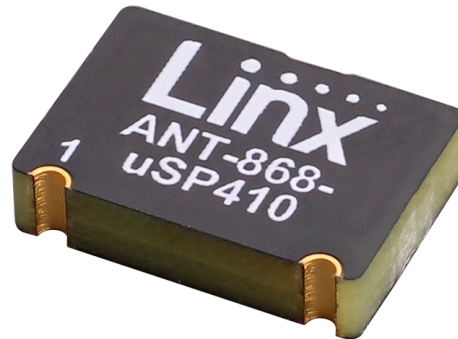


microSplatch™ ANT-868-uSP410 Embedded 868 MHz LPWA Antenna

The microSplatch™ uSP410 868 MHz antenna is a surface-mount monopole antenna for embedded Sub-1 GHz and low-power, wide-area (LPWA) applications including LoRaWAN®, SigFox®, remote controls, and ISM applications in the 862 MHz to 876 MHz range.

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 862 MHz to 876 MHz
 - VSWR: ≤ 2.1
- 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
- Gateways

Ordering Information

Part Number	Description
ANT-868-uSP410	868 MHz microSplatch antenna on tape and reel (1000 per reel)
AEK-868-uSP410	868 MHz microSplatch antenna evaluation kit

Available from Linix Technologies and select distributors and representatives.

Electrical Specifications

Frequency Range	862 MHz to 876 MHz
VSWR (max)	2.1
Peak Gain (dBi)	0.7
Average Gain (dBi)	-7.1
Efficiency (%)	20
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.

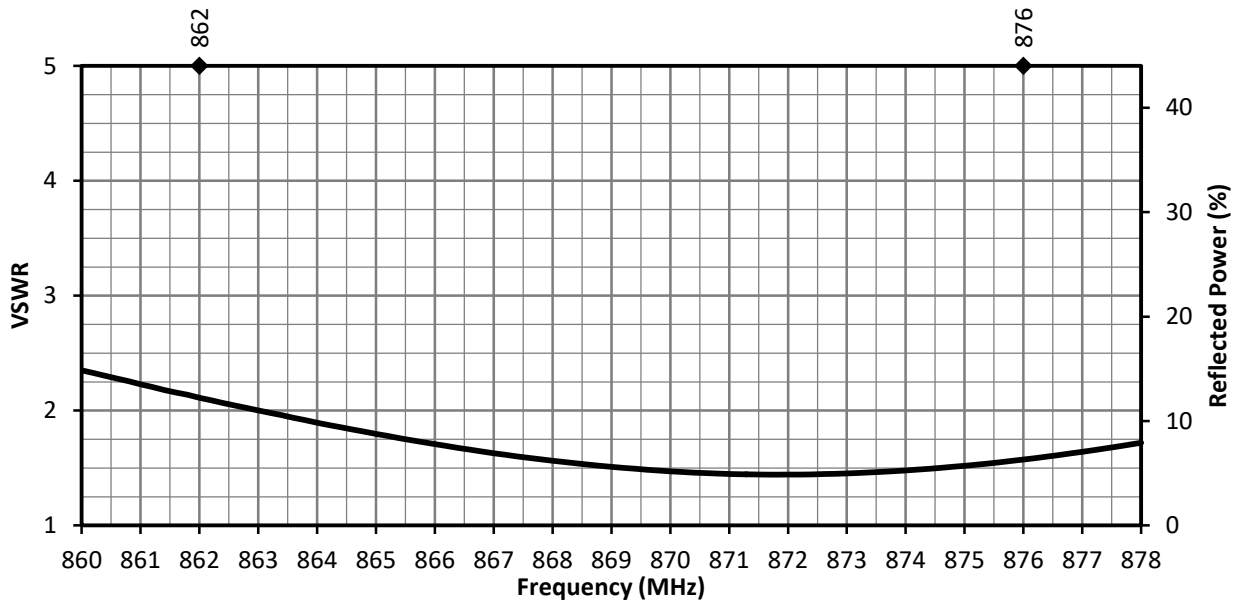


Figure 1. ANT-868-uSP410 VSWR

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