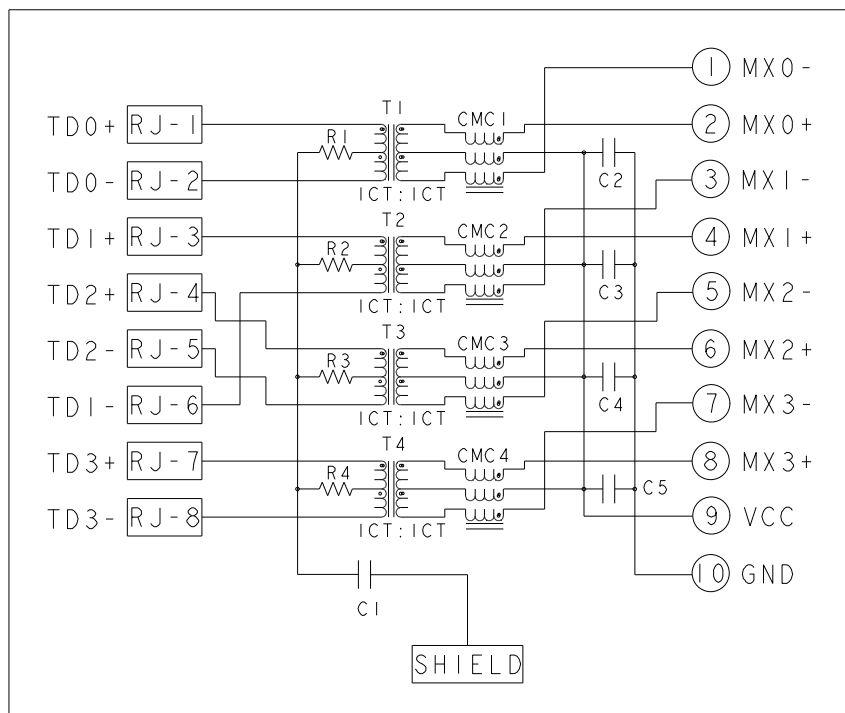


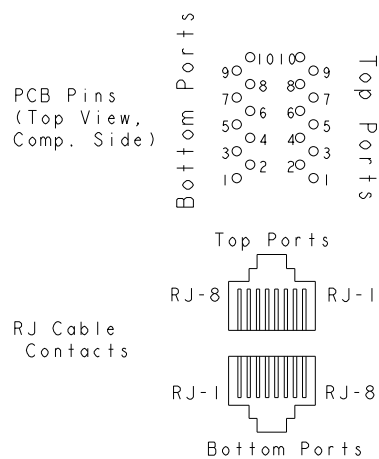
### S8G31 GIGABIT CIRCUIT <sup>2</sup>/<sub>7</sub> Top and Bottom Ports



C1 = 1000pF, 2kV  
 C2-C5 = 470pF, 10%, 50V  
 R1-R4 = 75ohms, 1/16W

### Pin Designations

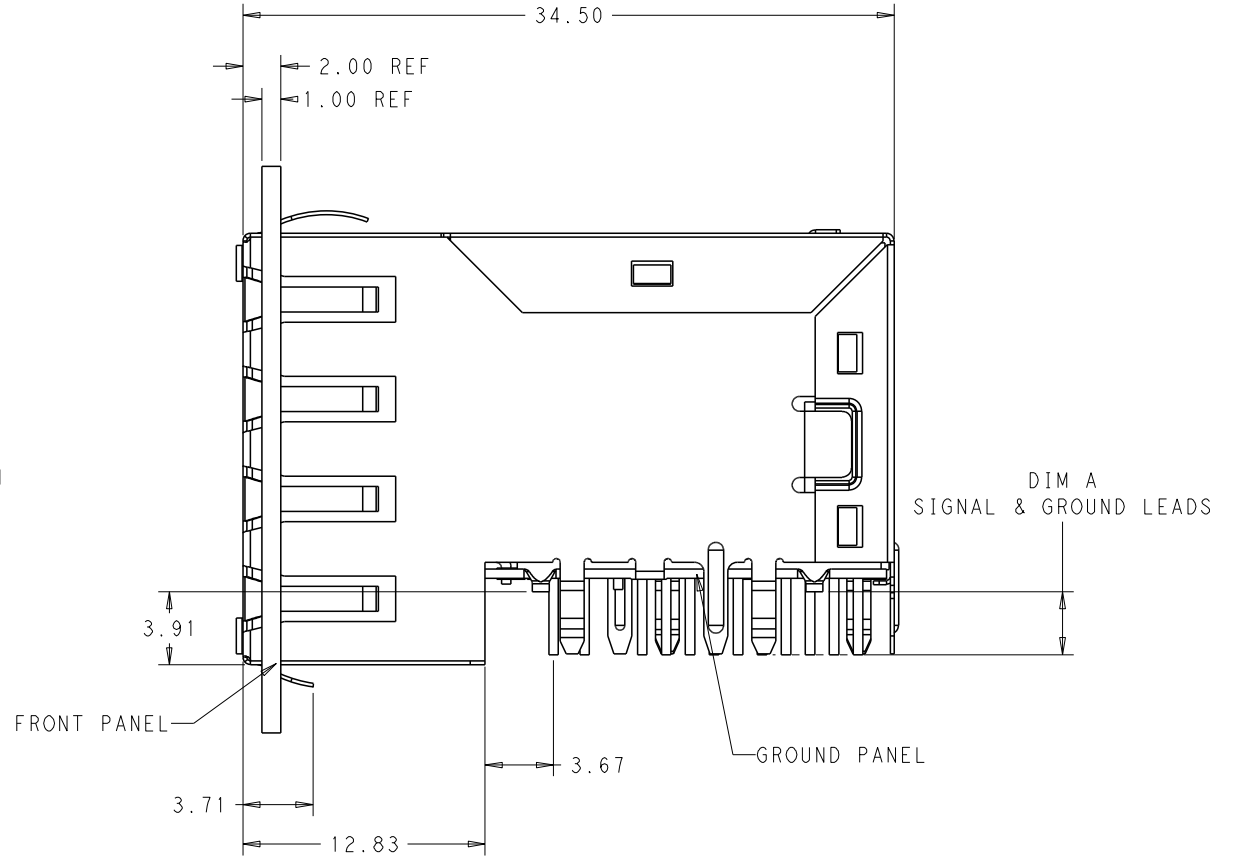
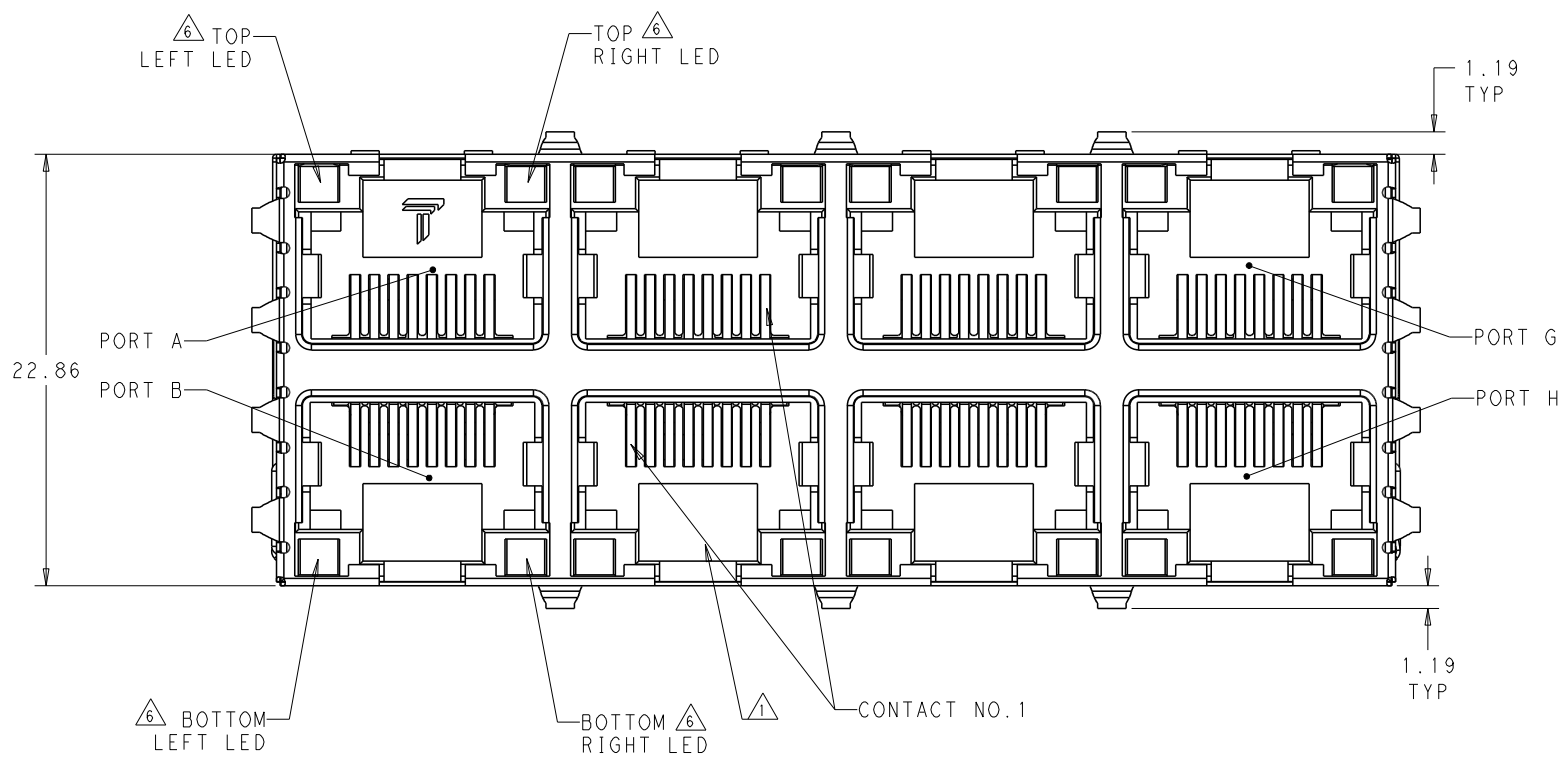
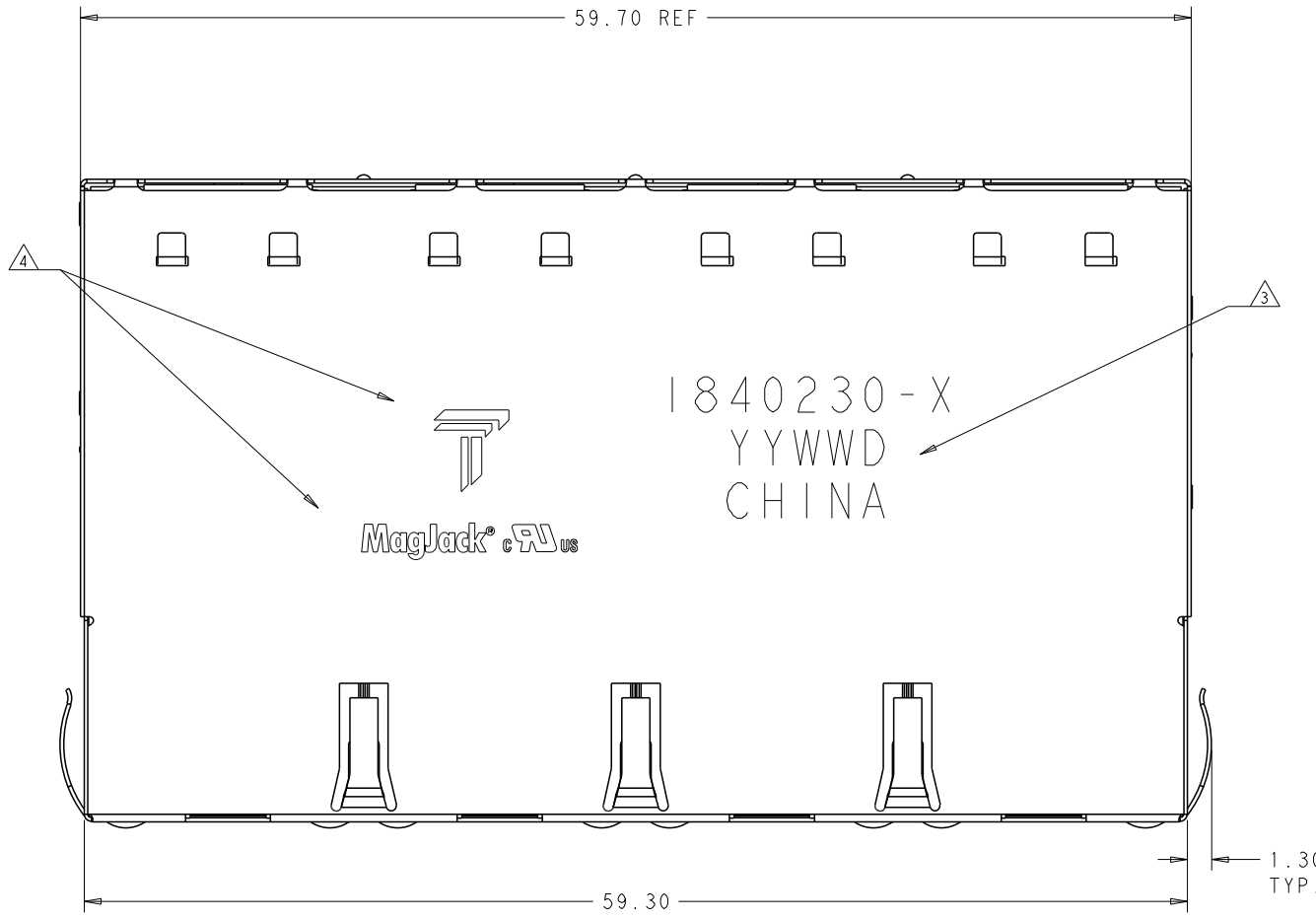
(Repeat for each vertical pair of ports.)




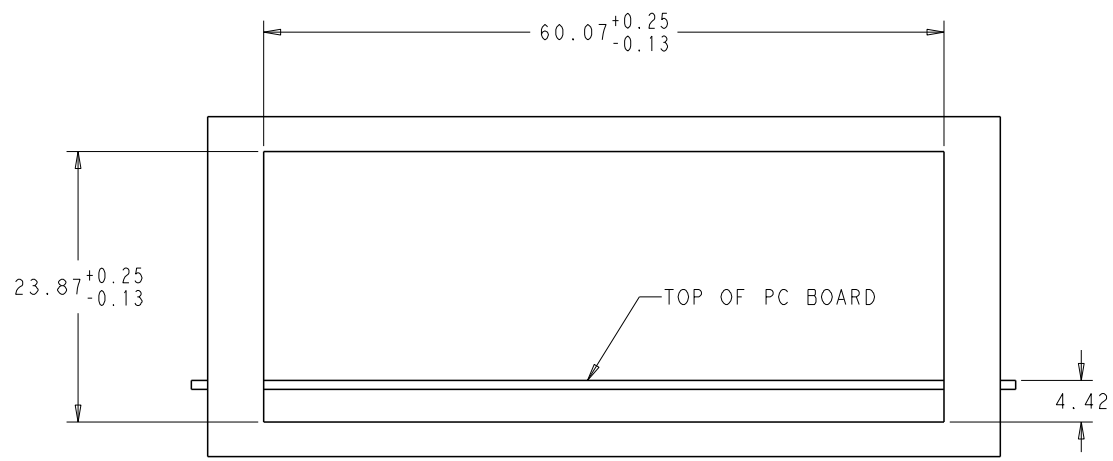
- 1 MATERIALS:
  - HOUSING: THERMOPLASTIC, BLACK, FLAMMABILITY RATING UL 94V-0.
  - SHIELD: BRASS, PREPLATED WITH 0.76um MIN SEMI-BRIGHT NICKEL, POST DIPPED WITH 2.54um MIN SAC SOLDER ON SOLDER TAILS.
  - CONTACTS: PHOSPHOR BRONZE, PLATED WITH 1.27um MIN OVERALL NICKEL UNDERPLATE, SELECTIVE 1.27um MIN 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: 100ohm
  - 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
  - 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 2005, PARA 40.6.1.1, ITEM b
- 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 IS DRIVEN WITH CONSTANT CURRENT AT APPROX 20mA  
 LED COLOR: DOMINANT WAVELENGTH (λD):  
 GREEN 568 nm TYP at IF=20mA  
 YELLOW 588 nm TYP at IF=20mA  
 ORANGE 610 nm TYP at IF=20mA  
 FORWARD VOLTAGE (VF):  
 GREEN 2.2V TYP at IF=20mA  
 YELLOW 2.1V TYP at IF=20mA  
 ORANGE 2.2V 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, TEMPERATURE 260 °C MAX PEAK 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

3.80	YELLOW	GREEN	YELLOW	GREEN	3	1-1840230-3
3.30	GREEN/ORANGE	GREEN/ORANGE	GREEN/ORANGE	GREEN/ORANGE	3	1840230-7
3.30	GREEN/ORANGE	GREEN	GREEN/ORANGE	GREEN	3	1840230-6
3.30	GREEN	GREEN/YELLOW	GREEN	GREEN/YELLOW	3	1840230-5
3.30	GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW	3	1840230-4
3.30	YELLOW	GREEN	YELLOW	GREEN	3	1840230-3
3.30	YELLOW	GREEN	GREEN	YELLOW	3	1840230-2
3.30	GREEN	GREEN	GREEN	GREEN	3	1840230-1
DIM A	TOP RIGHT LED	TOP LEFT LED	BOTTOM RIGHT LED	BOTTOM LEFT LED	REAR PCB GND TABS	PART NUMBER

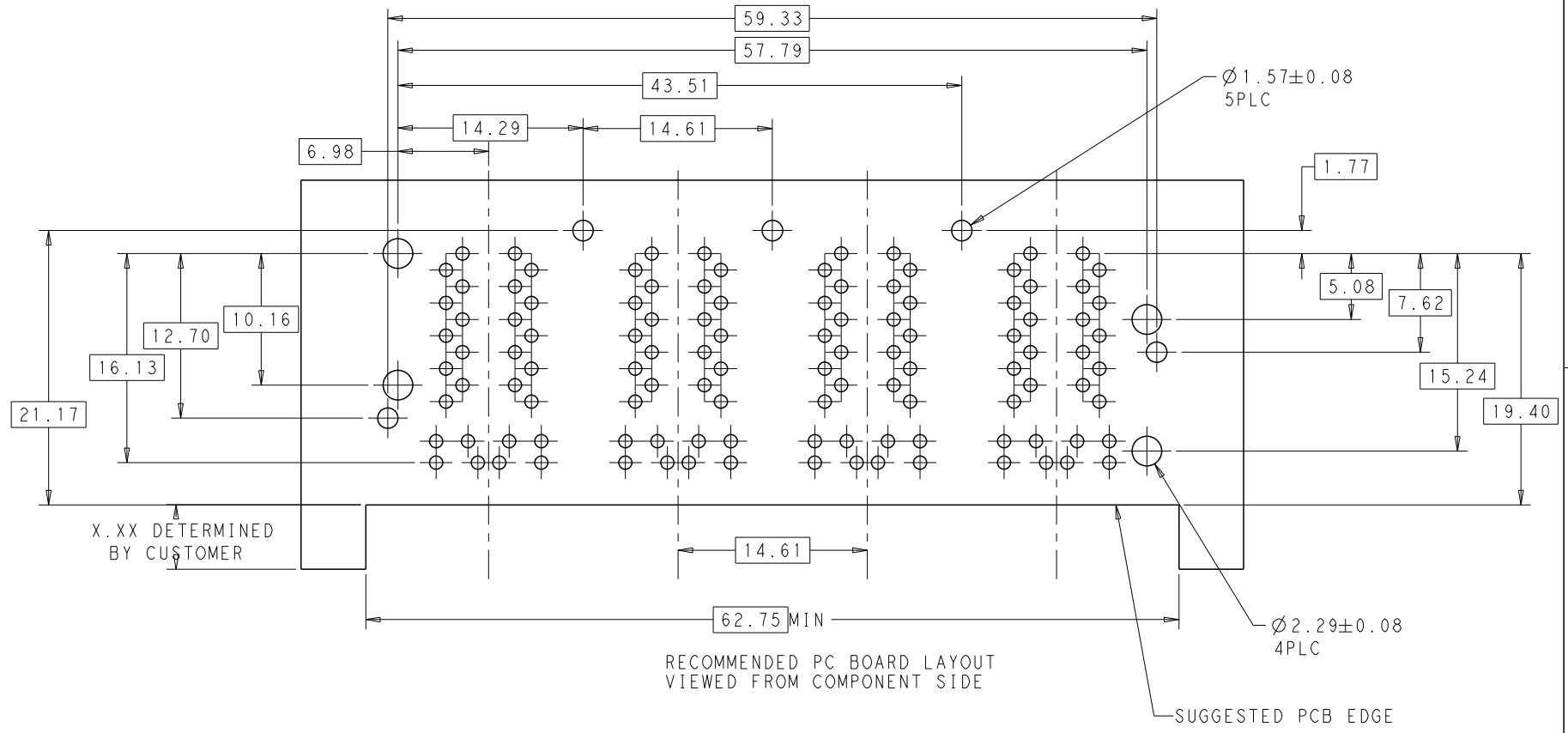
THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN: JEE LUD 05OCT2006		DONGGUAN CHINA
DIMENSIONS: mm		CHK: KEITH ZHU 05OCT2006		
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APPV: 05OCT2006		
0 PLC ±	1 PLC ±	2 PLC ±0.25	MODEL NAME: MAGJACK	DESC: 2X4 S8G31 GIGABIT OFFSET W/ LED
3 PLC ±	4 PLC ±	ANGLES ±	SIZE: A1	CAGE CODE: 1840230
PRODUCT SPEC: 108-104004	APPLICATION SPEC: -		CUSTOMER DRAWING	SCALE: 4:1 SHEET 1 OF 4 REV F



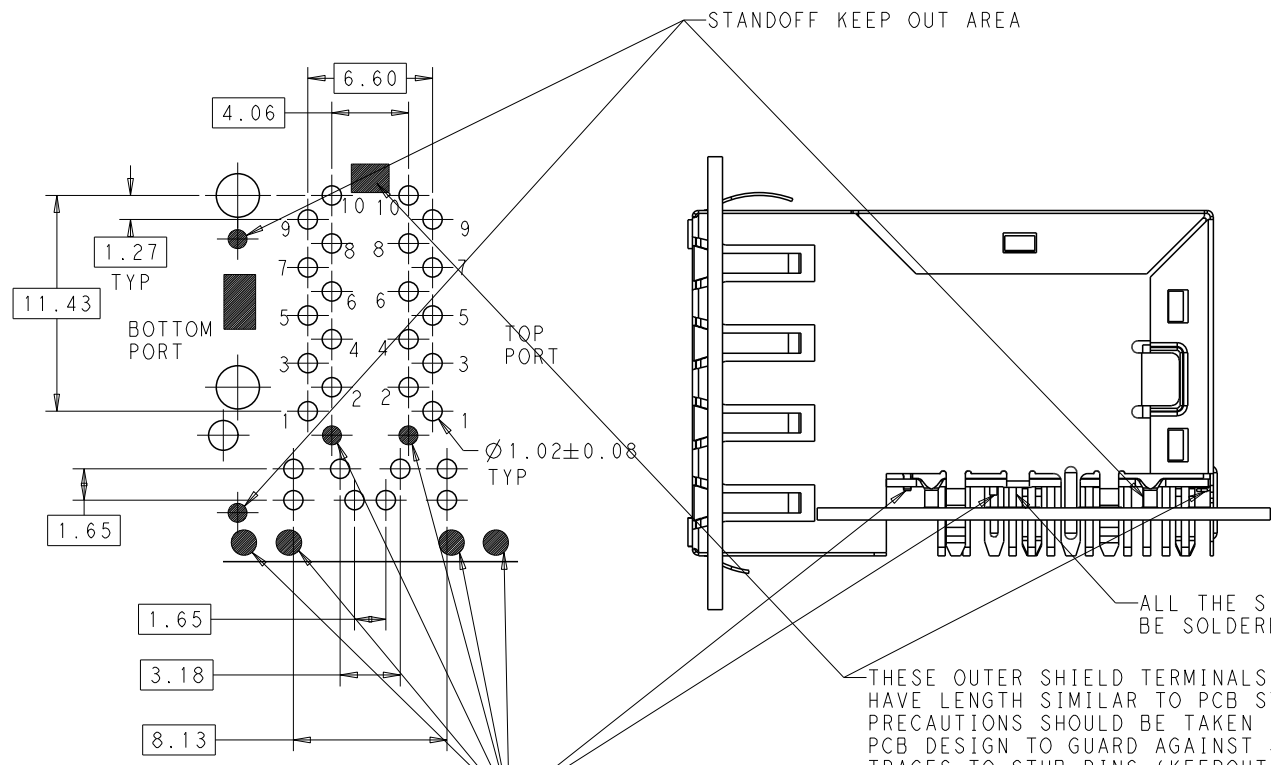
THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN: JEE LUO 05OCT2006	 <b>trp</b> CONNECTOR a bel group	DONGGUAN CHINA	
DIMENSIONS: mm		CHK: KEITH ZHU 05OCT2006		MODEL NAME	DESC
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD: 05OCT2006		MAGJACK	2X4 S8G31 GIGABIT OFFSET W/ LED
0 PLC ± 1 PLC ± 2 PLC ±0.25 3 PLC ± 4 PLC ± ANGLES ±	PRODUCT SPEC 108-104004 APPLICATION SPEC -	SIZE A1 CAGE CODE DRAWING NO. 1840230 CUSTOMER DRAWING	RESTRICTED TO SCALE 4:1 SHEET 2 OF 4 REV F		



RECOMMENDED PANEL CUT-OUT



RECOMMENDED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE

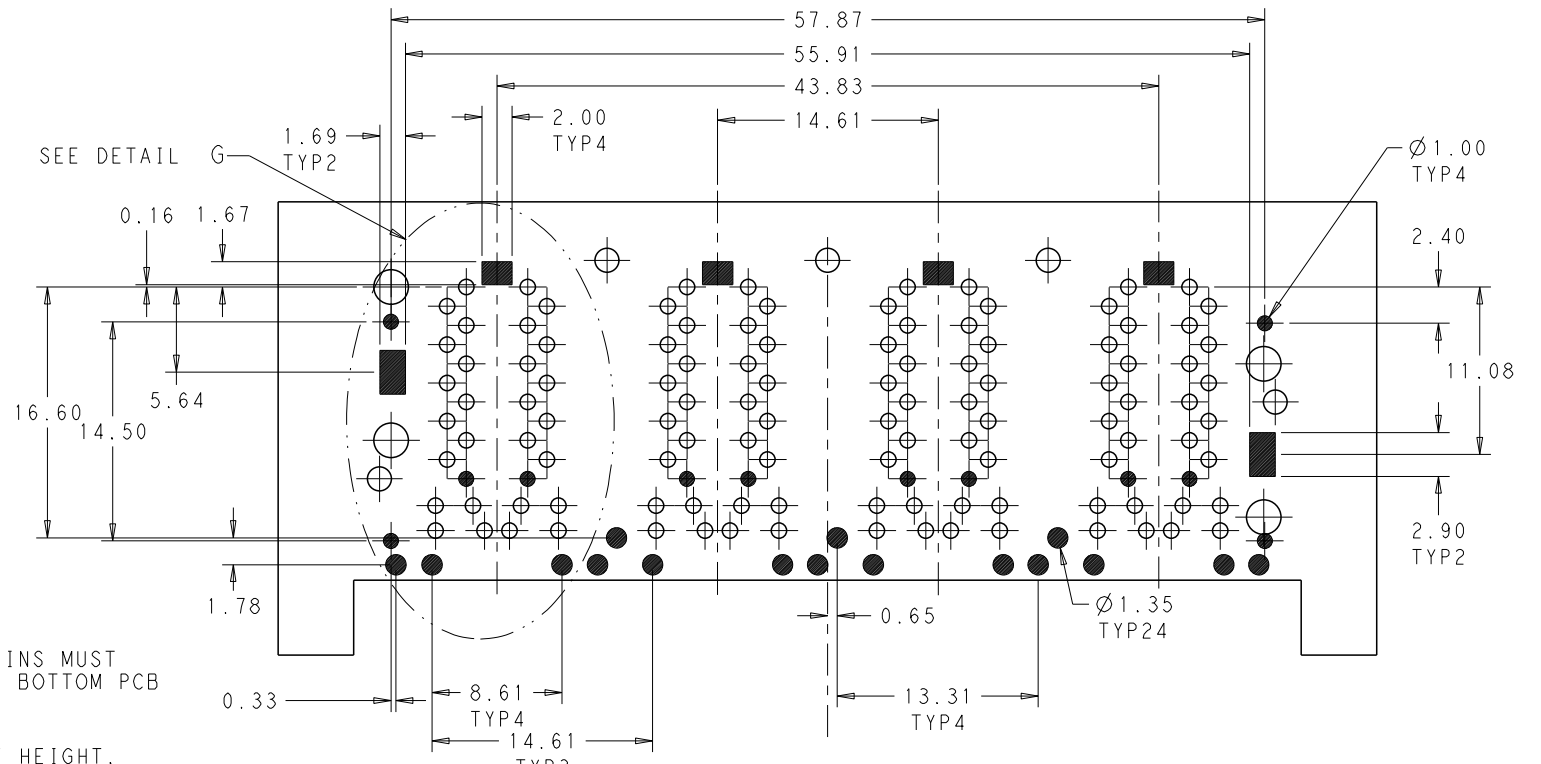


DETAIL G SCALE 5:1

THESE STUB PINS HAVE LENGTH SIMILAR TO PCB STANDOFF HEIGHT. PRECAUTIONS SHOULD BE TAKEN IN PCB DESIGN TO GUARD AGAINST SHORTING TRACES TO STUB PINS. (KEEPOUT AREA)

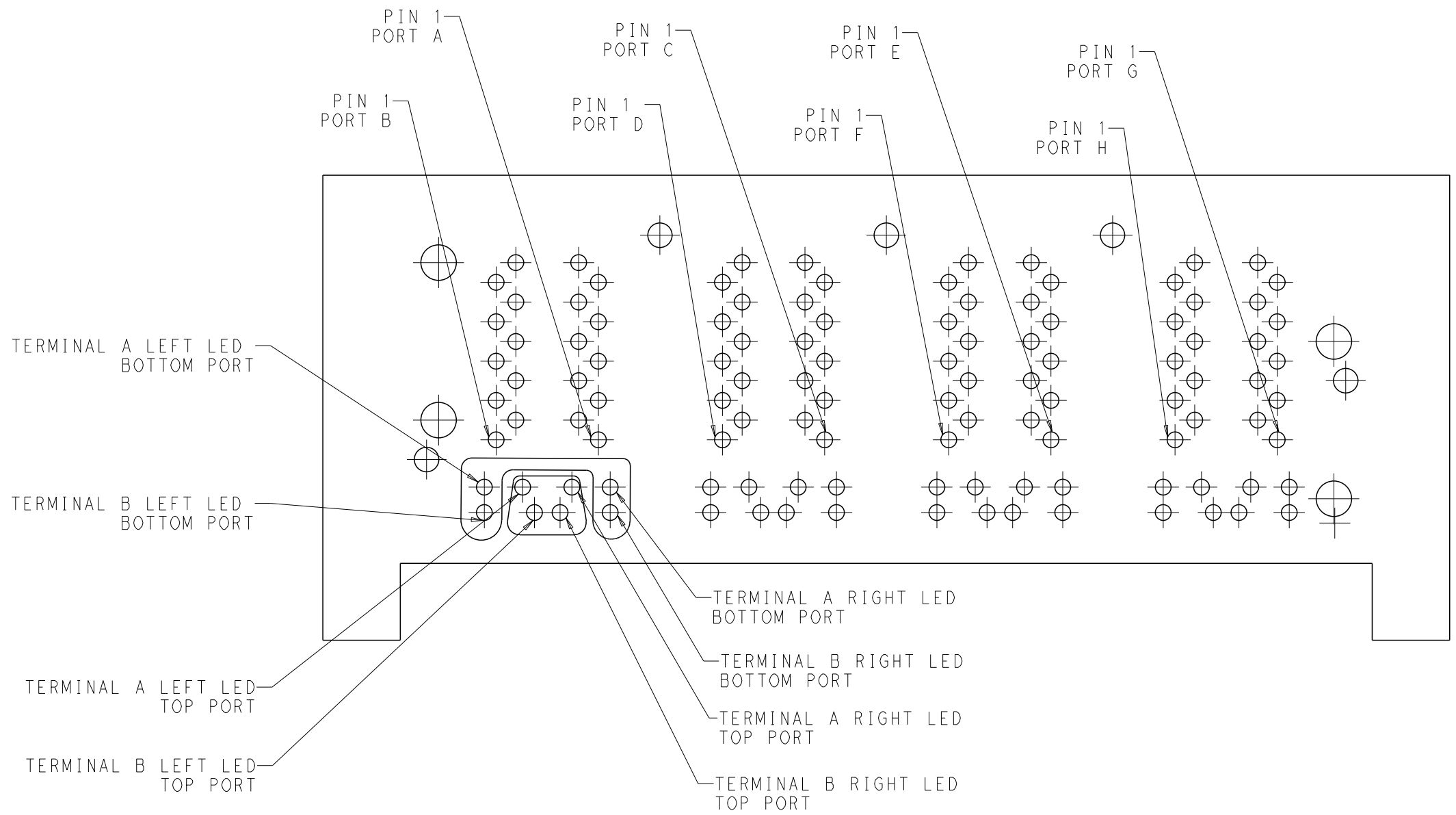
THESE OUTER SHIELD TERMINALS HAVE LENGTH SIMILAR TO PCB STANDOFF HEIGHT. PRECAUTIONS SHOULD BE TAKEN IN PCB DESIGN TO GUARD AGAINST SHORTING TRACES TO STUB PINS. (KEEPOUT AREA)

ALL THE SIGNAL PINS MUST BE SOLDERED WITH BOTTOM PCB



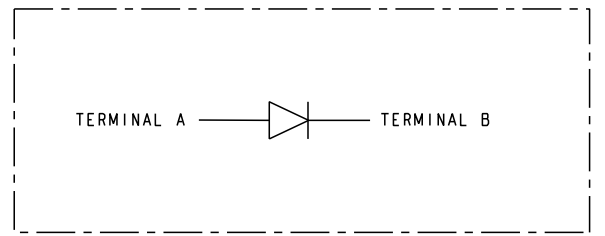
RECOMMENDED PC BOARD KEEP OUT VIEWED FROM COMPONENT SIDE

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN: JEE LUO 05OCT2006		DONGGUAN CHINA	
DIMENSIONS: mm		CHK: KEITH ZHU 05OCT2006		MODEL NAME: MAGJACK	DESC: 2X4 S8G31 GIGABIT OFFSET W/ LED
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD: 05OCT2006		SIZE: A1	RESTRICTED TO: -
0 PLC ± 1 PLC ±0.25 2 PLC ± 3 PLC ± 4 PLC ± ANGLES ±		PRODUCT SPEC: 108-104004	APPLICATION SPEC: -	SCALE: 4:1 SHEET 3 OF 4 REV F	

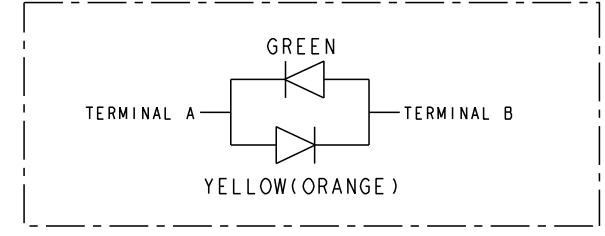



LED HOLE DESIGNATIONS VIEWED FROM COMPONENT SIDE

SINGLE COLOR LED



BI COLOR LED



THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN: JEE LUO 05OCT2006	 <b>trp</b> CONNECTOR <small>a bel group</small>	DONGGUAN CHINA	
DIMENSIONS: mm		CHK: KEITH ZHU 05OCT2006		MODEL NAME	DESC
0 PLC ± 1 PLC ± 2 PLC ±0.25 3 PLC ± 4 PLC ± ANGLES ±		APVD: 05OCT2006		MAGJACK	2X4 S8G31 GIGABIT OFFSET W/ LED
PRODUCT SPEC	APPLICATION SPEC	STACK NON-PoE		RESTRICTED TO	
108-104004	-	CUSTOMER DRAWING		SCALE 4:1 SHEET 4 OF 4 REV F	