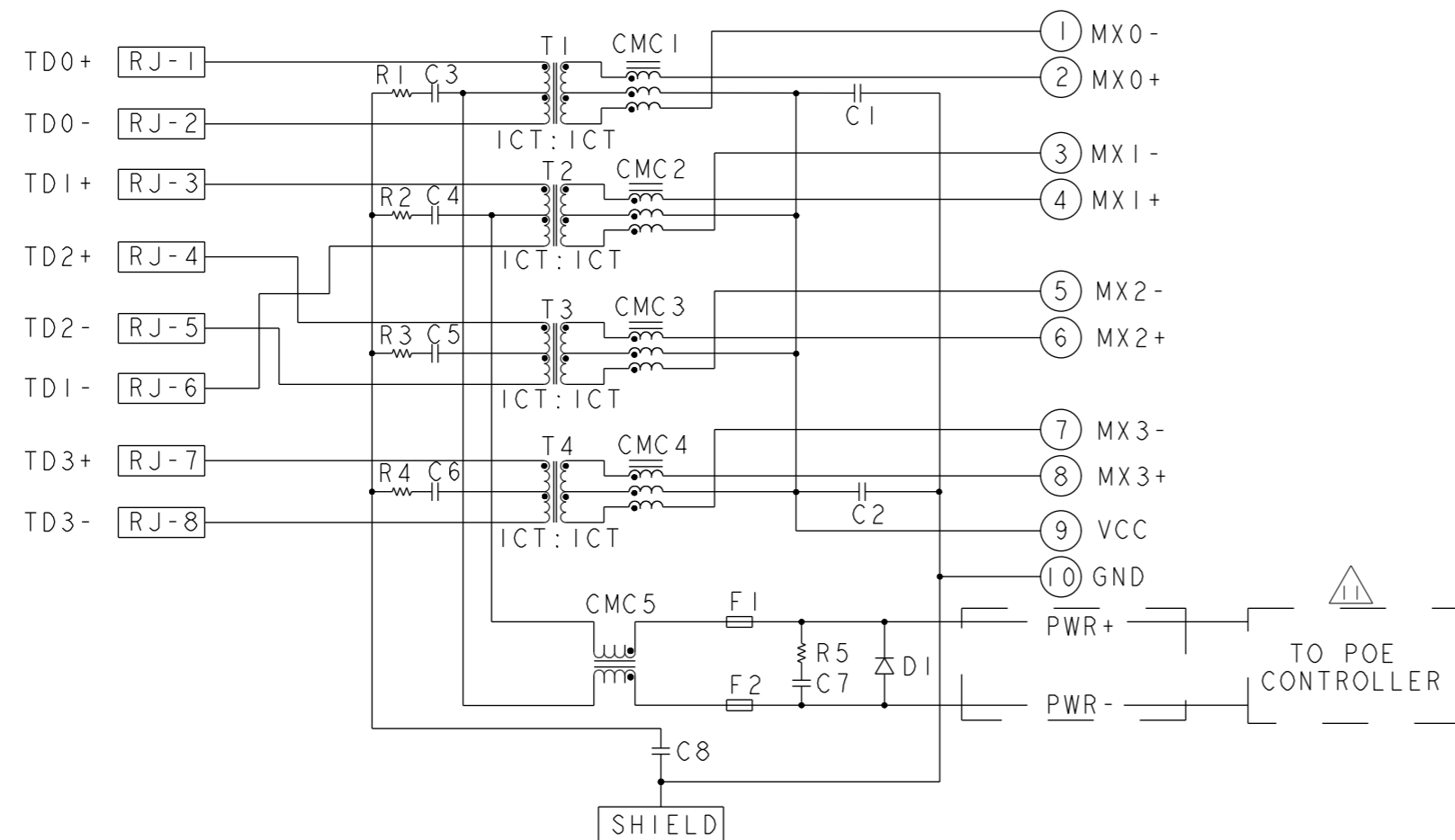


1. MATERIALS:
- HOUSING: THERMOPLASTIC, BLACK, FLAMMABILITY RATING UL 94V-0.
 - SHIELD: BRASS, PREPLATED WITH 0.76um MIN SEMI-BRIGHT NICKEL, POST DIPPED WITH 2.54um MIN SAC SOLDER ON SOLDER TAILS.
 - CONTACTS: PHOSPHOR BRONZE, PLATED WITH 1.27um MIN OVERALL NICKEL UNDERPLATE, WITH SELECT 0.05um MIN GOLD 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 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, PoE PLUS
 - IMPEDANCE: 100 OHMS
 - TURNS RATIO (CHIP:CABLE): 1:1 ALL FOUR PAIRS
 - OPEN CIRCUIT INDUCTANCE (OCL): 350uH MIN @100kHz, 0.1VRMS, 18mADC BIAS FROM 0°C TO 70°C, ACROSS RJ1-RJ2 & RJ3-RJ6; 8mADC BIAS FROM 0°C TO 70°C, ACROSS RJ4-RJ5 & RJ7-RJ8.
 - DIELECTRIC (ISOLATION VOLTAGE): 2250 VDC(MAX) FOR 60 SECONDS WITH A RISE TIME OF 500V/SEC AND WITH ALL PORTS CONNECTED.
 - ALL FOUR PAIRS BI-DIRECTIONAL
 - POE CURRENT: 600mADC MAX
 - PERFORMANCE @ 25°C: SEE TABLE ON SHEET 6
3. LABEL IS LOCATED IN THE APPROXIMATE AREA SHOWN. THE CONTENTS ON LABEL ARE BAR CODE OF PART NUMBER, PART NUMBER, BAR CODE OF DATE CODE, DATE CODE, TRP LOGO, COUNTRY OF ORIGIN AND AGENCY APPROVAL LOGO.
4. OPERATING TEMPERATURE: FROM 0°C TO 70°C.
5. RJ45 CAVITIES CONFORM TO FCC RULES AND REGULATIONS PART 68 SUBPART F.
6. INDICATED MAGNETIC CONNECTIONS ARE SYMMETRICAL AND SUPPORT AUTO-MDI/MDIX.
7. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
8. BASIC DIMENSION ESTABLISHED BY CUSTOMER, BUT NOT TO BE GREATER THAN 5.08.
9. LED IS DRIVEN WITH CONSTANT CURRENT AT APPROX 20mA
LED COLOR: DOMINANT WAVELENGTH (λ D):
GREEN 568 nm TYP at IF=20mA
YELLOW 588 nm TYP at IF=20mA
ORANGE 605 nm TYP at IF=20mA
FORWARD VOLTAGE (VF):
GREEN 2.2V TYP at IF=20mA
YELLOW 2.1V TYP at IF=20mA
ORANGE 2.1V TYP at IF=20mA
10. THE PARTS ARE RECOMMENDED FOR WAVE SOLDERING PROCESS, PEAK TEMPERATURE 260°C MAX, 10 SECONDS MAX.
11. POE CONTROLLER WITH LTC4270 AND LTC4271 CHIPS.

CIRCUIT S9HG48A STACKED SCHEMATIC

TOP AND BOTTOM PORTS



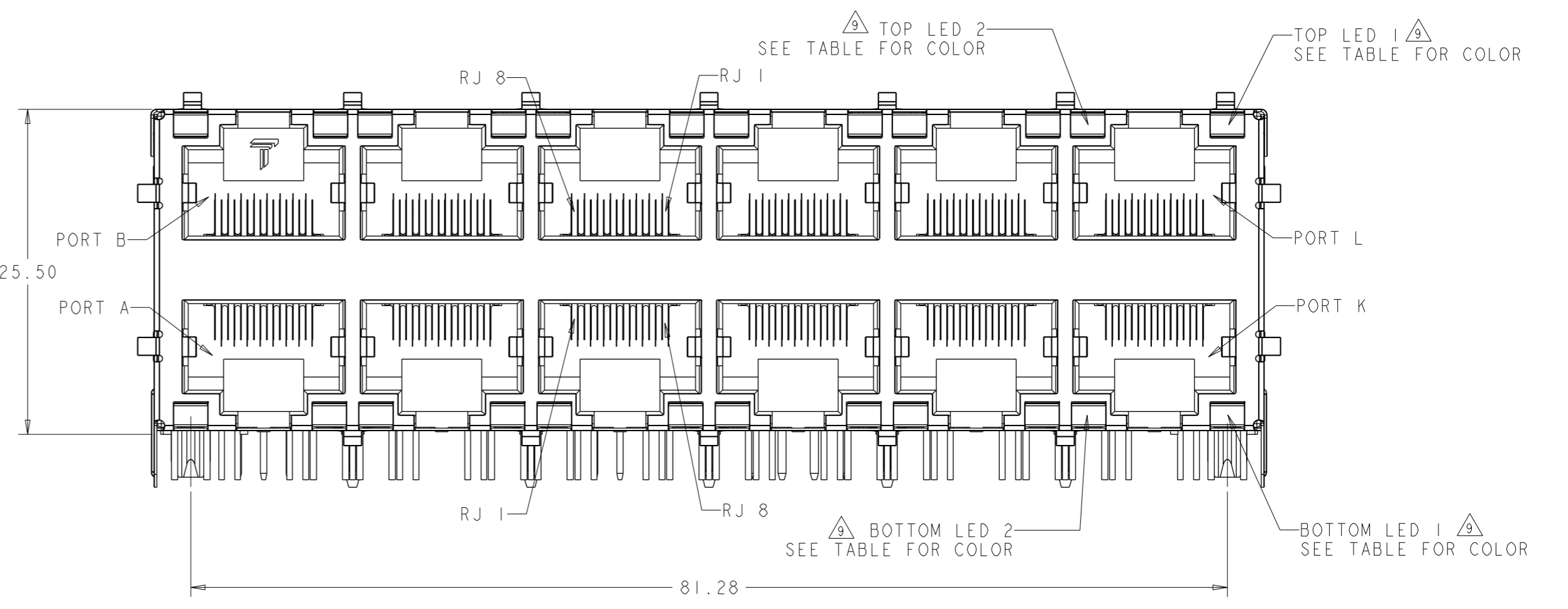
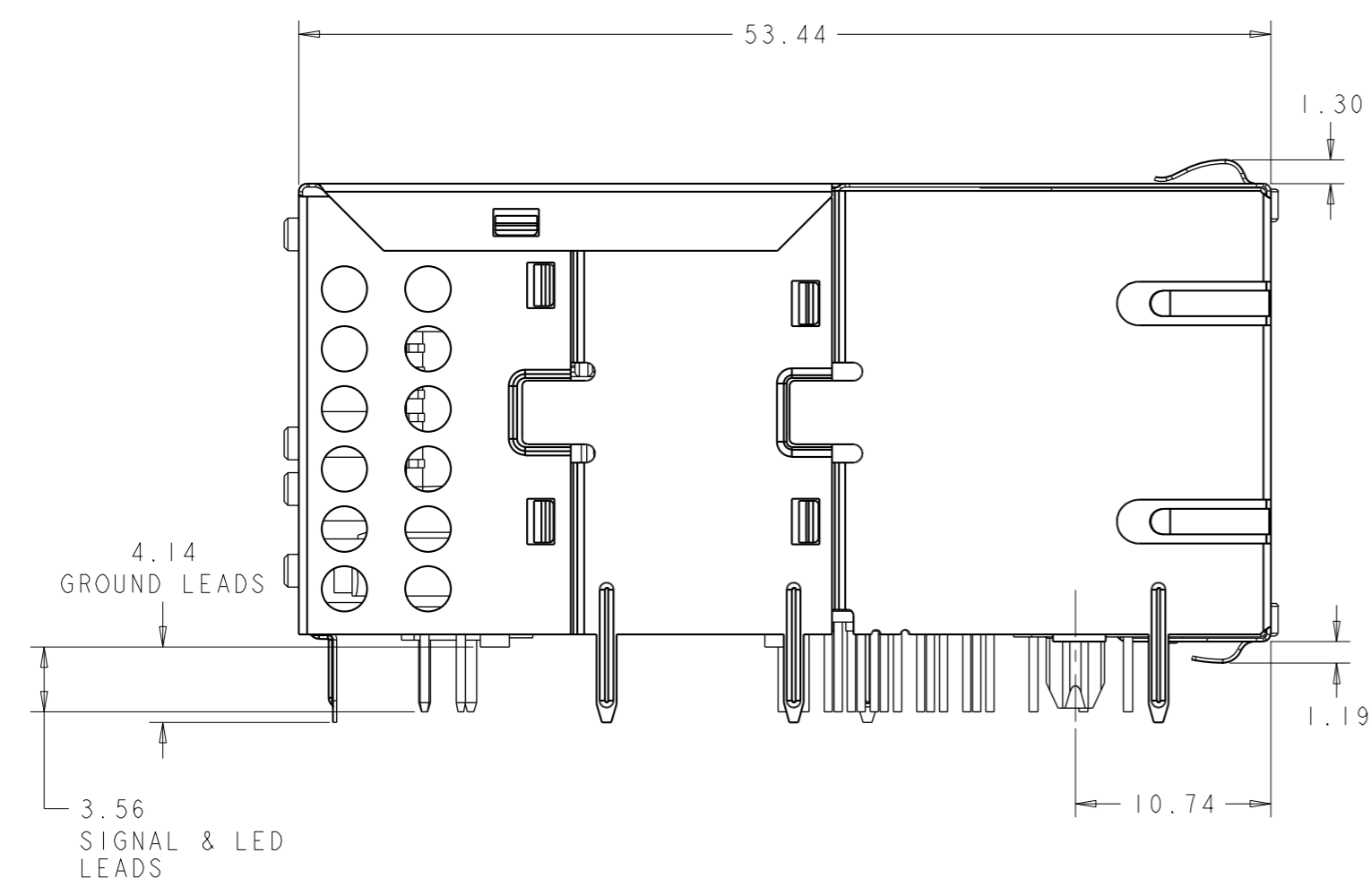
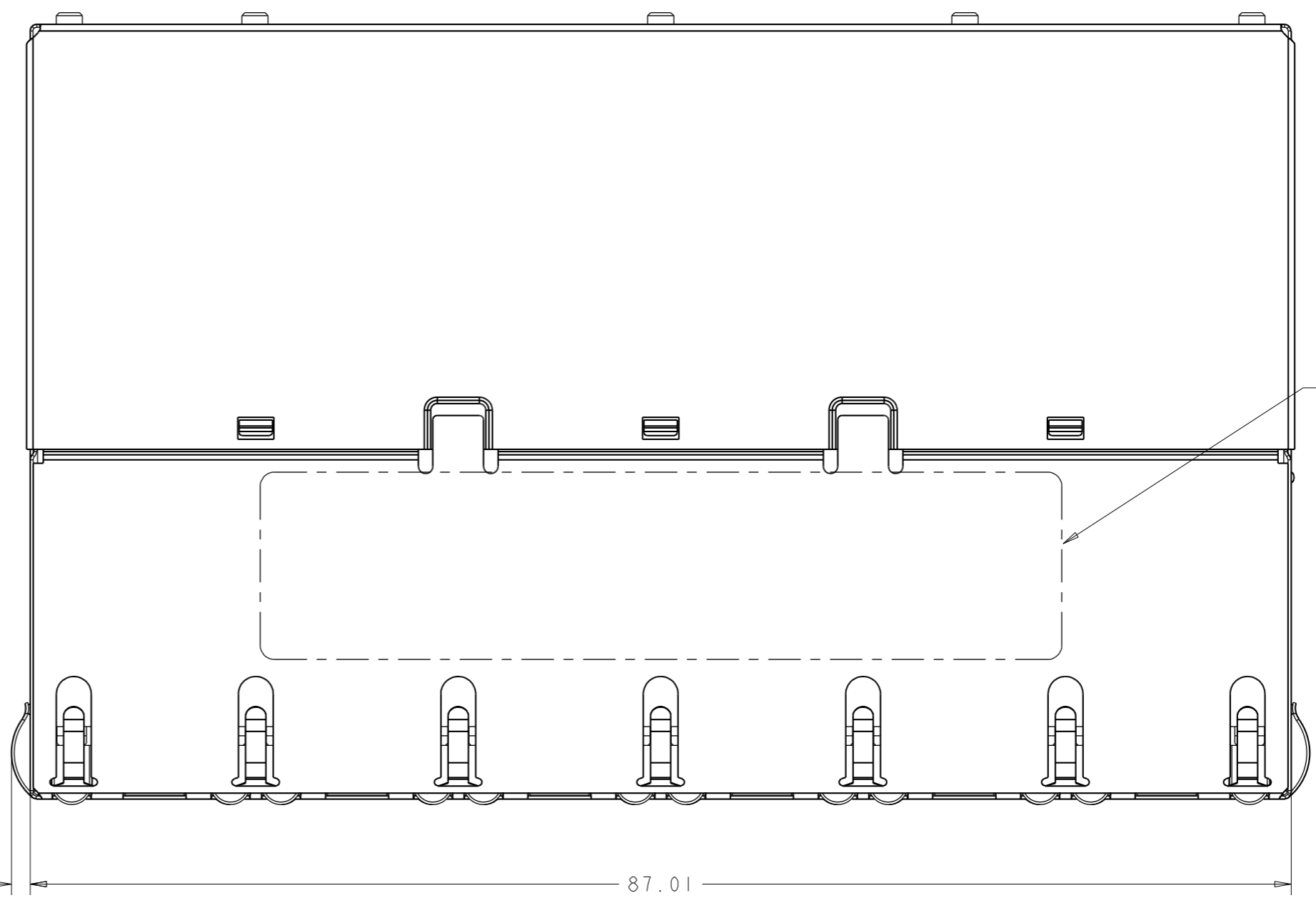
C1-C2 = 220nF, 25V CAPACITORS
 C3-C6 = 10nF, 250V CAPACITORS
 C7 = 100nF, 100V CAPACITOR
 C8 = 1000pF, 2KV CAPACITOR
 R1-R4 = 75 Ohms, 1/16W RESISTORS
 R5 = 4.7 Ohms, 1/10W RESISTOR
 F1-F2 = 63V, 1.5A FUSES
 D1 = 1A, Vr: 100V DIODE


| | | | | |
|--------------|--------------|-----------|-----------|-------------|
| GRN/ORA | GRN/ORA | GRN/ORA | GRN/ORA | 2250112-7 |
| GRN/YEL | GRN/YEL | GRN/YEL | GRN/YEL | 2250112-4 |
| BOTTOM LED 2 | BOTTOM LED 1 | TOP LED 2 | TOP LED 1 | PART NUMBER |

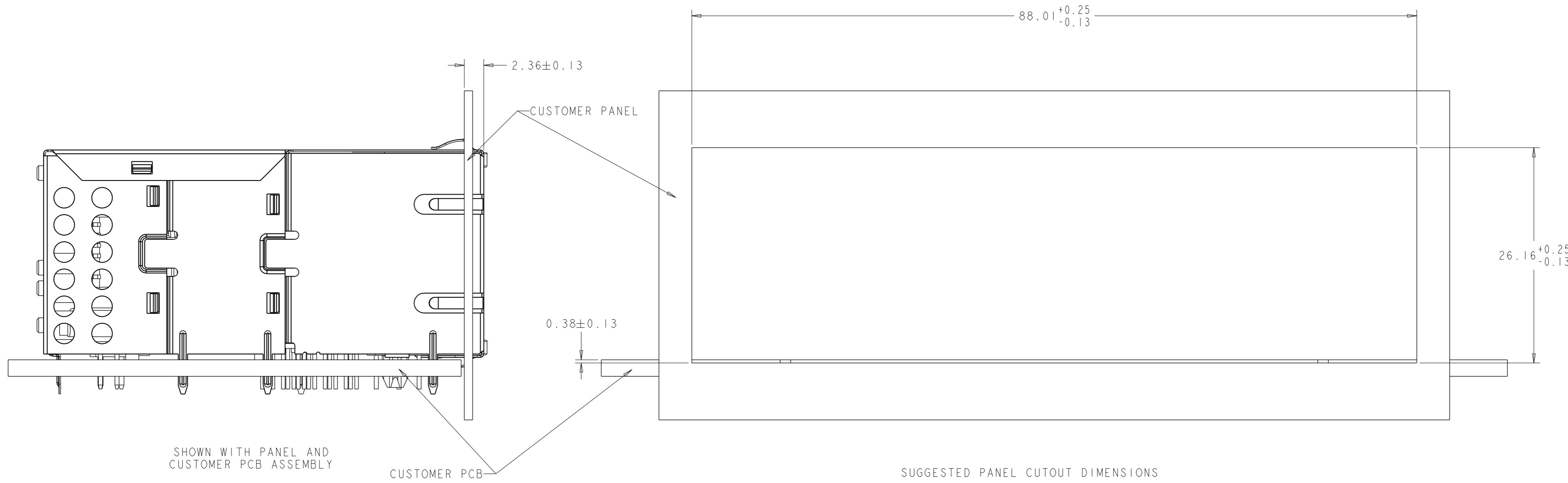
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|---|-----|------------------------------------|-------------------------------------|--|---|-----|-------|---|-----|-------|---|-----|---|---|-----|---|---------------------|------------|--------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT. | | DWN: 13AUG2013 TOMMY REN/YI LIU | trp CONNECTOR a bel group | DONGGUAN CHINA | | | | | | | | | | | | | | | |
| DIMENSIONS: mm | | CHK: 13AUG2013 TOMMY REN | | DESC: 2X6 S9HG48A 10G PoE PLUS CIRCUIT WITH LED, WITH LTC CONTROLLER | | | | | | | | | | | | | | | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: | | APPV: 13AUG2013 TONY YUAN | SIZE: A1 | RESTRICTED TO: - | | | | | | | | | | | | | | | |
| <table border="1" style="font-size: 8px;"> <tr><td>0</td><td>PLC</td><td>±0.25</td></tr> <tr><td>1</td><td>PLC</td><td>±0.25</td></tr> <tr><td>2</td><td>PLC</td><td>±0.25</td></tr> <tr><td>3</td><td>PLC</td><td>±</td></tr> <tr><td>4</td><td>PLC</td><td>±</td></tr> </table> | | 0 | PLC | ±0.25 | 1 | PLC | ±0.25 | 2 | PLC | ±0.25 | 3 | PLC | ± | 4 | PLC | ± | MODEL NAME: MAGJACK | SCALE: NTS | SHEET 1 OF 6 |
| 0 | PLC | ±0.25 | | | | | | | | | | | | | | | | | |
| 1 | PLC | ±0.25 | | | | | | | | | | | | | | | | | |
| 2 | PLC | ±0.25 | | | | | | | | | | | | | | | | | |
| 3 | PLC | ± | | | | | | | | | | | | | | | | | |
| 4 | PLC | ± | | | | | | | | | | | | | | | | | |
| PRODUCT SPEC: APPLICATION SPEC | | CUSTOMER DRAWING | DRAWING NO: C=2250112 | REV 4 | | | | | | | | | | | | | | | |


D
C
B
A

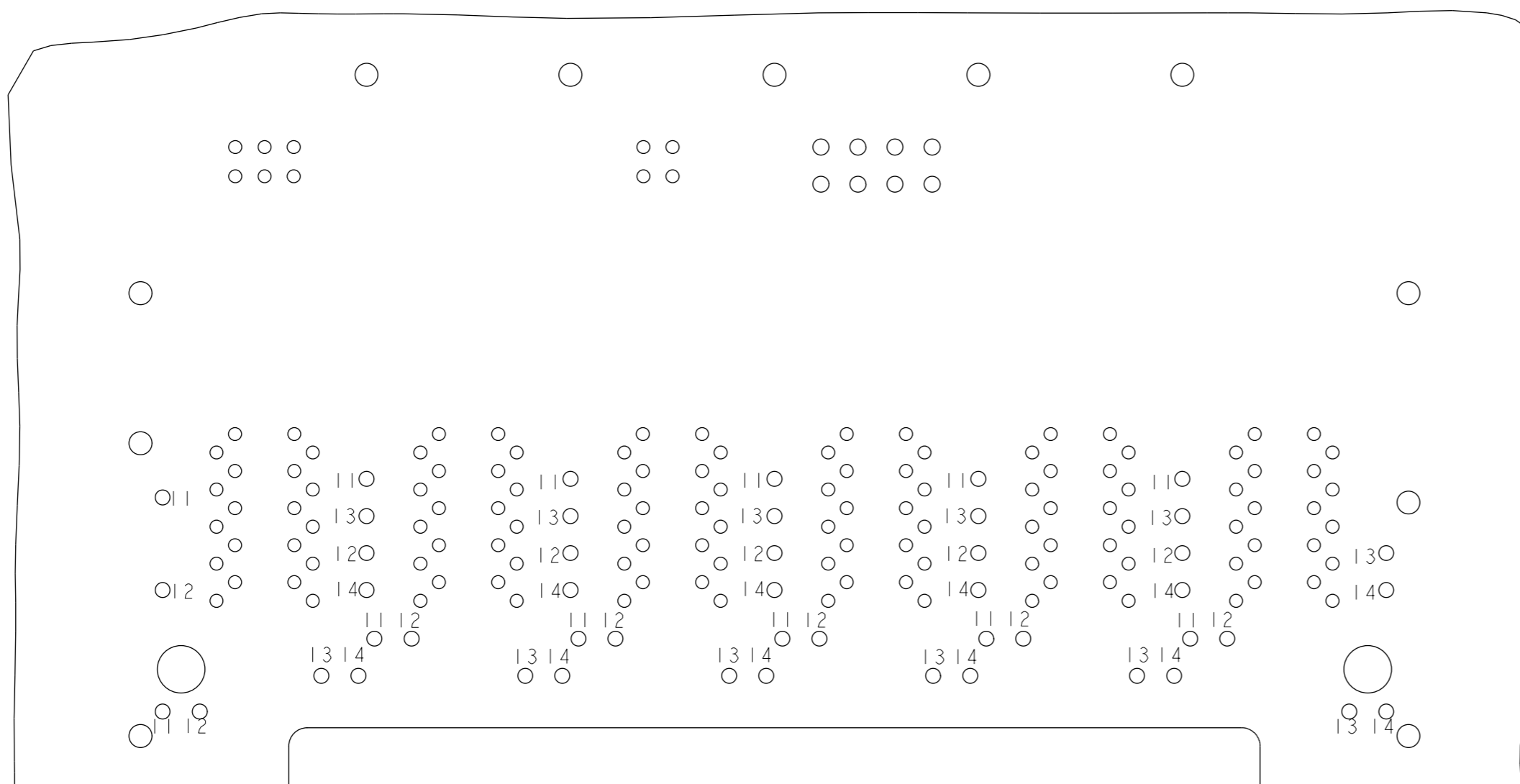
D
C
B
A



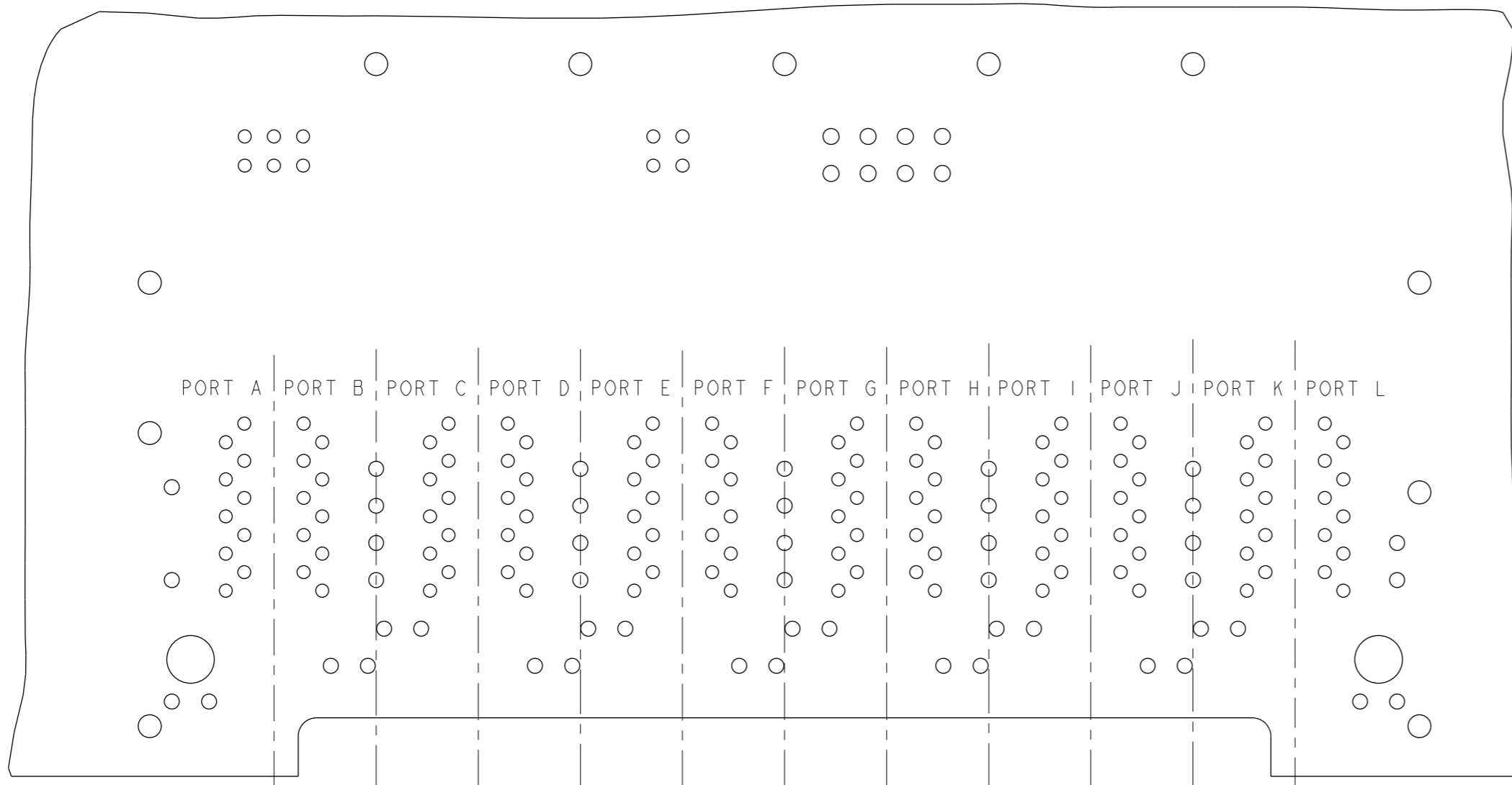
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|--|-------|---------------------------|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT. | | DNW: 13AUG2013 |  trp CONNECTOR a bel group DONGGUAN CHINA |
| DIMENSIONS: mm | | CHK: TOMMY REN 13AUG2013 | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: | | APPV: TONY YUAN 13AUG2013 | |
| 0 PLC | ±0.25 | MODEL NAME | DESC: 2X6 S9HG48A 10G PoE PLUS CIRCUIT WITH LED, WITH LTC CONTROLLER |
| 1 PLC | ±0.25 | MAGJACK | SIZE: A1 |
| 2 PLC | ±0.25 | STACK PoE PLUS | CAGE CODE: 2250112 |
| 3 PLC | ± | CUSTOMER DRAWING | SCALE: NTS |
| 4 PLC | ± | | SHEET: 2 OF 6 |
| ANGLES | ± | | REV: 4 |
| APPLICATION SPEC | ± | | |



| | | | |
|---|---|--|---|
| THIS DRAWING IS A CONTROLLED DOCUMENT. | | DWN: TOMMY REN/YI LIU 13AUG2013 |  trp CONNECTOR a bel group DONGGUAN CHINA |
| DIMENSIONS: mm | | CHK: TOMMY REN 13AUG2013 | |
| TOLERANCES UNLESS OTHERWISE SPECIFIED: | | APPV: TONY YUAN 13AUG2013 | |
| 0 PLC ±0.25 1 PLC ±0.25 2 PLC ±0.25 3 PLC ± 4 PLC ± ANGLES ± APPLICATION SPEC | MODEL NAME MAGJACK STACK PoE PLUS | DESC 2X6 S9HG48A 10G PoE PLUS CIRCUIT WITH LED, WITH LTC CONTROLLER | SIZE A1 |
| PRODUCT SPEC | APPLICATION SPEC | CAGE CODE | DRAWING NO C=2250112 |
| CUSTOMER DRAWING | | SCALE | SHEET 4 OF 6 REV 4 |

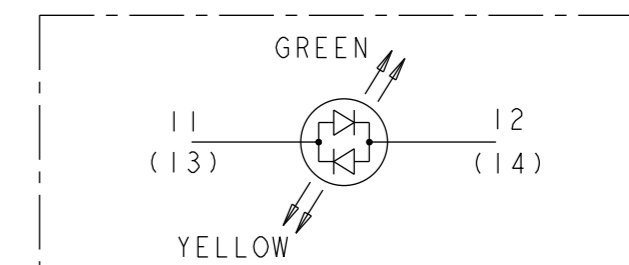
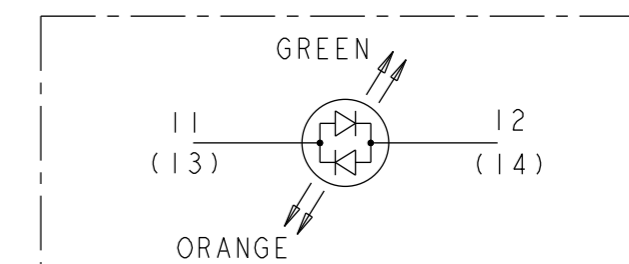


LED HOLE DESIGNATIONS
VIEWED FROM COMPONENT SIDE



PORT ASSIGNMENT
COMPONENT SIDE VIEW

BI-COLOR LED



| | | | | | |
|--|--|--|--|--|----------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT. | | DWN: TOMMY REN/YI LIU 13AUG2013 | | | DONGGUAN CHINA |
| | | CHK: TOMMY REN 13AUG2013 | | | |
| DIMENSIONS: mm | | TOLERANCES UNLESS OTHERWISE SPECIFIED: | | APPR: TONY YUAN 13AUG2013 | |
| | | 0 PLC ±0.25 | | MODEL NAME | |
| | | 1 PLC ±0.25 | | DESC: 2X6 S9HG48A 10G PoE PLUS CIRCUIT WITH LED, WITH LTC CONTROLLER | |
| | | 2 PLC ±0.25 | | SIZE: A1 | |
| | | 3 PLC ± | | CAGE CODE: C=2250112 | |
| | | 4 PLC ± | | DRAWING NO: 2250112 | |
| PRODUCT SPEC | | APPLICATION SPEC | | RESTRICTED TO | |
| | | | | CUSTOMER DRAWING | |
| | | | | SCALE: NTS | |
| | | | | SHEET 5 OF 6 | |
| | | | | REV 4 | |

TRANSMISSION PERFORMANCE AT 25°C

| FREQUENCY [MHz] | INSERTION LOSS [dB max.] LIMITS | RETURN LOSS [dB min.] LIMITS | CROSSTALK NEXT [dB min.] LIMITS |
|-----------------|------------------------------------|---------------------------------|------------------------------------|
| 1.0-9.9 | $-(0.4+0.1*\log(F))$ | -27 | $-(66-21*\log(F))$ |
| 10.0-49.9 | $-(0.5+0.3*\log(F/10))$ | $-(27-17*\log(F/10))$ | $-(45-16*\log(F/10))$ |
| 50.0-79.9 | $-(1+1.4*\log(F/80))$ | $-(27-17*\log(F/10))$ | $-(25-30*\log(F/100))$ |
| 80.0-99.9 | $-(1.3+3*\log(F/100))$ | $-(27-17*\log(F/10))$ | $-(25-30*\log(F/100))$ |
| 100.0-200 | $-(4+9*\log(F/200))$ | $-(1-30*\log(F/200))$ | $-(20-16.5*\log(F/200))$ |


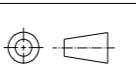
| CM-DM [dB min.] | |
|-----------------|----------------------------|
| FREQUENCY [MHz] | LIMITS |
| 1.0-9.9 | $-(48-12*\log(F))$ |
| 10.0-49.9 | $-(36-21*\log(F/10))$ |
| 50.0-79.9 | $-(18-11*\log(F/100))$ |
| 80.0-99.9 | $-(18-11*\log(F/100))$ |
| 100.0-199.9 | $-(8.7-15.5*\log(F/400))$ |
| 200.0-399.9 | $-(8.7-15.5*\log(F/400))$ |
| 400.0-1000.0 | $-(4.5-10.5*\log(F/1000))$ |

| DM-CM [dB min.] | |
|-----------------|------------------------|
| FREQUENCY [MHz] | LIMITS |
| 1.0-9.9 | $-(54.5-14.5*\log(F))$ |
| 10.0-49.9 | -25 |
| 50.0-79.9 | -25 |
| 80.0-99.9 | -25 |
| 100.0-199.9 | $-(9-23*\log(F/500))$ |
| 200.0-499.9 | $-(9-23*\log(F/500))$ |
| 500.0-1000 | $-(6-10*\log(F/1000))$ |

| CMR [dB min.] | |
|-----------------|--------------------------|
| FREQUENCY [MHz] | LIMITS |
| 1.0-9.9 | $-(57-23*\log(F))$ |
| 10.0-19.9 | $-(57-23*\log(F))$ |
| 20.0-79.9 | -27 |
| 80.0-99.9 | $-(27-14.5*\log(F/80))$ |
| 100.0-199.9 | $-(27-14.5*\log(F/80))$ |
| 200.0-399.9 | $-(21.5-39*\log(F/200))$ |
| 400.0-1000.0 | -10 |

TRANSMISSION PERFORMANCE AT 25°C

| FREQUENCY [MHz] | POWER SOURCE CMR [dB Min.] TYPICAL |
|-----------------|---------------------------------------|
| 1.0-9.9 | $-2-7*\log(F)$ |
| 10.0-19.9 | $-9.1-11.3*\log(F/20)$ |
| 20.0-49.9 | $-12.5-16.9*\log(F/20)$ |
| 50.0-79.9 | $-19.2-19.7*\log(F/50)$ |
| 80.0-99.9 | $-23.2-6.9*\log(F/80)$ |
| 100.0-199.9 | $-23.9+12.6*\log(F/100)$ |
| 200.0-399.0 | $-20.1+12.6*\log(F/200)$ |
| 400.0-899.0 | $-16.3+37.5*\log(F/400)$ |
| 900.0-1000 | $-3.1-94*\log(F/900)$ |

| | | | |
|---|---|------------------------------------|---|
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| PRODUCT SPEC | APPLICATION SPEC | STACK PoE PLUS CUSTOMER DRAWING | SIZE A1 CAGE CODE DRAWING NO. C=2250112 RESTRICTED TO |
| | | SCALE NTS | SHEET 6 OF 6 REV 4 |