

# RADIOTECHNIQUE<sup>®</sup>

402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report  
Transmitter Power Calculation  
W221EQ Front Royal, VA  
May 2023

|                                    |                                |
|------------------------------------|--------------------------------|
| Effective Radiated Power           | 250 Watts                      |
| Antenna Type                       | Radiotech Moxon -1 Array 1 Bay |
| Antenna Gain                       | 2.79 X                         |
| Antenna Input Power                | 86.2 Watts                     |
| Transmission Line                  | LMR-600 @ -2.39 db/100 m       |
| Length                             | 15.3 m                         |
| Efficiency                         | 91.9%                          |
| Power at line input                | 93.798 Watts                   |
| Transmission Line                  | LMR-400 @ -3.7 db/100 m        |
| Length                             | 15.3 m                         |
| Efficiency                         | 87.5%                          |
| Power at line input                | 107.17 Watts                   |
| Fittings 6 at 0.05db = 0.3db       | 93.3%                          |
| Transmitter Power Input Required   | 114.89 Watts                   |
| For Rated ERP (Rounded Per 73.212) | 115.0 Watts                    |