



VOOHU 沃虎

—— 连接世界 · 通信未来 ——



NETWORK PRODUCT

CHIP LAN

新的片式网络变压器完全突破了传统的设计模式，开发团队的灵感来自于SMD共模电感器的设计。为了使新型片式网络变压器的大规模生产成为可能，VOOHU采用了自动缠绕铁芯再焊接到端银的方法。VOOHU为客户提供分离式新型网络变压器单元或集成模块，以取代传统的脉冲变压器。

The New Chip Pulse Transformer Completely Breaks Through The Traditional Design Pattern, And The Development Team Was Inspired By The Design Of SMD Common Mode Inductors. To Make Large-scale Production Of Chip Pulse Transformers Possible, VOOHU USES The Method Of Automatically Winding The Iron Core And Then Connecting It To The Plate Plate Core. VOOHU Provides Customers With Discrete Chip Pulse Transformer is Or Integrated Modules To Replace Traditional Pulse Transformers

Features And Benefits

- Compliant With Ethernet 10/100/1000 Base-T
- Compliant With Ethernet 2.5/5G and 10G Base-T
- 100 % Automatic Production
- Improved Return Loss And Crosstalk Properties
- Super Small Size
- Operating Temperature: -40 °C Up To +105 °C

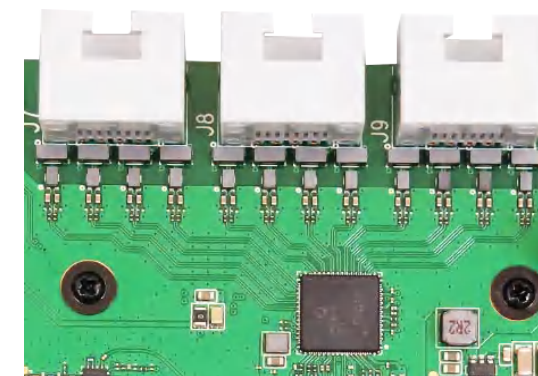
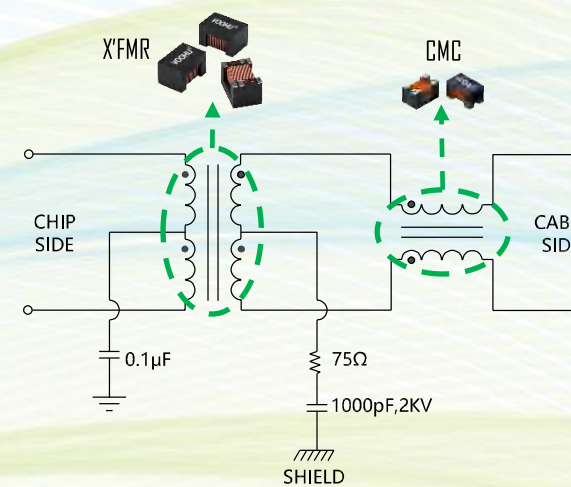
Applications

- Ethernet Connector Module
- Router
- G.Fast
- PON

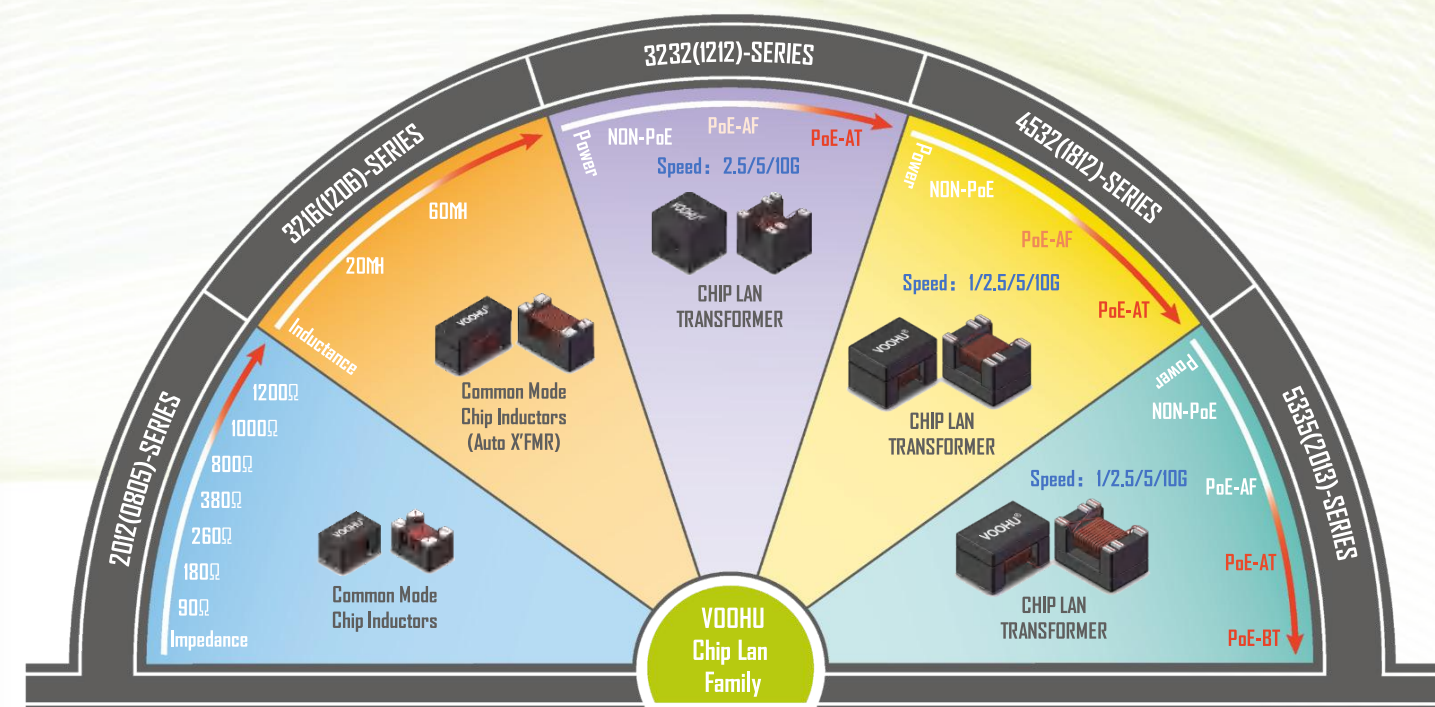
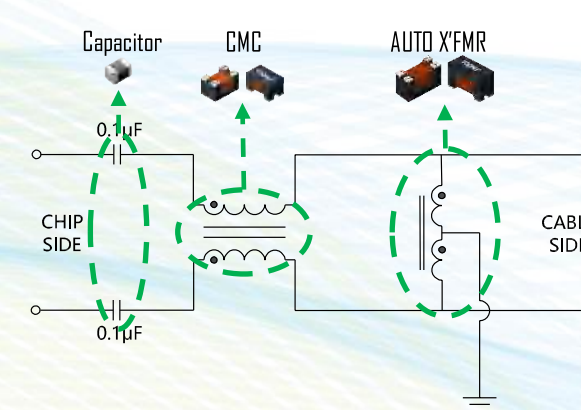
Product Application And Principle

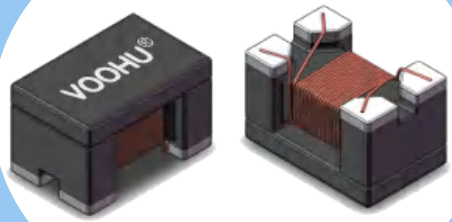


Inductive Chip LAN on Board



Capacitive Chip LAN on Board





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NETWORK PRODUCT

COMMON MODE CHIP INDUCTORS

2012(0805)-SERIES

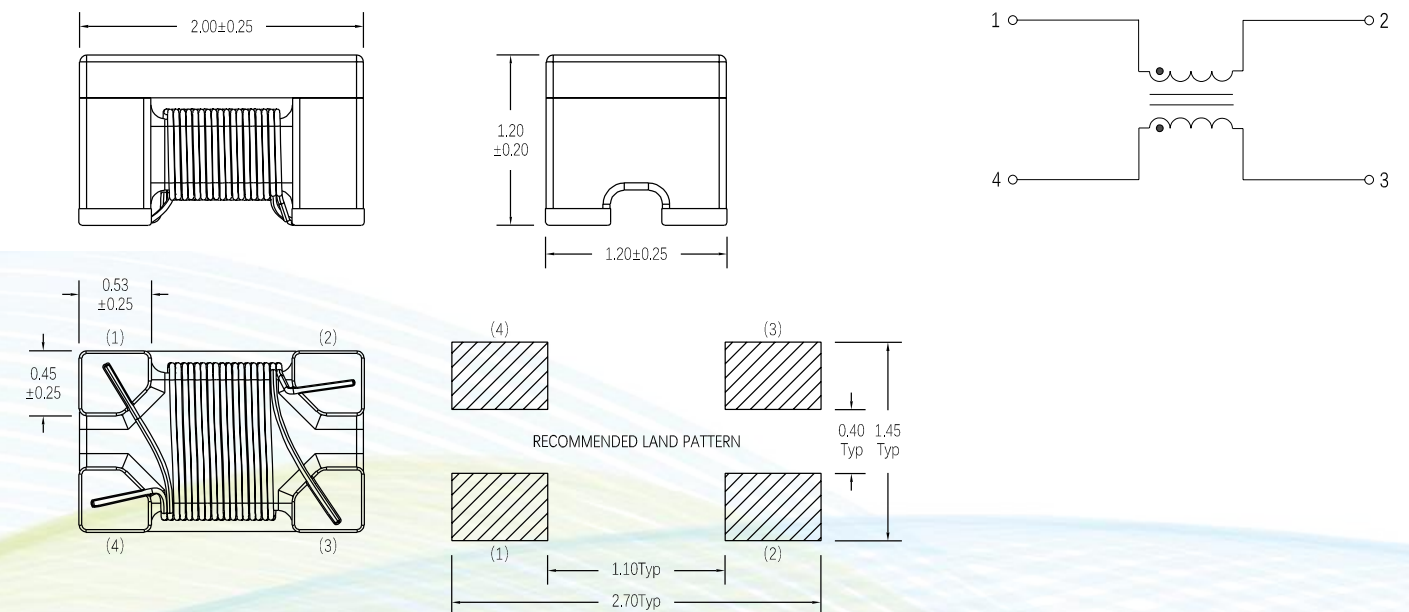
Features And Benefits

- Large Range of Common Mode Impedance to Fit With Signal And Noise Level
- Suppression of Common Mode Noise Without Attenuating The Signal
- High-Quality Product That Uses Auto Winding
- Available in 2012(0805) Size
- RoHS Compliant

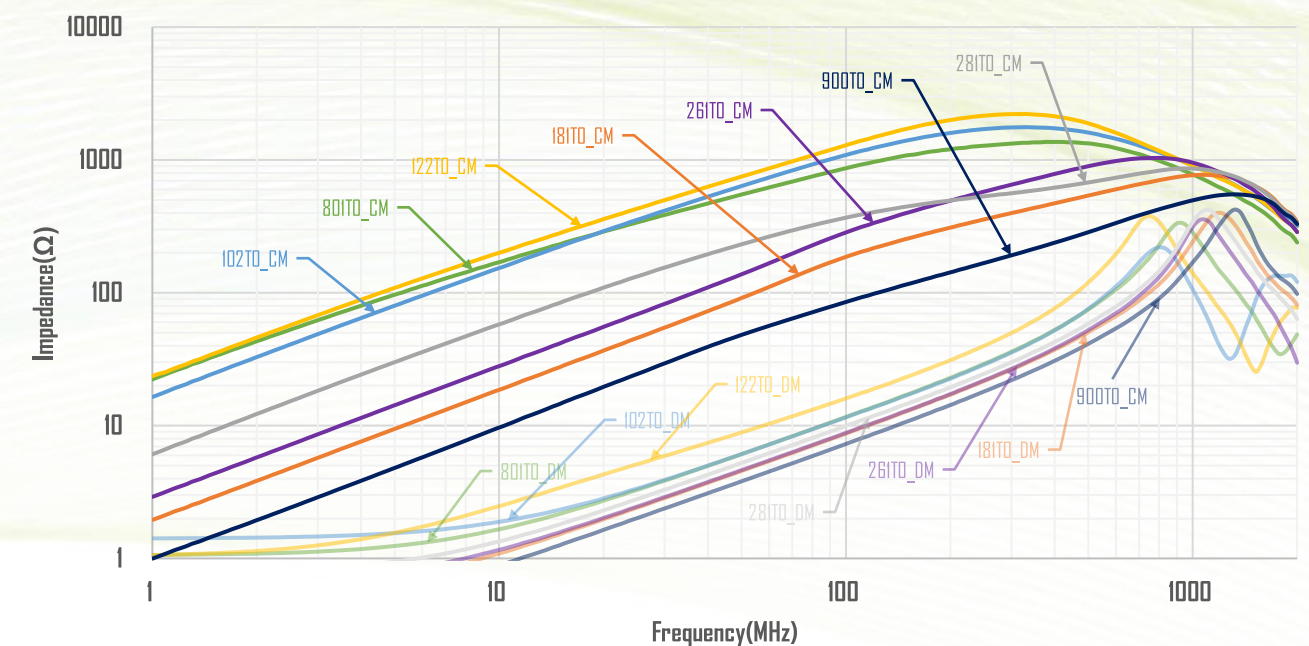
Electrical Specifications @ 25°C

Part Number	Common Mode Impedance 100MHz (Ω Typ)	DC Resistance (Ω MAX)	Rated Voltage (Vdc)	Rated Current (mA MAX)	Withstanding Voltage (Vdc)	Insulation Resistance (MΩ MIN)
WHLC-2012A-900TO	90	0.35	50	300	125	10
WHLC-2012A-181TO	180	0.35	50	300	125	10
WHLC-2012A-261TO	260	0.40	50	300	125	10
WHLC-2012A-381TO	380	0.45	50	300	125	10
WHLC-2012A-801TO	800	0.88	50	300	125	10
WHLC-2012A-102TO	1000	1.30	50	300	125	10
WHLC-2012A-122TO	1200	1.50	50	300	125	10

Mechanical & Schematics



Impedance VS. Frequency



Measurement Equipment

Product No. _____ Manufacturer _____
E4991A _____ Keysight Technologies _____

*Equivalent Measurement Equipment May Be Used.



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NETWORK PRODUCT

COMMON MODE CHIP INDUCTORS

3216(1206)-SERIES

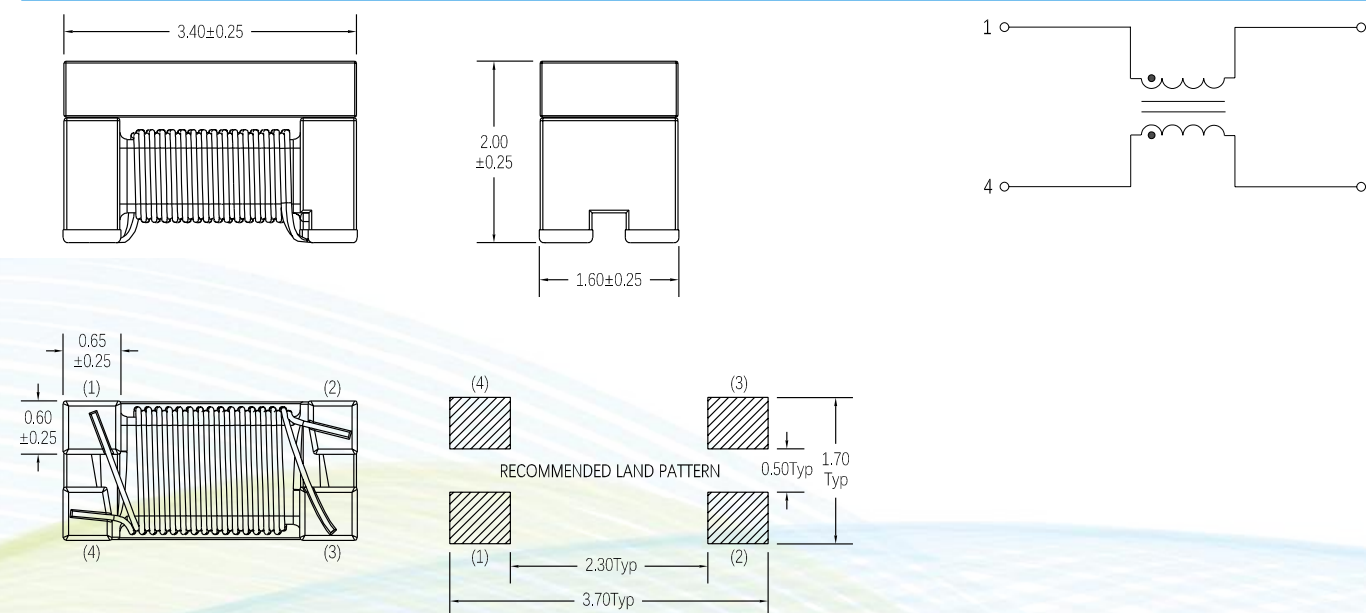
Features And Benefits

- Large Range of Common Mode Impedance to Fit With Signal And Noise Level
- Suppression of Common Mode Noise Without Attenuating The Signal
- High-Quality Product That Uses Auto Winding
- Available in 3216(1206) Size
- RoHS Compliant

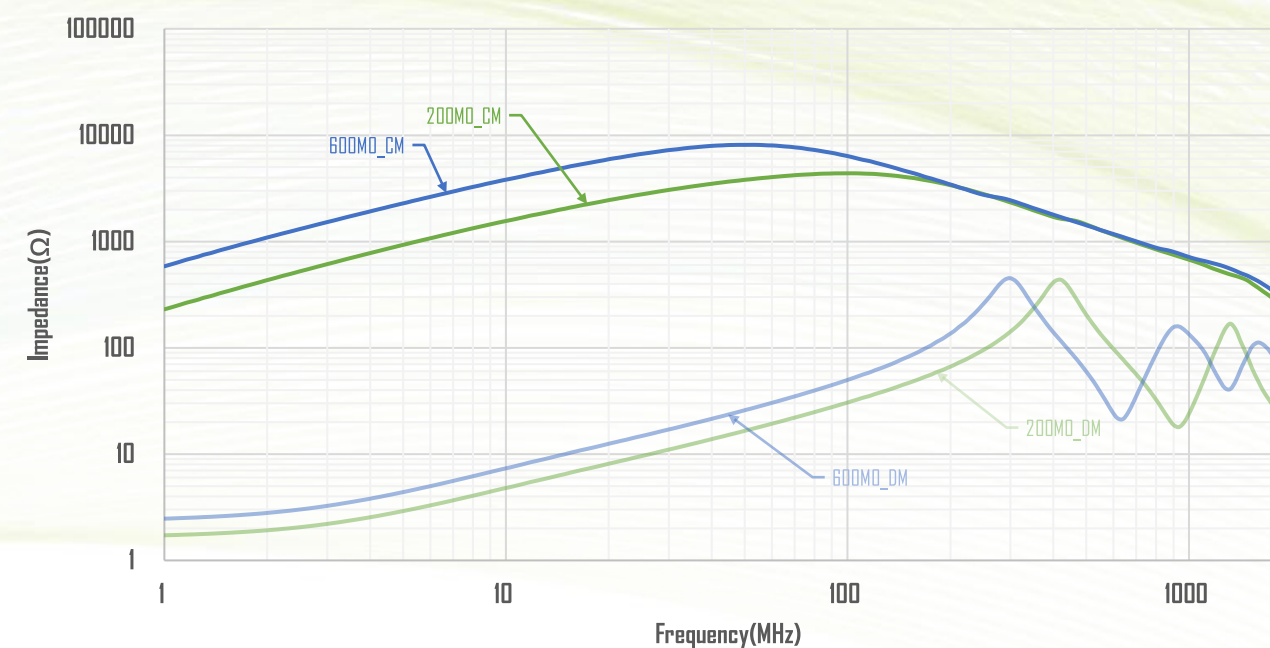
Electrical Specifications @ 25°C

Part Number	Inductance 100KHz/0.1V (μH)Min	DC Resistance (Ω)Max	Rated Current (mA)	Rated Volt (VDC)	Withstand Volt (VDC) Max	Insulation Resistance (MΩ Min)
WHLC-3216A-200MO	20	1.00	200	50	125	10
WHLC-3216A-600MO	60	1.70	200	50	125	10

Mechanical & Schematics



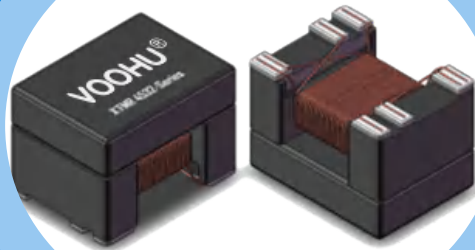
Impedance VS. Frequency



Measurement Equipment

Product No.	Manufacturer
E4991A	Keysight Technologies

*Equivalent Measurement Equipment May Be Used.



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NETWORK PRODUCT

CHIP LAN TRANSFORMER

4532(1812)-SERIES

Features And Benefits

- Compliant With Ethernet 1/2.5/5/10GBase-T
- 100 % Automatic Production
- Improved Return Loss And Cross Talk Properties
- Super Small Size
- Available in 4532(1812) Size
- RoHS Compliant

10GBase-T Series Electrical Specifications @ 25° C

Part Number	Speed	OCL (μH)	DCR (Ω)	Insertion Loss (dB)		Return Loss (dB)		Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)
		Min	Max	Max		Min				
		100KHz,0.1V		0.5-1 MHz	1-125 MHz	1-40 MHz	40-100 MHz			
WHLT-4532B-20IMGN	1G	200@8mA DC	3.00	-1.2	-0.2-0.002*f^1.4	-16	-10+20log(f/80)	-40 to 85	NON-PoE	1200
WHLT-4532B-20IMGF	1G	200@10.5mA DC	3.00	-1.2	-0.2-0.002*f^1.4	-16	-10+20log(f/80)	-40 to 85	PoE-AF	1200
WHLT-4532B-35IMGN	1G	350@8mA DC	6.00	-1.2	-0.2-0.002*f^1.4	-16	-10+20log(f/80)	-40 to 85	NON-PoE	1200
WHLT-4532B-35IMGF	1G	350@10.5mA DC	6.00	-1.2	-0.2-0.002*f^1.4	-16	-10+20log(f/80)	-40 to 85	PoE-AF	1200
WHLT-4532B-18IMGT	1G	180@15mA DC	6.00	-1.2	-0.2-0.002*f^1.4	-16	-10+20log(f/80)	-40 to 85	PoE-AT	1200

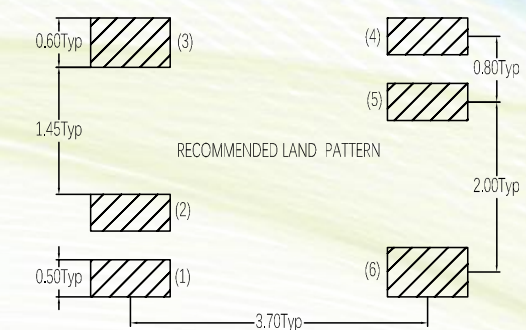
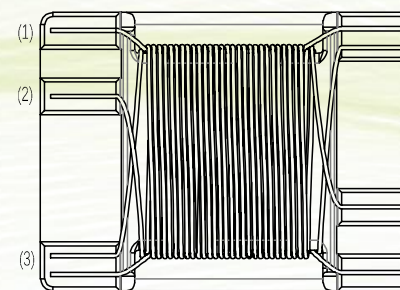
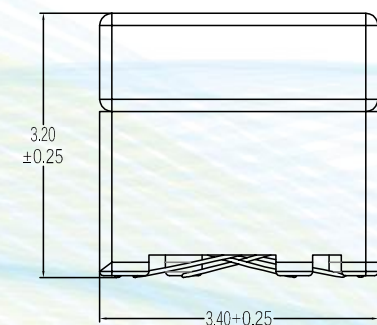
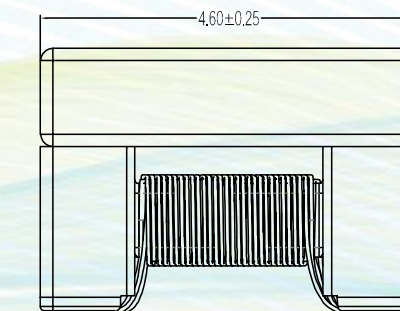
2.5/5GBase-T Series Electrical Specifications @ 25° C

Part Number	Speed	OCL (μH)	DCR (Ω)	Insertion Loss (dB)		Return Loss (dB)		Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)
		Min	Max	Max		Min				
		100KHz,0.1V		1-100 MHz	1-250 MHz	1-40 MHz	40-250 MHz			
WHLT-4532B-20IMQN	2.5/5G	200@8mA DC	3.00	-1.0	-2.0	-16	-16+10log(f/40)	-40 to 85	NON-PoE	1200
WHLT-4532B-20IMQF	2.5/5G	200@10.5mA DC	3.00	-1.0	-2.0	-16	-16+10log(f/40)	-40 to 85	PoE-AF	1200
WHLT-4532B-18IMQT	2.5/5G	180@15mA DC	3.00	-1.0	-2.0	-16	-16+10log(f/40)	-40 to 85	PoE-AT	1200

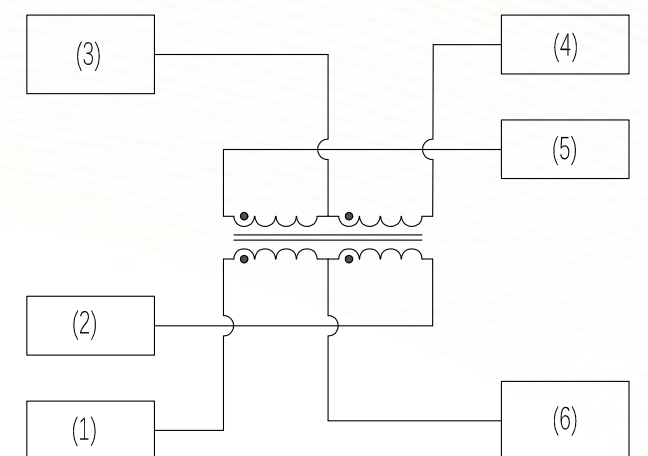
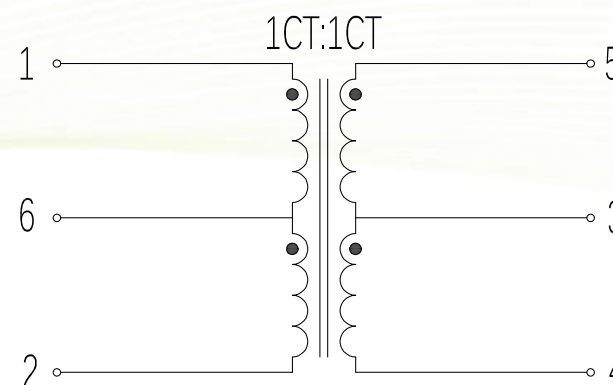
10GBase-T Series Electrical Specifications @ 25° C

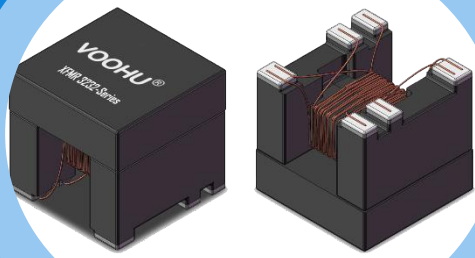
Part Number	Speed	OCL (μH)	DCR (Ω)	Insertion Loss (dB)				Return Loss (dB)				Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)	
		Min	Max	Max				Min							
		100KHz,0.1V		1- 200 MHz	200- 300 MHz	300- 400 MHz	400- 500 MHz	1- 100 MHz	100- 200 MHz	200- 300 MHz	300- 400 MHz				400- 500 MHz
WHLT-4532B-12IMMN	10G	120@8mA DC	2.00	-1.2	-1.5	-2.0	-3.0	-18	-16	-12	-10	-8	-40 to 85	NON-PoE	1200
WHLT-4532B-12IMMF	10G	120@10.5mA DC	2.00	-1.2	-1.5	-2.0	-3.0	-18	-16	-12	-10	-8	-40 to 85	PoE-AF	1200
WHLT-4532B-12IMMT	10G	120@15mA DC	2.00	-1.2	-1.5	-2.0	-3.0	-18	-16	-12	-10	-8	-40 to 85	PoE-AT	1200

Mechanical



Schematics & Application





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NETWORK PRODUCT

CHIP LAN TRANSFORMER

3232(1212)-SERIES

Features And Benefits

- Compliant With Ethernet 2.5/5/10GBase-T
- 100 % Automatic Production
- Improved Return Loss And Cross Talk Properties
- Super Small Size
- Available in 3232(1212) Size
- RoHS Compliant

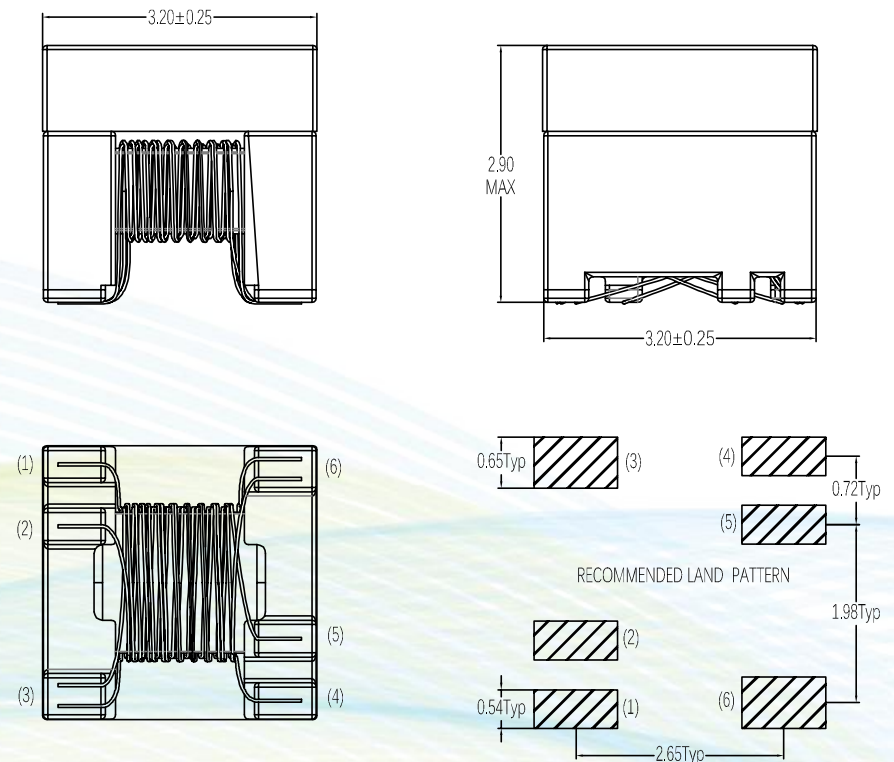
2.5/5GBase-T Series Electrical Specifications @ 25° C

Part Number	Speed	OCL (μ H)	DCR (Ω)	Insertion Loss (dB)		Return Loss (dB)		Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)
		Min	Max	Max		Min				
		100KHz,0.1V		1-100 MHz	1-250 MHz	1-40 MHz	40-100 MHz			
WHLT-3232A-121MQN	2.5/5G	120@8mA DC	4.50	-1.0	-2.0	-16	-16+10log(f/40)	-40 to 85	NON-PoE	1200
WHLT-3232A-121MQF	2.5/5G	120@10.5mA DC	4.50	-1.0	-2.0	-16	-16+10log(f/40)	-40 to 85	PoE-AF	1200

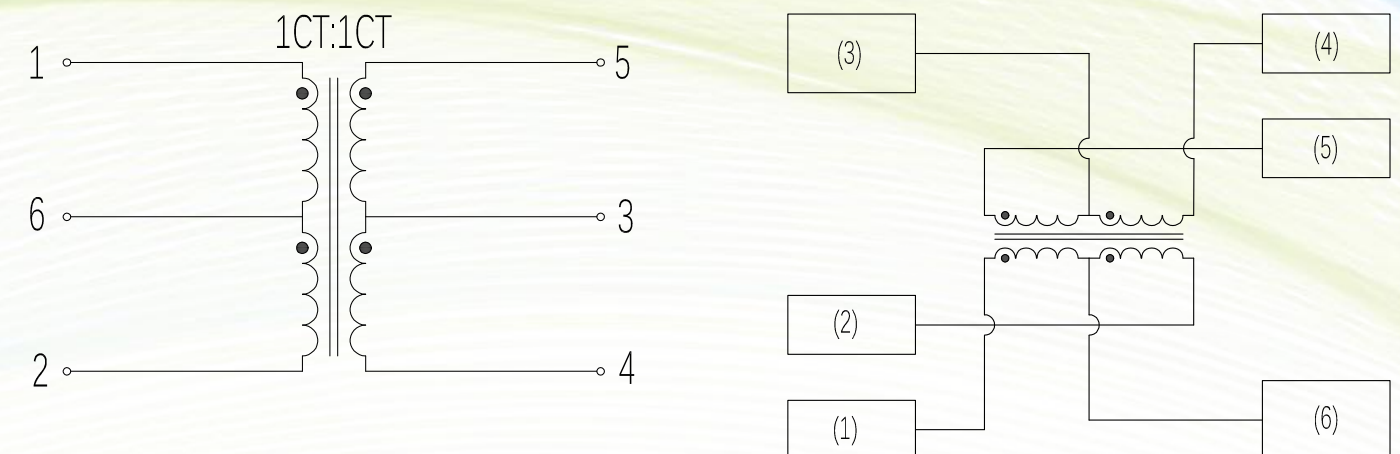
10GBase-T Series Electrical Specifications @ 25° C

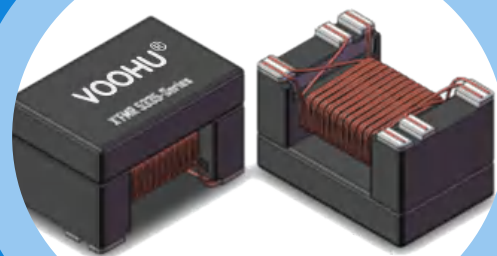
Part Number	Speed	DCL (μ H)	DCR (Ω)	Insertion Loss (dB)				Return Loss (dB)				Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)	
		Min	Max	Max				Min							
		100KHz,0.1V		1- 200 MHz	200- 300 MHz	300-400 MHz	400- 500 MHz	1- 100 MHz	100- 200 MHz	200- 300 MHz	300- 400 MHz				400- 500 MHz
WHLT-3232A-121MMN	10G	120@8mA DC	4.50	-1.2	-1.5	-2.0	-3.0	-18	-16	-12	-10	-8	-40 to 85	NON-PoE	1200
WHLT-3232A-121MMF	10G	120@10.5mA DC	4.50	-1.2	-1.5	-2.0	-3.0	-18	-16	-12	-10	-8	-40 to 85	PoE-AF	1200
WHLT-3232A-121MMT	10G	120@15mA DC	4.50	-1.2	-1.5	-2.0	-3.0	-18	-16	-12	-10	-8	-40 to 85	PoE-AT	1200

Mechanical



Schematics & Application





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NETWORK PRODUCT

CHIP LAN TRANSFORMER

5335(2013)-SERIES

Features And Benefits

- Compliant With Ethernet 1/2.5/5/10GBase-T
- 100 % Automatic Production
- Improved Return Loss And Cross Talk Properties
- Super Small Size
- Available in 5335(2013) Size
- RoHS Compliant

1GBase-T Series Electrical Specifications @ 25° C

Part Number	Speed	OCL (μH)	DCR (Ω)	Insertion Loss (dB)		Return Loss (dB)		Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)
		Min	Max	Max		Min				
		100KHz,0.1V		0.5-1 MHz	1-125 MHz	1-40 MHz	40-100 MHz			
WHLT-5335A-20IMGB	1G	200@21mA DC	3.00	-1.2	-0.2-0.002*f^1.4	-16	-10+20log(f/80)	-40 to 85	PoE-BT	1200
WHLT-5335A-25IMGB	1G	250@21mA DC	3.00	-1.2	-0.2-0.002*f^1.4	-16	-10+20log(f/80)	-40 to 85	PoE-BT	1200

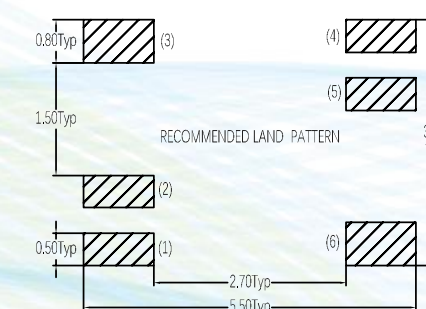
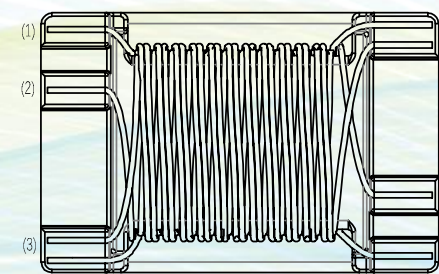
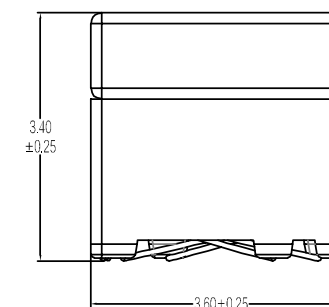
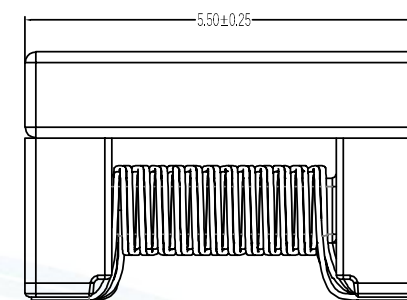
2.5/5GBase-T Series Electrical Specifications @ 25° C

Part Number	Speed	OCL (μH)	DCR (Ω)	Insertion Loss (dB)		Return Loss (dB)		Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)
		Min	Max	Max		Min				
		100KHz,0.1V		1-100 MHz	1-250 MHz	1-40 MHz	40-100 MHz			
WHLT--5335A-18IMQB	2.5/5G	180@21mA DC	4.50	-1.0	-2.0	-16	-16+10log(f/40)	-40 to 85	PoE-BT	1200

10GBase-T Series Electrical Specifications @ 25° C

Part Number	Speed	OCL (μH)	DCR (Ω)	Insertion Loss (dB)				Return Loss (dB)					Operating Temperature (°C)	PoE Rating	Hi-Pot (Vrms)
		Min	Max	Max				Min							
		100KHz,0.1V		1- 200 MHz	200- 300 MHz	300- 400 MHz	400- 500 MHz	1- 100 MHz	100- 200 MHz	200- 300 MHz	300- 400 MHz	400- 500 MHz			
WHLT-5335A-12IMMB	10G	120@21mA DC	1.00	-1.2	-1.5	-2.0	-3.0	-18	-16	-12	-10	-8	-40 to 85	PoE-BT	1200

Mechanical



Schematics & Application

