

RoHS & Halogen Free & REACH Compliance.

SPECIFICATION FOR APPROVAL

Customer :

Customer P/N:

Drawing No :

Quantity :

Pcs. Date :

Chilisin P/N :

BPPF00121190172X0F

SPECIFICATION ACCEPTED BY:

COMPONENT ENGINEER	
ELECTRICAL ENGINEER	
MECHANICAL ENGINEER	
APPROVED	
REJECTED	

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Drawn by
Stanley

Checked by
Marco

Approved by
Vincent

REVISIONS

REV.	Description	Date	Approved by	Checked by	Checked by	Prepared by
00	Issue	2022.04.01	Vincent	Marco	Sara	Stanley

BPPF00121190172X0F

1 Scope: This specification applies to the Pb Free DC Power Line Common Mode Filter

2 Part Numbering:

B PPF 00 121190 172 X 0F
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Grade Code
- ② Product Code
- ③ Control Code
- ④ Dimensions Code
- ⑤ Inductance Code
- ⑥ Tolerance Code
- ⑦ Inner Control Code

3 Rating:

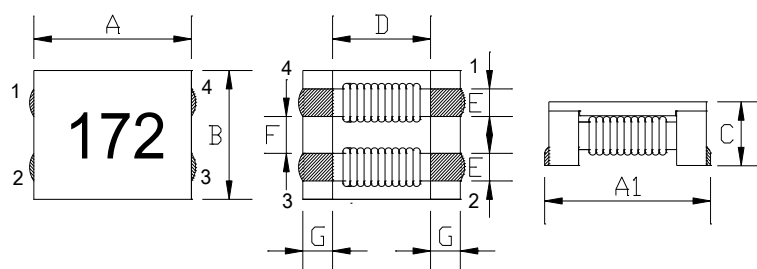
Operating Temperature: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (Including self - temperature rise)

Storage Temperature: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$

4 Standard Testing Condition:

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20 to 30°C
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80 %RH

5 Configuration and Dimensions:

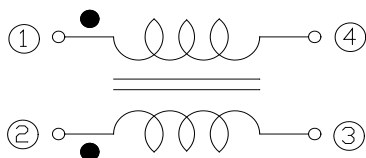


A:	12.0±0.5	mm
A1:	12.5±0.5	mm
B:	10.8±0.5	mm
C:	9.0 Max.	mm
D:	7.0 Typ.	mm
E:	2.7 Typ.	mm
F:	2.5 Typ.	mm
G:	2.5 Typ.	mm

6 Electrical Characteristics:

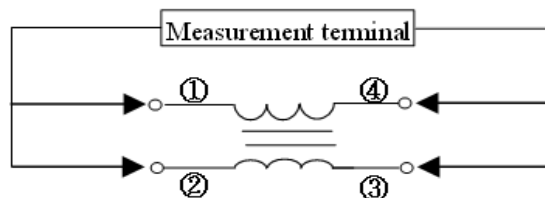
PT/NO.	Impedance(Ω) at 100MHz		Test Frequency	Resistance RDC(Ω) Max.(1 line)	Rated Current (A) Max.	Insulation Resistance (M Ω) Min.	Rated Voltage (V)Max.
	Min.	Typ.					
BPPF00121190172X0F	1100	1700	2.52MHz/0.5V	26m	6.0	10	125

CIRCUIT DIAGRAM



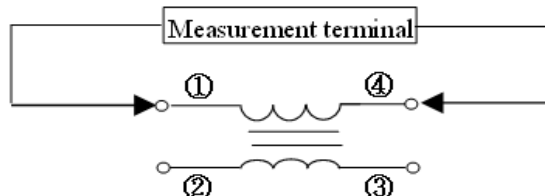
(6)-1 Impedance

Measured by HP4291B RF Impedance Analyzer.



(6)-2 DC Resistance

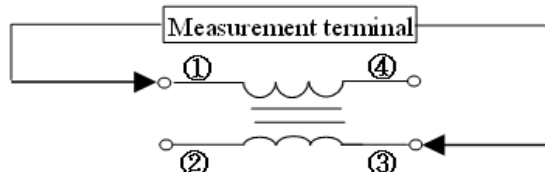
Measured by Chroma 16502 milliohm meter.



(6)-3 Insulation Resistance

Measured by Chroma 19073

Measurement voltage : 50V , Measurement time : 3 sec.



NOTE:

1. Rated DC Current : Based on temperature rise (ΔT : 40 $^{\circ}$ C Typ.)

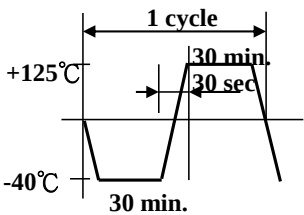
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MECHANICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Solder ability	The product shall be connected to the test circuit board by the fillet (the height is 0.2mm).	Apply cream solder to the printed circuit board . Refer to clause 8 for Reflow profile.
Resistance to Soldering heat (reflow soldering)	There shall be no damage or problems.	Temperature profile of reflow soldering Note: 1. Re-Flow Possible times: within 2 times 2. Nitrogen adopted is recommended while in re-flow
Terminal strength	The terminal electrode and the ferrite must not be damaged.	Solder a chip to test substrate , and then laterally apply a load 9.8N in the arrow direction.
Strength on PC board bending	The terminal electrode and the ferrite must not be damaged.	Solder a chip to test substrate and then apply a load.
High temperature resistance	Impedance: Within $\pm 20\%$ of the initial value. Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not be damaged.	After the samples shall be soldered onto the test circuit board, the test shall be done. Measurement : After placing for 24 hours min. Temperature : $+125 \pm 2^\circ\text{C}$ Applied voltage : Rated voltage Applied current : Rated current Testing time : 500 ± 12 hours

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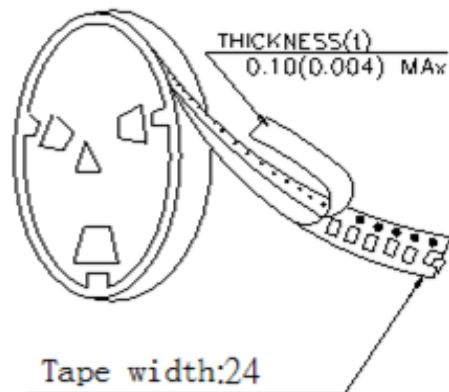
MECHANICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Humidity resistance	Impedance: Within $\pm 20\%$ of the initial value. Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not be damaged.	After the samples shall be soldered onto the test circuit board, the test shall be done. Measurement : After placing for 24 hours min. Temperature : $+60 \pm 2^\circ\text{C}$, Humidity : 90 to 95 %RH Applied voltage : Rated voltage Applied current : Rated current Testing time : 500 ± 12 hours
Thermal shock	Impedance: Within $\pm 20\%$ of the initial value. Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not be damaged.	 Testing Time: 100 cycle
Low temperature storage	Impedance: Within $\pm 20\%$ of the initial value. Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not be damaged.	After the samples shall be soldered onto the test circuit board, the test shall be done. Measurement : After placing for 24 hours min. Temperature : $-40 \pm 2^\circ\text{C}$ Testing time : 500 ± 12 hours
Vibration	Impedance: Within $\pm 20\%$ of the initial value. Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met. The terminal electrode and the ferrite must not be damaged.	After the samples shall be soldered onto the test circuit board, the test shall be done. Frequency : 10 to 55 Hz Amplitude : 1.52 mm Dimension and times : X , Y and Z directions for 2 hours each.
Solderability	New solder More than 75%	Flux (rosin, isopropyl alcohol {JIS-K-1522}) shall be coated over the whole of the sample before hand, the sample shall then be preheated for about 2 minutes in a temperature of $130 \sim 150^\circ\text{C}$ and after it has been immersed to a depth 0.5mm below for 3 ± 0.2 seconds fully in molten solder M705 with a temperature of $245 \pm 2^\circ\text{C}$. More than 75% of the electrode sections shall be covered with new solder smoothly when the sample is taken out of the solder bath.

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7 Packaging:

7.1 Packaging -Cover Tape

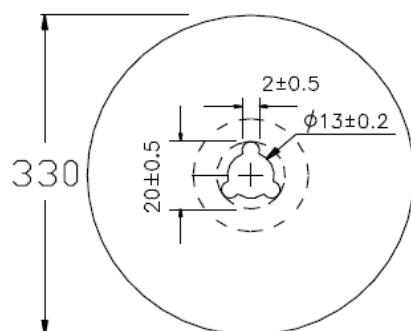


7.2 Packaging Quantity

TYPE	PCS/REEL
BPPF00121190	500

7.3 Reel Dimensions

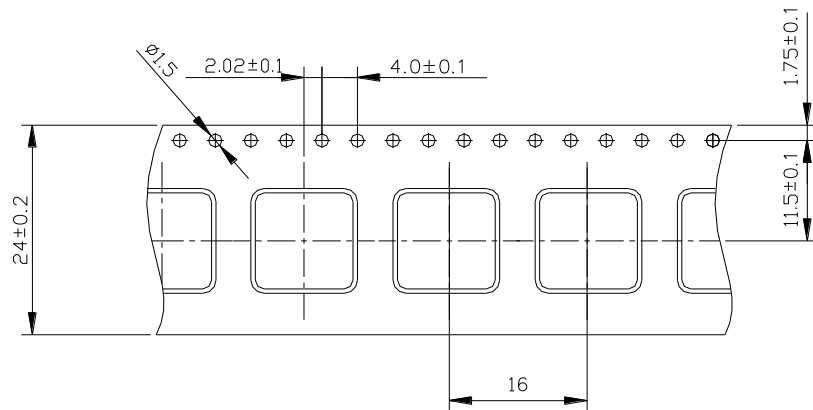
Unit : mm



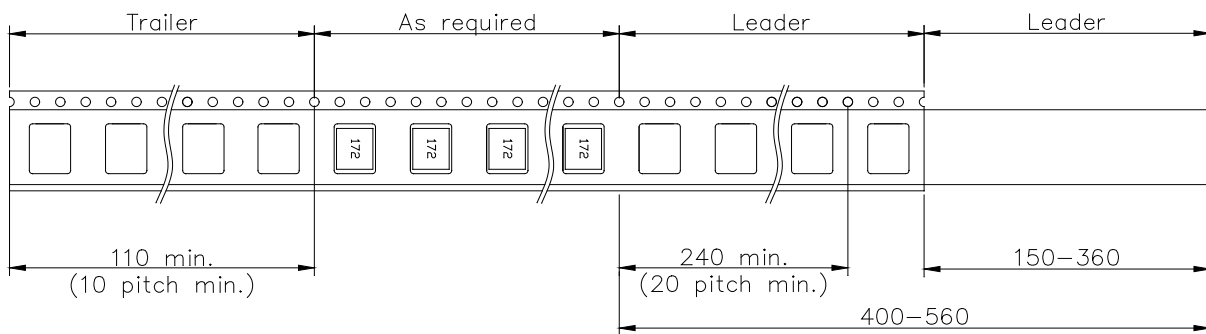
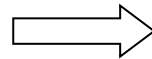
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7 Packaging:

7.4 Tape Dimensions in mm

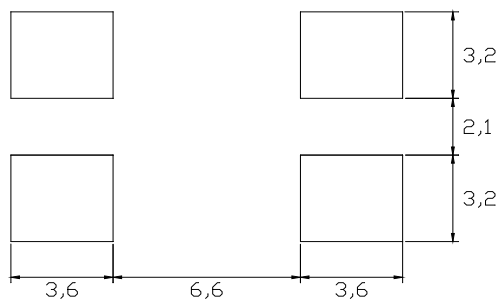


Unreeling
Direction



8 Recommended Land Pattern:

(STANDARD PATTERN) Unit : mm



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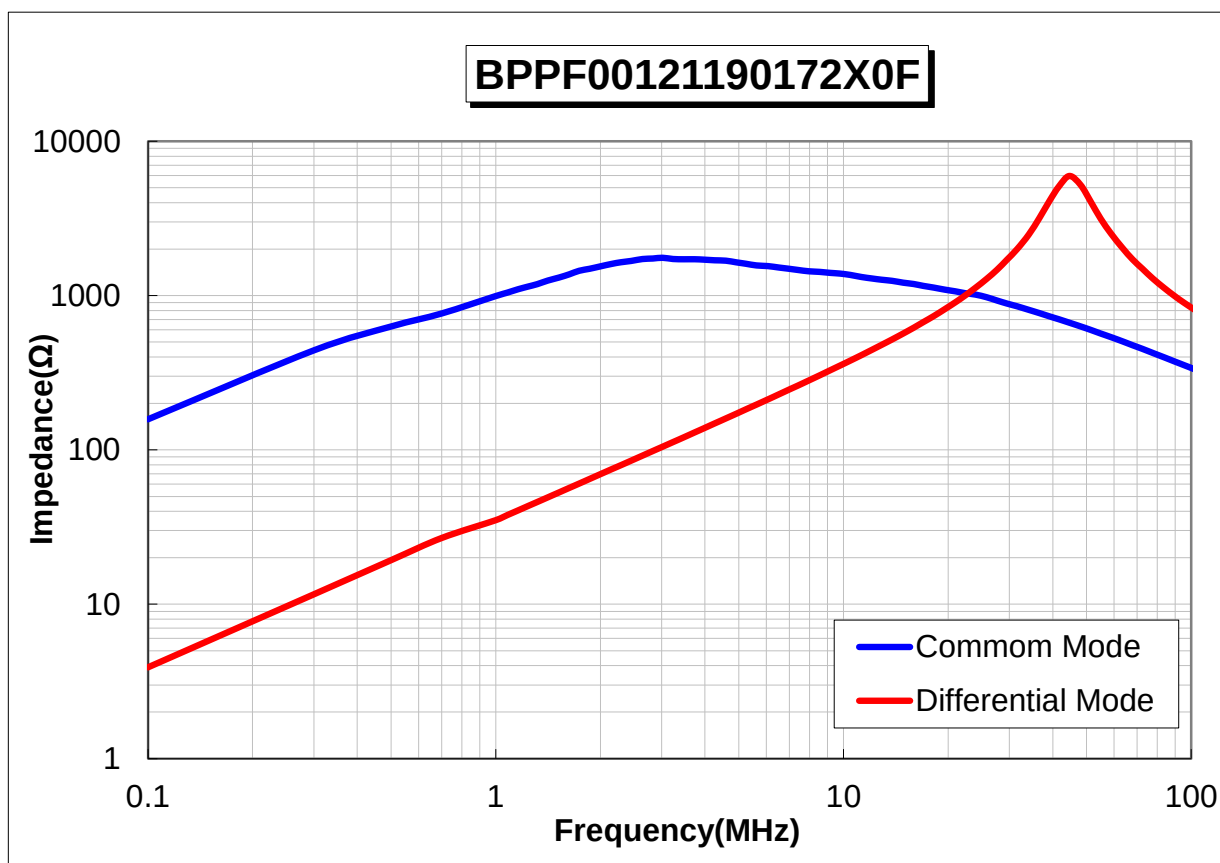
9 **Note:**

1. Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock or drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)
5. The moisture sensitivity level (MSL) of products is classified as level 1.

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TYPICAL ELECTRICAL CHARACTERISTICS

Frequency vs impedance



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TYPICAL ELECTRICAL CHARACTERISTICS

MATERIALS

NO.	ITEM	DESCRIPTION & TYPE	UL NO.	MANUFACTURER
1	CORE (Top)	FERRITE		RUYUAN DONGYANGGUANG MAGNETIC MATERIALS CO.,LTD.
				RU YUAN DONG YANG GUANG MAGNETIC MATERIALS CO.,LTD.
				OR EQUIV.
2	CORE (Bottom)	FERRITE		FENGYIN ELECTRONICS CORP.
				SINCORES ELECTRONICS CORP.
				OR EQUIV.
3	WIRE	POLYURETHANE ENAMELLED COPPER WIRE(180°C)	E84081	PACIFIC ELECTRICAL WIRE & CABLE CO., LTD.
			E258243	ELEKTRISOLA CO., LTD.
4	SOLDER	Sn99.3%/Cu0.7%		SOLENT METAL INDUSTRY CO.,LTD.
				SHENMAO TECHNOLOGY INC.
				OR EQUIV.
5	ADHESIVE	EPOXY RESIN (FOR PIN BASE ASSEMBLY)		PELNOX LTD.
				OR EQUIV.
6	INK	BON MARQUE INK		CHUNG YU INDUSTRY CORPORATION
				OR EQUIV.
7	COVER	LCP	E54705	WEI THE INTERNATIONAL CO.,LTD
				OR EQUIV.