

10/100/1000 BASE FILTER WITH DUAL USB 2.0 CONNECTOR Model NO.: RJLUG-029TA

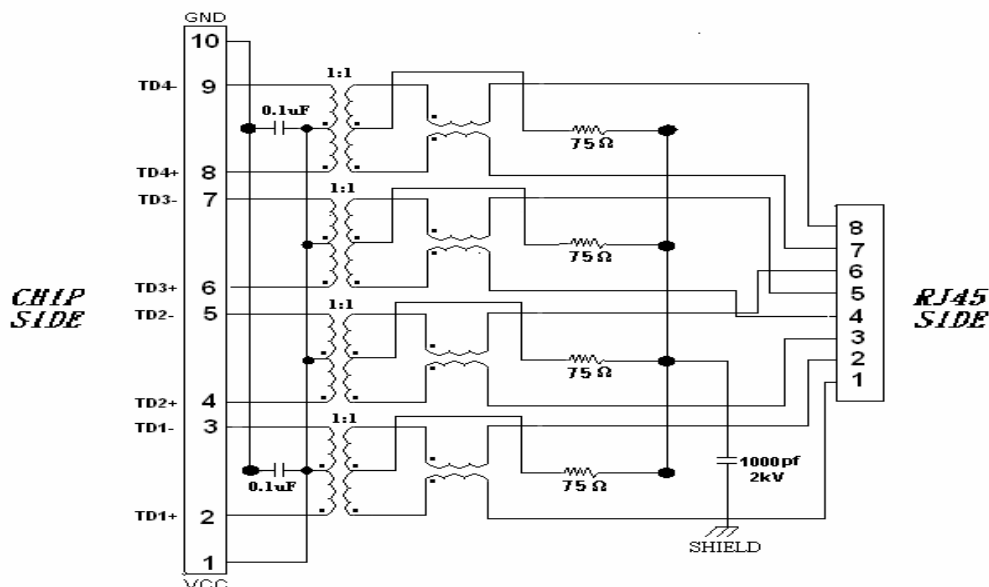
Feature:

- ⊙ RoHS Compliant
- ⊙ Fully shielded magnetics protect data from internally generated digital noise
- ⊙ Reduces the overall length of the signal path for improved common mode performance
- ⊙ Implements full common mode termination scheme with used and unused twisted pairs
- ⊙ Meets IEEE802.3 Baseline Wander Compensation specification
- ⊙ Integrates high voltage capacitor to chassis ground
- ⊙ Supports all major transceivers with matched turns ration and complete integration of specified termination
- ⊙ Design for 100base-tx transmission over UTP-5 cable
- ⊙ Operating TEMP. range: -40°C to +85°C
- ⊙ Storage TEMP. range: -55°C to + 125°C
- ⊙ Primary OCL inductance: 350μH MIN. at 100KHz/0.1Vrms with 8mA DC bias
- ⊙ With the LED lamp

Typical Performance Characteristics@ 25C

Insertion Loss (dB MAX)	Return Loss (dB Min @100±15Ω)				Differential to Common Mode Rejection (dB MIN)	Cross talk (dB MIN)					CMRR (dB MIN)	Isolation Voltage (Vrms min)
MHz	MHz				MHz	MHz					MHz	1500
1~100	1~30	40	50	60~80	1~100	20	40	60	80	100	1~100	
-1.0	-16	-14	-12	-10	-33	-47	-40	-37	-35	-33	-30	

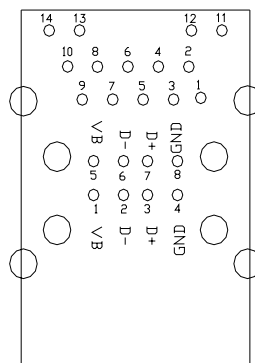
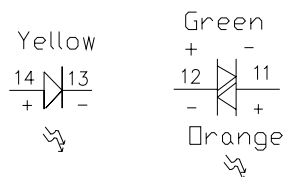
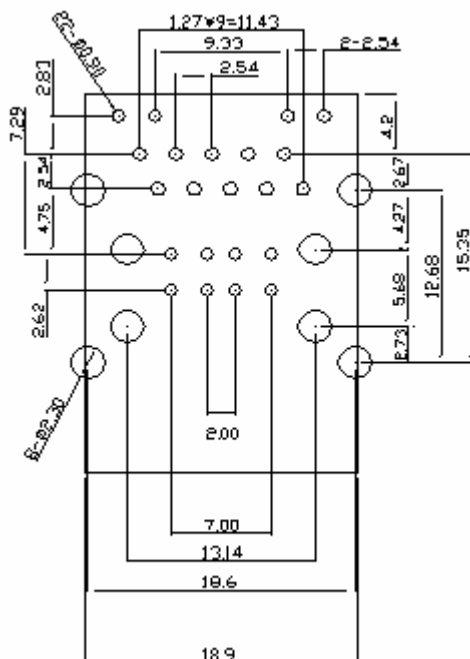
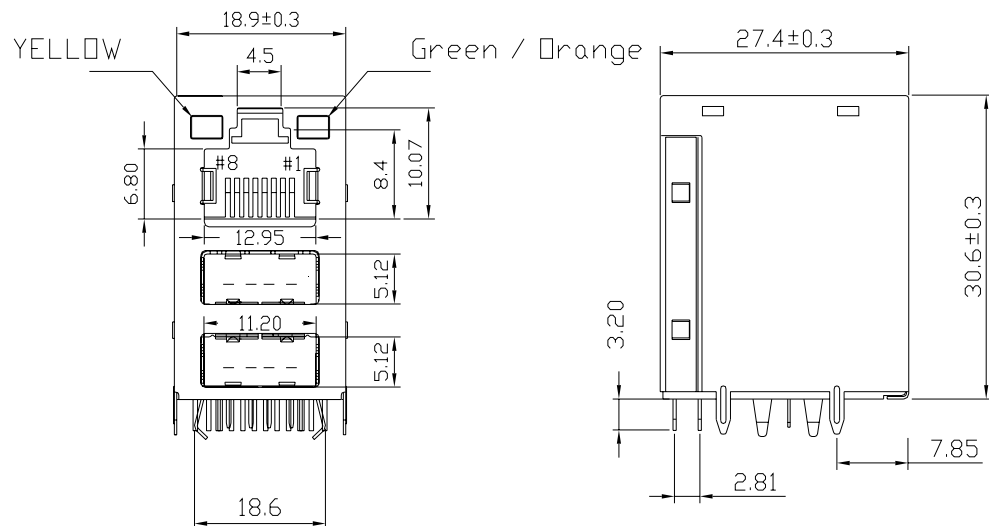
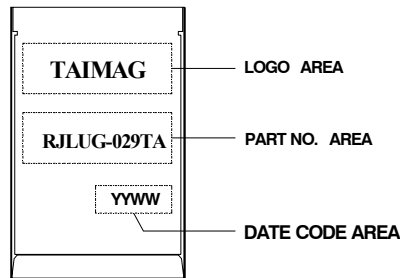
Schematic Design on MDI Interface Circuitry



Model NO.: RJLUG-029TA

Dimension: mm

TOLERANCE:±0.15 (Unless otherwise specified)



RECOMMENDED P.C.B LAYOUT
COMPONENT SIDE OF BOARD



NUMBER:RD-SDRJLUG-029TA
DATE : 2005/08/09 -JC(REV:A6)

Model NO.: RJLUG-029TA Ordering Information

R J L U G - 0 2 9 T A	
R J 4 5	Series N O .
W i t h L E D	1 0 0 0 B a s e
w i t h U S B	

Requirements :

1. Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable product drawing.

2. Materials and Finish

A. Contact:

RJ Contact : Phosphor Bronze, Thickness=0.30mm

Finish :Contact Area :6 μ "min. Gold over 50 μ "min. Nickel

RJ Joint Contact : Brass, Thickness=0.40mm

Finish : 80 μ "min. Sn over 50 μ "min. Nickel

USB Contact : Brass, Thickness=0.25mm

Finish :Contact Area : 30 μ "min. Gold over 50 μ "min. Nickel

LED Joint Contact : Brass, Thickness=0.40 mm

Finish : 80 μ "min. Sn over 50 μ "min. Nickel

B. Plastic Part :

(1) Set Housing : Thermoplastic, Black

UL FILE NO. : E59481

Manufacturer : SHIKONG SYNTHETIC FIBERS CORP.

Grade : 4830G

Flame Class : UL 94V-0

(2) Insert : Thermoplastic, Black

UL FILE NO. : E59481

Manufacturer : SHIKONG SYNTHETIC FIBERS CORP.

Grade : 4830G

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(3) Spacer : Thermoplastic, PA-9T,Black

UL FILE NO. : E90350

Manufacturer : Kuraray CO.,LTD.

Grade : G2330

Flame Class : UL 94V-0

(4) USB Housing : Thermoplastic ,PA-9T, Black

UL FILE NO. : E90350

Manufacturer : Kuraray CO.,LTD.

Grade : G2330

Flame Class : UL 94V-0

C. Shield Material :

Cartridge $t=0.25\text{mm}$

$10\ \mu\text{m}$ - $20\ \mu\text{m}$ Thick Nickel over Brass

D. LED Lamp

(a) Lens Color : Transparent with color

(b) Emitted Color : Green & Orange & Yellow

(c) View Angle : 65°

(d) Wave Length : Green 565nm ; Orange 610nm ; Yellow 585nm

(e)Recommended operation current (IF) : 20 mA

3. Ratings

(1) Voltage rating : 125 VAC

(2) Current rating : 1.5A

Durability :

(1) 1000 cycles with no function damage for RJ-45 and USB. Abnormalities shall be present after the test.

(2) Low Level Contact Resistance : $\Delta R=30\text{m}\Omega$ maximum (final)

(3) The sample should be mounted in the tester and fully mated and unmated 500 times per hour at the rate of 25mm/min. EIA-364-09C.

Solderability :

(1) The inspected area of each lead must have 95% solder coverage minimum.

(2) Steam Aging Preconditioning: 93°C ($+3/-5^\circ\text{C}$)、100%HR、8hrs <J-STD-002B category 3 aging>.

(3) Immerse in the flux for a period of 10 sec.

(4) Solder pot temperature: $245\pm 5^\circ\text{C}$ 、5sec



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Resistance to soldering heat :

- (1) Verify components meet their specified electrical performance criteria and no physical damage has occurred.
- (2) Solder pot temperature: 150°C preheat and 260°C 、 10 sec <MIL-STD-202G Method 202F>.
- (3) Total Number of Solder Temperature Cycles: Must withstand 3 temperature cycles.
- (4) Solder Iron: Iron tip temperature: 400°C 、 5 sec <MIL-STD-202G Method 202F>.

Leaching :

- (1) External visible using 10X optical microscope and components meet electrical performance criteria.
- (2) Solder pot temperature: 260±5°C 、 30sec.

Soldering adhesion strength :

- (1) Verify components meet their specified mechanical performance criteria.
- (2) Solder the component to the substrate.
- (3) To exert pressure upon component till it breakdown.

Humidity-Temperature Cycling :

- (1) Shall meet visual requirements,show no physical damage.Abnormalities shall be present after the test.
- (2) Low Level Contact Resistance: $\Delta R=50m\Omega$ maximum (final).
- (3) Subject mated connectors to 10 humidity-temperature cycles.

Temperature Cycling :

- (1) Shall meet visual requirements,show no physical damage.
- (2) Subject mated connectors to 5 cycles between -55°C and 85°C,30 minutes duration at both temperature extremes.

Temperature Life(Heat Aging) :

- (1) Shall meet visual requirements,show no physical damage. Abnormalities shall be present after the test.
- (2) Low Level Contact Resistance: $\Delta R=50m\Omega$ maximum (final).
- (3) Subject mated connectors to temperature life at 70°C for 96 hours.



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Model NO.: RJLUG-029TA

1. Unit weight :20.6 grams
2. package : 50 pcs / tray / 1.044 kgms
3. Carton : 400 pcs / 8 layers of tray
4. Gross weight : 8.964 kgms

Package drawing:

