# TEST REPORT

Product Name: 12/13 dBi LPDA Antenna

Product Model: ANT706

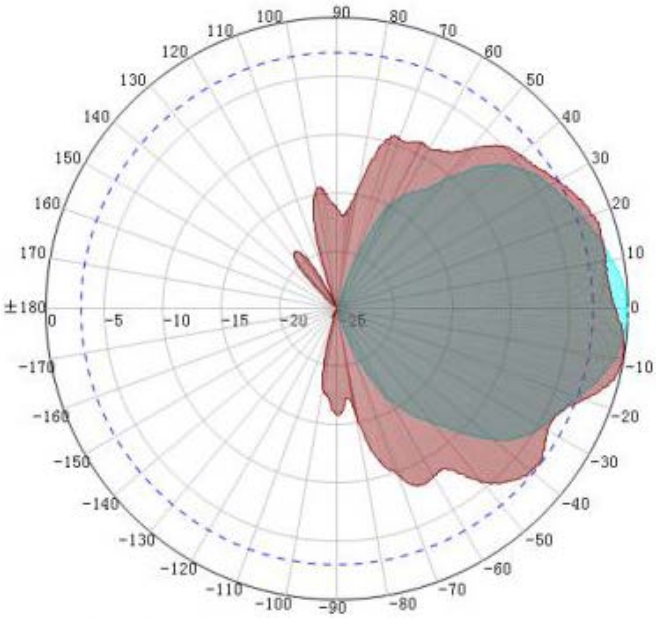
Note: 700-960/1710-2500MHz Gain:12/13 dBi Connector: N-Female

## 1. PRODUCT PICTURE

## 2、PRODUCT TECHNICAL SPECIFICATION

| Electrical Specifications | |
|---|---|
| Frequency Range | 700-960/1710-2500 MHz |
| Gain | 12/ 13dBi |
| VSWR | ≤2.0 |
| Input Impedance | 50Ω |
| Polarization | Vertical or Horizontal |
| Horizontal Half Power Angle | 60°/ 45° |
| Vertical Half Power Angle | 45°/ 35 |
| Front To Back Ratio | ≥ 15dB |
| Max Input Power | 100W |
| **Mechanical Specifications** | |
| Working Temperature | -40°C ~65°C |
| Connector Type | N-K or Customized |
| Cable Length | 0.3m LMR200 or Customized |
| Antenna Weight | 1000g |
| Size | 510x210x65mm |
| Pole Diameter | Φ38~55mm |
| Rated Wind Velocity | 210km/h |
| Antenna | ABS |
| Color | White |

# 3. ANTENNA PATTERN

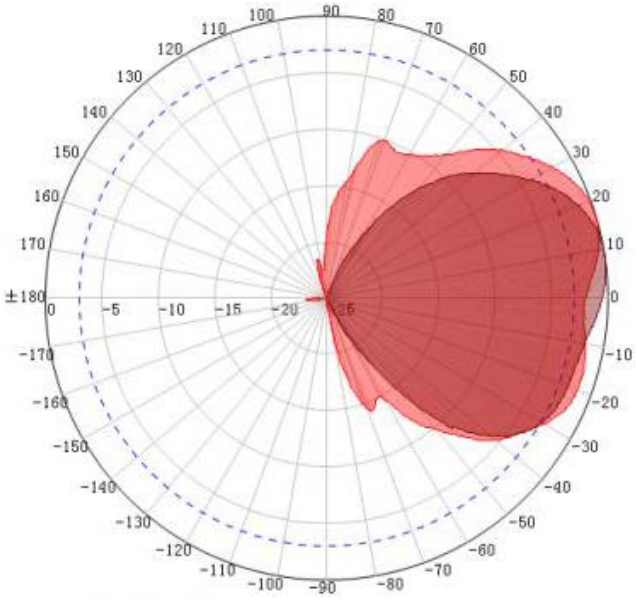



| | |
|---|---|
| Test Frequency | 700MHz |
| Test Plane | Vertical plane |
| Polarisation | Horizontal |
| Peak Level | -37.47dB |
| 3dB Beamwidth | 44.5 |
| F/B Ratio | 27.46dB |

| | |
|---|---|
| Test Frequency | 700MHz |
| Test Plane | Horizontal plane |
| Polarisation | Vertical |
| Peak Level | -38.94dB |
| 3dB Beamwidth | 51.23 |
| F/B Ratio | 27.02dB |

| | |
|---|---|
| Gain | 10.52dBi |

| Frequency | Test | Polarisation | Peak Level | 3dB Beamwidth | Front to Back ratio | XPD (0) | XPD (3dB) | Gain |
|---|---|---|---|---|---|---|---|---|
| 700MHz | Vertical plane | Horizontal | -37.47 | 44.5 | 27.46 | | | |
| 700MHz | Horizontal plane | Vertical | -38.94 | 51.23 | 27.02 | | | 10.52 |

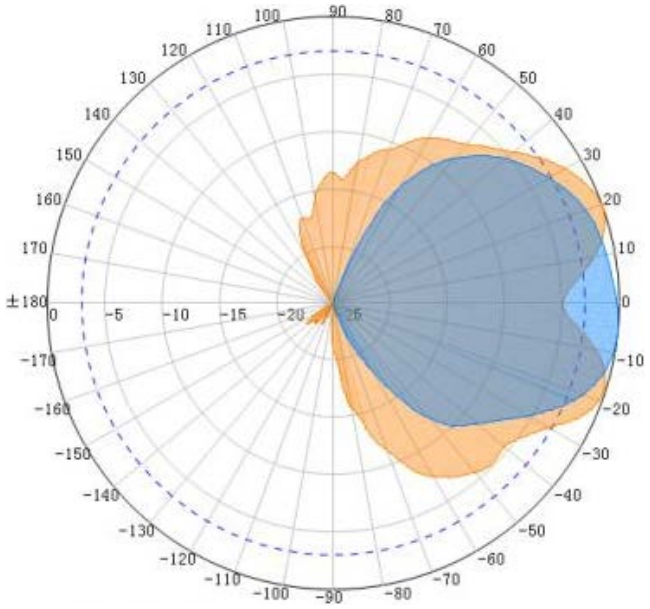



| | |
|---|---|
| Test Frequency | 820MHz |
| Test Plane | Vertical plane |
| Polarisation | Horizontal |
| Peak Level | -37.93dB |
| 3dB Beamwidth | 65.27 |
| F/B Ratio | 23.18dB |

| | |
|---|---|
| Test Frequency | 820MHz |
| Test Plane | Horizontal plane |
| Polarisation | Vertical |
| Peak Level | -36.61dB |
| 3dB Beamwidth | 57.53 |
| F/B Ratio | 25.3dB |

| | |
|---|---|
| Gain | 11.08dBi |

| Frequency | Test | Polarisation | Peak Level | 3dB Beamwidth | Front to Back ratio | XPD (0) | XPD (3dB) | Gain |
|---|---|---|---|---|---|---|---|---|
| 820MHz | Vertical plane | Horizontal | -37.93 | 65.27 | 23.18 | | | |
| 820MHz | Horizontal plane | Vertical | -36.61 | 57.53 | 25.3 | | | 11.08 |

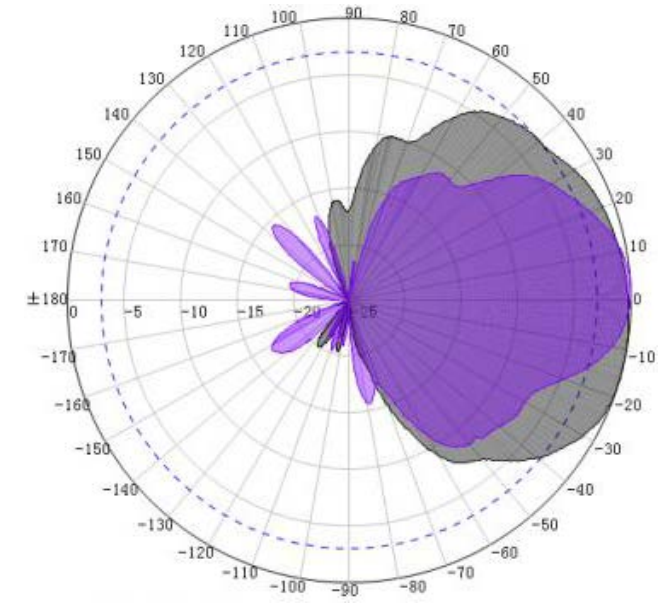



| Test Frequency | 960MHz |
|---|---|
| Test Plane | Vertical plane |
| Polarisation | Horizontal |
| Peak Level | -37.96dB |
| 3dB Beamwidth | 28.46 |
| F/B Ratio | 24.61dB |

| Test Frequency | 960MHz |
|---|---|
| Test Plane | Horizontal plane |
| Polarisation | Vertical |
| Peak Level | -36.67dB |
| 3dB Beamwidth | 52.94 |
| F/B Ratio | 29.82dB |

| Gain | 11.17dBi |
|---|---|

| Frequency | Test | Polarisation | Peak Level | 3dB Beamwidth | Front to Back ratio | XPD (0) | XPD (3dB) | Gain |
|---|---|---|---|---|---|---|---|---|
| 960MHz | Vertical plane | Horizontal | -37.96 | 28.46 | 24.61 | | | |
| 960MHz | Horizontal plane | Vertical | -36.67 | 52.94 | 29.82 | | | 11.17 |

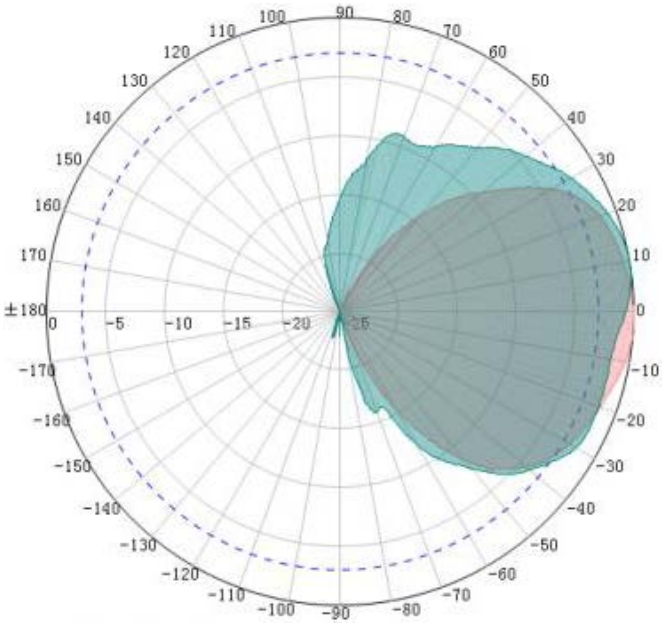



| Test Frequency | 1710MHz |
|---|---|
| Test Plane | Vertical plane |
| Polarisation | Horizontal |
| Peak Level | -32.43dB |
| 3dB Beamwidth | 79.1 |
| F/B Ratio | 23.76dB |

| Test Frequency | 1710MHz |
|---|---|
| Test Plane | Horizontal plane |
| Polarisation | Vertical |
| Peak Level | -37.07dB |
| 3dB Beamwidth | 39.35 |
| F/B Ratio | 17.23dB |

| Gain | 11.95dBi |
|---|---|

| Frequency | Test | Polarisation | Peak Level | 3dB Beamwidth | Front to Back ratio | XPD (0) | XPD (3dB) | Gain |
|---|---|---|---|---|---|---|---|---|
| 1710MHz | Vertical plane | Horizontal | -32.43 | 79.1 | 23.76 | | | |
| 1710MHz | Horizontal plane | Vertical | -37.07 | 39.35 | 17.23 | | | 11.95 |

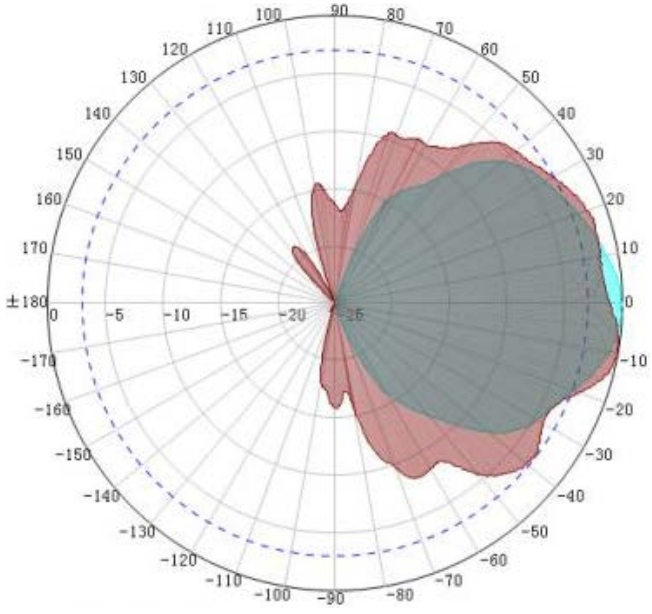



| | |
|---|---|
| Test Frequency | 1920MHz |
| Test Plane | Vertical plane |
| Polarisation | Horizontal |
| Peak Level | -34.35dB |
| 3dB Beamwidth | 61.05 |
| F/B Ratio | 31.26dB |

| | |
|---|---|
| Test Frequency | 1920MHz |
| Test Plane | Horizontal plane |
| Polarisation | Vertical |
| Peak Level | -34.87dB |
| 3dB Beamwidth | 69.29 |
| F/B Ratio | 29.34dB |

| | |
|---|---|
| Gain | 11.99dBi |

| Frequency | Test | Polarisation | Peak Level | 3dB Beamwidth | Front to Back ratio | XPD (0) | XPD (3dB) | Gain |
|---|---|---|---|---|---|---|---|---|
| 1920MHz | Vertical plane | Horizontal | -34.35 | 61.05 | 31.26 | | | |
| 1920MHz | Horizontal plane | Vertical | -34.87 | 69.29 | 29.34 | | | 11.99 |




| | |
|---|---|
| Test Frequency | 2500MHz |
| Test Plane | Vertical plane |
| Polarisation | Horizontal |
| Peak Level | -37.47dB |
| 3dB Beamwidth | 44.5 |
| F/B Ratio | 27.46dB |

| | |
|---|---|
| Test Frequency | 2500MHz |
| Test Plane | Horizontal plane |
| Polarisation | Vertical |
| Peak Level | -38.94dB |
| 3dB Beamwidth | 51.23 |
| F/B Ratio | 27.02dB |

| | |
|---|---|
| Gain | 12.52dBi |

| Frequency | Test | Polarisation | Peak Level | 3dB Beamwidth | Front to Back ratio | XPD (0) | XPD (3dB) | Gain |
|---|---|---|---|---|---|---|---|---|
| 2500MHz | Vertical plane | Horizontal | -37.47 | 44.5 | 27.46 | | | |
| 2500MHz | Horizontal plane | Vertical | -38.94 | 51.23 | 27.02 | | | 12.52 |

## 4. MECHANICAL CHARACTERISTICS

| | | | |
|---|---|---|---|
| 1 | BENDING TEST | Put away from the connector of line on 30 CM and bear 120g, fixed the connector and then test the Swing, swing Angle around each 60 degrees, swing 1000 times for test characteristics. | After 1000 times Swing have no any electrical properties damaged |
| 2 | SRRENGTH TEST | 15 pounds of static load on the wire bottom lasted one minutes | Have no any revealed mechanical and electrical damaged |
| 3 | PULL TEST | Between the Connector and Wire for the Pull Test | Bear 7Kg Stuff have no any revealed mechanical and electrical damaged |
| 4 | VIBRATION TEST | With 1.10 mm and amplitude 33.30 Hz/SEC vibration frequency to the X axis vibration 120 minutes, Y axis vibration 120 minutes, Z axis vibration 240 minutes. | have no any revealed mechanical and electrical damaged |

## 5. DURABILITY TEST

| | | | |
|---|---|---|---|
| 1 | SAIT SPRAY TEST | Salt spray test：Refer to GB1266-86 standard<br>Distilled water：Once Distilled PH6.5~7<br>SPRAY：1.4me80cm²/h<br>Compressed air pressure：1Kgf/ cm²<br>relative degrees：98°<br>Temperature：45°~47°<br>Pressure temperature：35°<br>Test time：96hr | All characteristic range is 30% of the initial value |
| 2 | HEAT TEST | 85+2°C for 96 hours, after keep in normal condition for 30mim the to test | |
| 3 | HUMIDITY TEST | 40+2°C 90-95%RH for 96hours, after keep in normal condition for 30mim the to test | |
| 4 | COLD TEST | -40+2°C for 96hours, after keep in normal condition for 30mim the to test | |