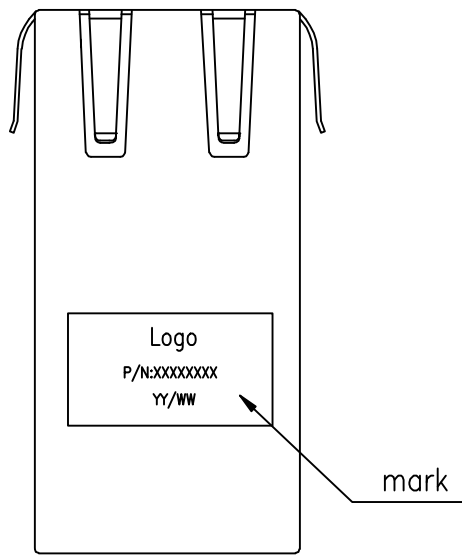
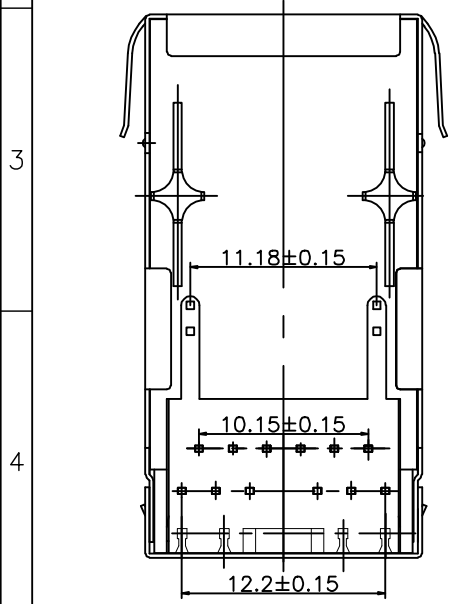


**DESCRIPTION:**  
RJ45 With internal Magnetics Connector  
Designed to support such applications as: Ethernet Equipment Complex, Switches, Routers, Firewalls, Servers and Hub  
Internal magnetics are 100% electrically tested for functionality per IEEE802.3af/at requirement

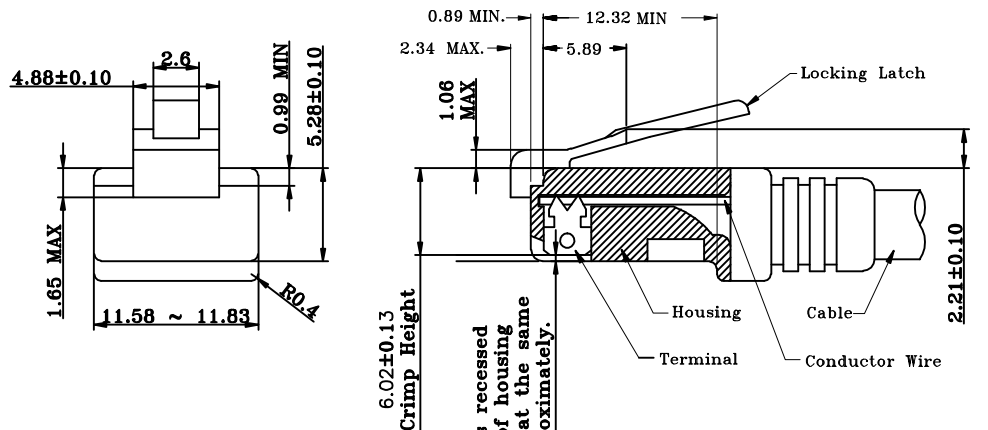
**ELECTRICAL:**  
RoHS peak wave solder temperature rating 235°C  
High performance for maximum EMI suppression  
PoE rating: 15W 350mA, 48V; PoE+ rating: 30W, 750mA, 57V; PoE++ rating: 60W, 1000mA, 57V;  
(For PoE Products only)  
JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS, PART 68 SUBPART F.  
INSERTION FORCE: 2 CONTACTS----350g 4 CONTACTS----500g  
6 CONTACTS----750g 8 CONTACTS----900g  
10 CONTACTS----1050g

**MECHANICAL:**  
RETENTION STRENGTH: 7.7Kgs BETWEEN JACK AND PLUG  
DURABILITY: 750 MATING CYCLES Mini  
HOUSING: 1) GLASS FILLED PA66 (UL 94V-0)  
2) GLASS FILLED PA46/LCP (UL 94V-0)  
3) GLASS FILLED PBT (UL 94V-0)

**MATERIAL:**  
SPRING WIRE:  
1) 0.2-0.45mm DIA PHOSPHOR BRONZE GOLD PLATING OVER NICKEL  
2) 0.2-.35mm THICKNESS PHOSPHOR BRONZE ALLOY SELECTIVE GOLD PLATING OVER NICKEL;  
GOLD PLATING: 3μ#, 6μ#, 15μ#, 30μ#, 50μ#  
WORKING TEMPERATURE: -20°C~70°C  
TOLERANCES UNLESS OTHERWISE SPECIFIED :  
0-10±0.15, 10-20±0.2, 20-40±0.25, 40-70±0.3, ≥70±0.4



**1. Recommend Plug Dim**



All contacts recessed below top of housing and must be at the same height approximately.

All dimensions follow :  
FCC subpart F, 68,500, Figure (C)(2)(i)  
IEC 60603-7

STANDARD MODULAR PLUG ASSEMBLY

NOTES : 1. Tolerance : PCB ±0.05mm  
Connector ±0.25mm  
2. Connector dimensions comply with FCC 68.5 dimension requirements

**B-TOP** 东莞市博腾电子科技有限公司  
Dongguan BtopTech Electronic Technology Co., Ltd.

|                |       |            |        |
|----------------|-------|------------|--------|
| DIM.           | TOL.  | UNIT:      | mm     |
| X              | ±0.30 | SCALE:     | 1:1    |
| X.X            | ±0.20 | SHEET:     | 1 of 2 |
| X.XX           | ±0.15 | DWG. SIZE: | A4     |
| X.XXX          | ±0.10 | LAYER:     | XXXX   |
| GENERAL ANGLE: |       | ±3°        |        |

WEBSITE: WWW.BTOPTECH.COM  
WWW.BTOPTECH.CN  
TEL: 0769-38928198  
FAX: 0769-38928199

DRAWN:  
CHECKED:  
APPROVED:

|           |  |
|-----------|--|
| TITLE:    | B50(157-01)SP8-221-P625-F52                                |
| PART NO.: | TAB-UP 1.3INch 1X1Port 5G BASE-T PoE W/ SHELL W/ LED (60W) |

|      |             |         |       |             |
|------|-------------|---------|-------|-------------|
| REV. | DESCRIPTION | ECN NO. | NAME  | DATE        |
| XA   | NEW RELEASE | xxxx    | Jason | 2018-Mar-19 |

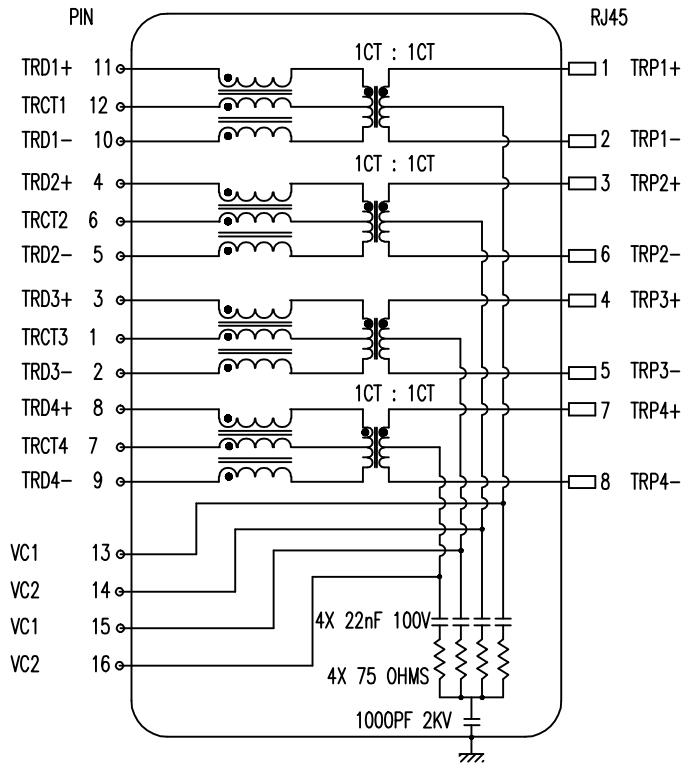
**REVISIONS**

Meets or exceeds IEEE 802.3 standard for 5G Base-T  
 160 uH minimum OCL with 8mA DC bias current  
 Available with or without LEDs  
 Minimum 1500Vrms isolation per IEEE802.3 requirement  
 Operating temperature -0°C to +70°C  
 Storage temperature -40°C to +85°C

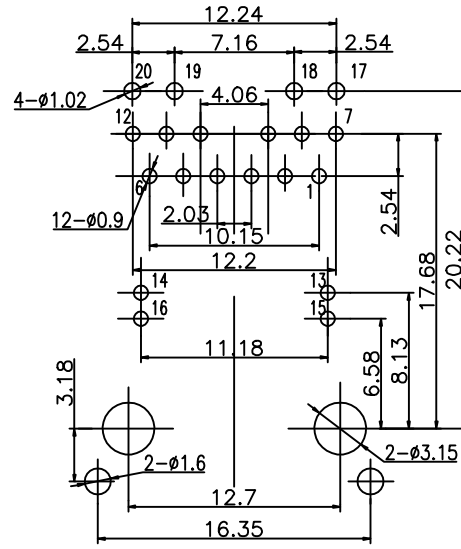
2. TRANSFORMER ELECTRICAL SPECIFICATIONS AT 25°C;

| Insertion Loss (dB max.) |             | Return Loss (dB min.) |            |             | Cross talk (dB min.) |             | C.M.R. (dB min.) |            | Hi - pot (Vrms) |
|--------------------------|-------------|-----------------------|------------|-------------|----------------------|-------------|------------------|------------|-----------------|
| 1-125 MHz                | 125-300 MHz | 1-50 MHz              | 50-200 MHz | 200-300 MHz | 1-125 MHz            | 125-300 MHz | 10-60 MHz        | 60-300 MHz | 60Hz/1min.      |
| -1.5                     | -2.0        | -20                   | -18        | -12         | -30                  | -25         | -40              | -25        | 1500            |

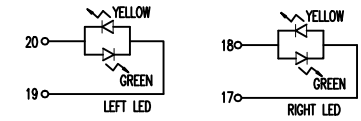
3. SCHEMATIC:



4. Pin Assignment For PCB Layout



Suggested PCB Pad Layout  
Component Side View



| Standard LED Color | LED Wavelength | Forward (v MAX) | Typical (v TYP) | Luminous Intensity |
|--------------------|----------------|-----------------|-----------------|--------------------|
| Green              | 560-580 nm     | 2.5V            | 2.1-2.2V        | 9-25 MCD           |
| Yellow             | 580-610 nm     | 2.5V            | 2.1-2.2V        | 9-30 MCD           |
| Orange             | 580-610 nm     | 2.5V            | 2.1-2.2V        | 50-100 MCD         |

LED Specification

5. ORDER INFORMATION

"B" with the company code

Series of products:  
 60: Double deck RJ45 connector+transformer series (in sidelong footprint);  
 59: Double deck RJ45 connector+transformer series (in vertical footprint);  
 50: Single RJ45 + transformer series;  
 52/53/55/56 LED/56/57/59: Ordinary RJ45 series; DX: that strip line series;  
 40: Conversion said Connectivity  
 80: Series that UK;  
 91: Automotive connector public Block;  
 92: Automotive connector mother Block;  
 93: HDMI the head;  
 94: HDMI mother Block;  
 95: SMT series;  
 96: RRS for switches

Family code (sequence id) : 1-99

Type of product code:  
 G: Gigabit RJ45 transformer;  
 F: 100Base RJ45 transformer;  
 W: for no transformer RJ45 products;  
 M: Series for board-to-board code

Number of magnetic ring

The No. of circuit

Product definition LOGO:  
 1-Press "B-TOP"; 2-No "B-TOP";  
 3- Other companies LOGO

Product definition plastic materials:  
 1-PA66, 2-PA46, 3-PA, 4-PA6, 5-PBT,  
 6-ABS, 7-PA9T, 8-PC, 9-LCP

Pin definition of the product:  
 F- Pin after; B- Pin back; C- No definition of the product

Electroplating product definition:  
 gold-plated terminals (degrees after nickel plated)  
 1-Fμ; 2-3μ; 3-6μ; 4-15μ; 5-30μ;  
 6-60μ; 7-(Ni-60μ, Sn-80-120μ)

Product shielding definition:  
 0-no shielding shell; 1-without shielding shell shrapnel;  
 2-shielding a shell shrapnel; 3-a half-shield shell;

Products luminous definition:  
 0- No LED; 1-Left Yellow Right Green; 2- Left Green Right Yellow; 3- Double Green; 4- Double Yellow; 5- LED straight for the pin; 6- A special definition; 7- Single linear LEDs

Products outport:  
 1-2X1, 2-2X2, 4-2X4, 5-2X5, 6-2X6, 8-2X8, A-1X1;  
 B-1X2, C-1X4, D-1X5, E-1X6, T-1X8, U-(USB+RJ45), P-TAB  
 UP1X1, H-TAB UP1X2, K-TAB UP1X4;

**B-TOP** 东莞市博腾电子科技有限公司  
 Dongguan BtopTech Electronic Technology Co., Ltd.

|                |       |
|----------------|-------|
| DIM.           | TOL.  |
| X              | ±0.30 |
| X.X            | ±0.20 |
| X.XX           | ±0.15 |
| X.XXX          | ±0.10 |
| GENERAL ANGLE: | ±3°   |

|            |        |
|------------|--------|
| UNIT:      | mm     |
| SCALE:     | 1:1    |
| SHEET:     | 2 of 2 |
| DWG. SIZE: | A4     |
| LAYER:     | XXXX   |

|          |                                     |
|----------|-------------------------------------|
| WEBSITE: | WWW.BTOPTECH.COM<br>WWW.BTOPTECH.CN |
| TEL:     | 0769-38928198                       |
| FAX:     | 0769-38928199                       |

|           |  |
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|           |          |             |             |      |       |             |
|-----------|----------|-------------|-------------|------|-------|-------------|
| DRAWN:    | CHECKED: | XA          | NEW RELEASE | xxxx | Jason | 2018-Mar-19 |
| APPROVED: | REV.     | DESCRIPTION | ECN NO.     | NAME | DATE  |             |

REVISIONS