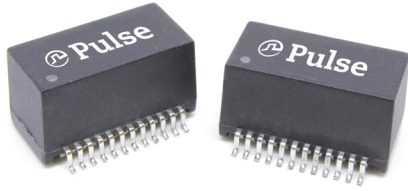


1Gigabit Magnetic Modules

HX5164NL, HX6164NL and HX6165NL



- Full IEEE802.3at/bt compliance for PoE
- Designed to exceed IEEE802.3au
- Compatible with all Major PHYs
- Up to 70W PoE over 100m of UTP
- Ideal for Wireless Access Points, Building Control, HVAC, Lighting, Remote Sensing, Digital Video and CCTV Cameras

Electrical Specifications @ 25°C - Operating Temperature -40°C to 85°C

Part Number	Inductance	Turns Ratio	Isolation (Pri:Sec)	Power over Ethernet (PoE)	
				DC Current (@ 70°C)	Power Supported (4 pair UTP)
HX5164NL	350uH @ 8mA	1.00 +/- 2%	1500Vrms / 60sec	350mA	40W (PSE)
HX6164NL	120uH @ 18.3mA	1.00 +/- 2%	1500Vrms / 60sec	600mA	70W (PSE)
HX6165NL	120uH @ 18.3mA	1.00 +/- 2%	1500Vrms / 60sec	600mA	70W (PSE)

Part Number	Insertion Loss			Return Loss			CMRR		
	100kHz	1-100MHz	125MHz	1-40MHz	60-80MHz	100MHz	2MHz	10-60MHz	100MHz
HX5164NL	-1.2dB	-1.5dB	-2.0dB	-18dB	-12dB	-10dB	-50dB	-44dB	-40dB
HX6164NL	-1.2dB	-1.5dB	-2.0dB	-18dB	-12dB	-10dB	-50dB	-44dB	-40dB
HX6165NL	-1.2dB	-1.5dB	-2.0dB	-18dB	-12dB	-10dB	-50dB	-44dB	-40dB

Notes:

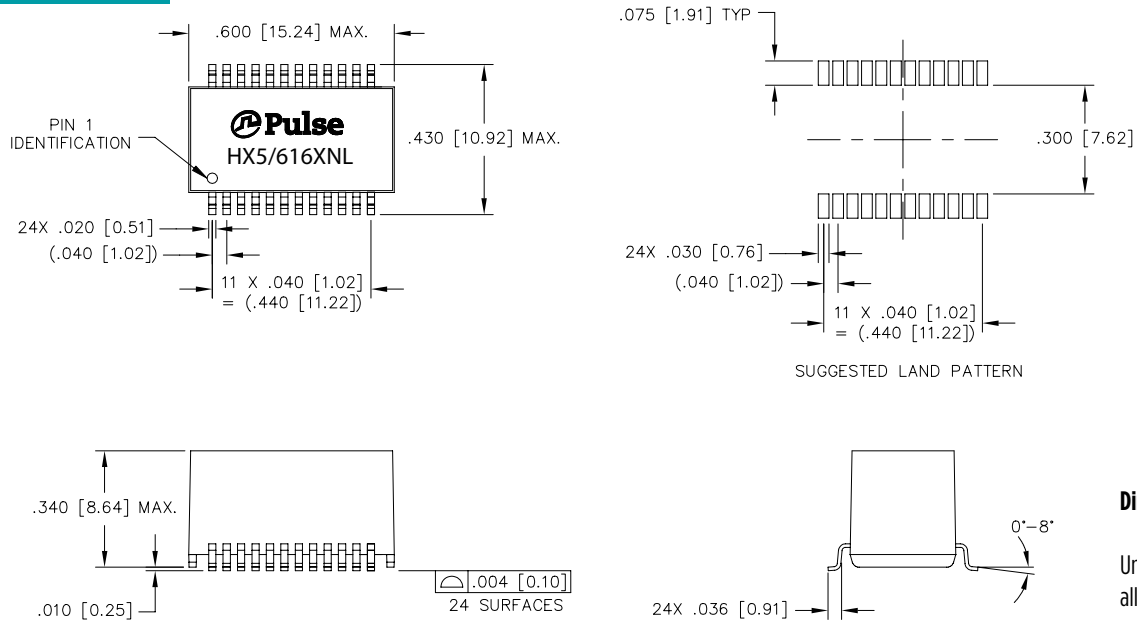
- Storage Temperature: -50°C to 125°C
Compliance to J-STD:
 - J-STD-002: Solderability at 245°C Reflow Profile
 - J-STD-020: Moisture Sensitive Level 1
 - J-STD-075: R7, 245°C Maximum Through Reflow Solder
- The NL suffix part comes in trays with 35pcs/tray. To order tape and reel packaging add a 'T' suffix to the part number (ie: HX5164NL becomes HX5164NLT). Quantity per reel is 250pcs/reel.
- Header: DAP (Diallyl Phthalate) with flammability Rating UL 94V-0 or better
- Lead Frame: Cooper Alloy
Under plated: Half Hard Ductile Nickel 50-100" (1.3-2.5um)
Over plated : 100% Tin electro-deposited per ASTM B545 300 - 50u"(8-13um)
Finish : Matte finish 100% Tin solder

1Gigabit Magnetic Modules

HX5164NL, HX6164NL and HX6165NL

Mechanical

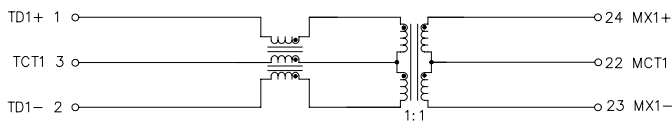
HX5164NL/HX616xNL



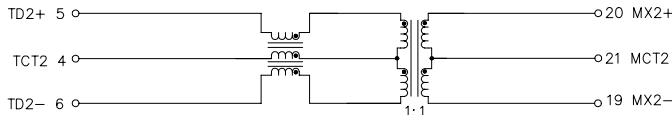
Schematics

HX5164NL, HX6165NL

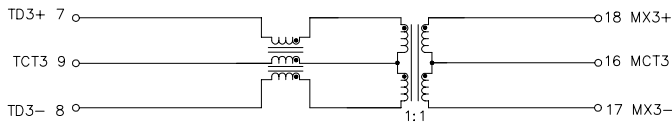
CHANNEL 1



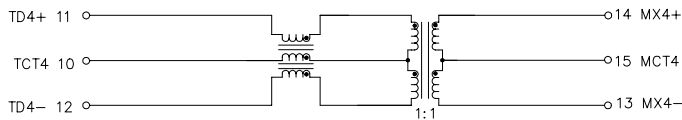
CHANNEL 2



CHANNEL 3

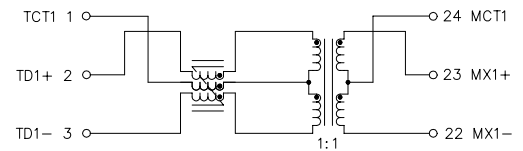


CHANNEL 4

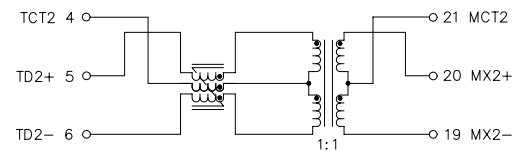


HX6164NL

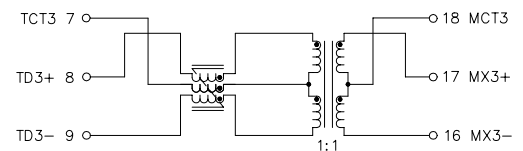
CHANNEL A



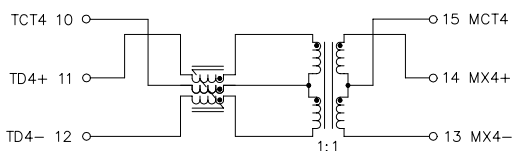
CHANNEL B



CHANNEL C



CHANNEL D

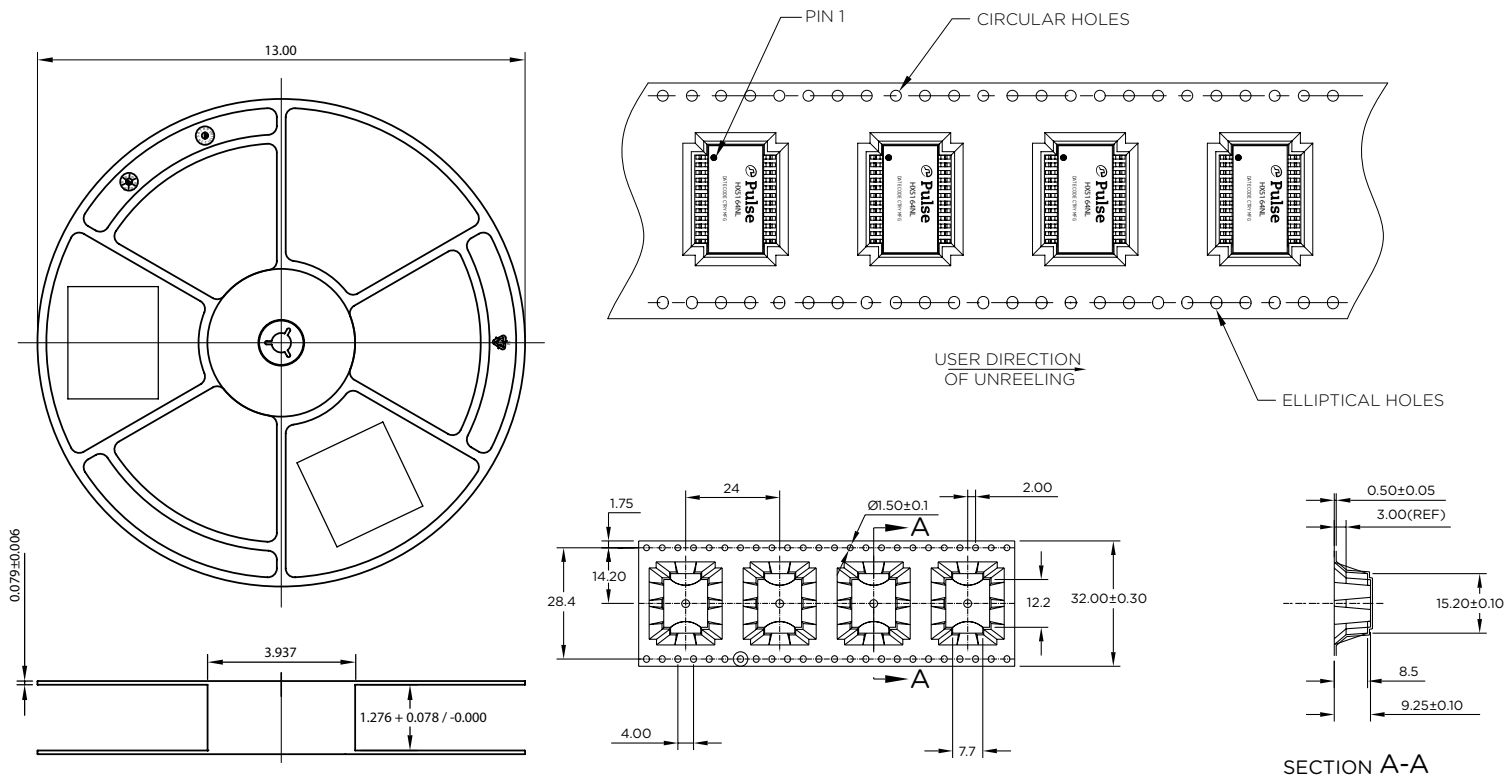


1Gigabit Magnetic Modules

HX5164NL, HX6164NL and HX6165NL

Tape & Reel

HX5164NL/HX616xNL



For More Information:

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

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2025. Pulse Electronics, Inc. All rights reserved.