

DTV Adjacent Channel

According to the new FCC rule 74.706 (d)(2)

Subpart G--Low Power TV, TV Translator, and TV Booster Stations

Sec. 74.706 Digital TV (DTV) station protection.

(d) A low power TV, TV translator or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the DTV station (L/D ratio) fails to meet the following:

(2) + 48 dB for adjacent channel operations at:

(i) The DTV noise-limited perimeter if a low power TV, TV translator or TV booster station is located outside that perimeter.

(ii) At all points within the DTV noise-limited area if a low power TV or TV translator is located within the DTV noise-limited perimeter, as demonstrated by the applicant.

Please find attached a study which shows your signal does not exceed a ratio of desired to undesired that exceeds the required +48 db within the DTV noise-limited perimeter, therefore, the proposed station complies with the FCC rule and does not cause harmful interference to KBDI DTV Channel 38.

At points where HAAT are less than 30.5, 30.5 was used per FCC rule 73.684. For close in calculations (1.5 – 5 Km), the Center of Radiation Above Ground is used unless the HAAT is higher for increased accuracy.

Contour At A Bearing of 000 Degrees From Proposed Station

KBDI -DT Distance-Km	53.48	53.49	53.52	53.56	53.63	54.24	55.30
Bearing-Deg	89.19	88.65	87.58	86.52	85.45	80.17	75.06
ERP-dBk	28.08	28.11	28.15	28.19	28.23	28.44	28.51
HAAT-m	973.44	976.81	983.55	990.29	997.01	1030.23	1065.71
Field Strength	80.79	80.84	80.92	81.00	81.06	81.16	80.85
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	5.95	4.47	2.98	2.24	1.79	.90	.60
ERP-dBk	-7.83	-2.10	.75	7.16	9.09	11.00	11.00
HAAT-m	156.37	156.37	156.37	156.37	156.37	156.37	156.37
Field Strength	94.28	96.28	93.90	96.25	94.93	85.41	78.43
Difference	13.49	15.44	12.98	15.25	13.87	4.25	-2.42

Contour At A Bearing of 030 Degrees From Proposed Station

KBDI -DT Distance-Km	54.23	54.48	55.00	55.53	56.08	58.98	62.15
Bearing-Deg	89.41	88.96	88.07	87.19	86.33	82.29	78.64
ERP-dBk	28.07	28.09	28.13	28.16	28.20	28.36	28.46
HAAT-m	972.03	974.88	980.50	986.02	991.43	1016.92	1040.82
Field Strength	80.25	80.12	79.86	79.59	79.32	77.86	76.27
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	5.07	3.80	2.54	1.90	1.52	.76	.51
ERP-dBk	-2.82	-.55	5.54	9.20	10.21	11.43	11.43
HAAT-m	133.00	133.00	133.00	133.00	133.00	133.00	133.00
Field Strength	99.02	97.36	97.93	97.34	94.94	84.43	77.42
Difference	18.77	17.24	18.07	17.75	15.62	6.57	1.15

Contour At A Bearing of 060 Degrees From Proposed Station

KBDI -DT Distance-Km	54.77	55.21	56.08	56.95	57.83	62.26	66.78
Bearing-Deg	89.99	89.73	89.23	88.74	88.26	86.08	84.19
ERP-dBk	28.05	28.06	28.08	28.10	28.12	28.21	28.28
HAAT-m	968.37	970.01	973.20	976.29	979.29	993.02	1004.91
Field Strength	79.81	79.55	79.02	78.50	77.99	75.47	72.92
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	3.79	2.85	1.90	1.42	1.14	.57	.38
ERP-dBk	1.10	4.40	10.85	12.08	12.75	13.06	13.06
HAAT-m	99.44	99.44	99.44	99.44	99.44	99.44	99.44
Field Strength	102.03	101.04	101.43	98.13	95.20	83.54	76.51
Difference	22.22	21.49	22.41	19.63	17.21	8.07	3.59

Contour At A Bearing of 090 Degrees From Proposed Station

KBDI -DT Distance-Km	54.98	55.48	56.48	57.48	58.48	63.48	68.48
Bearing-Deg	90.77	90.76	90.75	90.73	90.72	90.66	90.61
ERP-dBk	28.03	28.03	28.03	28.03	28.03	28.03	28.03
HAAT-m	964.43	964.47	964.54	964.60	964.67	964.96	965.20
Field Strength	79.61	79.28	78.62	77.97	77.33	74.29	71.19
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	3.43	2.58	1.72	1.29	1.03	.34	.23
ERP-dBk	3.38	8.43	12.90	13.97	14.55	14.62	14.62
HAAT-m	90.00	90.00	90.00	90.00	90.00	59.86	59.86
Field Strength	103.94	104.57	102.80	99.25	96.18	80.70	73.68
Difference	24.33	25.29	24.18	21.28	18.85	6.41	2.49

Contour At A Bearing of 120 Degrees From Proposed Station

KBDI -DT Distance-Km	54.80	55.24	56.13	57.02	57.91	62.42	67.01
Bearing-Deg	91.55	91.80	92.28	92.75	93.20	95.27	97.06
ERP-dBk	28.01	28.00	27.98	27.97	27.96	27.90	27.84
HAAT-m	960.43	959.17	956.72	954.34	952.04	941.51	932.42
Field Strength	79.67	79.36	78.73	78.11	77.49	74.53	71.54
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	3.43	2.58	1.72	1.29	1.03	.18	.12
ERP-dBk	4.19	9.25	13.72	14.79	15.37	15.44	15.44
HAAT-m	90.00	90.00	90.00	90.00	90.00	30.50	30.50
Field Strength	104.76	105.39	103.62	100.07	97.00	75.95	68.98
Difference	25.09	26.03	24.89	21.96	19.51	1.42	-2.56

Contour At A Bearing of 150 Degrees From Proposed Station

KBDI -DT Distance-Km	54.27	54.54	55.09	55.65	56.22	59.26	62.56
Bearing-Deg	92.15	92.59	93.47	94.33	95.17	99.12	102.67
ERP-dBk	27.99	27.98	27.95	27.92	27.90	27.78	27.72
HAAT-m	957.40	955.14	950.68	946.31	942.03	921.92	938.67
Field Strength	79.98	79.76	79.32	78.88	78.43	76.14	74.25
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	3.43	2.58	1.72	1.29	1.03	.30	.20
ERP-dBk	4.02	9.08	13.55	14.61	15.20	15.27	15.27
HAAT-m	90.00	90.00	90.00	90.00	90.00	52.68	52.68
Field Strength	104.58	105.21	103.45	99.89	96.82	80.21	73.20
Difference	24.60	25.45	24.13	21.01	18.39	4.07	-1.05

Contour At A Bearing of 180 Degrees From Proposed Station

KBDI -DT Distance-Km	53.53	53.56	53.62	53.70	53.80	54.58	55.80
Bearing-Deg	92.39	92.93	94.00	95.06	96.12	101.34	106.38
ERP-dBk	27.98	27.97	27.93	27.90	27.87	27.74	27.67
HAAT-m	956.15	953.43	948.00	942.59	937.19	928.11	968.07
Field Strength	80.47	80.41	80.28	80.14	79.98	79.22	78.75
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	3.43	2.58	1.72	1.29	1.03	.18	.12
ERP-dBk	2.98	8.04	12.51	13.58	14.16	14.23	14.23
HAAT-m	90.00	90.00	90.00	90.00	90.00	30.50	30.50
Field Strength	103.55	104.18	102.41	98.86	95.79	74.74	67.77
Difference	23.08	23.77	22.13	18.72	15.81	-4.48	-10.98

Contour At A Bearing of 210 Degrees From Proposed Station

KBDI -DT Distance-Km	52.77	52.54	52.09	51.66	51.24	49.41	48.02
Bearing-Deg	92.21	92.69	93.67	94.66	95.67	100.96	106.61
ERP-dBk	27.99	27.97	27.94	27.91	27.88	27.74	27.67
HAAT-m	957.09	954.63	949.66	944.60	939.46	925.09	969.89
Field Strength	81.02	81.14	81.38	81.61	81.83	82.89	84.27
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	3.43	2.58	1.72	1.29	1.03	.38	.25
ERP-dBk	1.22	6.28	10.75	11.81	12.40	12.47	12.47
HAAT-m	90.00	90.00	90.00	90.00	90.00	65.77	65.77
Field Strength	101.78	102.41	100.65	97.09	94.02	79.37	72.34
Difference	20.76	21.27	19.27	15.48	12.19	-3.52	-11.93

Contour At A Bearing of 240 Degrees From Proposed Station

KBDI -DT Distance-Km	52.20	51.78	50.93	50.10	49.26	45.20	41.34
Bearing-Deg	91.63	91.92	92.52	93.13	93.77	97.29	101.49
ERP-dBk	28.00	28.00	27.98	27.96	27.94	27.84	27.73
HAAT-m	960.03	958.56	955.53	952.40	949.17	931.23	929.30
Field Strength	81.47	81.75	82.31	82.88	83.45	85.72	88.06
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	4.45	3.34	2.23	1.67	1.34	.67	.45
ERP-dBk	-1.93	.07	7.36	9.55	10.38	11.15	11.15
HAAT-m	116.78	116.78	116.78	116.78	116.78	116.78	116.78
Field Strength	99.60	97.52	99.06	96.85	94.16	83.02	75.99
Difference	18.13	15.77	16.75	13.97	10.71	-2.70	-12.07

Contour At A Bearing of 270 Degrees From Proposed Station

KBDI -DT Distance-Km	51.98	51.48	50.48	49.48	48.48	43.48	38.48
Bearing-Deg	90.81	90.82	90.84	90.85	90.87	90.97	91.10
ERP-dBk	28.03	28.03	28.03	28.03	28.03	28.02	28.02
HAAT-m	964.20	964.16	964.08	963.99	963.90	963.39	962.75
Field Strength	81.69	82.05	82.77	83.51	84.27	87.26	90.57
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	5.30	3.98	2.66	1.99	1.60	.80	.53
ERP-dBk	-3.97	-1.07	4.43	8.81	9.89	11.29	11.29
HAAT-m	139.26	139.26	139.26	139.26	139.26	139.26	139.26
Field Strength	97.94	96.98	97.03	97.22	94.93	84.69	77.68
Difference	16.25	14.93	14.26	13.71	10.66	-2.57	-12.89

Contour At A Bearing of 300 Degrees From Proposed Station

KBDI -DT Distance-Km	52.18	51.74	50.88	50.02	49.17	45.00	41.03
Bearing-Deg	89.99	89.72	89.15	88.56	87.95	84.57	80.52
ERP-dBk	28.05	28.06	28.09	28.11	28.13	28.27	28.42
HAAT-m	968.37	970.12	973.70	977.40	981.23	1002.52	1028.05
Field Strength	81.62	81.95	82.63	83.32	84.02	86.92	89.76
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.03	4.53	3.03	2.27	1.82	.91	.61
ERP-dBk	-7.10	-1.24	1.46	7.93	9.98	11.96	11.96
HAAT-m	158.56	158.56	158.56	158.56	158.56	158.56	158.56
Field Strength	95.03	97.19	94.67	97.10	95.91	86.49	79.51
Difference	13.41	15.24	12.04	13.78	11.89	-.43	-10.25

Contour At A Bearing of 330 Degrees From Proposed Station

KBDI -DT Distance-Km	52.73	52.48	52.00	51.54	51.09	49.09	47.54
Bearing-Deg	89.40	88.92	87.96	86.97	85.97	80.72	75.07
ERP-dBk	28.08	28.10	28.13	28.17	28.21	28.42	28.51
HAAT-m	972.13	975.13	981.21	987.39	993.69	1026.79	1065.62
Field Strength	81.29	81.51	81.95	82.38	82.80	84.79	86.25
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.15	4.62	3.08	2.31	1.85	.93	.62
ERP-dBk	-6.89	-1.51	1.23	7.53	9.75	11.83	11.83
HAAT-m	161.56	161.56	161.56	161.56	161.56	161.56	161.56
Field Strength	95.27	96.97	94.52	96.81	95.82	86.53	79.54
Difference	13.98	15.46	12.57	14.43	13.02	1.74	-6.71