

# Specifications

Series 1185, 1256 & 1382

| <b>ELECTRICAL</b>                           | <b>1.8 series 1185</b> |                | <b>2.4 series 1256</b> |                | <b>3.8 series 1382</b> |                |             |
|---|------------------------|----------------|------------------------|----------------|------------------------|----------------|-------------|
|   | <b>C-Band</b>          | <b>Ku-Band</b> | <b>C-Band</b>          | <b>Ku-Band</b> | <b>C-Band</b>          | <b>Ku-Band</b> |             |
| <b>Antenna Aperture</b>                     | 1.8M 71 in.            |                | 2.4M 96 in.            |                | 3.8M 150 in.           |                |             |
| <b>Operating Frequency (GHz)</b>            | <i>Receive</i>         | 3.625-4.2      | 10.95-12.75            | 3.625-4.2      | 10.95-12.75            | 3.625-4.2      | 10.95-12.75 |
|   | <i>Transmit</i>        | 5.85-6.425     | 14.0-14.5              | 5.85-6.425     | 14.0-14.5              | 5.85-6.425     | 14.0-14.5   |
| <b>Midband Gain (+.2db)</b>                 | <i>Receive</i>         | 35.5 dBi       | 45.0 dBi               | 38.0 dBi       | 47.6 dBi               | 42.0 dBi       | 51.7dBi     |
|   | <i>Transmit</i>        | 39.5 dBi       | 46.5 dBi               | 42.0 dBi       | 49.2 dBi               | 46.0 dBi       | 53.2 dBi    |
| <b>3 dB Beamwidth</b>                       | <i>Receive</i>         | 2.9°           | 1.0°                   | 2.2°           | .73°                   | 1.4°           | 0.5°        |
|   | <i>Transmit</i>        | 1.9°           | 0.8°                   | 1.4°           | .61°                   | 0.8°           | 0.4°        |
| <b>Antenna Noise Temperature (linear)</b>   |                        |                |                        |                |                        |                |             |
| 10° elevation                               | 56 K                   | 49 K           | 52 K                   | 42 K           | 31 K                   | 29 K           |             |
| 20° elevation                               | 49 K                   | 38 K           | 46 K                   | 32 K           | 25 K                   | 21 K           |             |
| 30° elevation                               | 47 K                   | 35 K           | 45 K                   | 28 K           | 21 K                   | 20 K           |             |
| 40° elevation                               | 46 K                   | 34 K           | 44 K                   | 27 K           | 21 K                   | 19 K           |             |
| <b>Antenna Noise Temperature (circular)</b> |                        |                |                        |                |                        |                |             |
| 10° elevation                               | 30 K                   |                | 29 K                   |                | 28 K                   |                |             |
| 20° elevation                               | 23 K                   |                | 22 K                   |                | 22 K                   |                |             |
| 30° elevation                               | 21 K                   |                | 20 K                   |                | 19 K                   |                |             |
| 40° elevation                               | 20 K                   |                | 19 K                   |                | 18 K                   |                |             |
| <b>Cross-Pol Isolation (Linear)</b>         | >30 dB (on axis)       |                | >30 dB (on axis)       |                | >30 dB (on axis)       |                |             |
| <b>Sidelobe Envelope, Co-Pol Tx (dB)</b>    |                        |                |                        |                |                        |                |             |
| 100λ/D ≤ θ ≤ 20°                            | 29-25 Log θ dBi        |                | 29-25 Log θ dBi        |                | 29-25 Log θ dBi        |                |             |
| 20° < θ ≤ 26.3°                             | -3.5 dBi               |                | -3.5 dBi               |                | -3.5 dBi               |                |             |
| 26.3° < θ ≤ 48°                             | 32-25 Log θ dBi        |                | 32-25 Log θ dBi        |                | 32-25 Log θ dBi        |                |             |
| θ > 48°                                     | -10 dBi (averaged)     |                | -10 dBi (averaged)     |                | -10 dBi (averaged)     |                |             |
| <b>VSWR</b>                                 | 1.3:1 Max.             |                | 1.3:1 Max.             |                | -30 dB within B.P.E.   |                | 1.3:1 Max.  |

  

| <b>Mechanical</b>                  | Glass Fiber Reinforced Polyester SMC                                       |  |  |
|------------------------------------|--|--|--|
| <b>Reflector Material</b>          | Glass Fiber Reinforced Polyester SMC                                       |  |  |
| <b>Mount Type</b>                  | Dual Axis Motorized, Elevation over Azimuth, Galvanized Steel Construction |  |  |
| <b>Elevation Adjustment Range</b>  | 10° to 80°   |  |  |
| <b>Azimuth Adjustment Range</b>    | 360° Continuous  |  |  |
| <b>Angular Tracking Travel</b>     | Elevation +/- 10° ; Azimuth +/- 10° (within adjustment range)              |  |  |
| <b>Actuators</b>                   | Recirculating Ballscrews   |  |  |
| <b>Interface</b>                   | Electrically to ACU  |  |  |
| <b>Antenna Optics, Prime Focus</b> | One Piece Offset Feed  | Four Piece Offset Feed                 | Four Piece Offset Feed                   |
| <b>Tracking Accuracy</b>           | .10°   | .10°                                   | .05°                                     |
| <b>Mast Pipe Size</b>              | 3.5" SCH 40 Pipe<br>(4.00" OD) 10.16 cm.                                   | 6" SCH 40 Pipe<br>(6.63" OD) 16.83 cm. | 10" SCH 40 Pipe<br>(10.75" OD) 27.30 cm. |
| <b>Shipping Specifications</b>     | 445 lbs. (200 kg.)   | 680 lbs. (306 kg.)                     | 3000 lbs. (1360 kg.)                     |

  

| <b>ENVIRONMENTAL PERFORMANCE</b> |   |   |
|----------------------------------|---|---|
| <b>Wind Loading</b>              | <i>Operational</i>  | 45 mph with .2° pointing error (72km/h) |
|                                  | <i>Survival</i>   | 125 mph (201km/h)                       |
| <b>Temperature</b>               | <i>Operational</i>  | -4° to 140° F (-20° to 60° C)           |
|                                  | <i>Survival</i>   | -22° to 160° F (-30° to 71° C)          |
| <b>Rain</b>                      | <i>Operational</i>  | 1/2" /hr                                |
|                                  | <i>Survival</i>   | 2" /hr                                  |
| <b>Ice</b>                       | <i>Operational</i>  | -----                                   |
|                                  | <i>Survival</i>   | 1/2" radial                             |
| <b>Atmospheric Conditions</b>    | Salt, Pollutants, and Contaminants as Encountered in Coastal and Industrial Areas |   |
| <b>Solar Radiation</b>           | 360 BTU/h/ft <sup>2</sup>   |   |



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