



ELECTRONICS

Unlicensed Band Antenna Gain

Model: SC-55C, SCG16

FCC ID: A3LSMF936JPN

- Passive Gain

| BT / WiFi1 | |
|----------------|----------------|
| Frequency(MHz) | Peak Gain(dBi) |
| 2400 | -3.00 |
| 2412 | -2.58 |
| 2437 | -2.35 |
| 2442 | -2.09 |
| 2462 | -2.05 |
| 2472 | -2.12 |
| 2484 | -2.35 |
| 2500 | -2.29 |
| 5150 | -4.17 |
| 5200 | -4.20 |
| 5300 | -4.24 |
| 5400 | -3.69 |
| 5500 | -4.98 |
| 5600 | -4.69 |
| 5700 | -3.65 |
| 5850 | -3.88 |
| 5950 | -3.83 |
| 6350 | -7.21 |
| 6700 | -8.90 |
| 7100 | -9.40 |

| BT / WiFi2 | |
|----------------|----------------|
| Frequency(MHz) | Peak Gain(dBi) |
| 2400 | -8.40 |
| 2412 | -7.46 |
| 2437 | -5.98 |
| 2442 | -5.68 |
| 2462 | -5.55 |
| 2472 | -5.25 |
| 2484 | -5.15 |
| 2500 | -5.39 |
| 5150 | -3.45 |
| 5200 | -3.74 |
| 5300 | -3.62 |
| 5400 | -3.86 |
| 5500 | -4.86 |
| 5600 | -3.96 |
| 5700 | -3.99 |
| 5850 | -3.64 |
| 5950 | -3.42 |
| 6350 | -10.50 |
| 6700 | -8.64 |
| 7100 | -11.46 |

A3LSMF936JPN UWB Antenna Gain

| Q4_Metal Antenna | | Frequency | Peak gain (dBi) |
|------------------|-----|-----------|-----------------|
| NA | CH5 | 6.25GHz | -3.8 |
| | | 6.5GHz | -2.4 |
| | | 6.75GHz | -4.9 |
| | CH9 | 7.75GHz | -3.9 |
| | | 8GHz | -4.3 |
| | | 8.25GHz | -5.4 |

| Q4_Patch Tx | | Frequency | Peak gain (dBi) |
|-------------|-----|-----------|-----------------|
| NA | CH9 | 7.75GHz | -6.6 |
| | | 8GHz | -2.2 |
| | | 8.25GHz | -5.5 |

1. Measurement Information

- Measurement : Samsung Electronics Ant lab
- Calibration Due Date : 2023-01-31
- Equipment : RTS60 Chamber, ZNB 8 Network Analyzer

2. Return Loss & VSWR Test

The VSWR measurement of antennas assembled into a fully operating A3LSMF936JPN is measured on the Network Analyzer. The handset is set up with a 50 Ohm coaxial cable connected to the 50 Ohm point. Calibration is done at the end of the 50 Ohm coaxial cable connection. The other end of the 50 Ohm coaxial cable is connected to a network analyzer. The handset is positioned on a non-conductive table for free space measurements.

Samsung Antenna Lab has a system that can measure VSWR using RTS60 chamber and ZNB8 network analyzer. In order to measure the VSWR of each antenna, the antenna lab connects the coaxial cable to the point in contact with the antenna on the main board. The VSWR is measured through the coaxial cable connected in the set. At this time, the A3LSMF936JPN is assembled in the same state as the user environment.

3. Radiation Pattern Test

Antennas tested for Gain and Efficiency must be assembled into the enclosure and tested in the fully assembled and operating A3LSMF936JPN. The antenna is tested in free space in the anechoic chamber in the H, E1 and E2 Planes.

4. Test Method(Manufacturing)

All measurements are done with A3LSMF936JPN fully assembled. Measure in consideration of the customer's usage environment. Use a fully shielded chamber environment to prevent any noise-induced errors. Typically, the electrical properties of the antenna are measured using a jig that can hold the set.