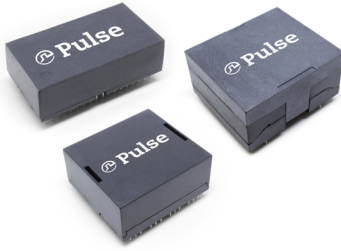


THT Quad Ports 1G, 5G or 10G Magnetic Modules

HB5610NL, HB5611NL, HB5612NL, HB5013NL, HB5014NL, HB5G603NL and HXB7603NL



- Ⓢ THT package 96, 88 and 72 pin designs offer space saving high density port count compared to SMD solutions
- Ⓢ Meets or exceeds IEEE 802.3ab/bz/an standards
- Ⓢ Compatible with leading silicon vendors PHYs
- Ⓢ Fully RoHS compliant
- Ⓢ THT Parts Hand or Wave Solder 260°C/5secs (max)

Electrical Specification @ 25°C (For 1Gbps)

Part Number	Media side Inductance (@100KHz/0.1Ve DC8mA) (uH min)	Insertion Loss (dB max)	Return Loss (dB min)		PoE (Current Per Pair mA)	Operating Temperature (°C)	Isolation (Pri:Sec)	Note	
			1-100 MHz	1-40MHz					40 < f ≤ 100 MHz
HB5613NL	350	-1.0	-16	-(10-20 log10(f/80))		-	0° to 70°	1500Vrms	-
HB5614NL	350	-1.0	-16	-(10-20 log10(f/80))		-	0° to 70°	1500Vrms	-
HB5610NL	350	-1.0	-16	-(10-20 log10(f/80))		-	0° to 70°	1500Vrms	-
HB5611NL	350	-1.0	-16	-(10-20 log10(f/80))		-	0° to 70°	1500Vrms	-
HB5612NL	350	-1.0	-16	-(10-20 log10(f/80))		-	0° to 70°	1500Vrms	-

Electrical Specification @ 25°C (For 5Gbps)

Part Number	Media side Inductance (@100KHz/0.1Ve) uH min	Insertion Loss (dB max)		Return Loss (dB min)		PoE (Current Per Pair mA)	Operating Temperature (°C)	Isolation (Pri:Sec)	Note	
		1-100 MHz	100-250MHz	1-40MHz	40 < f ≤ 250 MHz					
HB5G603NL	180	-1.0	-2.0	-16	-(16-10 log10(f /40))		-	0° to 70°	1500Vrms	-

Electrical Specification @ 25°C (For 10Gbps)

Part Number	Media side Inductance (@100KHz/0.1Ve) uH min	Insertion Loss (dB max)			Return Loss (dB min)			PoE (Current Per Pair mA)	Operating Temperature (°C)	Isolation (Pri:Sec)	Note	
		1-100MHz	100-400MHz	500MHz	1-40MHz	40 < f ≤ 400 MHz	400 < f ≤ 500 MHz					
HXB7603NL	100	-1.0	-1.5	-2.0	-18	-(18-10 log10(f /40))		-(8-30 log10(f /400))	-	-40° to 90°	1500Vrms	-

Process and Materials

Notes:

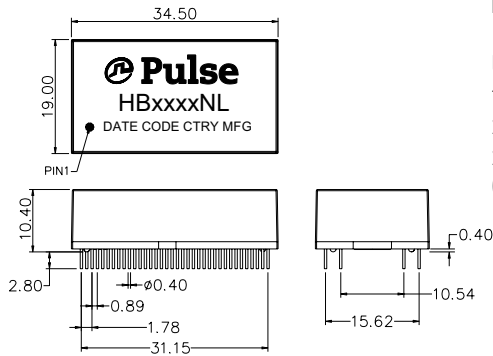
1. Storage Temperature:
 - HBxxxxNL = -20 to +125°C
 - HXBxxxxNL = -50 to +125°C
2. Compliance to JEDEC-J-STD 020:
 - i. Moisture Sensitive Level 1
3. All parts are packaged in tubes - see page 4-5 for details
4. Header: Black Thermoset Plastic - Material flammability rating UL 94V-0
5. Lead Frame: Copper-clad Steel
6. Underplate / Overplate: Tin electro-deposited over Nickel
7. Finish: Matte finish Tin solder

THT Quad Ports 1G, 5G or 10G Magnetic Modules

HB5610NL, HB5611NL, HB5612NL, HB5013NL, HB5014NL, HB5G603NL and HXB7603NL

Mechanicals

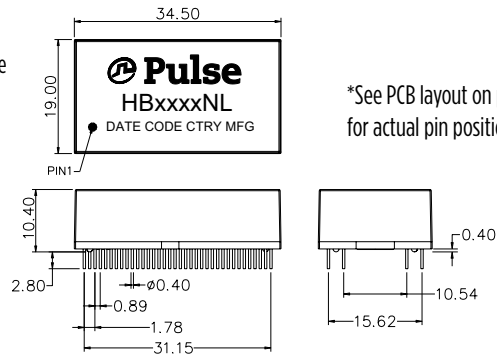
HB5613NL



Dimensions: mm

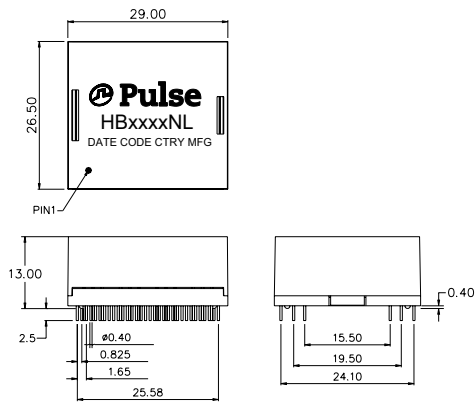
Unless otherwise specified the following tolerances apply:
 xx.xx = ± 0.25
 x.xx = ± 0.25
 0.xx = ± 0.13

HB5614NL



*See PCB layout on page 4 for actual pin positions

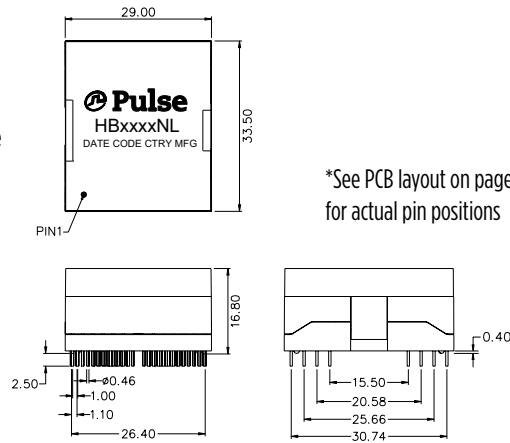
HB5610NL, HB5611NL



Dimensions: mm

Unless otherwise specified the following tolerances apply:
 xx.xx = ± 0.25
 x.xx = ± 0.25
 0.xx = ± 0.13

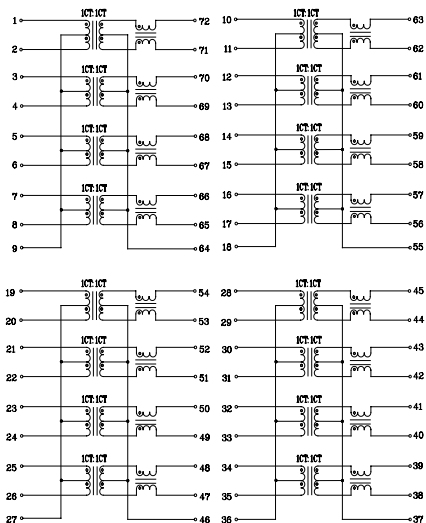
HB5612NL, HXB7603NL, HB5G603NL



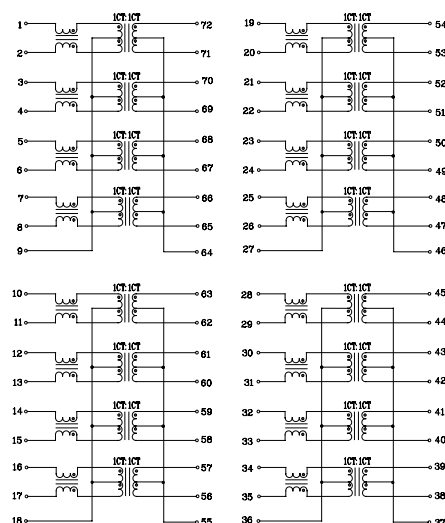
*See PCB layout on page 4 for actual pin positions

Schematics

HB5613NL



HB5614NL

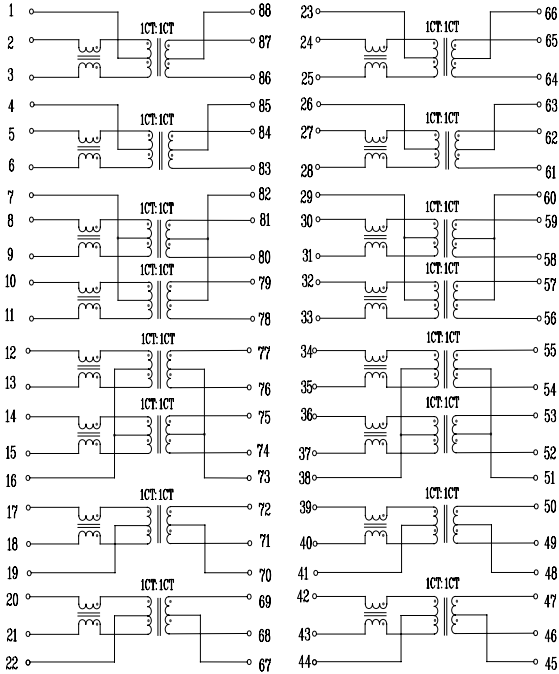


THT Quad Ports 1G, 5G or 10G Magnetic Modules

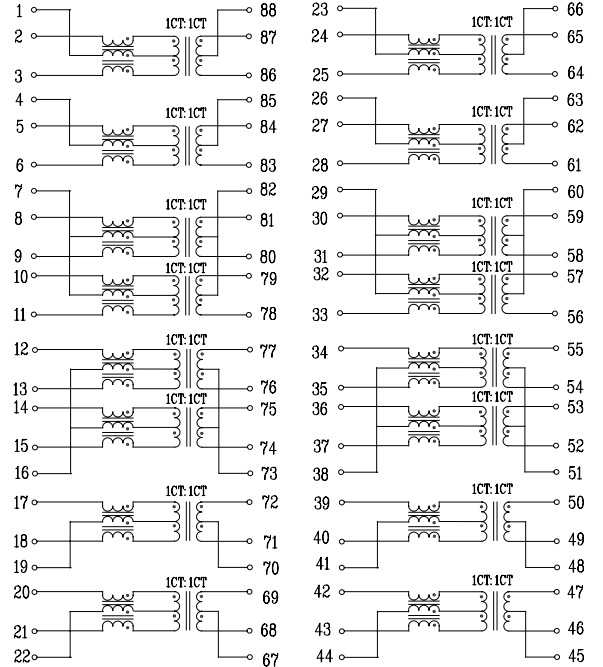
HB5610NL, HB5611NL, HB5612NL, HB5013NL, HB5014NL, HB5G603NL and HXB7603NL

Schematics

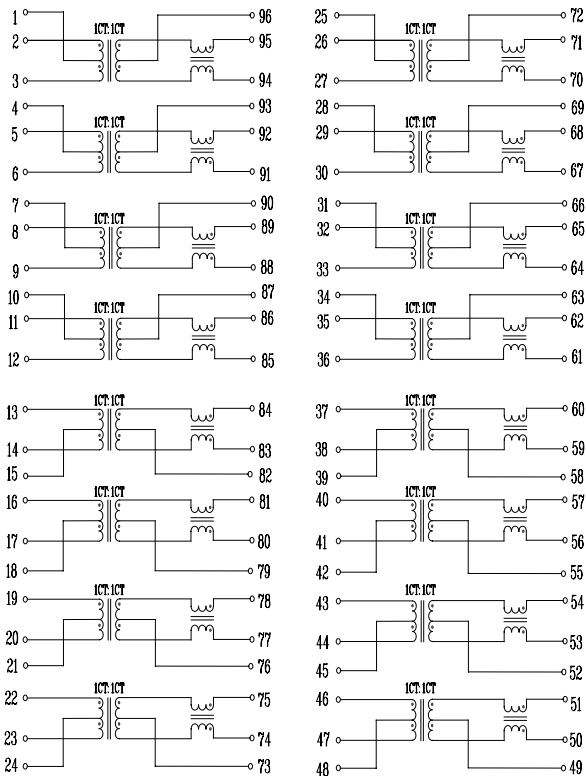
HB5611NL



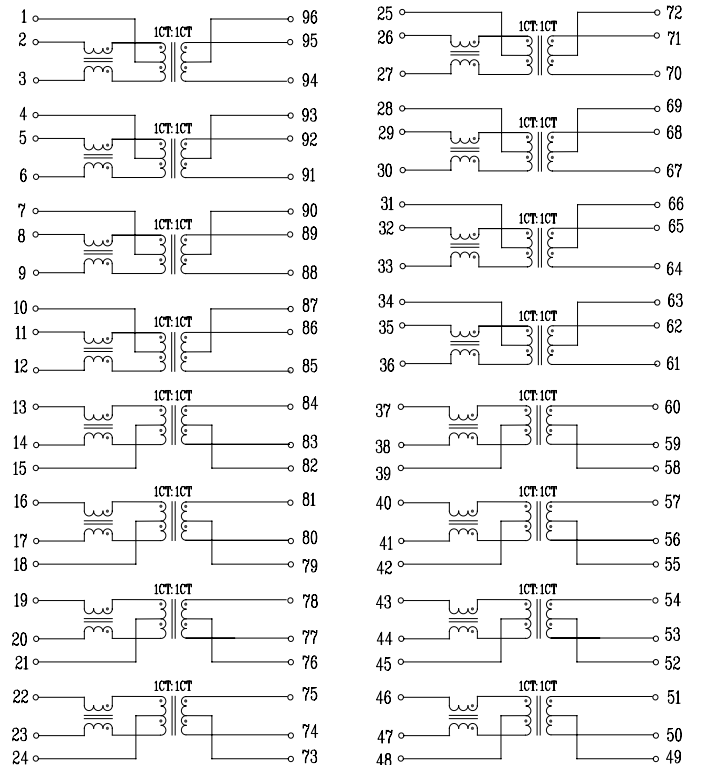
HB5610NL



HXB7603NL



HB5612NL, HB5G603NL



THT Quad Ports 1G, 5G or 10G Magnetic Modules

HB5610NL, HB5611NL, HB5612NL, HB5013NL, HB5014NL, HB5G603NL and HXB7603NL

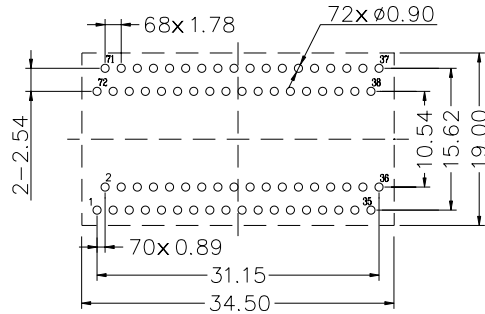


PCB Layout mounting Hole (Top View)

HB5613NL, HB5614NL

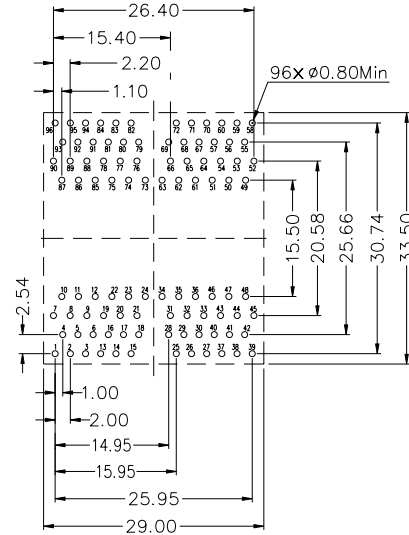
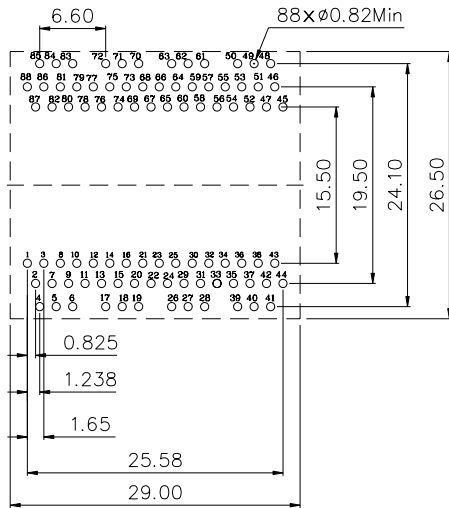
Dimensions: mm

Unless otherwise specified,
all tolerances are ± 0.08



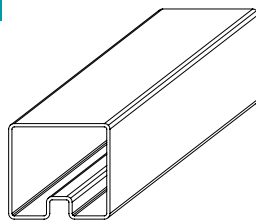
HB5610NL, HB5611NL

HB5612NL, HXB7603NL, HB5G603NL

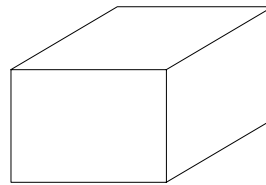


Carton Package

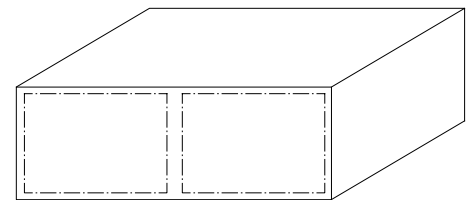
HB5613NL



TUBE



INNER BOX: 567x135x125



OUTER CARTON: 598x287x150

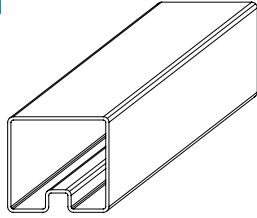
1. TUBE=14 PCS
2. INNER BOX=25 TUBES=350 PCS
3. OUTER CARTON=2 INNER BOXES=700 PCS

THT Quad Ports 1G, 5G or 10G Magnetic Modules

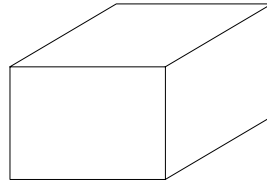
HB5610NL, HB5611NL, HB5612NL, HB5013NL, HB5014NL, HB5G603NL and HXB7603NL

Carton Package

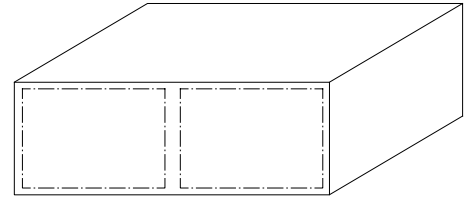
HB5614NL



TUBE



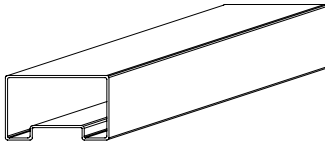
INNER BOX: 567x135x125



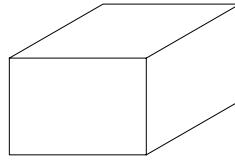
OUTER CARTON: 598x287x150

- 1.TUBE=14 PCS
- 2.INNER BOX=25 TUBES=420 PCS
- 3.OUTER CARTON=2 INNER BOXES=840 PCS

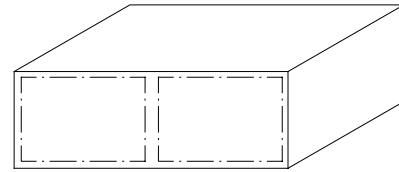
HB5610NL, HB5611NL



TUBE



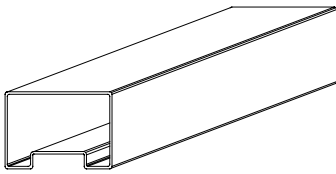
INNER BOX: 567x135x125



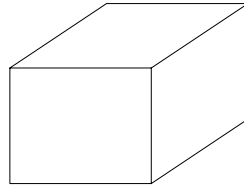
OUTER CARTON: 598x287x150

1. 1 TUBE=17PCS
2. 1 INNER BOX=20 TUBES=340PCS
3. 1 OUTER CARTON=2 INNER BOXES=680PCS

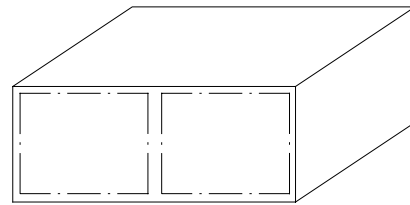
HB5612NL, HXB7603NL, HB5G603NL



TUBE



INNER BOX: 567x135x125



OUTER CARTON: 598x287x150

1. 1 TUBE=17PCS
2. 1 INNER BOX=12 TUBES=204PCS
3. 1 OUTER CARTON=2 INNER BOXES=408PCS

For More Information:

Americas - prodinfo_network_americas@yageo.com | Europe - prodinfo_network_emea@yageo.com | Asia - prodinfo_network_asia@yageo.com

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