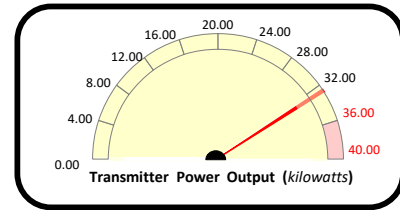


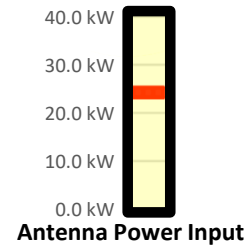
Transmitter Power Output Worksheet

Call letters: KOEZ (FM) .C
 City of License: Ames, IA
 Channel: CH281C1 (104.1 MHz)
 File No: LMS-0000149466
 Facility ID: 7823
 Applicant: Saga Communications of Iowa, LLC



Effective Radiated Power (ERP): 100.000 kW

Antenna Make: Dielectric, LLC
 Antenna Model: DCR-C8-CR
 No of Elements: eight (8)
 Antenna COR AGL: 269 meters AGL
 Antenna COR AMSL: 578 meters AGL
 Max Input Power: 40.000 kW
 Power Gain: 4.3
 Antenna Gain: 6.335 dBd
 Calculated Antenna Input Power: 23.256 kW
 Transmitter Rated Power: 40.000 kW
 Transmitter Make/Model: Nautel NV40



Power Gain to Antenna gain (dBd) Conversion:
 $=\text{Log}[\text{power gain}] * 10$

Inventory of System / Insertion Losses

Explanation	Component Make/Model	Length	Loss
4-to-3 Inch End Coupler	Generic (1@0.01 dB each)	n/a	-0.010 dBd
Main Feedline (4" Air)	Heliac (Andrew) HJ11-50EW (0.119 dB/100 ft)	927 ft	-1.103 dBd
4-to-3 Inch End Coupler	Generic (1@0.01 dB each)	n/a	-0.010 dBd
Wattmeter Line Section	BDI Model DPS100D Wattmeter	n/a	-0.050 dBd
3 Inch End Connector	Generic (1@0.01 dB each)	n/a	-0.010 dBd
Coax Switch	Dielectric Model DC 50000-300 Coax Switch	n/a	-0.100 dBd
3 Inch End Connector	Generic (1@0.01 dB each)	n/a	-0.010 dBd
3 1/8" Shorting Stub	Nautel Model 206-5090-08 Shorting Stub	n/a	-0.050 dBd
3 1/8 Inch Elbow	Myat Part No. 301-025(1@0.02 dB each)	n/a	-0.020 dBd
Feedline Ground Segment 2	3 1/8" Myat Rigid (50 Ω) (0.097 dB/100 ft)	3 ft	-0.003 dBd
3 1/8 Inch Elbow	Myat Part No. 301-025(1@0.02 dB each)	n/a	-0.020 dBd
Feedline Ground Segment 3	3 1/8" Myat Rigid (50 Ω) (0.097 dB/100 ft)	12 ft	-0.012 dBd
3 1/8 Inch Elbow	Myat Part No. 301-025(1@0.02 dB each)	n/a	-0.020 dBd
Feedline Ground Segment 4	3 1/8" Myat Rigid (50 Ω) (0.097 dB/100 ft)	1 ft	-0.001 dBd
3 1/8 Inch Elbow	Myat Part No. 301-025(1@0.02 dB each)	n/a	-0.020 dBd
Feedline Ground Segment 5	3 1/8" Myat Rigid (50 Ω) (0.097 dB/100 ft)	8 ft	-0.008 dBd
3 1/8 Inch Elbow	Myat Part No. 301-025(1@0.02 dB each)	n/a	-0.020 dBd
Feedline Ground Segment 6	3 1/8" Myat Rigid (50 Ω) (0.097 dB/100 ft)	4 ft	-0.004 dBd
3 Inch End Connector	Generic (1@0.01 dB each)	n/a	-0.010 dBd

TOTAL SYSTEM GAIN/LOSS: 4.85 dBd
 CALCULATED TRANSMITTER POWER OUTPUT: 32.70 kW
 (1 / [[10^{4.85} dB/10]/ERP])