



SPECIFICATION

PART NO. 101111FHAALM408ZA

DESCRIPTION. RJ45 1X1 TAB UP W/LED & TRANSFORMER

CUSTOMER. _____

REV. : P0

REV. DATE : 2006 / Aug / 24

| | APPROVED | CHECKED | PREPARED |
|------|------------|-----------|------------|
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1 P/N SPECIFICATION

SUYIN P/N: **101 111 F** **H** **AA** **L** **M4** **08** **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 | / | / | / |
| | G/Y | 5 | B | H | / | / | / |
| | O/G | 6 | C | J | / | / | / |

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

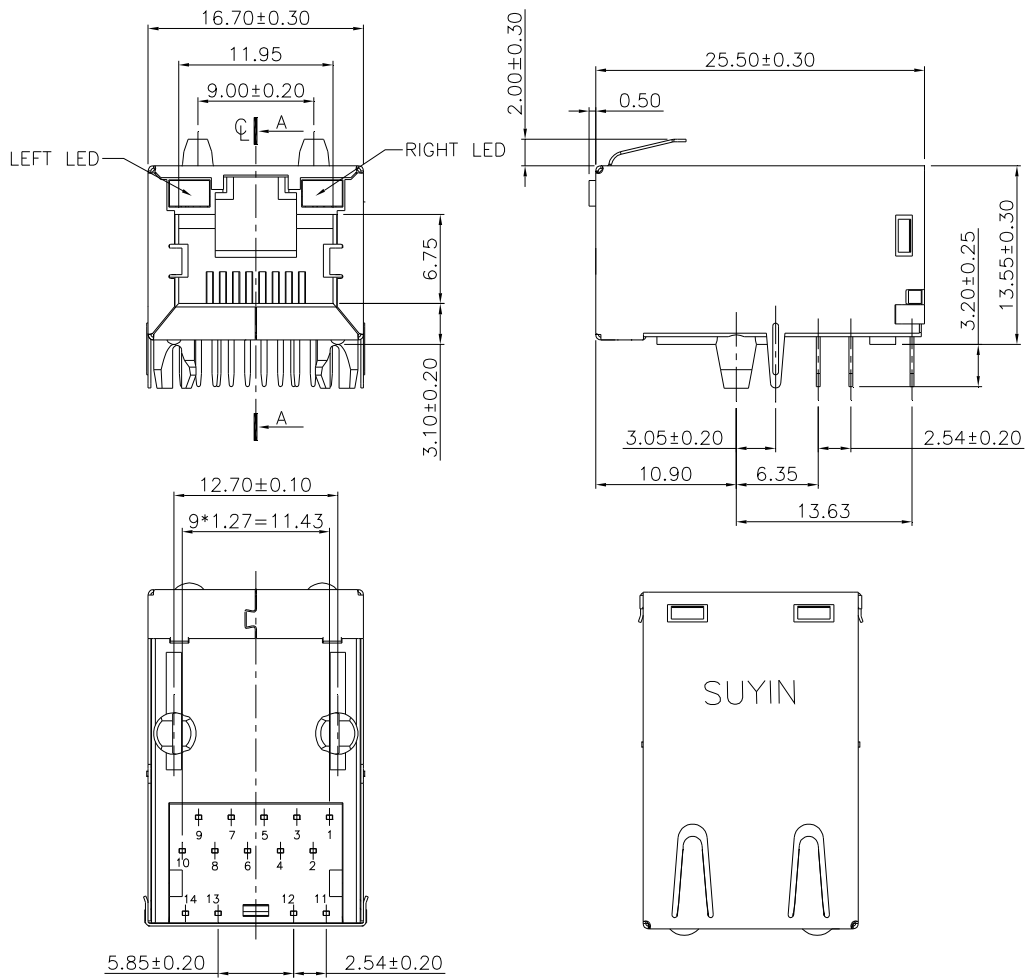
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2 MECHANICAL DIMENSIONS

2-1 Dimensions



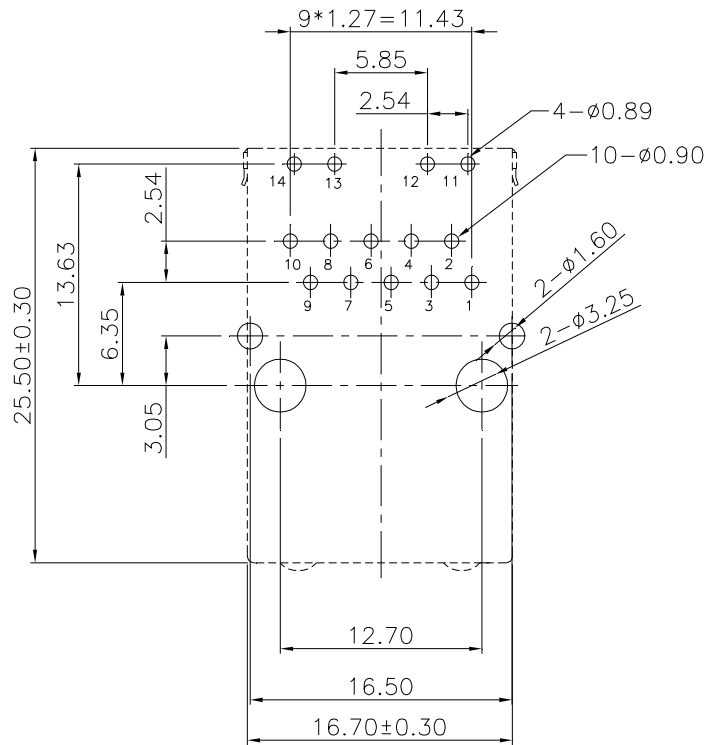
General Tolerance : 0~10mm: ± 0.10
 10~30mm: ± 0.20
 30~ mm: ± 0.30

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2-2 PCB Layout



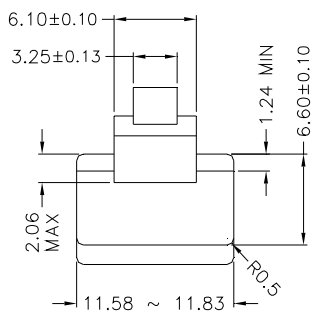
RECOMMENDED PCB LAYOUT
COMPONENT SIDE
ALL DIMENSION TOLERANCE ARE ± 0.05 mm

SUYIN CORPORATION

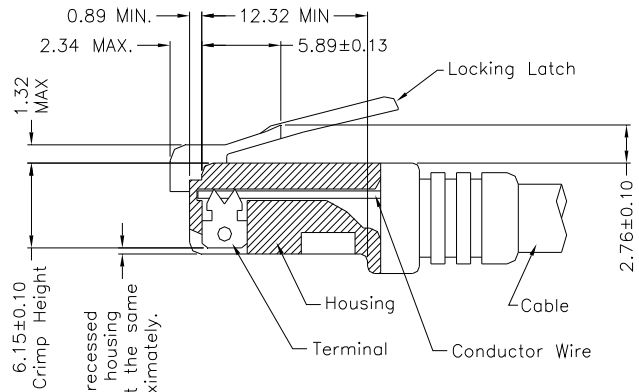
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3 RECOMMEND RJ PLUG SPECIFICATION

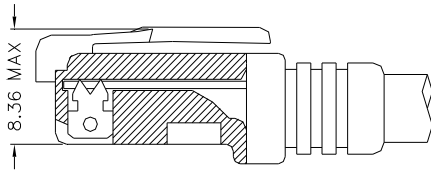


- * There must be no damage to housing or locking latch. There must be no nicks or cuts in cable.
- * Durability : 750 cycles generally



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



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 Housings: Nylon 9T , UL 94V-0, Black
- B. Transformer Housing: Nylon 9T, UL94V-0, Black
- C. Spacer: PBT, UL94V-0, Black

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. Shield: Stainless Steel

4-5 Plating:

- A. RJ Contacts: 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, Two Layer PCB

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

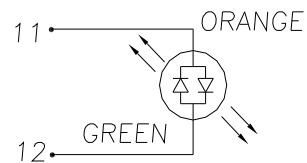
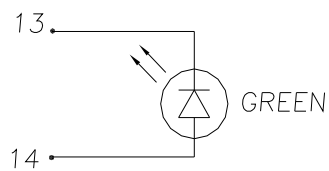
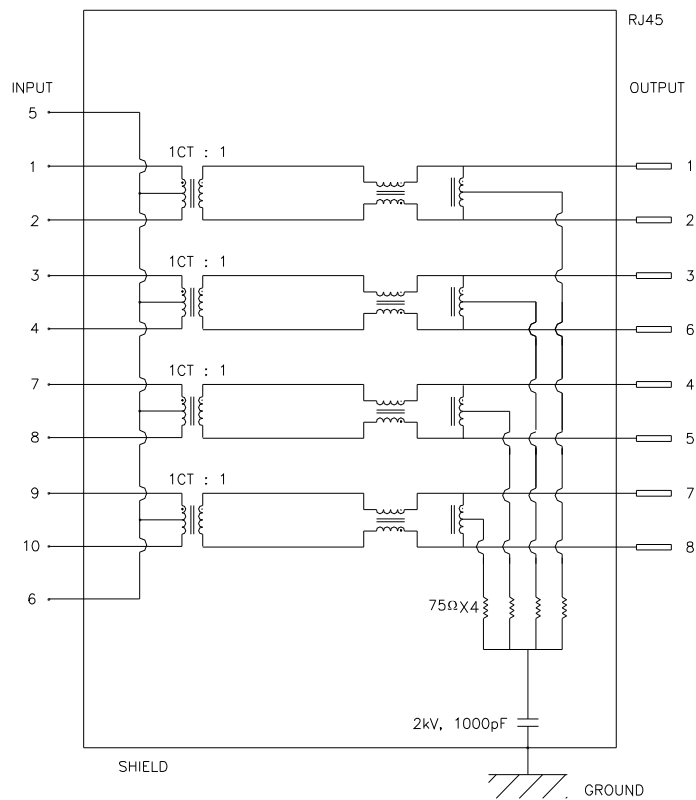
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5 ELECTRICAL CHARACTERISTICS

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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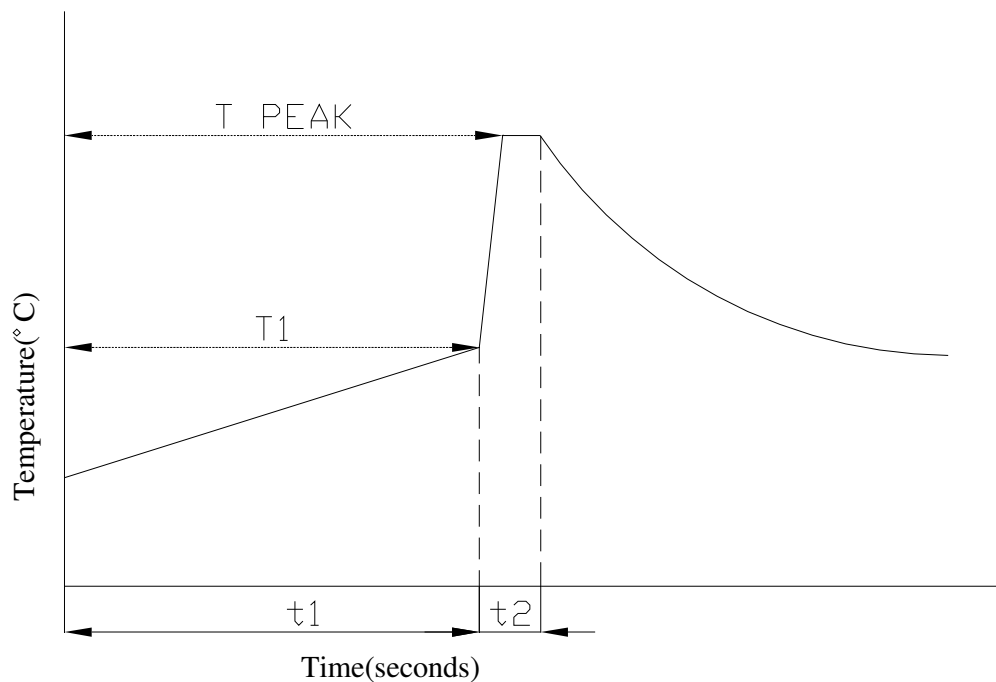
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7 STORAGE REQUIRMENTS

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 | t1 | 2~3 MIN |
| PREHEAT TEMPERATURE | T1 | >100°C |
| SOLDER POT TEMPERATURE | T PEAK | 260°C ±5°C |
| DWELL TIME | t2 | 3.5 SEC |
| PEAK BOARD TOP TEMPERATURE | | 190°C |
| COOLING TEMPERATURE GRADIENT | | -6°C/SEC MAX. |