



Section 74.1204 Clearance to WNVN (FM)
Translator W250CF
Channel 250D - 97.9 MHz
0.195 kW ERP - 968.1 m COR AMSL
Arecibo, Puerto Rico

Bromo Communications, Inc.

May 2022

\$74.1204 Clearance to WNVM (FM)

Translator W250CF

Channel 250D – 97.9 MHz

0.195 kW ERP (DA) – 968.1 m COR AMSL

Arecibo, Puerto Rico

May 2022

FM Over Calculation

05-03-2022

Terrain Data: FCC 30 meter

FMOver Analysis

WNVM 0000106819

Channel = 249A

Max ERP = 3.1 kW

RCAMSL = 555 m

N. Lat. 18 16 40.20

W. Lng. 66 06 31.00

W250CF (Proposed)

Channel = 250D

Max ERP = 0.195 kW

RCAMSL = 968.1 m

N. Lat. 18 13 59.00

W. Lng. 66 45 35.00

Protected
60 dBu

Interfering
54 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
206.0	003.1000	0140.3	028.2	109.8	000.0000	0455.5	060.0	06.38	
207.0	003.1000	0135.2	027.8	109.3	000.0000	0459.7	059.6	06.65	
208.0	003.1000	0133.8	027.7	109.1	000.0000	0460.9	059.1	06.84	
209.0	003.1000	0133.8	027.7	109.1	000.0000	0461.8	058.6	07.04	
210.0	003.1000	0130.7	027.4	108.7	000.0000	0465.4	058.2	07.29	
211.0	003.1000	0124.6	026.9	108.1	000.0000	0468.1	057.8	07.49	
212.0	003.1000	0125.0	026.9	108.0	000.0000	0468.6	057.4	07.67	
213.0	003.1000	0129.5	027.3	108.3	000.0000	0466.6	056.8	07.83	
214.0	003.1000	0120.9	026.6	107.4	000.0000	0480.0	056.6	08.26	
215.0	003.1000	0120.6	026.5	107.3	000.0000	0481.5	056.1	08.46	
216.0	003.1000	0127.3	027.1	107.7	000.0000	0474.7	055.5	08.52	
217.0	003.1000	0139.9	028.2	108.6	000.0000	0466.1	054.7	08.60	
218.0	003.1000	0138.7	028.1	108.4	000.0000	0466.3	054.3	08.76	
219.0	003.1000	0127.3	027.1	107.2	000.0000	0481.8	054.2	09.19	
220.0	003.1000	0120.5	026.5	106.4	000.0000	0484.5	054.0	09.33	
221.0	003.1000	0122.0	026.6	106.4	000.0000	0484.0	053.5	09.50	
222.0	003.1000	0122.7	026.7	106.2	000.0000	0483.5	053.0	09.65	
223.0	003.1000	0113.3	025.8	105.1	000.0000	0483.2	053.0	09.65	
224.0	003.1000	0115.4	026.0	105.1	000.0000	0483.3	052.5	09.84	
225.0	003.1000	0121.2	026.6	105.4	000.0000	0482.9	051.9	10.07	
226.0	003.1000	0124.2	026.8	105.4	000.0000	0482.9	051.3	10.27	
227.0	003.1000	0132.3	027.5	105.8	000.0000	0482.2	050.6	10.54	
228.0	003.1000	0140.9	028.3	106.2	000.0000	0483.4	049.8	10.86	
229.0	003.1000	0144.6	028.6	106.2	000.0000	0483.4	049.2	11.08	
230.0	003.1000	0148.4	029.0	106.3	000.0000	0483.4	048.6	11.31	
231.0	003.1000	0160.5	030.0	107.0	000.0000	0482.5	047.5	11.66	
232.0	003.1000	0166.9	030.6	107.2	000.0000	0481.8	046.8	11.94	
233.0	003.1000	0170.1	030.9	107.1	000.0000	0482.2	046.2	12.17	
234.0	003.1000	0175.9	031.4	107.2	000.0000	0481.7	045.4	12.45	
235.0	003.1000	0183.1	032.0	107.4	000.0000	0480.1	044.6	12.73	
236.0	003.1000	0187.8	032.4	107.4	000.0000	0480.6	043.9	13.02	
237.0	003.1000	0200.5	033.5	108.0	000.0000	0468.5	042.8	13.21	
238.0	003.1000	0200.2	033.5	107.5	000.0000	0478.9	042.4	13.61	

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
239.0	003.1000	0211.4	034.4	107.9	000.0000	0469.7	041.3	13.84	
240.0	003.1000	0208.4	034.2	107.1	000.0000	0482.1	041.0	14.22	
241.0	003.1000	0206.5	034.0	106.4	000.0000	0484.3	040.7	14.40	
242.0	003.1000	0202.5	033.7	105.5	000.0000	0483.4	040.5	14.46	
243.0	003.1000	0198.0	033.3	104.5	000.0000	0479.1	040.4	14.43	
244.0	003.1000	0196.4	033.2	103.8	000.0000	0489.3	040.1	14.75	
245.0	003.1000	0191.9	032.8	102.8	000.0000	0501.4	040.1	15.02	
246.0	003.1000	0186.1	032.3	101.7	000.0000	0518.7	040.1	15.34	
247.0	003.1000	0180.3	031.8	100.7	000.0000	0532.0	040.2	15.56	
248.0	003.1000	0180.5	031.8	100.0	000.0000	0536.8	039.9	15.79	
249.0	003.1000	0176.9	031.5	099.1	000.0000	0550.9	039.9	16.06	
250.0	003.1000	0171.5	031.0	098.1	000.0000	0565.1	040.0	16.26	
251.0	003.1000	0169.2	030.8	097.2	000.0000	0576.3	040.0	16.49	
252.0	003.1000	0173.1	031.2	096.8	000.0000	0581.0	039.4	16.80	
253.0	003.1000	0174.4	031.3	096.1	000.0000	0580.8	039.1	16.94	
254.0	003.1000	0161.3	030.1	094.7	000.0000	0577.9	040.0	16.52	
255.0	003.1000	0147.1	028.8	093.4	000.0000	0572.5	041.0	16.00	
256.0	003.1000	0128.9	027.2	092.1	000.0000	0570.5	042.4	15.41	
257.0	003.1000	0112.8	025.8	091.0	000.0000	0576.0	043.6	15.01	
258.0	003.1000	0095.8	023.9	089.9	000.0000	0590.9	045.4	14.65	
259.0	003.1000	0086.5	022.8	089.2	000.0000	0585.1	046.4	14.81	
260.0	003.1000	0085.7	022.6	088.7	000.0000	0591.9	046.5	15.30	
261.0	003.1000	0082.8	022.3	088.1	000.0000	0598.8	046.8	15.69	
262.0	003.1000	0092.2	023.5	087.8	000.0000	0600.7	045.5	16.41	
263.0	003.1000	0094.3	023.7	087.3	000.0000	0600.9	045.3	16.87	
264.0	003.1000	0102.9	024.7	086.9	000.0000	0602.3	044.2	17.60	
265.0	003.1000	0126.5	027.0	086.4	000.0000	0601.7	041.9	18.82	
266.0	003.1000	0145.8	028.7	085.7	000.0000	0601.4	040.2	19.91	
267.0	003.1000	0159.6	030.0	085.0	000.0000	0597.8	039.0	20.82	
268.0	003.1000	0194.1	033.0	083.9	000.0001	0590.3	036.0	22.58	
269.0	003.1000	0200.4	033.5	082.9	000.0001	0593.4	035.5	23.36	
270.0	003.1000	0189.3	032.6	082.2	000.0001	0602.4	036.5	23.45	
271.0	003.1000	0181.7	031.9	081.4	000.0001	0606.5	037.2	23.54	
272.0	003.1000	0170.1	030.9	080.9	000.0001	0610.0	038.3	23.37	
273.0	003.1000	0175.1	031.3	080.0	000.0001	0618.2	038.0	24.19	
274.0	003.1000	0193.8	033.0	078.5	000.0002	0623.5	036.6	28.26	
275.0	003.1000	0218.6	035.0	076.7	000.0003	0624.7	034.8	31.85	
276.0	003.1000	0237.1	036.3	075.0	000.0006	0645.8	033.8	34.87	
277.0	003.1000	0268.4	038.2	072.7	000.0009	0651.7	032.3	37.74	
278.0	003.1000	0295.5	039.8	070.3	000.0013	0641.5	031.1	39.95	
279.0	003.1000	0306.9	040.4	068.6	000.0023	0637.9	030.9	42.29	
280.0	003.1000	0316.9	041.0	066.9	000.0035	0659.1	030.8	44.59	
281.0	003.1000	0325.0	041.4	065.4	000.0051	0678.5	030.9	46.44	
282.0	003.1000	0323.7	041.4	064.4	000.0062	0673.8	031.3	46.96	
283.0	003.1000	0312.4	040.7	064.1	000.0065	0674.8	032.3	46.76	
284.0	003.1000	0297.9	039.9	064.0	000.0066	0674.9	033.4	46.31	
285.0	003.1000	0288.1	039.4	063.7	000.0069	0673.7	034.2	46.09	
286.0	003.1000	0296.5	039.8	062.3	000.0087	0659.6	034.3	46.84	
287.0	003.1000	0314.6	040.8	060.3	000.0117	0665.8	034.1	48.32	
288.0	003.1000	0340.9	042.3	057.6	000.0178	0685.1	033.7	50.61	
289.0	003.1000	0357.4	043.2	055.7	000.0233	0705.4	033.7	52.03	
290.0	003.1000	0372.1	044.0	053.9	000.0289	0724.0	033.9	53.12	
291.0	003.1000	0379.3	044.3	052.7	000.0330	0731.6	034.3	53.57	
292.0	003.1000	0383.2	044.5	051.7	000.0364	0730.7	034.9	53.72	
293.0	003.1000	0381.8	044.4	051.2	000.0383	0731.7	035.6	53.63	
294.0	003.1000	0375.8	044.1	051.1	000.0389	0732.5	036.4	53.34	
295.0	003.1000	0379.2	044.3	050.3	000.0419	0734.9	037.1	53.41	
296.0	003.1000	0380.4	044.4	049.7	000.0440	0739.8	037.7	53.37	
297.0	003.1000	0385.8	044.6	048.9	000.0468	0750.0	038.4	53.48	
298.0	003.1000	0406.2	045.6	047.1	000.0529	0758.0	038.7	53.93	

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
299.0	003.1000	0408.7	045.8	046.5	000.0549	0760.3	039.5	53.81	
300.0	003.1000	0409.4	045.8	046.1	000.0563	0762.3	040.2	53.61	
301.0	003.1000	0416.5	046.2	045.3	000.0594	0765.7	040.9	53.59	
302.0	003.1000	0421.7	046.4	044.7	000.0617	0762.1	041.6	53.41	
303.0	003.1000	0422.5	046.5	044.4	000.0628	0763.0	042.4	53.17	
304.0	003.1000	0427.4	046.7	043.9	000.0649	0769.7	043.1	53.08	
305.0	003.1000	0433.2	047.0	043.3	000.0671	0769.8	043.9	52.92	
306.0	003.1000	0440.0	047.4	042.7	000.0695	0768.6	044.7	52.75	
307.0	003.1000	0441.6	047.5	042.5	000.0705	0768.0	045.5	52.49	
308.0	003.1000	0444.2	047.6	042.2	000.0716	0767.1	046.3	52.23	
309.0	003.1000	0444.3	047.6	042.2	000.0719	0767.1	047.1	51.94	
310.0	003.1000	0445.9	047.7	042.0	000.0725	0766.6	048.0	51.67	
311.0	003.1000	0449.2	047.9	041.8	000.0735	0763.7	048.8	51.39	
312.0	003.1000	0455.0	048.2	041.4	000.0750	0759.6	049.6	51.12	
313.0	003.1000	0460.5	048.5	041.1	000.0764	0756.8	050.5	50.86	
314.0	003.1000	0462.4	048.6	041.0	000.0767	0756.3	051.3	50.56	
315.0	003.1000	0462.9	048.6	041.0	000.0766	0756.4	052.2	50.24	
316.0	003.1000	0465.3	048.8	040.9	000.0769	0756.2	053.0	49.94	
317.0	003.1000	0466.2	048.8	041.0	000.0768	0756.3	053.9	49.62	
318.0	003.1000	0464.7	048.7	041.2	000.0760	0757.6	054.7	49.29	
319.0	003.1000	0467.3	048.9	041.1	000.0761	0757.3	055.6	48.98	
320.0	003.1000	0468.4	048.9	041.2	000.0759	0757.8	056.4	48.66	
321.0	003.1000	0472.4	049.1	041.1	000.0762	0757.1	057.3	48.36	
322.0	003.1000	0473.8	049.2	041.2	000.0759	0757.7	058.2	48.04	
323.0	003.1000	0477.8	049.4	041.1	000.0761	0757.3	059.1	47.73	
324.0	003.1000	0480.5	049.6	041.2	000.0760	0757.6	059.9	47.42	
325.0	003.1000	0481.4	049.6	041.3	000.0754	0758.9	060.8	47.11	

At no point on the WNVN (FM) 60 dBu (protected) contour does the proposed W250CF deliver more than 54 dBu (interfering).