

Product Brief

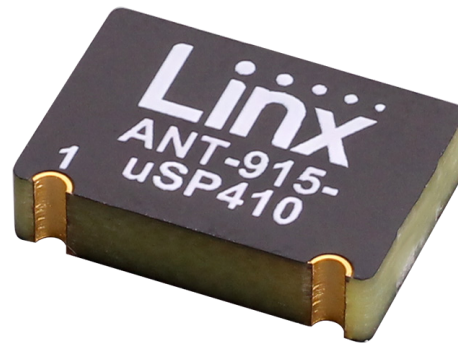


microSplatch™ ANT-915-uSP410 Embedded 915 MHz LPWA Antenna

The microSplatch™ uSP410 915 MHz antenna is a surface-mount monopole antenna for embedded Sub-1 GHz and low-power, wide-area (LPWA) applications including LoRaWAN®, remote controls, and ISM applications in the 902 MHz to 928 MHz band.

uSP410 series monopole antennas use a grounded-line technique to achieve outstanding performance in a compact surface-mount package. The uSP410 series exhibits low proximity effect, making it a good embedded antenna choice for devices typically subject to nearby interferers.

uSP410 series antennas are available in tape and reel packaging and are designed for reflow-solder mounting directly to a printed circuit board for high-volume applications.



Features

- Performance at 902 MHz to 928 MHz
 - VSWR: ≤ 2.7
 - Peak Gain: 0.9 dBi
 - Efficiency: 27%
- Omnidirectional radiation pattern
- Compact package
 - 13.2 mm x 9.1 mm x 2.9 mm
- Direct surface-mount PCB attachment
- Reflow- or hand-solder assembly
- Resistant to proximity effect from nearby interferers
- Excellent performance with small ground plane (38 mm x 84 mm)

Applications

- Low-power, wide-area (LPWA) applications
 - LoRaWAN®
 - Sigfox®
 - WiFi HaLow™
- Remote sensing, monitoring and control
 - Security systems
 - Industrial machinery
- Internet of Things (IoT) devices
- ISM applications
- Smart Home networking
- Hand-held devices

Ordering Information

| Part Number | Description |
|----------------|---------------------------------------------------------------|
| ANT-915-uSP410 | 915 MHz microSplatch antenna on tape and reel (1000 per reel) |
| AEK-915-uSP410 | 915 MHz microSplatch antenna evaluation kit |

Available from Linix Technologies and select distributors and representatives.

Electrical Specifications

| Frequency Range | 902 MHz to 928 MHz |
|-----------------------------|--------------------------------------------------------------------|
| VSWR (max) | 2.7 |
| Peak Gain (dBi) | 0.9 |
| Average Gain (dBi) | -5.8 |
| Efficiency (%) | 27 |
| Polarization | Linear |
| Radiation | Omnidirectional |
| Max Power | 5 W |
| Wavelength | 1/4-wave |
| Electrical Type | Monopole |
| Impedance | 50 Ω |
| Connection | Surface-mount |
| Weight | 0.6 g (0.02 oz) |
| Dimensions | 13.2 mm x 9.1 mm x 2.9 mm (0.52 in x 0.36 in x 0.11 in) |
| Operating Temperature Range | -40 °C to +130 °C |
| ESD Sensitivity | NOT ESD sensitive. As a best practice, Linx may use ESD packaging. |

Electrical specifications and plots measured with a 38 mm x 84 mm (1.5 in x 3.3 in) reference ground plane.

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.

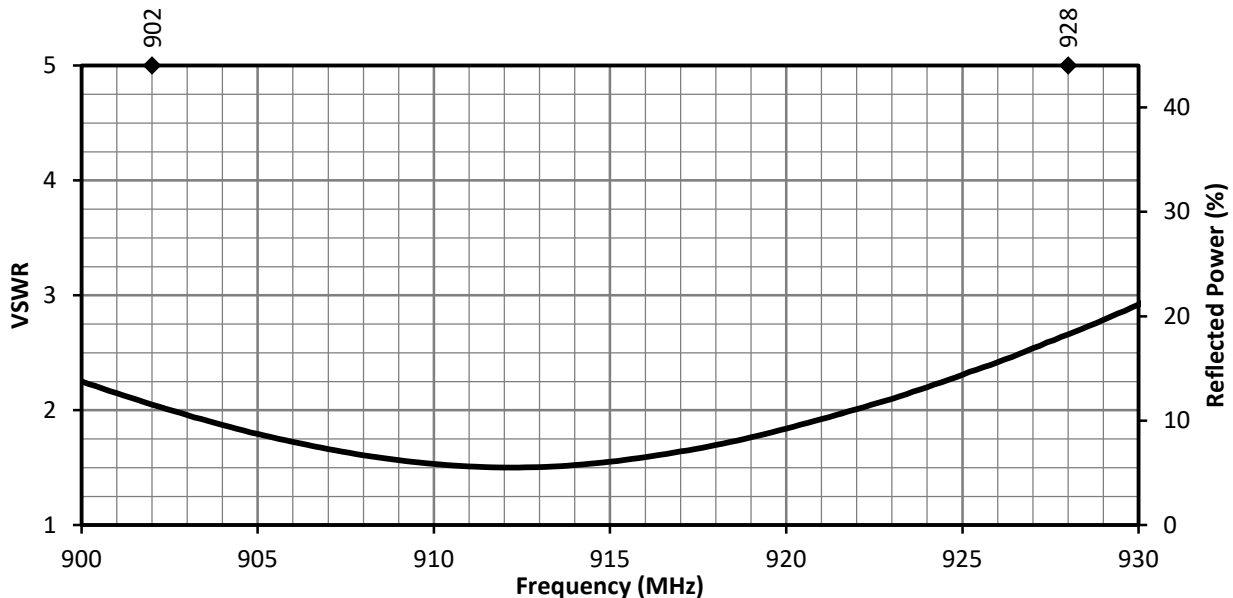


Figure 1. ANT-915-uSP410 VSWR

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