

## CONMHF1-SMD

### U.FL-Type Jack PCB Surface-Mount Connector

The CONMHF1-SMD is an U.FL-type jack (male pin) PCB surface-mount connector designed for reflow-solder mounting directly to a printed circuit board. Operating from 0 Hz to 6 GHz, the CONMHF1-SMD combines superior performance, compact size, and a convenient snap-on 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 6 GHz operation
- Gold plating
  - Superior corrosion resistance
- MHF1/U.FL-type jack (male pin) connection
  - Gold plated brass center contact
- Direct PCB attachment
- Reflow- or hand-solder assembly

#### APPLICATIONS

- LPWA
  - LoRaWAN®, Sigfox®, WiFi HaLow™ (802.11ah)
- Cellular IoT
  - LTE-M (Cat-M1), NB-IoT
- Cellular
  - 5G/4G LTE/3G/2G
- GNSS
  - GPS, Galileo, GLONASS, BeiDou, QZSS
- Industrial/Commercial/Enterprise
- ISM

**TABLE 1. ELECTRICAL SPECIFICATIONS**

Impedance	50 Ω	
Frequency Range	0 Hz to 6 GHz	
Voltage Rating	60 V RMS	
Contact Resistance	Main: [.002Ω] Ground: [.002Ω] [EIA 364-23]	
Insulation Resistance	500 MΩ min.	
Select Frequencies	2.4 GHz	5 GHz
Insertion Loss (dB max)	0.10	0.81
VSWR (max)	1.1	2.0

## ORDERING INFORMATION

Part Number	Description
CONMHF1-SMD-T	MHF1/U.FL-type nickel plated jack (male pin) PCB surface-mount connector in tape and reel (4500 per reel)
CONMHF1-SMD-G-T	MHF1/U.FL-type gold plated jack (male pin) PCB surface-mount connector in tape and reel (4500 per reel)

Available from Linx Technologies and select distributors and representatives.

## PRODUCT DIMENSIONS

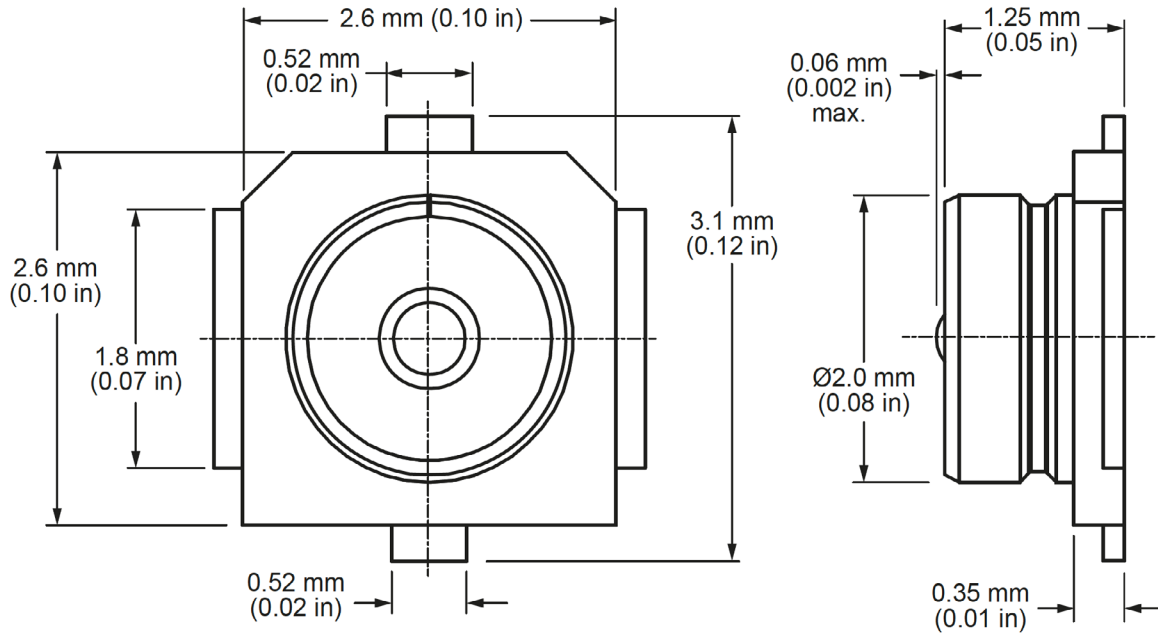


Figure 1. Product Dimensions for the CONMHF1-SMD Connector

## TABLE 2. CONNECTOR COMPONENTS

Model	CONMHF1-SMD		CONMHF1-SMD-G	
Connector Part	Material	Finish	Material	Finish
Connector Body	LCP, UL94V-0	-	LCP, UL94V-0	-
Outer Contact	Brass	Nickel	Brass	Gold
Center Contact (male pin)	Brass	Gold	Brass	Gold
Signal Contact	Phosphor Bronze	Gold	Phosphor Bronze	Gold
Ground Contact	Phosphor Bronze	Gold	Phosphor Bronze	Gold

## RECOMMENDED PCB FOOTPRINT

Figure 2 shows the connectors recommended PCB footprint for the CONMHF1-SMD connector.

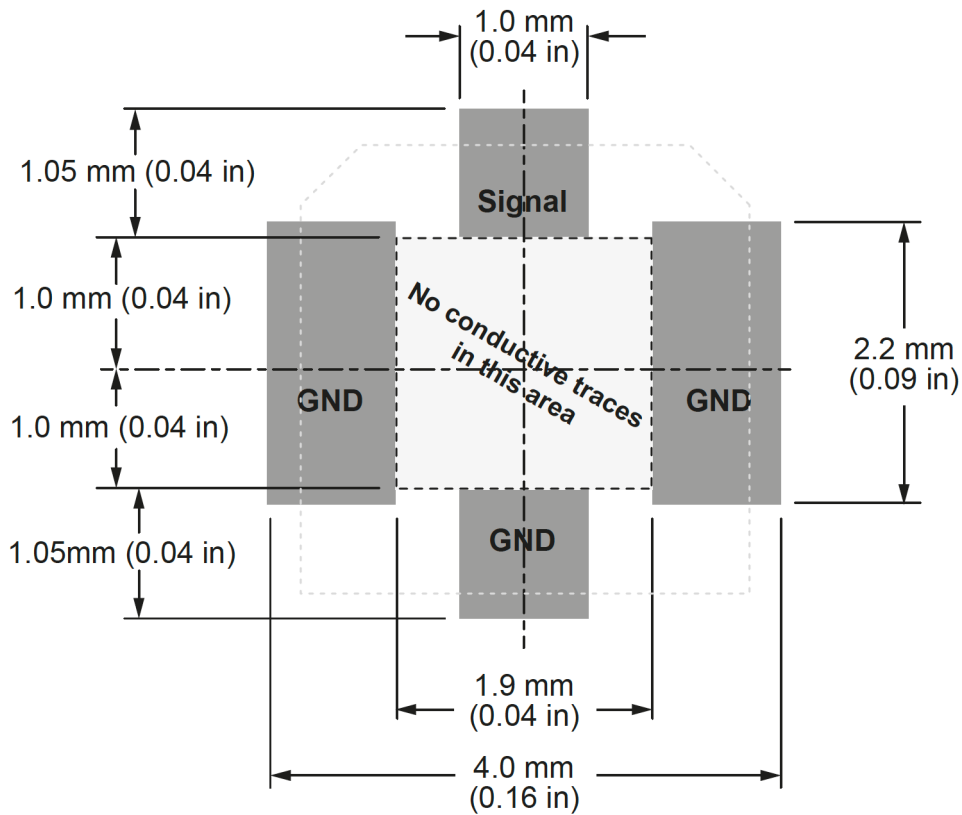


Figure 2. Recommended PCB Dimensions for the CONMHF1-SMD

## CONNECTOR PERFORMANCE

Table 3 shows insertion loss and VSWR values for the CONMHF1-SMD connector at commonly used frequencies. Insertion loss is the loss of signal power (gain) resulting from the insertion of a device in a transmission line. VSWR describes how efficiently power is transmitted through the connector. A lower VSWR value indicates better performance at a given frequency.

**TABLE 3. INSERTION LOSS AND VSWR FOR THE CONMHF1-SMD CONNECTOR**

Band	Low-Band Cellular/ISM/LPWA	GNSS	Midband Cellular	WiFi/ISM
Frequency Range	400 MHz to 960 MHz	1164 MHz to 1609 MHz	1427 MHz to 5000 MHz	2.4 GHz
Insertion Loss (dB max)	0.04	0.07	0.85	0.10
VSWR (max)	1.1	1.1	2.0	1.1

## TABLE 4. MECHANICAL SPECIFICATIONS

Model	CONMHF1-SMD
Mounting Type	PCB Surface-Mount
Fastening Type	Snap-on Coupling
Interface in Accordance with	EIA-364
Connector Durability	30 cycles min.
Weight	0.017 g (0.0006 oz)

## TABLE 5. ENVIRONMENTAL SPECIFICATIONS

STD, Test Condition	
Corrosion (Salt spray)	EIA 364-26
Thermal Shock	EIA 364-32
Vibration	EIA 364-28
Mechanical Shock	EIA 364-27
Temperature Range	-40 °C to +90 ° C
Environmental Compliance	RoHS

## REFLOW SOLDER PROFILE

Figure 3 shows the time and temperature data for reflow soldering the connector to a PCB.

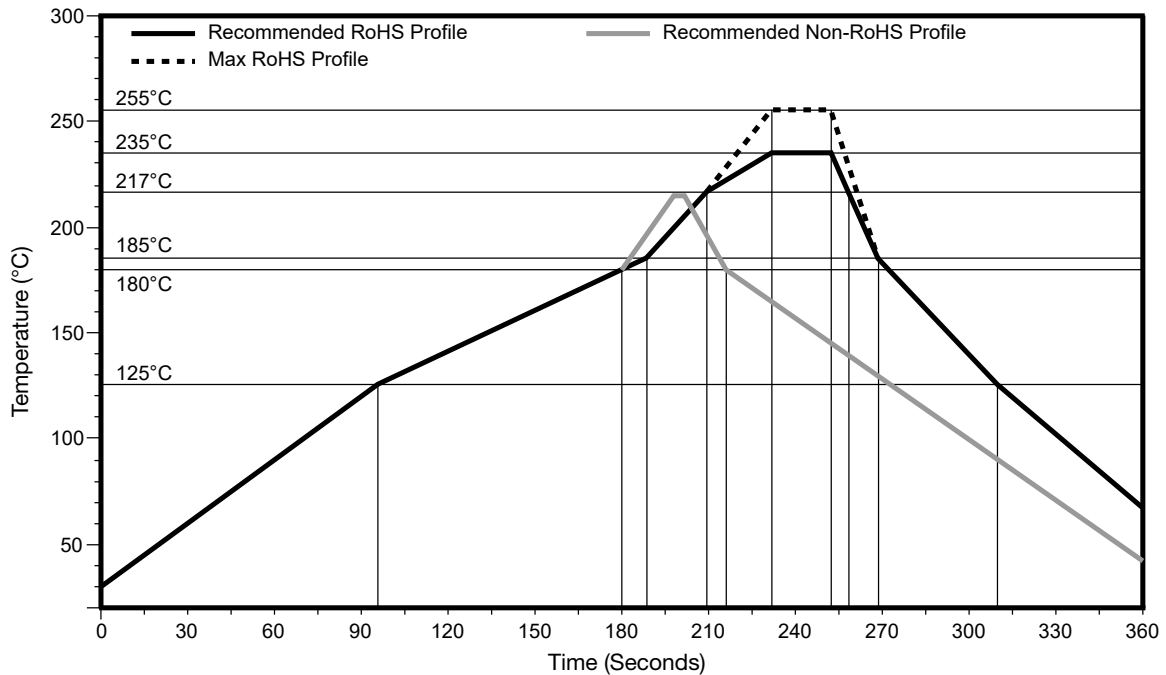


Figure 3. CONMHF1-SMD Recommended Reflow Solder Profile

## PACKAGING INFORMATION

Figure 4 shows the tape dimensions for the CONMHF1-SMD connector. The reel specifications are provided in Figure 5.

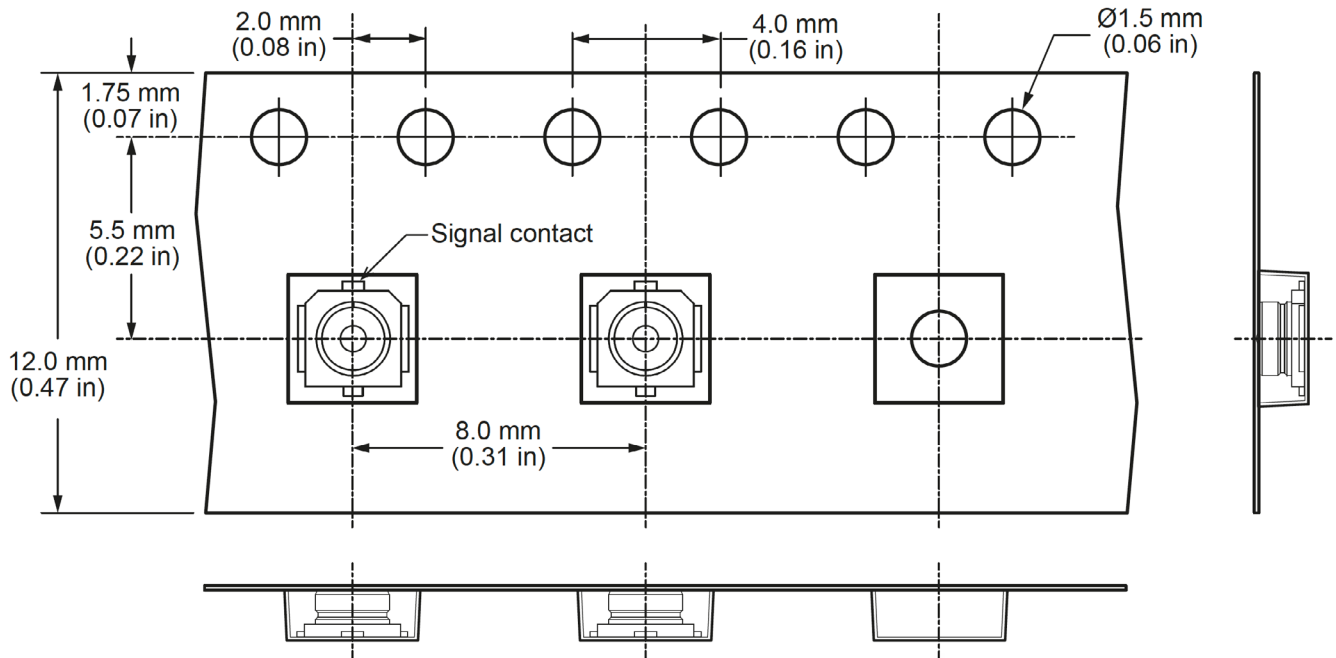


Figure 4. Tape Specifications for the CONMHF1-SMD Connector

## PACKAGING INFORMATION (CONTINUED)

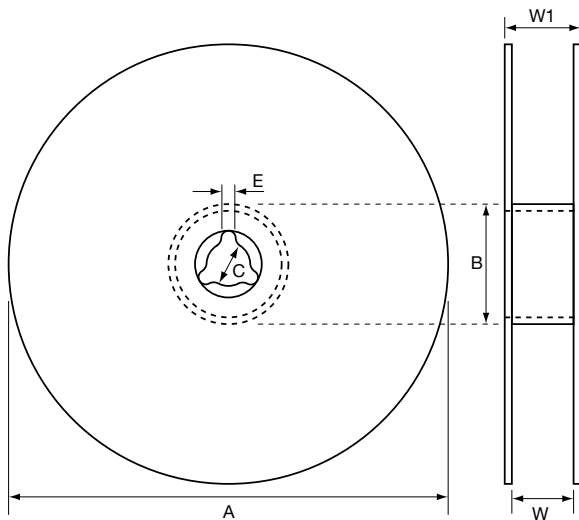


Figure 5. Reel Specifications for the CONMHF1-SMD Connector

Reel Dimensions		
Symbol	Qty	Unit
QTY per reel	4,500	pcs
Tape width	12.00	mm
A	$\varnothing 330 \pm 1$	mm
B	$\varnothing 100 \pm 0.5$	mm
C	$\varnothing 13.00 \pm 0.2$	mm
E	$2.2 \pm 0.5$	mm
W	$12 \pm 0.5$	mm
W1	$16.4 \pm 0.2$	mm

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