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PATENTED: THIS PRODUCT IS COVERED BY U.S. PATENT 5,736,910

DOCUMENT / PART NO.: SI-52008-F

TITLE: 10/100BT,PoE; TAB UP, SHIELDED

| ISSUE |   | DE | SCRI | PTIOI | N OF (   | CHAN       | GE |   | REVIE        | WED          | BY | A   | PPRO | VED | вү    | EC    | N#   |
|-------|---|----|------|-------|----------|------------|----|---|--------------|--------------|----|-----|------|-----|-------|-------|------|
| A0    | USE NEW FORMAT AND PRODUCTION RELEASE             |    |      |       |          | David Chan |    |   | D            | Danny Kwan   |    | 062 | :57  |     |       |       |      |
| В0    | Update drawing format,remove PIN#6 from footprint |    |      |       |          | Bain Liu   |    |   | S            | Steve Weller |    |     | 063  | 46  |       |       |      |
| B1    | Update the circuit drawing                        |    |      |       | Bain Liu |            |    | s | Steve Weller |              |    | 063 | 83   |     |       |       |      |
|       |   |    |      |       |          |            |    |   |              |              |    |     |      |     |       |       |      |
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|       |   |    |      |       |          |            |    |   |              |              |    |     |      |     |       |       |      |
| PAGE  | 1   | 2  | 3    | 4     |          |            |    |   | <br>         |              |    |     |      |     |       |       |      |
| REV.  | B1  | B1 | B1   | B1    |          |            |    |   | <br>         |              |    |     |      |     |       |       |      |
| PAGE  |   |    |      |       |          |            |    |   | <br>         |              |    |     |      | C5  | 128-1 | F REV | A2   |
| REV.  |   |    |      |       |          |            |    |   | <br>         |              |    |     |      | 24- |       | F RE  | √ B0 |

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RJ45

J1 TX+

## ELECTRICAL CHARACTERISTICS @ 25°C

1.0 TURNS RATIO: (P1-P3): (J1-J2) (P4-P5): (J3-J6)

1CT : 1CT ±2% 1CT : 1CT ±2%

2.0 DC RESISTANCE:

(P1-P3): (P4-P5) 1.4 OHMS (J1-J2): (J3-J6) 1.2 OHMS

3.0 INDUCTANCE:

(P1–P3) (P4–P5) 350uH MIN. @ 0.1V, 100KHz, 8mA DC BIAS 350uH MIN. @ 0.1V, 100KHz, 8mA DC BIAS

4.0 LEAKAGE INDUCTANCE:

(P4−P5) WITH J6 AND J3 SHORT 0.3uH MAX. @ 1MHz (P1−P3) WITH J2 AND J1 SHORT 0.3uH MAX. @ 1MHz

5.0 INTERWINDING CAPACITANCE:

(P4,P5) TO (J3,J6) (P1,P2,P3) TO (J1,J2) 60pF TYP @ 1MHz 60pF TYP @ 1MHz

6.0 RETURN LOSS: (P1-P3)=100 OHMS REF. AND (P4-P5)=100 OHM REF.

1MHz TO 30MHz 30MHz TO 60MHz 60MHz TO 80MHz -18dB MIN. -(19-20LOG(f/30MHz))

12dB MIN.

7.0 DIELECTRIC WITHSTAND:

(J3,J6) TO (P4,P5) (J1,J2) TO (P1,P3) 1500Vms 1500Vrms

8.0 INSERTION LOSS: RS=RL=100 OHMS 1MHz-65MHz

THITTE CONTIL

-1dB MAX

9.0 RISE TIME: RS=RL=100 OHMS OUTPUT VOLTAGE = 1V PEAK

OUTPUT VOLTAGE = 1V PEAK 3.0nS MAX PULSE WIDTH = 112nS 3.0nS MAX

10.0 CROSS TALK:

1MHz-65MHz

-35dB MIN.

11.0 CM TO CM ATTENUATION:

30MHz TO 100MHz 100MHz TO 130MHz

TITLE

-30dB MIN. -20dB MIN.

12.0 BALANCED DC LINE CURRENT:

350mA MAX @ 57 VDC CONTINUOUS 500mA MAX @ 57 VDC FOR 200 MILLSECONDS COMMON CT P2 J2 TX-TD- P3 1CT : 1CT RD+ P4  $\overline{\mathbf{u}}$ J3 RX+ J6 RX- $\sim$ RD- P5 VC+ P8 VC- P9 J4 VC+ P10 J5 J7 VC- P11 J8 4X22nF 100Vdc 4X 75 OHM 1nF 2kVdc NOTES SHIELD 7777

**SCHEMATIC** 

1CT : 1CT

1.0 DESIGNED TO SUPPORT IEEE 802.3

| ORIGINATED BY | DATE       |
|---------------|------------|
| Zeng Xiaochun | 2012-04-18 |
| DRAWN BY      | DATE       |
| Duan Jun      | 2012-04-18 |

MagJack®
10/100BT,PoE
TAB UP,SHIELDED
PATENTED

| PART NO. / DRAWING NO. | STANDA       | RD DIM. | [] METRIC DIM. AS REFERENCE |          |  |  |
|------------------------|--------------|---------|-----------------------------|----------|--|--|
| SI-52008-F             | TOL. IN INCH |         | UNIT : INCH [mm]            | REV.: B1 |  |  |
| FILE NAME              | .X           |         | SCALE: N/A                  | SIZE: A4 |  |  |
| SI-52008-F.DWG         | .XX          |         | DOALE: IUA                  |          |  |  |
| 31-32008-F.DVVG        | XXX.         | ±0.005  |                             | PAGE: 2  |  |  |



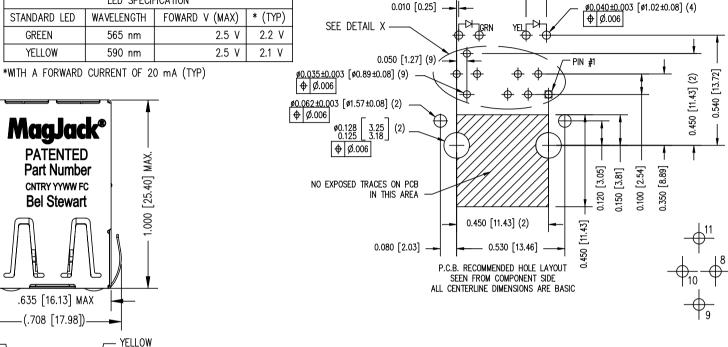
PINS

TD+ P1

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| LED SPECIFICATION |            |                |         |  |  |  |  |
|-------------------|------------|----------------|---------|--|--|--|--|
| STANDARD LED      | WAVELENGTH | FOWARD V (MAX) | * (TYP) |  |  |  |  |
| GREEN             | 565 nm     | 2.5 V          | 2.2 V   |  |  |  |  |
| YELLOW            | 590 nm     | 2.5 V          | 2.1 V   |  |  |  |  |



.425 [10.79]

0.340 [8.64] -



1. CONNECTOR MATERIALS:

NOTES:

0.100 [2.54] (2)

HOUSING: THERMOPLASTIC UL94 V-0 CONTACT/SHIELD: COPPER ALLOY SHIELD PLATING: NICKEL OR TIN

CONTACT PLATING: 50 MICRO-INCH SELECTIVE HARD GOLD PLATING

OR EQUIVALENT IN CONTACT AREA

DETAIL X

- 2. PIN NOT ELECTRICALLY CONNECTED MAYBE OMITTED. SEE ELECTRICAL DRAWING FOR OMITTED PINS.
- 3. TOLERANCES COMPLY WITH F.C.C. DIMENSION REQUIREMENTS.
- 4. ALL TOLERANCES NOT OTHERWISE SPECIFIED TO BE ±.005 [0.13]
- 5. REFLOW AND WAVE SOLDER COMPATIBLE -260°C FOR 10 SECONDS MAX.

| ORIGINATED BY | DATE       |
|---------------|------------|
| Zeng Xiaochun | 2012-04-18 |
| DRAWN BY      | DATE       |
| Duan Jun      | 2012-04-18 |

GREEN

**MagJack®** 10/100BT,PoE **TAB UP.SHIELDED** 

PATENTED

[.599 [15.21])

PIN: J1

TITLE

[13.97]<sub>.</sub> MAX

550

PART NO. / DRAWING NO. STANDARD DIM. [] METRIC DIM. AS REFERENCE SI-52008-F **TOL. IN INCH** UNIT: INCH [mm] В1 REV.: X. FILE NAME SCALE: N/A SIZE: A4 XX. SI-52008-F.DWG PAGE: XXX. ±0.005

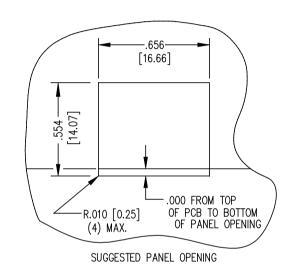


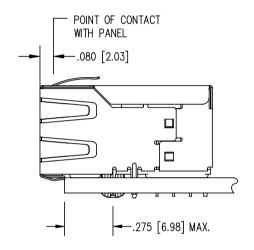
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- THE SUGGESTED PANEL OPENING IS INTENDED
   TO GIVE THE USER THE ABILITY TO HAVE
   REASONABLE JACK / PANEL CLEARANCES
   YET MAINTAIN RELIABLE GROUNDING
   CAPABILITY.
- 2. ALL TOLERANCES NOT OTHERWISE SPECIFIED TO BE ±.005 [0.13]

| ORIGINATED BY | DATE       | TITLE |
|---------------|------------|-------|
| Zeng Xiaochun | 2012-04-18 |       |
| DRAWN BY      | DATE       | 1     |
| Duan Jun      | 2012-04-18 |       |

MagJack®
10/100BT,PoE
TAB UP,SHIELDED
PATENTED

| PART NO. / DRAWING NO. | STANDA  | RD DIM. | [] METRIC DIM. AS REFERENCE |          |  |  |
|------------------------|---------|---------|-----------------------------|----------|--|--|
| SI-52008-F             | TOL. IN | INCH    | UNIT : INCH [mm]            | REV.: E  |  |  |
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В1