

Exhibit 5: Antenna Data Sheet



SYSTEMS WITH RELIABILITY, LLP
BROADCAST ANTENNAS AND TRANSMISSION LINE
SYSTEM DATA SHEET

Customer	WUPJ
Contact	David Bolduc
Location	Escanaba, MI
Antenna Model	FM3/10-CFS-0.9WS-DA
Channel / Frequency	215C1 / 90.9 MHz

ELECTRICAL SPECIFICATIONS

Antenna Specifications:

	H-POL			V. Pol.	
		dB			dB
License ERP (KW)	100.000			100.000	
FCC Limit Pattern Directivity	1.697	2.297	dB	1.697	2.297 dB
Elevation Directivity	10.780	10.326	dB	10.780	10.326 dB
Azimuth Directivity	2.492	3.965	dB	1.877	2.736 dB
Composite Pattern	1.783	2.510	dB	1.783	2.510 dB
Polarization Ratio	0.430			0.570	
RMS Comp./RMS Limit	97.6 %				
Antenna Efficiency %	100			100	
Power Ratio (Pol. Ratio X Efficiency)	0.4297			0.5703	
Antenna Gain	11.542	10.623	dB	11.542	10.623 dB

Antenna Input Power (KW)	8.664 kW	9.377 (dBK)
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Feed Line Specifications:

Line Type:Cablewave	3 1/8" Air	50 Ω HCA300-50J
Attenuation Per 100 ft (dB)	0.13	dB
Line Length (ft) AGL + 20' Horizontal Run	265.06	ft.
Total Line Attenuation (dB)	0.3446	dB
Line Efficiency	92.37	%
Power Input to the Line (KW)	9.379 kW	9.722 (dBK)

MECHANICAL SPECIFICATIONS

No. Of Bays	10		
Antenna Aperture	87.65	ft.	26.72 meter
Center of Radiation AGL	245.06	ft.	74.69 meter
Antenna Weight (Everything)	1050.00	lbs.	404.55 kg
Windload (50/33)	2720.00	lbs.	Windload CaAc 78.40 ft^2

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