

# W299DB Application 74.1204 protection of WBBT-FM 297A Powhatan, VA

■ WBBT-FM (297)  
■ W299DB.A (299)

## WBBT-FM - CH297

Powhatan, VA - 107.3 MHz  
FACID:31859  
File:BMLED20180102AAL  
Lat: 37-30-15.97 N  
Long: 077-42-14.02 W  
ERP: 1.40 kW HAAT: 207.0  
RCAMSL: 282.0 m  
Ground Elev: 99.0 m  
Pattern: Omni

## W299DB.A - CH299

Richmond, VA - 107.7 MHz  
FACID:0  
File:  
Lat: 37-30-52.47 N  
Long: 077-30-28.05 W  
ERP: 0.03 kW HAAT: 145.19  
RCAMSL: 201.0 m  
Ground Elev: 70.0 m  
Pattern: Omni

WBBT-FM

W299DB.A

68.5 dBu



Scale 1:250,000  
0 3 6 9 km

## Section 74.1204 Compliance: Second Adjacent WBBT-FM 297A

Powhatan, VA has a signal strength of 68.5 dBu at the proposed translator tower site. The table on the next sheet shows that the interfering signal from the translator (108.5 dBu) will come no closer than 280 feet from the ground at the translator site. There are no nearby tall structures to the supporting tower. Therefore no interference will occur to WBBT-FM.

**W299DB application**  
**Richmond, VA**

**ERP 30.00 WATTS**

**Maximum ERP** *Interfering contour value ----->* **108.5** dBu  
0.03 kW *RCAGL (m)----->* **131** meters  
*Antenna Type ----->* **3**

Antenna Type 3 = **Shively, 2-bay, half-wave spaced**

Angle Below Horizontal (degrees)	Vertical Pattern (REL. FIELD)	W299DB application ERP (kW)	W299DB application ERP (dBk)	Free-Space Distance to interfering contour (meters)	Slant Distance (meters) *	Height of interfering contour above ground (feet)**	Proposed Interference within 30 ' of ground level?	Horizontal Distance (meters) ***	Horizontal Distance (feet) ***
0	1.000	0.0300	-15.229	144.1	N/A	429.8			472.7
5	0.988	0.0293	-15.334	142.3	1,398.6	389.1	No	141.8	465.2
10	0.950	0.0271	-15.674	136.9	702.0	351.8	No	134.8	442.2
15	0.892	0.0239	-16.221	128.5	471.0	320.7	No	124.1	407.2
20	0.815	0.0199	-17.006	117.4	356.4	298.0	No	110.3	362.0
25	0.725	0.0158	-18.022	104.4	288.4	285.0	No	94.7	310.6
30	0.628	0.0118	-19.270	90.5	243.8	281.4	No	78.4	257.1
35	0.525	0.0083	-20.826	75.6	212.5	287.5	No	62.0	203.3
40	0.427	0.0055	-22.620	61.5	189.6	300.1	No	47.1	154.6
45	0.332	0.0033	-24.806	47.8	172.4	318.8	No	33.8	111.0
50	0.250	0.0019	-27.270	36.0	159.1	339.3	No	23.2	76.0
55	0.180	0.0010	-30.123	25.9	148.8	360.1	No	14.9	48.8
60	0.121	0.0004	-33.573	17.4	140.8	380.3	No	8.7	28.6
65	0.077	0.0002	-37.499	11.1	134.5	396.8	No	4.7	15.4
70	0.042	0.0001	-42.764	6.1	129.7	411.1	No	2.1	6.8
75	0.022	0.0000	-48.380	3.2	126.2	419.7	No	0.8	2.7
80	0.010	0.0000	-55.229	1.4	123.8	425.1	No	0.3	0.8
85	0.005	0.0000	-61.249	0.7	122.4	427.4	No	0.1	0.2
90	0.000	0.0000	-115.229	0.0	121.9	429.8	No	0.0	0.0

\* Slant distance from antenna center of radiation to location 30 feet (9.1 meters) above ground level at angle below horizontal.

\*\* A negative number indicates that the interfering contour is predicted to reach ground level. If a negative number is present, the interfering contour reaches ground level at the "Horizontal Distance" described below.

\*\*\* Horizontal distance from tower base to interfering contour at the indicated height above ground level. If a negative height above ground level is indicated, this horizontal distance is the distance from the tower base to the interfering contour. This horizontal distance is only relevant if the proposed interference is predicted to occur within 30 feet of ground level.