

## DATASHEET

# Wi-Fi 6E/7 2.4/5/6GHz Antenna ANTS0WF602M01001



## DESCRIPTION

ANT,Wi-Fi-6G,2400-2500MHz,5150-5850MHz,6150-7200MHz,RP-SMA Plug,2-5dBi,188/146x21.6mm,A01-0521618827-A0

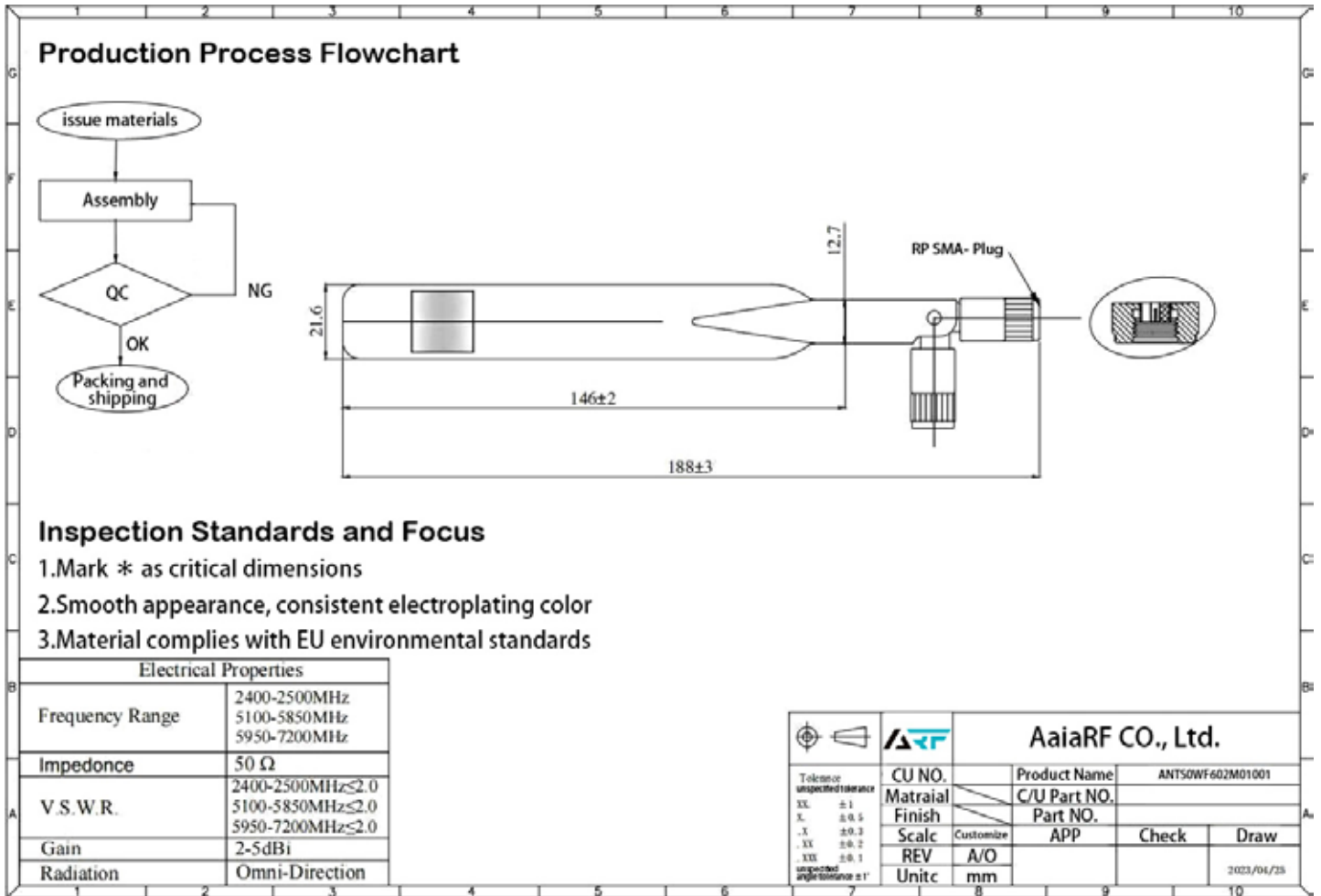
## Electrical Data

|                          |  |
|--------------------------|--|
| Frequency Range          | 2400~2500MHz<br>5150~5850MHz<br>6150~7200MHz                   |
| Gain                     | 2-5dBi   |
| VSWR                     | 2400~2500MHz@≤2.5<br>5150~5850MHz@≤2.5<br>6150~7200MHz@≤4.013° |
| Polarization             | Vertical   |
| Impedance                | 50Ω  |
| Admitted power radiation | 1W   |
| Pattern of Radiation     | Toroidal   |
| Radiation                | Omni   |
| Connector Type           | RP-SMA Plug  |

## Mechanical Data

|                             |                                 |
|-----------------------------|---------------------------------|
| Operation temperature range | -20°C~+85°C                     |
| Storage temperature range   | -20°C~+85°C                     |
| Color                       | Black                           |
| Dimension                   | As diagram                      |
| Weight                      | 11.4 g                          |
| Main Material               | PC/PC+PBT/POM/ Brass/RG316/PCB/ |

## Diagram





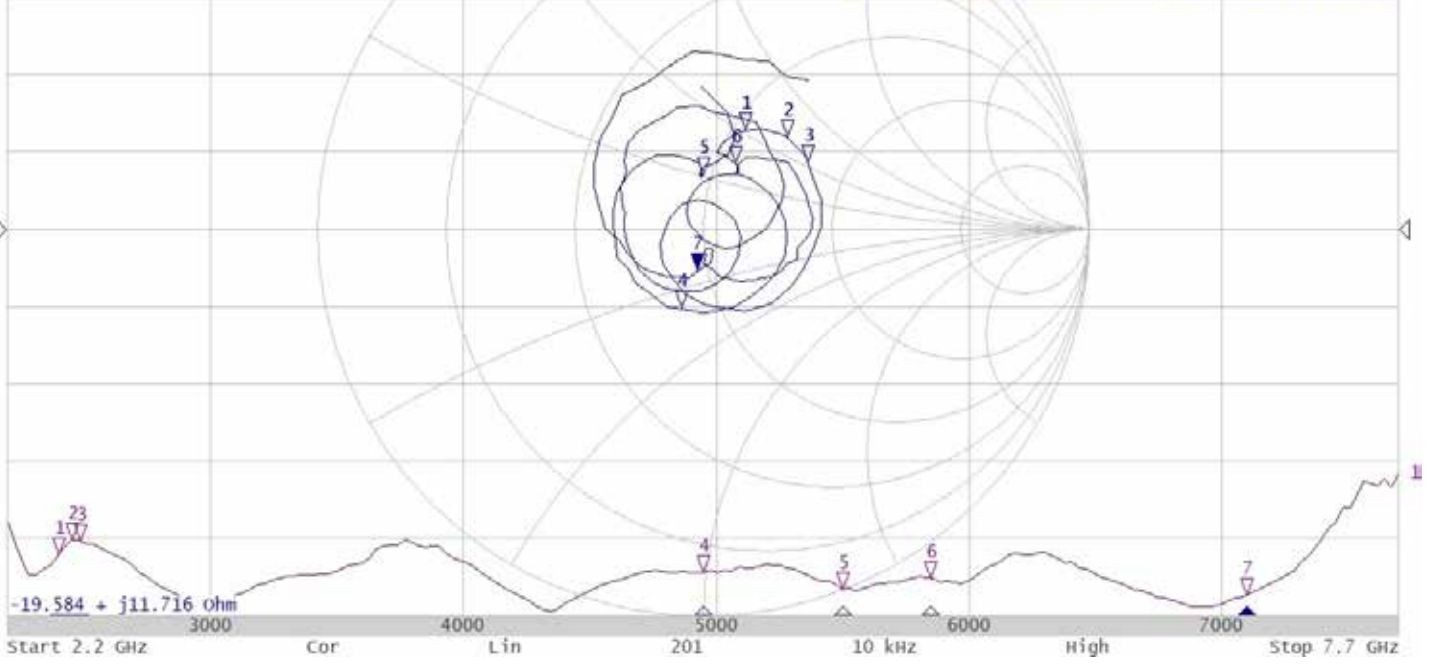
# V.S.W.R Report

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Tr1 S11 SWR 1.0 / 6.0 [F1 Pxt]  
 Tr2 S11 Smith (R+jX) 1.0 [F1 Pxt]

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|   |               |        |   |               |                      |           |
|---|---------------|--------|---|---------------|----------------------|-----------|
| 1 | 2400.0000 MHz | 1.7807 | 1 | 2400.0000 MHz | 53.617 + j29.939 Ohm | 1.9854 nH |
| 2 | 2450.0000 MHz | 1.9629 | 2 | 2450.0000 MHz | 67.158 + j35.841 Ohm | 2.3283 nH |
| 3 | 2485.0000 MHz | 1.9530 | 3 | 2485.0000 MHz | 80.116 + j30.657 Ohm | 1.9634 nH |
| 4 | 4950.0000 MHz | 1.5521 | 4 | 4950.0000 MHz | 41.015 - j17.946 Ohm | 1.7916 pF |
| 5 | 5500.0000 MHz | 1.3323 | 5 | 5500.0000 MHz | 47.760 + j13.889 Ohm | 401.91 pF |
| 6 | 5850.0000 MHz | 1.4729 | 6 | 5850.0000 MHz | 55.763 + j19.704 Ohm | 536.06 pF |
| 7 | 7100.0000 MHz | 1.2543 | 7 | 7100.0000 MHz | 47.093 - j10.592 Ohm | 2.1163 pF |



# Gain Test Report

| Frequency ID               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 700.0 | 726.0 | 752.0 | 778.0 | 804.0 | 830.0 | 856.0 | 882.0 | 908.0 | 934.0 | 960.0 | 1430.0 | 1445.0 | 1460.0 | 1475.0 | 1490.0 | 1505.0 | 1520.0 | 1535.0 | 1550.0 |
| Point Values               |       |       |       |       |       |       |       |       |       |       |       |        |        |        |        |        |        |        |        |        |
| Ant. Port Input Pwr. (dBm) | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Tot. Rad. Pwr. (dBm)       | -1.90 | -2.12 | -2.33 | -2.32 | -2.40 | -3.04 | -2.49 | -2.39 | -2.75 | -2.69 | -2.63 | -2.47  | -2.36  | -2.21  | -2.28  | -1.86  | -2.05  | -1.90  | -1.45  | -1.49  |
| Peak EIRP (dBm)            | 1.08  | 1.71  | 1.99  | 2.91  | 2.74  | 1.78  | 3.15  | 3.88  | 3.83  | 2.96  | 2.11  | 2.56   | 1.99   | 1.55   | 1.14   | 0.95   | 0.87   | 1.09   | 1.38   | 1.10   |
| Directivity (dB)           | 2.97  | 3.84  | 4.32  | 5.23  | 5.13  | 4.81  | 5.64  | 6.27  | 6.58  | 5.65  | 4.74  | 5.03   | 4.36   | 3.77   | 3.42   | 2.81   | 2.92   | 2.99   | 2.83   | 2.59   |
| Efficiency (dB)            | -1.90 | -2.12 | -2.33 | -2.32 | -2.40 | -3.04 | -2.49 | -2.39 | -2.75 | -2.69 | -2.63 | -2.47  | -2.36  | -2.21  | -2.28  | -1.86  | -2.05  | -1.90  | -1.45  | -1.49  |
| Efficiency (%)             | 64.60 | 61.30 | 58.50 | 58.60 | 57.60 | 49.70 | 56.40 | 57.60 | 53.10 | 53.80 | 54.60 | 56.60  | 58.00  | 60.10  | 59.20  | 65.20  | 62.30  | 64.60  | 71.60  | 71.00  |
| Gain (dB)                  | 1.08  | 1.71  | 1.99  | 2.91  | 2.74  | 1.78  | 3.15  | 3.88  | 3.83  | 2.96  | 2.11  | 2.56   | 1.99   | 1.55   | 1.14   | 0.95   | 0.87   | 1.09   | 1.38   | 1.10   |
| NHPRP ±PI/4 (dBm)          | -3.06 | -3.66 | -4.26 | -4.50 | -4.48 | -4.95 | -4.66 | -5.02 | -5.48 | -5.02 | -4.76 | -4.05  | -3.75  | -3.49  | -3.49  | -2.97  | -3.06  | -2.87  | -2.45  | -2.53  |
| NHPRP ±PI/6 (dBm)          | -4.38 | -4.96 | -5.71 | -5.65 | -5.61 | -6.50 | -6.57 | -6.87 | -7.11 | -6.60 | -6.29 | -5.61  | -5.05  | -4.61  | -4.51  | -3.94  | -4.05  | -3.87  | -3.45  | -3.51  |
| NHPRP ±PI/8 (dBm)          | -5.56 | -5.92 | -6.64 | -6.26 | -6.30 | -7.86 | -8.50 | -8.62 | -8.92 | -8.39 | -7.81 | -7.23  | -6.23  | -5.49  | -5.21  | -4.58  | -4.74  | -4.59  | -4.19  | -4.25  |
| Upper Hem. PRP (dBm)       | -6.19 | -6.62 | -6.70 | -6.85 | -7.38 | -8.52 | -8.30 | -8.35 | -8.77 | -7.87 | -7.47 | -6.61  | -6.38  | -5.94  | -5.79  | -5.02  | -5.02  | -4.80  | -4.34  | -4.38  |
| Lower Hem. PRP (dBm)       | -3.92 | -4.03 | -4.31 | -4.21 | -4.05 | -4.48 | -3.81 | -3.66 | -4.00 | -4.26 | -4.36 | -4.58  | -4.56  | -4.61  | -4.92  | -5.11  | -5.03  | -4.59  | -4.62  |        |
| Upper Hem. PRP (%)         | 24.05 | 21.77 | 21.40 | 20.65 | 18.27 | 14.05 | 14.79 | 14.61 | 13.28 | 16.31 | 17.92 | 21.83  | 23.04  | 25.45  | 26.94  | 31.47  | 31.47  | 33.12  | 36.81  | 36.44  |
| Lower Hem. PRP (%)         | 40.56 | 39.56 | 37.08 | 37.92 | 35.65 | 41.58 | 43.03 | 39.81 | 37.52 | 36.64 | 34.81 | 34.92  | 34.61  | 32.21  | 33.69  | 30.85  | 31.44  | 34.75  | 34.52  |        |

| Frequency ID               | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 1565.0 | 1580.0 | 1710.0 | 1808.0 | 1906.0 | 2004.0 | 2102.0 | 2200.0 | 2298.0 | 2396.0 | 2494.0 | 2592.0 | 2690.0 | 3300.0 | 3400.0 | 3500.0 | 3600.0 | 3700.0 | 3800.0 | 3900.0 |
| Point Values               |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Ant. Port Input Pwr. (dBm) | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Tot. Rad. Pwr. (dBm)       | -1.28  | -1.23  | -3.22  | -3.12  | -1.19  | -1.11  | -2.08  | -2.99  | -1.55  | -1.18  | -1.33  | -1.39  | -1.57  | -2.24  | -2.53  | -2.28  | -2.40  | -2.64  | -2.93  | -3.23  |
| Peak EIRP (dBm)            | 1.66   | 1.90   | 0.56   | 0.83   | 2.86   | 1.38   | 1.98   | 0.83   | 2.07   | 4.11   | 2.79   | 2.30   | 1.72   | 1.62   | 1.65   | 2.12   | 1.49   | 2.72   | 1.78   | 2.00   |
| Directivity (dB)           | 2.94   | 3.13   | 1.79   | 3.15   | 4.05   | 2.49   | 4.07   | 3.82   | 3.61   | 5.29   | 4.11   | 3.69   | 3.28   | 3.86   | 4.18   | 4.39   | 3.89   | 4.86   | 4.71   | 5.22   |
| Efficiency (dB)            | -1.28  | -1.23  | -3.22  | -3.12  | -1.19  | -1.11  | -2.08  | -2.99  | -1.55  | -1.18  | -1.33  | -1.39  | -1.57  | -2.24  | -2.53  | -2.28  | -2.40  | -2.64  | -2.93  | -3.23  |
| Efficiency (%)             | 74.50  | 75.30  | 47.60  | 48.80  | 76.00  | 77.40  | 61.90  | 50.20  | 70.00  | 76.10  | 73.70  | 72.60  | 69.70  | 59.70  | 55.90  | 59.20  | 57.50  | 54.40  | 50.90  | 47.60  |
| Gain (dB)                  | 1.66   | 1.90   | 0.56   | 0.83   | 2.86   | 1.38   | 1.98   | 0.83   | 2.07   | 4.11   | 2.79   | 2.30   | 1.72   | 1.62   | 1.65   | 2.12   | 1.49   | 2.72   | 1.78   | 2.00   |
| NHPRP ±PI/4 (dBm)          | -2.38  | -2.38  | -4.58  | -4.76  | -2.90  | -1.82  | -3.31  | -3.72  | -2.22  | -1.63  | -1.89  | -2.10  | -2.89  | -3.36  | -4.07  | -3.40  | -3.76  | -3.77  | -4.21  | -4.14  |
| NHPRP ±PI/6 (dBm)          | -3.20  | -3.20  | -5.89  | -6.45  | -3.93  | -2.80  | -4.71  | -4.52  | -2.98  | -2.40  | -2.74  | -3.31  | -4.39  | -4.73  | -5.89  | -5.13  | -5.54  | -5.77  | -6.74  | -6.22  |
| NHPRP ±PI/8 (dBm)          | -4.03  | -3.88  | -7.05  | -7.75  | -4.62  | -3.65  | -5.83  | -5.08  | -3.51  | -3.00  | -3.38  | -4.34  | -5.46  | -5.79  | -7.37  | -6.50  | -6.85  | -7.46  | -9.23  | -8.28  |
| Upper Hem. PRP (dBm)       | -4.17  | -4.06  | -5.56  | -6.48  | -5.21  | -5.15  | -8.67  | -7.45  | -6.00  | -6.85  | -6.28  | -5.13  | -5.39  | -3.68  | -4.14  | -3.52  | -4.21  | -4.22  | -4.76  | -4.81  |
| Lower Hem. PRP (dBm)       | -4.40  | -4.43  | -7.02  | -5.80  | -3.38  | -3.30  | -3.16  | -4.92  | -3.48  | -2.56  | -3.00  | -3.78  | -3.89  | -7.72  | -7.62  | -8.31  | -7.07  | -7.82  | -7.57  | -8.38  |
| Upper Hem. PRP (%)         | 38.24  | 39.29  | 27.77  | 22.47  | 30.10  | 30.56  | 13.58  | 17.99  | 25.14  | 20.64  | 23.57  | 30.72  | 28.90  | 42.81  | 38.59  | 44.44  | 37.89  | 37.89  | 33.44  | 33.05  |
| Lower Hem. PRP (%)         | 36.27  | 36.04  | 19.82  | 26.29  | 45.82  | 46.81  | 48.33  | 32.21  | 44.87  | 55.50  | 50.10  | 41.91  | 40.80  | 16.91  | 17.29  | 14.25  | 19.61  | 16.54  | 17.49  | 14.51  |

| Frequency ID               | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 4000.0 | 4100.0 | 4200.0 | 5100.0 | 5200.0 | 5300.0 | 5400.0 | 5500.0 | 5600.0 | 5700.0 | 5800.0 | 5900.0 | 6000.0 | 6100.0 | 6200.0 | 6300.0 | 6400.0 | 6500.0 | 6600.0 | 6700.0 |
| Point Values               |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Ant. Port Input Pwr. (dBm) | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Tot. Rad. Pwr. (dBm)       | -2.76  | -3.74  | -2.58  | -3.08  | -3.84  | -3.25  | -2.05  | -2.18  | -2.24  | -2.07  | -2.37  | -2.05  | -2.78  | -2.05  | -2.01  | -2.17  | -2.04  | -2.34  | -2.78  | -2.95  |
| Peak EIRP (dBm)            | 3.08   | 0.46   | 2.18   | 2.29   | 0.88   | 2.14   | 3.53   | 3.68   | 3.30   | 3.53   | 3.31   | 3.77   | 3.34   | 3.78   | 3.63   | 2.89   | 2.76   | 1.81   | 1.86   | 2.75   |
| Directivity (dB)           | 3.04   | 4.20   | 4.73   | 5.09   | 4.72   | 5.39   | 6.38   | 5.86   | 5.54   | 5.69   | 5.82   | 6.11   | 5.84   | 5.64   | 5.86   | 4.80   | 4.15   | 4.64   | 5.70   |        |
| Efficiency (dB)            | -2.76  | -3.74  | -2.58  | -3.08  | -3.84  | -3.25  | -2.05  | -2.18  | -2.24  | -2.07  | -2.37  | -2.05  | -2.78  | -2.05  | -2.01  | -2.17  | -2.04  | -2.34  | -2.78  | -2.95  |
| Efficiency (%)             | 53.00  | 42.30  | 55.20  | 49.20  | 41.30  | 47.30  | 51.90  | 60.60  | 59.70  | 62.00  | 58.00  | 62.30  | 52.80  | 62.30  | 62.90  | 60.70  | 62.50  | 58.30  | 52.80  | 50.70  |
| Gain (dB)                  | 3.08   | 0.46   | 2.18   | 2.29   | 0.88   | 2.14   | 3.53   | 3.68   | 3.30   | 3.53   | 3.31   | 3.77   | 3.34   | 3.78   | 3.63   | 2.89   | 2.76   | 1.81   | 1.86   | 2.75   |
| NHPRP ±PI/4 (dBm)          | -3.97  | -5.01  | -4.60  | -5.68  | -6.46  | -6.17  | -6.21  | -5.49  | -5.12  | -4.61  | -4.89  | -4.74  | -5.37  | -4.71  | -4.68  | -5.02  | -4.71  | -4.93  | -5.08  | -5.18  |
| NHPRP ±PI/6 (dBm)          | -5.74  | -6.45  | -6.45  | -8.83  | -9.30  | -8.83  | -8.83  | -8.25  | -7.29  | -6.53  | -7.01  | -7.07  | -7.70  | -7.06  | -6.94  | -7.15  | -6.58  | -6.58  | -6.52  | -6.40  |
| NHPRP ±PI/8 (dBm)          | -7.68  | -7.70  | -8.24  | -11.47 | -11.48 | -10.69 | -10.23 | -9.54  | -8.29  | -7.48  | -8.10  | -7.98  | -8.51  | -7.88  | -7.85  | -7.76  | -7.14  | -7.09  | -6.99  | -6.86  |
| Upper Hem. PRP (dBm)       | -4.09  | -5.19  | -4.04  | -4.24  | -5.95  | -5.70  | -5.17  | -4.54  | -5.24  | -5.02  | -4.29  | -4.25  | -5.26  | -4.16  | -3.84  | -4.06  | -4.00  | -4.26  | -4.61  | -4.81  |
| Lower Hem. PRP (dBm)       | -8.54  | -9.21  | -8.02  | -8.04  | -7.98  | -6.90  | -6.08  | -5.95  | -5.27  | -5.15  | -6.06  | -6.07  | -6.38  | -6.20  | -6.05  | -6.69  | -6.44  | -6.81  | -7.40  | -7.54  |
| Upper Hem. PRP (%)         | 38.97  | 30.27  | 39.48  | 33.54  | 25.40  | 28.90  | 30.44  | 35.14  | 29.68  | 31.45  | 33.20  | 37.59  | 29.75  | 38.35  | 41.32  | 39.25  | 39.81  | 37.48  | 34.58  | 33.04  |
| Lower Hem. PRP (%)         | 13.99  | 12.60  | 15.77  | 15.69  | 15.92  | 20.41  | 21.48  | 25.43  | 29.74  | 30.58  | 24.25  | 24.71  | 23.03  | 24.00  | 21.62  | 21.43  | 22.70  | 20.82  | 18.20  | 17.61  |

| Frequency ID               | 61     | 62     | 63     | 64     | 65     |
|----------------------------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 6800.0 | 6900.0 | 7000.0 | 7100.0 | 7200.0 |
| Point Values               |        |        |        |        |        |
| Ant. Port Input Pwr. (dBm) | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Tot. Rad. Pwr. (dBm)       | -2.12  | -3.13  | -2.18  | -2.61  | -2.73  |
| Peak EIRP (dBm)            | 3.38   | 3.15   | 4.02   | 3.92   | 3.83   |
| Directivity (dB)           | 5.50   | 6.29   | 6.19   | 6.53   | 6.56   |
| Efficiency (dB)            | -2.12  | -3.13  | -2.18  | -2.61  | -2.73  |
| Efficiency (%)             | 61.40  | 48.60  | 60.60  | 54.90  | 53.30  |
| Gain (dB)                  | 3.38   | 3.15   | 4.02   | 3.92   | 3.83   |
| NHPRP ±PI/4 (dBm)          | -4.22  | -5.15  | -4.22  | -5.12  | -5.46  |
| NHPRP ±PI/6 (dBm)          | -5.26  | -5.93  | -4.87  | -5.74  | -6.20  |
| NHPRP ±PI/8 (dBm)          | -5.73  | -6.29  | -5.17  | -6.07  | -6.61  |
| Upper Hem. PRP (dBm)       | -3.93  | -5.03  | -4.23  | -4.68  | -4.75  |
| Lower Hem. PRP (dBm)       | -6.78  | -7.65  | -6.41  | -6.81  | -7.02  |
| Upper Hem. PRP (%)         | 40.42  | 31.39  | 37.22  | 34.05  | 33.49  |
| Lower Hem. PRP (%)         | 20.98  | 17.20  | 22.86  | 20.83  | 19.85  |



# Gain Test Report

