

## SPIA Series



SPIA series is automatic assembly power inductor which is shielded with ferrite core. It is ideal for portal device DC-DC converter line.

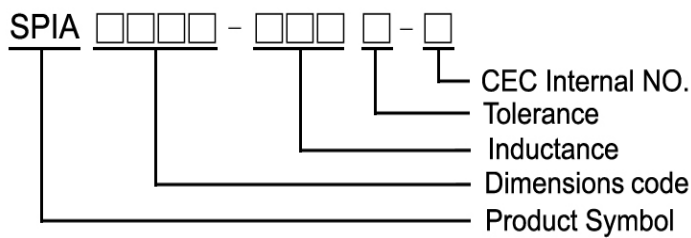
### Features

- RoHS Compliant.
- Miniature size. 3\*3\*1~4\*4\*2 (mm)
- Magnetic shielded power inductor.
- Available on tape & reel for auto surface mounting.

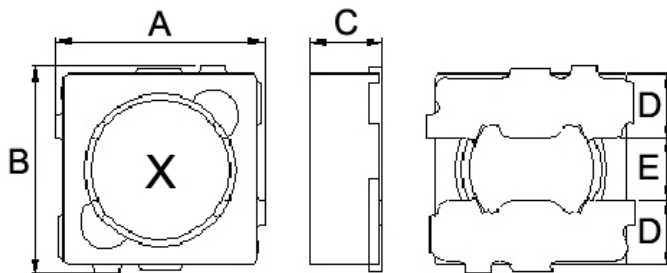
### Applications

- Tablet PC, Smart Phone, GPS, DSC, Wireless Module, STB, Game Console

### Product Identification



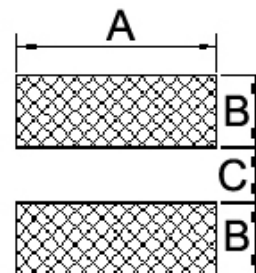
### Shapes and Dimensions



Dimensions in mm

TYPE	A	B	C	D	E
SPIA3010	3.0±0.2	3.0±0.2	1.0±0.1	1.1	0.8
SPIA3015	3.0±0.2	3.0±0.2	1.5±0.1	1.1	0.8
SPIA3020	3.0±0.2	3.0±0.2	2.0±0.1	1.1	0.8
SPIA4012	4.0±0.2	4.0±0.2	1.2±0.1	1.3	1.2
SPIA4016	4.0±0.2	4.0±0.2	1.6±0.1	1.3	1.2
SPIA4020	4.0±0.2	4.0±0.2	2.0±0.1	1.3	1.2

### Recommended Pattern



Dimensions in mm

TYPE	A	B	C
SPIA3010	3.2	1.1	1.0
SPIA3015	3.2	1.1	1.0
SPIA3020	3.2	1.1	1.0
SPIA4012	4.2	1.5	1.2
SPIA4016	4.2	1.5	1.2
SPIA4020	4.2	1.5	1.2

## Standard Specifications

Part Number	Inductance ( $\mu$ H)	Tolerance ( $\pm\%$ )	Test Frequency (KHz)	RDC ( $\Omega$ ) $\pm 30\%$	Isat (mA)Typ	Irms (mA)Typ	Marking
SPIA3010-1R2□-N	1.2	20,30	100	0.075	920	1400	A
SPIA3010-1R5□-N	1.5	20,30	100	0.085	840	1200	B
SPIA3010-2R2□-N	2.2	20,30	100	0.155	640	1000	C
SPIA3010-3R3□-N	3.3	20,30	100	0.230	520	750	D
SPIA3010-4R7□-N	4.7	20,30	100	0.285	450	650	E
SPIA3010-6R8□-N	6.8	20,30	100	0.410	350	500	F
SPIA3010-100□-N	10	20,30	100	0.600	290	400	G
SPIA3010-150□-N	15	20,30	100	0.810	230	350	H
SPIA3010-220□-N	22	20,30	100	1.300	180	300	I

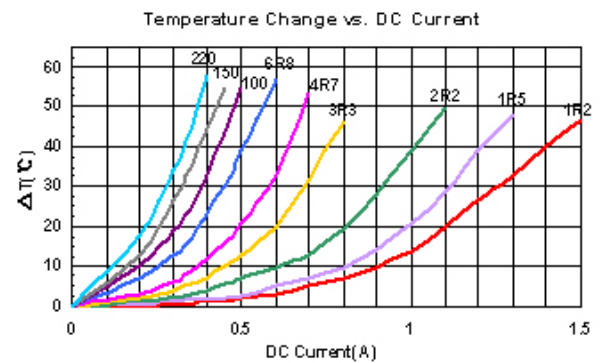
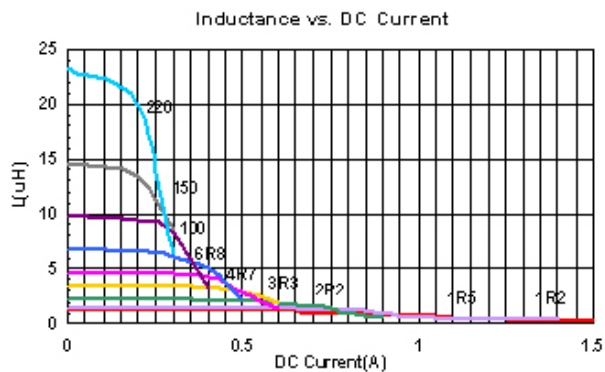
Test Freq.(L): 100KHz , 1V

- When ordering, please specify tolerance and packaging codes
- Tolerance: M =  $\pm 20\%$  , T =  $\pm 30\%$
- Operating temperature range —  $25^{\circ}\text{C} \sim 105^{\circ}\text{C}$  . (Including self - temperature rise )
- Isat for Inductance drop 30% from its value without current.
- I rms for a  $40^{\circ}\text{C}$  rise above  $25^{\circ}\text{C}$  ambient.
- Test Instrument: L: Agilent/HP 4284A + Agilent/HP 16334A

RDC: Digital Milliohm Meter Chroma 16502, or equivalent

Isat: HP4284+42841A

I rms: Agilent 6641 SYSTEM DC POWER SUPPLY



## Standard Specifications

Part Number	Inductance (μH)	Tolerance (±%)	Test Frequency (KHz)	RDC (Ω)±30%	Isat (mA)Typ	Irms (mA)Typ	Marking
SPIA3015-1R0□-N	1.0	20,30	100	0.052	1700	2000	A
SPIA3015-1R5□-N	1.5	20,30	100	0.072	1400	1600	B
SPIA3015-2R2□-N	2.2	20,30	100	0.095	1200	1400	C
SPIA3015-3R3□-N	3.3	20,30	100	0.160	1000	1100	D
SPIA3015-4R7□-N	4.7	20,30	100	0.195	900	950	E
SPIA3015-6R8□-N	6.8	20,30	100	0.340	720	750	F
SPIA3015-100□-N	10	20,30	100	0.425	600	650	G
SPIA3015-150□-N	15	20,30	100	0.695	450	500	H
SPIA3015-220□-N	22	20,30	100	0.970	400	420	I

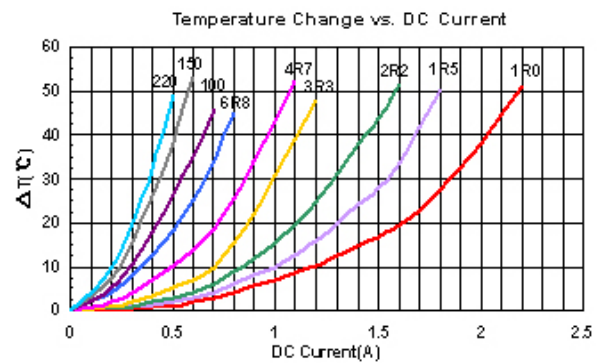
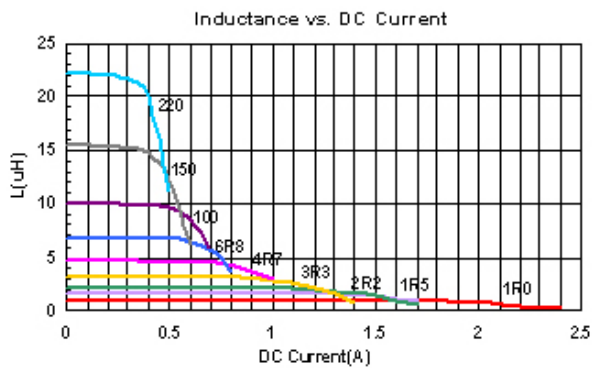
Test Freq.(L): 100KHz , 1V

- When ordering, please specify tolerance and packaging codes
- Tolerance: M = ±20% , T = ±30%
- Operating temperature range — 25℃ ~ 105℃ . (Including self - temperature rise )
- Isat for Inductance drop 30% from its value without current.
- Irms for a 40℃ rise above 25℃ ambient.
- Test Instrument: L: Agilent/HP 4284A + Agilent/HP 16334A

RDC: Digital Milliohm Meter Chroma 16502, or equivalent

Isat: HP4284+42841A

Irms: Agilent 6641 SYSTEM DC POWER SUPPLY



## Standard Specifications

Part Number	Inductance ( $\mu$ H)	Tolerance ( $\pm\%$ )	Test Frequency (KHz)	RDC ( $\Omega$ ) $\pm 30\%$	Isat (mA)Typ	Irms (mA)Typ	Marking
SPIA3020-1R0□-N	1.0	20,30	100	0.045	1500	2300	A
SPIA3020-1R5□-N	1.5	20,30	100	0.055	1300	2100	B
SPIA3020-2R2□-N	2.2	20,30	100	0.070	1000	1700	C
SPIA3020-3R3□-N	3.3	20,30	100	0.110	920	1500	D
SPIA3020-4R7□-N	4.7	20,30	100	0.150	840	1200	E
SPIA3020-6R8□-N	6.8	20,30	100	0.210	720	920	F
SPIA3020-100□-N	10	20,30	100	0.295	570	800	G
SPIA3020-150□-N	15	20,30	100	0.470	490	630	H
SPIA3020-220□-N	22	20,30	100	0.570	400	520	I

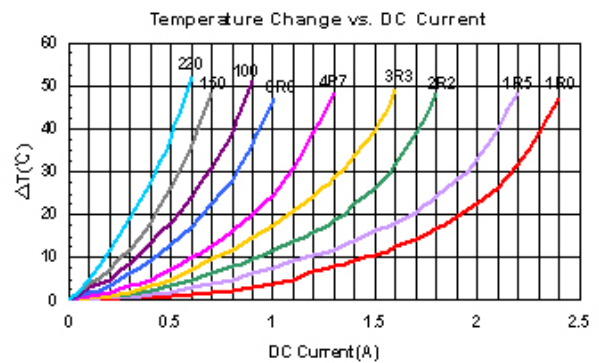
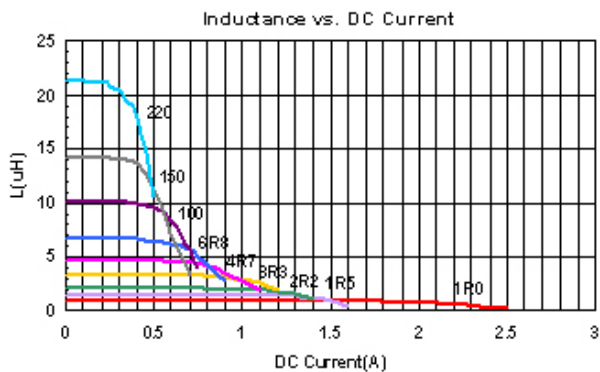
Test Freq.(L): 100KHz , 1V

- When ordering, please specify tolerance and packaging codes
- Tolerance: M =  $\pm 20\%$  , T =  $\pm 30\%$
- Operating temperature range —  $25^{\circ}\text{C} \sim 105^{\circ}\text{C}$  . (Including self - temperature rise )
- Isat for Inductance drop 30% from its value without current.
- I rms for a  $40^{\circ}\text{C}$  rise above  $25^{\circ}\text{C}$  ambient.
- Test Instrument: L: Agilent/HP 4284A + Agilent/HP 16334A

RDC: Digital Milliohm Meter Chroma 16502, or equivalent

Isat: HP4284+42841A

I rms: Agilent 6641 SYSTEM DC POWER SUPPLY

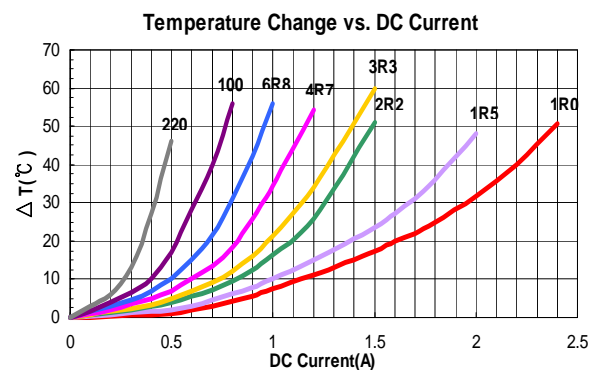
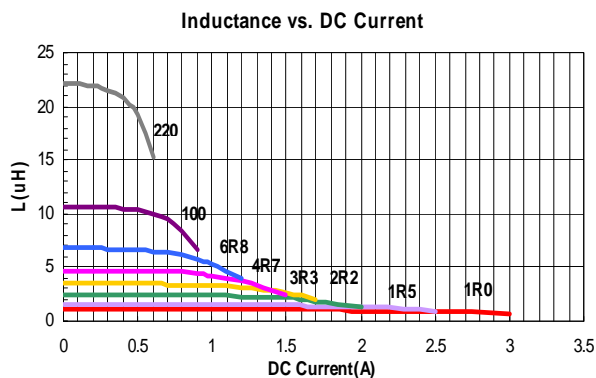


## Standard Specifications

Part Number	Inductance (μH)	Tolerance (±%)	Test Frequency (KHz)	RDC (Ω)±30%	Isat (mA)Typ	Irms (mA)Typ	Marking
SPIA4012-1R0□-N	1.0	20,30	100	0.055	2500	2100	A
SPIA4012-1R5□-N	1.5	20,30	100	0.070	2000	1800	B
SPIA4012-2R2□-N	2.2	20,30	100	0.110	1600	1350	C
SPIA4012-3R3□-N	3.3	20,30	100	0.140	1400	1200	D
SPIA4012-4R7□-N	4.7	20,30	100	0.190	1200	1000	E
SPIA4012-6R8□-N	6.8	20,30	100	0.280	1000	850	F
SPIA4012-100□-N	10	20,30	100	0.420	800	650	G
SPIA4012-220□-N	22	20,30	100	0.800	600	450	H

Test Freq.(L): 100KHz , 1V

- When ordering, please specify tolerance and packaging codes
- Tolerance: M = ±20% , T = ±30%
- Operating temperature range  $-25^{\circ}\text{C} \sim 105^{\circ}\text{C}$  . (Including self - temperature rise )
- Isat for Inductance drop 30% from its value without current.
- Irms for a  $40^{\circ}\text{C}$  rise above  $25^{\circ}\text{C}$  ambient.
- Test Instrument: L: Agilent/HP 4284A + Agilent/HP 16334A  
RDC: Digital Milliohm Meter Chroma 16502, or equivalent  
Isat: HP4284+42841A  
Irms: Agilent 6641 SYSTEM DC POWER SUPPLY

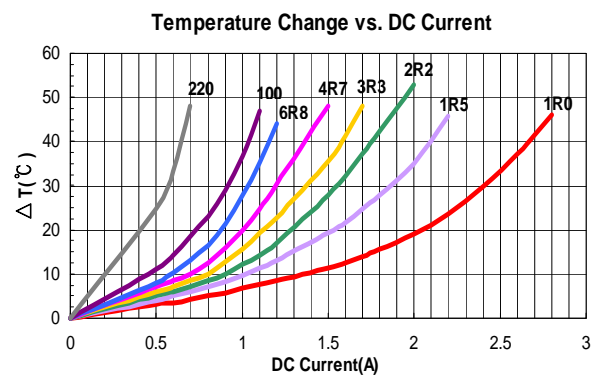
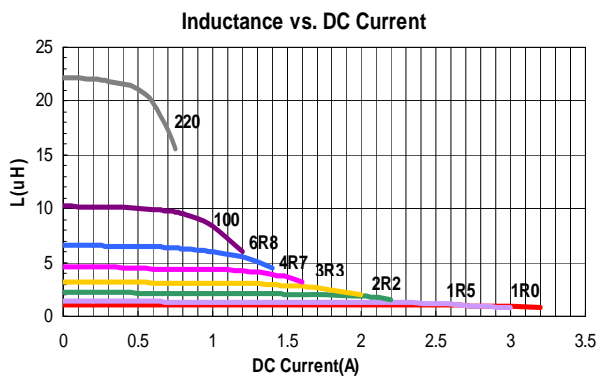


## Standard Specifications

Part Number	Inductance ( $\mu$ H)	Tolerance ( $\pm\%$ )	Test Frequency (KHz)	RDC ( $\Omega$ ) $\pm 30\%$	Isat (mA)Typ	Irms (mA)Typ	Marking
SPIA4016-1R0□-N	1.0	20,30	100	0.044	2800	2600	A
SPIA4016-1R5□-N	1.5	20,30	100	0.059	2500	2100	B
SPIA4016-2R2□-N	2.2	20,30	100	0.090	1900	1700	C
SPIA4016-3R3□-N	3.3	20,30	100	0.109	1700	1500	D
SPIA4016-4R7□-N	4.7	20,30	100	0.134	1500	1300	E
SPIA4016-6R8□-N	6.8	20,30	100	0.181	1200	1100	F
SPIA4016-100□-N	10	20,30	100	0.262	1000	1000	G
SPIA4016-220□-N	22	20,30	100	0.562	690	600	H

Test Freq.(L): 100KHz , 1V

- When ordering, please specify tolerance and packaging codes
- Tolerance: M =  $\pm 20\%$  , T =  $\pm 30\%$
- Operating temperature range  $-25^{\circ}\text{C} \sim 105^{\circ}\text{C}$  . (Including self - temperature rise )
- Isat for Inductance drop 30% from its value without current.
- Irms for a  $40^{\circ}\text{C}$  rise above  $25^{\circ}\text{C}$  ambient.
- Test Instrument: L: Agilent/HP 4284A + Agilent/HP 16334A  
RDC: Digital Milliohm Meter Chroma 16502, or equivalent  
Isat: HP4284+42841A  
Irms: Agilent 6641 SYSTEM DC POWER SUPPLY

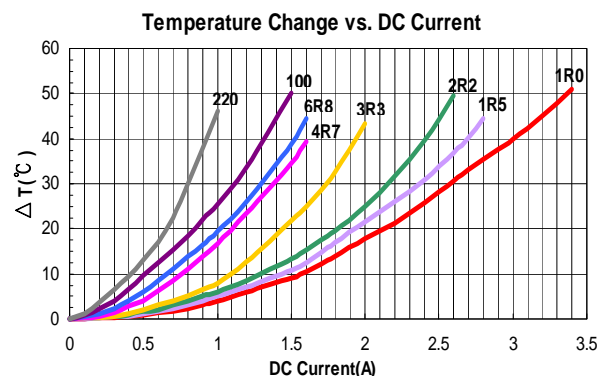
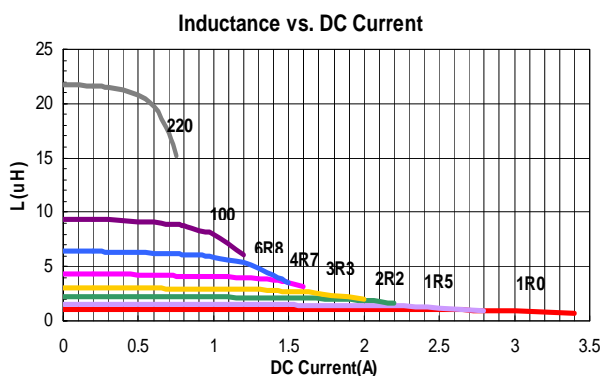


## Standard Specifications

Part Number	Inductance ( $\mu$ H)	Tolerance ( $\pm\%$ )	Test Frequency (KHz)	RDC ( $\Omega$ ) $\pm 30\%$	Isat (mA)Typ	Irms (mA)Typ	Marking
SPIA4020-1R0□-N	1.2	20,30	100	0.051	2900	3000	A
SPIA4020-1R5□-N	1.5	20,30	100	0.059	2500	2700	B
SPIA4020-2R2□-N	2.2	20,30	100	0.066	2100	2400	C
SPIA4020-3R3□-N	3.3	20,30	100	0.077	1700	1800	D
SPIA4020-4R7□-N	4.7	20,30	100	0.100	1400	1500	E
SPIA4020-6R8□-N	6.8	20,30	100	0.125	1200	1400	F
SPIA4020-100□-N	10	20,30	100	0.177	1100	1300	G
SPIA4020-220□-N	22	20,30	100	0.365	670	800	H

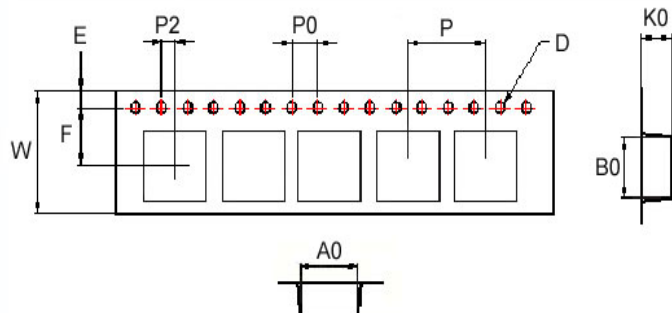
Test Freq.(L): 100KHz , 1V

- When ordering, please specify tolerance and packaging codes
- Tolerance: M =  $\pm 20\%$  , T =  $\pm 30\%$
- Operating temperature range  $-25^{\circ}\text{C} \sim 105^{\circ}\text{C}$  . (Including self - temperature rise )
- Isat for Inductance drop 30% from its value without current.
- Irms for a  $40^{\circ}\text{C}$  rise above  $25^{\circ}\text{C}$  ambient.
- Test Instrument: L: Agilent/HP 4284A + Agilent/HP 16334A  
RDC: Digital Milliohm Meter Chroma 16502, or equivalent  
Isat: HP4284+42841A  
Irms: Agilent 6641 SYSTEM DC POWER SUPPLY

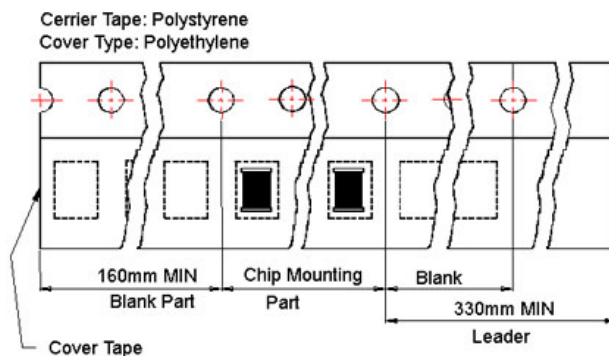


## Packaging Specifications

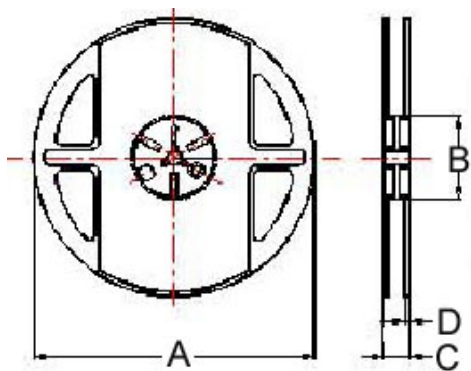
Tape Dimensions



Reel Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions										Reel Dimensions				Quantity PCS / REEL
	A0	B0	K0	D	E	F	W	P	P0	P2	A	B	C	D	
SPIA3010	3.25	3.25	1.1	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	2000
SPIA3015	3.25	3.25	1.6	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	1000
SPIA3020	3.25	3.25	2.1	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	1000
SPIA4012	4.25	4.25	1.3	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	1000
SPIA4016	4.25	4.25	1.7	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	1000
SPIA4020	4.25	4.25	2.1	1.55	1.75	5.5	12	8	4	2	178	60	13	13.2	1000