



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

**DOCUMENT / PART NO.: SI-46004-F**

**TITLE : 10/100BT, TAB UP, SHIELDED**

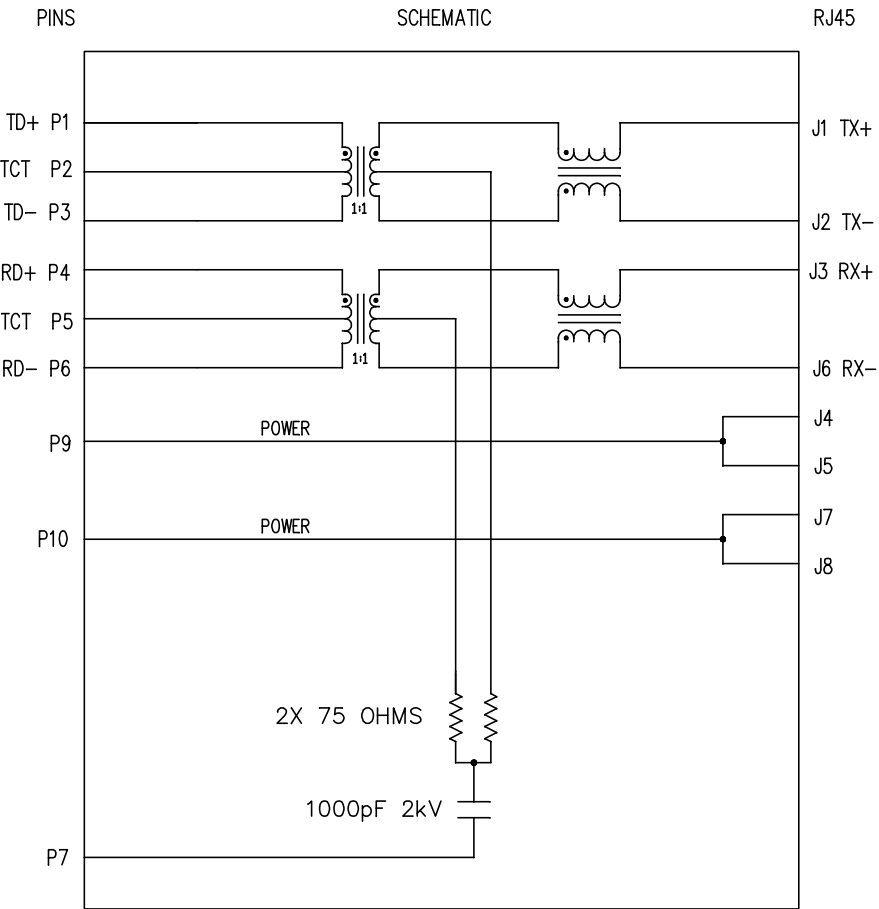
| ISSUE | DESCRIPTION OF CHANGE                     |  |  |  |  |  |  |  | REVIEWED BY |  |  |  | APPROVED BY  |  |  |  | ECN#  |  |
|-------|-------------------------------------------|--|--|--|--|--|--|--|-------------|--|--|--|--------------|--|--|--|-------|--|
| A0    | Use new format and production release     |  |  |  |  |  |  |  | David Chan  |  |  |  | Danny Kwan   |  |  |  | 06252 |  |
| A1    | Update circuit drawing and use new format |  |  |  |  |  |  |  | Bain Liu    |  |  |  | Steve Weller |  |  |  | 06389 |  |
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ELECTRICAL CHARACTERISTICS @ 25°C

|                                                            |                                        |
|------------------------------------------------------------|----------------------------------------|
| CURRENT CAPABILITY FOR POWER LINES:                        | 400 mA MAX                             |
| 1.0 INDUCTANCE:                                            |                                        |
| (P4-P6)                                                    | 350uH MIN. @ 0.1V, 100KHz, 8mA DC BIAS |
| (P1-P3)                                                    | 350uH MIN. @ 0.1V, 100KHz, 8mA DC BIAS |
| 2.0 TURNS RATIO:                                           |                                        |
| (P4-P5-P6):(J3-J6)                                         | 1CT : 1CT ± 3%                         |
| (P1-P2-P3):(J1-J2)                                         | 1CT : 1CT ± 3%                         |
| 3.0 LEAKAGE INDUCTANCE:                                    |                                        |
| P4-P6 (WITH J3 AND J6 SHORT)                               | 0.3 uH MAX. @ 1MHz                     |
| P1-P3 (WITH J1 AND J2 SHORT)                               | 0.3 uH MAX. @ 1MHz                     |
| 4.0 INTERWINDING CAPACITANCE:                              |                                        |
| (P4,P5,P6) TO (J3,J6)                                      | 30pF MAX. @ 1 MHz                      |
| (P1,P2,P3) TO (J1,J2)                                      | 30pF MAX. @ 1 MHz                      |
| 5.0 DC RESISTANCE:                                         |                                        |
| (J3-J6)=(J1-J2)                                            | 1.2 OHMS MAX.                          |
| 6.0 RETURN LOSS: (P4-P6)=100 OHMS AND (P1-P3)=100 OHM REF. |                                        |
| 1MHz TO 30MHz                                              | -18dB MIN.                             |
| 60MHz TO 80MHz                                             | -12dB MIN.                             |
| NOTE: 100 OHMS CONNECTED TO (J1-J2) OR (J3-J6).            |                                        |
| 7.0 DIELECTRIC WITHSTAND:                                  |                                        |
| (J1, J2) TO (P1, P3)                                       | 1500 VAC                               |
| (J3, J6) TO (P4,P6)                                        | 1500 VAC                               |
| 8.0 INSERTION LOSS: RS=RL=100 ohms                         |                                        |
| 100KHz TO 100MHz                                           | -1.1 dB                                |
| 9.0 RISE TIME: RS=100 OHMS AND RL = 100 OHMS               |                                        |
| OUTPUT VOLTAGE = 1 V peak                                  | 3.0 nS MAX                             |
| PULSE WIDTH= 112nS                                         | 3.0 nS MAX                             |
| 10.0 CROSS TALK:                                           |                                        |
| 1MHz TO 100MHz                                             | -40 dB TYP                             |
| 11.0 COMMON TO COMMON MODE ATTENUATION:                    |                                        |
| 30MHz TO 100MHz                                            | -35dB TYP                              |

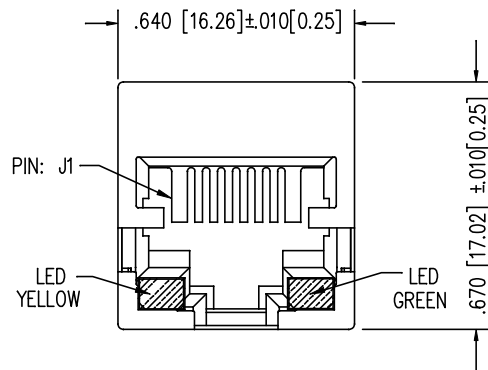
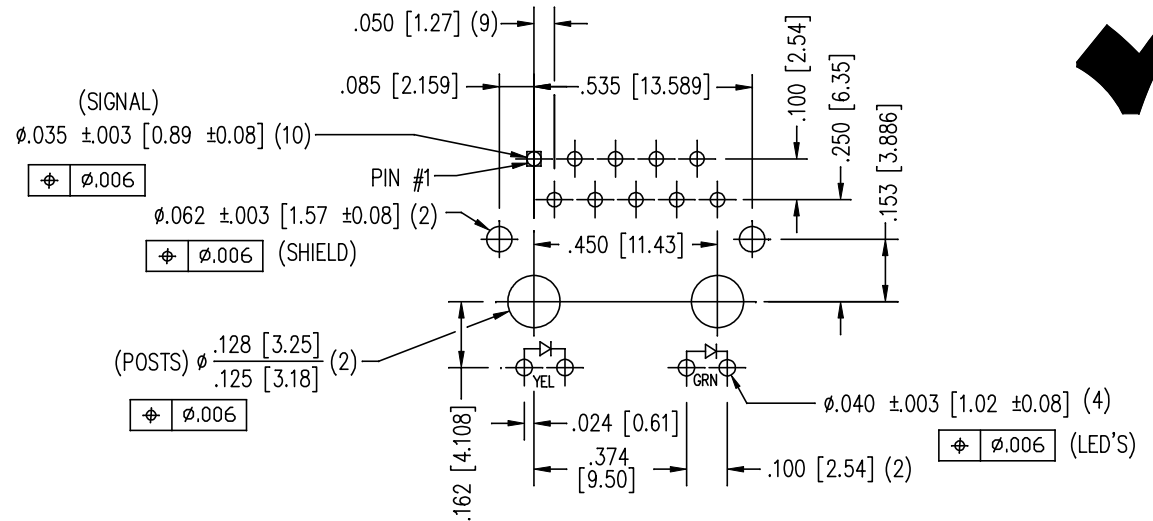
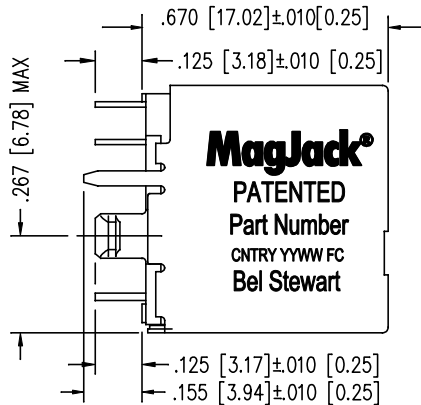


NOTES  
1.0 PINS WITHOUT ELECTRICAL CONNECTION ARE OMITTED

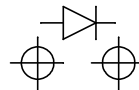
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|---------------|------------|-------------------------------------------------------------------------------|--------------------------------------|-------------------------------|--------|---------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------|
| ORIGINATED BY | DATE       | TITLE<br><div>MagJack®<br/>10/100BT<br/>VERTICAL, SHIELDED<br/>PATENTED</div> | PART NO. / DRAWING NO.<br>SI-46004-F | STANDARD DIM.<br>TOL. IN INCH |        | [ ] METRIC DIM. AS REFERENCE                                                          |           | <div>bel</div> <div>COMPONENTS FOR A<br/>CONNECTED<br/>PLANET</div> |
| Bain Liu      | 2013-01-09 |                                                                               | FILE NAME<br>SI-46004-F.DWG          | .X                            |        | UNIT : INCH [mm]                                                                      | REV. : A1 |                                                                     |
| DRAWN BY      | DATE       |                                                                               |                                      | .XX                           |        | SCALE : N/A                                                                           | SIZE : A4 |                                                                     |
| Duan Jun      | 2013-01-09 |                                                                               |                                      | .XXX                          | ±0.005 |  | PAGE : 2  |                                                                     |

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RoHS



## LED POLARITY (ENLARGED VIEW)



SINGLE COLOR LED

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

\*WITH A FORWARD CURRENT OF 20 mA (TYP)

## NOTES:

- CONNECTOR MATERIALS:  
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
- PIN NOT ELECTRICALLY CONNECTED MAYBE OMITTED.  
SEE ELECTRICAL DRAWING FOR OMITTED PINS.
- TOLERANCES COMPLY WITH F.C.C. DIMENSION REQUIREMENTS.
- ALL TOLERANCES NOT OTHERWISE SPECIFIED TO BE ±0.005 [0.13]
- WAVE SOLDER COMPATIBLE - PREHEAT 125°C/90SECS.

|                           |                    |                                                                        |                                                                     |                                                              |                                     |                                    |
|---------------------------|--------------------|------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------|------------------------------------|
| ORIGINATED BY<br>Bain Liu | DATE<br>2013-01-09 | TITLE<br><b>MagJack®</b><br>10/100BT<br>VERTICAL, SHIELDED<br>PATENTED | PART NO. / DRAWING NO.<br>SI-46004-F<br>FILE NAME<br>SI-46004-F.DWG | STANDARD DIM.<br>TOL. IN INCH<br>.X<br>.XX<br>.XXX<br>±0.005 | [ ] METRIC DIM. AS REFERENCE        |                                    |
|                           |                    |                                                                        |                                                                     |                                                              | UNIT : INCH [mm]<br>SCALE : N/A<br> | REV. : A1<br>SIZE : A4<br>PAGE : 3 |

