

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 “NL” peak solder rating 260°C, non-RoHS peak solder rating 235°C
-  For RoHS part, add suffix NL⁴
-  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

Part ⁴ Number	Data Rate	Turns Ratios		EMI ¹ Fingers	LEDs ² (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	100Ω ±15Ω	1-10MHz	5MHz	@60Hz 1 MIN
J00-0025 ³	10BT	1CT:2.5	1CT:1	Yes	None	No	-1	-15	-30	-25	1500
J00-0051 ³	10BT	1CT:2.5	1CT:1	Yes	G/Y	No	-1	-15	-30	-25	1500
J00-0062 ³	10BT	1CT:2.5	1CT:1	No	None	No	-1	-15	-30	-25	1500
J00-0063 ³	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

Part ⁴ Number	Data Rate	Turns Ratios		EMI ¹ Fingers	LEDs ² (L/R)	BST	Insertion Loss (dB MAX)	Return Loss (dB MIN)					Crosstalk (dB MIN)			Common Mode Rejection (dB MIN)	Hipot (Vrms)
		TX	RX				1-65MHz	100Ω ±15Ω		1-10MHz			1-50MHz		150-150MHz	@60Hz 1 MIN	
								1-10MHz	10-30MHz	30-60MHz	60-80MHz	1-30MHz	30-60MHz	60-100MHz			
J00-0014	100BT	1CT:1	1CT:1	No	None	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500
J00-0042	100BT	1CT:1	1CT:1	No	None	No	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500
J00-0045	100BT	1CT:1	1CT:1	No	G/Y	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500
J00-0046	100BT	1CT:1	1CT:1	No	G/Y	No	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500
J00-0061	100BT	1CT:1	1CT:1	Yes	None	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500
J00-0064	100BT	1CT:1	1CT:1	Yes	None	No	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500
J00-0065	100BT	1CT:1	1CT:1	Yes	G/Y	Yes	-1	-18	-14	-12	-10	-35	-35	-30	-20	-15	1500
J00-0066	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. Add suffix “NL” for RoHS compliant parts (e.g. J00-0065 changes to J00-0065NL).

RJ45 Durability Testing Rating

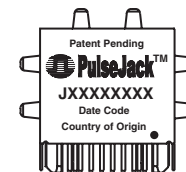
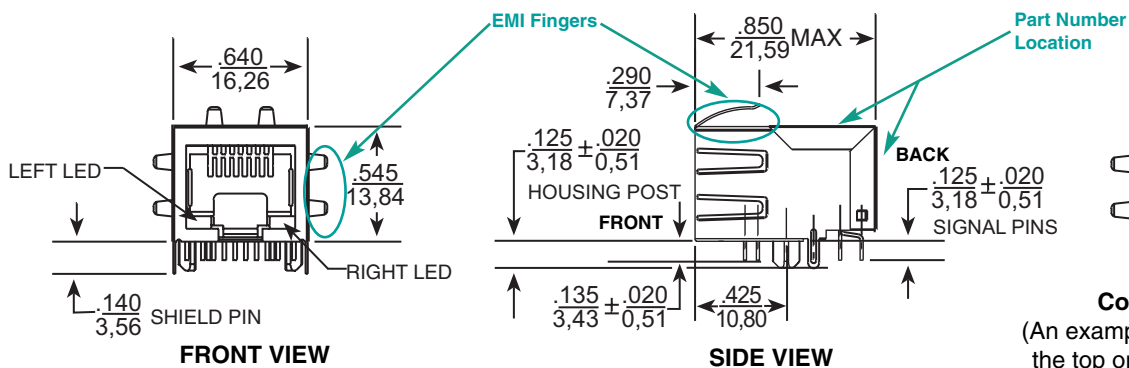
Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
J00 Series	5 lbs./2.268 kgs.	5 lbs./2.268 kgs.	750 Insertions	20 lbs./9.072 kgs.

RJ45 Material Specification

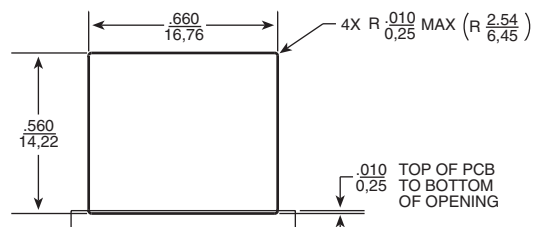
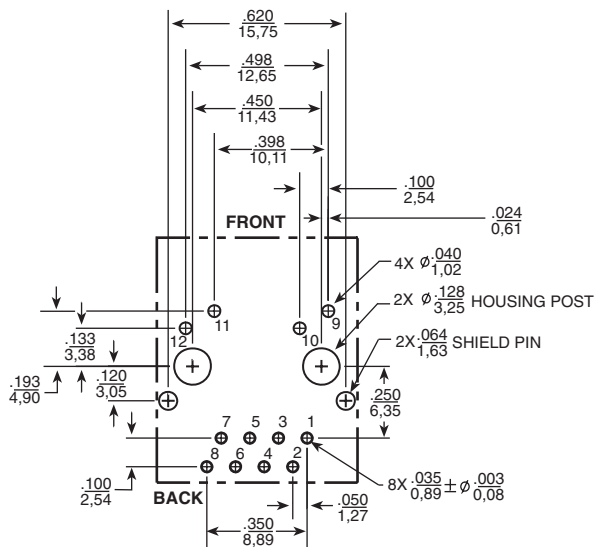
Part Number	Shield		Contact			Housing		MSL ² Rating
	Material	Finish	Material	Plating Area	Solder Area ³	Material	Specification	
J00 Series	Brass	20-40m inches Nickel over 10-20m inches Brass	Phosphor Bronze	Nickel underplating and selective gold plating 15µ inches	120µ inches Sn90/Pb10 over 50µ inches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

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

J00-00XX Series Mechanicals



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



Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .010$ (0,25)

LED Configuration

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

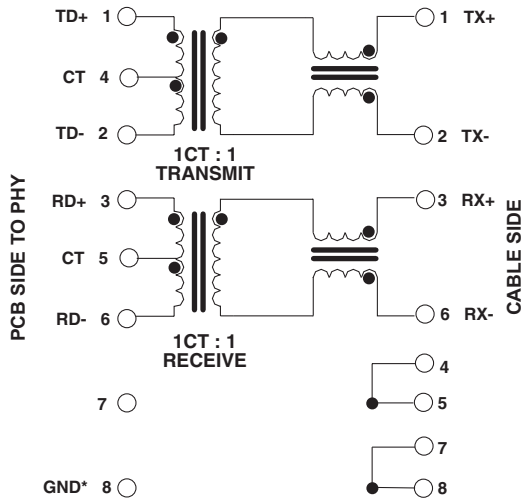


Standard LED	Wavelength	Forward* V(MAX)	(TYP)
Yellow	585 nm	2.5 V	2.1 V
Green	565 nm	2.5 V	2.2 V

* Assumes bias current = 20mA

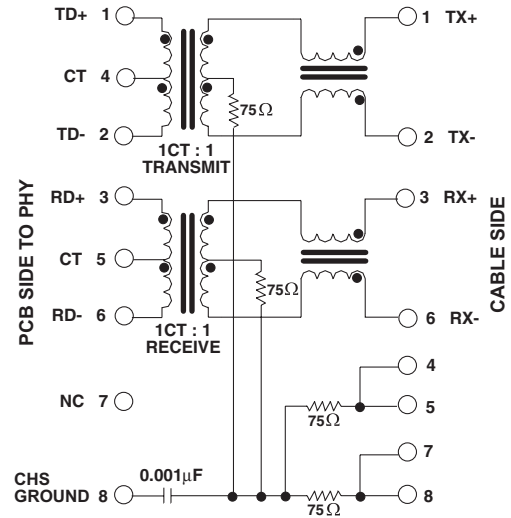
J00-00XX Series Electrical Schematics

J00-0042/46/64/66



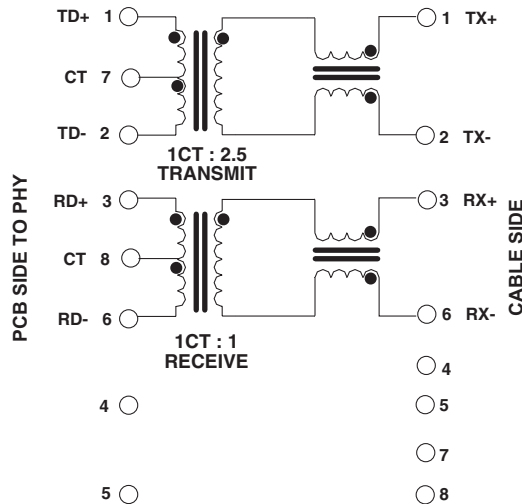
*Connecting pin 8 to Ground makes J00-0042/46/64/66 footprint compatible to J00-0014/45/61/65.

J00-0014/45/61/65



NOTE: Connect CHS GND to PCB ground.

J00-0025/51/62/63



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