

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.

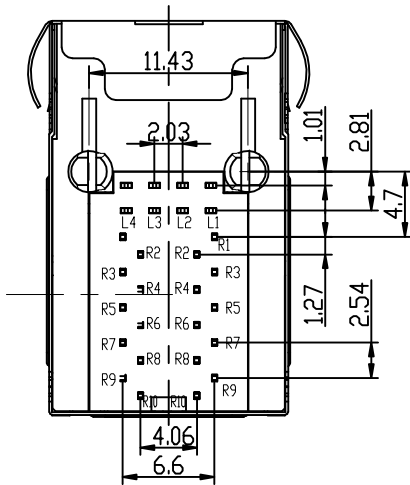
INSERTION FORCE:
 2 CONTACTS----350g 4 CONTACTS----500g
 6 CONTACTS----750g 8 CONTACTS----900g
 10 CONTACTS----1050g

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)

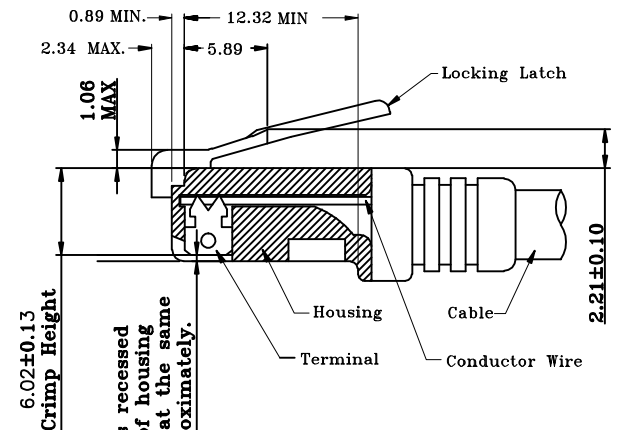
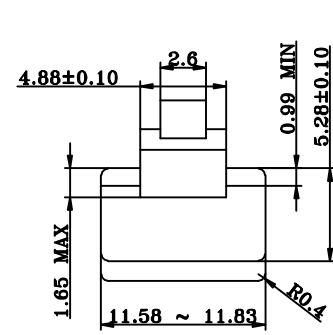
MATERIAL:
 SPRING WIRE: 1) 0.2-0.45mm DIA PHOSPHOR BRONZE GOLD PLATING OVER NICKEL
 2) 0.2-0.35mm THICKNESS PHOSPHOR BRONZE ALLOY SELECTIVE GOLD PLATING OVER NICKEL;
 GOLD PLATING: 3μ#, 6μ#, 15μ#, 30μ#, 50μ#

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



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



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

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:	B59(45-188)G8-060-1623-C12
PART NO.:	2X1Port 10/100/1000BASE W/ SHELL W/ LED

REV.	DESCRIPTION	ECN NO.	NAME	DATE
XA	NEW RELEASE	xxxx	Jason	2018-Apr-24
REVISIONS				

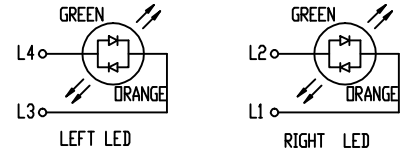
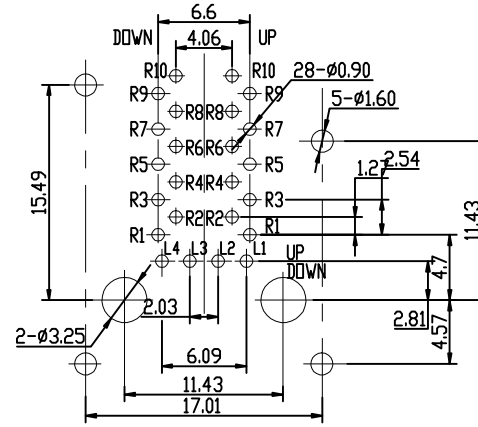
Meets or exceeds IEEE 802.3 standard for 10/100/1000 Base-TX
 350 uH minimum OCL with 8mA DC bias current
 Available with or without LEDs
 Minimum 1500Vrms isolation per IEEE802.3 requirement
 Operating temperature 0°C to +70°C
 Storage temperature -40°C to +85°C

4.Pin Assignment For PCB Layout



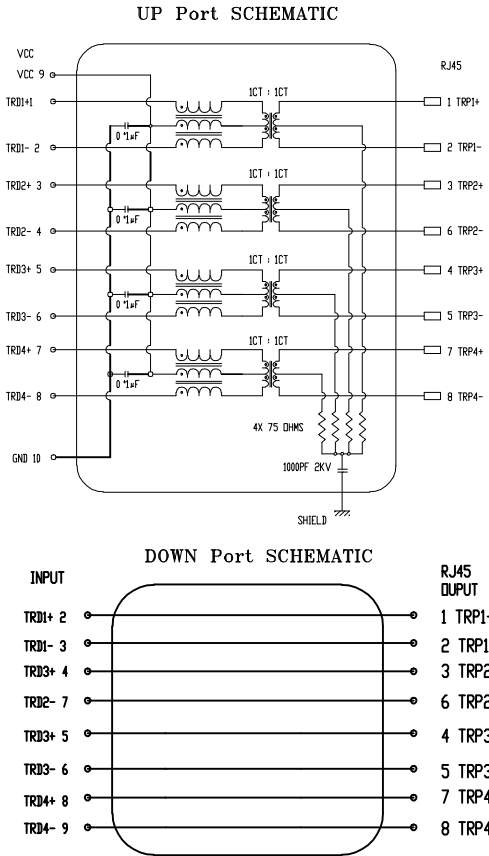
2.TRANSFORMER ELECTRICAL SPECIFICATIONS AT 25°C;

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	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

LED Specification

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/56/57/59: 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: RBS 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-PA6,2-PA66,3-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:
 1-2X1,2-2X2,4-2X4,5-2X5,6-2X6,6-2X8 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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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

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