

CON24001-VIA-1

2.4 mm Jack PCB Compression Surface-Mount Connector

The CON24001-VIA-1 is a 2.4 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 50 GHz, the CON24001-VIA-1 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 50 GHz operation
- Passivated stainless steel body for superior corrosion resistance
- Gold plated beryllium copper center contact
- All mounting hardware provided
 - 2x split washers
 - 2x 0-80UNF-2A x 4.76 mm 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 50 GHz |
| Dielectric Withstanding Voltage | 500 V RMS |
| Contact Resistance | Center: ≤ 4.0 m Ω Outer: ≤ 2.5 m Ω |
| Insulation Resistance | 5000 M Ω min. |
| Insertion Loss (dB max) | 0.3 |
| VSWR (max) | 1.3 |

Ordering Information

| Part Number | Description |
|----------------|--|
| CON24001-VIA-1 | 2.4 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

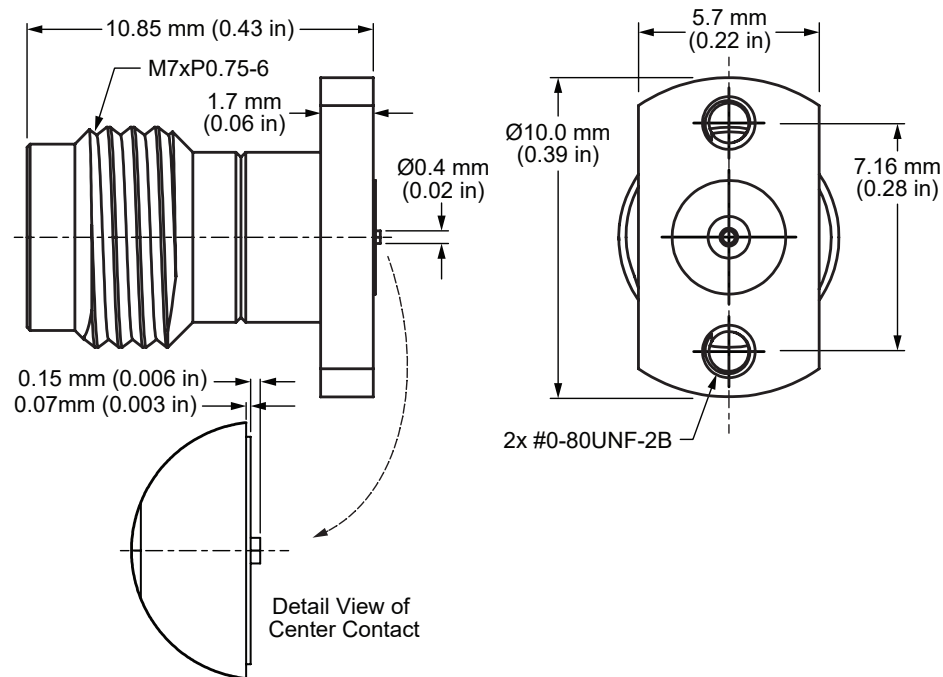


Figure 1. Product Dimensions for the CON24001-VIA-1 Connector

Table 2. Connector Components

| Model | CON24001-VIA-1 | |
|--------------------------------|------------------|------------|
| Connector Part | Material | Finish |
| Connector Body | Stainless Steel | Passivated |
| 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 provided split washers and screws should be tightened to a torque setting not to exceed 0.09N:m (12 in-oz).

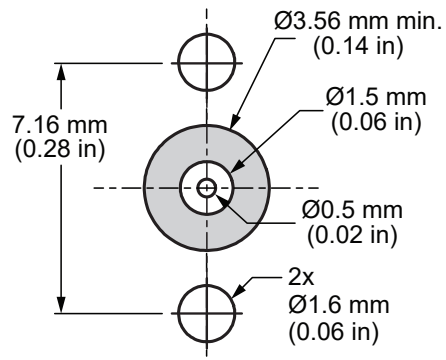


Figure 2. Recommended PCB Dimensions for the CON24001-VIA-1

Table 3. Mechanical Specifications

| Model | CON24001-VIA-1 |
|------------------------------|-------------------------------------|
| Mounting Type | Solderless PCB Surface-Mount design |
| Fastening Type | Type IAW M7 Threaded Coupling |
| Interface in Accordance with | MIL-STD-348B |
| Connector Durability | 500 cycles min. |
| Recommended torque | 8.0 in. -lbs |
| Weight | 3.0 g (0.11 oz) |

Insertion Loss

Figure 3 shows the Insertion Loss for the CON24001-VIA-1 connector. Insertion loss is the loss of signal power (gain) resulting from the insertion of a device in a transmission line.

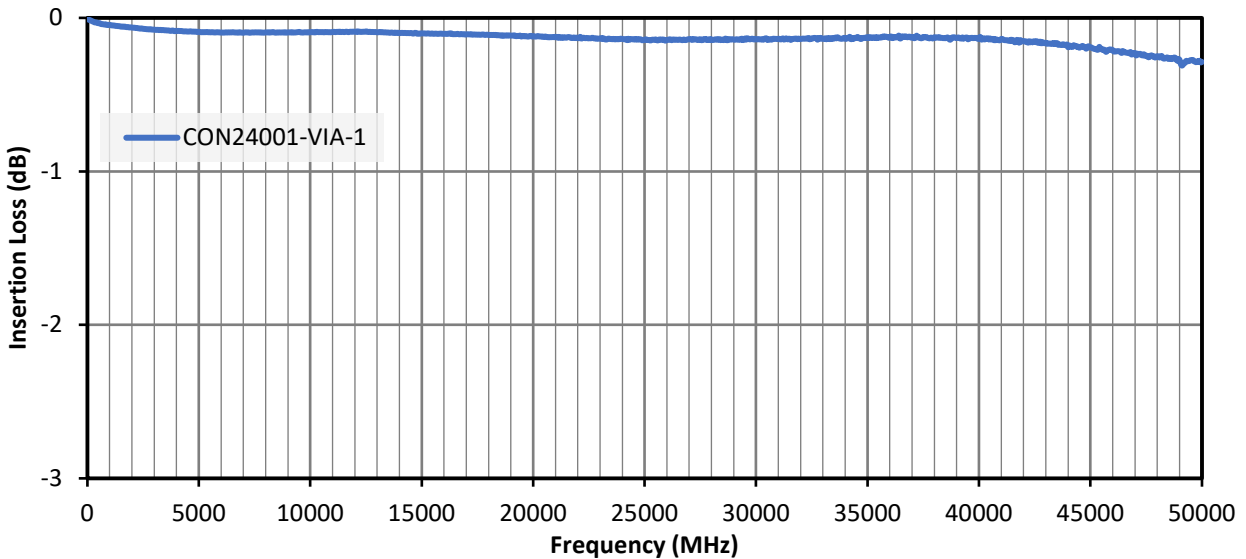


Figure 3. Insertion Loss for the CON24001-VIA-1 Connector

VSWR

Figure 4 provides the voltage standing wave ratio (VSWR) across the adapter's bandwidth for the CON24001-VIA-1 connector. VSWR describes how efficiently power is transmitted. A lower VSWR value indicates better performance at a given frequency.

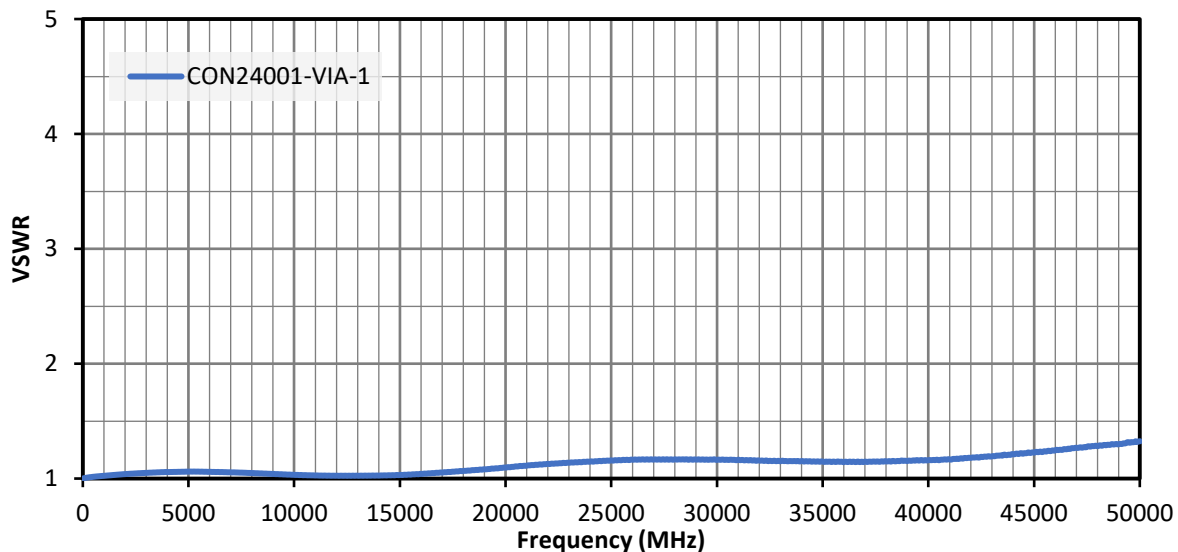


Figure 4. VSWR for the CON24001-VIA-1 Connector

Packaging Information

The CON24001-VIA-1 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.

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

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 .

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

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