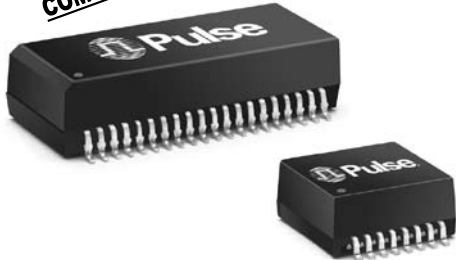





# 10/100BASE-TX TRANSFORMER MODULES

## For Auto MDI/MDIX Applications



-  Symmetrical TX and RX channels for Auto MDI/MDIX capability
-  Approved for use with the Broadcom BCM5226 and Level One LXT9784
-  Meets IEEE 802.3 specification

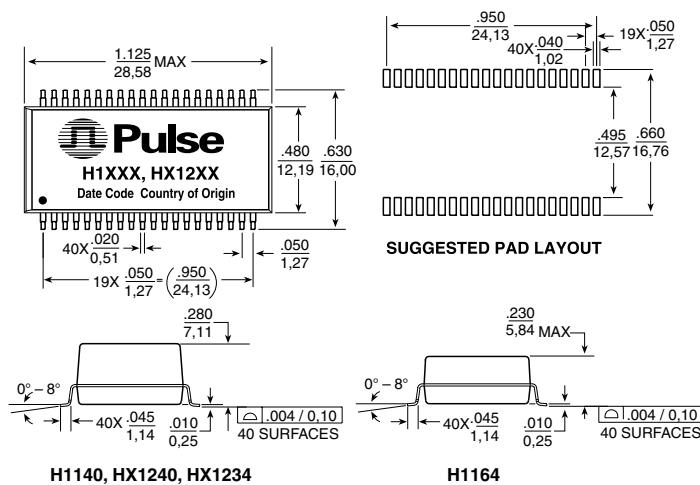
### Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

RoHS-6 <sup>2</sup> Compliant Part Number	RoHS-5 <sup>2</sup> Compliant Part Number	Insertion Loss (MAX)	Return Loss (dB MIN)				Crosstalk (dB MIN)				Differential to Common Mode Rejection (dB MIN)		Hipot (Vrms MIN)
			0.1-100MHz	2-30MHz	40MHz	50MHz	60-80MHz	1kHz	30MHz	60MHz	100MHz	1-60MHz	
H1140NL <sup>3c</sup>	H1140 <sup>3c</sup>	-1.0	-18	-14.4	-13.1	-12	-65	-50	-40	-35	-40	-35	1500
H1141NL <sup>3c</sup>	—	-1.0	-18	-14.4	-13.1	-12	-65	-50	-40	-35	-40	-35	1500
H1164NL <sup>3d</sup>	H1164 <sup>3d</sup>	-1.0	-18	-14.4	-13.1	-12	-55	-45	-40	-33	-37	-25	1500
HX1234NL <sup>1,3c</sup>	HX1234 <sup>1,3c</sup>	-1.4	-18	-14.4	-13.1	-12	-55	-45	-40	-33	-37	-25	1500
—	HX1240 <sup>3c</sup>	-1.0	-16.5	-16	-15.5	-12	-60	-43	-38	-33	-43	-27	1500

1. Operating Temperature -40°C to +85°C
2. For Tape & Reel packaging, add a "T" suffix at the end of the part number when ordering, e.g. H1164T
3. MSL = Moisture Sensitivity Level a=1 b=2 c=3 d=4

## Mechanicals

### H1140, H1164, HX1234, HX1240



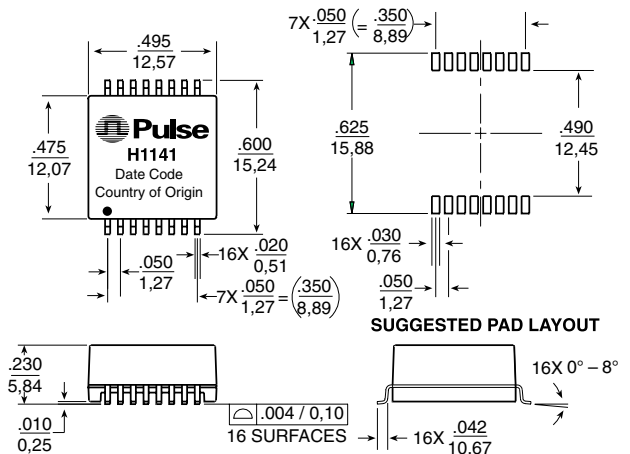
Weight . . . . . 5.6 grams\*  
Tape & Reel . . . . . 250/reel  
Tube . . . . . 15/tube

\*H1164 = 4.4 grams

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

### H1141



Weight . . . . . 1 gram  
Tape & Reel . . . . . 350/reel  
Tube . . . . . 35/tube

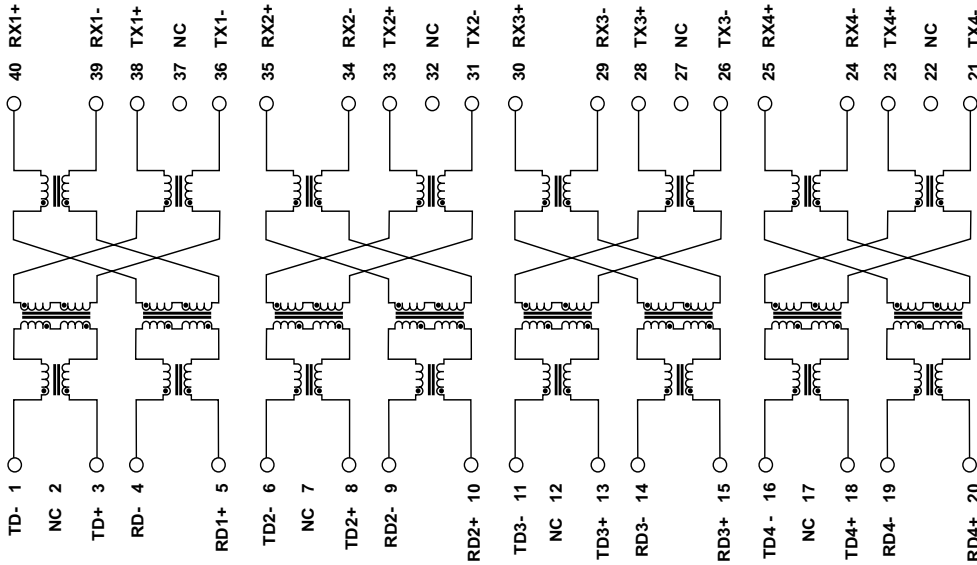
# 10/100BASE-TX TRANSFORMER MODULES

## For Auto MDI/MDIX Applications

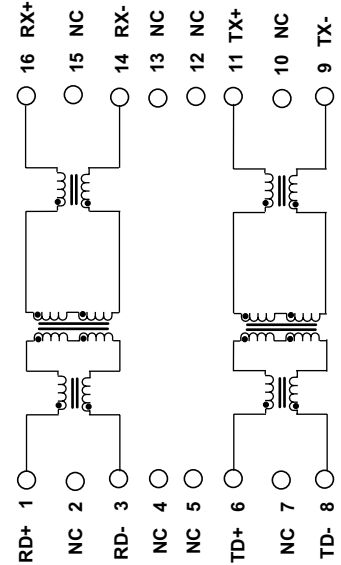


### Schematics

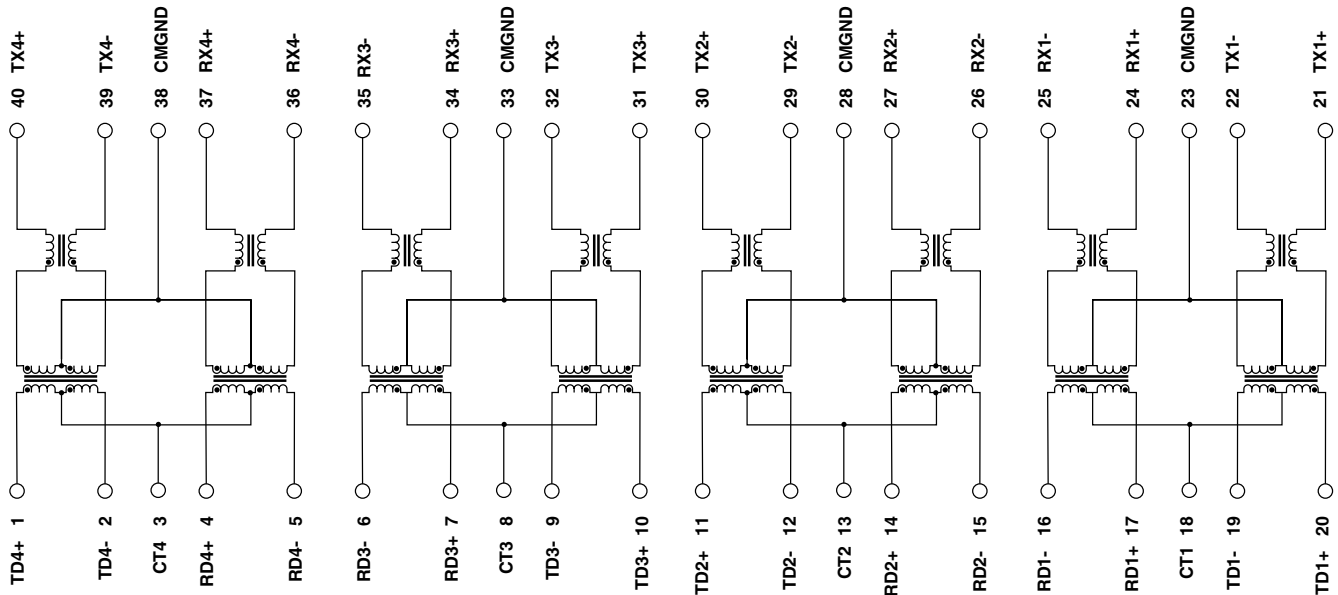
#### H1140, HX1240



#### H1141



#### H1164, HX1234



### For More Information:

**Pulse Worldwide Headquarters**  
12220 World Trade Dr.  
San Diego, CA 92128  
U.S.A.

**Pulse Europe**  
Einsteinstrasse 1  
D-71083 Herrenberg  
Germany

**Pulse China Headquarters**  
B402, Shenzhen Academy of  
Aerospace Technology Bldg.  
10th Kejinan Rd.  
High-Tech Zone  
Nanshan District  
Shenzhen, PR China 518057

**Pulse North China**  
Room 1503  
XinYin Building  
No. 888 YiShan Rd.  
Shanghai 200233  
China

**Pulse South Asia**  
150 Kampong Ampat  
#07-01/02  
KA Centre  
Singapore 368324

**Pulse North Asia**  
No. 26, Kao Ching Rd.  
Yang Mei Chen  
Taoyuan Hsien  
Taiwan  
R. O. C.

[www.pulseeng.com](http://www.pulseeng.com)

Tel: 858 674 8100  
Fax: 858 674 8262

Tel: 49 7032 7806 0  
Fax: 49 7032 7806 135

TEL: 86 755 33966678  
FAX: 86 755 33966700

Tel: 86 21 54643211/2  
Fax: 86 21 54643210

Tel: 65 6287 8998  
Fax: 65 6280 0080

Tel: 886 3 4643715  
Fax: 886 3 4641911

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, 2008. Pulse Engineering, Inc. All rights reserved.