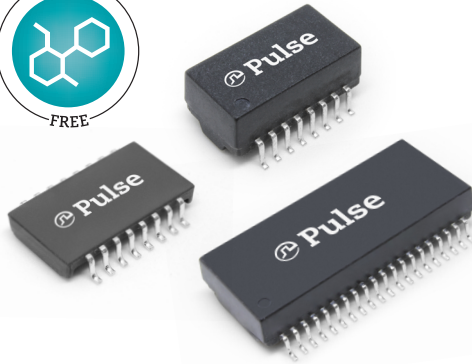


# Single and Quad 100BASE-TX SMD Modules

HB3005HLT, HXB2001HLT, HXB2002HLT, HB3004HLT, HB2003HLT,  
HB3006HLT, HB3002HLT, HB3003HLT



- Ⓢ Fully RoHS and Halogen Free
- Ⓢ Single, Quad and Power over Ethernet options
- Ⓢ Meet or exceed IEEE802.3u/af/at for 10/100Base-TX
- Ⓢ Compatible with all 1:1 turns ration PHYs
- Ⓢ Supports AutoMDIX functionality
- Ⓢ Commercial and Industrial Temperature
- Ⓢ Reliable SMD packages support 245°C pk Reflow
- Ⓢ All components Supplied in Tape and Reel

## Electrical Specification @ 25°C (OCL@DC8mA)

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
			0.3-100 MHz	2-30MHz	30-60MHz	60-80MHz				
HB3005HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	-	0 to +70	1500Vrms	-
HXB2001HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	720	-40 to +85	1500Vrms	PoE+
HXB2002HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	350	-40 to +85	1500Vrms	PoE
HB3004HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	-	0 to +70	1500Vrms	-
HB2003HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	720	0 to +70	1500Vrms	PoE+
HB3006HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	-	0 to +70	1500Vrms	QUAD PORT

Note: \* Specifications listed above refer to the base component part number that is printed on the product - ie HXB2002HLT will be HXB2002HL

## Electrical Specification @ 25°C

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
			0.3-100 MHz	2-30MHz	30-60MHz	60-80MHz				
HB3002HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	-	0 to +70	1500Vrms	PCMCIA
HB3003HLT	350	-1.5	-16	-(16-20log10(f/30))		-10	-	0 to +70	1500Vrms	PCMCIA

Note: \* Specifications listed above refer to the base component part number that is printed on the product - ie HB3002HLT will be HB3002HL

## Process and Materials

### Notes:

1. Storage Temperature:  
HBxxxxHL = -20 to +125°C  
HXBxxxxHL = -50 to +125°C
2. Compliance to JEDEC-J-STD 020:  
i. Moisture Sensitive Level 1  
ii. Maximum peak Reflow Solder temperature 245°C
3. All parts come in 13" (330mm) Diameter Tape and reel - see page 4-5 for details
4. Header: Black Thermoset Plastic - Material flammability rating UL 94V-0
5. Lead Frame: Cooper Alloy
6. Underplate / Overplate: Tin electro-deposited over Nickel
7. Finish: Matte finish Tin solder

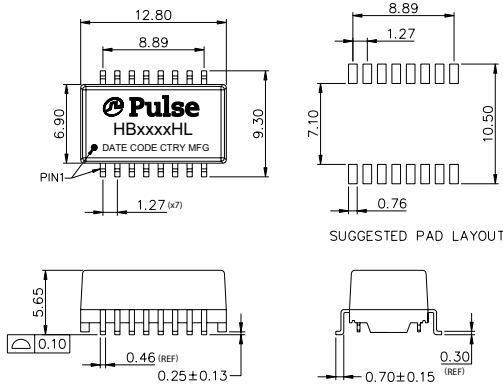
# Single and Quad 100BASE-TX SMD Modules

HB3005HLT, HXB2001HLT, HXB2002HLT, HB3004HLT, HB2003HLT, HB3006HLT, HB3002HLT, HB3003HLT

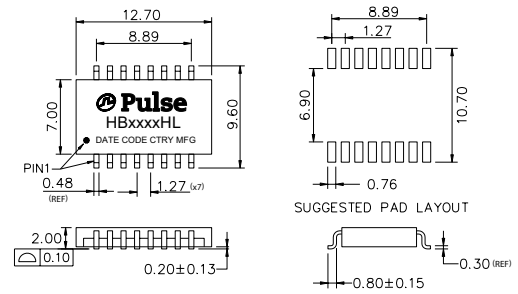


## Mechanicals

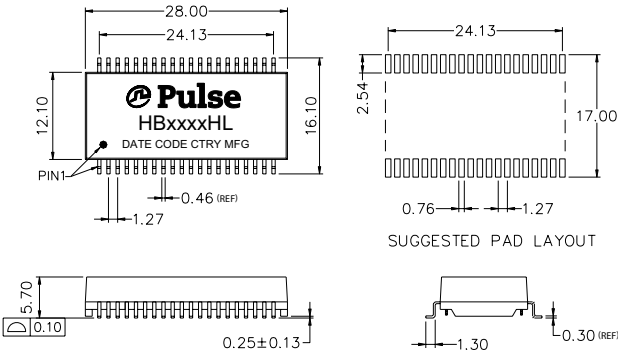
### HB2003HLT, HB3004/5HLT, HXB2001/2HLT



### HB3002HLT, HB3003HLT

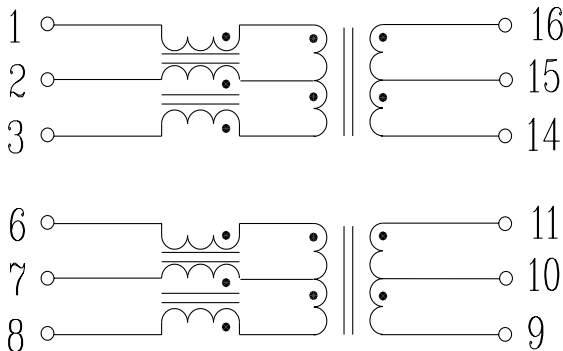


### HB3006HLT

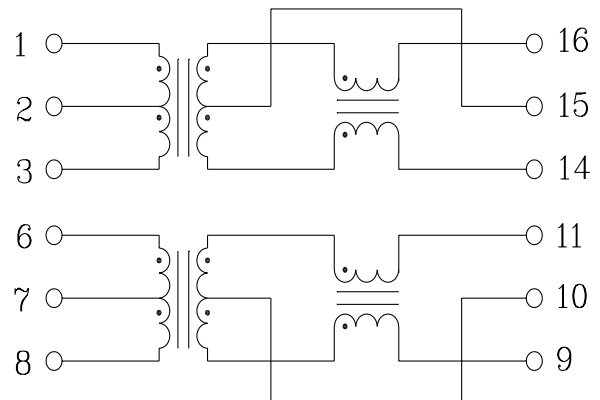


## Schematics

### HB2003HLT



### HB3004HLT, HXB2002HLT

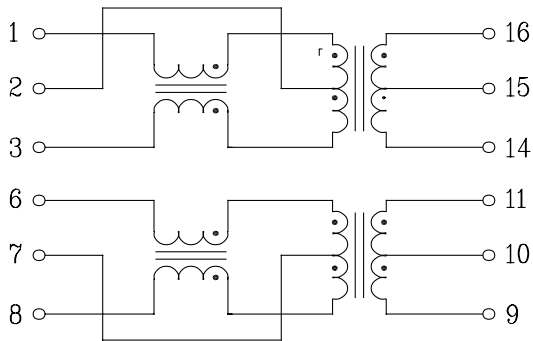


# Single and Quad 100BASE-TX SMD Modules

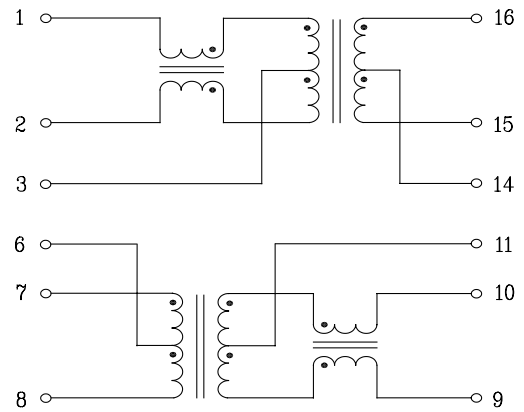
HB3005HLT, HXB2001HLT, HXB2002HLT, HB3004HLT, HB2003HLT,  
HB3006HLT, HB3002HLT, HB3003HLT

## Schematics

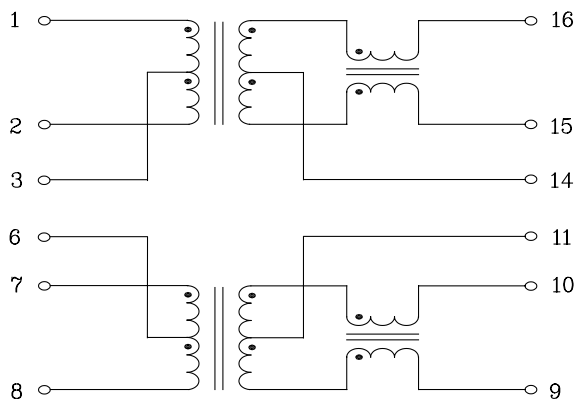
**HB3005HLT, HXB2001HLT**



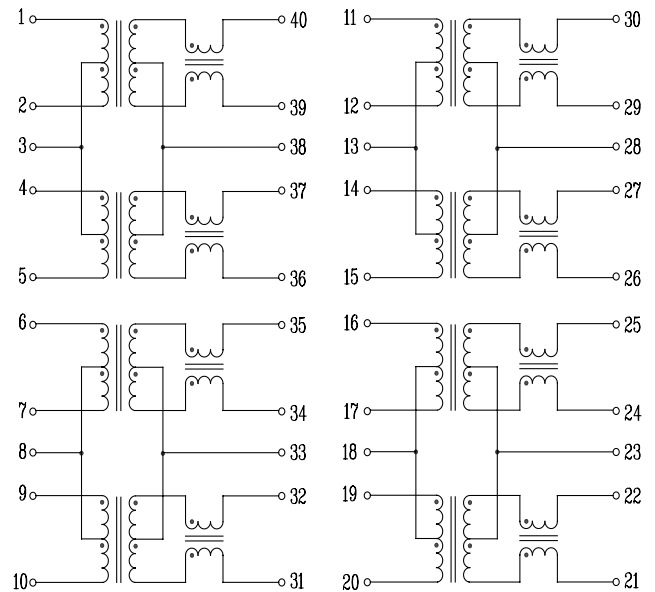
**HB3003HLT**



**HB3002HLT**



**HB3006HLT**



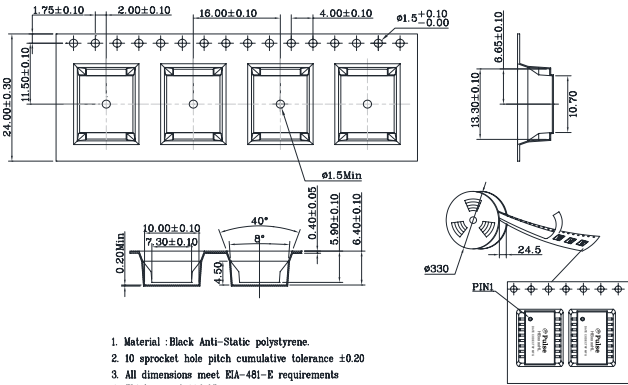
# Single and Quad 100BASE-TX SMD Modules

HB3005HLT, HXB2001HLT, HXB2002HLT, HB3004HLT, HB2003HLT, HB3006HLT, HB3002HLT, HB3003HLT



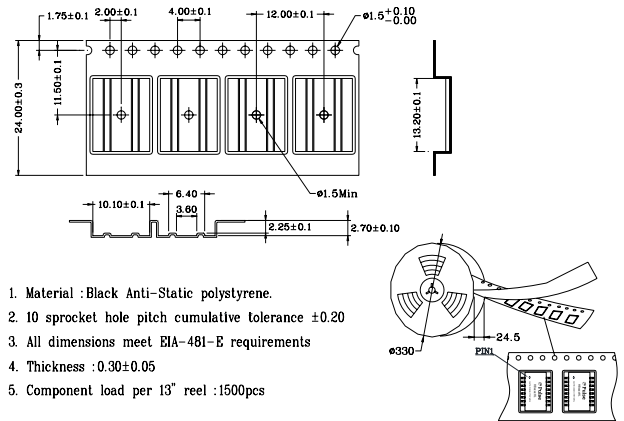
## Tape & Reel

### HB2003HLT, HB3004/5HLT, HXB2001/2HLT



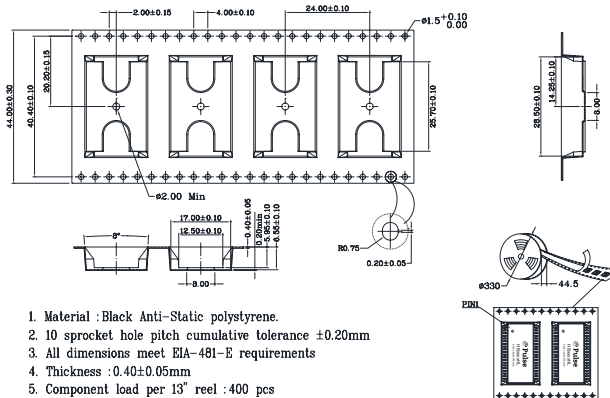
1. Material : Black Anti-Static polystyrene.
2. 10 sprocket hole pitch cumulative tolerance ±0.20
3. All dimensions meet EIA-481-E requirements
4. Thickness : 0.4±0.05mm
5. Component load per 13" reel : 600 pcs

### HB3002/3HLT



1. Material : Black Anti-Static polystyrene.
2. 10 sprocket hole pitch cumulative tolerance ±0.20
3. All dimensions meet EIA-481-E requirements
4. Thickness : 0.30±0.05
5. Component load per 13" reel : 1500pcs

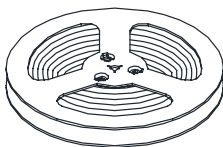
### HB3006HLT



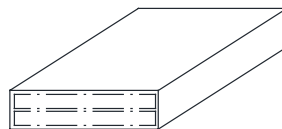
1. Material : Black Anti-Static polystyrene.
2. 10 sprocket hole pitch cumulative tolerance ±0.20mm
3. All dimensions meet EIA-481-E requirements
4. Thickness : 0.40±0.05mm
5. Component load per 13" reel : 400 pcs

## Carton Package

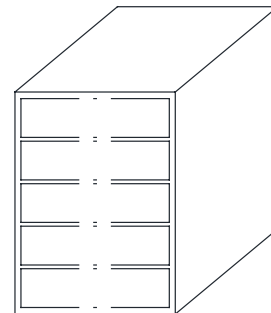
### HB2003HLT, HB3004/5HLT, HXB2001/2HLT



REEL



INNER BOX 347x347x82



OUTER CARTON: 375x375x470

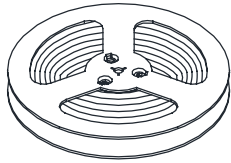
1. 1 REEL=600PCS
2. 1 INNER BOX=2 REELS=1200PCS
3. 1 OUTER CARTON=5 INNER BOXES=6000PCS

# Single and Quad 100BASE-TX SMD Modules

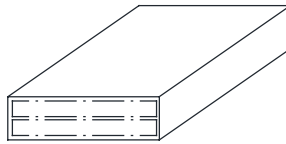
HB3005HLT, HXB2001HLT, HXB2002HLT, HB3004HLT, HB2003HLT,  
HB3006HLT, HB3002HLT, HB3003HLT

## Carton Package

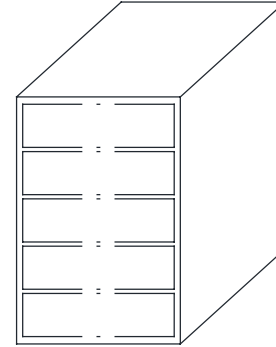
### HB3002/3HLT



REEL



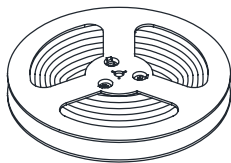
INNER BOX: 347x347x82



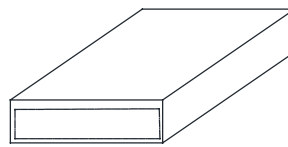
OUTER CARTON: 375x375x470

1. 1 REEL=1500PCS
2. 1 INNER BOX=2 REELS=3000PCS
3. 1 OUTER CARTON=5 INNER BOXES=15000PCS

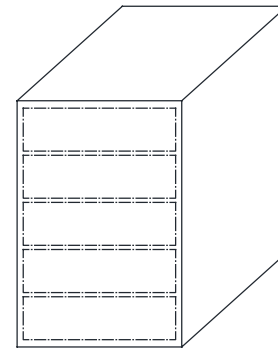
### HB3006HLT



REEL



INNER BOX: 347x347x82



OUTER CARTON: 375x375x470

1. 1 REEL=400PCS
2. 1 INNER BOX=1 REEL=400PCS
3. 1 OUTER CARTON=5 INNER BOXES=2000PCS

## For More Information:

Americas - [prodinfo\\_network\\_americas@yageo.com](mailto:prodinfo_network_americas@yageo.com) | Europe - [prodinfo\\_network\\_emea@yageo.com](mailto:prodinfo_network_emea@yageo.com) | Asia - [prodinfo\\_network\\_asia@yageo.com](mailto:prodinfo_network_asia@yageo.com)

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