

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 GHz 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 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 to 6 GHz		
Voltage Rating	60 V RMS		
Contact Resistance	Center: \leq 6.0 m Ω Outer: \leq 1.0 m Ω		
Insulation Resistance	100 MΩ min.		
Dielectric Withstanding Voltage	0.5 mA max.		
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)

CONMHF1-SMD Datasheet

Product Dimensions

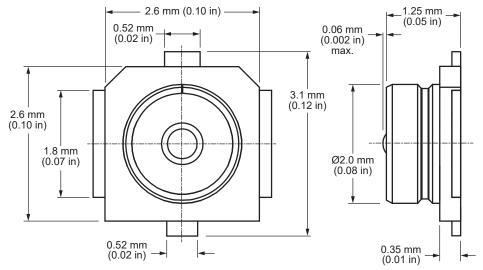


Figure 1. Product Dimensions for the CONMHF1-SMD Connector

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

Table 2. Connector Components

Recommended PCB Footprint

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

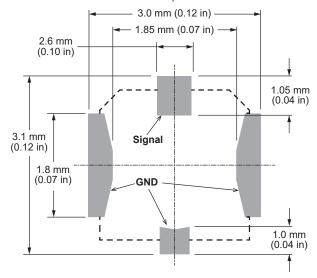


Figure 2. Recommended PCB Dimensions for the CONMHF1-SMD



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	0.8 g (0.03 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.

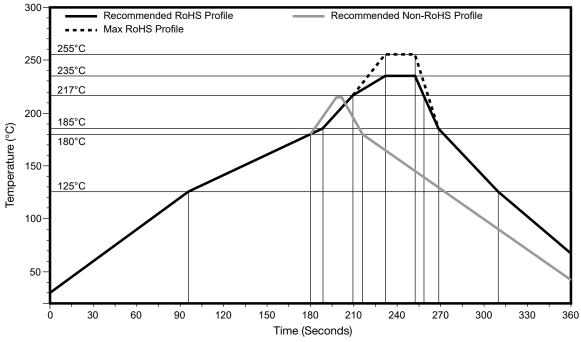


Figure 3. CONMHF1-SMD Recommended Reflow Solder Profile

Packaging Information

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

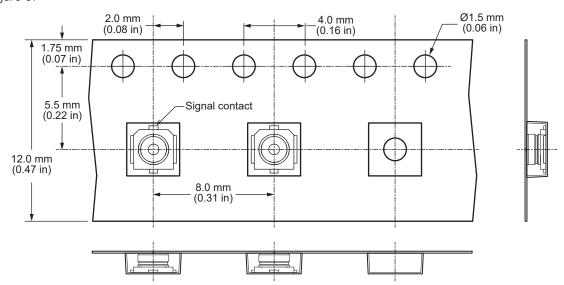
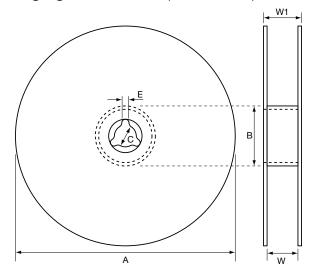


Figure 4. Tape Specifications for the CONMHF1-SMD Connector



Packaging Information (Continued)



Reel Dimensions				
Symbol	Qty	Unit		
QTY per reel	4,500	pcs		
Tape width	12.00	mm		
Α	Ø 330 ±1	mm		
В	Ø 100 ±0.5	mm		
С	Ø 13.00 ±0.2	mm		
Е	2.2 ±0.5	mm		
W	12 ±0.5	mm		
W1	16.4 ±0.2	mm		

Figure 5. Reel Specifications for the CONMHF1-SMD Connector



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