CON292003

2.92 mm Jack PCB Compression Surface-Mount Connector

The CON292003 is a 2.92 mm jack (female socket) PCB solderless surface-mount connector designed for installation directly to a printed circuit board using the provided split washers and screws.

Operating from 0 Hz to 40 GHz, the CON292003 combines superior performance, compact size, and a convenient threaded mating interface to provide a reliable, easy-to-use connector. Additionally, all Linx connectors meet RoHS lead free standards and are tested to meet requirements for corrosion resistance, vibration, mechanical and thermal shock.

FEATURES

- 0 Hz to 40 GHz operation
- Nickel plated brass body for superior corrosion resistance
- Gold plated beryllium copper center contact
- All mounting hardware is passivated stainless steel
  - 2x split washers
  - 2x pan-head screws
- Direct PCB attachment
- Solderless compression-mount design

APPLICATIONS

- Satellite communications
- Test and measurement
- Radar
- Experimental

TABLE 1. ELECTRICAL SPECIFICATIONS

Parameter	Value
Impedance	50 Ω
Frequency Range	0 Hz to 40 GHz
Dielectric Withstanding Voltage	750 V RMS
Contact Resistance	Center: ≤ 3.0 mΩ Outer: ≤ 2.0 mΩ
Insulation Resistance	5000 MΩ min.
Insertion Loss (dB max)	0.1
VSWR (max)	1.1

ORDERING INFORMATION

Part Number	Description
CON292003	2.92 mm jack (female socket) PCB solderless surface-mount connector with split washers and pan-head 0-80UNF-2A screws

Available from Linx Technologies and select distributors and representatives.

PRODUCT DIMENSIONS

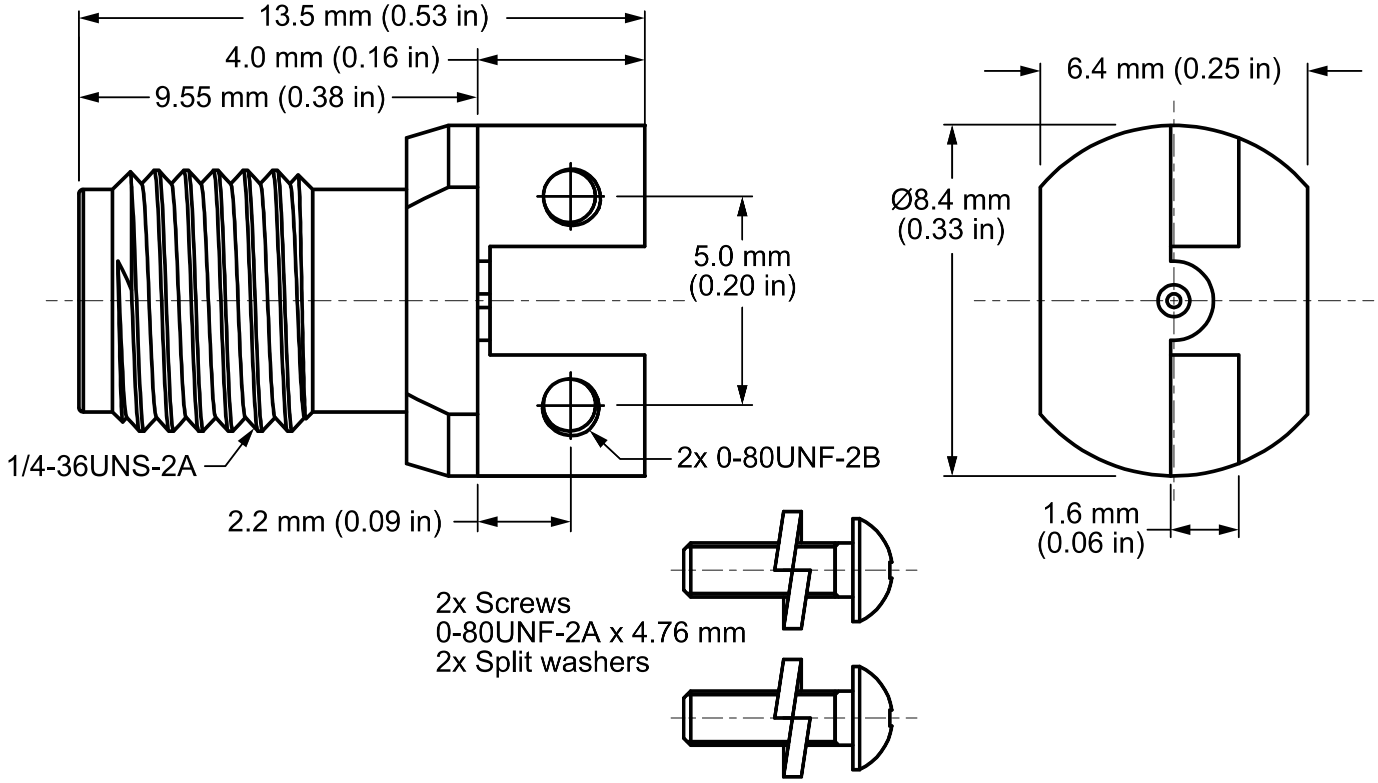

Figure 1: Product Dimensions for the CON292003 Connector

TABLE 2. CONNECTOR COMPONENTS

Model	CON292003	
Connector Part	**Material**	**Finish**
Connector Body	Brass	Nickel
Center Contact (female socket)	Beryllium Copper	Gold
Split Washer (2x)	Stainless Steel	Passivated
Screw, PHP (2x) 0-80UNF-2A	Stainless Steel	Passivated

RECOMMENDED PCB FOOTPRINT

Figure 2 shows the connectors recommended PCB footprint and mounting requirements. The printed circuit board thickness should be no more than 2 mm thick. The provided split washers and screws should be tightened to a torque setting not to exceed 0.09N:m (12 in-oz).

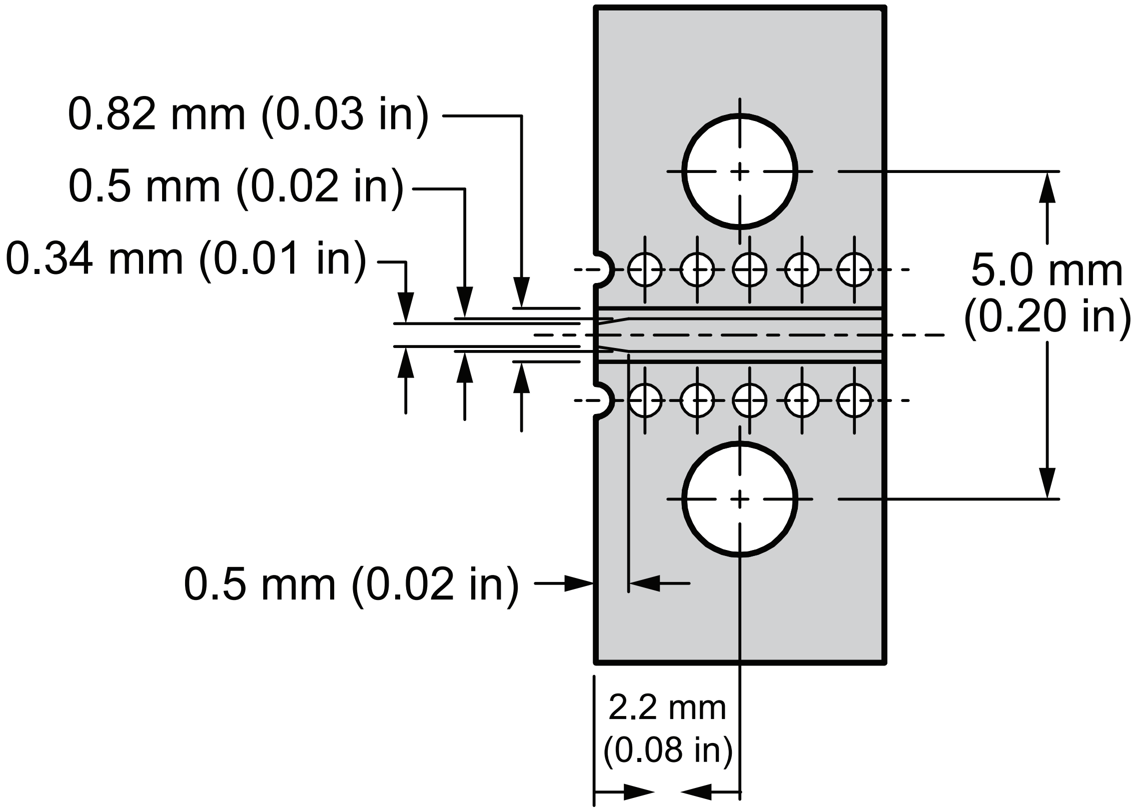

Figure 2: Recommended PCB Dimensions for the CON292003

TABLE 3. MECHANICAL SPECIFICATIONS

Model	CON292003
Mounting Type	Solderless PCB end-launch design
Fastening Type	1/4-36UNS Threaded Coupling
Interface in Accordance with	MIL-STD-348B
Connector Durability	500 cycles min.
Recommended torque	8.0 in. -lbs
Weight	2.2 g (0.08 oz)

INSERTION LOSS

Figure 3 shows the Insertion Loss for the CON292003 connector. Insertion loss is the loss of signal power (gain) resulting from the insertion of a device in a transmission line.

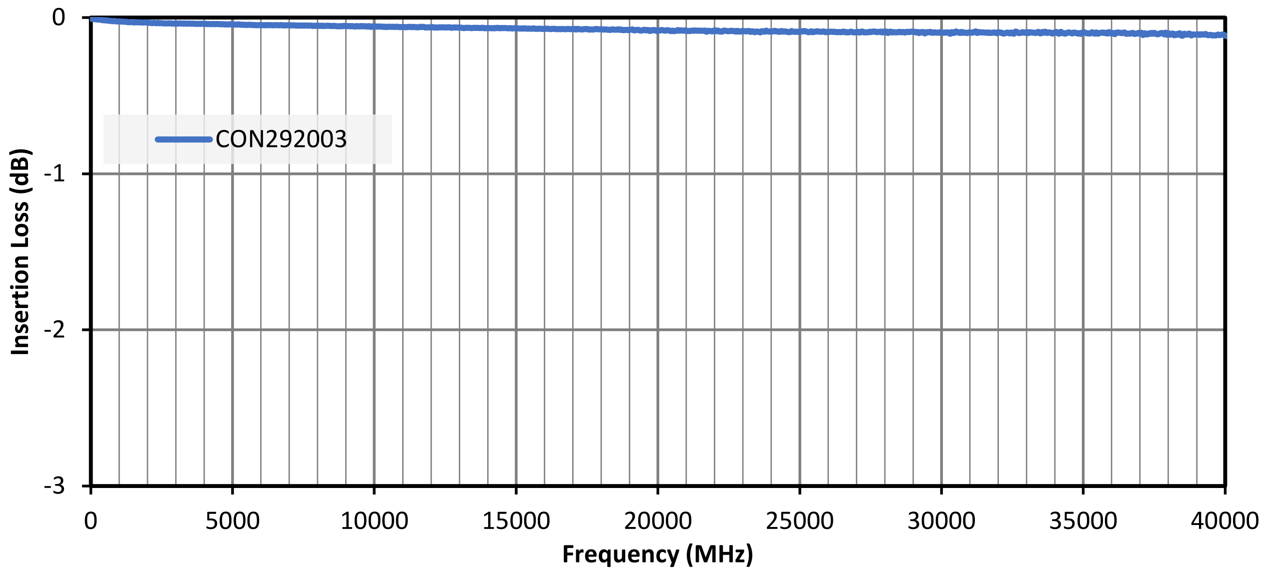

Figure 3: Insertion Loss for the CON292003 Connector

VSWR

Figure 4 provides the voltage standing wave ratio (VSWR) across the adapter's bandwidth for the CON292003 connector. VSWR describes how efficiently power is transmitted. A lower VSWR value indicates better performance at a given frequency.

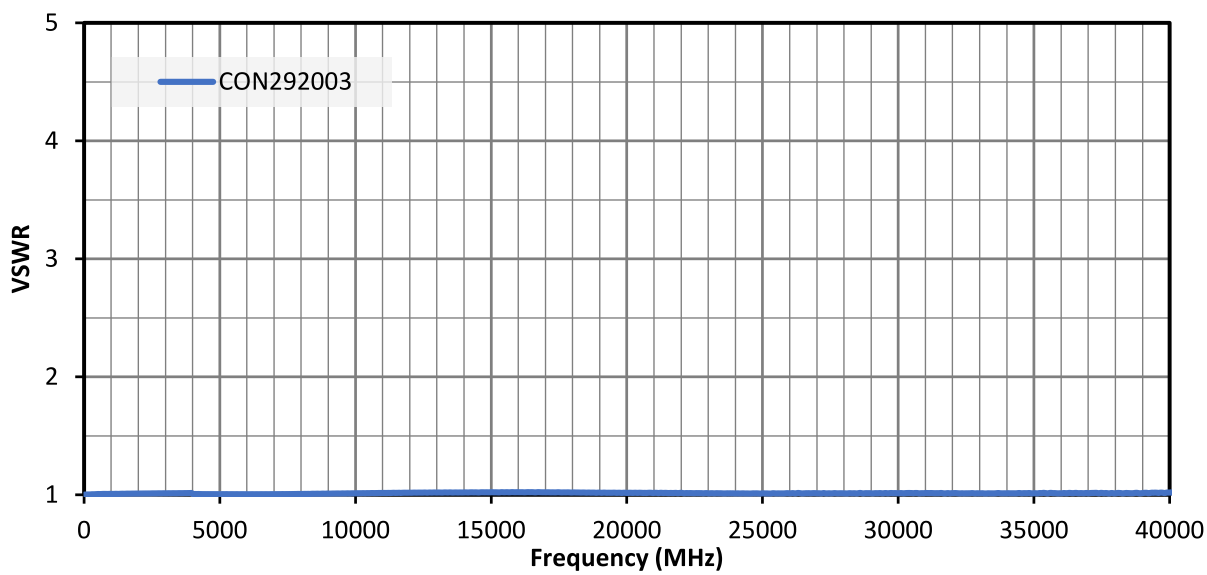

Figure 4: VSWR for the CON292003 Connector

PACKAGING INFORMATION

The CON292003 connector is individually placed in a clear anti-static polyethylene bag. 25 pcs are packaged in a larger anti-static polyethylene bag. 100 pcs are packaged in a shipping carton (370 mm x 330 mm x 240 mm). Distribution channels may offer alternative packaging options.

CONNECTOR & ADAPTER DEFINITIONS AND USEFUL FORMULAS

VSWR - Voltage Standing Wave Ratio. VSWR is a unitless ratio that describes how efficiently power is transmitted through the connector. A lower VSWR value indicates better performance at a given frequency. VSWR is easily derived from Return Loss.

$$\mathrm{VSWR} = \frac{10^{\left[\frac{\mathrm{Return\ \ Loss}}{20}\right]} + 1}{10^{\left[\frac{\mathrm{Return\ \ Loss}}{20}\right]} - 1}$$

Insertion Loss - The loss of signal power (gain) resulting from the insertion of a device in a transmission line. Insertion loss can be derived from the power transmitted to the load before the insertion of the component P_T and the power transmitted to the load after the insertion of the component P_R .

$$\mathit{Insertion\ Loss}\ (\mathrm{dB}) = 10\log_{10}\frac{P_T}{P_R}$$

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