

Product Brief



ANT-8/9-FPC-UFL-100

Flexible Embedded LPWA 868/915 MHz Antenna

The 8/9-FPC antenna is a flexible embedded multiband antenna designed for use in 868 MHz and 915 MHz frequency bands for low-power, wide-area (LPWA) applications such as LoRaWAN®, Sigfox® and WiFi HaLow™ as well as other ISM and remote control applications.

The 8/9-FPC provides a ground plane independent dipole embedded antenna solution comparable in performance to an external antenna. The 8/9-FPC's flexibility and adhesive backing makes it easy to mount in unique and custom enclosures, while enabling an environmentally sealed enclosure and protection from tampering or accidental antenna damage.

Connection is made to the radio via a 100 mm long, 1.13 mm coaxial cable terminated in a U.FL-type plug (female socket).



Features

- Performance at 902 MHz to 930 MHz
 - VSWR: ≤ 1.6
 - Peak Gain: -7.4 dBi
 - Efficiency: 19%
- Ground plane independent dipole antenna
- Compact, low-profile
 - 39.0 mm x 15.0 mm x 0.2 mm
- U.FL-type plug (female socket) Compatible with MHF1, AMC, UMCC
- Flexible to fit in challenging enclosures
- Adhesive backing permanently adheres to non-metal enclosures using 3M 300LSE™ adhesive

Applications

- Low-power, wide-area (LPWA) applications
 - LoRaWAN®
 - Sigfox®
 - WiFi HaLow™ (802.11ah)
- Remote control, monitoring and sensing
- Internet of Things (IoT) devices
- ISM applications

Ordering Information

Part Number	Description
ANT-8/9-FPC-UFL-100	LPWA antenna with 100 mm of 1.13 mm coaxial cable and U.FL-type plug (female socket)

Available from Linx Technologies and select distributors and representatives.

Electrical Specifications

ANT-8/9-FPC-UFL	868 MHz	915 MHz
Frequency Range	862 MHz to 876 MHz	902 MHz to 930 MHz
VSWR (max.)	2.0	1.6
Peak Gain (dBi)	-3.2	-3.0
Average Gain (dBi)	-8.4	-7.4
Efficiency (%)	15	19
Polarization	Linear	
Radiation	Omnidirectional	
Max Power	2 W	
Wavelength	1/2-wave	
Electrical Type	Dipole	
Impedance	50 Ω	
Connection	U.FL-type plug (female socket) on 100 mm (3.94 in) of 1.13 mm coaxial cable.	
Weight	0.6 g (0.02 oz)	
Dimensions	39.0 mm x 15.0 mm x 0.2 mm (1.54 in x 0.59 in x 0.01 in)	
Operating Temp. Range	-40 °C to +85 °C	

VSWR

Figure 1 provides the voltage standing wave ratio (VSWR) across the antenna bandwidth. VSWR describes the power reflected from the antenna back to the radio. A lower VSWR value indicates better antenna performance at a given frequency. Reflected power is also shown on the right-side vertical axis as a gauge of the percentage of transmitter power reflected back from the antenna.

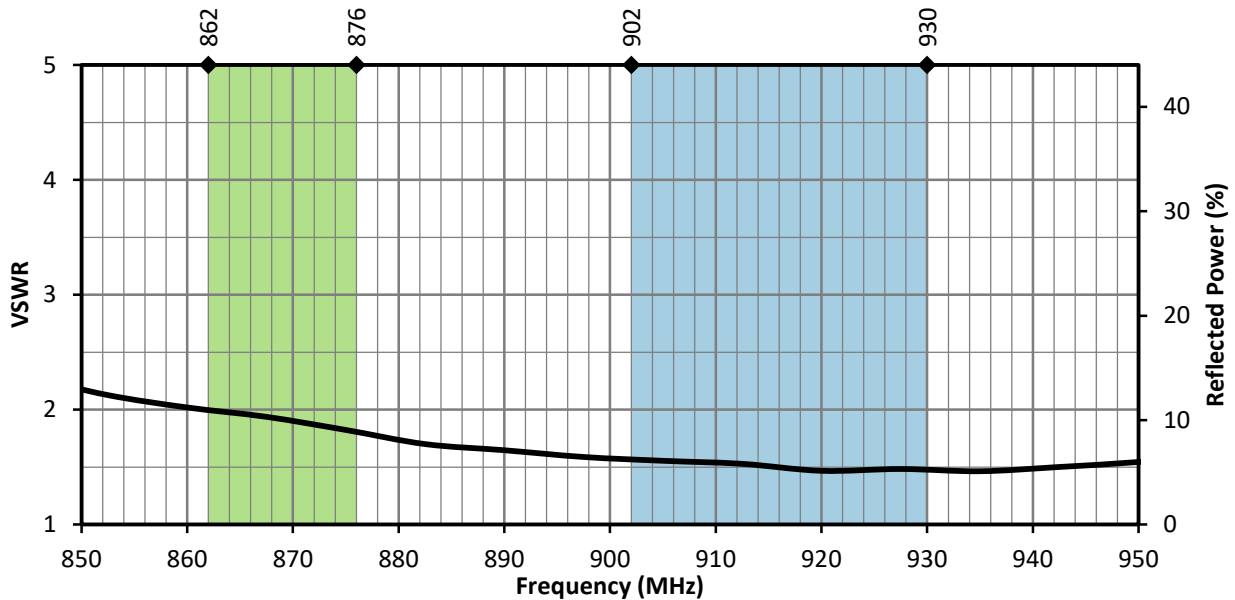


Figure 1. 8/9-FPC VSWR with Frequency Band Highlights

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