

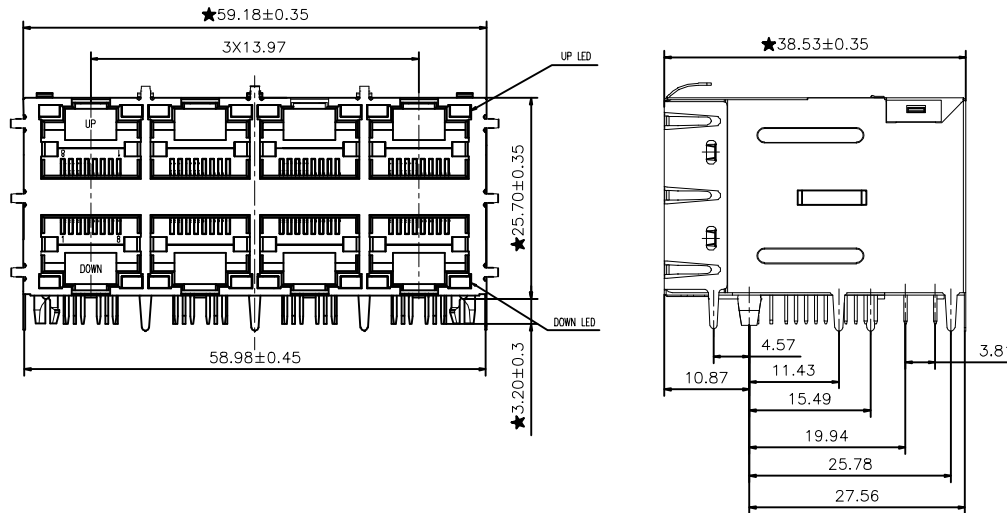


**DESCRIPTION:**  
RJ45 With internal Magnetics Connector  
Designed to support such applications as: Ethernet Equipment Complex, Switches, Routers, Firewalls, Servers and Hub  
Internal magnetics are 100% electrically tested for functionality per IEEE802.3af/at requirement

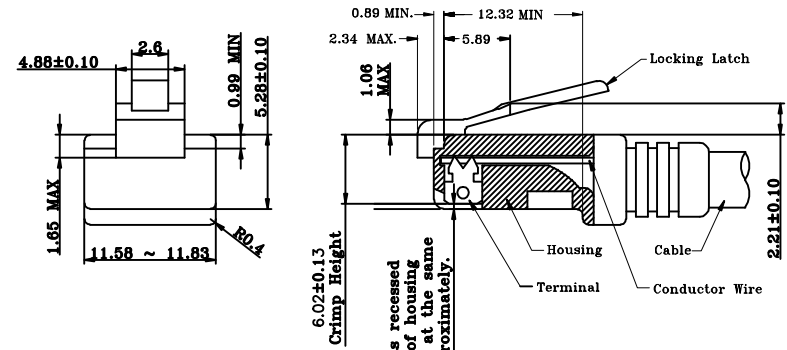
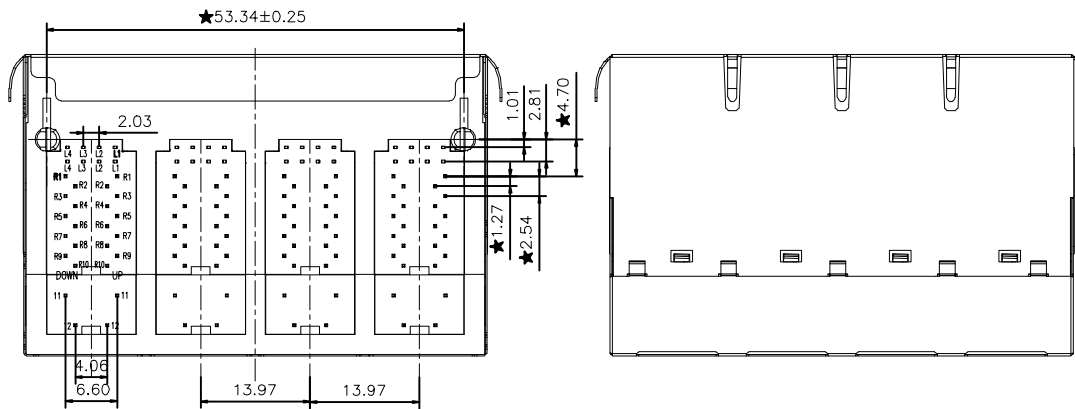
**ELECTRICAL:**  
RoHS peak wave solder temperature rating 235°C  
High performance for maximum EMI suppression  
JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS, PART 68 SUBPART F.  
**INSERTION FORCE:** 2 CONTACTS----350g 4 CONTACTS----500g  
6 CONTACTS----750g 8 CONTACTS----900g  
10 CONTACTS----1050g

**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) 0.2-0.35mm THICKNESS PHOSPHOR BRONZE ALLOY SELECTIVE GOLD PLATING OVER NICKEL;  
**GOLD PLATING:** 3μ#, 6μ#, 15μ#, 30μ#, 50μ#



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.

TITLE: B59(118-111)GP8-239-4123-C12

PART NO.: 2X4Port 10/100/1000 BASE-T PoE W/ SHELL W/LED POE Y-G

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:	

REV.	DESCRIPTION	ECN NO.	NAME	DATE
XA	NEW RELEASE	xxxx	Jason	2018-Nov-06
<b>REVISIONS</b>				

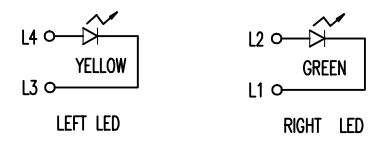
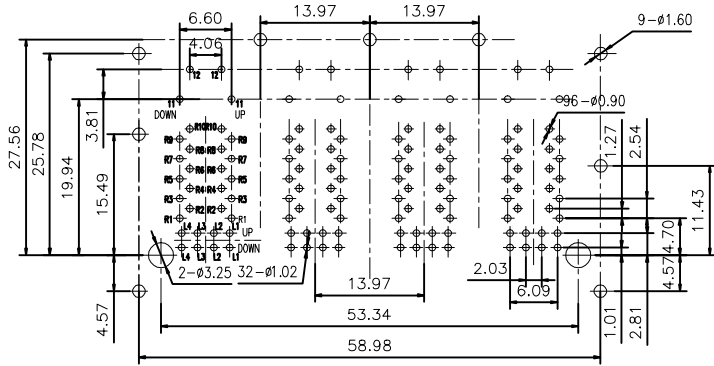
Meets or exceeds IEEE 802.3 standard for 10/100//1000 Base-TX  
 350 uH minimum OCL with 8mA DC bias current  
 Available with or without LEDs  
 Minimum 1500Vrms isolation per IEEE802.3 requirement  
 DC Current/Voltage Rating-PoE: 720mA MAX @57VDC(Continuous)  
 Operating temperature -40°C to +85°C  
 Storage temperature -40°C to +85°C

### 4.Pin Assignment For PCB Layout



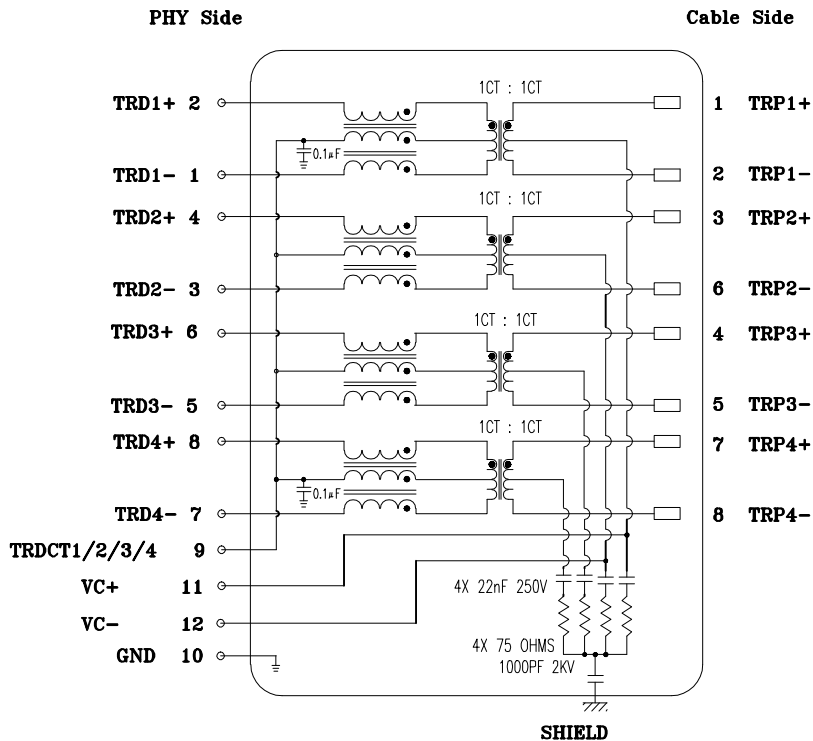
### 2.TRANSFORMER ELECTRICAL SPECIFICATIONS AT 25°C;

Insertion Loss (dB max.)	Return Loss (dB min.)				Cross talk (dB min.)			C.M.R. (dB min.)		Hi - pot ( Vrms )
	1-30 MHz	30-60 MHz	60-80 MHz	80-100 MHz	1-30 MHz	30-60 MHz	60-100 MHz	10-60 MHz	60-100 MHz	
-1.2	-18	-16	-12	-10	-40	-35	-30	-40	-30	1500



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

### 3.SCHEMATIC:



Suggested PCB Pad Layout  
Component Side View

### 5.ORDER INFORMATION

**B** N (Z) G X - M - A B C D - E H I

"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/56/57/58: 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;  
 98: RHS 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 ;  
 S: 5GB RJ45 transformer  
 T: 10GB RJ45 transformer

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- $7\mu$ ; 2- $3\mu$ ; 3- $6\mu$ ; 4- $15\mu$ ; 5- $30\mu$ ;  
 6- $50\mu$ ; 7-(Ni- $50\mu$ , Sn- $60-120\mu$ ).

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 output:  
 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.

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 X.XXX ±0.10

GENERAL ANGLE: ±3°

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

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