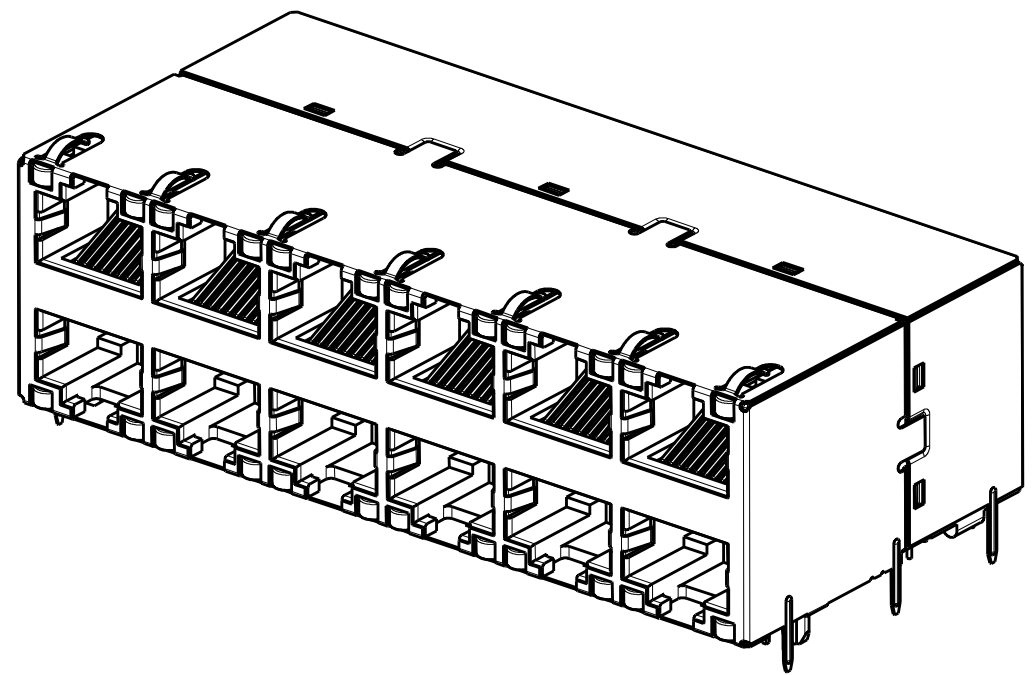


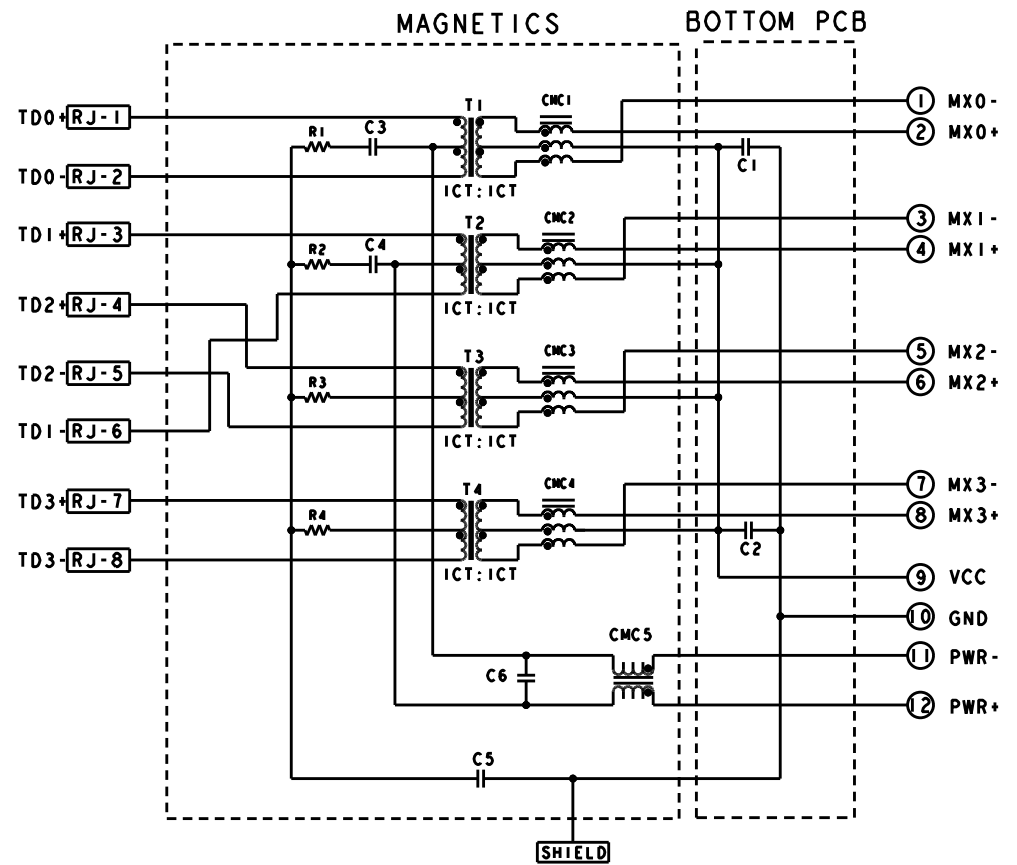
THIS DRAWING AND THE SUBJECT MATTER SHOWN THEREON ARE CONFIDENTIAL AND THE PROPERTY OF BEL/STEWART/TRP CONNECTOR AND SHALL NOT BE REPRODUCED, COPIED, OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF TRP CONNECTOR.

PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS:  
 5736910 5939955 6425781 6428361 6554638 6840817 7123117  
 7429195 7717749 7808751 6217391 6149050 7924130

| REVISIONS |           |    |     |      |
|-----------|-----------|----|-----|------|
| REV       | DATE      | BY | CHK | APPV |
| D         | 04FEB2015 | CZ | TY  |      |



S9HG104 GIGABIT PoE PLUS CIRCUIT  $\Delta\Delta\Delta$   
 TOP AND BOTTOM PORTS



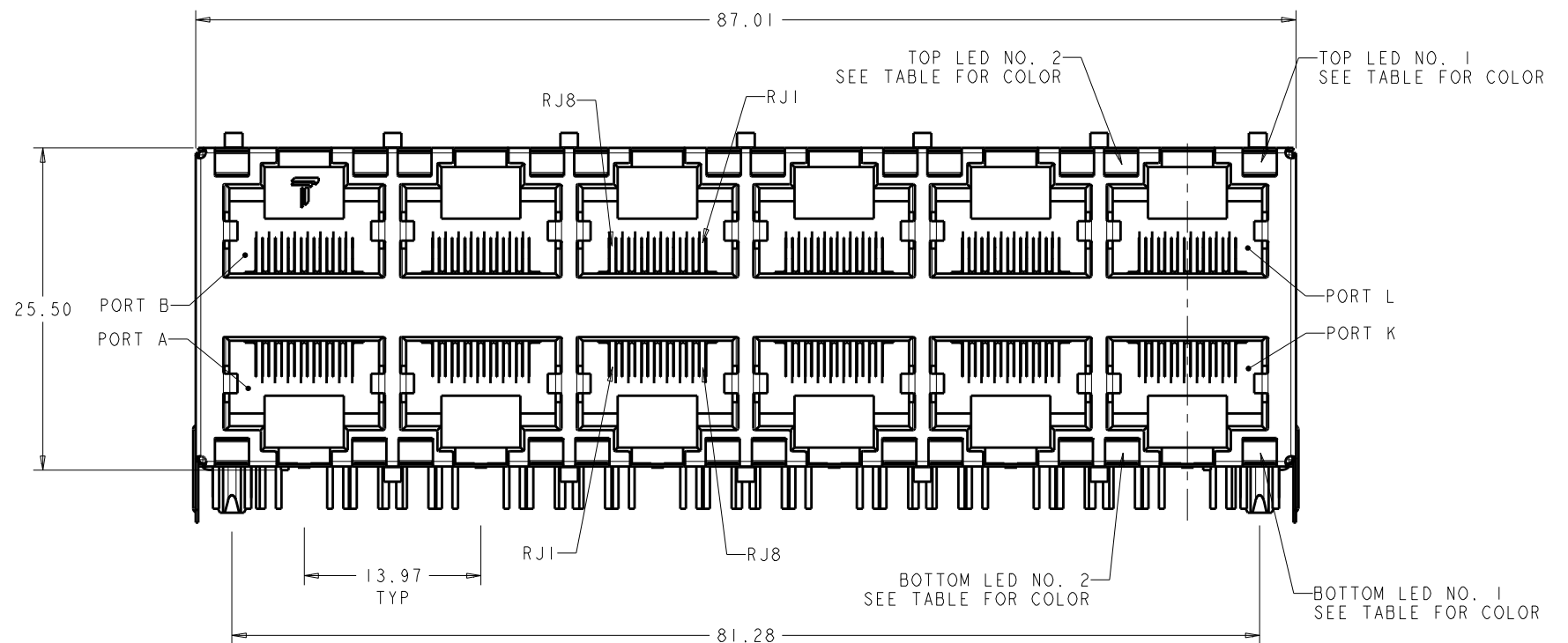
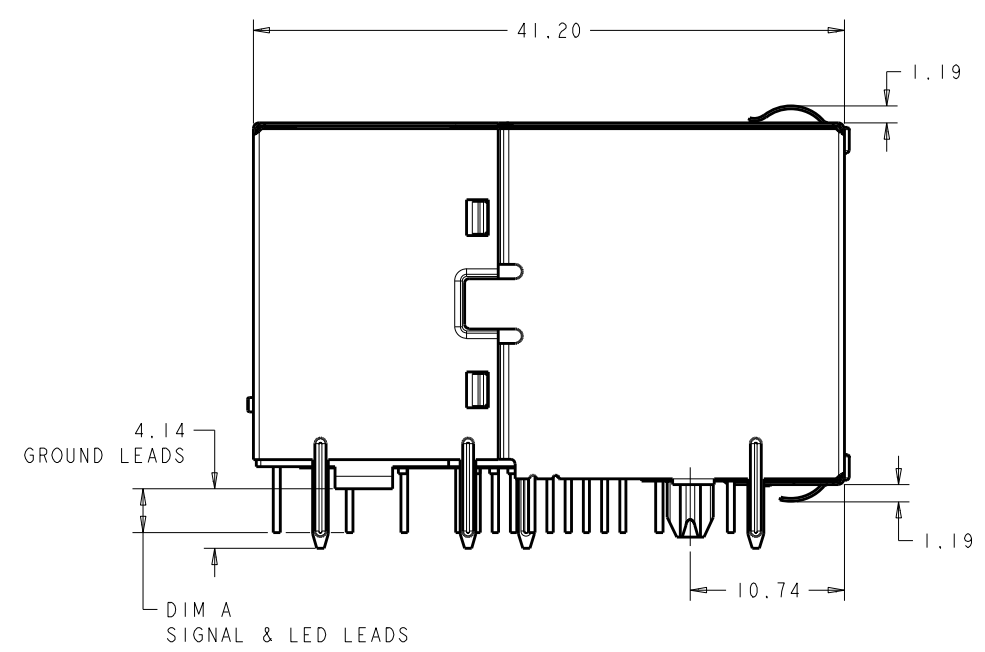
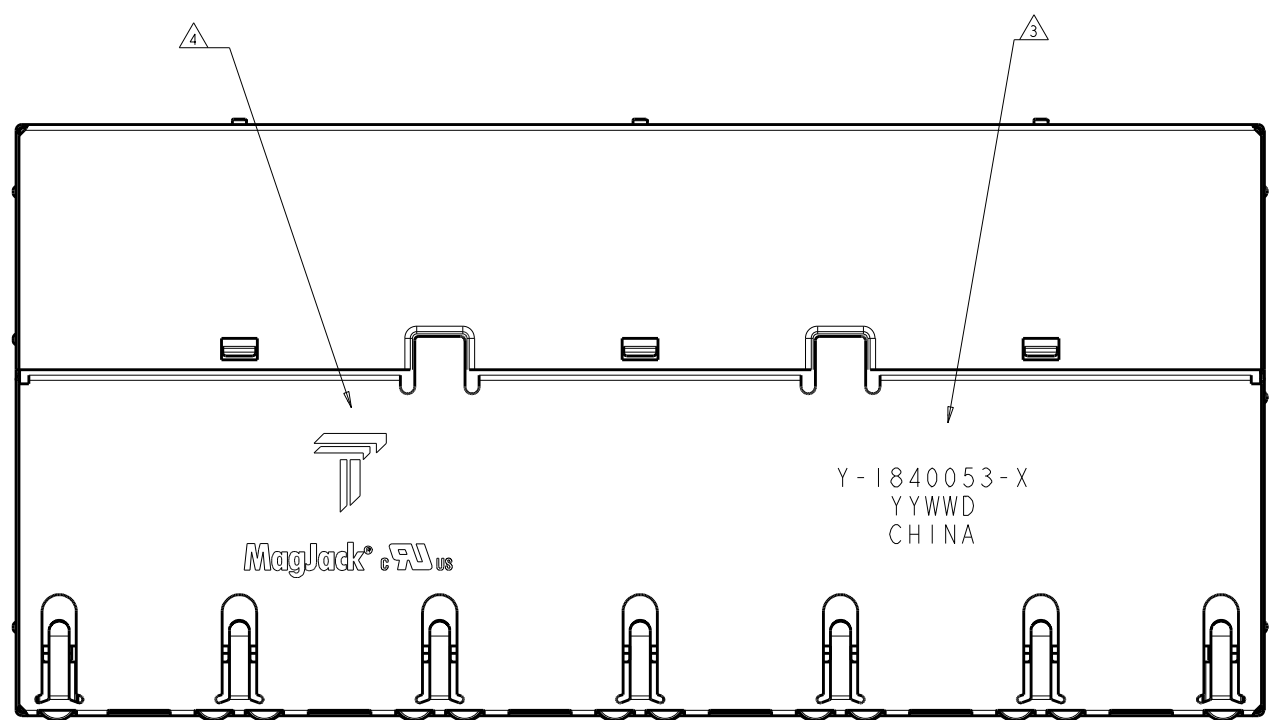
C1-C2=10nF, 50V, CAPACITORS  
 C3-C4=22nF, 100V, CAPACITORS  
 C5=1000pF, 2kV, CAPACITOR  
 C6=68nF, 100V, CAPACITOR  
 R1-R4=75 OHMS, 1/16W, RESISTORS

- MATERIALS:**  
 PLASTIC HOUSING: BLACK, THERMOPLASTIC FLAMMABILITY RATING UL 94V-0  
 SHIELD: BRASS, PREPLATED WITH 0.76um MIN SEMI-BRIGHT NICKEL,  
 POST DIPPED WITH 2.54um MIN SAC SOLDER OR PURE TIN SOLDER DIP ON SOLDER TAILS,  
 CONTACTS: PHOSPHOR BRONZE, 1.27um MIN OVERALL NICKEL UNDERPLATE WITH 1.27um MIN GOLD OR WITH SELECT 0.05um MIN GOLD OVER 0.76um MIN PALLADIUM-NICKEL AT MATING INTERFACE AND 2.54um MIN MATTE TIN ON SOLDER TAILS,  
 LED: DIFFUSED EPOXY LENS, CARBON STEEL LEAD FRAME TAILS OF LED ARE PREPLATED WITH 2.03um MIN SILVER OVER 1.02um MIN NICKEL UNDERPLATE OVER 1.02um MIN COPPER UNDERPLATE. POST-PLATED WITH 2.54um MIN MATTE TIN AND/OR SAC SOLDER DIP OR PURE TIN SOLDER DIP
- MAGNETICS:**  
 APPLICATION: 10/100/1000 BASE-T, PoE PLUS  
 IMPEDANCE: 100 OHMS  
 TURNS RATIO (CHIP: CABLE): 1:1 ALL FOUR PAIRS  
 OPEN CIRCUIT INDUCTANCE (OCL):  
 ALL CHANNELS 350 uH MIN @ 100KHz, 0.1 VRMS WITH 8mA DC BIAS FROM 0°C TO 70°C,  
 120 uH min @ 100KHz, 0.1 VRMS WITH 19 mA DC BIAS FROM 0°C TO 70°C, ACROSS RJ1-RJ2 & RJ3-RJ6.  
 ALL FOUR PAIRS BI-DIRECTIONAL  
 POE CURRENT: 600mA DC MAX  
 PERFORMANCE @25°C:  
 INSERTION LOSS (IL): 1.1dB MAX FROM 1.0MHz TO 100MHz  
 RETURN LOSS (RL): 18dB MIN FROM 1.0MHz TO 40MHz  
 12-20LOG(f/80)dB MIN FROM 40.1MHz TO 100MHz  
 CROSSTALK ATTENUATION: 35dB MIN FROM 1.0MHz TO 40MHz  
 33-20LOG(f/50)dB MIN FROM 40.1MHz TO 100MHz  
 COMMON MODE REJECTION RATIO (CMRR):  
 30dB MIN FROM 1.0MHz TO 100MHz  
 ISOLATION VOLTAGE: 2250VDC(MAX) FOR 60 SECONDS WITH A RISE TIME OF 500V/SEC AND WITH ALL PORTS CONNECTED.
- PART NUMBER, DATE CODE AND COUNTRY OF ORIGIN LOCATED IN APPROXIMATE AREA SHOWN  
 DATE CODE: YYWW WHERE "YY" IS YEAR, "WW" IS WORK WEEK, "D" IS DAY OF WEEK, WITH SUNDAY = 1
- TRP CONNECTOR LOGO AND AGENCY APPROVAL LOGO ARE LOCATED IN APPROXIMATE AREA SHOWN.
- OPERATING TEMP: FROM 0°C TO 70°C.
- RJ45 CAVITY CONFORMS TO FCC RULES AND REGULATION PART 68 SUBPART F.
- INDICATED MAGNETIC CONNECTIONS ARE SYMMETRICAL AND SUPPORT AUTO-MDI/MDIX.
- DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
- DIMENSION ESTABLISHED BY CUSTOMER, BUT MAY NOT BE GREATER THAN 5.08mm.
- LEDS ARE DRIVEN WITH CONSTANT CURRENT AT APPROX 20mA  
 LED COLOR: DOMINANT WAVELENGTH ( $\lambda$ D): GREEN 568 nm TYP. @ IF=20mA  
 FORWARD VOLTAGE (VF): GREEN 2.2V TYP. @ IF=20mA  
 DOMINANT WAVELENGTH ( $\lambda$ D): YELLOW 588 nm TYP. @ IF=20mA  
 FORWARD VOLTAGE (VF): YELLOW 2.1V TYP. @ IF=20mA
- THESE PARTS ARE RECOMMENDED FOR WAVE SOLDERING PROCESS, PEAK TEMPERATURE 260°C, 10 SECONDS MAX.

|       |                  |                  |               |               |             |
|-------|------------------|------------------|---------------|---------------|-------------|
| 3.04  | GREEN/YELLOW     | GREEN/YELLOW     | GREEN/YELLOW  | GREEN/YELLOW  | 9-1840053-4 |
| 2.79  | GREEN/YELLOW     | GREEN/YELLOW     | GREEN/YELLOW  | GREEN/YELLOW  | 1-1840053-4 |
| DIM A | BOTTOM LED NO. 2 | BOTTOM LED NO. 1 | TOP LED NO. 2 | TOP LED NO. 1 | PART NO.    |

THIS DRAWING IS A CONTROLLED DOCUMENT.

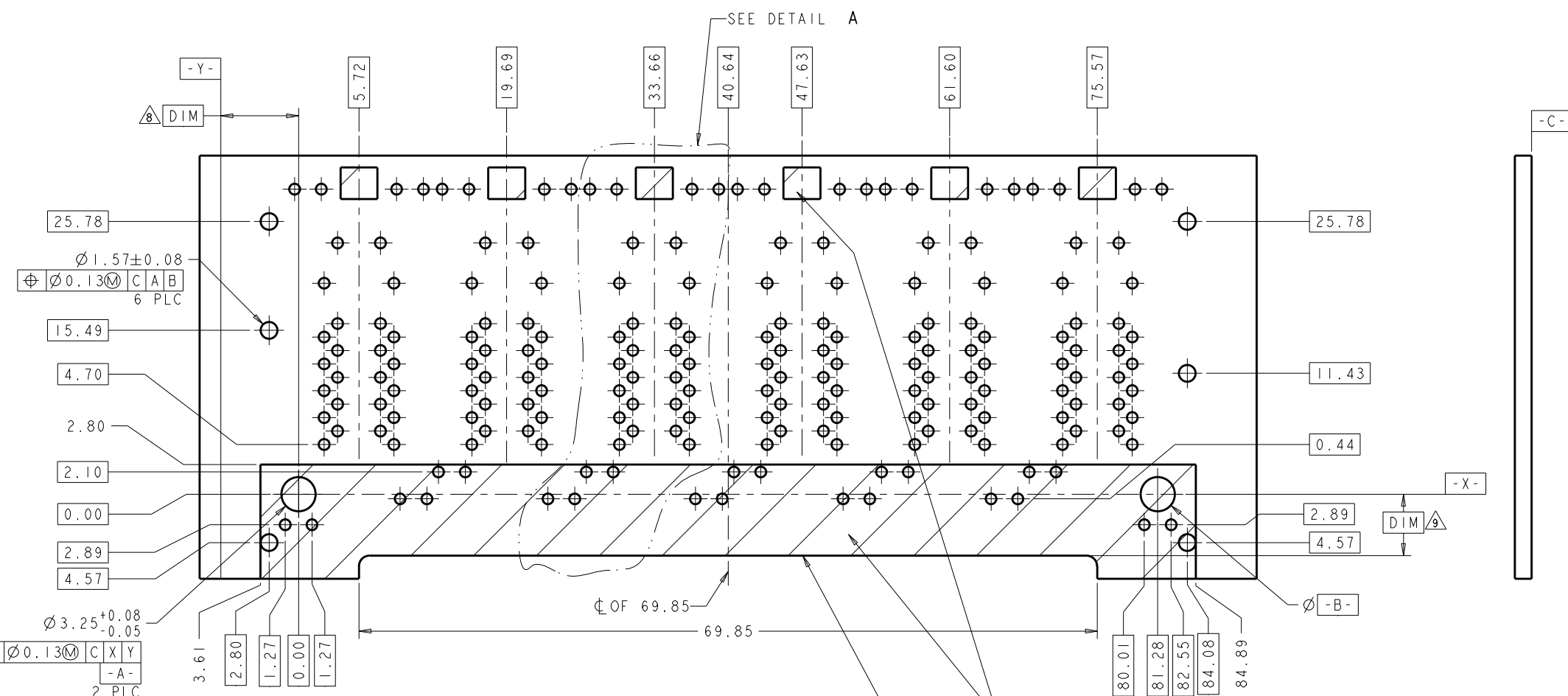
|                    |   |   |  |
|--------------------|---|---|--|
| DIMENSIONS: mm<br> | TOLERANCES UNLESS OTHERWISE SPECIFIED:<br>0 PLC ±<br>1 PLC ±<br>2 PLC ±0.25<br>3 PLC ±<br>4 PLC ±<br>ANGLES ± | THIS DRAWING IS A CONTROLLED DOCUMENT.<br>DIM: RICK LI/TERRY LIN 13AUG2012<br>CHK: TOMMY REN 13AUG2012<br>APVD: KELTH ZHU 13AUG2012<br>MODEL NAME: MAGJACK<br>PRODUCT SPEC: 108-104004<br>APPLICATION SPEC: | DONGGUAN CHINA<br>2X6 S9HG104 GIGABIT PoE+ W/ LED<br>SIZE: A1<br>CAGE CODE: 1840053<br>DRAWING NO: 108-104004<br>CUSTOMER DRAWING<br>SCALE: NTS<br>SHEET 1 OF 4<br>REV D |
|--------------------|---|---|--|



|   |                  |                                       |   |
|---|------------------|---------------------------------------|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT.                              |                  | DRN<br>RICK LI/TERRY LIN<br>13AUG2012 | <p>trp CONNECTOR<br/>DONGGUAN CHINA</p> |
| DIMENSIONS:<br>mm   |                  | CHK<br>TOMMY REN<br>13AUG2012         |   |
| TOLERANCES UNLESS OTHERWISE SPECIFIED:                              |                  | APVD<br>KELTH ZHU<br>13AUG2012        | DESC<br>MAGJACK                         |
| 0 PLC ±<br>1 PLC ±<br>2 PLC ±0.25<br>3 PLC ±<br>4 PLC ±<br>ANGLES ± |                  | MODEL NAME<br>MAGJACK                 | SIZE<br>2X6 S9HG104 GIGABIT PoE+ W/ LED |
| PRODUCT SPEC<br>108-104004  | APPLICATION SPEC | CAGE CODE<br>A1                       | DRAWING NO<br>1840053                   |
| CUSTOMER DRAWING  |                  | SCALE<br>NTS                          | SHEET<br>2 OF 4                         |
|   |                  | REV<br>D                              |   |

D  
C  
B  
A

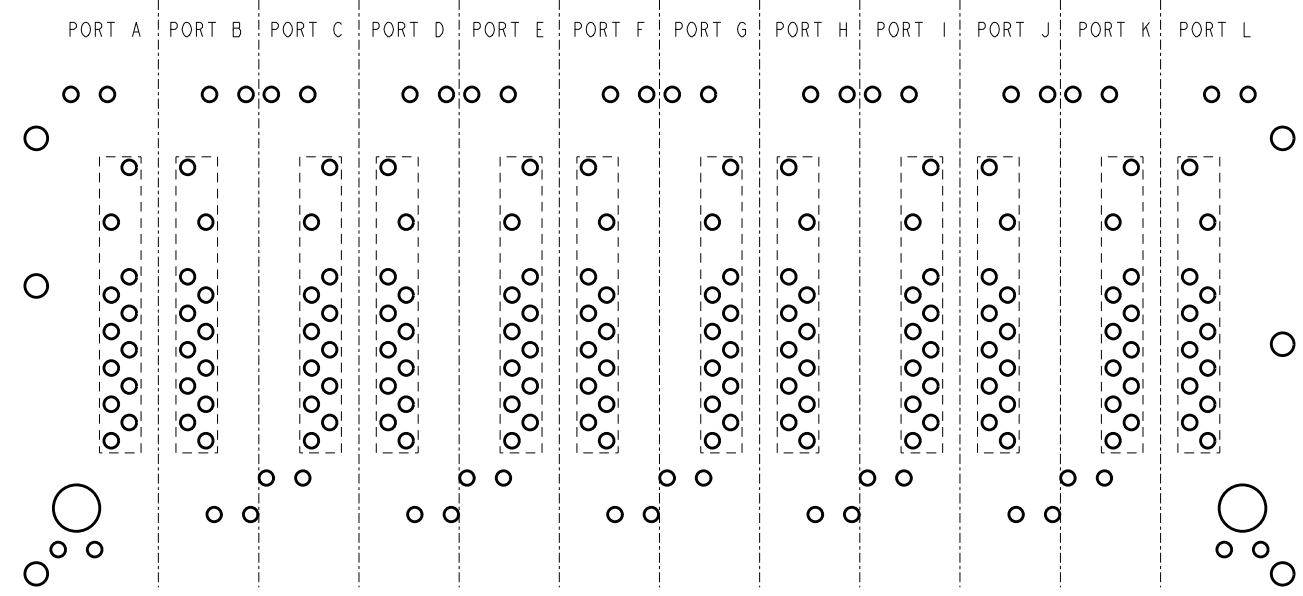
D  
C  
B  
A



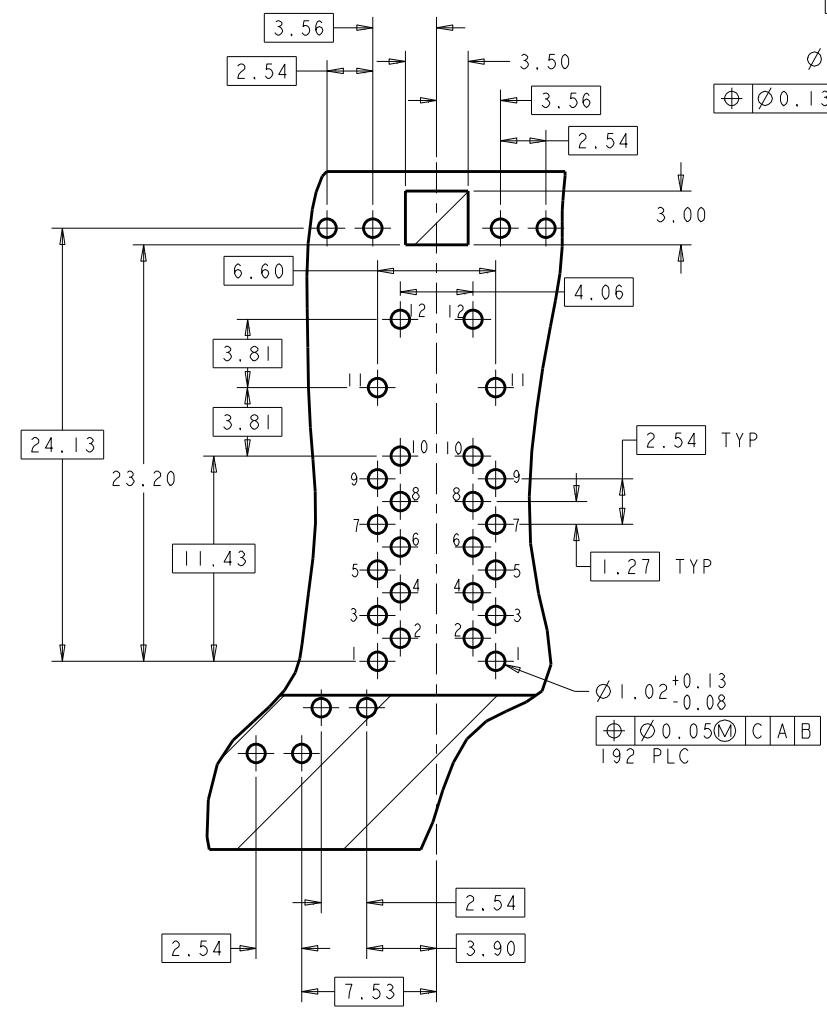
RECOMMENDED CUSTOMER PCB LAYOUT  
VIEWED FROM COMPONENT SIDE

IT IS RECOMMENDED THAT SHADED AREAS ON CUSTOMER PCB BOARD BE CLEAR OF ANY VIA HOLE, COMPONENT, CIRCUIT TRACE WHICH HAS EQUAL POTENTIAL WITH CABLE SIDE SIGNAL AND POE SIGNAL

RECOMMENDED PCB FRONT EDGE CUTOUT:  
THE BOTTOM SHIELD GROUND TABS(FRONT) SHOULD NOT BE SEATED ON THE TOP OF THE PCB

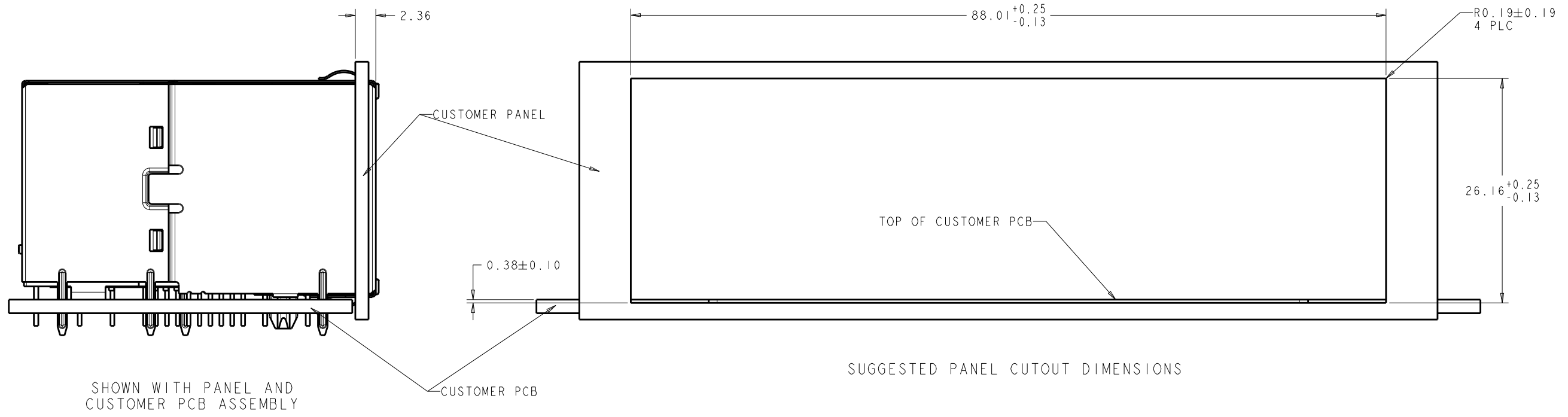
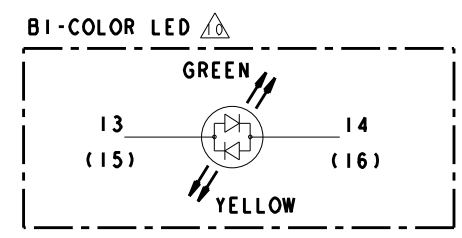
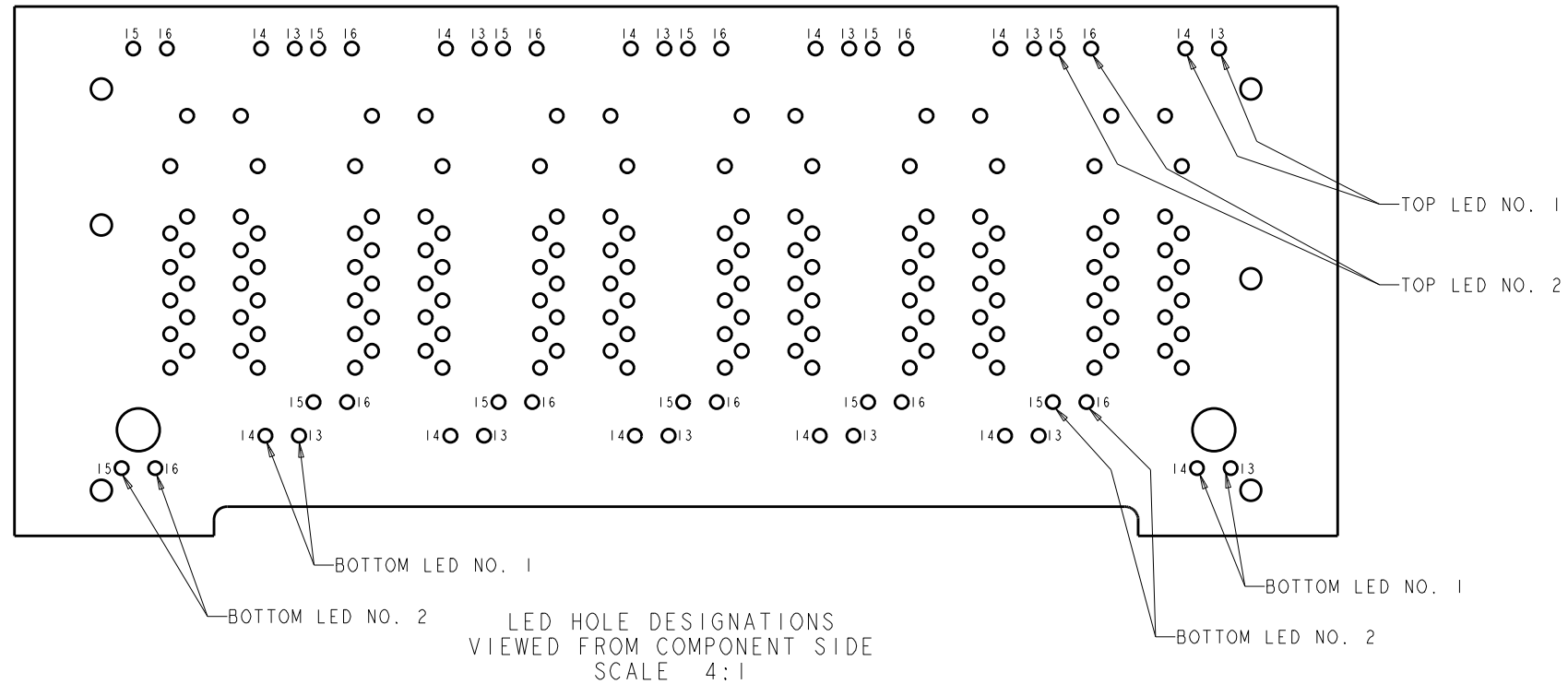


PORT ASSIGNMENT  
VIEWED FROM COMPONENT SIDE  
SCALE 4:1



DETAIL A  
SCALE 5:1

|  |   |   |   |
|--|---|---|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT. |   | DWG: RICK LI/TERRY LIN 13AUG2012<br>CHK: TOMMY REN 13AUG2012<br>APVD: KELTH ZHU 13AUG2012 | DONGGUAN CHINA                          |
| DIMENSIONS:<br>mm                      | TOLERANCES UNLESS OTHERWISE SPECIFIED:<br>0 PLC ±<br>1 PLC ±<br>2 PLC ±0.25<br>3 PLC ±<br>4 PLC ± | MODEL NAME<br>MAGJACK   | DESC<br>2X6 S9HG104 GIGABIT PoE+ W/ LED |
| PRODUCT SPEC<br>108-104004             | APPLICATION SPEC  | SIZE<br>A1  | CAGE CODE<br>1840053                    |
| CUSTOMER DRAWING                       |   | SCALE<br>NTS  | SHEET 3 OF 4<br>REV D                   |



SUGGESTED PANEL CUTOUT DIMENSIONS

|  |   |  |                    |
|--|---|--|--------------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT. |   | DWN RICK LI/TERRY LIN 13AUG2012<br>CHK TOMMY REN 13AUG2012<br>APVD KEITH ZHU 13AUG2012 | DONGGUAN CHINA     |
| DIMENSIONS: mm<br>                     | TOLERANCES UNLESS OTHERWISE SPECIFIED:<br>0 PLC ±<br>1 PLC ±<br>2 PLC ±0.25<br>3 PLC ±<br>4 PLC ±<br>ANGLES ± | MODEL NAME: MAGJACK<br>2X6 S9HG104 GIGABIT PoE+ W/ LED                                 |                    |
| PRODUCT SPEC: 108-104004               | APPLICATION SPEC:   | SIZE: A1<br>CAGE CODE: 1840053<br>DRAWING NO: 1840053                                  | RESTRICTED TO:     |
| CUSTOMER DRAWING                       |   | SCALE: NTS   | SHEET 4 OF 4 REV D |