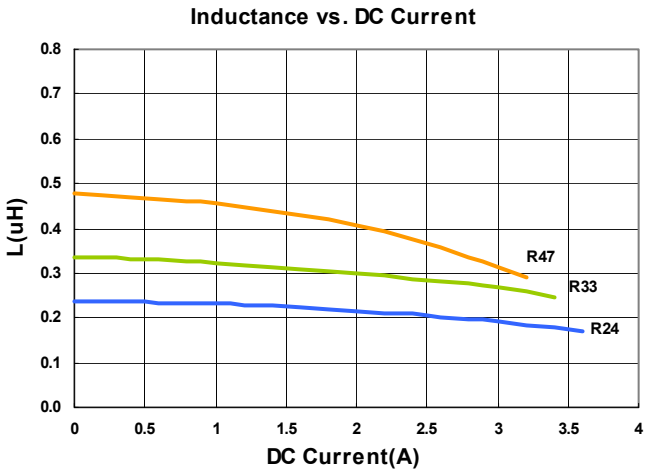
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

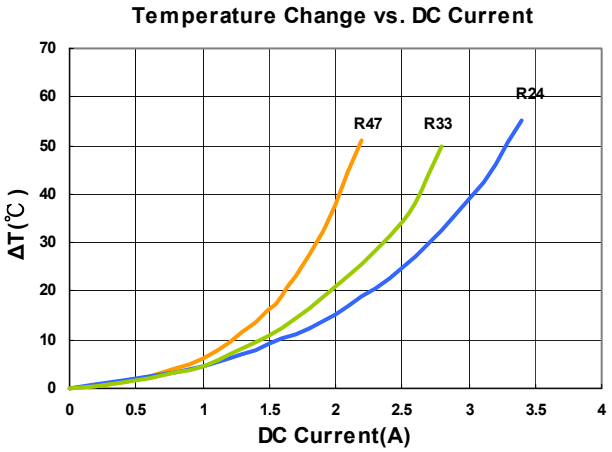
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI201208A-R24M-Q8	0.24	20	2	25(19)	4.8(5.4)	4.2(4.8)
HEI201208A-R47M-Q8	0.47	20	2	48(40)	3.2(3.6)	3.0(3.4)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 20VDC
- Measure Equipment：

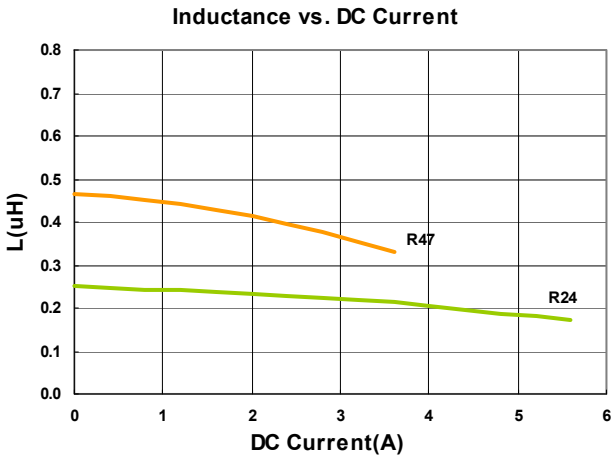
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

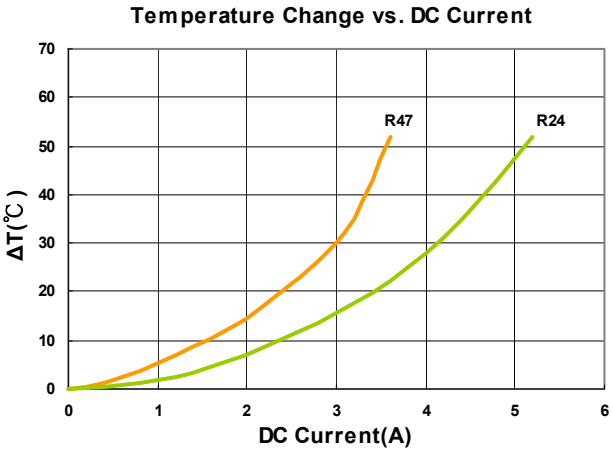
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





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Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI201210A-R24M-Q8	0.24	20	2	28(22)	4.5(5.7)	3.7(4.6)
HEI201210A-R33M-Q8	0.33	20	2	30(25)	4.5(4.8)	3.7(4.3)
HEI201210A-R47M-Q8	0.47	20	2	42(33)	3.3(4.2)	3.0(3.7)
HEI201210A-1R0M-Q8	1.0	20	2	78(69)	2.3(2.8)	2.2(2.7)
HEI201210A-1R5M-Q8	1.5	20	2	126(108)	1.7(2.2)	1.6(2.1)
HEI201210A-2R2M-Q8	2.2	20	2	176(166)	1.6(1.7)	1.4(1.5)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 20VDC
- Measure Equipment：

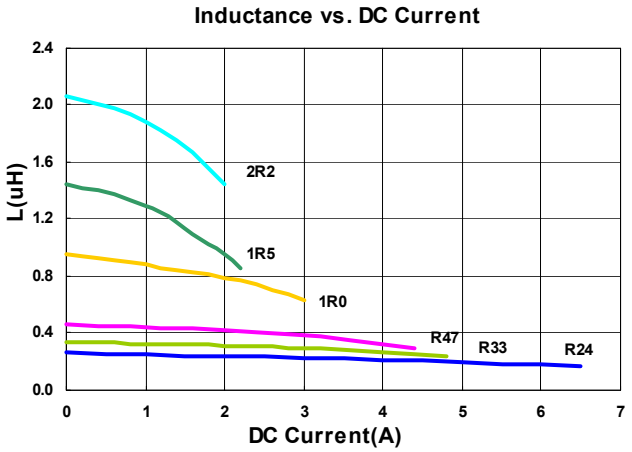
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

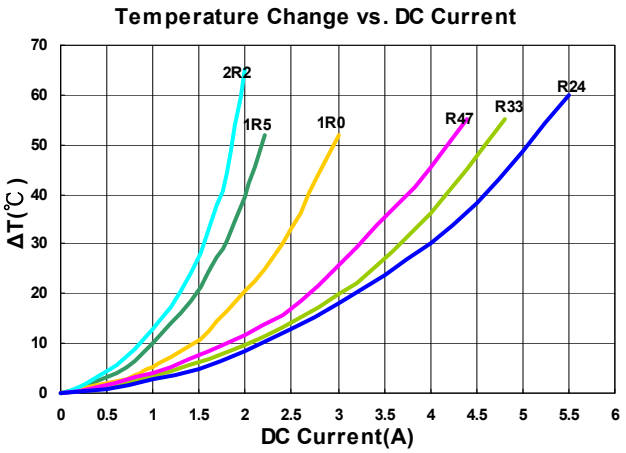
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI201608A-R47M-Q8	0.47	20	2	51(42)	3.3(3.6)	3.1(3.4)
HEI201608A-1R0M-Q8	1.0	20	2	87(76)	2.5(2.8)	2.3(2.7)
HEI201608A-1R5M-Q8	1.5	20	2	115(102)	2.0(2.3)	2.1(2.4)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 25VDC
- Measure Equipment：

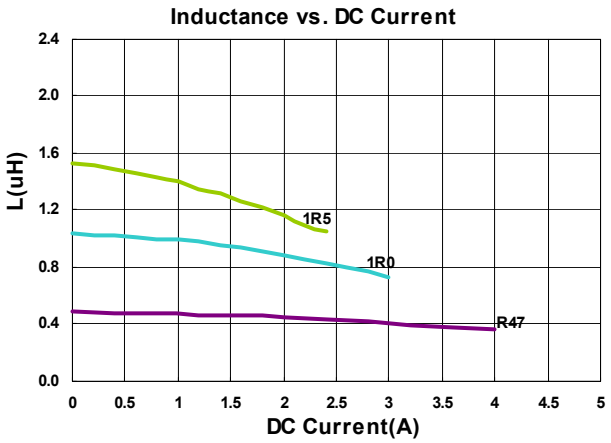
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

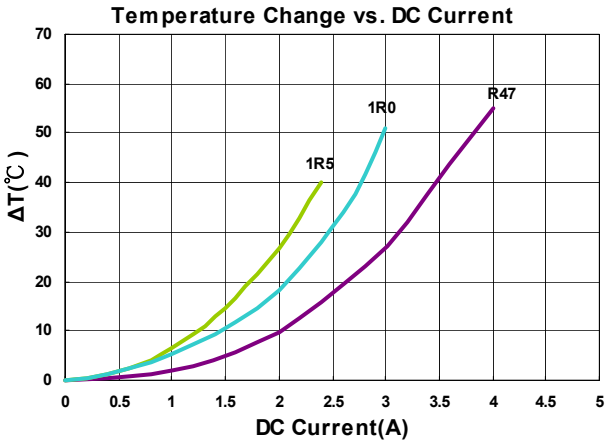
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





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Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI201610A-R24M-Q8	0.24	20	2	27(21)	5.6(7.0)	3.9(4.8)
HEI201610A-R47M-Q8	0.47	20	2	42(33)	3.9(4.8)	3.5(4.2)
HEI201610A-R68M-Q8	0.68	20	2	56(43)	3.2(4.0)	2.7(3.4)
HEI201610A-1R0M-Q8	1.0	20	2	65(53)	2.9(3.6)	2.5(3.1)
HEI201610A-1R5M-Q8	1.5	20	2	85(75)	2.5(2.8)	2.3(2.7)
HEI201610A-2R2M-Q8	2.2	20	2	135(112)	2.4(2.7)	1.8(2.2)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 25VDC
- Measure Equipment：

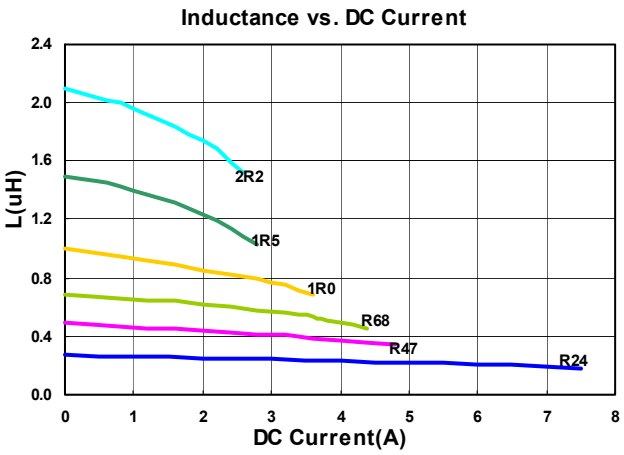
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

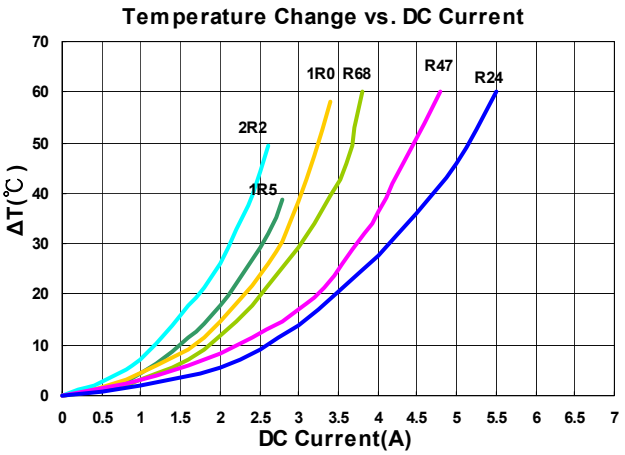
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





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CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI252010A-R24M-Q8	0.24	20	2	18(13)	8.0(9.5)	5.5(6.5)
HEI252010A-R33M-Q8	0.33	20	2	24(18)	6.5(8.0)	4.8(5.5)
HEI252010A-R47M-Q8	0.47	20	2	35(27)	5.0(6.2)	3.9(4.5)
HEI252010A-R68M-Q8	0.68	20	2	40(32)	4.5(5.6)	3.7(4.2)
HEI252010A-1R0M-Q8	1.0	20	2	53(45)	3.7(4.6)	3.0(3.5)
HEI252010A-1R5M-Q8	1.5	20	2	75(68)	3.1(3.8)	2.4(2.8)
HEI252010A-2R2M-Q8	2.2	20	2	97(87)	2.5(3.0)	2.2(2.5)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 25VDC
- Measure Equipment：

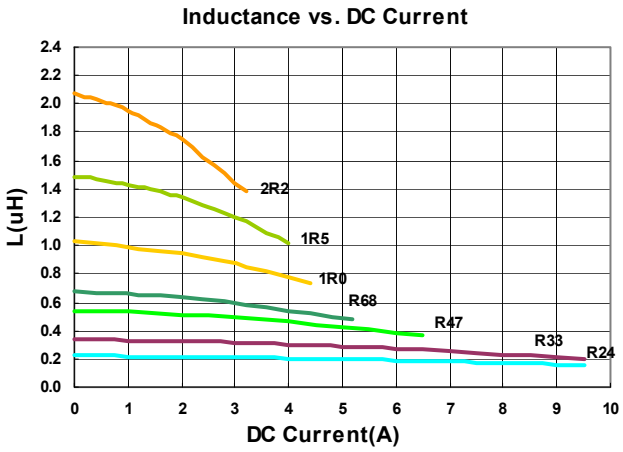
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

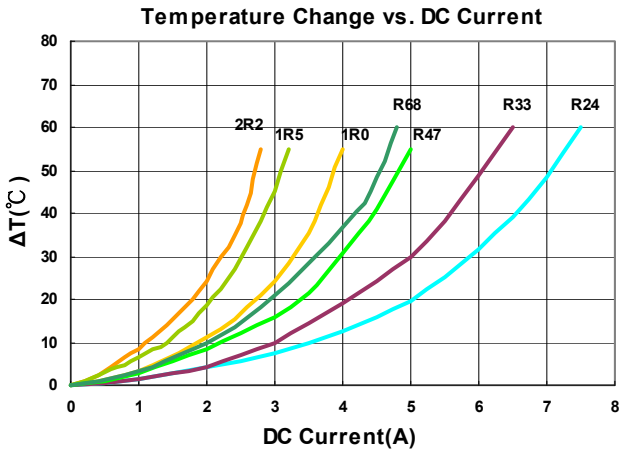
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





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CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI252012A-R24M-Q8	0.24	20	2	15(11.5)	9.0(10.5)	6.2(7.3)
HEI252012A-R33M-Q8	0.33	20	2	18(14.5)	8.5(10)	5.8(6.4)
HEI252012A-R47M-Q8	0.47	20	2	33(28)	5.6(7.0)	3.8(4.5)
HEI252012A-R68M-Q8	0.68	20	2	36(30)	5.0(6.2)	3.8(4.4)
HEI252012A-1R0M-Q8	1.0	20	2	42(35)	4.4(5.5)	3.6(4.1)
HEI252012A-1R5M-Q8	1.5	20	2	65(57)	3.4(4.2)	2.7(3.1)
HEI252012A-2R2M-Q8	2.2	20	2	83(74)	3.0(3.7)	2.5(2.9)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 25VDC
- Measure Equipment：

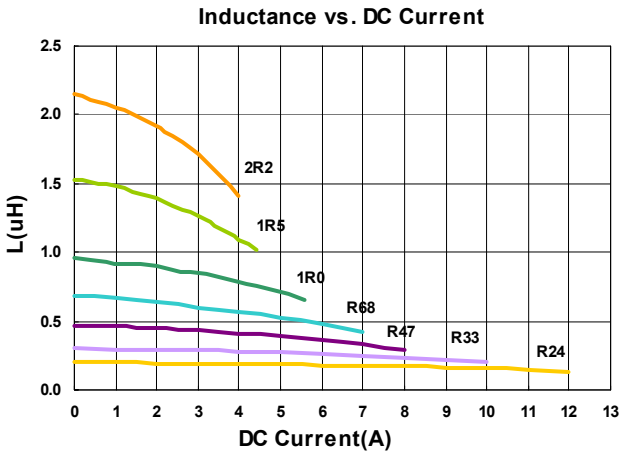
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

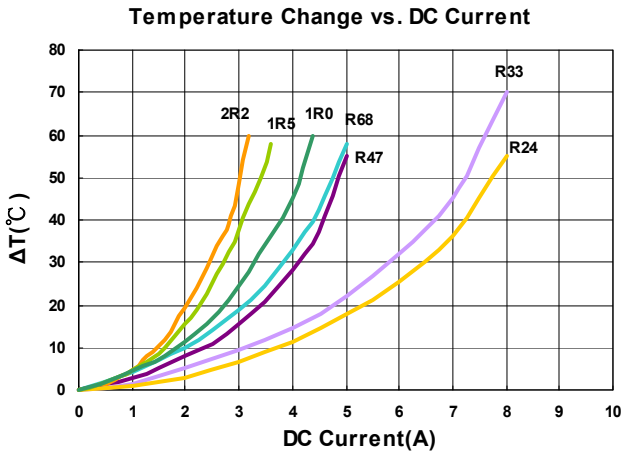
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





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CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI322510A-R24M-Q8	0.24	20	2	16(12)	9.0(11.5)	6.0(6.8)
HEI322510A-R33M-Q8	0.33	20	2	17(12.5)	8.0(9.5)	5.8(6.5)
HEI322510A-R47M-Q8	0.47	20	2	24(19)	6.0(7.3)	4.5(5.4)
HEI322510A-1R0M-Q8	1.0	20	2	46(39)	4.1(4.7)	3.3(3.7)
HEI322510A-1R5M-Q8	1.5	20	2	58(50)	3.5(4.0)	3.2(3.5)
HEI322510A-2R2M-Q8	2.2	20	2	85(73)	3.0(3.5)	2.5(2.8)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 25VDC
- Measure Equipment：

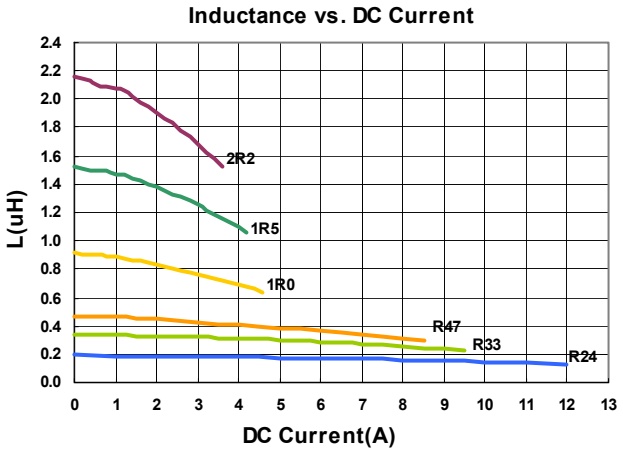
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

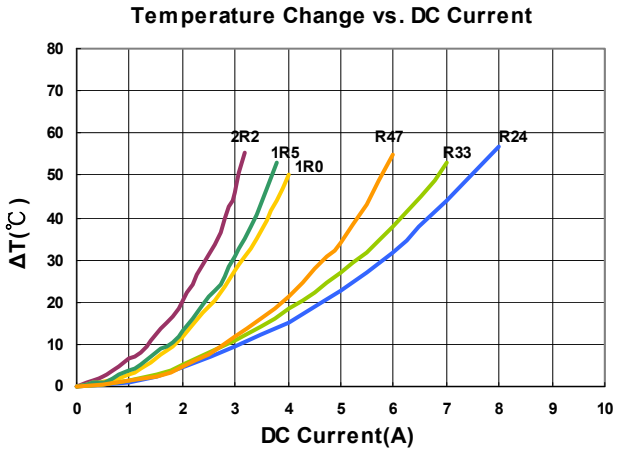
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer





Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI322512A-R47M-Q8	0.47	20	2	25(19)	7.0(8.2)	4.6(5.2)
HEI322512A-1R0M-Q8	1.0	20	2	34(27.5)	5.7(6.5)	3.7(4.2)
HEI322512A-1R5M-Q8	1.5	20	2	59(51)	4.0(4.6)	2.8(3.2)
HEI322512A-2R2M-Q8	2.2	20	2	73(64)	3.5(4.0)	2.7(3.0)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 25VDC
- Measure Equipment：

  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

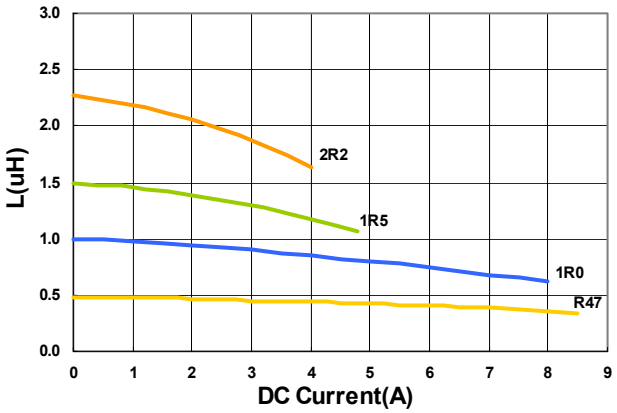
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

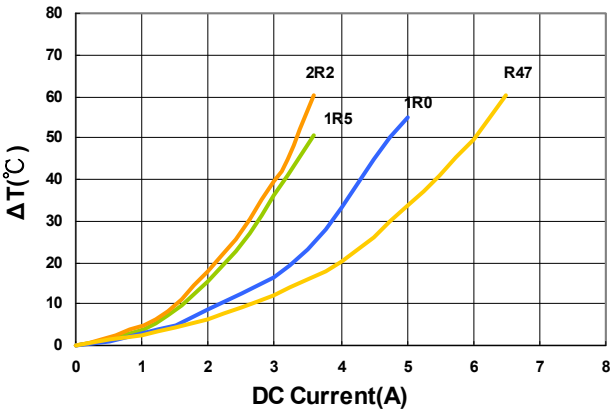
  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer

Inductance vs. DC Current



Temperature Change vs. DC Current



Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	RDC(mΩ) Max(Typ.)	Isat(A) Max(Typ.)	Irms(A) Max(Typ.)
HEI322525A-1R0M-Q8	1.0	20	2	34(28)	6.0(8.0)	3.5(4.3)
HEI322525A-1R5M-Q8	1.5	20	2	45(35)	5.5(7.5)	3.2(3.9)
HEI322525A-2R2M-Q8	2.2	20	2	60(49)	4.8(6.5)	3.0(3.3)

Note: When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40℃ ~ 125℃(Including self - temperature rise)
- Isat for Inductance drop 30% from its value without current
- Irms for a 40℃ temperature rise from 25℃ ambient with current
- Absolute maximum voltage 25VDC
- Measure Equipment：

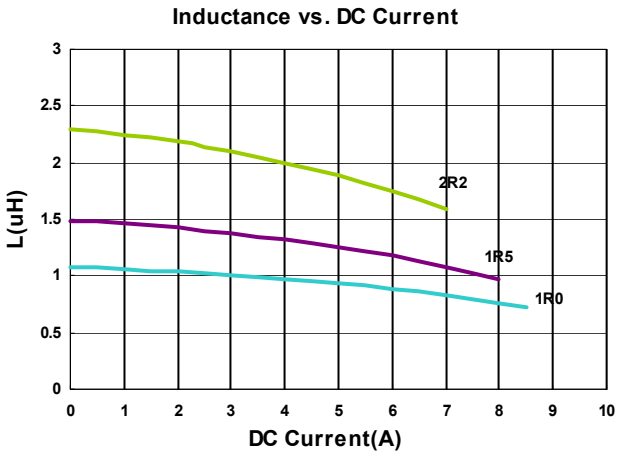
  L：Agilent E4991/HP4286A+16197A (or equivalent), 2MHz 0.2V

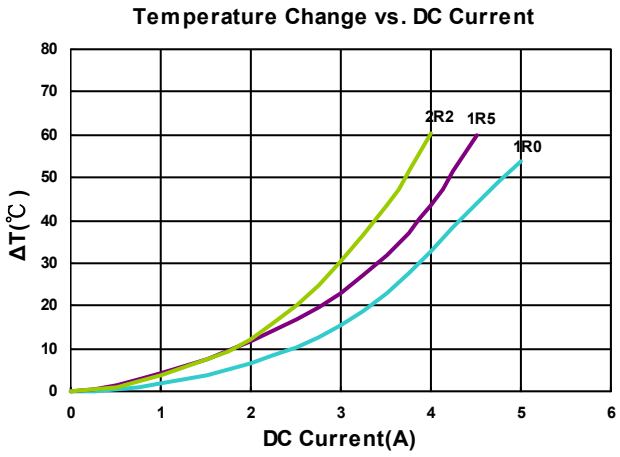
  RDC：CHEN HWA502BC/HP4338B (or equivalent)

  Isat：Agilent E4980A+HP42841A (or equivalent)

  Irms：Agilent 6641 SYSTEM DC POWER SUPPLY (or equivalent)

Test Instruments：E4991A Impedance / Material Analyzer



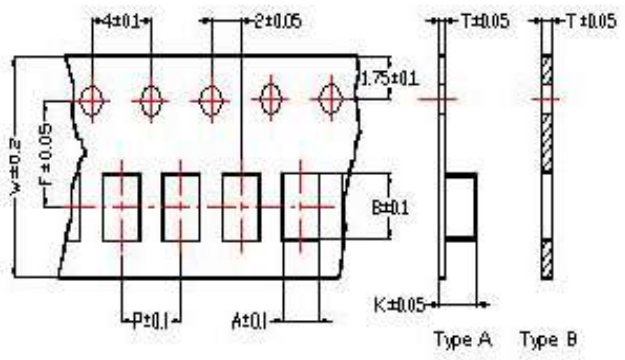


Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without advance notice. Please contact our sales department before ordering.

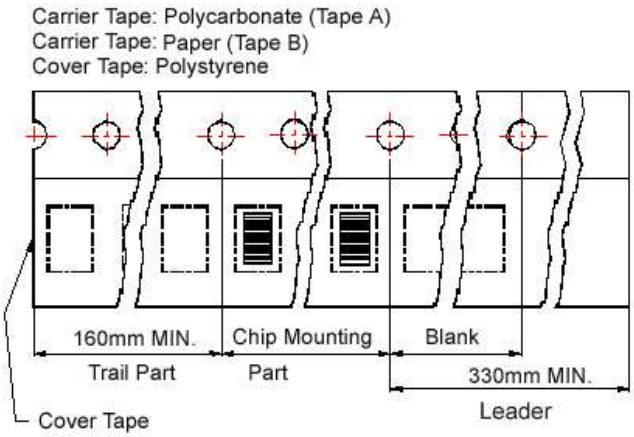
CHILISIN ELECTRONICS CORP.

Packaging Specifications

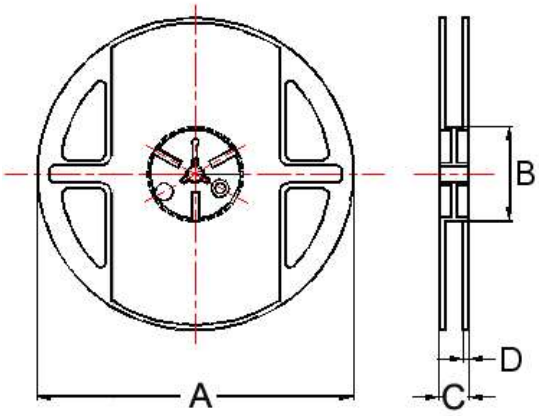
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Quantity
	A	B	T	W	P	F	K	Tape	A	B	C	D	PCS / REEL
160808A	1.20	1.88	0.95	8	4	3.5	-	B	178	60	12	1.5	4000
201208A	1.45	2.25	0.22	8	4	3.5	1.04	A	178	60	12	1.5	3000
201210A	1.50	2.25	0.22	8	4	3.5	1.15	A	178	60	12	1.5	3000
201608A	1.80	2.35	0.23	8	4	3.5	0.85	A	178	60	12	1.5	3000
201610A	1.80	2.20	0.22	8	4	3.5	1.15	A	178	60	12	1.5	3000
252010A	2.25	2.80	0.22	8	4	3.5	1.15	A	178	60	12	1.5	3000
252012A	2.25	2.80	0.22	8	4	3.5	1.35	A	178	60	12	1.5	3000
322510A	2.80	3.55	0.23	8	4	3.5	1.20	A	178	60	12	1.5	3000
322512A	2.80	3.50	0.23	8	4	3.5	1.34	A	178	60	12	1.5	3000
322525A	2.90	3.50	0.23	8	4	3.5	2.90	A	178	60	12	1.5	1500