

VALIDATION OF TOTAL POWER GAIN CALCULATION

WAVX 90.9 Schuyler Falls, NY

MODEL 6014-1/1-DA

Elevation Gain of Antenna 0.46

The RMS values are calculated utilizing the data of a planimeter

Horizontal RMS value divided by the Vertical RMS value equals the Horiz. - Vert. Ratio

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|-------|-------|-------|-------|-----------|-------|
| H RMS | 0.446 | V RMS | 0.441 | H/V Ratio | 1.011 |
|-------|-------|-------|-------|-----------|-------|

Elevation Gain of Horizontal Component 0.465

Elevation Gain of Vertical Component 0.455

Horizontal Azimuth Gain equals 1/(RMS)SQ. 5.027

Vertical Azimuth Gain equals 1/(RMS/Max Vert)SQ. 5.040

Max. Vertical 0.99

***Total Horizontal Power Gain is the Elevation Gain Times the Azimuth Gain**

Total Horizontal Power Gain = 2.339

***Total Vertical Power Gain is the Elevation Gain Times the Azimuth Gain**

Total Vertical Power Gain = 2.292

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ERP divided by Horizontal Power Gain equals Antenna Input Power

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|-----|--------|--------|-------|------------------------|
| 2.7 | KW ERP | Equals | 1.154 | KW Antenna Input Power |
|-----|--------|--------|-------|------------------------|

Antenna Input Power times Vertical Power Gain equals Vertical ERP

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|-------|----|-------|-------|----|--------|-------|--------|
| 1.154 | KW | Times | 2.292 | KW | Equals | 2.646 | KW ERP |
|-------|----|-------|-------|----|--------|-------|--------|

Maximum Value of the Vertical Component squared times the Maximum ERP equals the Vertical ERP

0.99 Equals 2.646 KW Vertical ERP

NOTE: Calculating the ERP of the Vertical Component by two methods validates the total power gain calculations