# Antenna

# Specifications

**At Wavelink, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:**

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Email: sales@kswavelink.com

Wavelink Certifications:

Wavelink Partners:

# Catalogue

# 1 Product Description

This wavelink antenna covers 4G LTE bands and is compatible with 3G/2G bands.

# 2 Product Features

Easy to install
High efficiency
Removable

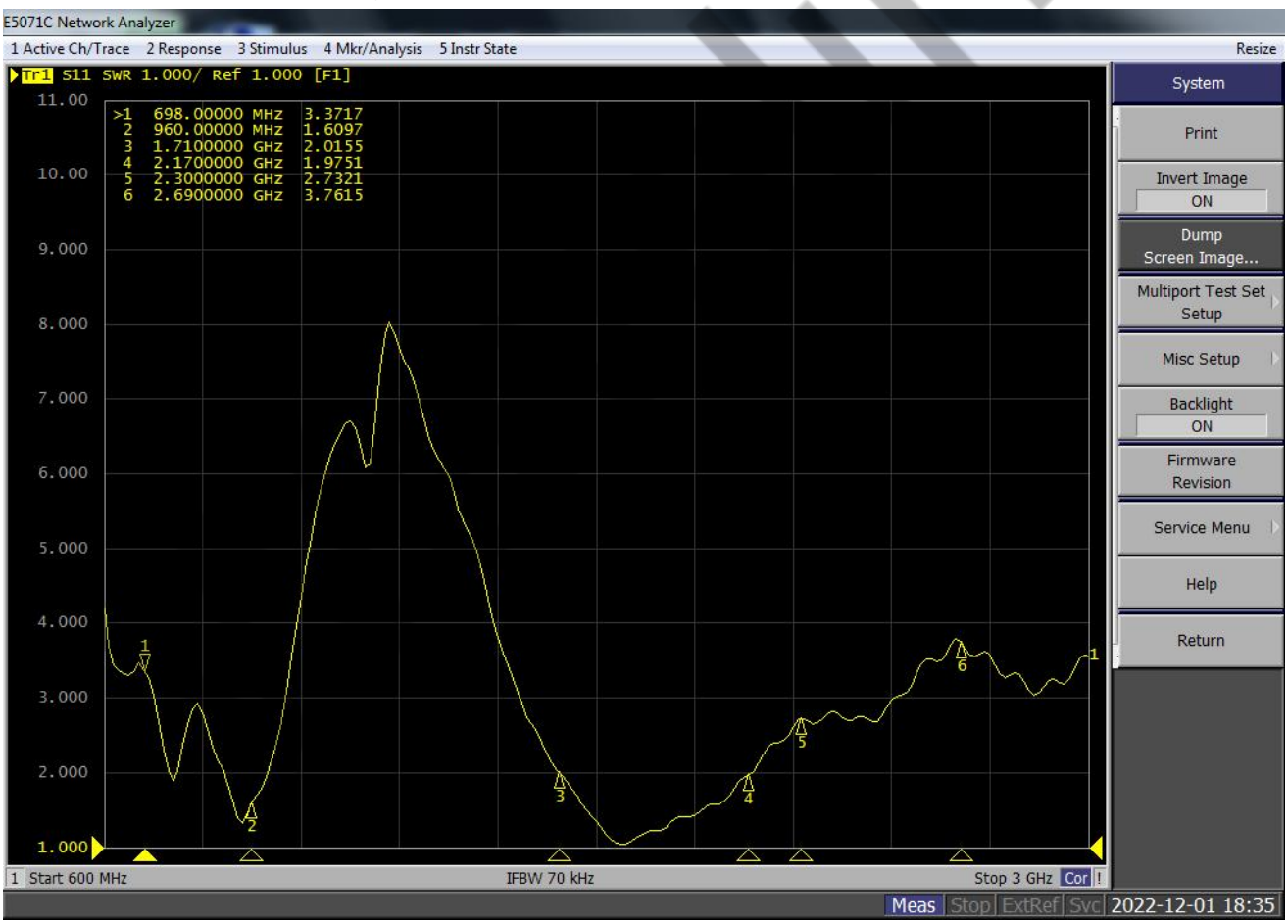
# 3 Product Specifications

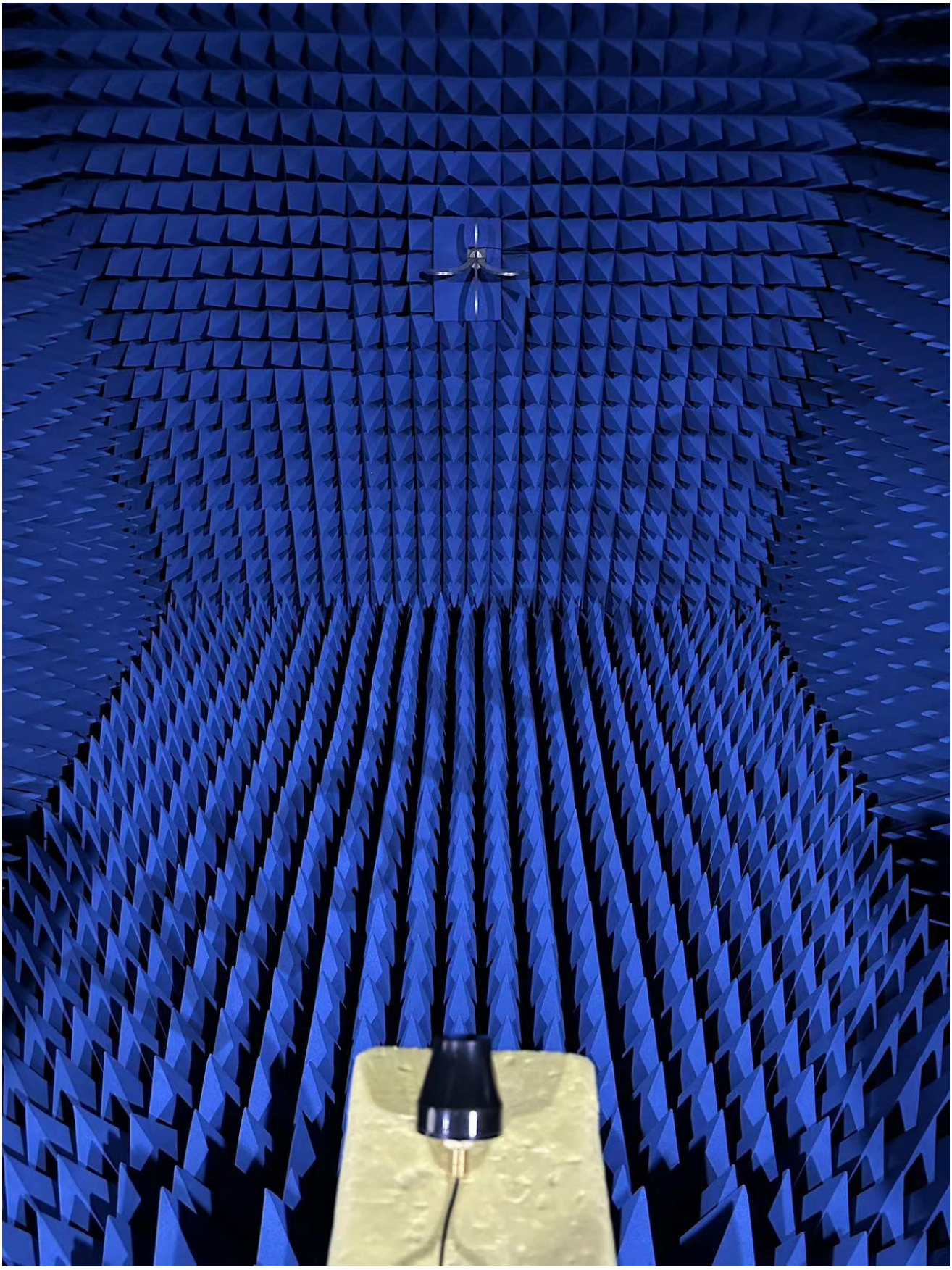
| Passive Electrical Specifications | |
|---|---|
| Frequency Range | 698-960 MHz 1710-2690MHz |
| Input Impedance | 50 Ω |
| VSWR | ≤4 |

| | |
|---|---|
| Gain | ≤3 dBi |
| Polarization Type | Linear |
| **Mechanical Specifications** | |
| Antenna Size | 48mm ×50mm |
| Connector Type | SMA |
| Working Temperature | -40 °C to +85 °C |
| Radome Color | Black |

# 4 Overall Performance

KEYSIGHT VNA Network Analyzer E5071C 100 kHz – 8.5 GHz





| Freq (MHz) | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dBd) | Max (dB) | Min (dB) | Directivity (dBi) | AttH (dB) | AttV (dB) |
|---|---|---|---|---|---|---|---|---|---|
| 690 | 11.33 | -9.46 | -6.37 | -8.52 | -6.37 | -13.76 | 3.09 | 38.69 | 38.84 |
| 700 | 12.38 | -9.07 | -5.85 | -8 | -5.85 | -13.92 | 3.22 | 38.16 | 38.52 |
| 710 | 14.62 | -8.35 | -5.22 | -7.37 | -5.22 | -13.01 | 3.13 | 37.78 | 38.21 |
| 720 | 18.85 | -7.25 | -4.43 | -6.58 | -4.43 | -12.11 | 2.81 | 37.6 | 38.21 |
| 730 | 20.35 | -6.92 | -4.13 | -6.28 | -4.13 | -12.51 | 2.79 | 37.16 | 37.69 |
| 740 | 22.97 | -6.39 | -3.32 | -5.47 | -3.32 | -13.27 | 3.06 | 37.26 | 37.76 |
| 750 | 16.21 | -7.9 | -4.39 | -6.54 | -4.39 | -17.46 | 3.51 | 37.05 | 37.48 |
| 760 | 5.58 | -12.53 | -8.64 | -10.79 | -8.64 | -21.14 | 3.89 | 37 | 37.4 |
| 770 | 15.95 | -7.97 | -5.54 | -7.69 | -5.54 | -12.15 | 2.43 | 36.81 | 37.23 |
| 780 | 24.39 | -6.13 | -3.52 | -5.67 | -3.52 | -11.83 | 2.6 | 36.63 | 37.02 |
| 790 | 31.44 | -5.03 | -2.23 | -4.38 | -2.23 | -11.51 | 2.8 | 36.91 | 37.3 |
| 800 | 33.59 | -4.74 | -2.1 | -4.25 | -2.1 | -11.98 | 2.64 | 36.97 | 37.22 |
| 810 | 39.75 | -4.01 | -1.47 | -3.62 | -1.47 | -11.04 | 2.54 | 37.63 | 37.8 |
| 820 | 35.75 | -4.47 | -1.92 | -4.07 | -1.92 | -12.67 | 2.55 | 37.56 | 37.65 |
| 830 | 39.95 | -3.98 | -1.22 | -3.37 | -1.22 | -11.98 | 2.77 | 38.01 | 38.02 |
| 840 | 36.14 | -4.42 | -1.56 | -3.71 | -1.56 | -12.45 | 2.86 | 37.66 | 37.69 |
| 850 | 37.78 | -4.23 | -1.31 | -3.46 | -1.31 | -13.25 | 2.92 | 37.95 | 37.95 |
| 860 | 41.9 | -3.78 | -0.88 | -3.03 | -0.88 | -13.3 | 2.9 | 38.46 | 38.51 |
| 870 | 39.48 | -4.04 | -1.04 | -3.19 | -1.04 | -14.2 | 3 | 38.56 | 38.57 |
| 880 | 40.73 | -3.9 | -1.02 | -3.17 | -1.02 | -13.66 | 2.89 | 39.13 | 39.13 |
| 890 | 39.84 | -4 | -1.14 | -3.29 | -1.14 | -13.64 | 2.86 | 39.4 | 39.39 |
| 900 | 33.95 | -4.69 | -1.63 | -3.78 | -1.63 | -13.21 | 3.06 | 39.82 | 39.71 |
| 910 | 28.94 | -5.38 | -2.14 | -4.29 | -2.14 | -14.86 | 3.24 | 40.04 | 39.93 |
| 920 | 19.68 | -7.06 | -3.4 | -5.55 | -3.4 | -17.52 | 3.66 | 40.17 | 40.07 |
| 930 | 9.98 | -10.01 | -6.17 | -8.32 | -6.17 | -22.96 | 3.84 | 40.36 | 40.22 |
| 940 | 10.57 | -9.76 | -5.95 | -8.1 | -5.95 | -21.59 | 3.81 | 40.37 | 40.21 |
| 950 | 19.66 | -7.06 | -3.08 | -5.23 | -3.08 | -15.8 | 3.98 | 40.51 | 40.23 |
| 960 | 25.16 | -5.99 | -2.05 | -4.2 | -2.05 | -14.88 | 3.94 | 40.26 | 39.96 |
| 1700 | 30.45 | -5.16 | -0.51 | -2.66 | -0.51 | -17.78 | 4.65 | 42.66 | 42.74 |
| 1710 | 28.36 | -5.47 | -0.71 | -2.86 | -0.71 | -20.37 | 4.76 | 42.41 | 42.5 |
| 1720 | 25.27 | -5.97 | -1.29 | -3.44 | -1.29 | -25.78 | 4.69 | 42.24 | 42.31 |
| 1730 | 22.34 | -6.51 | -1.95 | -4.1 | -1.95 | -26.54 | 4.56 | 42.06 | 42.19 |
| 1740 | 27.18 | -5.66 | -1.23 | -3.38 | -1.23 | -27.89 | 4.42 | 42.71 | 42.9 |
| 1750 | 29.32 | -5.33 | -0.64 | -2.79 | -0.64 | -24.33 | 4.68 | 42.75 | 42.88 |
| 1760 | 31.04 | -5.08 | -0.14 | -2.29 | -0.14 | -21.41 | 4.94 | 42.78 | 42.9 |
| 1770 | 32.43 | -4.89 | 0.26 | -1.89 | 0.26 | -19.19 | 5.15 | 42.99 | 43.01 |
| 1780 | 31.03 | -5.08 | 0.16 | -1.99 | 0.16 | -17.16 | 5.24 | 42.84 | 42.92 |
| 1790 | 31.49 | -5.02 | 0.25 | -1.9 | 0.25 | -16.25 | 5.27 | 42.72 | 42.8 |
| 1800 | 31.64 | -5 | 0.15 | -2 | 0.15 | -16.21 | 5.15 | 42.62 | 42.74 |
| 1810 | 33.7 | -4.72 | 0.15 | -2 | 0.15 | -15.84 | 4.88 | 42.94 | 43.1 |

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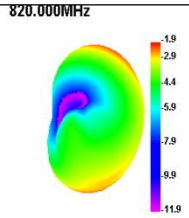
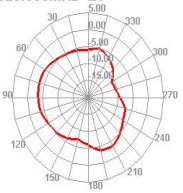
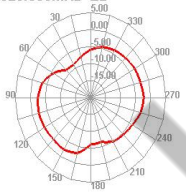
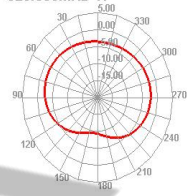
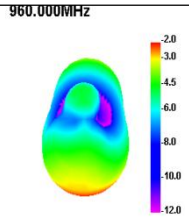
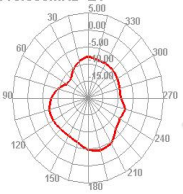
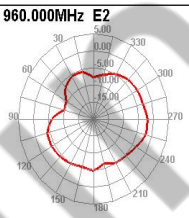
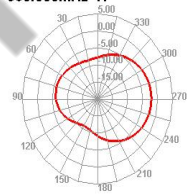
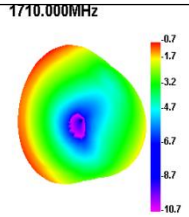
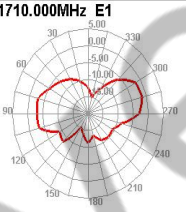
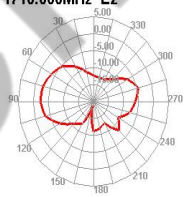
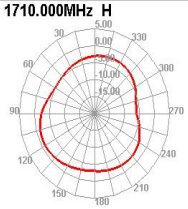
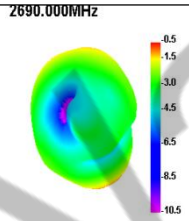
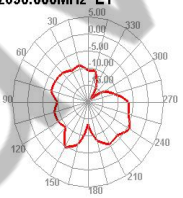
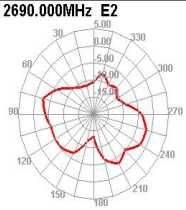
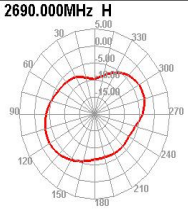
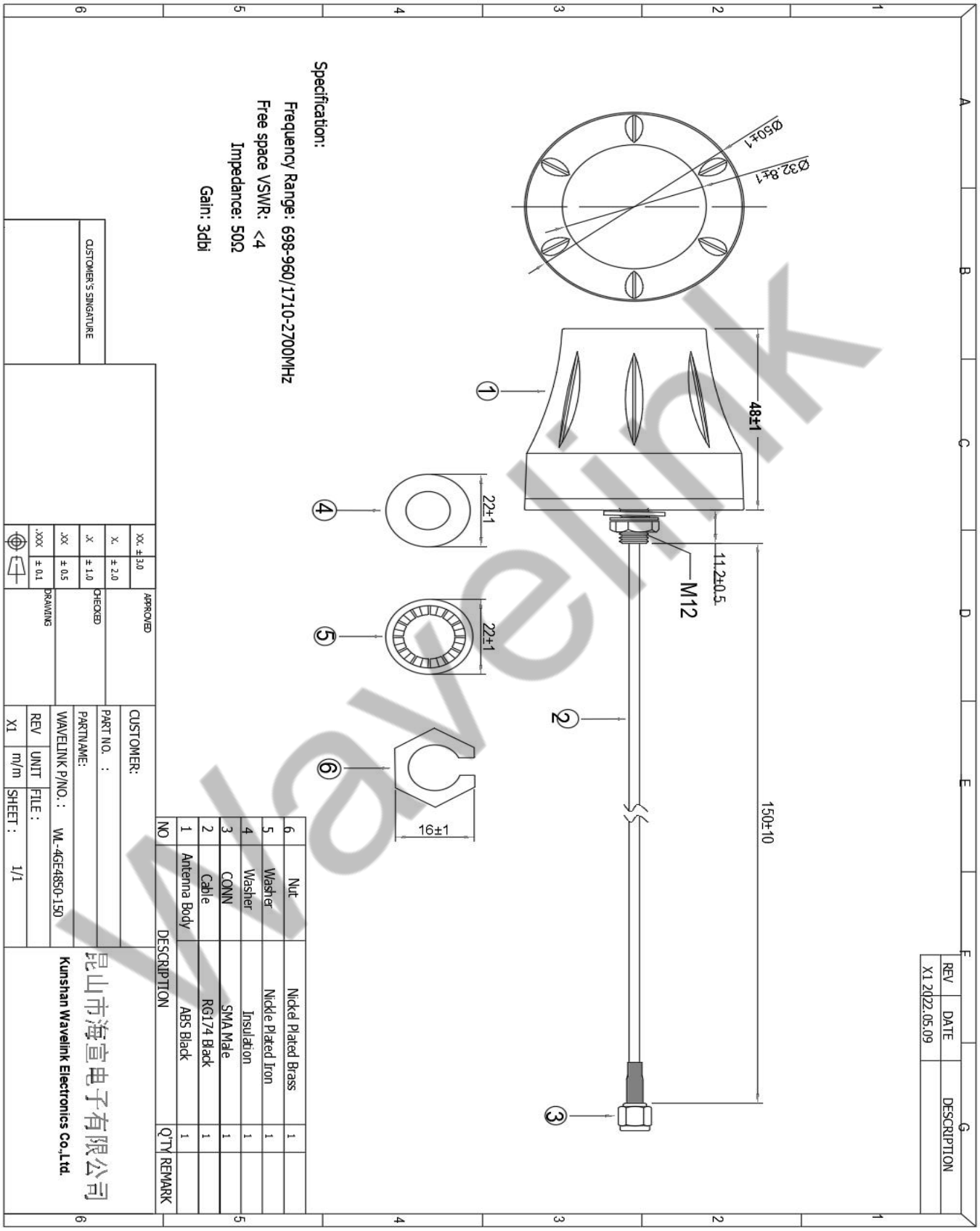
|---|---|---|---|---|---|---|---|---|---|
| 1820 | 30.57 | -5.15 | -0.78 | -2.93 | -0.78 | -15.5 | 4.36 | 42.81 | 42.89 |
| 1830 | 31.14 | -5.07 | -0.58 | -2.73 | -0.58 | -14.08 | 4.49 | 42.95 | 42.99 |
| 1840 | 36.63 | -4.36 | 0.06 | -2.09 | 0.06 | -14.29 | 4.43 | 43.3 | 43.22 |
| 1850 | 38.14 | -4.19 | 0.5 | -1.65 | 0.5 | -15.85 | 4.69 | 43.34 | 43.21 |
| 1860 | 39.89 | -3.99 | 0.64 | -1.51 | 0.64 | -18.85 | 4.63 | 43.55 | 43.42 |
| 1870 | 36.67 | -4.36 | 0.22 | -1.93 | 0.22 | -20.16 | 4.58 | 43.39 | 43.24 |
| 1880 | 36.78 | -4.34 | 0.17 | -1.98 | 0.17 | -19.83 | 4.51 | 43.41 | 43.26 |
| 1890 | 37.16 | -4.3 | 0.35 | -1.8 | 0.35 | -19.37 | 4.65 | 43.39 | 43.23 |
| 1900 | 37.05 | -4.31 | 0.51 | -1.64 | 0.51 | -18.56 | 4.82 | 43.4 | 43.23 |
| 1910 | 37.22 | -4.29 | 0.66 | -1.49 | 0.66 | -18.44 | 4.95 | 43.53 | 43.29 |
| 1920 | 37.86 | -4.22 | 0.87 | -1.28 | 0.87 | -20.24 | 5.08 | 43.68 | 43.56 |
| 1930 | 38 | -4.2 | 0.99 | -1.16 | 0.99 | -20.88 | 5.2 | 43.82 | 43.66 |
| 1940 | 37.3 | -4.28 | 1.01 | -1.14 | 1.01 | -21.15 | 5.29 | 43.64 | 43.54 |
| 1950 | 37.09 | -4.31 | 1.1 | -1.05 | 1.1 | -19.54 | 5.41 | 43.69 | 43.62 |
| 1960 | 36.43 | -4.39 | 1.13 | -1.02 | 1.13 | -21.31 | 5.52 | 43.61 | 43.5 |
| 1970 | 35.45 | -4.5 | 1.15 | -1 | 1.15 | -24.04 | 5.65 | 43.6 | 43.5 |
| 1980 | 35.97 | -4.44 | 1.33 | -0.82 | 1.33 | -24.47 | 5.77 | 43.65 | 43.62 |
| 1990 | 37.04 | -4.31 | 1.58 | -0.57 | 1.58 | -25.95 | 5.9 | 43.8 | 43.76 |
| 2000 | 39.6 | -4.02 | 2 | -0.15 | 2 | -26.83 | 6.02 | 44.07 | 44.09 |
| 2010 | 41.73 | -3.8 | 2.36 | 0.21 | 2.36 | -25.7 | 6.15 | 44.5 | 44.61 |
| 2020 | 42.35 | -3.73 | 2.58 | 0.43 | 2.58 | -23.76 | 6.31 | 44.48 | 44.56 |
| 2030 | 42.65 | -3.7 | 2.68 | 0.53 | 2.68 | -22.25 | 6.38 | 44.6 | 44.76 |
| 2040 | 41.43 | -3.83 | 2.61 | 0.46 | 2.61 | -21.64 | 6.44 | 44.55 | 44.67 |
| 2050 | 41.73 | -3.8 | 2.61 | 0.46 | 2.61 | -20.77 | 6.4 | 44.46 | 44.6 |
| 2060 | 40.41 | -3.94 | 2.4 | 0.25 | 2.4 | -20.38 | 6.34 | 44.56 | 44.67 |
| 2070 | 40.02 | -3.98 | 2.26 | 0.11 | 2.26 | -19.99 | 6.24 | 44.55 | 44.64 |
| 2080 | 38.41 | -4.16 | 1.92 | -0.23 | 1.92 | -20.47 | 6.08 | 44.51 | 44.7 |
| 2090 | 37.41 | -4.27 | 1.62 | -0.53 | 1.62 | -21.25 | 5.89 | 44.47 | 44.66 |
| 2100 | 36.37 | -4.39 | 1.25 | -0.9 | 1.25 | -22.35 | 5.65 | 44.59 | 44.83 |
| 2110 | 37.78 | -4.23 | 1.21 | -0.94 | 1.21 | -22.83 | 5.43 | 44.8 | 44.98 |
| 2120 | 38 | -4.2 | 1.08 | -1.07 | 1.08 | -23.33 | 5.28 | 44.86 | 45.02 |
| 2130 | 37.8 | -4.23 | 0.97 | -1.18 | 0.97 | -24.46 | 5.2 | 44.83 | 44.9 |
| 2140 | 36.79 | -4.34 | 0.78 | -1.37 | 0.78 | -24.98 | 5.13 | 44.8 | 44.9 |
| 2150 | 36.66 | -4.36 | 0.74 | -1.41 | 0.74 | -25.69 | 5.1 | 44.91 | 45 |
| 2160 | 36.32 | -4.4 | 0.58 | -1.57 | 0.58 | -24.39 | 4.98 | 44.83 | 44.89 |
| 2170 | 35.96 | -4.44 | 0.38 | -1.77 | 0.38 | -25.91 | 4.82 | 45.01 | 45.18 |
| 2180 | 36.84 | -4.34 | 0.36 | -1.79 | 0.36 | -26.3 | 4.69 | 45.06 | 45.22 |
| 2190 | 37.23 | -4.29 | 0.41 | -1.74 | 0.41 | -24.78 | 4.71 | 45.13 | 45.29 |
| 2200 | 36.42 | -4.39 | 0.39 | -1.76 | 0.39 | -22.48 | 4.77 | 45.1 | 45.33 |
| 2210 | 37.08 | -4.31 | 0.51 | -1.64 | 0.51 | -19.95 | 4.82 | 45.19 | 45.35 |
| 2220 | 34.62 | -4.61 | 0.32 | -1.83 | 0.32 | -19.75 | 4.92 | 44.99 | 45.17 |
| 2230 | 34.24 | -4.65 | 0.43 | -1.72 | 0.43 | -19.56 | 5.08 | 45.09 | 45.33 |
| 2240 | 34.22 | -4.66 | 0.55 | -1.6 | 0.55 | -20.15 | 5.2 | 45.1 | 45.21 |
| 2250 | 33.82 | -4.71 | 0.54 | -1.61 | 0.54 | -19.16 | 5.25 | 45.14 | 45.27 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2260 | 33.07 | -4.81 | 0.46 | -1.69 | 0.46 | -17.91 | 5.26 | 45.29 | 45.37 |
| 2270 | 33.41 | -4.76 | 0.56 | -1.59 | 0.56 | -16.05 | 5.32 | 45.28 | 45.33 |
| 2280 | 32.8 | -4.84 | 0.6 | -1.55 | 0.6 | -16.01 | 5.45 | 45.38 | 45.47 |
| 2290 | 32.67 | -4.86 | 0.68 | -1.47 | 0.68 | -16.27 | 5.53 | 45.34 | 45.47 |
| 2300 | 32.38 | -4.9 | 0.73 | -1.42 | 0.73 | -16.37 | 5.63 | 45.37 | 45.49 |
| 2310 | 31.32 | -5.04 | 0.54 | -1.61 | 0.54 | -15.94 | 5.59 | 45.4 | 45.49 |
| 2320 | 31.22 | -5.06 | 0.44 | -1.71 | 0.44 | -16.12 | 5.5 | 45.55 | 45.69 |
| 2330 | 32.64 | -4.86 | 0.5 | -1.65 | 0.5 | -16.35 | 5.37 | 45.64 | 45.7 |
| 2340 | 32.77 | -4.85 | 0.54 | -1.61 | 0.54 | -16.55 | 5.39 | 45.87 | 46 |
| 2350 | 32.04 | -4.94 | 0.48 | -1.67 | 0.48 | -19.14 | 5.42 | 46.03 | 46.1 |
| 2360 | 32.66 | -4.86 | 0.49 | -1.66 | 0.49 | -19.28 | 5.35 | 46.03 | 46.21 |
| 2370 | 31.09 | -5.07 | 0.17 | -1.98 | 0.17 | -20.27 | 5.25 | 45.99 | 46.14 |
| 2380 | 33.45 | -4.76 | 0.26 | -1.89 | 0.26 | -18.47 | 5.02 | 46.06 | 46.2 |
| 2390 | 32.05 | -4.94 | 0.02 | -2.13 | 0.02 | -18.32 | 4.97 | 46.15 | 46.41 |
| 2400 | 32.15 | -4.93 | -0.15 | -2.3 | -0.15 | -18.07 | 4.78 | 46.16 | 46.3 |
| 2410 | 31.65 | -5 | -0.37 | -2.52 | -0.37 | -19.22 | 4.63 | 46.26 | 46.45 |
| 2420 | 31.68 | -4.99 | -0.49 | -2.64 | -0.49 | -18.37 | 4.5 | 46.15 | 46.32 |
| 2430 | 31.86 | -4.97 | -0.23 | -2.38 | -0.23 | -18.07 | 4.74 | 46.31 | 46.44 |
| 2440 | 30.79 | -5.12 | -0.09 | -2.24 | -0.09 | -17.2 | 5.02 | 46.52 | 46.56 |
| 2450 | 32.3 | -4.91 | 0.25 | -1.9 | 0.25 | -15.97 | 5.16 | 46.77 | 46.93 |
| 2460 | 33.22 | -4.79 | 0.49 | -1.66 | 0.49 | -14.83 | 5.27 | 46.82 | 46.89 |
| 2470 | 32.55 | -4.87 | 0.48 | -1.67 | 0.48 | -15.63 | 5.35 | 46.54 | 46.65 |
| 2480 | 32.37 | -4.9 | 0.5 | -1.65 | 0.5 | -16.36 | 5.39 | 47.04 | 47.22 |
| 2490 | 30.78 | -5.12 | 0.34 | -1.81 | 0.34 | -16.24 | 5.46 | 46.75 | 46.82 |
| 2500 | 30.44 | -5.17 | 0.4 | -1.75 | 0.4 | -16.72 | 5.56 | 46.91 | 47.08 |
| 2510 | 28.96 | -5.38 | 0.32 | -1.83 | 0.32 | -17.74 | 5.71 | 46.86 | 46.93 |
| 2520 | 28.26 | -5.49 | 0.29 | -1.86 | 0.29 | -18.69 | 5.78 | 46.62 | 46.75 |
| 2530 | 27.46 | -5.61 | 0.02 | -2.13 | 0.02 | -20.03 | 5.63 | 46.77 | 46.81 |
| 2540 | 26.48 | -5.77 | -0.11 | -2.26 | -0.11 | -24.05 | 5.66 | 46.69 | 46.75 |
| 2550 | 28.63 | -5.43 | 0.25 | -1.9 | 0.25 | -29.71 | 5.68 | 46.7 | 46.76 |
| 2560 | 29.31 | -5.33 | 0.08 | -2.07 | 0.08 | -25.1 | 5.41 | 46.78 | 46.83 |
| 2570 | 30.35 | -5.18 | -0.22 | -2.37 | -0.22 | -19.34 | 4.96 | 46.94 | 46.98 |
| 2580 | 27.89 | -5.55 | -0.07 | -2.22 | -0.07 | -18.06 | 5.48 | 46.77 | 46.83 |
| 2590 | 25.24 | -5.98 | -0.11 | -2.26 | -0.11 | -18.05 | 5.87 | 46.97 | 47.02 |
| 2600 | 25.32 | -5.97 | 0.12 | -2.03 | 0.12 | -16.61 | 6.08 | 46.9 | 46.97 |
| 2610 | 26.76 | -5.73 | 0.46 | -1.69 | 0.46 | -16.62 | 6.18 | 47.03 | 47.14 |
| 2620 | 28.62 | -5.43 | 0.76 | -1.39 | 0.76 | -16.86 | 6.19 | 47.28 | 47.32 |
| 2630 | 25.78 | -5.89 | 0.27 | -1.88 | 0.27 | -17.68 | 6.16 | 47.28 | 47.31 |
| 2640 | 26.22 | -5.81 | 0.34 | -1.81 | 0.34 | -18.66 | 6.16 | 47.26 | 47.33 |
| 2650 | 27.42 | -5.62 | 0.49 | -1.66 | 0.49 | -19.69 | 6.11 | 47.34 | 47.45 |
| 2660 | 26.17 | -5.82 | 0.31 | -1.84 | 0.31 | -21.9 | 6.13 | 47.07 | 47.11 |
| 2670 | 24.74 | -6.07 | -0.01 | -2.16 | -0.01 | -23.58 | 6.06 | 47.24 | 47.43 |
| 2680 | 22.78 | -6.42 | -0.53 | -2.68 | -0.53 | -28.81 | 5.9 | 47.43 | 47.5 |
| 2690 | 24.68 | -6.08 | -0.48 | -2.63 | -0.48 | -27.75 | 5.59 | 47.34 | 47.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2700 | 25.18 | -5.99 | -0.65 | -2.8 | -0.65 | -24.57 | 5.34 | 47.58 | 47.8 |

| Frequency | 3D | E1 | E2 | H |
|---|---|---|---|---|
| 820MHz |   |   |   |   |
| 960MHz |   |   |   |   |
| 1710MHz |   |   |   |   |
| 2690MHz |   |   |   |   |

# 5 Product Size



# 6 Others

| DESCRIPTION | SPECIFICATION |
|---|---|
| Temperature /Humidity cycling | 1, The device under test is kept for 30 mins in an environment with a temperature of -40 ℃.<br>2, Kept for 4 Hours in an environment with a temperature of 8cthe conditions are stabilized at room temperature.<br>3, Parts should meet RF spec before and after test.<br>4, No cosmetic problem(No soldering problem;No adhesion problem of glue). |
| Temperature Shock | 1, The device under test at -40 ℃⇔125 ℃ by 100 cycles, Dwell of 30 mins, transition time between Dwell 30 secs (~ 61 mins / cycle) and each item should be measured after exposing them in normal temperature and humidity for 24 h.<br>2, Parts should meet RF spec before and after test.<br>3, No cosmetic problem(No soldering problem; No adhesion problem of glue). |
| High Temperature | 1, Temperature:125℃, time:1008 hours<br>2, There is no substantial obstruction to air flow across and around the samples, and the samples are not touching each other<br>3, Parts should meet RF spec before and after test.<br>4, No cosmetic problem(No soldering problem; No adhesion problem of glue). |
| Salt mist test | 1, The device under test is exposed to a spray of a 5% (by volume) resolution of NACL in water for 2 hours. Thereafter the device under test is left for 1 week in room temperature at a relative humidity of 95%. The cycle is repeated until a total of 2 cycles have been completed. Here after the conditions are stabilized at room temperature.<br>2, Parts should meet RF spec before and after test.<br>3, No visible corrosion. Discoloration accept. |