



**THE DATASHEET OF  
J00-0051NL**



# STARJACK™

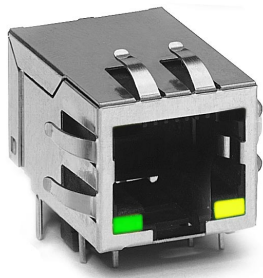
## 1x1 Tab-DOWN RJ45





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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 <sup>1</sup> Fingers	LEDs <sup>2</sup> (L/R)	BST	Insertion Loss (dB MAX)	Return Loss (dB MIN)	Crosstalk (dB MIN)	Common Mode Rejection (dB MIN)	Hipot (Vrms)
		TX	RX				1-10MHz	1-10MHz	1-10MHz	5MHz	@60Hz 1 MIN
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 <sup>1</sup> Fingers	LEDs <sup>2</sup> (L/R)	BST	Insertion Loss (dB MAX)					Return Loss (dB MIN)			Crosstalk (dB MIN)			Common Mode Rejection (dB MIN)	Hipot (Vrms)
		TX	RX				100Ω ±15Ω		100Ω ±15Ω			100Ω ±15Ω			5MHz	@60Hz 1 MIN			
		1-65MHz	1-10MHz				10-30MHz	30-60MHz	60-80MHz	1-30MHz	30-60MHz	60-100MHz	1-50MHz	50-150MHz					
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.

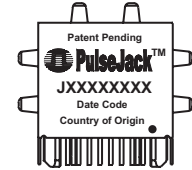
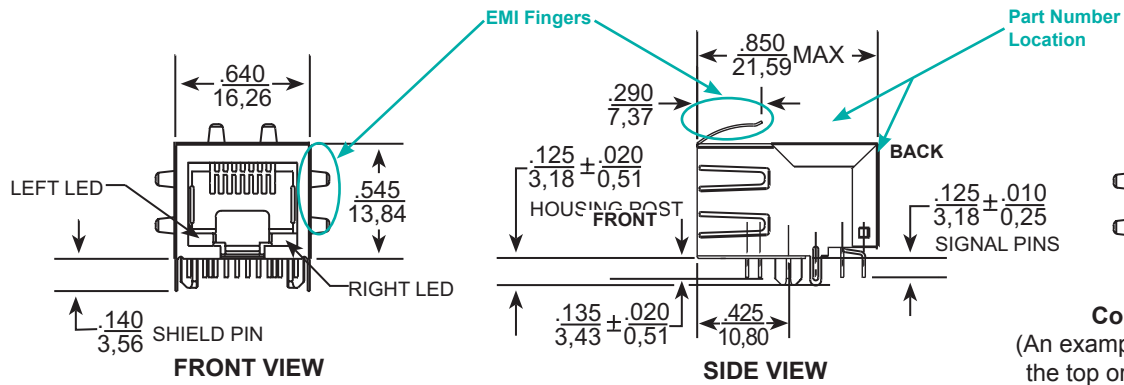
### RJ45 Material Specification

Part Number	Shield		Contact			Housing		MSL <sup>2</sup> 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

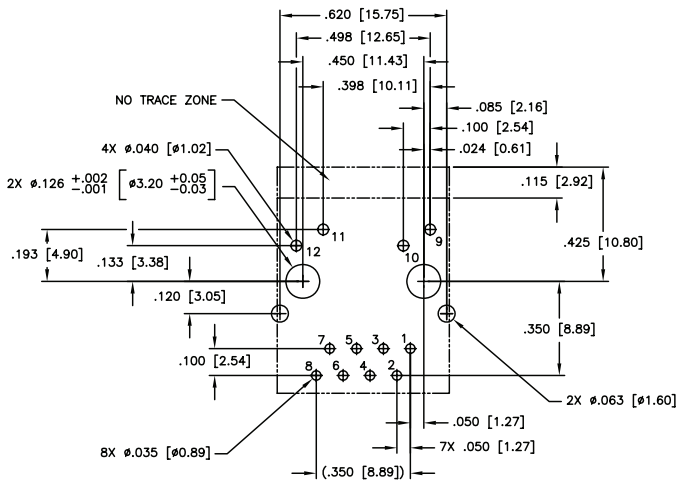
- NOTES: 1. Connector dimensions comply with FCC dimension requirements.  
2. MSL - Moisture Sensitivity Level class limits = 1 to 5 (Highest: 1; Lowest: 5).

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

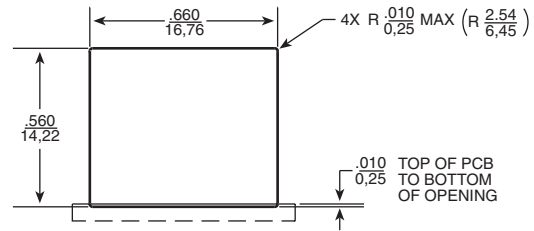
### J00-00XXNL Series Mechanicals



**Connector Marking**  
(An example - parts are marked on the top or end surface as shown)



Viewed from PCB Component side



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

### LED Configuration

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

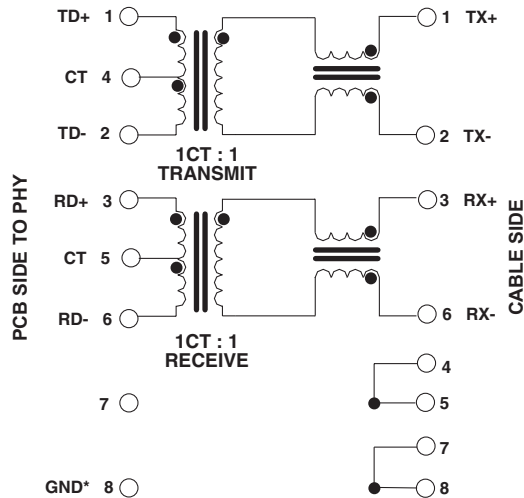


Standard LED	Wavelength	Forward* V(MAX)	(TYP)
Yellow	585 nm	2.5 V	2.1 V
Green	565 nm	2.5 V	2.2 V

\* Assumes bias current = 20mA

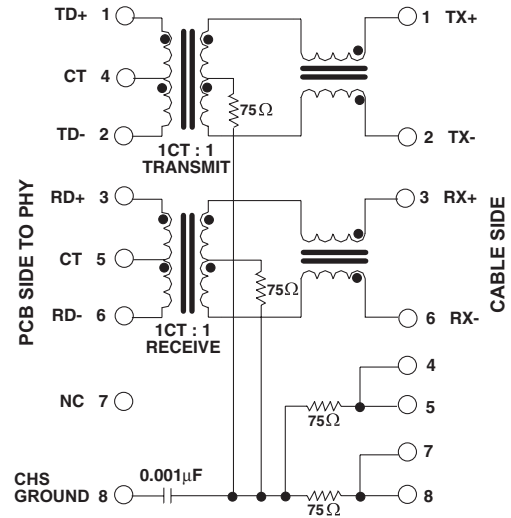
### J00-00XX Series Electrical Schematics

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



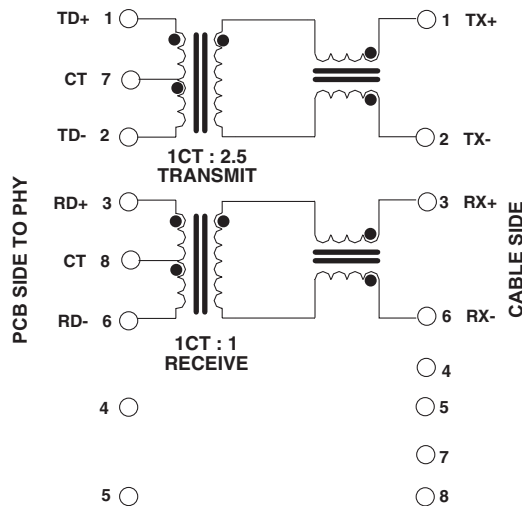
\*Connecting pin 8 to Ground makes J00-0042/46/64/66 footprint compatible to J00-0014/45/61/65.

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



NOTE: Connect CHS GND to PCB ground.

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



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