

## Multi-Port 10/100/1000 BASE-TX Filtered Connector Module MODEL NO. : RJ12G-001YA1

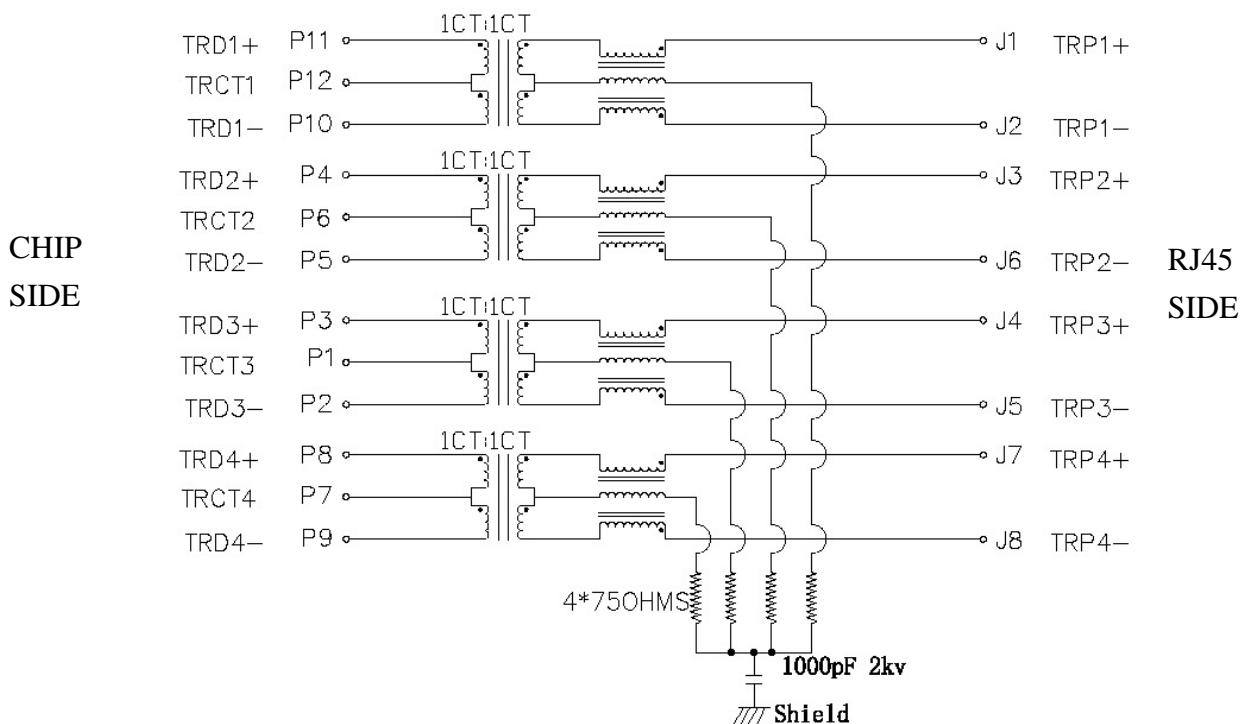
### Features :

- ⊙ RoHS Compliant
- ⊙ Do not use material and use that the prohibition that SS-00259 stipulates
- ⊙ 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.

### Typical Performance Characteristics

| Insertion Loss<br>(dB MAX) | Return Loss<br>(dB Min @100±15Ω) |     |     |       | Differential to<br>Common<br>Mode Rejection<br>(dB MIN) | Cross talk<br>(dB MIN) |     |     |     |     | CMRR<br>(dB MIN) | Isolation<br>Voltage<br>(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              |                                    |

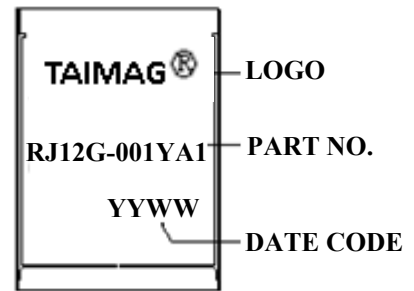
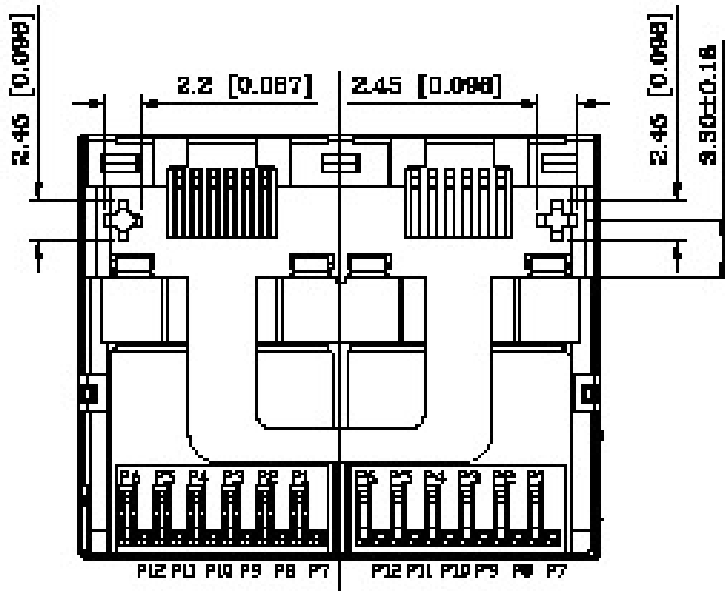
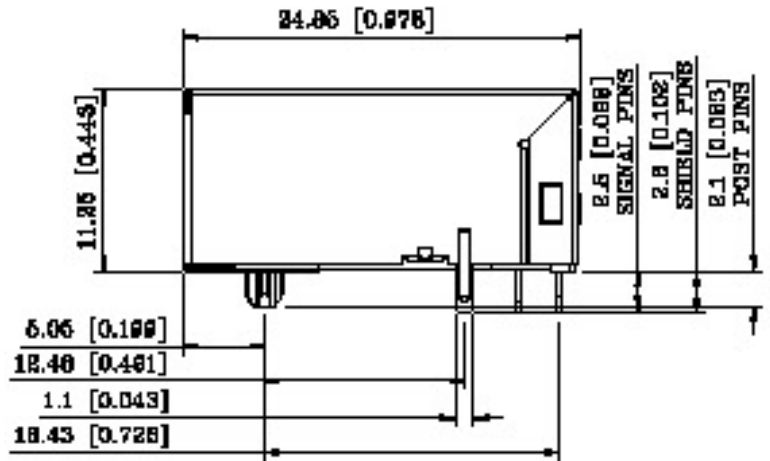
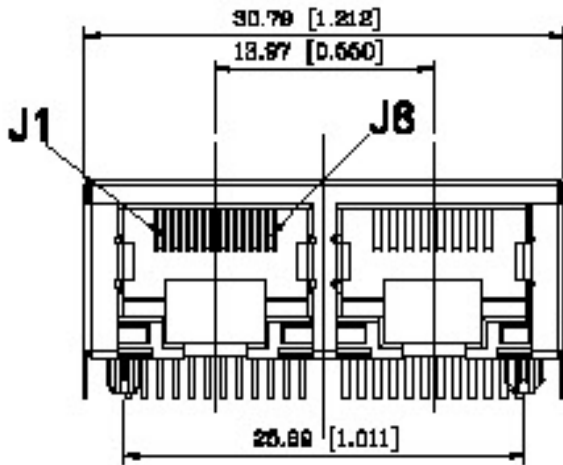
### Schematic: Design on MDI Interface Circuitry



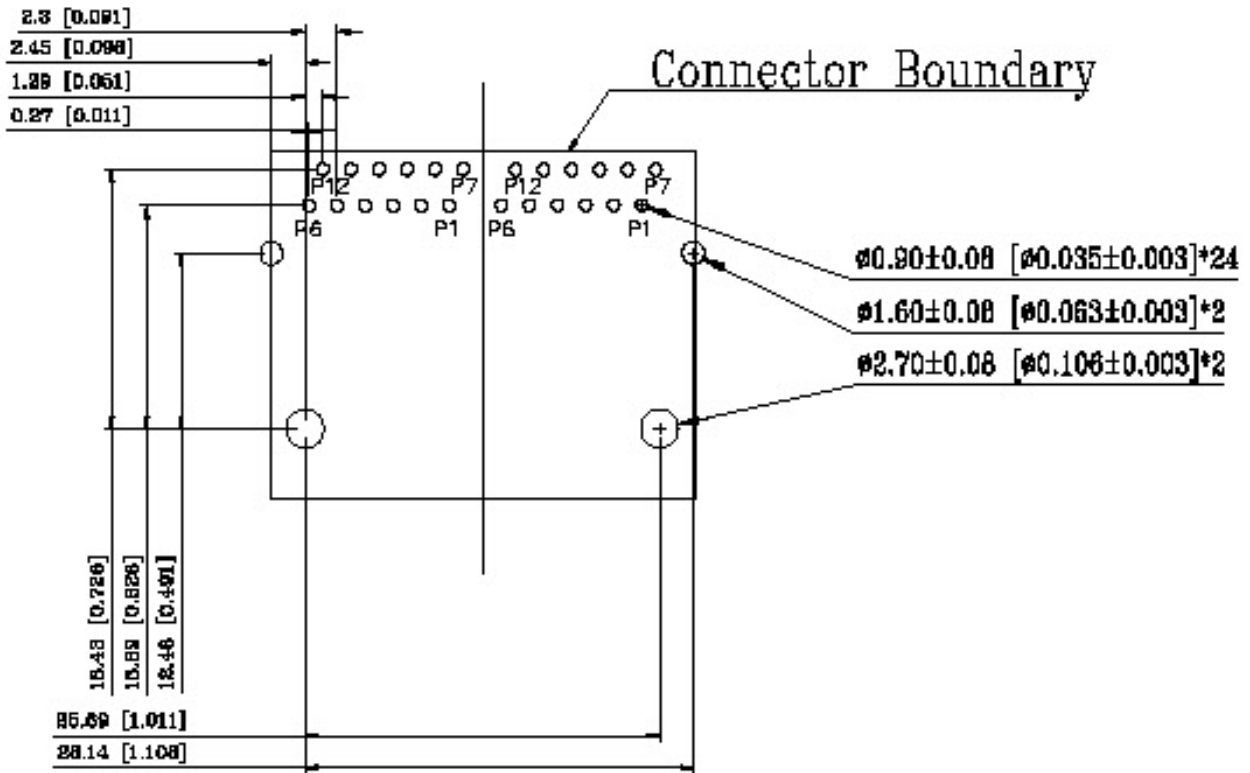
## MODEL NO. : RJ12G-001YA1

Dimension: mm

TOLERANCE:±0.15 (Unless otherwise specified)



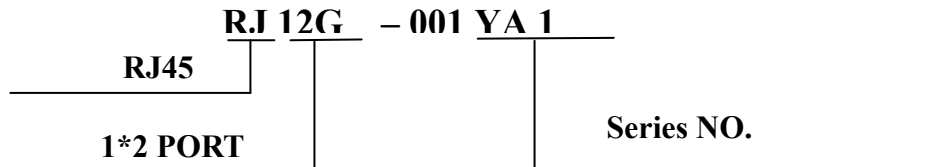
FCC



RECOMMENDED P.C.B LAYOUT  
COMPONENT SIDE OF BOARD

## MODEL NO. : RJ12G-001YA1

### Ordering Information



## 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=0.35mm

Finish : Contact Area :6 $\mu$ "min. Gold over 50  $\mu$ "min. Nickel

RJ Joint Contact : SPCC, Thickness=0.30mm

Finish : 80 $\mu$ "min. Sn over 50  $\mu$ "min. Nickel

#### B. Plastic Part :

- (1) Set Housing : Thermoplastic, LCP, Black  
UL FILE NO. : E106764  
Manufacturer : POLYPLASTICS CO LTD.  
Grade : E130i(d)(e)  
Flame Class : UL 94V-0
- (2) Insert : Thermoplastic, LCP, Black  
UL FILE NO. : E106764  
Manufacturer : POLYPLASTICS CO LTD.  
Grade : E130i(d)(e)  
Flame Class : UL 94V-0
- (3) Spacer : Thermoplastic, LCP, Black  
UL FILE NO. : E106764  
Manufacturer : POLYPLASTICS CO LTD.  
Grade : E130i(d)(e)  
Flame Class : UL 94V-0

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### C. Shield Material :

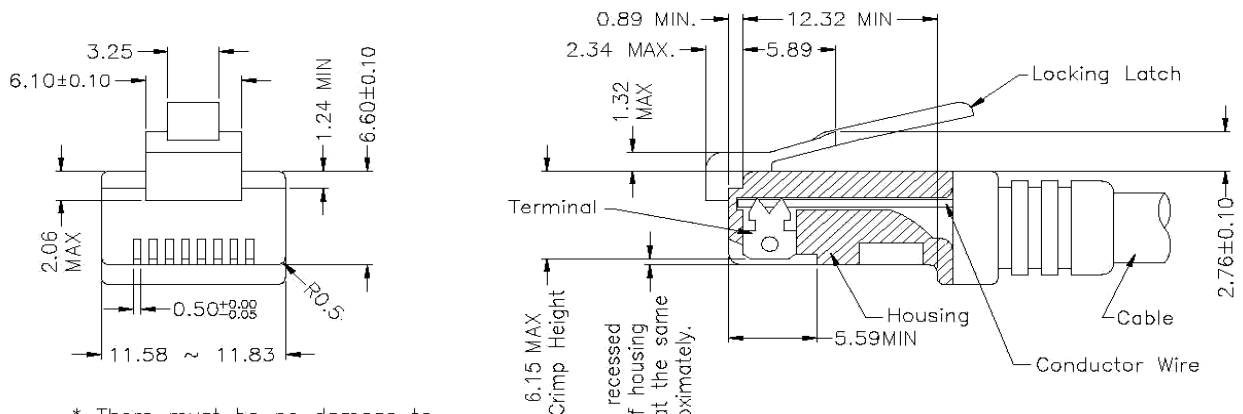
Cartridge  $t=0.25\pm 0.05\text{mm}$

$30\ \mu\text{m}$  MIN Thick Nickel over Brass

### Durability :

- (1) 1000 cycles with no function damage for RJ-45 . 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.

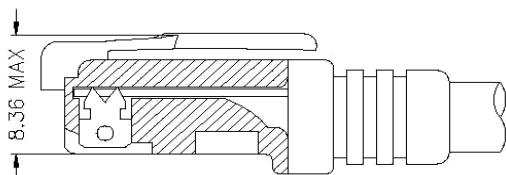
### RJ PLUG SPECIFICATION :



- \* There must be no damage to housing or locking latch. There must be no nicks or cuts in cable.
- \* Durability : 750 cycles generally

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

FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(i) AND IEC 603-7 FIGURE 23 & 24



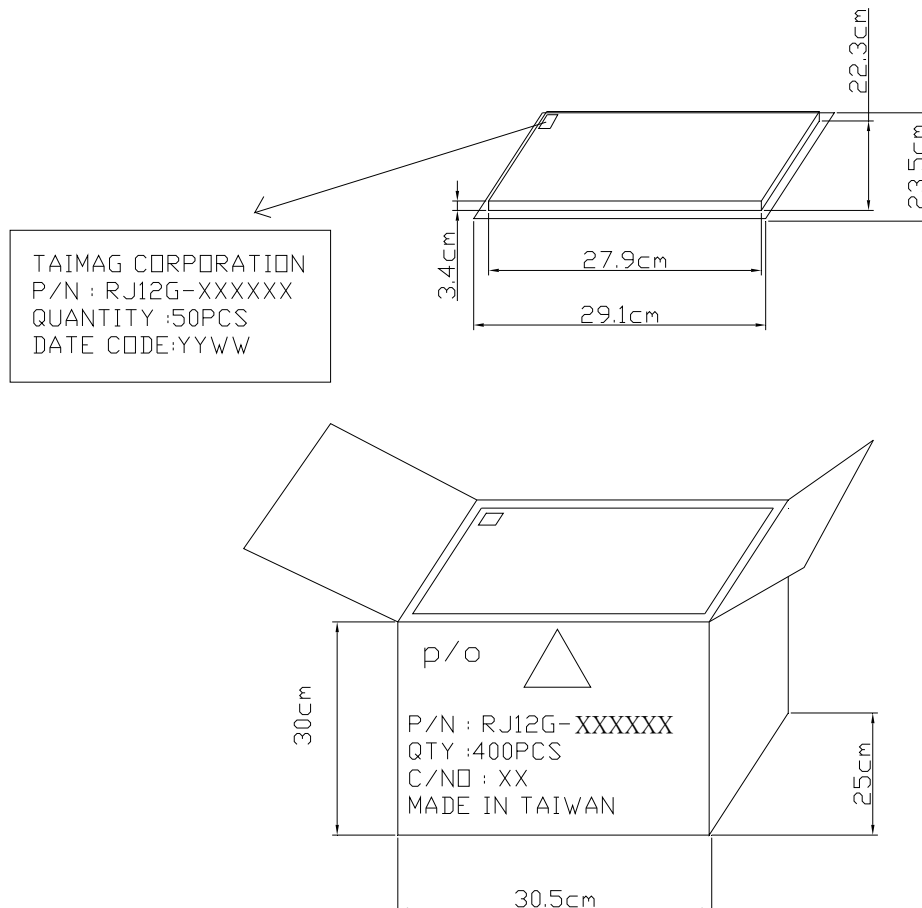
STANDARD MODULAR PLUG ASSEMBLY

FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(ii)

## MODEL NO. : RJ12G-001YA1

1. Unit weight : 10.3 grams
2. package : 50 pcs / tray / 0.522 kgms
3. Carton : 400 pcs / 8 layers of tray
4. Gross weight : 4.482 kgms

### Package drawing:





NUMBER:RD-SD-RJ12G-001LA1  
DATE :2013/12/01 T (REV:A2)

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**MODEL NO. : RJ12G-001YA1**

| REV. | Revision Description | DATE       | APPROVED |
|------|----------------------|------------|----------|
| A1   | First Release        | 2015/11/05 |          |
|      |                      |            |          |
|      |                      |            |          |
|      |                      |            |          |
|      |                      |            |          |