

Transmitter Power Output Worksheet

Call letters: K254CX.C
 City of License: Norfolk, NE
 Channel: CH254D (98.7 MHz)
 File No: BMPFT-20180726AAB
 Facility ID: 200085
 Applicant: Nebraska Rural Radio Association

Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Nicom USA, Inc. (NIC)
 Antenna Model: BKG77/2L(Fully Spaced)
 No of Elements: Two (2)
 Antenna COR AGL: 87 meters AGL
 Antenna COR AMSL: 627 meters AMSL
 Max Input Power: 1.00 kW

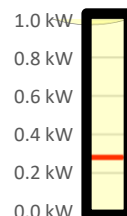
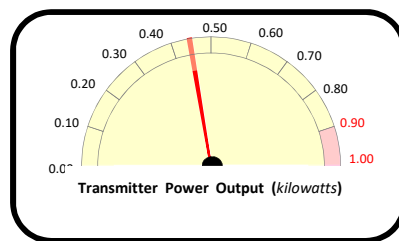
Power Gain: 0.9

Antenna Gain: -0.458 dBd

Calculated Antenna Input Power: 0.278 kW

Transmitter Rated Power: 1.0 kW

Transmitter Make/Model: Nautel VS1



Antenna Power Input

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

Inventory of System / Insertion Losses

Explanation	Component Make/Model	Length	Loss
Typical End Connector(s)	Generic (2@0.02 dB each)	n/a	-0.040 dBd
Interbay Antenna Leads	RG-213(12 ft x 2 leads) (2.000 dB/100 ft)	24 ft	-0.480 dBd
Typical End Connector(s)	Generic (2@0.02 dB each)	n/a	-0.040 dBd
Interbay Power Divide	Nicom Series BAC2N	n/a	-0.300 dBd
Typical End Connector	Generic (1@0.02 dB each)	n/a	-0.020 dBd
Jumper to Antenna	Andrew SFJ4-50B (1.038 dB/100 ft)	3 ft	-0.031 dBd
Typical End Connector	Generic (1@0.02 dB each)	n/a	-0.020 dBd
Main Feedline (7/8" Foam)	RFS (Cablewave) LCF78-50JA (0.354 dB/100 ft)	300 ft	-1.062 dBd
Typical End Connector	Generic (1@0.02 dB each)	n/a	-0.020 dBd
Jumper to Transmitter	Andrew SFJ4-50B (1.038 dB/100 ft)	3 ft	-0.031 dBd
Typical End Connector	Generic (1@0.02 dB each)	n/a	-0.020 dBd

TOTAL SYSTEM GAIN/LOSS: -2.52 dBd

CALCULATED TRANSMITTER POWER OUTPUT: 0.447 kW

$(1 / [10^{(dB/10)/ERP}])$