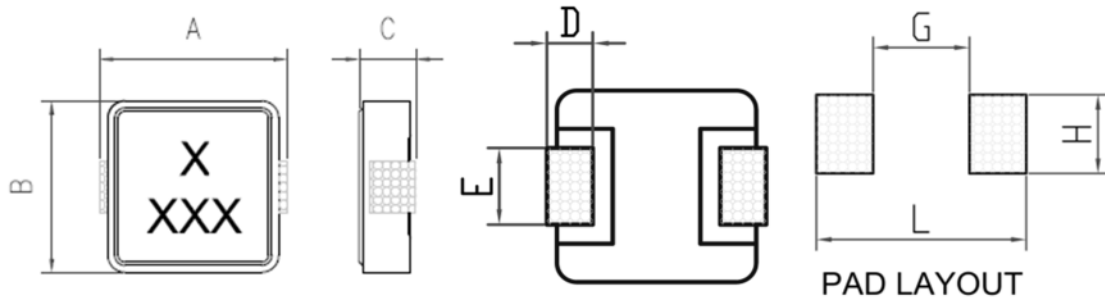




Shielded SMT High Current Power Inductor AEC-Q200 standard compliance SPIA1004_1005_1054 series

■ SHAPES AND DIMENSIONS



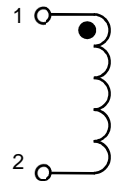
Unit: mm

Item	A Max	B Max	C Max	D	E	G	H	L
SPIA1004	11.0±0.5	10.0±0.3	3.80±0.2	2.30±0.3	3.00±0.5	5.40	4.50	12.4
SPIA1005	11.0±0.5	10.0±0.3	4.80±0.2	2.30±0.3	3.00±0.5	5.40	4.50	12.4
SPIA1054	11.0±0.5	10.0±0.3	5.20±0.2	2.30±0.3	3.00±0.5	5.40	4.50	12.4

Marking :

X = A
XXX = Inductance

Schematic :



■ PART NUMBER CODE

SPIA **1004** - **1R0** **M** **A**
1 **2** **3** **4** **5**

1. Series Name
2. Size Code
3. Inductance(R=Decimal Point) Unit : μH ; 1R0 =1.0uH
4. Inductance tolerance: "M"±20%
5. Soldering : A=Lead Free



■ ELECTRICAL CHARACTERISTICS

1. Part Number and Characteristics Table

Part No.	Inductance L0 (uH)	DCR(mΩ)		Isat(A)		Irms(A)	
		Typ.	Max.	Typ.	Max.	Typ.	Max.
SPIA1004-R22MA	0.22	0.67	0.8	65.0	60.0	45.0	40.0
SPIA1004-R47MA	0.47	1.24	1.5	45.0	38.0	30.0	25.0
SPIA1004-1R0MA	1.0	2.93	3.5	34.0	29.0	23.0	18.0
SPIA1004-2R2MA	2.2	7.47	9.0	25.0	22.0	16.0	12.0
SPIA1004-3R3MA	3.3	10.3	11.8	22.0	18.0	14.0	11.5
SPIA1004-4R7MA	4.7	13.5	16.2	16.0	14.0	13.0	9.5
SPIA1004-6R8MA	6.8	20.4	22.5	13.0	11.0	8.5	7.0
SPIA1004-100MA	10.0	30.5	36.5	9.0	8.0	7.5	5.5
SPIA1004-150MA	15.0	39.5	48.0	8.0	6.5	6.0	4.6
SPIA1004-220MA	22.0	63.5	68.0	6.4	5.0	4.5	4.0
SPIA1004-330MA	33.0	91.0	102.0	5.0	4.2	4.3	3.5
SPIA1004-470MA	47.0	139.7	150.0	3.6	3.2	3.3	3.0

Note 1: Referenced ambient temperature 25°C.

Note 2: Test Condition :100kHz ,0.25 Vrms.

Note 3: Isat (Typ): DC current (A) that will cause L0 to drop approximately 30%

Isat (Max): DC current (A) that will cause L0 to drop 30% Max

Irms (Typ): DC current (A) that will cause an approximate ΔT of 40°C

Irms (Max): DC current (A) that will cause an ΔT of 40°C Max

Note 4: Operating temperature range includes self-temperature rise.

Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.



Part No.	Inductance L0 (uH)	DCR(mΩ)		Isat(A)		Irms(A)	
		Typ.	Max.	Typ.	Max.	Typ.	Max.
SPIA1005-1R0MA	1.0	2.50	3.3	36.0	33.0	27.0	24.0
SPIA1005-3R3MA	3.3	8.46	10.2	20.0	18.0	15.0	13.0
SPIA1005-100MA	10.0	24.1	28.0	14.0	12.7	8.5	7.8
SPIA1005-220MA	22.0	47.5	53.0	6.5	5.0	6.0	5.0

Part No.	Inductance L0 (uH)	DCR(mΩ)		Isat(A)		Irms(A)	
		Typ.	Max.	Typ.	Max.	Typ.	Max.
SPIA1054-1R0MA	1.0	2.43	2.76	37.0	31.7	30.0	27.0
SPIA1054-2R2MA	2.2	4.17	4.9	25.0	21.4	23.0	20.7
SPIA1054-4R7MA	4.7	9.4	10.5	18.0	15.7	14.5	13.0
SPIA1054-8R2MA	8.2	20.5	22.36	15.0	13.0	10.0	8.5
SPIA1054-100MA	10.0	20.7	24.2	14.5	12.7	9.5	7.8
SPIA1054-150MA	15.0	29.9	36.0	9.5	8.2	8.0	7.0
SPIA1054-220MA	22.0	52.5	62.0	8.8	7.5	6.0	5.4
SPIA1054-330MA	33.0	78.2	90.0	6.5	5.5	4.8	4.3

Note 1: Referenced ambient temperature 25°C.

Note 2: Test Condition :100kHz ,0.25 Vrms.

Note 3: Isat (Typ): DC current (A) that will cause L0 to drop approximately 30%

Isat (Max): DC current (A) that will cause L0 to drop 30% Max

Irms (Typ): DC current (A) that will cause an approximate ΔT of 40°C

Irms (Max): DC current (A) that will cause an ΔT of 40°C Max

Note 4: Operating temperature range includes self-temperature rise.

Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

2. Test equipments

2.1. L: Wayne kerr 3260B LCR meter, Wayne kerr 3265B bias current source.

2.2. DCR: Chroma16502 Milliohm Meter

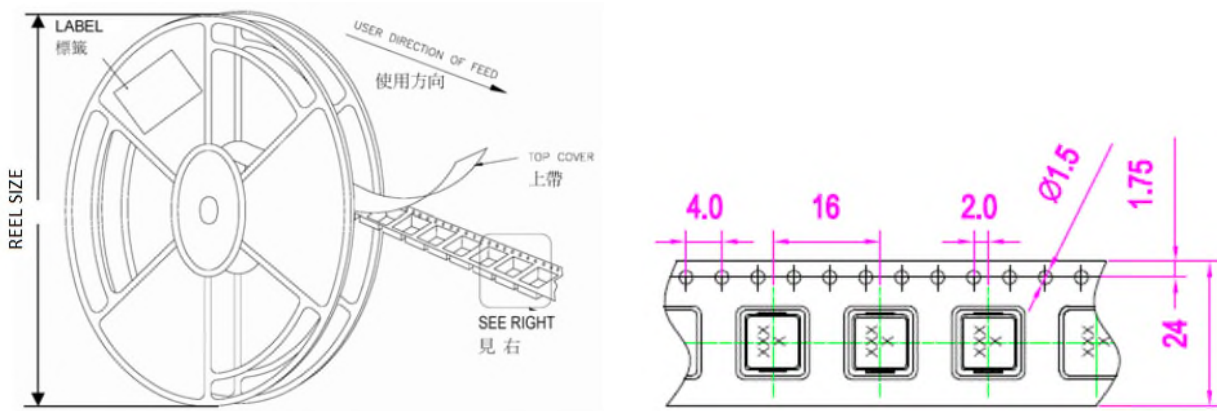
2.3. IWT test: Chroma 19301(A).(Impulse winding test)

2.4. Operating temperature: -55°C to 155°C

* Equivalent measurement equipment may be used.



■ REEL DIMENSIONS AND PACKAGING QUANTITY



Unit: mm

TYPE	W	P	REEL SIZE	PCS / REEL
SPIA1004 series	24	16	330 mm (13")	900
SPIA1005 series	24	16	330 mm (13")	800
SPIA1054 series	24	16	330 mm (13")	600