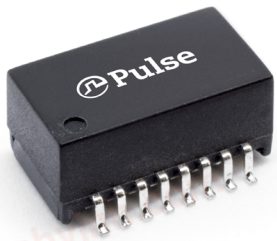
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High Temperature Single 100Base-Tx Magnetic Modules

HX1188ENL and HX1198ENL

Pulse
a YAGEO company



- *High Temperature design for non-automotive applications*
- *Meets or exceeds IEEE802.3u over extended Industrial temperature range -40 to +125°C*
- *Support 15W PoE over 100m of UTP using 2pair connection*
- *Compatible with all Major PHYs*
- *Two design options available - left or right*
  Drop in design for Pulse legacy parts H1102NL and HX1188NL

Electrical Specifications @ 25°C – Operating Temperature -40°C to +125°C

Part Number	Inductance	Turns Ratio	Isolation (Pri:Sec)	Power over Etherent (PoE)	
				DC Current (@ 25°C)	Power Supported (2/4 pair UTP)
HX1188ENL	350uH @ 8mA	1.00 +/- 2%	1500Vrms / 60sec	320mA	15W (PSE)
HX1198ENL	350uH @ 8mA	1.00 +/- 2%	1500Vrms / 60sec	320mA	15W (PSE)

Part Number	Insertion Loss (MAX)		Return Loss (MIN)			Cross Talk (MIN)			CCMR (MIN)		
	1-100MHz	125MHz	5MHz	30-60MHz	80MHz	30MHz	60MHz	100MHz	2MHz	30-100MHz	200MHz
HX1188ENL	-1.0dB	-3.0dB	-18dB	13dB	-11dB	-45dB	-38dB	-34dB	-50dB	-20dB	-15dB
HX1198ENL	-1.0dB	-3.0dB	-18dB	-13dB	-11dB	-45dB	-38dB	-34dB	-50dB	-20dB	-15dB

Notes:

1. Storage Temperature: -50°C to 125°C Compliance to J-STD:
   - **A.** J-STD-002: Solderability at 245°C Reflow Profile
   - **B.** J-STD-020: Moisture Sensitive Level 1
   - **C.** J-STD-075: R7, 245°C Maximum Through Reflow Solder
2. The NL suffix part is supplied in tubes with 40pcs/tube. To order tape and reel packaging add a '**T**' suffix to the part number (ie: HX1188ENL becomes HX1188ENLT). Where quantity per 13" reel will be 600pcs - see page 3 for more details.
3. Header: DAP (Diallyl Phthalate) with flammability Rating UL 94V-0 or better
4. 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

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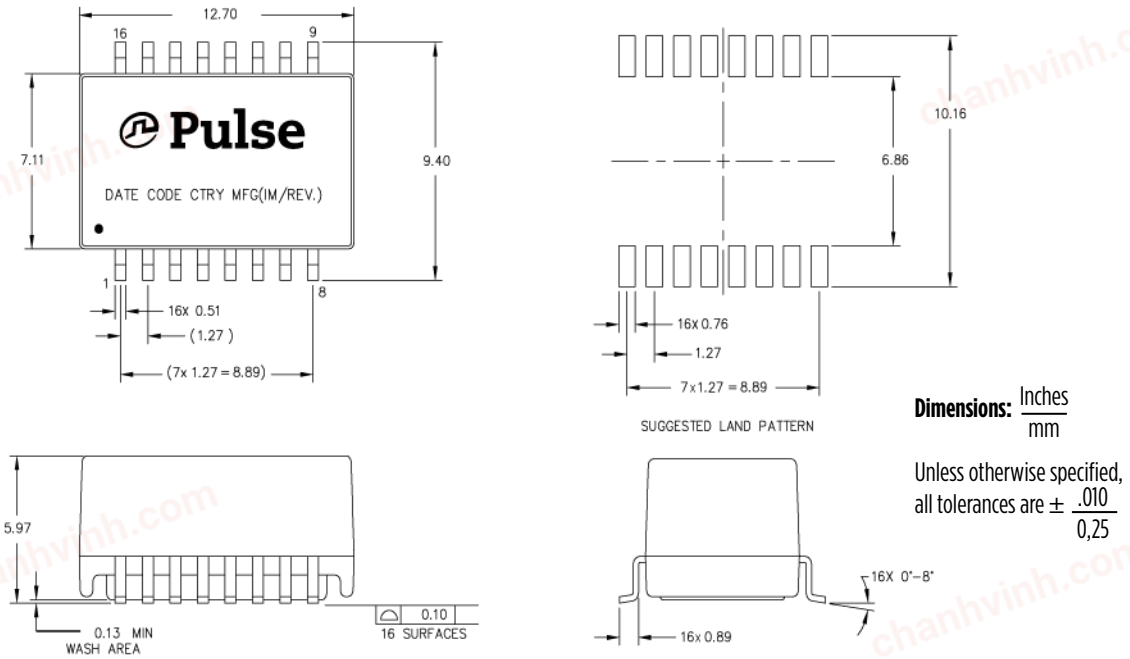
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MECHANICAL

HX11xxNL

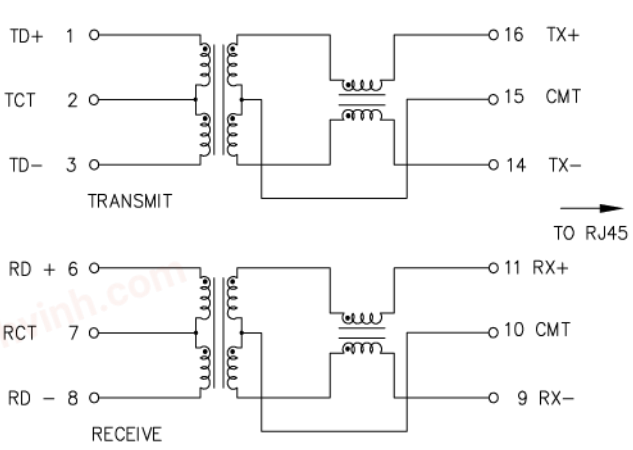


Dimensions: Inches / mm

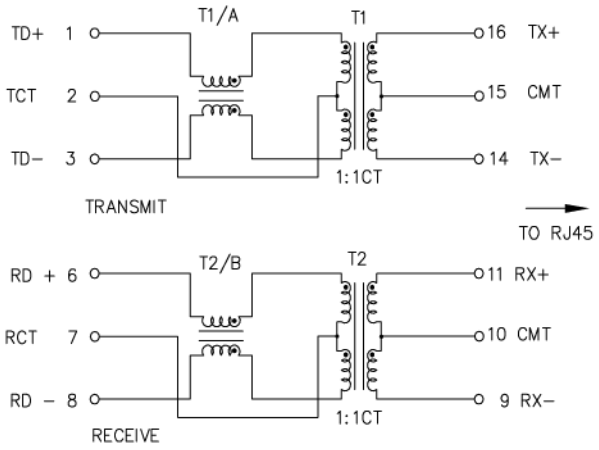
Unless otherwise specified, all tolerances are ± .010 / 0,25

SCHEMATICS

HX1188ENL



HX1198ENL



NOTATION ON SCHEMATICS ARE REFERENCE ONLY
THESE PART SUPPORT **AUTOMDIX** WHERE EACH COIL IS
THE SAME AND TX AND RX FUNCTIONS CAN BE SWAPPED

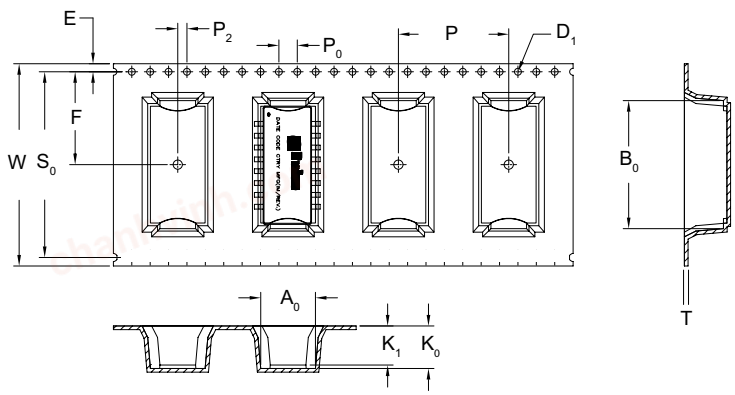
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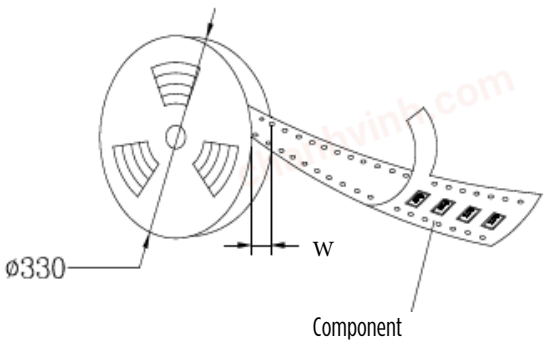
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HX1188ENL and HX1198ENL

TAPE & REEL

HX11xxNL



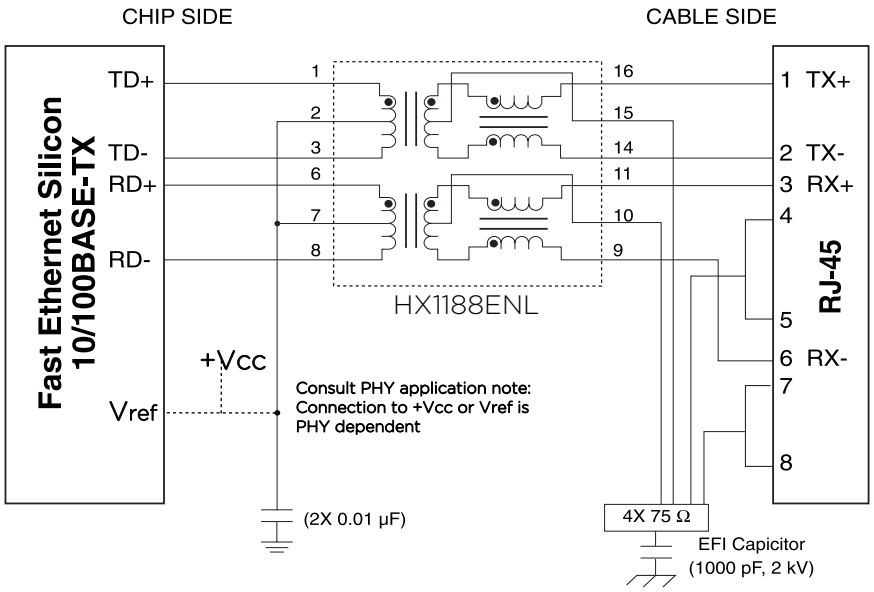


W	24.00±0.30	P	12.00±0.10	A_0	9.90±0.10	B_0	13.20±0.10
S_0	N/A	P_0	4.00±0.10	A_1	--------	B_1	--------
E	1.75±0.10	P_2	2.00±0.15	A_2	--------	B_2	--------
F	11.50±0.15	D_0	--------	K_0	7.00±0.10	K_1	6.4±0.10
T	0.50±0.05	D_1	1.50 $^{+0.10}_{-0.00}$				UNIT: mm

ALL Dimensions meet EIA-481-D requirements.

1. **Material:** Black Conductive Polystyrene
2. **Components per Reel:** 600 pcs
3. **Quantity per box:** 5x reels = 3000 pcs

TYPICAL FAST ETHERNET DISCRETE APPLICATION CIRCUIT



For More Information:

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