

ANTENNA TYPE dBs 610
SPECIFICATIONS/CHARACTERISTICS

PERFORMANCE CHARACTERISTICS:

<u>Antenna Parameter</u>	<u>Antenna Performance</u>
1. Type	Omni-directional
2. Circularity	± 2 dB max on horizon
3. Frequency range	960 through 1215 MHz (no adjustments or tuning required)
4. Array	4 radiator assy's (35" tall)
5. Polarization	Vertically polarized
6. Gain, main beam	6 dB/iso, minimum
7. Gain, horizon	3 dB/iso, minimum
8. Main beam elevation location	10° nominal above horizon
9. Slope (Vicinity of horizon)	0.35 dB/° nominal
10. Power Handling capability	up to at least 5 kW peak RF power at 3% duty cycle
11. Impedance	50 ohm nominal
12. VSWR	not greater than 2:1 (960-1215 MHz) measured at end of low loss cable not exceeding 5 feet in length.

<u>Antenna Parameter (Cont)</u>	<u>Antenna Performance (Cont)</u>
13. Vertical field pattern	The radiation pattern of the antenna in the vertical plane has a lobe of energy not less than 20 degrees wide at the half-power points. The power gain at angles between 10 and 50 degrees below the horizon shall be lower than the power gain at the peak of the major lobe above the horizon by at least 8 dB. The power gain at angles between 6 and 30 degrees above the horizon shall not pass under a straight line joining the points of co-ordinates (+6°, -15 dB) and (+30°, -25 dB) with values referenced to the peak of the major lobe above the horizon.
14. Size	36" long, 4 radiator assemblies (driven elements), 3 1/4" OD radome. Has top cap and base flange. See 1/2 scale drawing, Figure 5-8.
15. Weight	12 lbs. (excluding obstruction light and mounting fixtures and other optional items).
16. Physical design	A metal tube, 1.5" OD x 1.43" ID (.040" wall thickness) runs through center of antenna for full length. RF transmission line assembly and obstruction light power lines are located within this tube. Also used as lightning down conductor. See Figure 5-8.
17. Weather proofing	Entire Antenna, including all cable connectors is weather proofed such that removal /replacement of radome is possible without sealing compounds.

<u>Antenna Parameter (Cont)</u>	<u>Antenna Performance (Cont)</u>
18. Antenna mounting	The configuration of the antenna base is such that the antenna can be mounted directly or indirectly through use of optional adapter(s). See Figure 5-8.
19. Wind loading	Withstands without damage 100 mile per hour gusts.
20. Monitor ports	Two coupling ports for monitoring the signal radiated by the antenna. Located within the radome can be provided as optional items. 50 ohm nominal impedance. Probe output level is 25 dB $\pm$ 1.5 dB (for J2 and J3) below power level applied to main RF input connector.
21. Obstruction light (s)	Optional dual, red lamp obstruction light fixture. Connector is MS-3112E8-3P, 13 1/2"H x 12"W x 4"D 5.3 lbs.
22. Connectors RF	Type N Female.
23. Pipe adapter	Solid cast aluminum part (A356-T6). Painted white. Adapts 4" OD pipe to antenna base. 12"H x 8" greatest dia., 8.3lbs., excluding cover, stainless steel cover weight 1.5 lbs.