



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



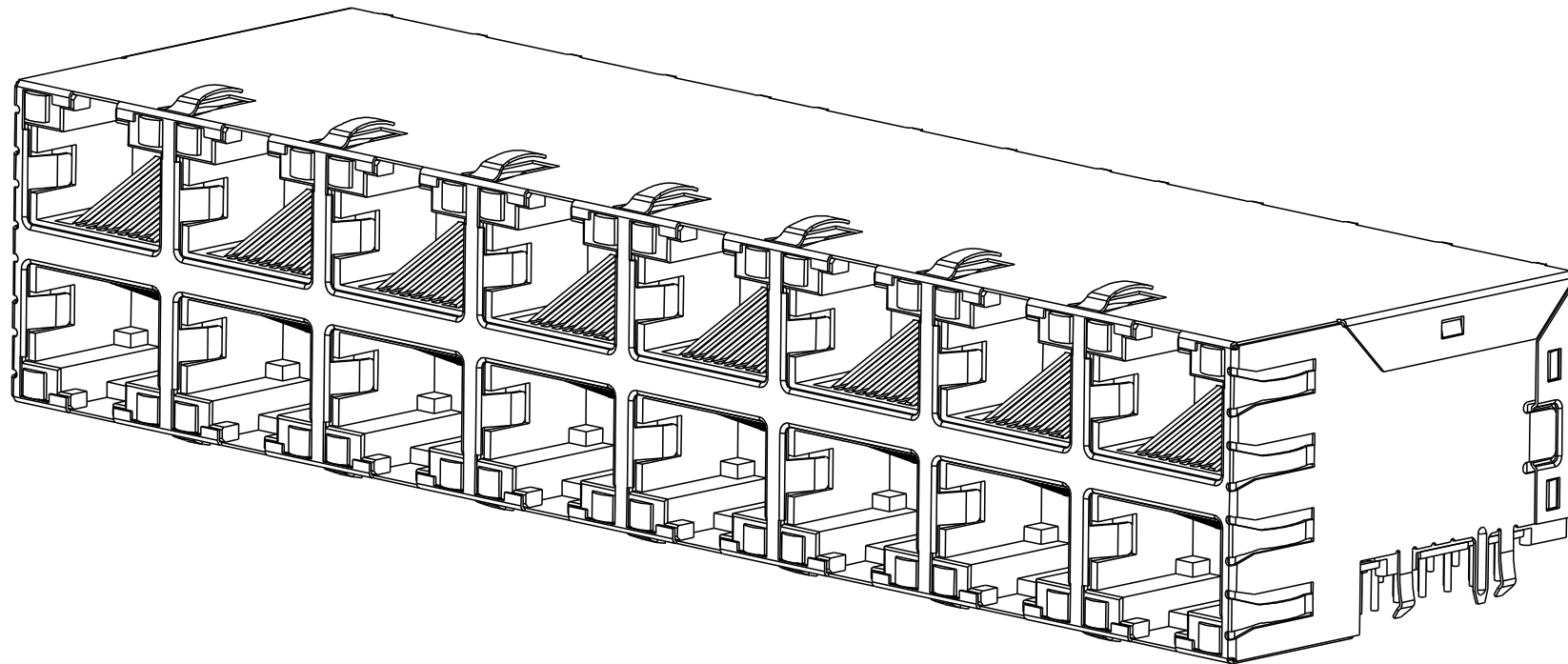
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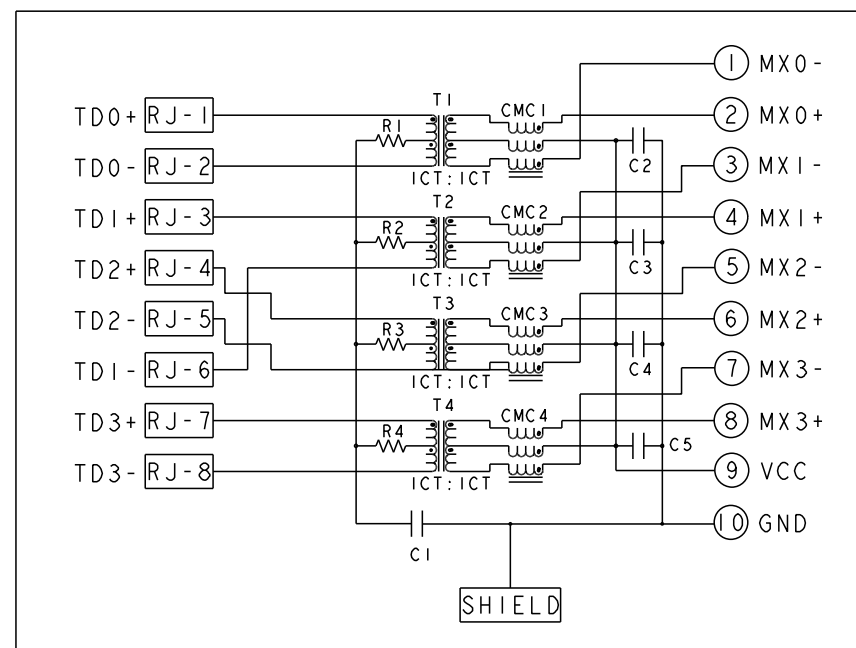




- 1 MATERIALS:
- HOUSING: THERMOPLASTIC, BLACK, FLAMMABILITY RATING UL 94V-0.
  - SHIELD: BRASS, PREPLATED WITH 0.76um MIN SEMI-BRIGHT NICKEL, POST DIPPED WITH 2.54um MIN SAC SOLDER ON SOLDER TAILS.
  - CONTACTS: PHOSPHOR BRONZE, PLATED WITH 1.27um MIN OVERALL NICKEL UNDERPLATE, SELECTIVE 1.27um MIN GOLD AT MATING INTERFACE AND 2.54um MIN MATTE TIN ON SOLDER TAILS.
  - LED: DIFFUSED EPOXY LENS, CARBON STEEL LEAD FRAME LEADS, PREPLATED WITH 2.03um MIN SILVER OVER 1.02um MIN NICKEL OVER 1.02um MIN COPPER UNDERPLATE, POST PLATED WITH 2.54um MIN MATTE TIN AND/OR 2.54um MIN SAC SOLDER DIP OR PURE TIN SOLDER DIP.
- 2 MAGNETICS:
- APPLICATION: 10/100/1000 BASE-T
  - IMPEDANCE: 100 ohm
  - TURNS RATIO (CHIP:CABLE): 1:1 ALL FOUR PAIRS
  - OPEN CIRCUIT INDUCTANCE (OCL): 350uH MIN @100kHz, 0.1VRMS, 8mA DC BIAS FROM 0°C TO 70°C, ALL FOUR PAIRS
  - RISE TIME(10%-90%): 2.5ns TYPICAL;
  - ALL FOUR PAIRS BI-DIRECTIONAL
  - PERFORMANCE @25°C:
    - INSERTION LOSS (IL): 1.1dB MAX FROM 0.5MHz TO 100MHz
    - RETURN LOSS (RL): 18dB MIN FROM 0.5MHz TO 40MHz
    - 12-20LOG(f/80)dB MIN FROM 40.1MHz TO 100MHz
    - CROSSTALK ATTENUATION: 35dB MIN FROM 0.5MHz TO 40MHz
    - 33-20LOG(f/50)dB MIN FROM 40.1MHz TO 100MHz
    - COMMON MODE REJECTION RATIO (CMRR): 30dB MIN FROM 0.5MHz TO 100MHz
  - ISOLATION VOLTAGE: COMPLIES WITH IEEE802.3 2002, PARA 40.6.1.1, ITEM a and b.

## S8G16 GIGABIT CIRCUIT

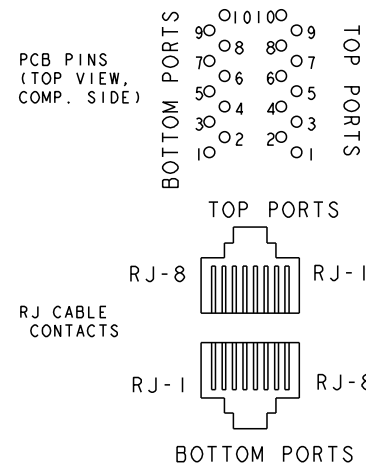
### TOP AND BOTTOM PORTS



C1 = 1000pF, 3kV  
 C2 - C5 = 470pF, 10%, 50V  
 R1-R4 = 75 OHMS, 1/16W

### PIN DESIGNATIONS

(REPEAT FOR EACH VERTICAL PAIR OF PORTS)



- 3 PART NUMBER, DATE CODE AND COUNTRY OF ORIGIN ARE LOCATED IN THE APPROXIMATE AREA SHOWN. DATE CODE "YY" IS THE YEAR, "WW" IS THE WEEK, "D" IS THE DAY OF WEEK, WITH SUNDAY="1".
- 4 TRP LOGO AND AGENCY APPROVAL LOGO ARE LOCATED IN THE APPROXIMATE AREA SHOWN.
- 5 RJ45 CAVITIES CONFORM TO FCC RULES AND REGULATIONS PART 68 SUBPART F.
- 6 LED ARE DRIVEN WITH CONSTANT CURRENT AT APPROX. 20mA  
 DOMINANT WAVELENGTH (λD)  
 GREEN, 568nm TYP at IF=20mA  
 YELLOW, 588nm TYP at IF=20mA  
 FORWARD VOLTAGE (VF):  
 GREEN, 2.2V TYP at IF=20mA  
 YELLOW, 2.1V TYP at IF=20mA
- 7 INDICATED MAGNETIC CONNECTIONS ARE SYMMETRICAL AND SUPPORT AUTO-MDI/MDIX.
- 8 OPERATING TEMPERATURE: FROM 0°C TO 70°C
- 9 THE PARTS ARE RECOMMENDED FOR WAVE SOLDERING PROCESS, PEAK TEMPERATURE 265 °C MAX. 10 SECONDS MAX. IT IS RECOMMENDED THAT THE CONNECTOR SHIELD AND BODY BE MASKED TO PROTECT IT FROM DIRECT EXPOSURE TO THE SOLDER WAVE TO AVOID DAMAGE TO THE CONNECTOR AND LEDS.

|       |                     |                      |                  |                   |                   |             |
|-------|---------------------|----------------------|------------------|-------------------|-------------------|-------------|
| 2.80  | GREEN/YELLOW        | GREEN/YELLOW         | GREEN/YELLOW     | GREEN/YELLOW      | 7                 | 1-1840215-4 |
| 2.50  | GREEN               | YELLOW               | GREEN            | YELLOW            | 7                 | 1840215-5   |
| 3.30  | GREEN/YELLOW        | GREEN/YELLOW         | GREEN/YELLOW     | GREEN/YELLOW      | 7                 | 1840215-4   |
| 3.30  | YELLOW              | GREEN                | GREEN            | YELLOW            | 7                 | 1840215-3   |
| 3.30  | GREEN               | YELLOW               | GREEN            | YELLOW            | 7                 | 1840215-2   |
| 3.30  | GREEN               | GREEN                | GREEN            | GREEN             | 7                 | 1840215-1   |
| DIM A | BOTTOM LED 2 (LEFT) | BOTTOM LED 1 (RIGHT) | TOP LED 2 (LEFT) | TOP LED 1 (RIGHT) | REAR PCB GND TABS | PART NUMBER |

THIS DRAWING IS A CONTROLLED DOCUMENT.

APPROVED: DENNIS CHEN, TEDDY XIANG

DATE: 15SEP2006

DRW: WAVE XU

CHK: DENNIS CHEN

APPD: TEDDY XIANG

MODEL NAME: MAGJACK

DESC: 2X8 S8G16 GIGABIT OFFSET W/ LED

SIZE: A1

CAGE CODE: 108-104004

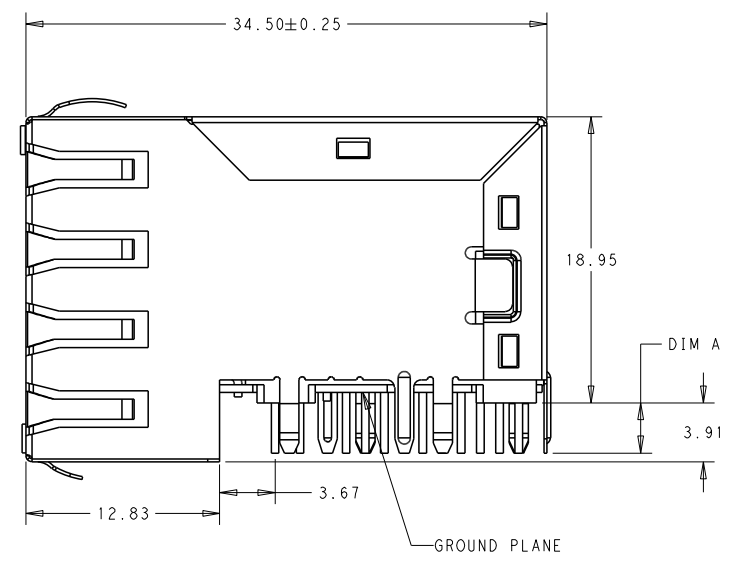
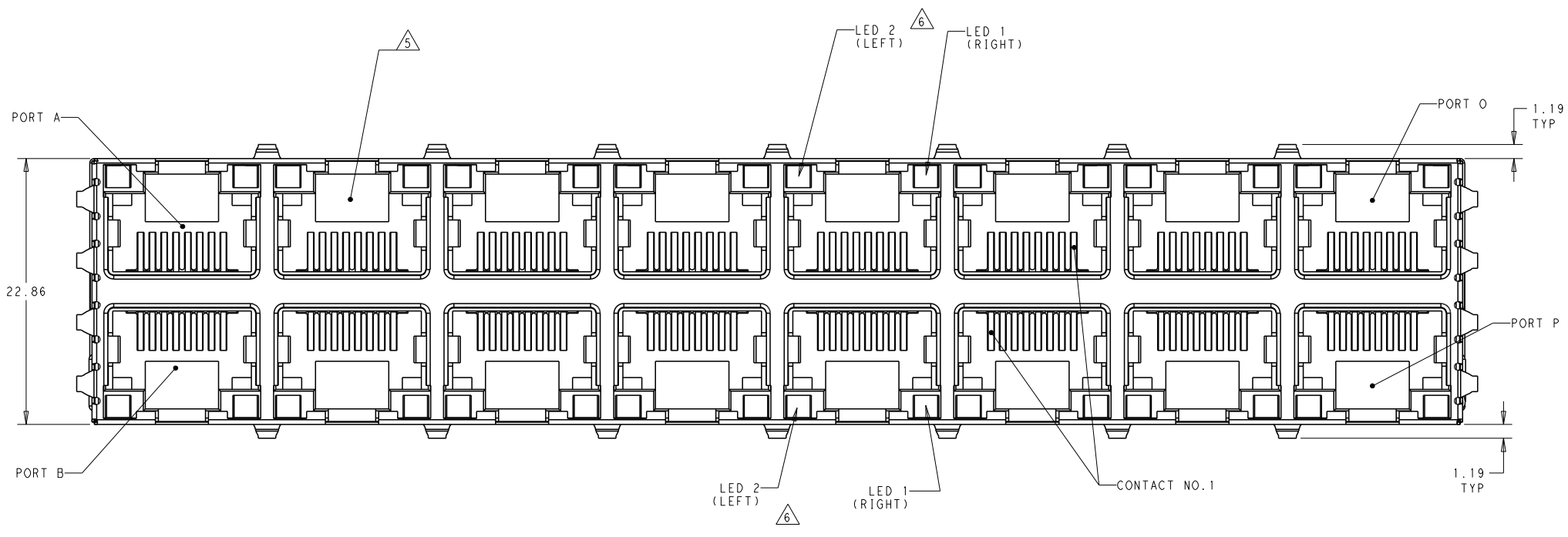
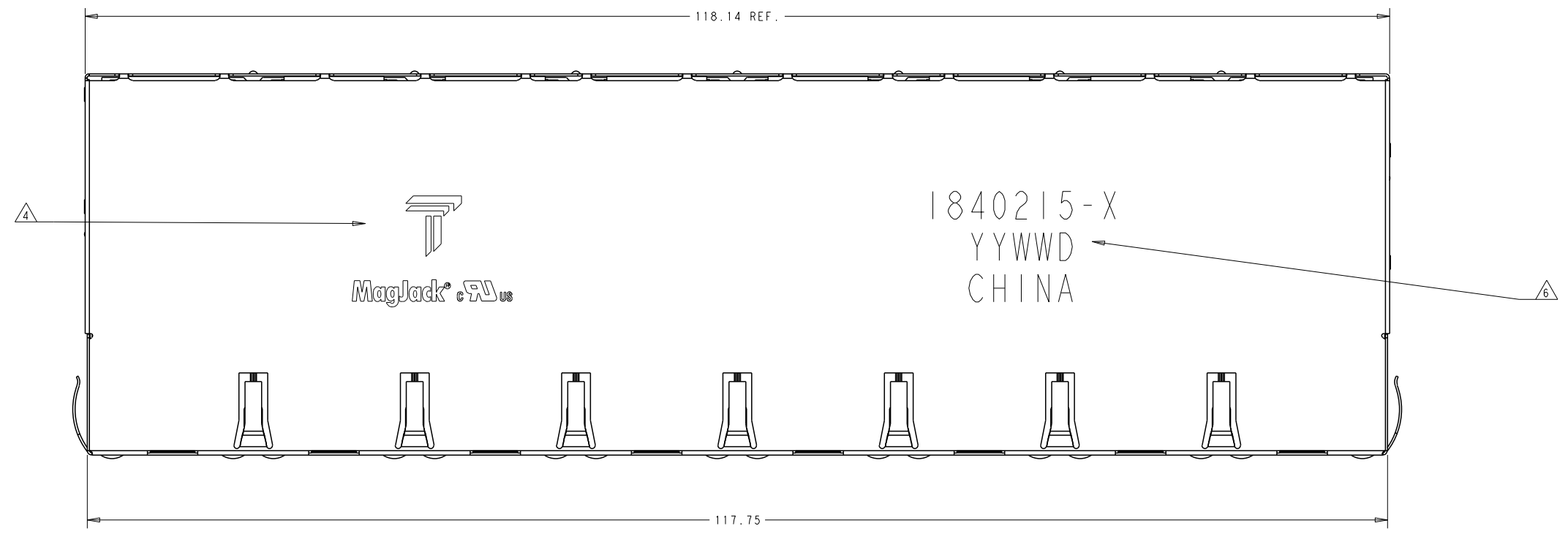
DRAWING NO: 1840215

SCALE: 4:1

SHEET 1 OF 4

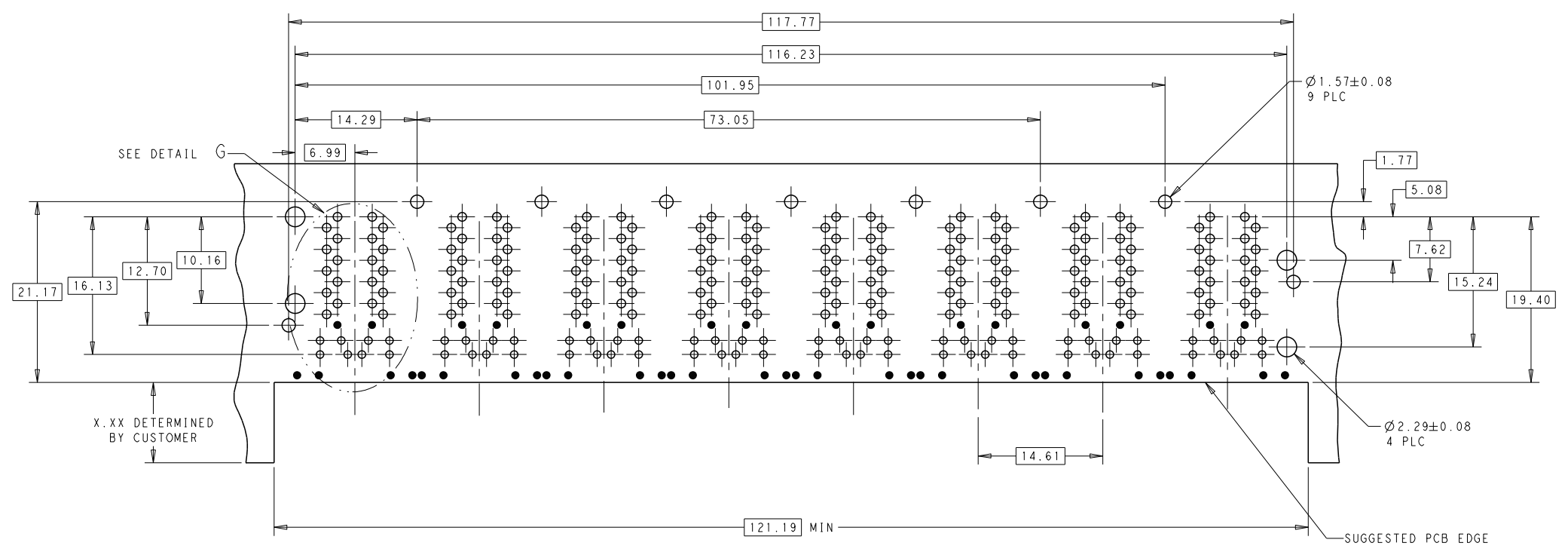
REV H

TRP CONNECTOR DONGGUAN CHINA

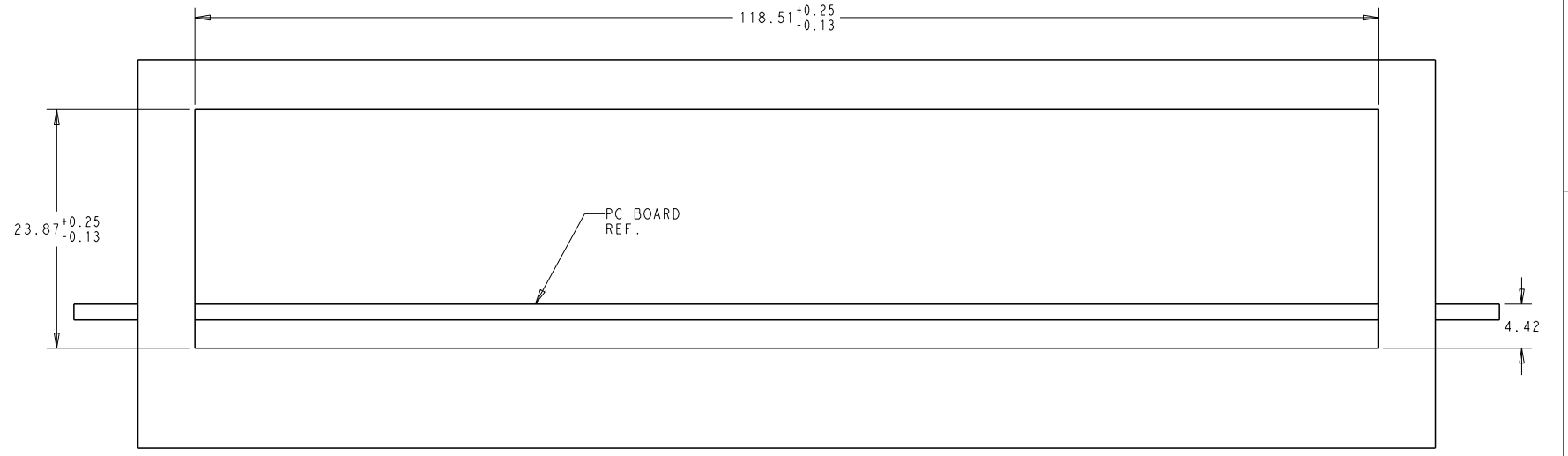


|  |                  |                  |                                 |               |
|--|------------------|------------------|---------------------------------|---------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT. |                  | DWN              | WAVE XU                         | 15SEP2006     |
| DIMENSIONS:                            |                  | CHK              | DENNIS CHEN                     | 15SEP2006     |
| mm                                     |                  | APP'D            | TEDDY XIONG                     | 15SEP2006     |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |                  | MODEL NAME       | MAGJACK                         |               |
| 0 PLC ±                                |                  | DESC             | 2X8 S8G16 GIGABIT OFFSET W/ LED |               |
| 1 PLC ±0.25                            |                  | SIZE             | A1                              | RESTRICTED TO |
| 2 PLC ±0.25                            |                  | CAGE CODE        |                                 |               |
| 3 PLC ±0.25                            |                  | DRAWING NO       | 1840215                         |               |
| 4 PLC ±                                |                  | SCALE            | 4:1                             | SHEET 2 OF 4  |
| ANGLES ±                               |                  | REV              | H                               |               |
| PRODUCT SPEC                           | APPLICATION SPEC | CUSTOMER DRAWING |                                 |               |
| 108-104004                             | -                |                  |                                 |               |

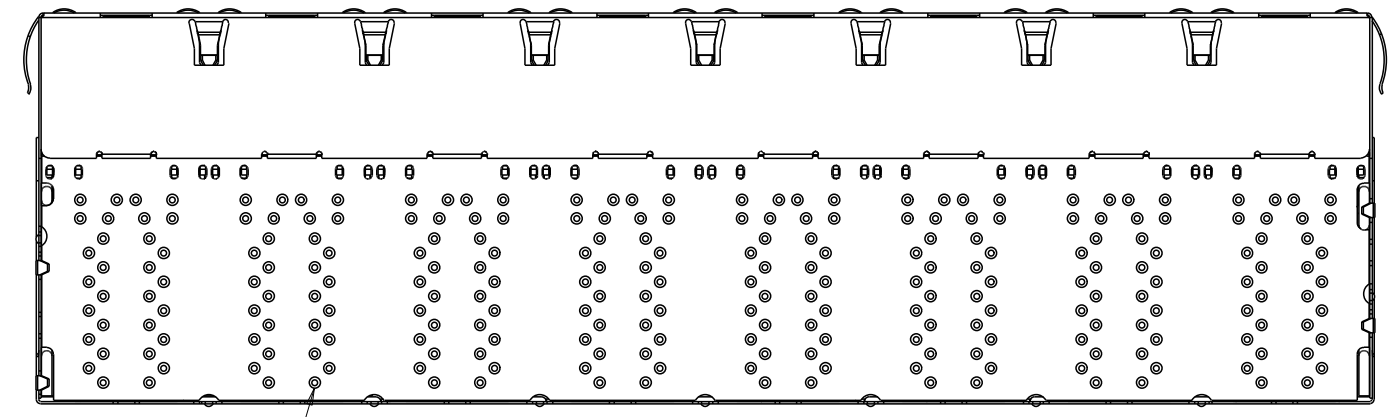




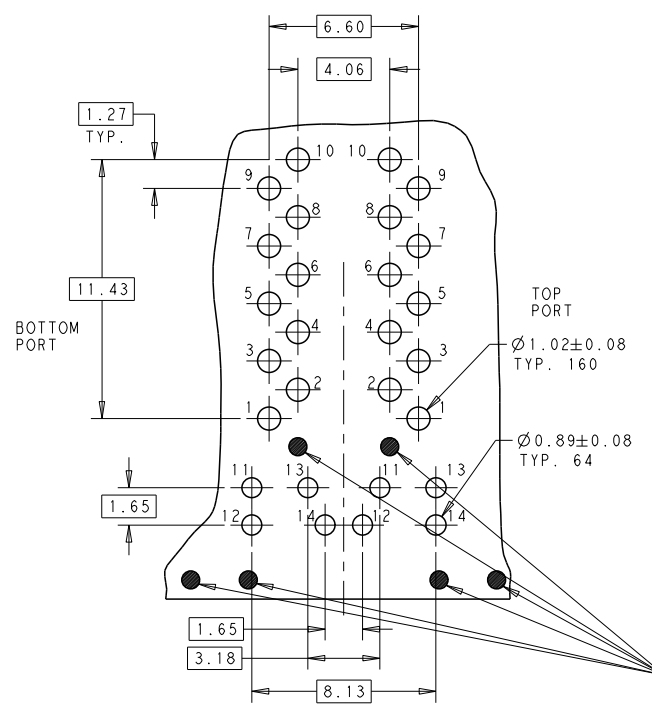
RECOMMENDED PC BOARD LAYOUT VIEW FROM COMPONENT SIDE



RECOMMENDED PANEL CUT-OUT



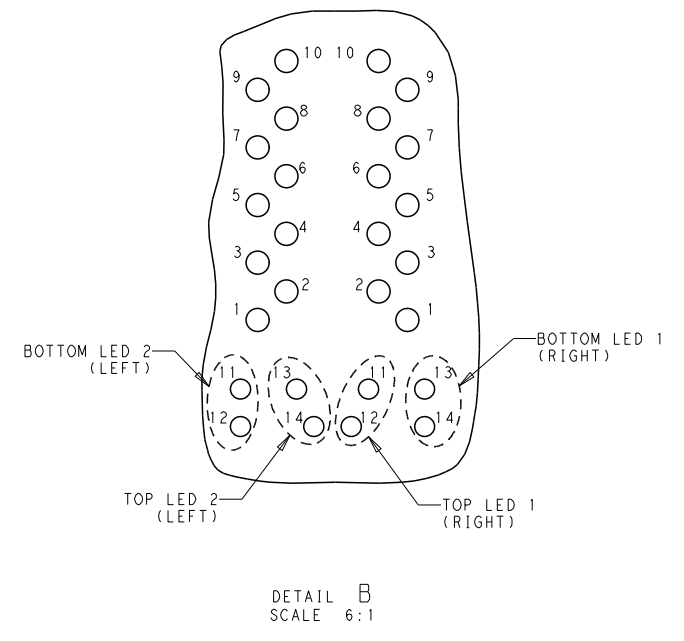
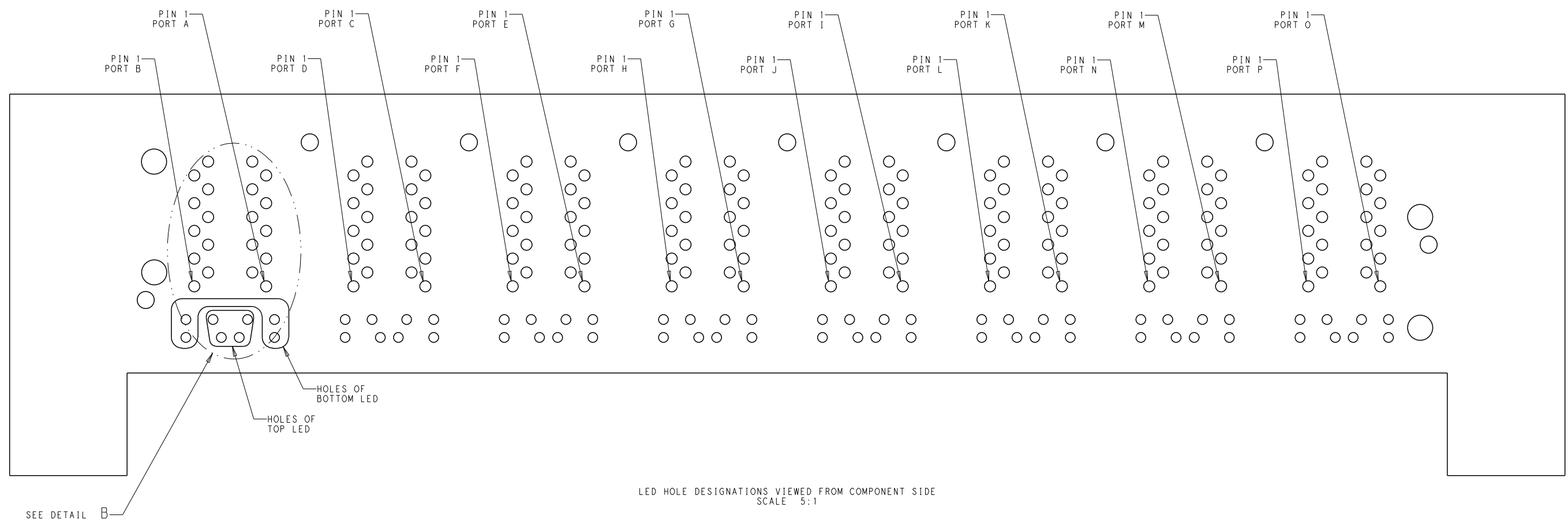
ALL THE SIGNAL PINS MUST BE SOLDERED WITH BOTTOM PCB



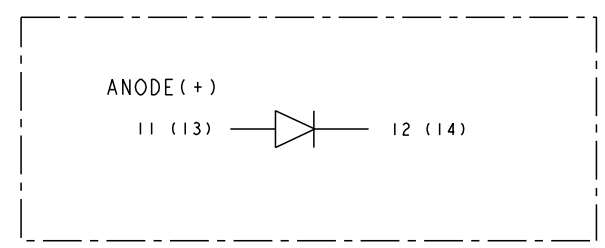
PIN #0, BOTTOM LED'S PIN ON MOD JACK AND BOTTOM PCB ARE STUB PINS WITH LENGTH SIMILAR TO PCB STANDOFF HEIGHT PRECAUTIONS SHOULD BE TAKEN IN PCB DESIGN TO GUARD AGAINST SHORTING TRACES TO STUB PINS

DETAIL G SCALE 6:1

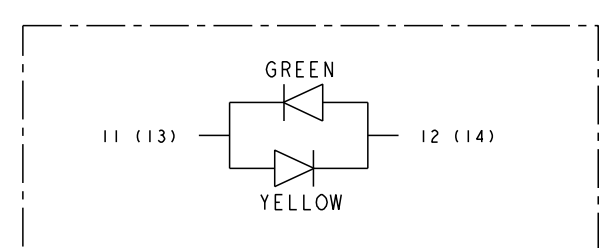
|   |  |                              |   |
|---|--|------------------------------|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT.                                      |  | DWN: WAVE XU 15SEP2006       | <br>DONGGUAN CHINA                                  |
| DIMENSIONS: mm  |  | CHK: DENNIS CHEN 15SEP2006   |   |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:                                      |  | APP'D: TEDDY XIONG 15SEP2006 | DESC: 2X8 S8G16 GIGABIT OFFSET W/ LED               |
| 0 PLC ±<br>1 PLC ±0.25<br>2 PLC ±0.25<br>3 PLC ±0.25<br>4 PLC ±<br>ANGLES ± |  | MODEL NAME: MAGJACK          | SIZE: A1  |
| PRODUCT SPEC: 108-104004  |  | APPLICATION SPEC: -          | STOCK NON-PoE                                       |
|   |  | CUSTOMER DRAWING             | SCALE: 3:1 SHEET 3 OF 4 REV H<br>CAGE CODE: 1840215 |




SINGLE COLOR LED



BI COLOR LED



|  |                            |                              |   |   |                                 |
|--|----------------------------|------------------------------|---|---|---------------------------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT.                                       |                            | DWN: WAVE XU 15SEP2006       |  <b>trp</b> CONNECTOR<br>a bel group | DONGGUAN CHINA  |                                 |
| DIMENSIONS: mm   |                            | CHK: DENNIS CHEN 15SEP2006   |   | MODEL NAME  | DESC                            |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:                                       |                            | APP'D: TEDDY XIONG 15SEP2006 |   | MAGJACK   | 2X8 S8G16 GIGABIT OFFSET W/ LED |
| 0 PLC ±<br>1 PLC ±0.25<br>2 PLC ±0.25<br>3 PLC ±0.25<br>4 PLC ±<br>ANGLES ±° | PRODUCT SPEC<br>108-104004 | APPLICATION SPEC<br>-        | SIZE: A1<br>CAGE CODE: 1840215<br>DRAWING NO: 1840215   | RESTRICTED TO: -<br>SCALE: 1:1<br>SHEET: 4 OF 4<br>REV: H |                                 |