

## 10/100/1000 BASE-TX Filtered Connector Module Design on MDI Interface Circuitry MODEL NO : RJSG-001TA1

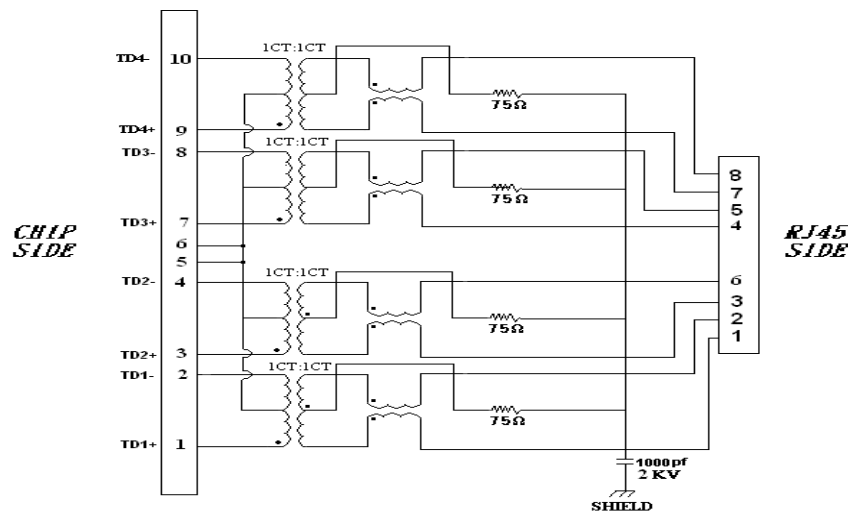
### Features:

- ⊙ RoHS Compliant
- ⊙ Not use the controlled substances defined in SS-00259
- ⊙ Fully shielded magnetic 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 1000 base-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@ 25°C

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					
1~100	1~30	40	50	60~80	1~100	20	40	60	80	100	1~100	1500
-1.0	-16	-14	-12	-10	-33	-47	-40	-37	-35	-33	-30	

### Schematic:



# TAIMAG

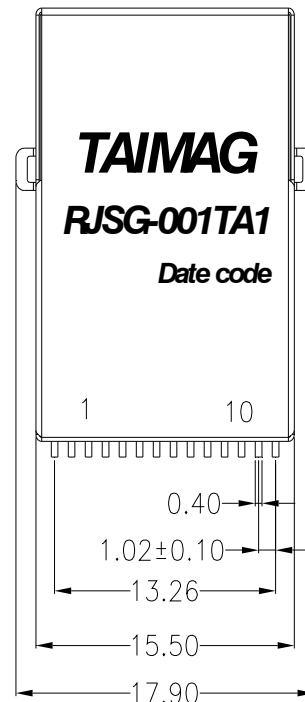
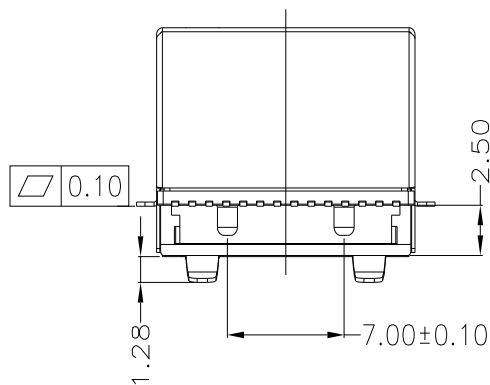
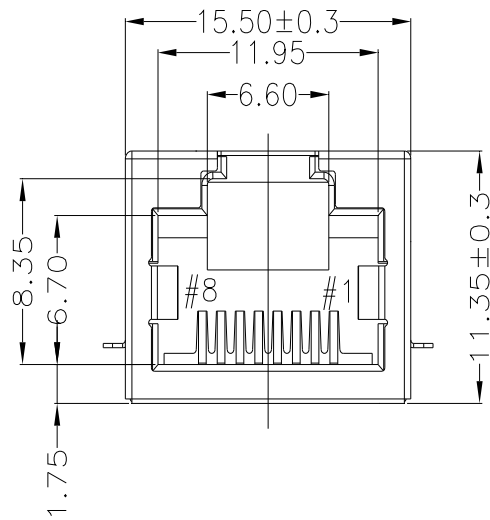
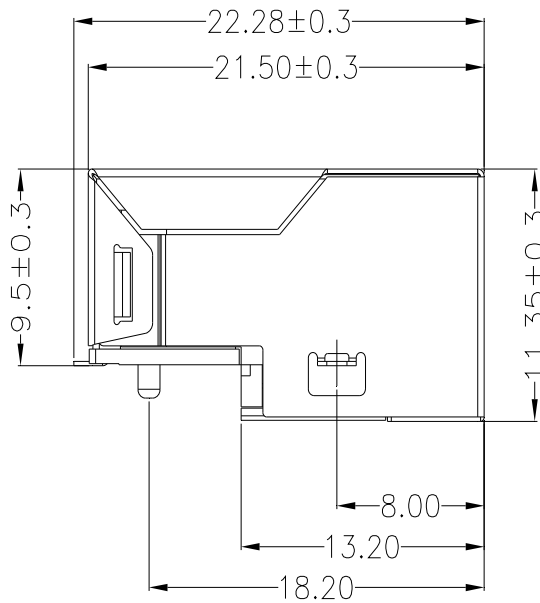


NUMBER:RD-SDRJSJG-001TA1  
DATE :2014/11/04 T(REV:A5)

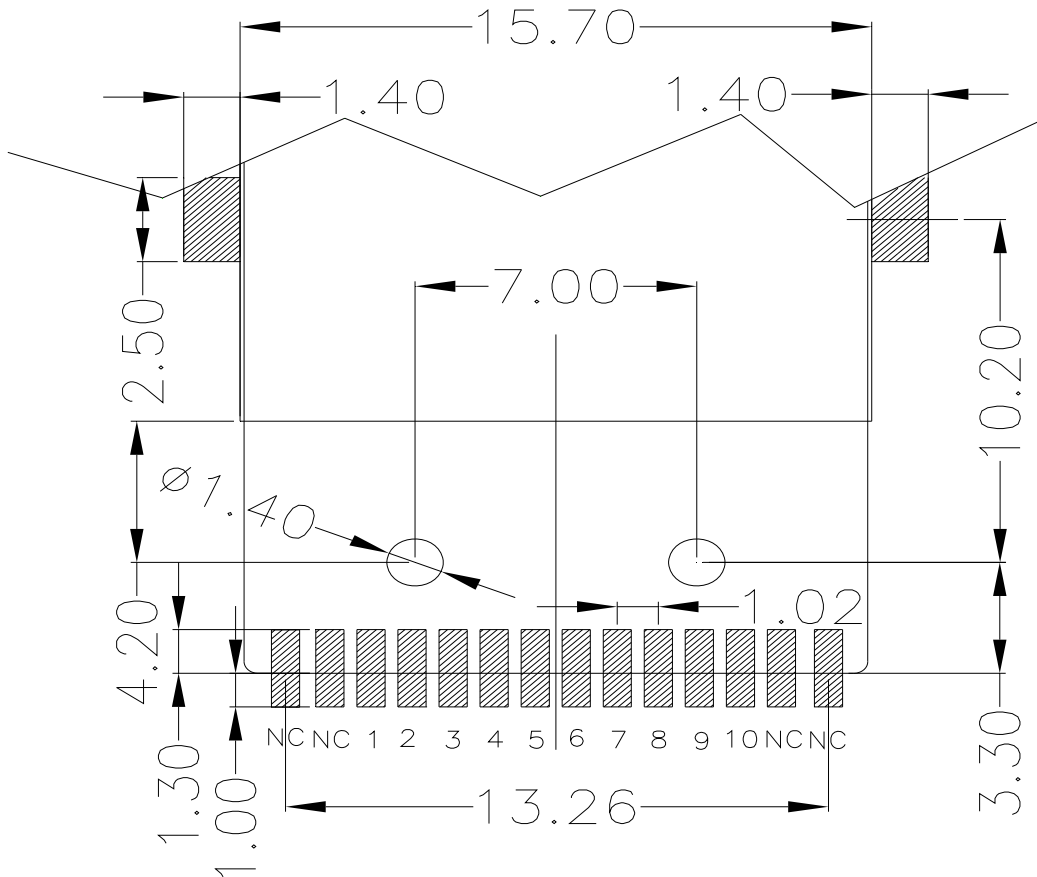
## MODEL NO : RJSJG-001TA1

Dimension: mm

TOLERANCE:  $\pm 0.15$  (unless otherwise specified)



## MODEL NO : RJSG-001TA1



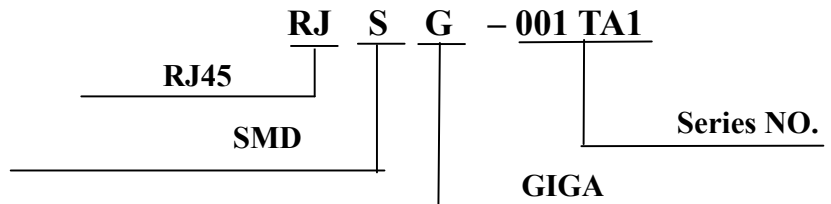
RECOMMENDED P.C.B LAYOUT  
COMPONENT SIDE OF BOARD



NUMBER:RD-SDRJSG-001TA1  
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## MODEL NO : RJSG-001TA1

### 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=0.30mm

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

RJ Joint Contact : Brass, Thickness=0.20mm

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 :

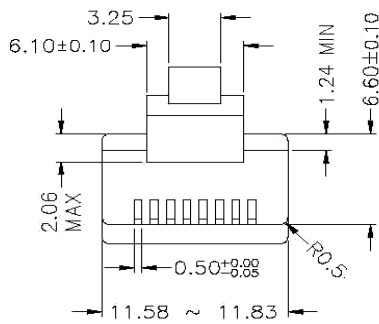
Cartridge  $t=0.25\pm 0.05\text{mm}$

10 $\mu$ "-20 $\mu$ " Thick Nickel over Brass

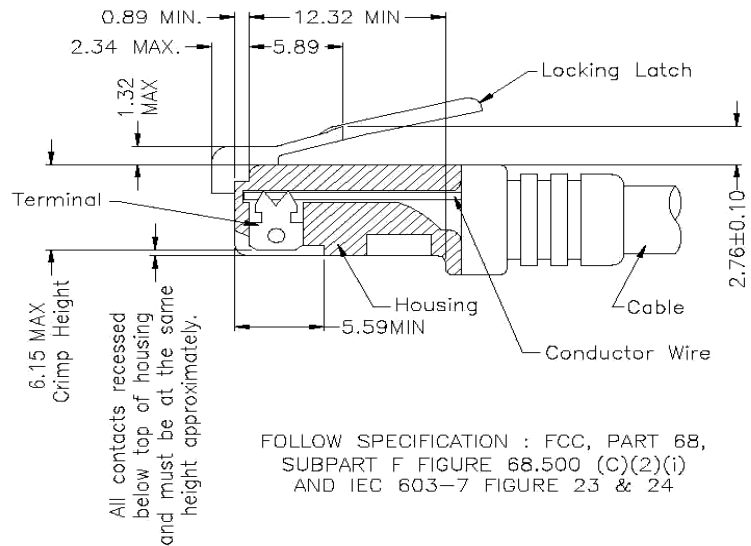
### Durability :

- (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.

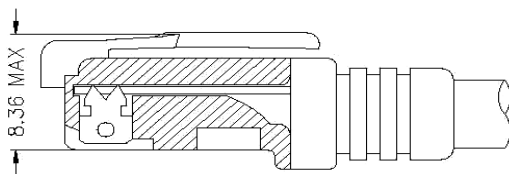
### RJ PLUG SPECIFICATION :



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



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



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

STANDARD MODULAR PLUG ASSEMBLY

## MODEL NO : RJSG-001TC1

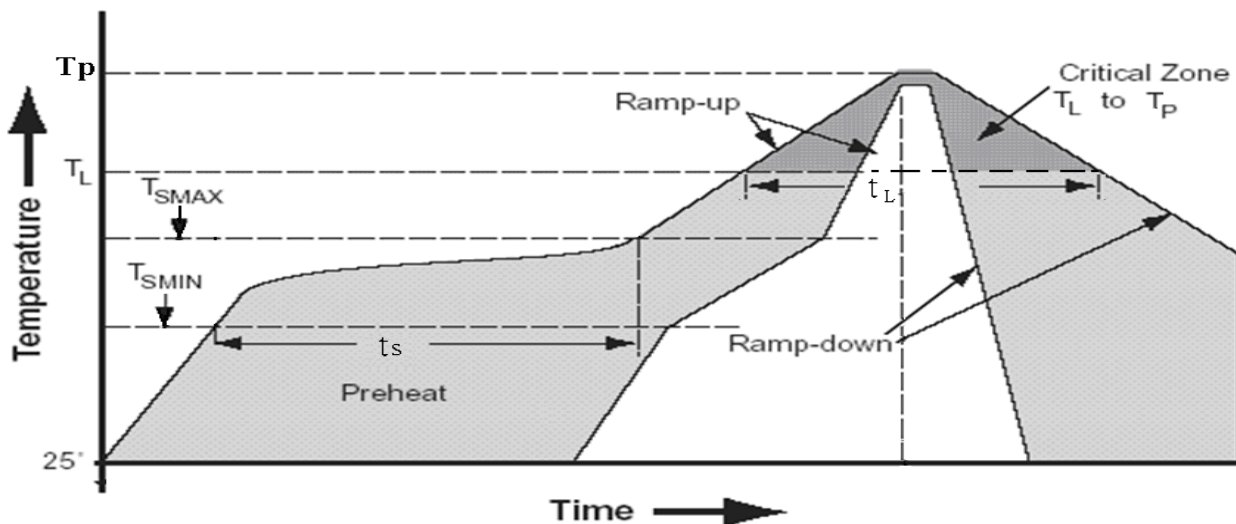
Solder Reflow profile for Lead-Free packages.

### Package Peak Reflow Temperatures

Classification Reflow Profiles

Profile Feature	Lead-Free Assembly	
Average ramp-up rate( $T_L$ to $T_P$ )	3°C / Second Max.	
Preheat Temperature Min.( $T_s$ min.) Temperature Max.( $T_s$ max.) Time (min to max) ( $t_s$ )	150 °C 200 °C 60-180 sec	
$T_s$ max. to $T_L$ Ramp-up Rate	3°C / Second Max.	
Time maintained above Temperature ( $T_L$ ) Time ( $t_L$ )	217 °C 60-150 sec	
Peak Temperature ( $T_p$ ) Time within 5 °C of actual peak Temp.	260 +0 / -5 °C 3 to 5 Sec	250 +0 / -5 °C 20 to 40 Sec
Ramp-down	6°C / Second Max.	
Time 25 °C to Peak Temperature	8 minutes Max.	

### Profile



## MODEL NO : RJSG-001TA1

### PACKING :

1. Unit weight : 4.5 grams
2. Tape & Reel : 150pcs / Reel , 750pcs / Carton
3. Dry Pack : 1pcs  
**Product Description:(5g Silica Gel Desiccant)**  
**PH: 4-8**  
**Package Materials: Paper(Length 6.5±1cm , Width 5±1cm)**
4. Reel Packed By Vacuum
5. Seal Per Jedec

ITEM	W	A0	B0	K0	K1	P	E	F	D	D1	P0	P2
DIM	44 <sup>+0.3</sup> <sub>-0.3</sub>	18.25 <sup>+0.1</sup> <sub>-0.1</sub>	23.5 <sup>+0.1</sup> <sub>-0.1</sub>	14.6 <sup>+0.1</sup> <sub>-0.1</sub>	12.8 <sup>+0.1</sup> <sub>-0.1</sub>	24 <sup>+0.1</sup> <sub>-0.1</sub>	1.75 <sup>+0.1</sup> <sub>-0.1</sub>	20.2 <sup>+0.1</sup> <sub>-0.1</sub>	1.5 <sup>+0.1</sup> <sub>-0.0</sub>	0.0 <sup>+0.25</sup> <sub>-0.0</sub>	4.0 <sup>+0.1</sup> <sub>-0.1</sub>	2.0 <sup>+0.1</sup> <sub>-0.1</sub>

