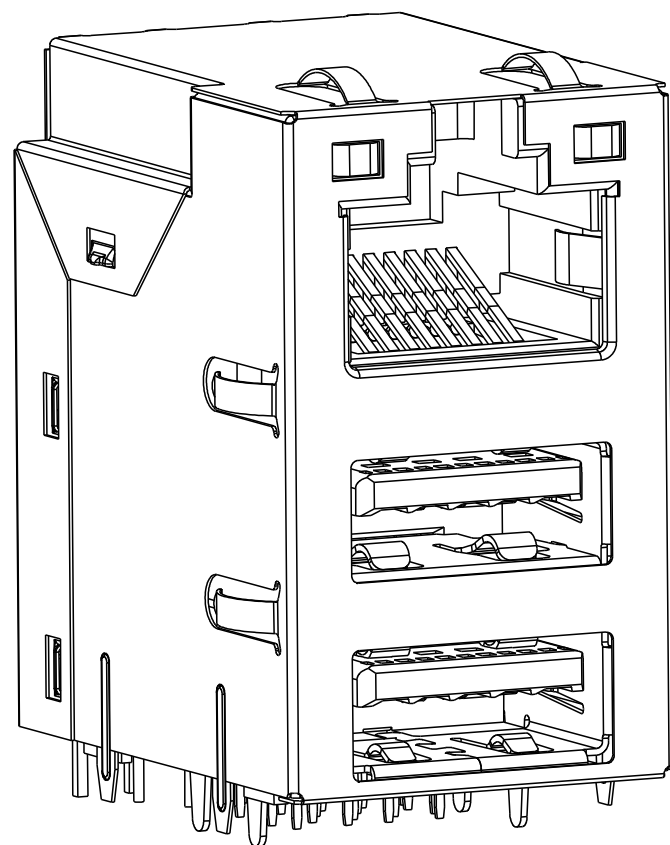


THIS DRAWING AND THE SUBJECT MATTER SHOWN THEREON ARE CONFIDENTIAL AND THE PROPERTY OF BEL/STEWART/TRP CONNECTOR AND SHALL NOT BE REPRODUCED, COPIED, OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF TRP CONNECTOR.

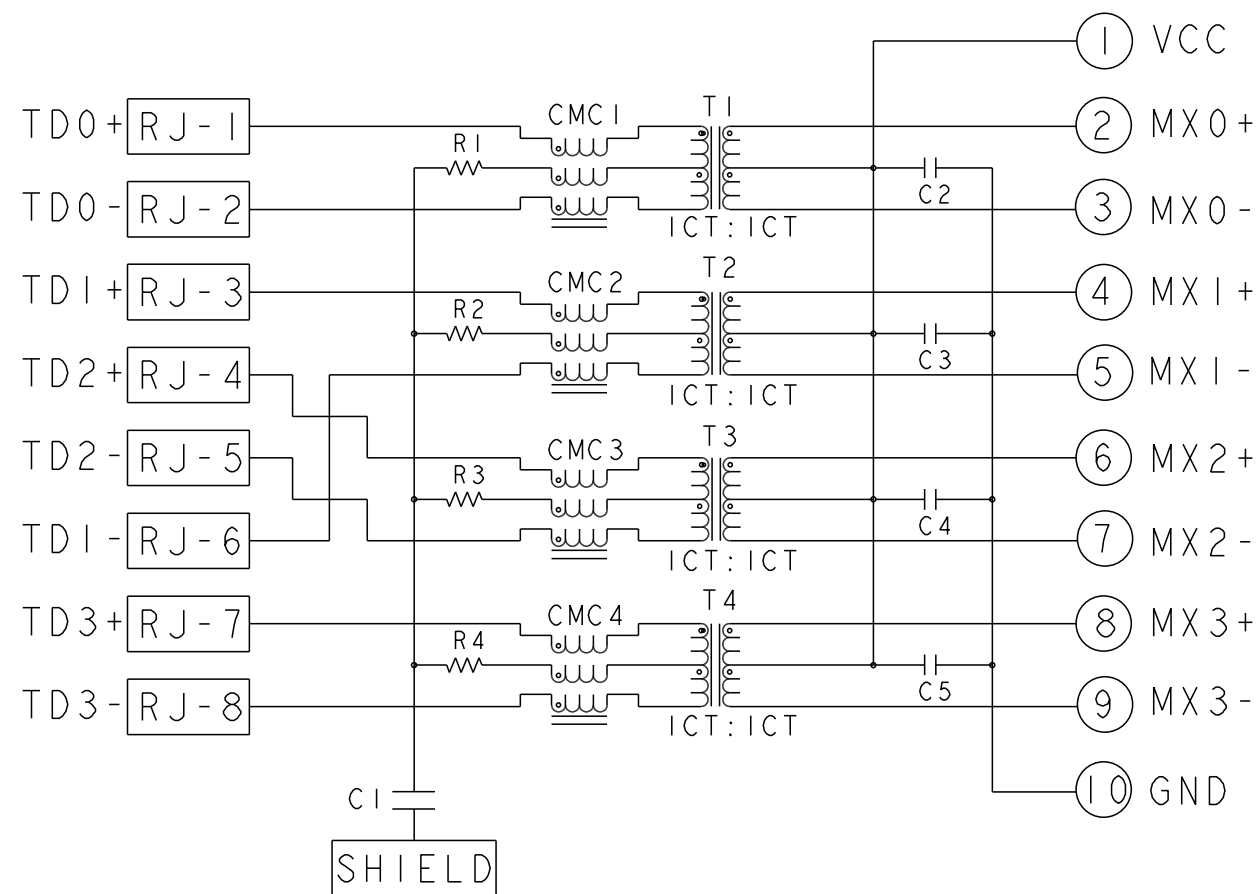
PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS:
5736910 5939955 6425781 6428361 6554638 6840817 7123117
7429195 7717749 7808751 6217391 6149050 7924130

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	4	SEE LAST SHEET	26AUG2019	TRY	TY



WITH EMI FINGER

URG153 GIGABIT CIRCUIT



C1: 1000pF, 2kV, CAPACITOR;
C2-C5: 100nF, 50V, CAPACITORS;
R1-R4: 750hms, 1/16W, RESISTORS

- ```

1. MATERIALS
 USB MATERIALS:
 HOUSING: THERMOPLASTIC, BLUE, FLAMMABILITY RATING UL 94V-0
 USB 3.1 GEN 1 CONTACT TYPE 1: PHOSPHOR BRONZE, WITH 1.27um MIN OVERALL NICKEL UNDERPLATE AND
 SELECTIVE 0.762um MIN GOLD PLATING AT MATING INTERFACE
 USB 3.1 GEN 1 CONTACT TYPE 2: COPPER BASE ALLOY, WITH 1.27um MIN OVERALL NICKEL UNDERPLATE AND
 SELECTIVE 0.762um MIN GOLD PLATING AT MATING INTERFACE
 RJ45 MATERIALS:
 HOUSING: THERMOPLASTIC, BLACK, FLAMMABILITY RATING UL 94V-0
 SHIELD: STAINLESS STEEL, PREPLATED WITH MIN 0.76um SEMI-BRIGHT NICKEL,
 POST DIPPED WITH 2.54um MIN SOLDER ON SOLDER TAILS
 CONTACT: PHOSPHOR BRONZE, WITH 1.27um MIN OVERALL NICKEL UNDERPLATE AND
 SELECTIVE 1.27um MIN GOLD PLATING AT MATING INTERFACE
 LED MATERIALS:
 DIFFUSED EPOXY LENS, CARBON STEEL LEAD FRAME LEADS,
 PREPLATED WITH 2.03um MIN SILVER OVER 1.02 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 OHMS
  - TURNS RATIO(CHIP:CABLE): 1:1 ALL FOUR PAIRS
  - OPEN CIRCUIT INDUCTANCE(OC): 350uH MIN @100kHz, 0.1 VRMS,  
8mA DC BIAS FROM 0°C TO 70°C, ALL FOUR PAIRS
  - ALL FOUR PAIRS BI-DIRECTIONAL
  - PERFORMANCE @ 25°C:
    - INSERTION LOSS (IL): 1.1 dB MAX FROM 0.5MHz TO 100MHz
    - RETURN LOSS (RL): 18dB MIN FROM 0.5MHz TO 40MHz
    - 12-20LOG(f/80)dB MIN FROM 40.1 MHz TO 100MHz
    - CROSSTALK ATTENUATION: 35 dB MIN FROM 0.5 MHz TO 40 MHz
    - 33-20LOG(f/50) dB MIN FROM 40.1 MHz TO 100 MHz
    - COMMON MODE REJECTION RATIO (CMRR): 30dB MIN FROM 0.5MHz TO 100MHz
  - ISOLATION VOLTAGE: 2250VDC (MAX) FOR 60 SECONDS WITH A RISE TIME OF 500V/SEC.

- 3 THE MAGNETIC CIRCUIT ON ALL FOUR CHANNELS IS SYMMETRICAL AND SUPPORTS AUTO-MDIX OPERATION.

4. OPERATING TEMPERATURE: 0°C - 70°C.

- 5 DATUM Y AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.

6. RJ45 CAVITY CONFORMS TO FCC RULES AND REGULATION PART 68 SUBPART F.

- 7 TRP CONNECTOR LOGO, PART NUMBER, DATE CODE, COUNTRY OF ORIGIN,  
 AGENCY APPROVAL MARKING IN APPROPRIATE LOCATION SHOWN.  
 DATE CODE: YYWW WHERE "YY" IS YEAR, "WW" IS WORK WEEK, "D" IS DAY OF WEEK, WITH SUNDAY= 1

- LED IS WITH CONSTANT CURRENT AT APPROX 20mA.  
LED COLOR: DOMINANT WAVELENGTH( $\lambda_D$ ), GREEN = 568 $\pm$ 5nm TYP. at IF=20mA  
FORWARD VOLTAGE(VF), GREEN 2.2V TYP. at IF=20mA.  
DOMINANT WAVELENGTH( $\lambda_D$ ), YELLOW = 590 $\pm$ 3nm TYP. at IF=20mA  
FORWARD VOLTAGE(VF), YELLOW 2.1V TYP. at IF=20mA.

9. PARTS SHOULD BE RECOMMENDED FOR IR REFLOW SOLDERING PROCESS, PEAK TEMPERATURE 260°C MAX, DURATION TIME 10 SECONDS MAX, OVER 230°C WITHIN 40-60 SECONDS.

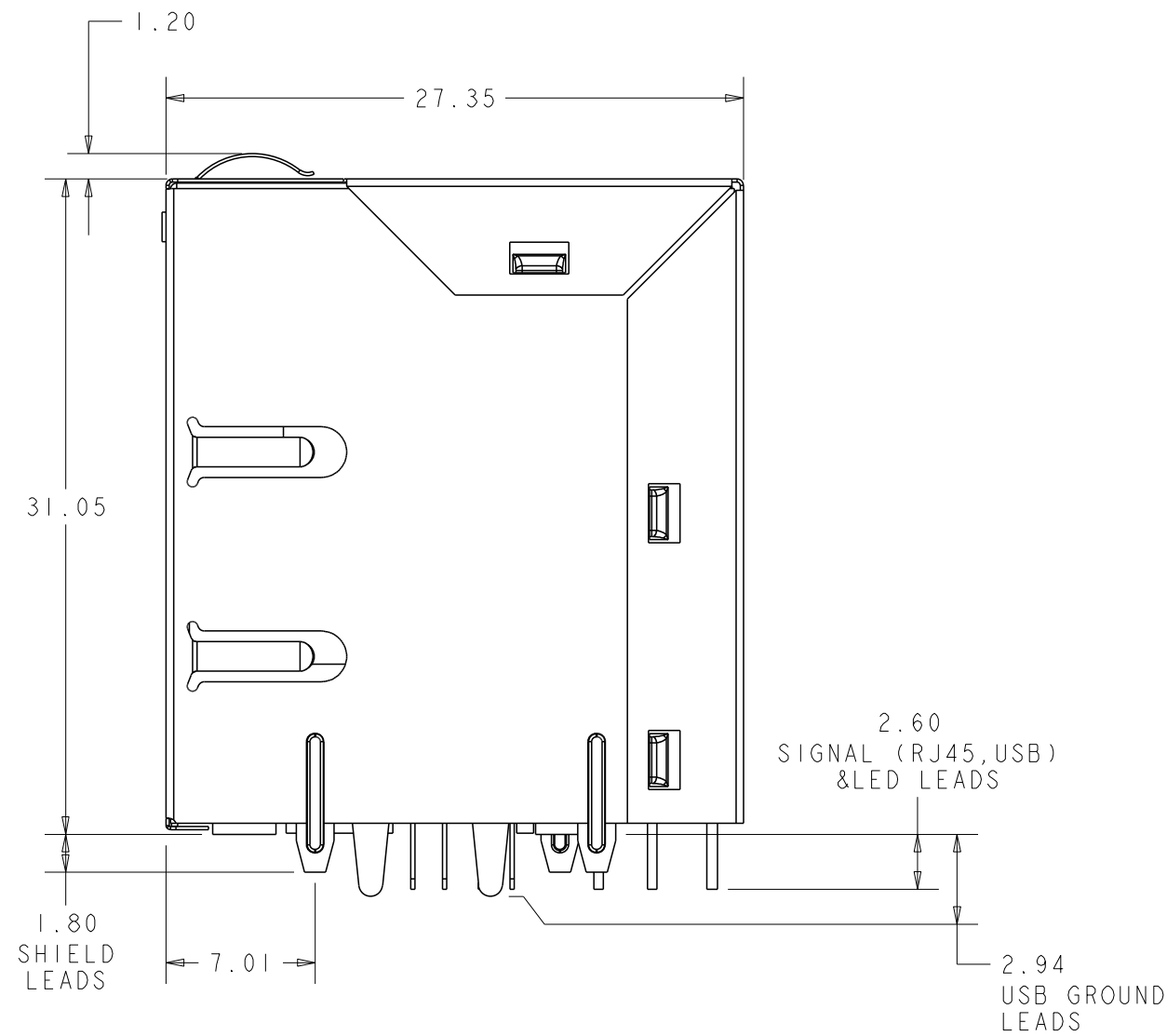
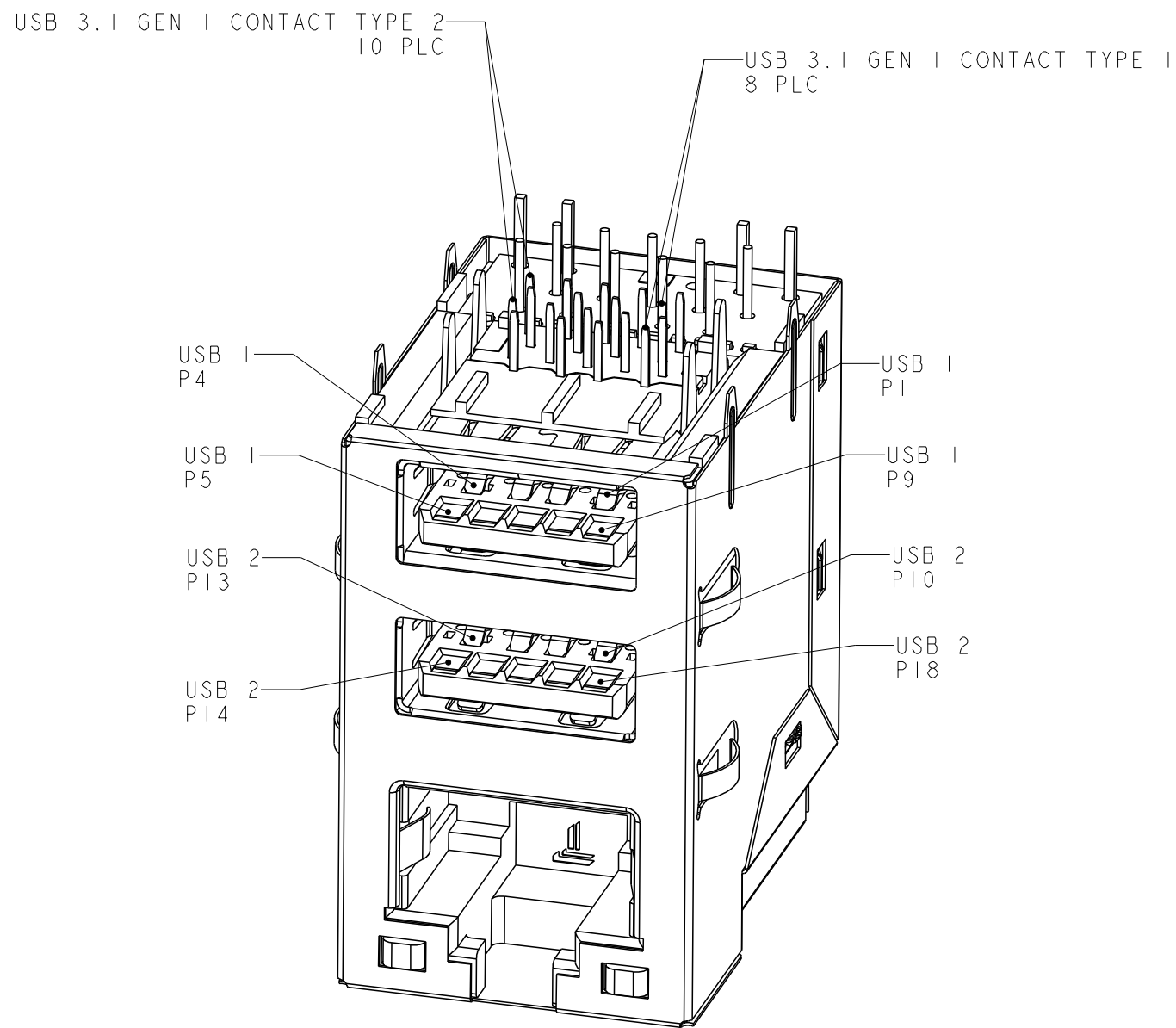
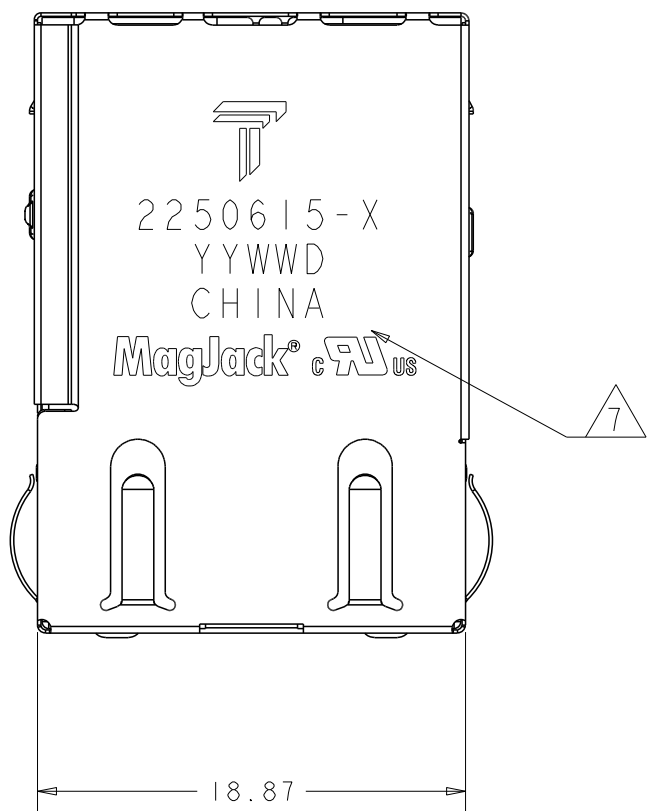
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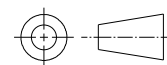
10.  LOW HALOGEN SPEC(EXCEPT LIGHT PIPE):
      CHLORINE (Cl) 900PPM MAX
      BROMINE (Br) 900PPM MAX
      TOTAL BROMINE AND CHLORINE (Br+Cl) 1500PPM MAX
LIGHT PIPE COMPLY WITH LOW HALOGEN SPECIFICATION "DIN VDE 0472"
      CHLORINE (Cl) 1000PPM MAX
      BROMINE (Br) 1000PPM MAX
      TOTAL BROMINE AND CHLORINE (Br+Cl) 2000PPM MAX

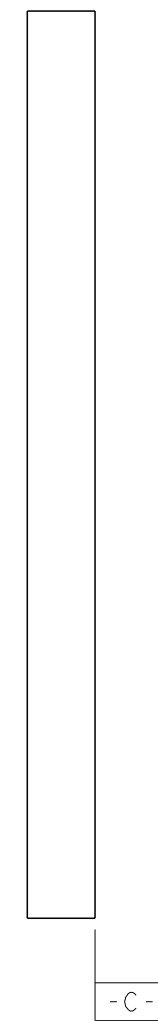
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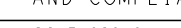
YELLOW	GREEN	GREEN	2250615-1
13  14	14  13	12  11	PART NUMBER
LED2		LED1	

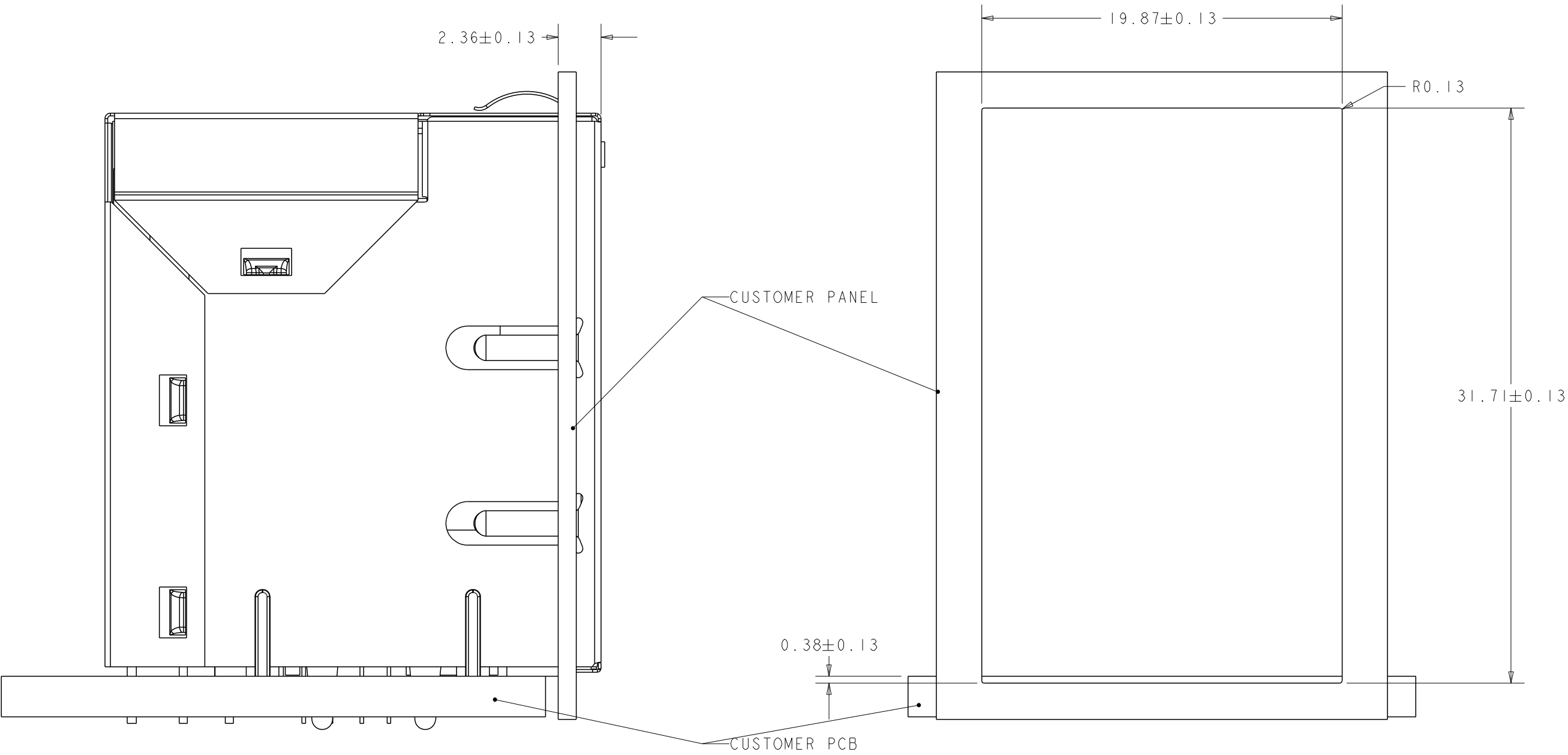
THIS DRAWING IS A CONTROLLED DOCUMENT. AND COMPLIANT TO ASME Y14.5M		DWN TOWER YU / YI LIU 13SEP2018		 trp CONNECTOR a bel group		DONGGUAN CHINA		
DIMENSIONS: mm		CHK BILL LIU 13SEP2018						
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD TONY YUAN 13SEP2018		DESC MAGJACK OVER DUAL USB3.1 GEN 1 URG153 CIRCUIT, GIGABIT, W/ LEDS				
		MODEL NAME MAGJACK						
0 PLC ± 1 PLC ± 2 PLC ±0.25 3 PLC ± 4 PLC ± ANGLES ±		OVER USB NON-PoE		SIZE A2	CAGE CODE	DRAWING NO C=2250615	RESTRICTED TO -	
PRODUCT SPEC 108-104004		APPLICATION SPEC -		CUSTOMER DRAWING		SCALE 3:1	SHEET 1 OF 5	REV 4



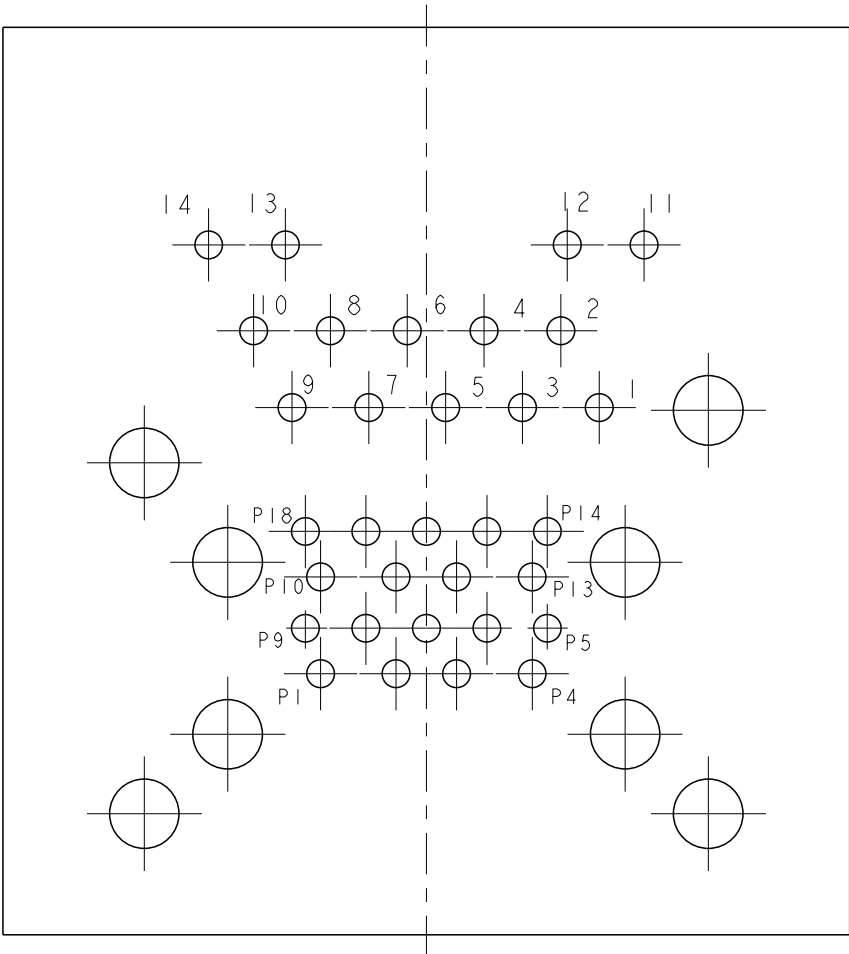
THIS DRAWING IS A CONTROLLED DOCUMENT. AND COMPLIANT TO ASME Y14.5M		DWN TOWER YU / YI LIU CHK BILL LIU APVD TONY YUAN MODEL NAME	13SEP2018 13SEP2018 13SEP2018	 trp CONNECTOR a bel group		DONGGUAN CHINA		
DIMENSIONS: mm	TOLERANCES UNLESS OTHERWISE SPECIFIED:	MAGJACK OVER USB NON-PoE		DESC MAGJACK OVER DUAL USB3.1 GEN 1 URG153 CIRCUIT, GIGABIT, W/ LEDS		RESTRICTED TO		
	0 PLC ± 1 PLC ± 2 PLC ±0.25 3 PLC ± 4 PLC ± ANGLES ± APPLICATION SPEC	SIZE A2		CAGE CODE	DRAWING NO C-2250615	-		
PRODUCT SPEC 108-104004	-	CUSTOMER DRAWING			SCALE 3:1	SHEET 2	OF 5	REV 4



THIS DRAWING IS A CONTROLLED DOCUMENT. AND COMPLIANT TO ASME Y14.5M		DWN 13SEP2018 TOWER YU / YI LIU		 trp CONNECTOR a bel group		DONGGUAN CHINA				
DIMENSIONS: mm		CHK 13SEP2018 BILL LIU								
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD 13SEP2018 TONY YUAN		DESC MAGJACK OVER DUAL USB3.1 GEN 1 URGI53 CIRCUIT, GIGABIT, W/ LEDS		RESTRICTED TO -				
 0 PLC ± 1 PLC ± 2 PLC ±0.25 3 PLC ± 4 PLC ± ANGLES ± APPLICATION SPEC		MODEL NAME MAGJACK OVER USB NON-POE								
PRODUCT SPEC 108-104004		CUSTOMER DRAWING		SIZE A2	CAGE CODE	DRAWING NO C=2250615	SCALE 3:1	SHEET 3	OF 5	REV 4

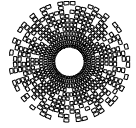


SUGGEST CUSTOMER CUTOUT DIMENSIONS



USB 3.1 GEN 1 STANDARD-A CONNECTOR PIN ASSIGNMENTS

PIN NUMBER	SIGNAL NAME	DESCRIPTION
P1 & P10	VBUS	POWER
P2 & P11	D-	USB 2.0 DIFFERENTIAL PAIR
P3 & P12	D+	
P4 & P13	GND	GROUND FOR POWER RETURN
P5 & P14	STDA_SSRX-	SUPERSPEED RECEIVER DIFFERENTIAL PAIR
P6 & P15	STDA_SSRX+	
P7 & P16	GND_DRAIN	GROUND FOR SIGNAL RETURN
P8 & P17	STDA_SSTX-	SUPERSPEED TRANSMITTER DIFFERENTIAL PAIR
P9 & P18	STDA_SSTX+	

THIS DRAWING IS A CONTROLLED DOCUMENT. AND COMPLIANT TO ASME Y14.5M		DWN 13SEP2018 TOWER YU / YI LIU CHK 13SEP2018 BILL LIU APVD 13SEP2018 TONY YUAN MODEL NAME		 trp CONNECTOR a bel group		DONGGUAN CHINA	
DIMENSIONS: mm		TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±- 1 PLC ±- 2 PLC ±0.25 3 PLC ±- 4 PLC ±- ANGLES ±- APPLICATION SPEC		DESC MAGJACK OVER DUAL USB3.1 GEN 1 URG153 CIRCUIT, GIGABIT, W/ LEDS		RESTRICTED TO	
PRODUCT SPEC 108-104004		MAGJACK OVER USB NON-PoE		SIZE A2	CAGE CODE	DRAWING NO C-2250615	-
CUSTOMER DRAWING				SCALE 3:1	SHEET 4	OF 5	REV 4

D

D

C

C

B

B

A

A

2250615_C					STOCK DISPOSITION			
					A: CONTINUE AS IS		D: USE OLD FIRST	
					B: REWORK		E: PARTS TO CONFORM	
REVISION HISTORY					C: SCRAP		F: OTHER	
DATE	REV	CHANGES	REASON	APPROVAL	INVENTORY (A,B,C,D,E,F)	WORK IN PROCESS (A,B,C,F)	SUPPLIER ORDERS (A,E,F)	OPEN CUST ORDERS (A,E,F)
13SEP2018	1	-	INITIAL RELEASE	TONY YUAN	-	-	-	-
21MAR2019	2	NOTE AND TITLE BLOCK: CHANGE USB 3.0 TO USB 3.1 GEN 1	DRAWING CLARIFICATION	TONY YUAN	A	A	A	A
24MAY2019	3	NOTE 5: CHANGE YELLOW LED WAVE LENGTH FROM 588nm TO 590nm	DRAWING CLARIFICATION	TONY YUAN	A	A	A	A
26AUG2019	4	SHEET 2, A4: UPDATE VIEW SHOWING USB STANDOFF CHANGE	PRODUCT IMPROVEMENT	TONY YUAN	A	A	A	A

THIS DRAWING IS A CONTROLLED DOCUMENT.
AND COMPLIANT TO ASME Y14.5M

DIMENSIONS:
mm

PRODUCT SPEC
108-104004

TOLERANCES UNLESS
OTHERWISE SPECIFIED:

0 PLC ±-
1 PLC ±-
2 PLC ±0.25
3 PLC ±-
4 PLC ±-
ANGLES ±-
APPLICATION SPEC
-

DWN
TOWER YU / YI LIU
13SEP2018

CHK
BILL LIU
13SEP2018

APVD
TONY YUAN
13SEP2018

MODEL NAME
MAGJACK
OVER USB NON-PoE

trp CONNECTOR
a bel group

DONGGUAN
CHINA

DESC
MAGJACK OVER DUAL USB3.1 GEN 1
URG153 CIRCUIT, GIGABIT, W/ LEDS

SIZE
A2

CAGE CODE

DRAWING NO
C-2250615

RESTRICTED TO
-

CUSTOMER DRAWING

SCALE
3:1

SHEET
5

OF
5

REV
4

XXXXX

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[GMX-SMT4-N-88](#) [GSGX-N-2-88](#) [GSGX-N-4-88](#) [GSX-NS2-88-3.05](#) [GSX-NS-88-3.68](#) [PT-108A-8C-UL](#) [PTS-J531-8CS-50UL](#) [A-2014-0-4](#)
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