

LTECH

LTECH Technology Co., Ltd.

RF Antenna Specification

Antenna Model: S-Type Antenna

Date: 2026.2.1

1. Drawing or Product Image

1.1 Outline Drawing

This section presents the outline drawing of the S-Type antenna together with the drawing title block, key dimensions and tolerances, as shown in the original drawing sheet (Figure 1).

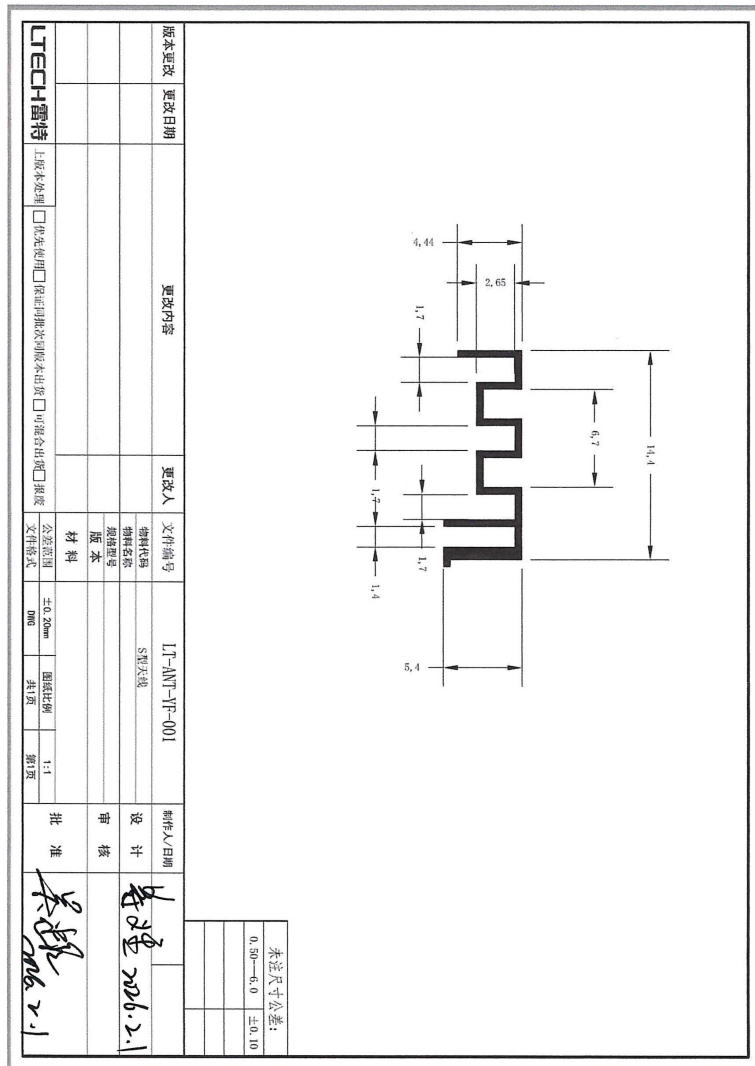


Figure 1 - S-Type Antenna Outline Drawing (original drawing sheet)

1.2 Drawing / Title Block Information

The information recorded in the drawing title block is summarized in Table 1. Fields left blank on the original drawing are marked with "-".

Item	Information
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Item	Information
Document No. / Material Code	LT-ANT-YF-001
Material Name	S-Type Antenna
Model	-
Version	-
Material	-
General Tolerance	±0.20 mm
Undimensioned Tolerance	0.50-6.0 mm: ±0.10 mm
File Format	DWG
Drawing Scale	1:1
Sheet	1 of 1
Revision History	None recorded

1.3 Key Dimensions

The drawing (Figure 1) marks the following key dimensions (in mm): 14.4, 6.7, 5.4, 4.4, 2.65, 1.7 and 1.4.

2. RF Performance Test Report

2.1 Test Conditions

RF measurements were performed with a vector network analyzer over a swept frequency range of 1.45 GHz to 3.5 GHz, with a source power of -10 dBm and an IF bandwidth of 10 kHz. Calibration: TOSM (Through-Open-Short-Match), ports P1/P2. Test date: 05.06.2026 (as displayed on the instrument).

2.2 RF Performance Parameters

The RF performance parameters and measured values are summarized in Table 2. M1, M2 and M3 denote the marker points at 2.400000 GHz, 2.450000 GHz and 2.483500 GHz respectively.

Parameter	Test Parameter / Measured Value
Gain	≤ 1.5 dBi
S11 (Return Loss)	M1 @ 2.400000 GHz: -9.0091 dB; M2 @ 2.450000 GHz: -10.9187 dB; M3 @ 2.483500 GHz: -8.2191 dB
Input Impedance (Smith Chart)	M1 @ 2.400000 GHz: 51.199 + j39.971 Ω (2.650658 nH); M2 @ 2.450000 GHz: 87.369 + j12.533 Ω (814.156337 pH); M3 @ 2.483500 GHz: 77.406 - j43.794 Ω (1.463331 pF)

Parameter	Test Parameter / Measured Value
VSWR	M1 @ 2.400000 GHz: 2.167; M2 @ 2.450000 GHz: 1.776; M3 @ 2.483500 GHz: 2.199
Radiation Pattern	See Figure 5 (3D radiation pattern; no numerical specification given in the original report)

2.3 Measurement Plots

The original measurement plots are reproduced below.

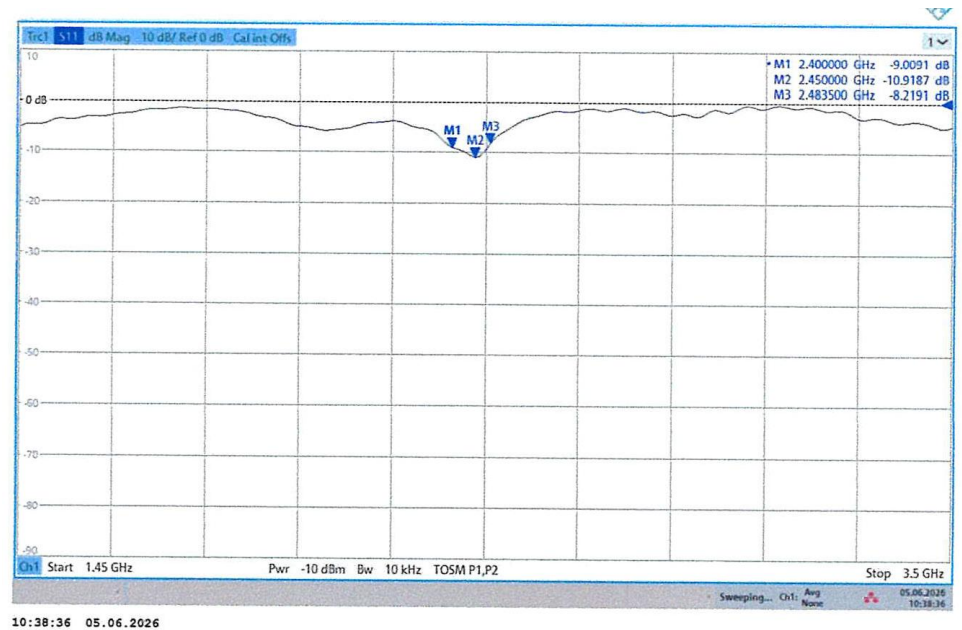


Figure 2 - S11 (Return Loss) vs. Frequency

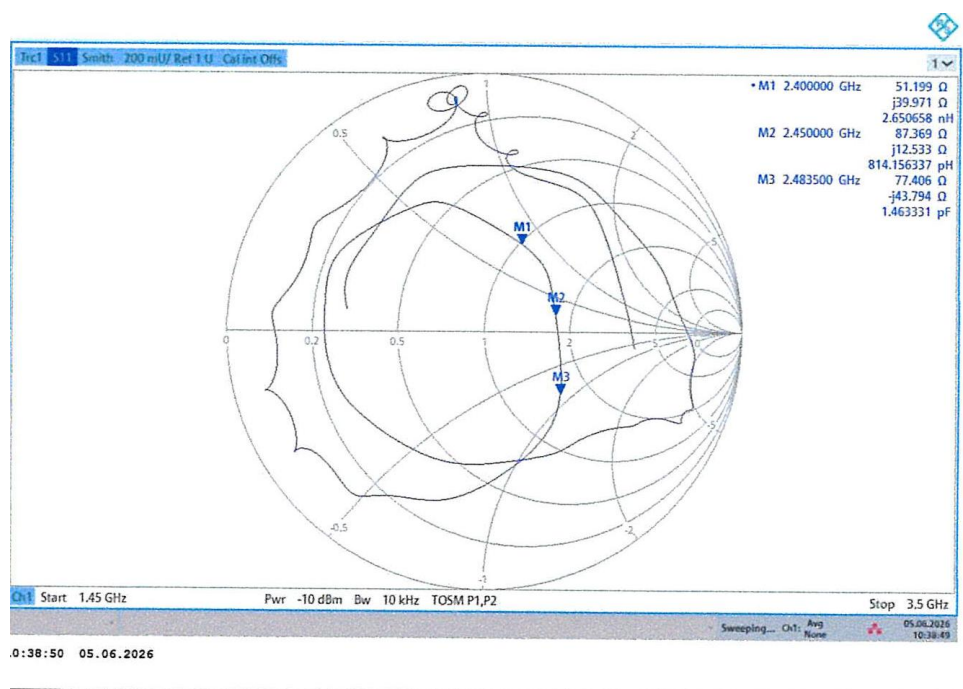


Figure 3 - Smith Chart (Input Impedance)

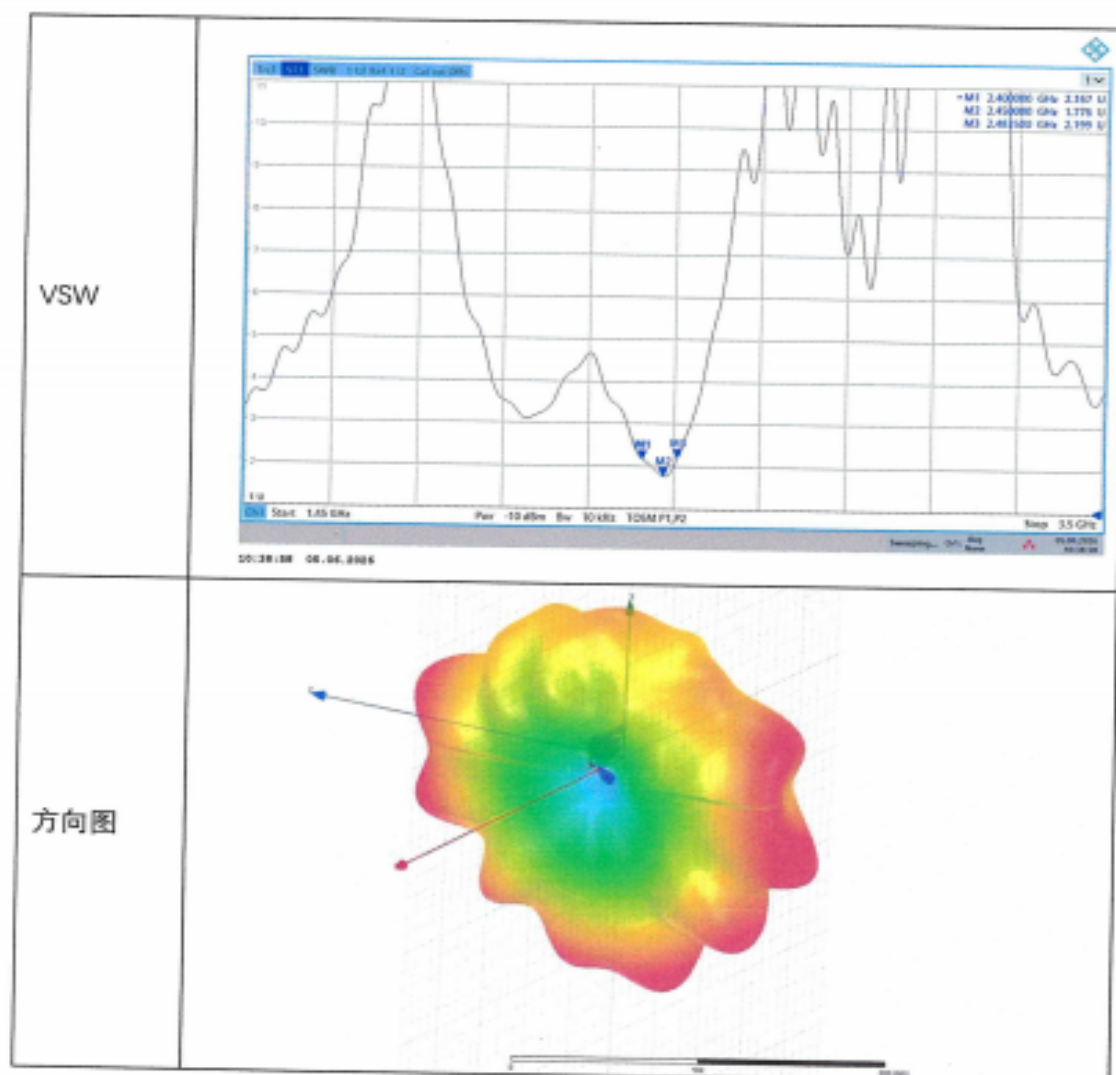


Figure 5 - 3D Radiation Pattern

3. Reliability Test Report

3.1 Test Conditions and Results

Three samples were tested for each test item. All three samples passed each item with a result of OK, and the overall verdict for every item is PASS, as summarized in Table 3.

Test Item	Test Condition	Test Equipment	Sample 1	Sample 2	Sample 3	Verdict
High-Temperature Storage	Exposed to +65 °C for 24 h; tested after 2 h recovery	Temp. & Humidity Chamber	OK	OK	OK	PASS
Low-Temperature Storage	Exposed to -30 °C for 24 h; tested after 2 h recovery	Temp. & Humidity Chamber	OK	OK	OK	PASS
High-Temperature Operation	Powered operation at +60 °C for 24 h	Temp. & Humidity Chamber	OK	OK	OK	PASS
Low-Temperature Operation	Powered operation at -20 °C for 24 h	Temp. & Humidity Chamber	OK	OK	OK	PASS
Salt Spray Test	(5 ± 0.5) % NaCl solution, pH 6.5-7.2, chamber temperature (35 ± 2) °C, 48 h	Salt Spray Test Chamber	OK	OK	OK	PASS