

# 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-5 peak wave solder temperature rating 235°C
- Ⓜ RoHS-6 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-5 <sup>4</sup> Compliant Part No.	RoHS-6 <sup>5</sup> 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) 100Ω ±15Ω	Crosstalk (dB MIN)	Common Mode Rejection (dB MIN)	Hipot (Vrms)
			TX	RX								
J00-0025 <sup>3</sup>	J00-0025 NL <sup>3</sup>	10BT	1CT:2.5	1CT:1	Yes	None	No	-1	-15	-30	-25	1500
J00-0051 <sup>3</sup>	J00-0051NL <sup>3</sup>	10BT	1CT:2.5	1CT:1	Yes	G/Y	No	-1	-15	-30	-25	1500
J00-0062 <sup>3</sup>	J00-0062 NL <sup>3</sup>	10BT	1CT:2.5	1CT:1	No	None	No	-1	-15	-30	-25	1500
J00-0063 <sup>3</sup>	J00-0063NL <sup>3</sup>	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-5 <sup>4</sup> Compliant Part No.	RoHS-6 <sup>5</sup> 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) 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	1-50MHz		50-150MHz
			@60Hz 1 MIN																
J00-0014	J00-0014NL	100BT	1CT:1	1CT:1	No	None	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	
J00-0042	J00-0042NL	100BT	1CT:1	1CT:1	No	None	No	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	
J00-0045	J00-0045NL	100BT	1CT:1	1CT:1	No	G/Y	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	
J00-0046	J00-0046NL	100BT	1CT:1	1CT:1	No	G/Y	No	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	
J00-0061	J00-0061NL	100BT	1CT:1	1CT:1	Yes	None	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	
J00-0064	J00-0064NL	100BT	1CT:1	1CT:1	Yes	None	No	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	
J00-0065	J00-0065NL	100BT	1CT:1	1CT:1	Yes	G/Y	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	
J00-0066	J00-0066NL	100BT	1CT:1	1CT:1	Yes	G/Y	No	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500	

#### NOTES:

1. For an explanation of EMI fingers, refer to the mechanical drawing page.
2. LEDs Left/Right: G=green, Y=yellow.
3. IEEE802.3i (10Base-T) standard does not require these parts to achieve 350µH minimum OCL with 8mA bias current for 10Base-T parts.
4. RoHS-5 - Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Product contains lead in applications considered as solders.
5. RoHS-6 - Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Some internal connections may contain lead in high temperature solder (solder alloys containing more than 85% lead).

### RJ45 Durability Testing Rating

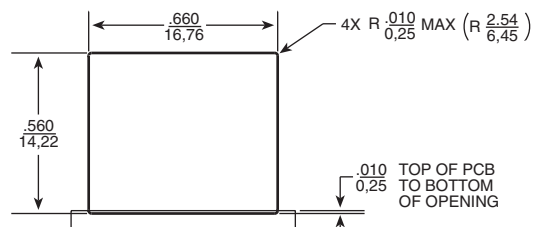
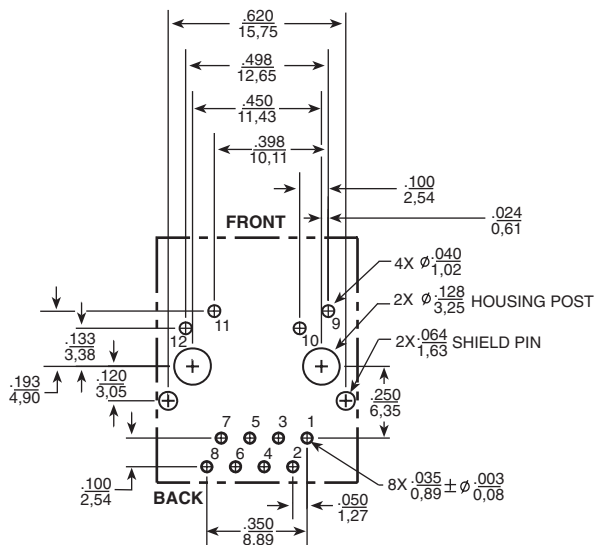
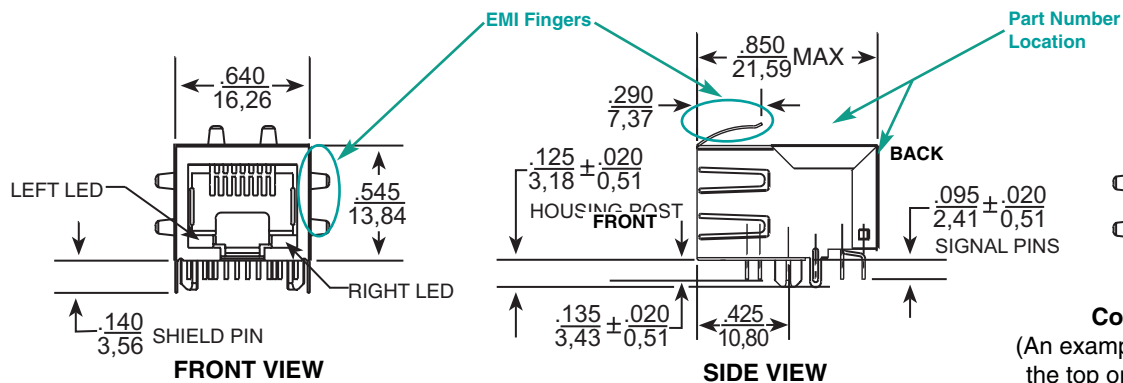
Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
J00 Series	5lbs./2.268kgs.	5lbs./2.268kgs.	750 Insertions	20lbs./9.072kgs.

### RJ45 Material Specification

Part Number	Shield		Contact			Housing		MSL <sup>2</sup> Rating
	Material	Finish	Material	Plating Area	Solder Area <sup>3</sup>	Material	Specification	
J00 Series	Brass	20-40m inches Nickel over 10-20m inches Brass	Phosphor Bronze	Nickel underplating and selective gold plating 15µ inches	120µ inches Sn90/Pb10 over 50µ inches nickel	Thermoplastic	UL 94 V-0	1

- NOTES: 1. Connector dimensions comply with FCC dimension requirements. 3. RoHS-6 parts are tin matte finish over nickel.  
2. MSL - Moisture Sensitivity Level class limits = 1 to 5 (Highest: 1; Lowest: 5).

### J00-00XX Series Mechanicals



**Dimensions:** Inches  
mm  
Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

### LED Configuration

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

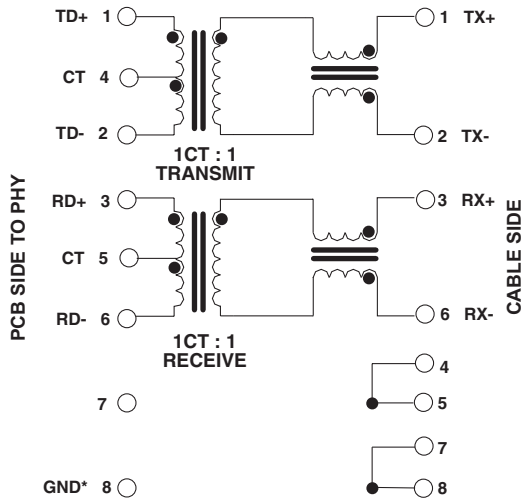


Standard LED	Wavelength	Forward* V(MAX)	(TYP)
Yellow	585 nm	2.5 V	2.1 V
Green	565 nm	2.5 V	2.2 V

\* Assumes bias current = 20mA

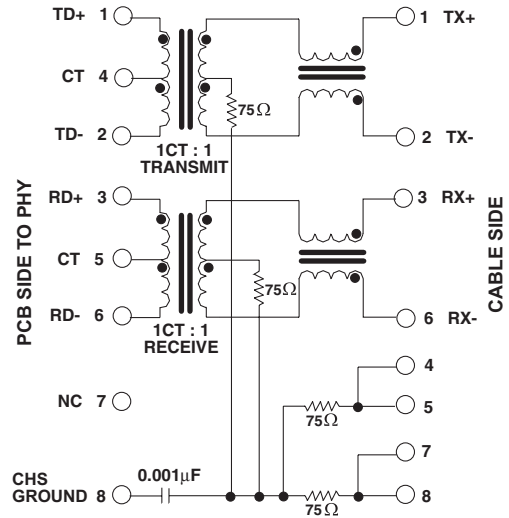
### J00-00XX Series Electrical Schematics

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



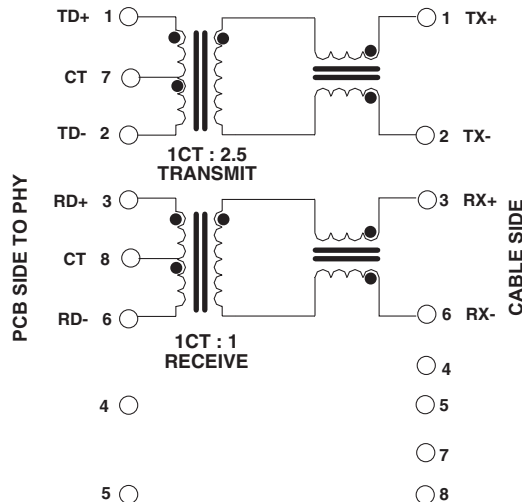
\*Connecting pin 8 to Ground makes J00-0042/46/64/66 footprint compatible to J00-0014/45/61/65.

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



NOTE: Connect CHS GND to PCB ground.

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



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