

STARJACK™

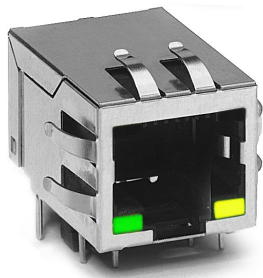
1x1 Tab-DOWN RJ45





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Description:




10/100 Base-TX RJ45 1x1 Tab-DOWN 8-pin Integrated Magnetics Connector, designed to support high volume cost-conscious consumer applications such as: ADSL modems, Cable modems, STB and Video on Demand.



Features and Benefits:

-  RoHS peak wave solder temperature rating 260°C
-  Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP

Electrical Performance Summary:

-  Meets IEEE 802.3 specification
-  350µH minimum OCL with 8mA bias current
-  High performance for Max EMI suppression for cost-conscious applications

10 Base-T Electrical Specifications @ 25°C — Operating Temperature 0°C to +70°C

| RoHS Compliant Part No. | Data Rate | Turns Ratios | | EMI ¹ Fingers | LEDs ² (L/R) | BST | Insertion Loss (dB MAX) | Return Loss (dB MIN) 100Ω ±15Ω | Crosstalk (dB MIN) | Common Mode Rejection (dB MIN) | Hipot (Vrms) |
|-------------------------|-----------|--------------|-------|--------------------------|-------------------------|-----|-------------------------|-----------------------------------|--------------------|--------------------------------|--------------|
| | | TX | RX | | | | | | | | |
| J00-0025 NL | 10BT | 1CT:2.5 | 1CT:1 | Yes | None | No | -1 | -15 | -30 | -25 | 1500 |
| J00-0051NL | 10BT | 1CT:2.5 | 1CT:1 | Yes | G/Y | No | -1 | -15 | -30 | -25 | 1500 |
| J00-0062 NL | 10BT | 1CT:2.5 | 1CT:1 | No | None | No | -1 | -15 | -30 | -25 | 1500 |
| J00-0063NL | 10BT | 1CT:2.5 | 1CT:1 | No | G/Y | No | -1 | -15 | -30 | -25 | 1500 |

10/100 Base-T Electrical Specifications @ 25°C — Operating Temperature 0°C to +70°C

| RoHS Compliant Part No. | Data Rate | Turns Ratios | | EMI ¹ Fingers | LEDs ² (L/R) | BST | Insertion Loss (dB MAX) | Return Loss (dB MIN) 100Ω ±15Ω | | | | Crosstalk (dB MIN) | | | Common Mode Rejection (dB MIN) | Hipot (Vrms) | |
|-------------------------|-----------|--------------|-------|--------------------------|-------------------------|-----|-------------------------|-----------------------------------|---------|----------|----------|--------------------|---------|----------|--------------------------------|--------------|-----------|
| | | TX | RX | | | | | 1-65MHz | 1-10MHz | 10-30MHz | 30-60MHz | 60-80MHz | 1-30MHz | 30-60MHz | | | 60-100MHz |
| | | | | | | | | | | | | | | | | | |
| J00-0014NL | 100BT | 1CT:1 | 1CT:1 | No | None | Yes | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |
| J00-0042NL | 100BT | 1CT:1 | 1CT:1 | No | None | No | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |
| J00-0045NL | 100BT | 1CT:1 | 1CT:1 | No | G/Y | Yes | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |
| J00-0046NL | 100BT | 1CT:1 | 1CT:1 | No | G/Y | No | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |
| J00-0061NL | 100BT | 1CT:1 | 1CT:1 | Yes | None | Yes | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |
| J00-0064NL | 100BT | 1CT:1 | 1CT:1 | Yes | None | No | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |
| J00-0065NL | 100BT | 1CT:1 | 1CT:1 | Yes | G/Y | Yes | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |
| J00-0066NL | 100BT | 1CT:1 | 1CT:1 | Yes | G/Y | No | -1 | -18 | -14 | -12 | -10 | -35 | -35 | -30 | -20 | -15 | 1500 |

NOTES:

- For an explanation of EMI fingers, refer to the mechanical drawing page.
- LEDs Left/Right: G=green, Y=yellow.
- IEEE802.3i (10Base-T) standard does not require these parts to achieve 350µH minimum OCL with 8mA bias current for 10Base-T parts.

RJ45 Durability Testing Rating

| Part Number | Mating Force (MAX) | Unmating Force (MAX) | Durability | Plug to Jack Retention (MIN) |
|-------------|--------------------|----------------------|----------------|------------------------------|
| J00 Series | 5lbs./2.268kgs. | 5lbs./2.268kgs. | 750 Insertions | 20lbs./9.072kgs. |

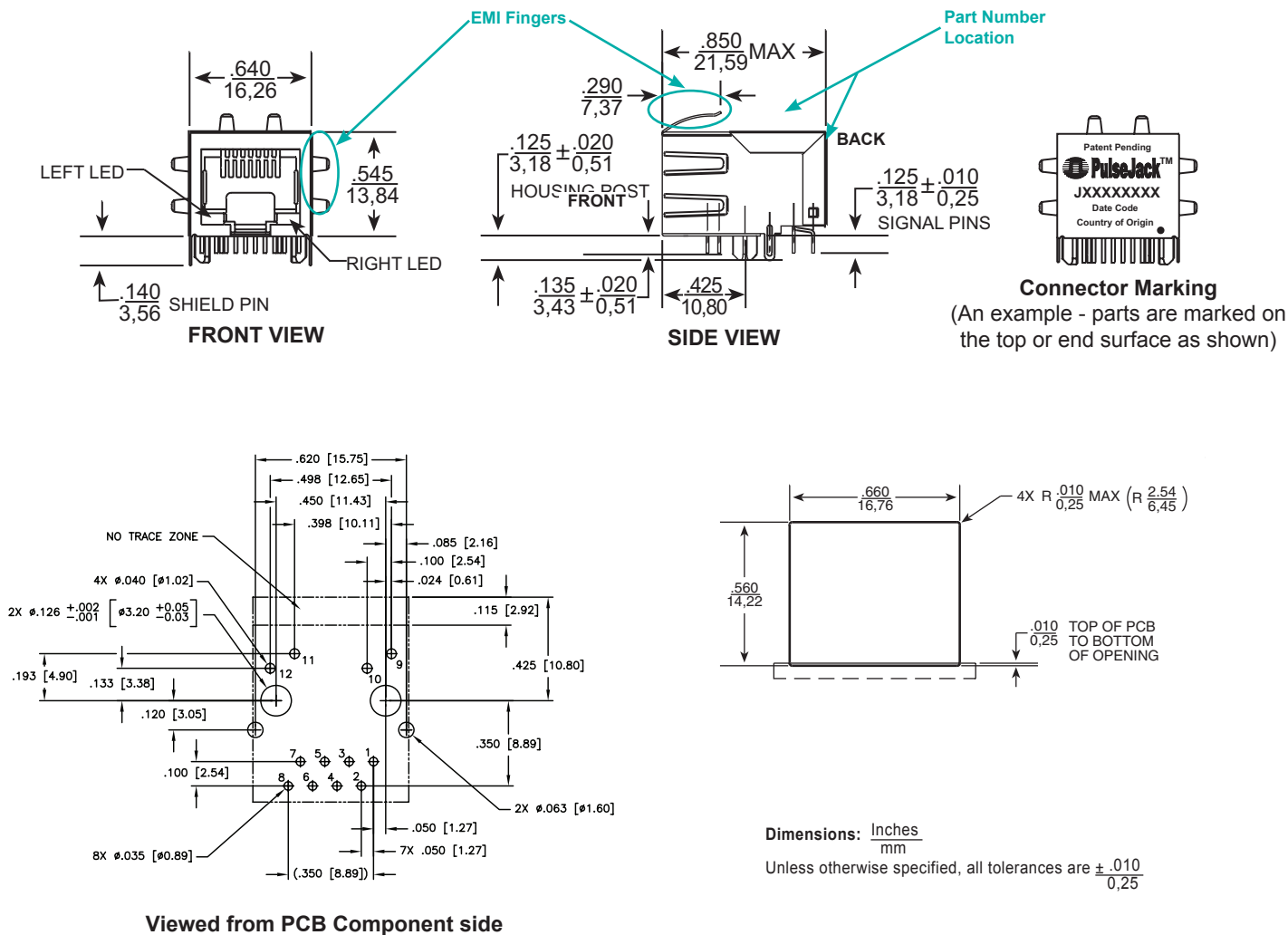
RJ45 Material Specification

| Part Number | Shield | | Contact | | | Housing | | MSL ² Rating |
|-------------|----------|--|-----------------|--|------------------|---------------|---------------|-------------------------|
| | Material | Finish | Material | Plating Area | Solder Area | Material | Specification | |
| J00 Series | Brass | 20-40m inches Nickel over 10-20m inches Brass | Phosphor Bronze | Nickel underplating and selective gold plating 15µ inches | Tin matte finish | Thermoplastic | UL 94 V-0 | 1 |

- NOTES: 1. Connector dimensions comply with FCC dimension requirements.
2. MSL - Moisture Sensitivity Level class limits = 1 to 5 (Highest: 1; Lowest: 5).

USA 215 781 6400 • Germany 49 7032 7806 0 • Singapore 65 6287 8998 • Shanghai 86 21 62787060 • China 86 755 33966678 • Taiwan 886 3 4356768

J00-00XXNL Series Mechanicals



LED Configuration

Green / Yellow LED Specification - (LEDs without internal resistors)

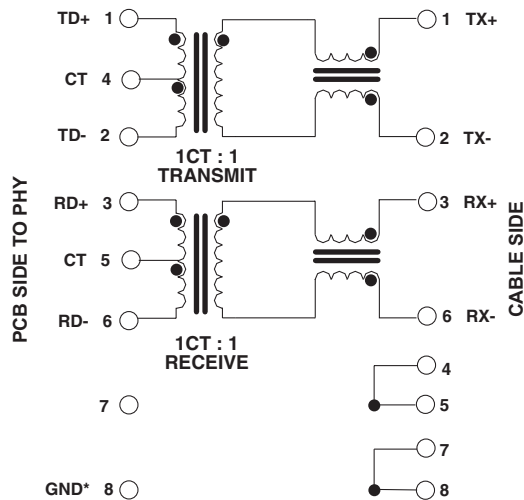


| Standard LED | Wavelength | Forward* V(MAX) | (TYP) |
|--------------|------------|-----------------|-------|
| Yellow | 585 nm | 2.5 V | 2.1 V |
| Green | 565 nm | 2.5 V | 2.2 V |

* Assumes bias current = 20mA

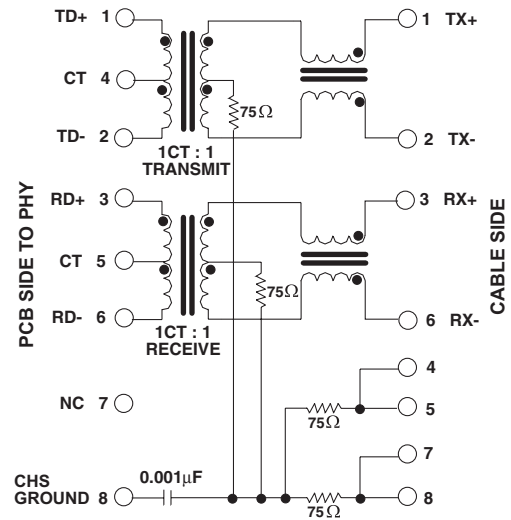
J00-00XX Series Electrical Schematics

J00-0042NL/46NL/64NL/66NL



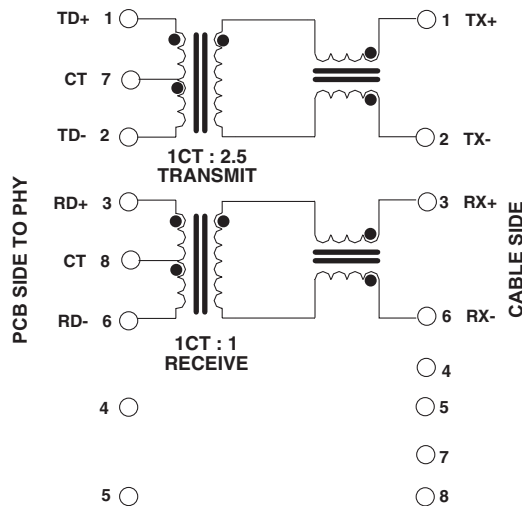
*Connecting pin 8 to Ground makes J00-0042/46/64/66 footprint compatible to J00-0014/45/61/65.

J00-0014NL/45NL/61NL/65NL



NOTE: Connect CHS GND to PCB ground.

J00-0025NL/51NL/62NL/63NL



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