Pulse
Electronics
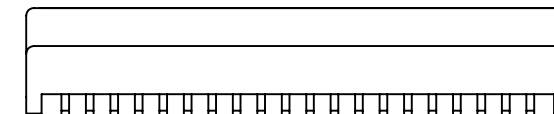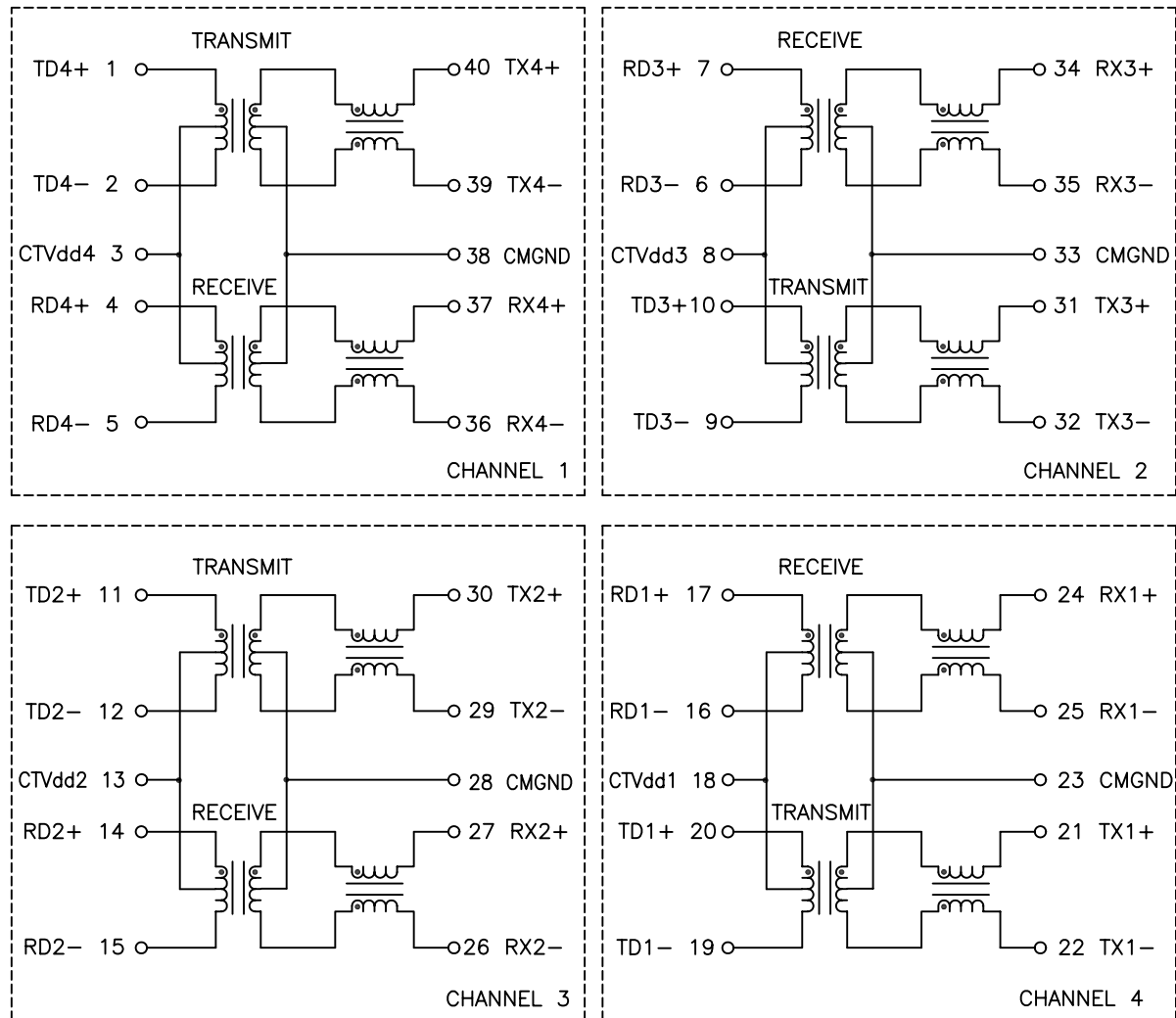www.pulseelectronics.com

NOTES:

1.   ROHS COMPLIANT

2.   HEADER: PHENOLIC WITH FLAMMABILITY
      RATING UL 94V-0 OR BETTER.

3.   STORAGE TEMPERATURE: -20°C TO +125°C

4.   COMPLIANCE TO J-STD:

   A.   J-STD-002: SOLDERABILITY AT 245°C REFLOW PROFILE

   B.   J-STD-020: LEVEL 1, NO MOISTURE SENSITIVE

   C.   J-STD-075: R7, 245°C MAXIMUM THROUGH REFLOW SOLDER

5.   TO ORDER TAPE & REEL PACKAGING ADD A "T" SUFFIX
      TO THE PART NUMBER(i.e H1164FNL BECOMES H1164FNLT).

Pulse
H1164FNL
DATE CODE CTRY MFG

FINAL OUTLINE

PRODUCT DESCRIPTION	TLA DRAWING	PS DRAWING	SHEET	PART NO.	DATASHEET REV.
MDL,QUAD,100D,1:1,SM,TU	H1164FNL-10	PS-2743.001-A	1 OF 3	H1164FNL	A

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CHANNEL 1 — TRANSMIT / RECEIVE

- TD4+ 1
- TD4− 2
- CTVdd4 3
- RD4+ 4
- RD4− 5
- 40 TX4+
- 39 TX4−
- 38 CMGND
- 37 RX4+
- 36 RX4−

CHANNEL 2 — RECEIVE / TRANSMIT

- RD3+ 7
- RD3− 6
- CTVdd3 8
- TD3+ 10
- TD3− 9
- 34 RX3+
- 35 RX3−
- 33 CMGND
- 31 TX3+
- 32 TX3−

CHANNEL 3 — TRANSMIT / RECEIVE

- TD2+ 11
- TD2− 12
- CTVdd2 13
- RD2+ 14
- RD2− 15
- 30 TX2+
- 29 TX2−
- 28 CMGND
- 27 RX2+
- 26 RX2−

CHANNEL 4 — RECEIVE / TRANSMIT

- RD1+ 17
- RD1− 16
- CTVdd1 18
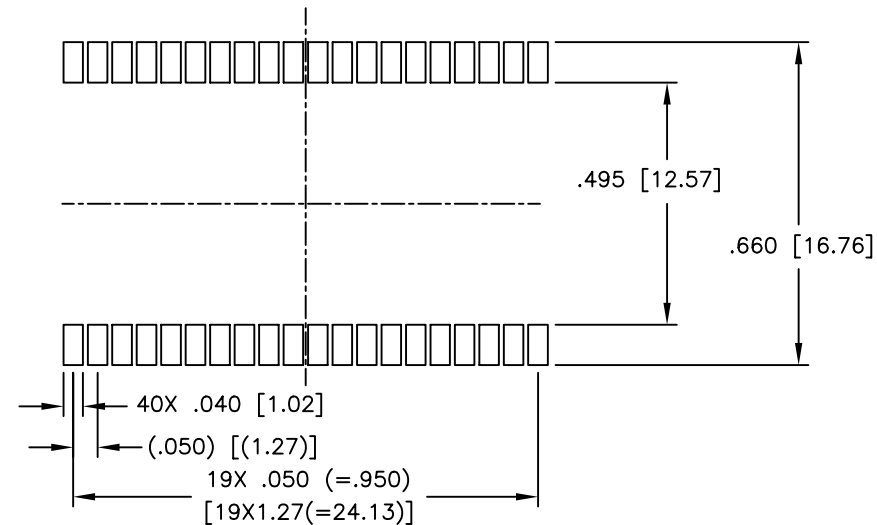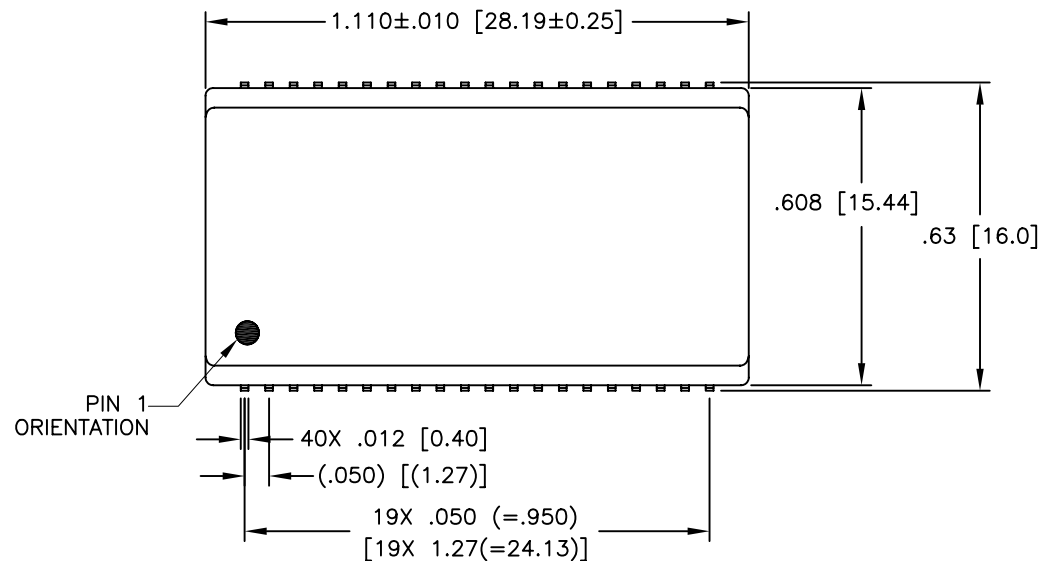- TD1+ 20
- TD1− 19
- 24 RX1+
- 25 RX1−
- 23 CMGND
- 21 TX1+
- 22 TX1−

SCHEMATIC

ELECTRICAL CHARACTERISTICS AT +25°C UNLESS OTHER SPECIFIED

MEETS IEEE 802.3 SPECIFICATION

PARAMETER	SPECIFICATIONS		
OPERATING TEMPERATURE	0°C − 70°C		
TURNS RATIO	1.00 ± 2%		
POLARITY	PER SCHEMATIC		
INSERTION LOSS	100 KHz	1−125 MHz	
	−1.2 dB MAX	$-0.2-0.002*f^{1.4}$ dB MAX	
RETURN LOSS, 1000BT (Z OUT = 100 OHM ±15%)	.1−30 MHz	30−60 MHz	60−80 MHz
	−16 dB MIN	$-10+20*LOG_{10}$ (f/60 MHz) dB MIN	−10 dB MIN
INDUCTANCE (OCL) (MEDIA SIDE, 0°C−70°C)	350 uH MIN	(MEASURED AT 100 KHz, 100 mVRMS AND WITH 8 mA DC BIAS)	
CROSSTALK, ADJACENT CHANNELS	1 MHz	10−100 MHz	
	−50 dB MIN	$-55+22*LOG_{10}(f/10)$ dB MIN	
DIFFERENTIAL TO COMMON MODE REJECTION	2 MHz	30−200 MHz	
	−50 dB MIN	$-43+22*LOG_{10}(f/30)$ dB MIN	
DC RESISTANCE, 1/2 WINDING	.65 OHMS MAX		
DC RESISTANCE IMBALANCE	±.065 OHMS MAX (CENTER TAP SYMMETRY)		
INPUT − OUTPUT ISOLATION	1500 VRMS MIN @ 60 SECONDS		

NOTE: f IS FREQUENCY IN MHz.

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MDL,QUAD,100D,1:1,SM,TU	H1164FNL−10	PS−2743.001−A	2 OF 3	H1164FNL	A

1.110±.010 [28.19±0.25]

.608 [15.44]

.63 [16.0]

PIN 1 ORIENTATION

40X .012 [0.40]

(.050) [(1.27)]

19X .050 (=.950)
[19X 1.27(=24.13)]

.495 [12.57]

.660 [16.76]

40X .040 [1.02]

(.050) [(1.27)]

19X .050 (=.950)
[19X1.27(=24.13)]

SUGGESTED PAD LAYOUT

.078 [1.98]

.225 [5.72]

.004 | ⌓
40 SURFBCES

.527 [13.39]

.010 [0.25]

.049 [1.25]
40X 0°-8°

40X .045 [1.15]
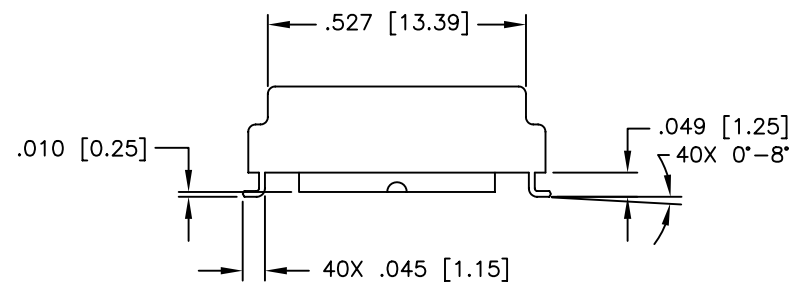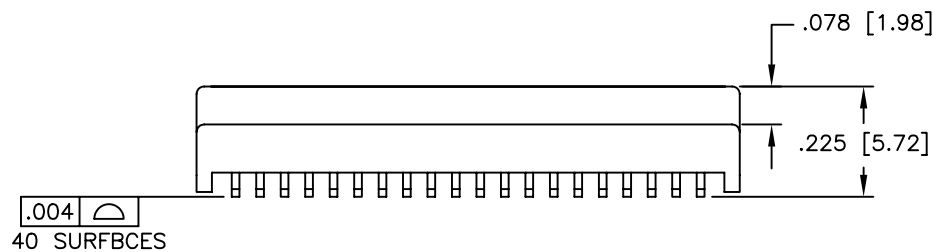
DIMENSIONS ARE IN INCHES [MILLIMETERS] WITH THE FOLLOWING
TOLERANCES: [MILLIMETERS] ARE FOR REFERENCE ONLY.
.XX= ±.01   [±0.25]
.XXX= ±.005 [±0.13]

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Mouser Electronics

Authorized Distributor

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