



# SPECIFICATION

PART NO. 101210FHACPM400ZA

DESCRIPTION. RJ45 2x1 PORT W/LED ,W/TRANSFORMER

CUSTOMER. \_\_\_\_\_

REV. : P0

REV. DATE : 2006 / Sep / 11

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### 1 P/N SPECIFICATION

SUYIN P/N: **101 210 F** **H** **AC** **P** **M4** **00** **ZA**  
A B C D E

A. Transformer Speed: **10/100/1000 Base-T**  
LED Polarity: **Normal**

B. Schematic: Refers to section 5.1

C. LED Color Code:

w/o LED: 0		RIGHT LED					
		YELLOW	GREEN	ORANGE	G/O	G/Y	O/G
LEFT LED	YELLOW	1	7	D	K	N	R
	GREEN	2	8	E	L	P	S
	ORANGE	3	9	F	M	Q	T
	G/O	4	A	G	U	/	/
	G/Y	5	B	H	/	V	/
	O/G	6	C	J	/	/	W

D. RJ Contact Plating:

- M2: Gold Flash selected Gold plating over 50 u” min. Nickel
- M3: 10u” selected Gold plating over 50 u” min. Nickel
- M4: 15u” selected Gold plating over 50 u” min. Nickel
- M5: 30u” selected Gold plating over 50 u” min. Nickel
- M6: 50u” selected Gold plating over 50 u” min. Nickel.

E. Mechanical Series: Refers to section 2.1~2.2

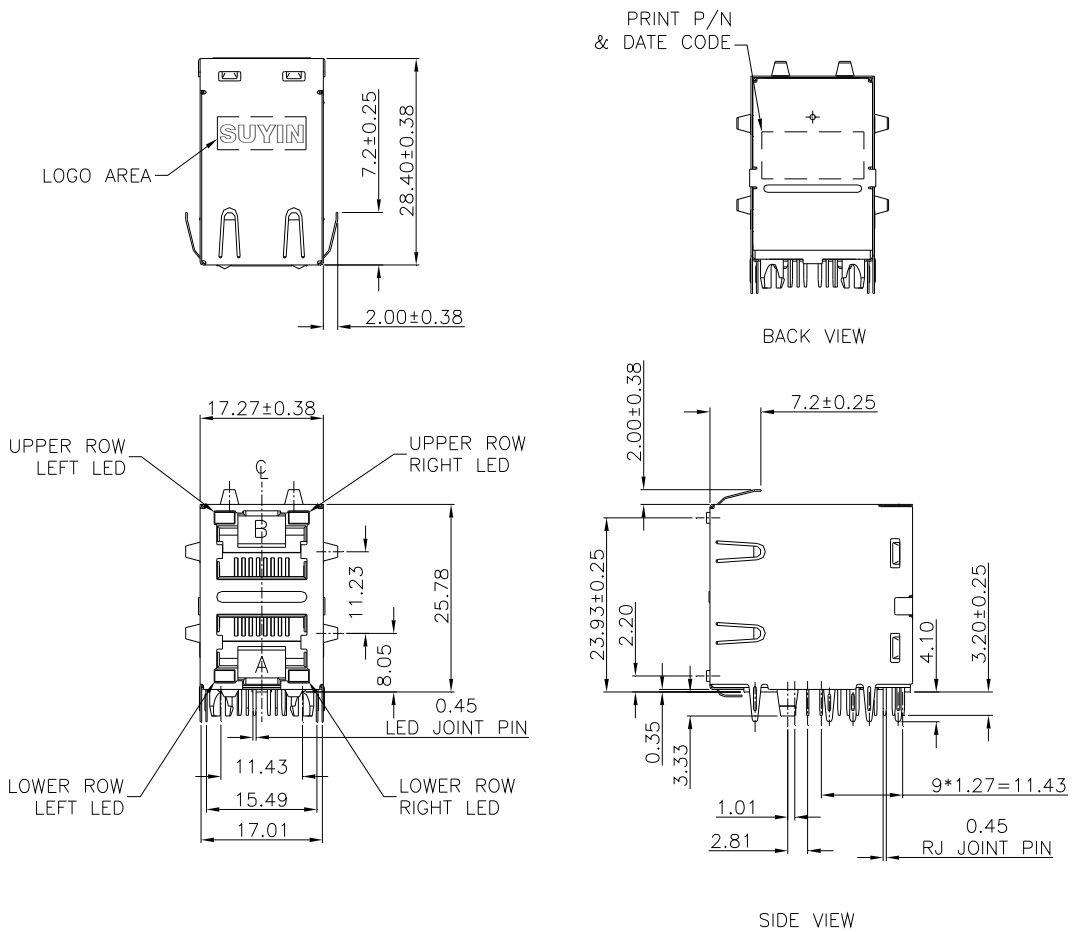
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### 2 MECHANICAL DIMENSIONS

#### 2-1 Dimensions



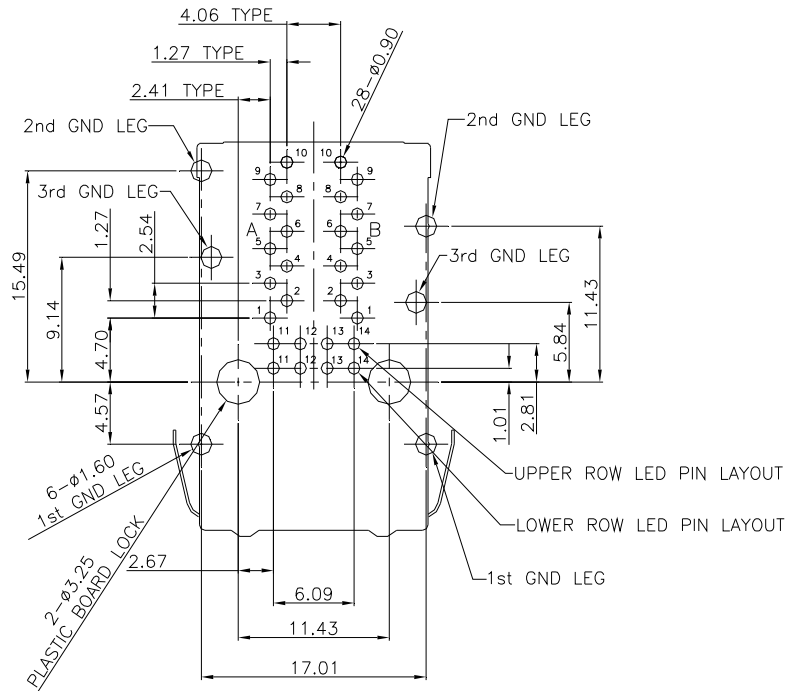
General Tolerance : 0~10mm:  $\pm 0.10$   
 10~30mm:  $\pm 0.20$   
 30~ mm:  $\pm 0.30$

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### 2-2 PCB Layout



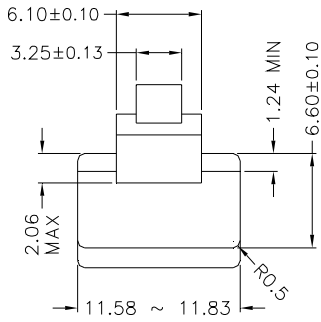
RECOMMENDED PCB LAYOUT COMPONENT SIDE  
 ALL DIMENSION TOLERANCE ARE  $\pm 0.05$  UNLESS  
 OTHER WISE SPECIFIED

# SUYIN CORPORATION

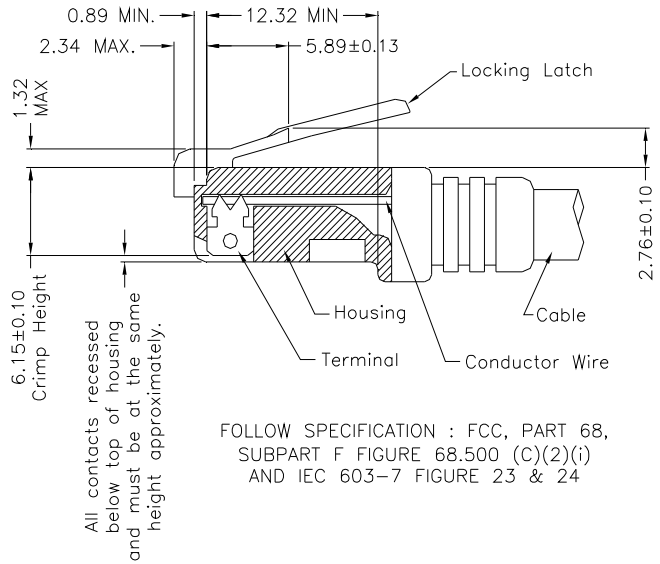
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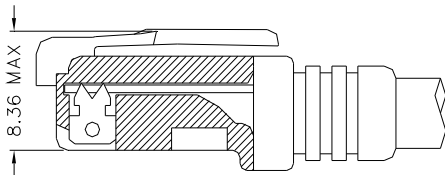
### 3 RECOMMEND RJ PLUG SPECIFICATION



- \* 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)

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### 4 MATERIAL SPECIFICATION

4-1 RoHS Compliance per EU Directive 2002/95/EC

4-2 Plastic Housings:

- A. Main Housing: Nylon 9T, UL 94V-0, Black
- B. RJ Contact Insert: PBT, UL94V-0, Black
- C. RJ Contact Housing: Nylon9T, UL94V-0, Black
- D. Internal Module Cover: PBT, UL94V-0, Black
- E. Transformer Housing: Nylon 9T, UL94V-0, Black
- F. Solder Pin Spacer: PBT, UL94V-0, Black
- G. LED Light Pipe: PC, UL 94V-0, Transparent

4-3 Terminals:

- A. RJ Contacts: Phosphor Bronze
- B. RJ Solder Pins: Brass
- C. LED Solder Pins: Brass
- D. Transformer Housing Solder Pins: Brass

4-4 Shields:

- A. Front and Back Shield: Stainless Steel

4-5 Plating:

- A. RJ Contact: As P/N specified
- B. RJ Solder Pins: 100u" min. Matte Tin over 50u" Nickel under-plating
- C. LED Solder Pins: 100u" min. Tin over 50u" Nickel under-plating
- D. Transformer Housing Solder Pins: 100u" min. Matte Tin over 50u" Nickel under-plating
- E. Shield Grounding Legs: Pre-soldering, Sn/ Ag/ Cu ( 96.5/ 3/ 0.5 )

4-6 PCB: FR-4, Four Layer PCB

4-7 Internal Solder Joints: Sn/ Ag/ Cu ( 96.5/ 3/ 0.5 )

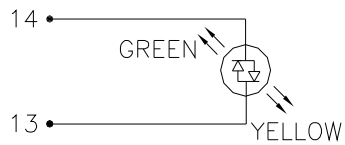
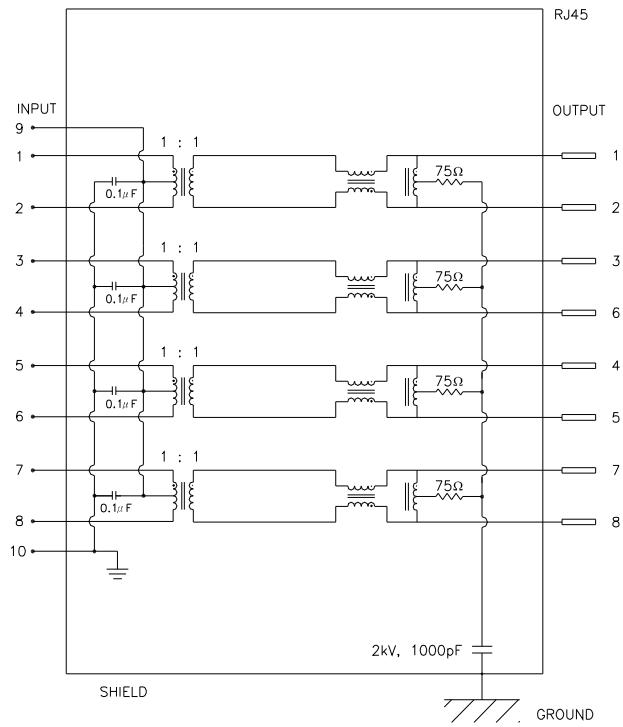
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### 5 ELECTRICAL CHARACTERISTICS

#### 5-1 Schematic



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5-2 Transmitter & Receiver Filter:

Insertion Loss (dB MAX)	Return Loss at 100Ω (dB MIN)			
1~125MHz	1~30MHz	30~60MHz	60~80MHz	80~100MHz
-1.2	-18	-16	-12	-10

5-3 Common Mode Rejection @ 1~100 MHz: -30dB MIN

5-4 Cross Talk @ 1~100 MHz: -25dB MIN

5-5 Inductance @ 100KHz/ 0.1V, 8mA DC BIAS: 350μH MIN

5-6 HiPot Test: 1500Vrms, 60sec

5-7 LED:

Forward Voltage (V) @ 20mA	
Typical	MAX
2.2	2.6

## 6 OPERATING & TEST REQUIRMENTS

Product is designed to meet electrical, mechanical and environmental performance requirements specified below. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified

6-1 Operating Temperature Range: 0°C TO +70°C

6-2 Storage Temperature: -40°C to 85°C

6-3 Ratings:

1. Insulation Resistance: 500M Ohm (MIN)
2. Dielectric Withstanding Voltage: 1000 VAC



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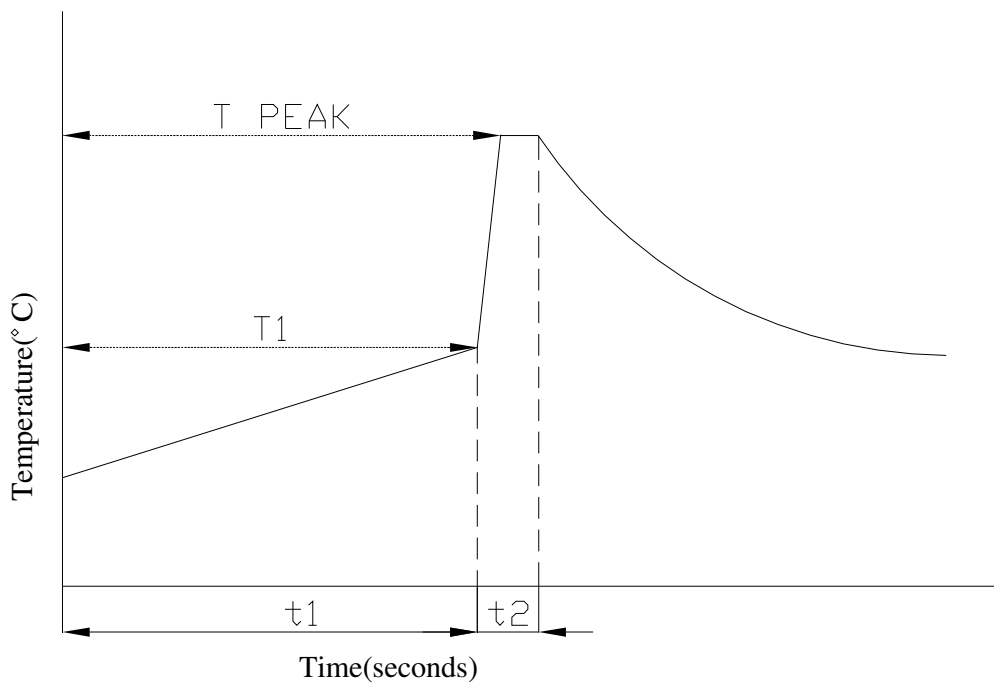
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### 7 STORAGE REQUIRMENTS

All products shall be packaged against any physical damage and corrosion during shipment or in storage.

### 8 RECOMMEND WAVE SOLDERING PROFILE



PARAMETER	REFERENCE	LEAD FREE SPECIFICATION
PREHEAT TEMPERATURE GRADIENT		+1~4°C/sec
PREHEAT TIME	$t_1$	2~3 MIN
PREHEAT TEMPERATURE	$T_1$	>100°C
SOLDER POT TEMPERATURE	$T$ PEAK	260°C ±5°C
DWELL TIME	$t_2$	3.5 SEC
PEAK BOARD TOP TEMPERATURE		190°C
COOLING TEMPERATURE GRADIENT		-6°C/SEC MAX.