



**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

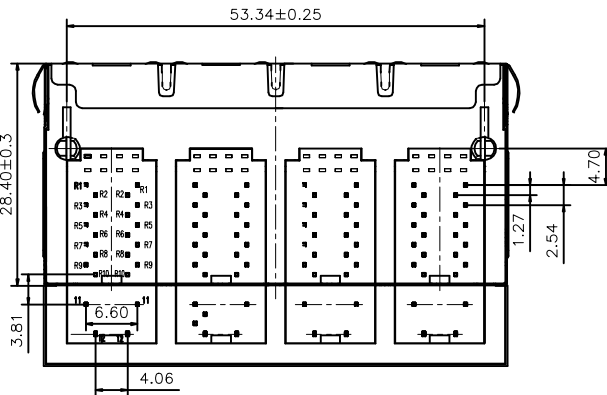
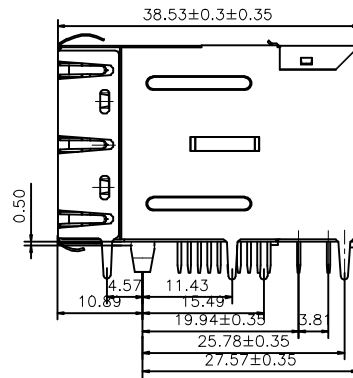
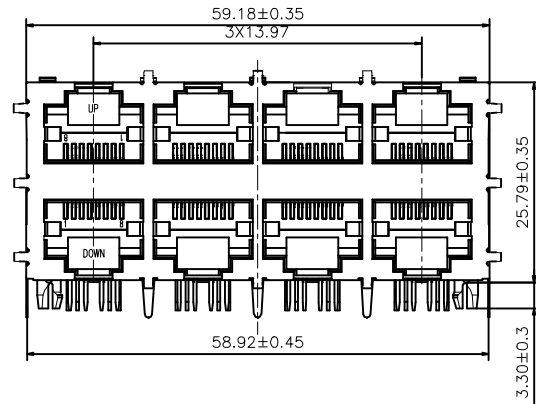
**ELECTRICAL:**  
 RoHS peak wave solder temperature rating 235°C  
 High performance for maximum EMI suppression  
 JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS, PART 68 SUBPART F.  
**INSERTION FORCE:** 2 CONTACTS----350g 4 CONTACTS----500g  
 6 CONTACTS----750g 8 CONTACTS----900g  
 10 CONTACTS----1050g

**MECHANICAL:**  
**RETENTION STRENGTH:** 7.7Kgs BETWEEN JACK AND PLUG  
**DURABILITY:** 750 MATING CYCLES Mini

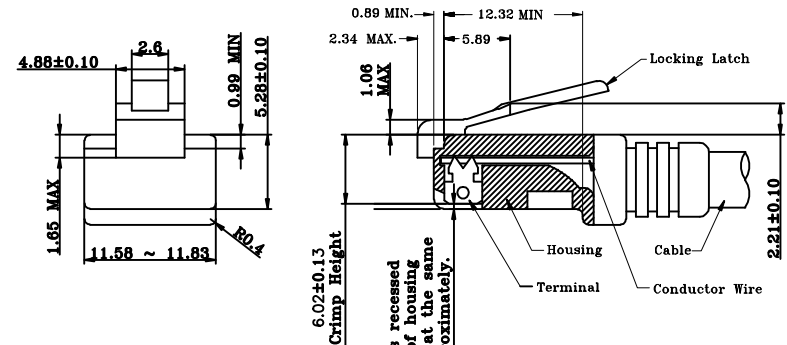
**MATERIAL:**  
**HOUSING:** 1) GLASS FILLED PA66 (UL 94V-0)  
 2) GLASS FILLED PA46/LCP (UL 94V-0)  
 3) GLASS FILLED PBT (UL 94V-0)

**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.

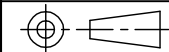
All dimensions follow :  
 FCC subpart F, 68,500, Figure (C)(2)(i)  
 IEC 60603-7  
 STANDARD MODULAR PLUG ASSEMBLY

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(118-104)GP8-232-4013-C12  
 PART NO.: 2X4Port 10/100/1000 BASE-T PoE+ W/ SHELL W/O LED

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: 1 of 2  
 DWG. SIZE: A4  
 LAYER: XXXX

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

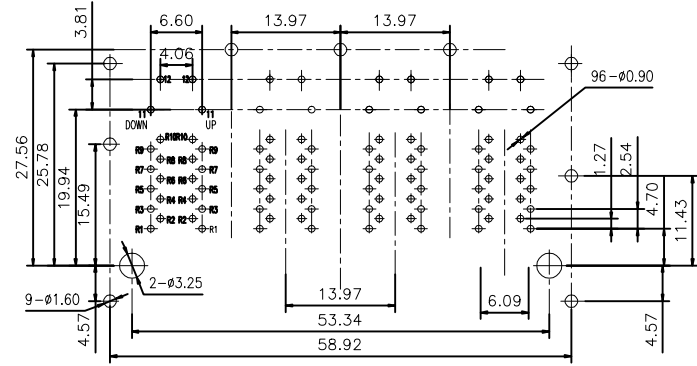
DRAWN:  
 CHECKED:  
 APPROVED:

XA	NEW RELEASE	xxxx	Jason	2018-Jul-23
REV.	DESCRIPTION	ECN NO.	NAME	DATE

REVISIONS

Meets or exceeds IEEE 802.3 standard for 10/100/1000 Base-T  
 350 uH minimum OCL with 18mA DC Bias current  
 Available with or without LEDs  
 Minimum 1500Vrms isolation per IEEE802.3 requirement  
 DC Current/Voltage Rating-PoE+: 1000mA MAX @57VDC(Continuous)  
 Operating temperature -40°C to +85°C  
 Storage temperature -40°C to +85°C

### 4.Pin Assignment For PCB Layout



**Suggested PCB Pad Layout**  
Component Side View

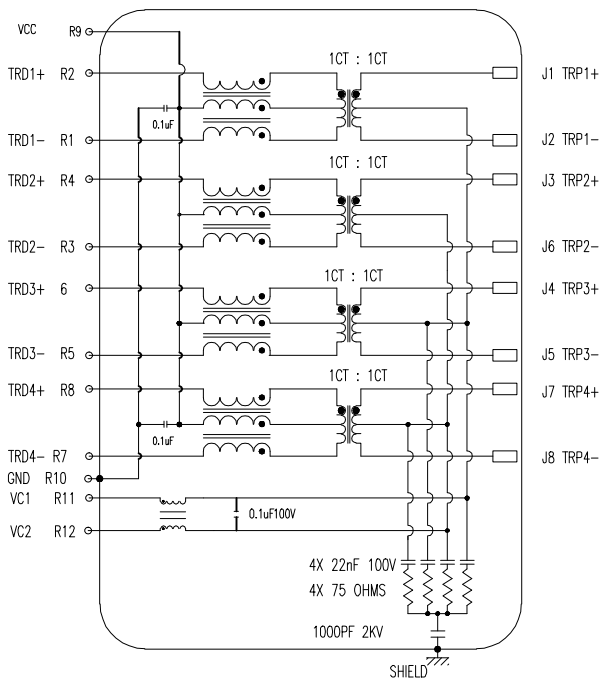
### 2.TRANSFORMER ELECTRICAL SPECIFICATIONS AT 25°C;

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

### 3.SCHEMATIC:

PHY Side

Cable Side



### 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/56/57/58: 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

Number of magnetic ring

The No. of circuit

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

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-PET,  
 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)  
 1-1μ; 2-3μ;3-6μ; 4-15μ; 5-30μ;  
 6-50μ;7-(Ni-50μ;Sn-60-120μ).

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

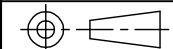
Products output:  
 1-2X1,2-2X2,4-2X4,5-2X5,6-2X6,8-2X8,A-1X1,  
 B-1X2,C-1X4,D-1X5,E-1X6,T-1X8,U-(USB+RJ45),P-TAB  
 UP1X1,H-TAB UP1X2;K-TAB UP1X4.

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### REVISIONS