

## Product Brief



### ANT-W63-FPC2-UFL-100 Flexible Embedded WiFi 6 Antenna

The Linx W63-FPC2 antenna is a flexible embedded multiband antenna offering excellent performance for WiFi 6E applications in the 6 GHz band (5.925 GHz to 7.125 GHz) plus 2.4 GHz and 5 GHz WiFi/WLAN for WiFi 5 and WiFi 6 solutions.

The W63-FPC2 provides a ground plane independent dipole embedded antenna solution comparable in performance to an external antenna. The flexibility and adhesive backing makes the W63-FPC2 antenna 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 (3.94 in) long, 1.13 mm coaxial cable terminated in a U.FL-type plug (female socket) connector.



#### Features

- 2.4 GHz, 5 GHz and 6 GHz WiFi/WLAN bands
- Ground plane independent dipole antenna
- Compact, low-profile
  - 42.0 mm x 12.0 mm x 0.2 mm
- U.FL-type plug (female socket) Compatible with MHF1, AMC, UMCC
- Adhesive backing permanently adheres to non-metal enclosures using 3M 467MP™/200MP adhesive
- Flexible to fit in challenging enclosures

#### Applications

- Complete WiFi/WLAN coverage
  - 802.11b/g
  - WiFi 4 (802.11n)
  - WiFi 5 (802.11ac)
  - WiFi 6 (802.11ax)
  - WiFi 6E (802.11ax)
- U-NII bands 1-4 and 5-8 (proposed)
- 2.4 GHz ISM applications
  - Bluetooth®
  - ZigBee®
- Internet of Things (IoT) devices
- Smart Home networking
- Sensing and remote monitoring

#### Ordering Information

| Part Number          | Description   |
|----------------------|---|
| ANT-W63-FPC2-UFL-100 | 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-W63-FPC2-UFL      | ISM/WiFi   | U-NII 1-4            | U-NII 5-8*           |
|-----------------------|--|----------------------|----------------------|
| Frequency Range       | 2400 MHz to 2485 MHz   | 5150 MHz to 5850 MHz | 5925 MHz to 7125 MHz |
| VSWR (max.)           | 2.4  | 1.4                  | 2.4                  |
| Peak Gain (dBi)       | 3.2  | 7.7                  | 8.4                  |
| Average Gain (dBi)    | -2.3   | -1.6                 | -2.9                 |
| Efficiency (%)        | 61   | 72                   | 57                   |
| Polarization          | Linear   |                      |                      |
| Radiation             | Omnidirectional  |                      |                      |
| Max Power             | 2 W  |                      |                      |
| Wavelength            | 1/2-wave   |                      |                      |
| Electrical Type       | Dipole   |                      |                      |
| Impedance             | 50 $\Omega$  |                      |                      |
| 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            | 42.0 mm x 12.0 mm x 0.2 mm (1.65 in x 0.47 in x 0.01 in)                     |                      |                      |
| Operating Temp. Range | -40 °C to +80 °C   |                      |                      |

\*Proposed

## 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.

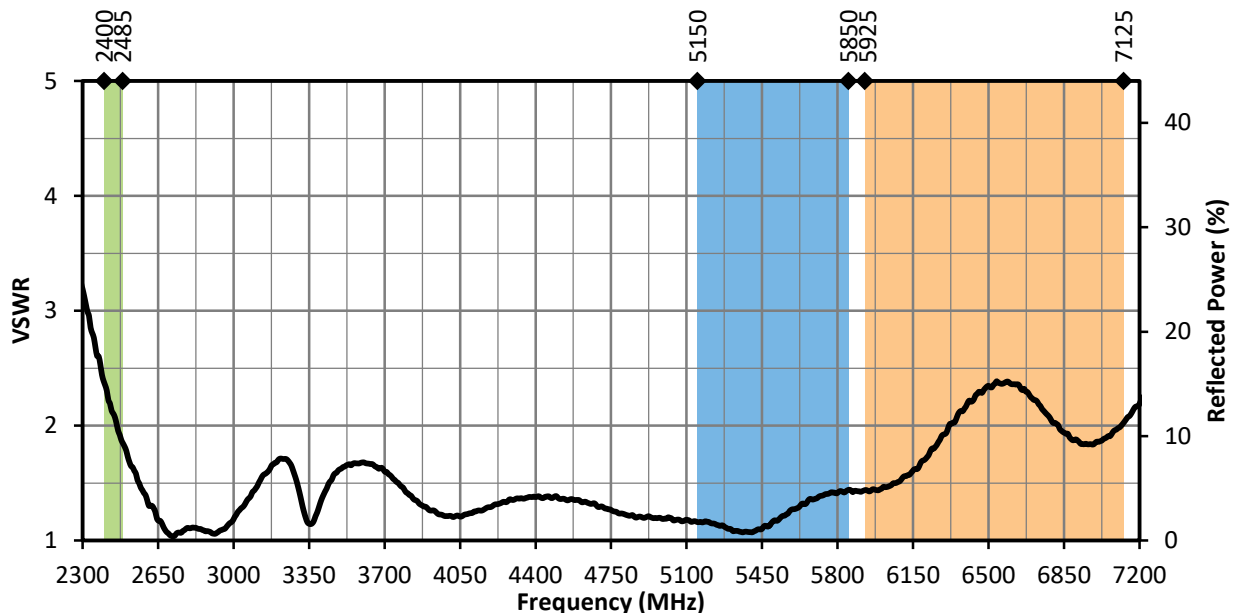


Figure 1. W63-FPC2 VSWR with Frequency Band Highlights

Website: <http://linxtechnologies.com> • Phone: +1 (541) 471-6256 • E-MAIL: [info@linxtechnologies.com](mailto:info@linxtechnologies.com) • Linx Offices: 159 Ort Lane, Merlin, OR, US 97532

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