

Specification for Approval

Customer: _____

Customer P/N: _____

EEC P/N: LC-2012A-750C

Spec No.: _____

Version No.: V0.1

Description: Chip LAN Choke

Customer Approval		EEC Approval	
Inspected By:		Issued By:	Fuming Chen
Checked By:		Checked By:	/
Approved By:		Approved By:	Jerry Gu
Approved Date:		Issued Date:	2025/5/20

Please Return One Copy to Us After Approved,TKS! (承认后请回寄一份,谢谢)

Remark:

1. Before use, please confirm whether this product is suitable for your design, Scientific only ensure products meet this specification.
2. This specification data change must be confirmed by both parties,any individual modification is invalid.
3. If customer placed orders without signing back this specification, it is regarded as recognition.



绵阳敦源电子科技有限公司

Mianyang Dunyuan Electronics Technology Co.,Ltd

地址：四川省绵阳市高新区综合保税区

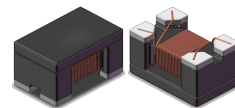
ADD: Comprehensive Bonded Zone, High-Tech Industrial Development Zone Mianyang, SiChuan

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1 Features And Benefits

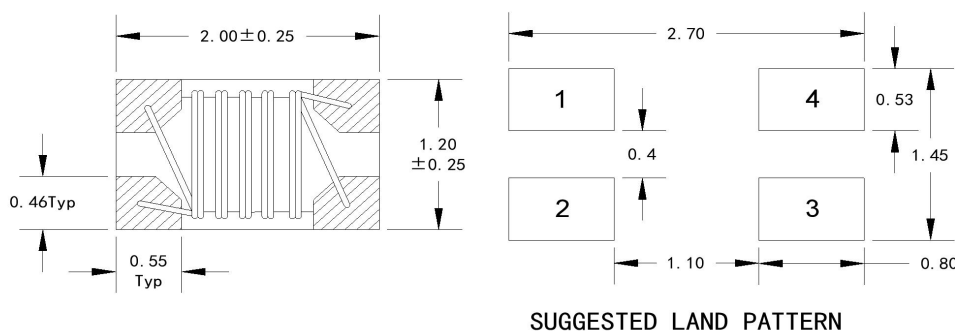
- High common mode impedance at high frequency effects excellent noise suppression performance
- Suppression of Common Mode Noise Without Attenuating The Signal
- High-Quality Product That Uses Auto Winding
- Operating temperature -40°C to +105°C
- Available in 2012(0805) Size
- RoHS Compliant



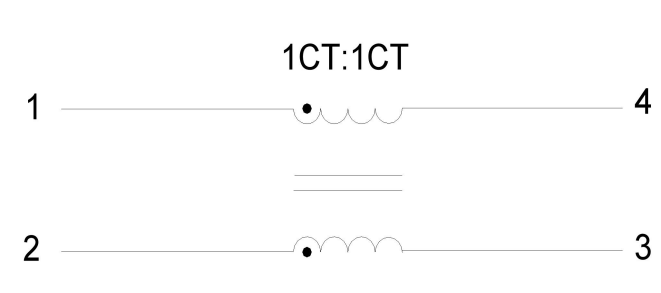
2 Electrical Specifications @ 25°C

Part Number	Insertion loss 50~1200MHz (dB) typ.	Characteristic Impedance (Ω typ)	DC Resistance (Ω MAX)	Rated Voltage (Vdc)	Rated Current (mA MAX)	Withstandin g Voltage (Vdc)	Insulation Resistance (MΩ MIN)
LC-2012A-750C	-1.2	75	0.55	50	280	125	10

3 Dimensions (mm)& recommend layout

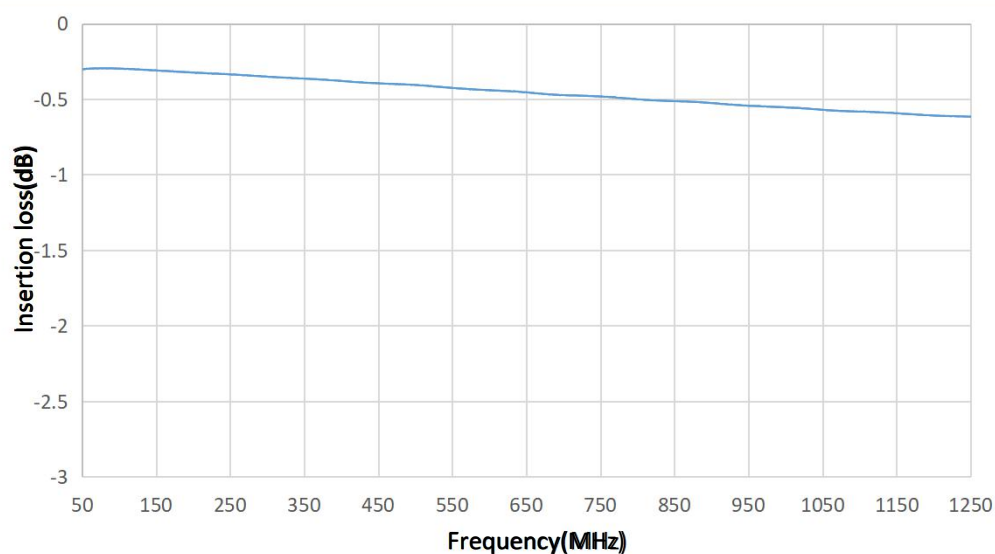


4 Schematics

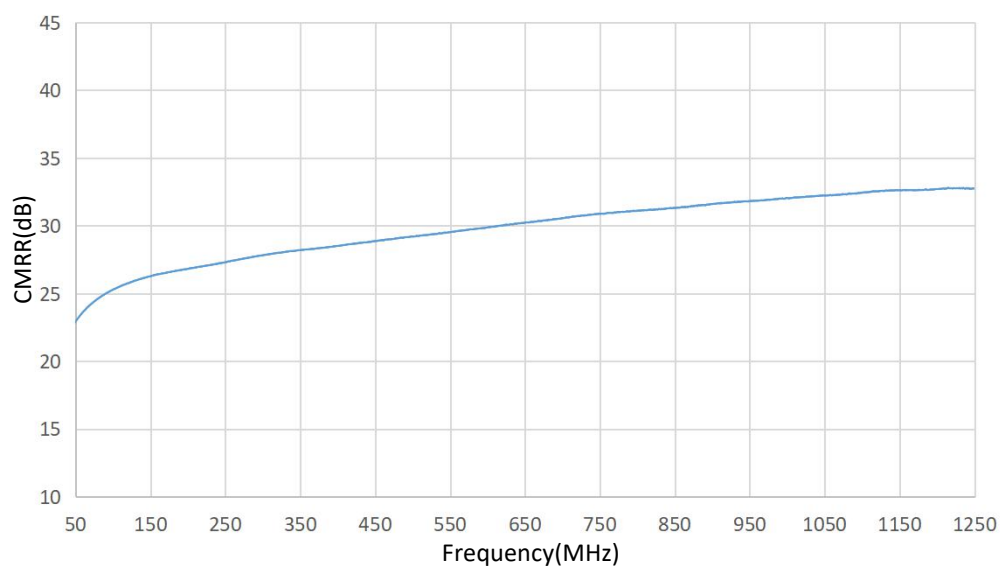


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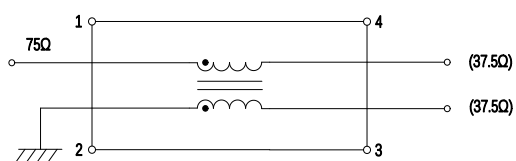
5 INSERTION LOSS



6 CMRR

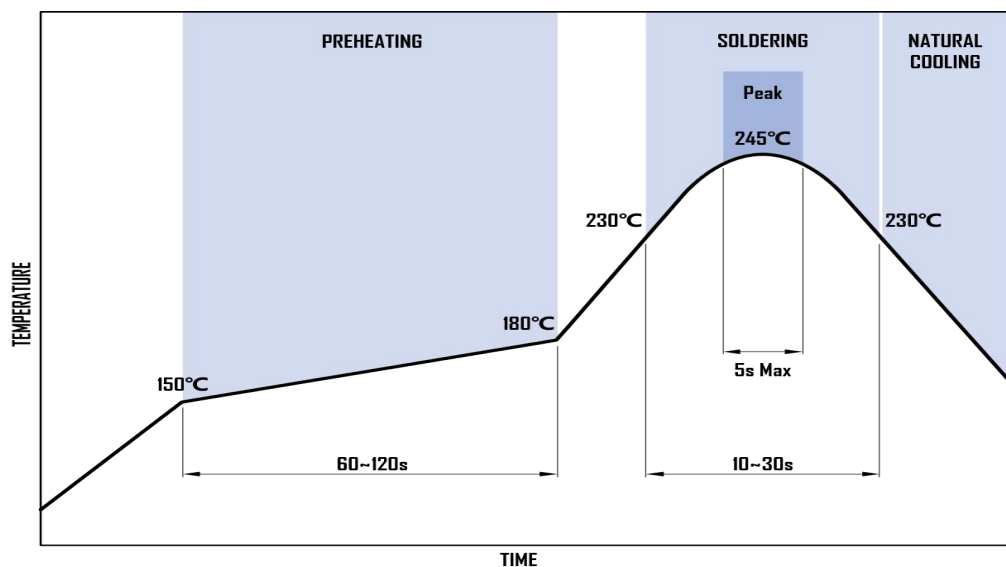


■ CIRCUIT DIAGRAM



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7 Recommended Reflow Profile



8 TEST EQUIPMENT

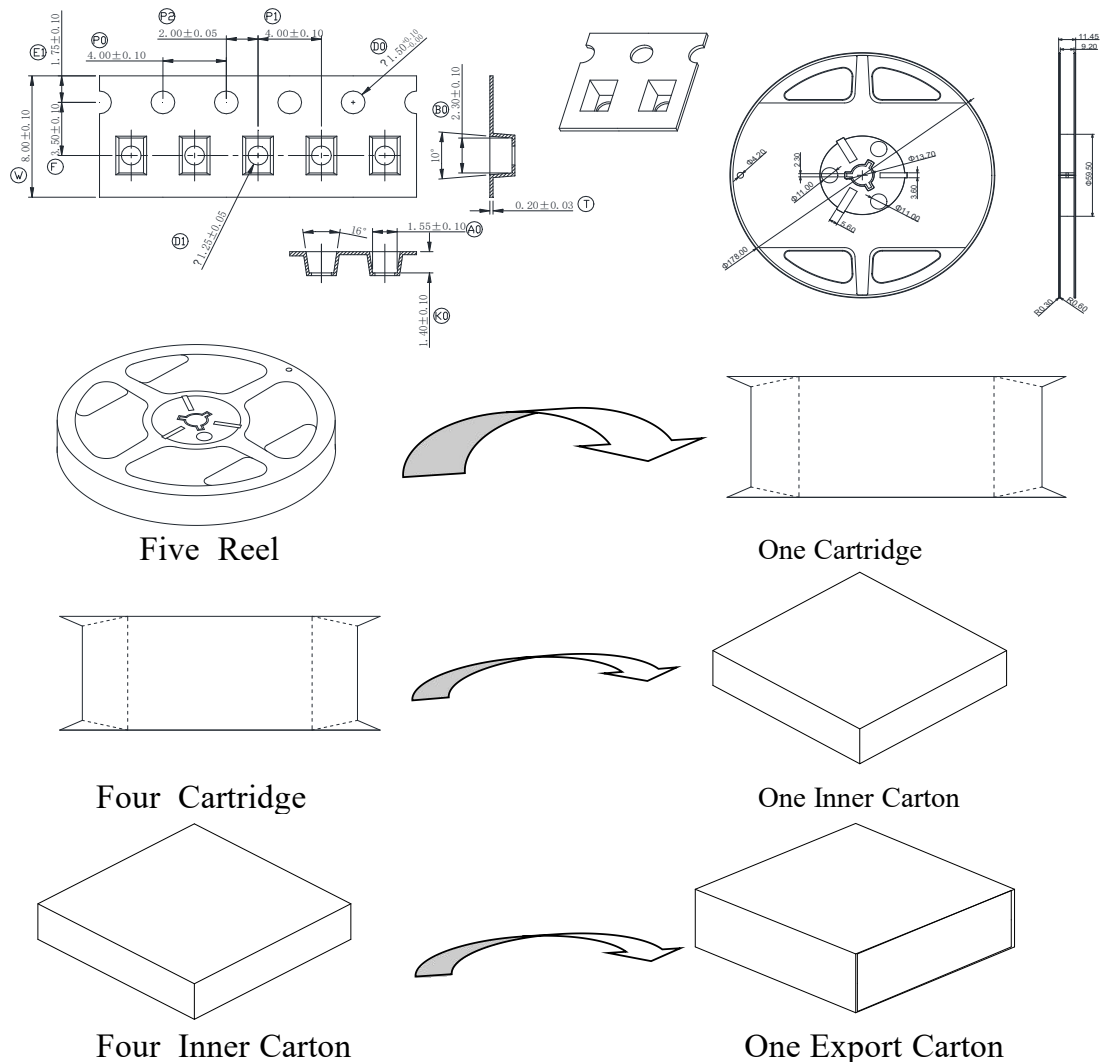
ELECTRICAL PERFORMANCE TEST		
TEST ITEMS	SPECIFICATIONS	TEST INSTRUMENT
插入损耗IL	Electrical Specifications @ 25°C	E5071C
共模抑制比CMRR		E5071C
电阻DCR		TH2829AX-48

9 MATERIAL&APPROVALS

NO.	Item	Materials	Rating	Manufacturer	UL
1	H CORE	Ni-Zn	/	Ruyuan Dongyangguang	/
2	I CORE		/		/
3	WIRE	Class H	180°C	ELEKTRISOLA	E258243
4	EPOXY/黑胶	E-500(LB)无卤1.15	/	Dongguan Liduo	E218090

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10 Packaging specification



Package Quantity:

One Reel=2K Pcs

One Cartridge=2K*5=10K Pcs

One Inner Carton=10K*4=40K Pcs

One Export Carton=40K*4=160K Pcs

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11 Reliability test

NO.	Test Item	Standard Reference	Test Condition
1	High temperature storage test	IPC/JEDEC J-STD-020D	Temperature: $125\pm 2^{\circ}\text{C}$ Time: 168 hours Measurement at 24 ± 4 hours after test conclusion.
2	Low temperature test	IPC/JEDEC J-STD-020D	Temperature: $-40\pm 2^{\circ}\text{C}$ Time: 168 hours Measurement at 24 ± 4 hours after test conclusion.
3	Constant temperature and constant humidity test	GB/T 2423.3 (IEC 60068-2-78)	Temperature: $40\pm 2^{\circ}\text{C}$ / humidity: $93\pm 2\%\text{RH}$ Time: 168 hours Measurement at 24 ± 4 hours after test conclusion.
4	High temperature and high humidity test	GB/T 2423.50	Temperature: $85\pm 2^{\circ}\text{C}$ / humidity: $85\pm 2\%\text{RH}$ Time: 168 hours Measurement at 24 ± 4 hours after test conclusion.
5	Thermal shock test	IPC/JEDEC J-STD-020D	First $-40\pm 5^{\circ}\text{C}$ for 30 ± 2 minutes, last 125°C 30 ± 2 minutes as 1 cycle. Total 100 cycles.
6	Salt spray test	GB/T 2423.17 (IEC 60068-2-11)	Concentration : $(5\pm 0.1)\%$ PH : 6.5 ~ 7.2 Temperature: $35\pm 2^{\circ}\text{C}$ Time: 24 hours
7	Solder ability test	GB/T 2423.28 (IEC 60068-2-20)	Preheating: $150\pm 5^{\circ}\text{C}$, 60 seconds Immerse the terminal in flux for 5 seconds. then dip the terminal into a soldering bath of $245\pm 5^{\circ}\text{C}$ for 2 ± 0.5 seconds.
8	Drop test	GB/T 2423.8 (IEC 60068-2-32)	Floor should be hard, strong, concrete. Height: 0.8m. Test 6 surfaces, 3 ridges and 1 corner of Test-box.

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9	Vibration test	GB/T 4857.7	Apply frequency 10~100~10Hz 1.52mm±10% amplitude in each of perpendicular direction for 20 minutes. Total 12 cycles
10	Soldering resistance test	GB/T 2423.50	Preheating: 150±5℃, 60~120 seconds dip the terminal into a soldering bath of 260±5℃ for 10±3 seconds with 3 times.
11	Terminal strength	MIL-STD-202	PCB specification: 100mm X 40mm. 4 layer board Thickness: 1.60 + / - 0.2 mm 1、>0805 inch/2012mm : 9.8N (1kg) 2、<=0805 inch/2012mm: 4.9N (0.5kg) Hold time: 60±1 s
12	Plate bending test	MIL-STD-202	PCB specification: 100mm X 40mm. 4 layer board Thickness: 1.60 + / - 0.2 mm Displacement: 2mm Hold time: 60±1s

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 REMINDERS

The best assembly quality guarantee period of product: 12 months (From shipment date)
Storage condition : seal in packaging, (temperature: 5 to 40°C, humidity: 10 to 75% RH or less).

If taking out for use, the remaining products should be sealed in plastic bags and preserved in accordance with the above conditions, to avoid oxidation of electrodes and affect soldering status.

Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.)

Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.

Always handle products with care to avoid damage.

Do not touch electrodes with bare hands directly, as oil secretions may inhibit soldering.
Always ensure optimum conditions for soldering.

Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.

Use a wrist band to discharge static electricity in your body through the grounding wire.

Do not expose the products to magnets or magnetic fields.

Do not use for a purpose outside of the contents regulated in the delivery specifications.

Do not use for Automotive application.

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