

Interference Exhibit
Minor Change to K233BT
Des Moines, IA
394m RC-AMSL
126.4m AGL
250 Watts

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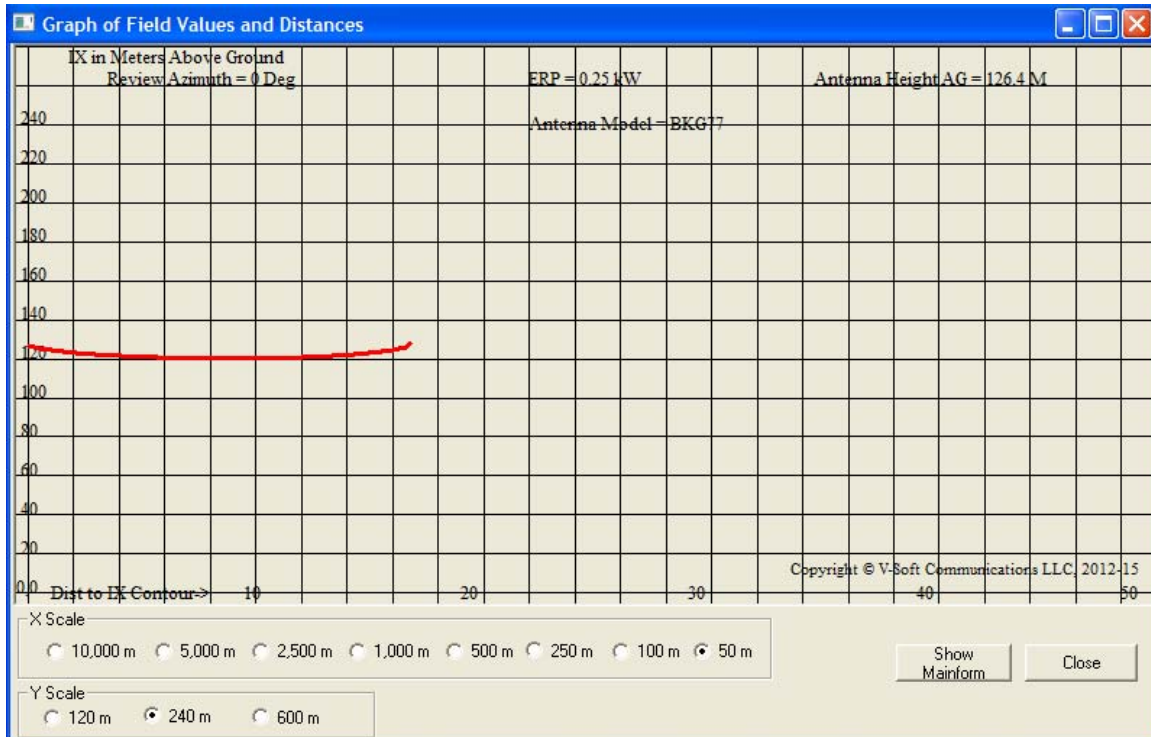
Interference Compliance

Contour protection, as required by C.F.R. Section 74.1204 to co-channel and first, second and third adjacent channels is demonstrated herein by Figure 1. The instant application seeks waiver processing under 74.1204 with respect to KGGO, a second adjacent facility.

74.1204

The instant application seeks a waiver of the second adjacent contour protection required by 47 C.F.R. Section 74.1204. The proposed facility will not interfere with any authorized radio service, specifically, KGGO.

Below is a graphic and tabular output showing the interfering 134 dB F(50,10) contour of the proposed facility does not reach ground level. There are no tall buildings within this contour.



K233BT Des Moines, IA

74.1204(d) Showing

Translator Maximum Licensed ERP = 0.25

Translator Antenna Height AG = 126.4 Meters

K233BT Antenna Model = BKG77

Protected Station's Contour = 93.98467 dBu

Translator's full Interference contour 133.98467

Review Azimuth = 0 Degrees True

Relative Field on the horizon at Review Azimuth = 0.571

Translator ERP on the horizon at Review Azimuth = 0.082 kW

Distance between stations = 15.0 km

Protected Station= KGGO, 100 kW, 597 M Meters COR AMSL

Depression Angle From Horizon(Deg) (m)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground
00.00	1.0	0.57	0.1427	016.7515	016.7515	126.400
01.00	1.0	0.57	0.1427	016.7515	016.7490	126.108
02.00	1.0	0.57	0.1427	016.7515	016.7413	125.815
03.00	0.999	0.57	0.1425	016.7348	016.7118	125.524
04.00	0.999	0.57	0.1425	016.7348	016.6940	125.233
05.00	0.999	0.57	0.1425	016.7348	016.6711	124.941
06.00	0.999	0.57	0.1425	016.7348	016.6431	124.651
07.00	0.995	0.57	0.1413	016.6678	016.5435	124.369
08.00	0.991	0.57	0.1402	016.6008	016.4392	124.090
09.00	0.987	0.57	0.1391	016.5338	016.3302	123.814
10.00	0.982	0.57	0.1377	016.4500	016.2001	123.543
11.00	0.977	0.57	0.1363	016.3662	016.0656	123.277
12.00	0.972	0.57	0.1349	016.2825	015.9267	123.015
13.00	0.966	0.57	0.1332	016.1820	015.7672	122.760
14.00	0.96	0.57	0.1316	016.0815	015.6038	122.510
15.00	0.954	0.57	0.1299	015.9810	015.4364	122.264
16.00	0.947	0.57	0.1280	015.8637	015.2492	122.027
17.00	0.941	0.57	0.1264	015.7632	015.0744	121.791
18.00	0.934	0.57	0.1245	015.6459	014.8802	121.565
19.00	0.926	0.57	0.1224	015.5119	014.6668	121.350
20.00	0.918	0.57	0.1203	015.3779	014.4505	121.140
21.00	0.91	0.57	0.1182	015.2439	014.2314	120.937
22.00	0.9	0.57	0.1156	015.0764	013.9786	120.752
23.00	0.891	0.57	0.1133	014.9256	013.7391	120.568
24.00	0.881	0.57	0.1108	014.7581	013.4822	120.397

25.00	0.872	0.57	0.1085	014.6073	013.2387	120.227
26.00	0.862	0.57	0.1061	014.4398	012.9784	120.070
27.00	0.852	0.57	0.1036	014.2723	012.7167	119.921
28.00	0.84	0.57	0.1007	014.0713	012.4242	119.794
29.00	0.829	0.57	0.0981	013.8870	012.1459	119.667
30.00	0.818	0.57	0.0955	013.7028	011.8669	119.549
31.00	0.806	0.57	0.0927	013.5017	011.5732	119.446
32.00	0.795	0.57	0.0902	013.3175	011.2939	119.343
33.00	0.783	0.57	0.0875	013.1165	011.0004	119.256
34.00	0.771	0.57	0.0849	012.9154	010.7074	119.178
35.00	0.758	0.57	0.0820	012.6977	010.4013	119.117
36.00	0.745	0.57	0.0792	012.4799	010.0964	119.065
37.00	0.732	0.57	0.0765	012.2621	009.7930	119.020
38.00	0.719	0.57	0.0738	012.0444	009.4911	118.985
39.00	0.706	0.57	0.0712	011.8266	009.1910	118.957
40.00	0.691	0.57	0.0682	011.5753	008.8672	118.960
41.00	0.676	0.57	0.0652	011.3240	008.5464	118.971
42.00	0.661	0.57	0.0624	011.0728	008.2287	118.991
43.00	0.646	0.57	0.0596	010.8215	007.9143	119.020
44.00	0.631	0.57	0.0568	010.5702	007.6036	119.057
45.00	0.616	0.57	0.0542	010.3189	007.2966	119.103
46.00	0.6	0.57	0.0514	010.0509	006.9820	119.170
47.00	0.584	0.57	0.0487	009.7829	006.6719	119.245
48.00	0.568	0.57	0.0461	009.5149	006.3667	119.329
49.00	0.553	0.57	0.0437	009.2636	006.0775	119.409
50.00	0.538	0.57	0.0413	009.0123	005.7930	119.496
51.00	0.523	0.57	0.0390	008.7611	005.5135	119.591
52.00	0.508	0.57	0.0368	008.5098	005.2391	119.694
53.00	0.494	0.57	0.0348	008.2753	004.9802	119.791
54.00	0.479	0.57	0.0328	008.0240	004.7164	119.908
55.00	0.465	0.57	0.0309	007.7895	004.4679	120.019
56.00	0.45	0.57	0.0289	007.5382	004.2153	120.151
57.00	0.436	0.57	0.0271	007.3037	003.9779	120.275
58.00	0.421	0.57	0.0253	007.0524	003.7372	120.419
59.00	0.406	0.57	0.0235	006.8011	003.5028	120.570
60.00	0.391	0.57	0.0218	006.5498	003.2749	120.728
61.00	0.376	0.57	0.0202	006.2986	003.0536	120.891
62.00	0.361	0.57	0.0186	006.0473	002.8390	121.061
63.00	0.345	0.57	0.0170	005.7793	002.6237	121.251
64.00	0.329	0.57	0.0155	005.5113	002.4160	121.447
65.00	0.313	0.57	0.0140	005.2432	002.2159	121.648
66.00	0.297	0.57	0.0126	004.9752	002.0236	121.855
67.00	0.282	0.57	0.0114	004.7239	001.8458	122.052
68.00	0.268	0.57	0.0103	004.4894	001.6818	122.237
69.00	0.246	0.57	0.0086	004.1209	001.4768	122.553
70.00	0.239	0.57	0.0082	004.0036	001.3693	122.638

71.00	0.225	0.57	0.0072	003.7691	001.2271	122.836
72.00	0.225	0.57	0.0072	003.7691	001.1647	122.815
73.00	0.199	0.57	0.0057	003.3336	000.9746	123.212
74.00	0.188	0.57	0.0050	003.1493	000.8681	123.373
75.00	0.176	0.57	0.0044	002.9483	000.7631	123.552
76.00	0.166	0.57	0.0039	002.7808	000.6727	123.702
77.00	0.155	0.57	0.0034	002.5965	000.5841	123.870
78.00	0.145	0.57	0.0030	002.4290	000.5050	124.024
79.00	0.137	0.57	0.0027	002.2950	000.4379	124.147
80.00	0.129	0.57	0.0024	002.1609	000.3752	124.272
81.00	0.12	0.57	0.0021	002.0102	000.3145	124.415
82.00	0.115	0.57	0.0019	001.9264	000.2681	124.492
83.00	0.11	0.57	0.0017	001.8427	000.2246	124.571
84.00	0.105	0.57	0.0016	001.7589	000.1839	124.651
85.00	0.103	0.57	0.0015	001.7254	000.1504	124.681
86.00	0.102	0.57	0.0015	001.7087	000.1192	124.696
87.00	0.1	0.57	0.0014	001.6752	000.0877	124.727
88.00	0.102	0.57	0.0015	001.7087	000.0596	124.692
89.00	0.104	0.57	0.0015	001.7422	000.0304	124.658
90.00	0.105	0.57	0.0016	001.7589	000.0000	124.641

X-Field™ By V-Soft Communications®LLC

AM Fill-In

The instant application is proposed as a fill in for KWKY AM 1150. The proposed 60 dBu F(50,50) contour is within the 2 mV/m contour of KWKY and within 25 miles of the KWKY transmit site (see Figure 2).

RF Electromagnetic Exposure Analysis

Using a worst case assumption of maximum downward radiation (F=1.0) the RF exposure at 2m above ground level is 0.1% of the controlled standard. This is inconsequential when added to the RF on the tower.

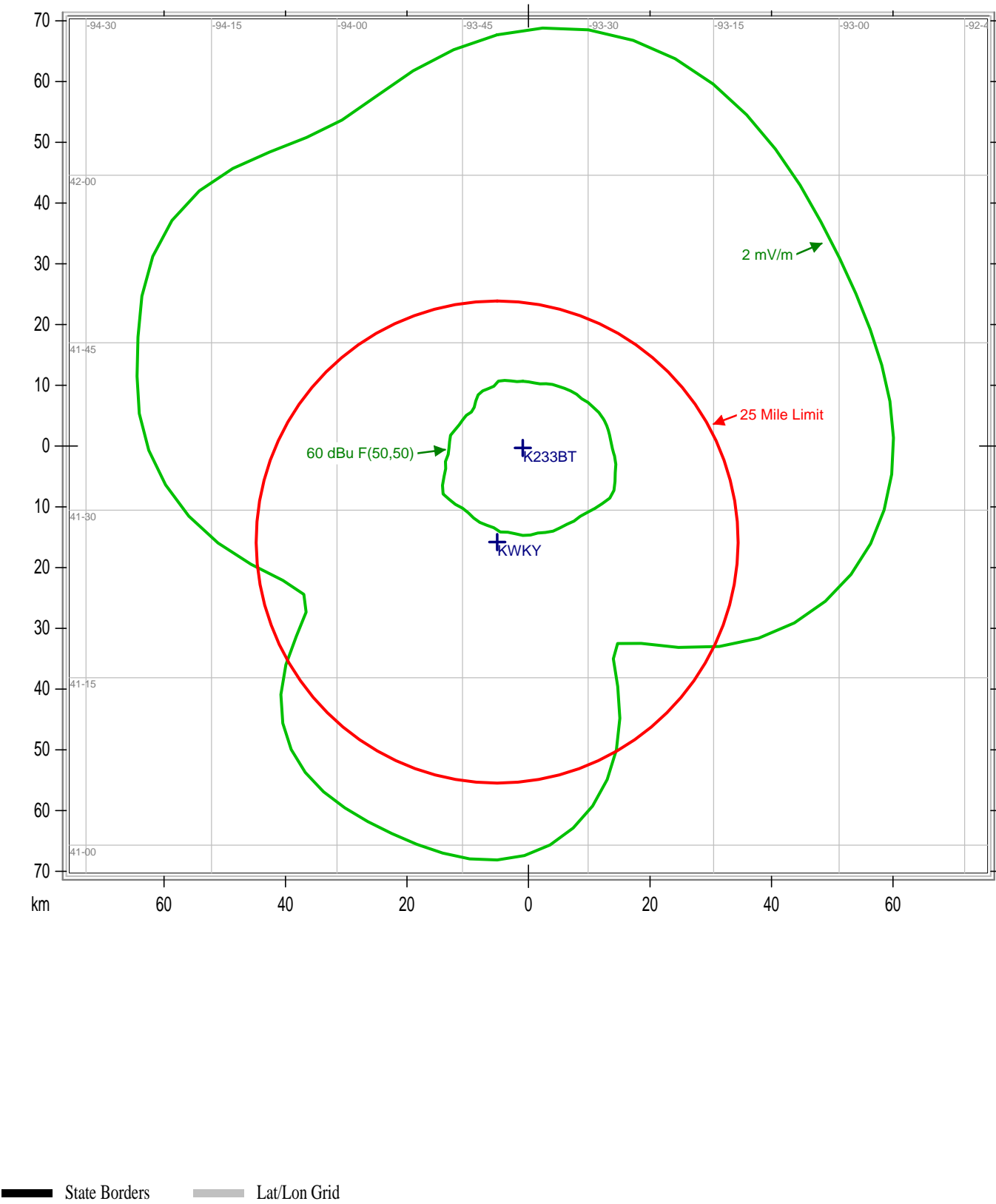
The tower is fenced with RF warning signs. The power will be reduced or shut off to allow necessary access to the tower.

MHz, Pwr= 0.25 kW DA, HAAT= 125.5 M,
Average Protected F(50-50)= 14.38 km
Standard Directional

DI SPLAY DATES
DATA 07-07-15
SEARCH 08-18-15

CH CITY	CALL	TYPE	ANT STATE	AZI ---	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Over lap	*OUT* in km)
235C0	KGGO	LIC_C_	IA	73.4 253.5	15.03 BMLH19870212KB	41 37 54.0 93 27 24.0	100.000 325	10.7 597	75.1 Radio Li cense	-9.8	-61.1*
233C1	KKEZ	LIC_CN	IA	334.7 154.3	111.12 BLH7723	42 29 43.0 94 12 33.0	100.000 183	159.5 521	61.9 Digi ty 3e Li cense,	-60.0*	10.1 LI c
233D	K233BT	LIC_C_	IA	42.5 222.6	6.28 BLFT20150327AAC	41 38 05.0 93 34 44.0	0.250 308	47.1 374	13.8 St. Gabriel Communi cations	-53.2*	-49.6*
233C	KRXL	LIC_CY	MO	145.7 326.5	180.91 BLH19900604KE	40 14 34.0 92 25 42.0	100.000 308	170.8 578	71.5 Kirx, Inc.	-4.7	60.8
286C3	KCYZ	LIC_CN	IA	358.4 178.4	53.85 BLH19980203KC	42 04 38.0 93 38 54.0	25.000 100	9.0 403	67.2 Ci ti casters Li censes, Inc.	11.5R	42.4M
231C1	KRNA	LIC_CN	IA	82.7 263.9	149.86 BLH19911115KA	41 45 00.0 91 50 16.0	100.000 299	9.9 546	71.5 Townsquare Medi a Cedar Rap	125.4	77.2
287C2	KEDB	LIC_NCX	IA	146.9 327.3	93.14 BLH20081028ACO	40 53 23.0 93 01 29.0	34.000 182	9.0 475	67.2 Honey Creek Broadcas ting,	14.5R	78.6M
233L1	KULT-LP	LIC_---	IA	43.0 223.8	140.84 BLL20031017AAB	42 30 50.0 92 27 30.0	0.100 29	307	109.6 Board Of Control For Stude	93.1	93.1
236D	K236BB	LIC_C_	IA	334.4 154.0	109.69 BLFT20070514ABL	42 28 53.0 94 12 29.0	0.004 54	0.1 393	3.2 First Ventures Capital Par	97.9	105.7
230C1	KIAI	LIC_CN	IA	13.8 194.1	180.37 BLH19911024KD	43 10 04.0 93 06 05.0	100.000 241	9.0 585	67.1 Digi ty 3e Li cense, LI c	160.2	112.5
231C	KQCH	LIC_CY	NE	261.7 80.1	202.38 BMLH20080129ABC	41 18 16.0 96 01 41.0	100.000 361	11.2 702	77.9 Journal Broadcast Corporat	177.2	123.6

Terrain database is NED 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding. Call signs with strikeout need not be protected.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
***affixed to 'IN' or 'OUT' values = site inside restricted contour.



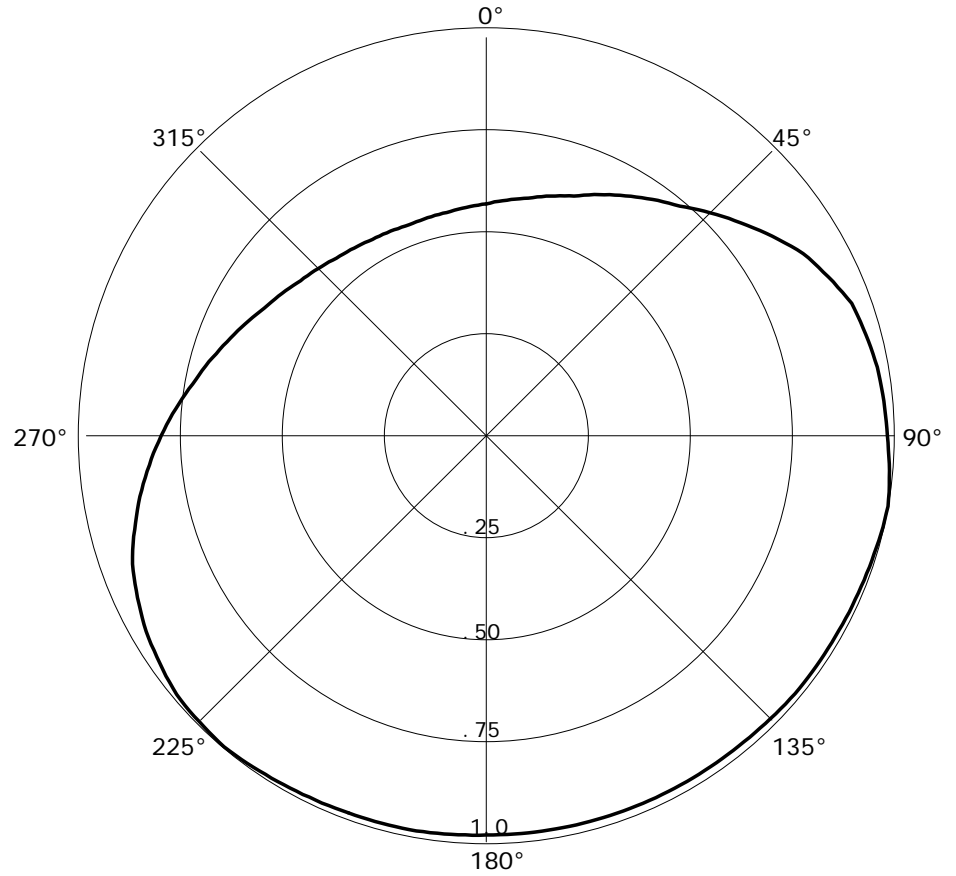
K233BT

08-18-2015

RMS(V) = .853

Graph is Relative Field

Azi	Field	dBk	kW
000	0.571	-10.888	0.082
010	0.594	-10.545	0.088
020	0.628	-10.061	0.099
030	0.682	-09.345	0.116
040	0.738	-08.659	0.136
050	0.815	-07.797	0.166
060	0.897	-06.965	0.201
070	0.953	-06.439	0.227
080	0.973	-06.258	0.237
090	0.983	-06.170	0.242
100	1.000	-06.021	0.250
110	0.992	-06.090	0.246
120	0.988	-06.125	0.244
130	0.988	-06.125	0.244
140	0.983	-06.170	0.242
150	0.983	-06.170	0.242
160	0.983	-06.170	0.242
170	0.983	-06.170	0.242
180	0.983	-06.170	0.242
190	0.988	-06.125	0.244
200	0.988	-06.125	0.244
210	0.992	-06.090	0.246
220	1.000	-06.021	0.250
230	0.991	-06.099	0.246
240	0.963	-06.348	0.232
250	0.923	-06.717	0.213
260	0.862	-07.310	0.186
270	0.797	-07.991	0.159
280	0.731	-08.742	0.134
290	0.676	-09.422	0.114
300	0.628	-10.061	0.099
310	0.594	-10.545	0.088
320	0.571	-10.888	0.082
330	0.558	-11.088	0.078
340	0.553	-11.166	0.076
350	0.558	-11.088	0.078



TX station:

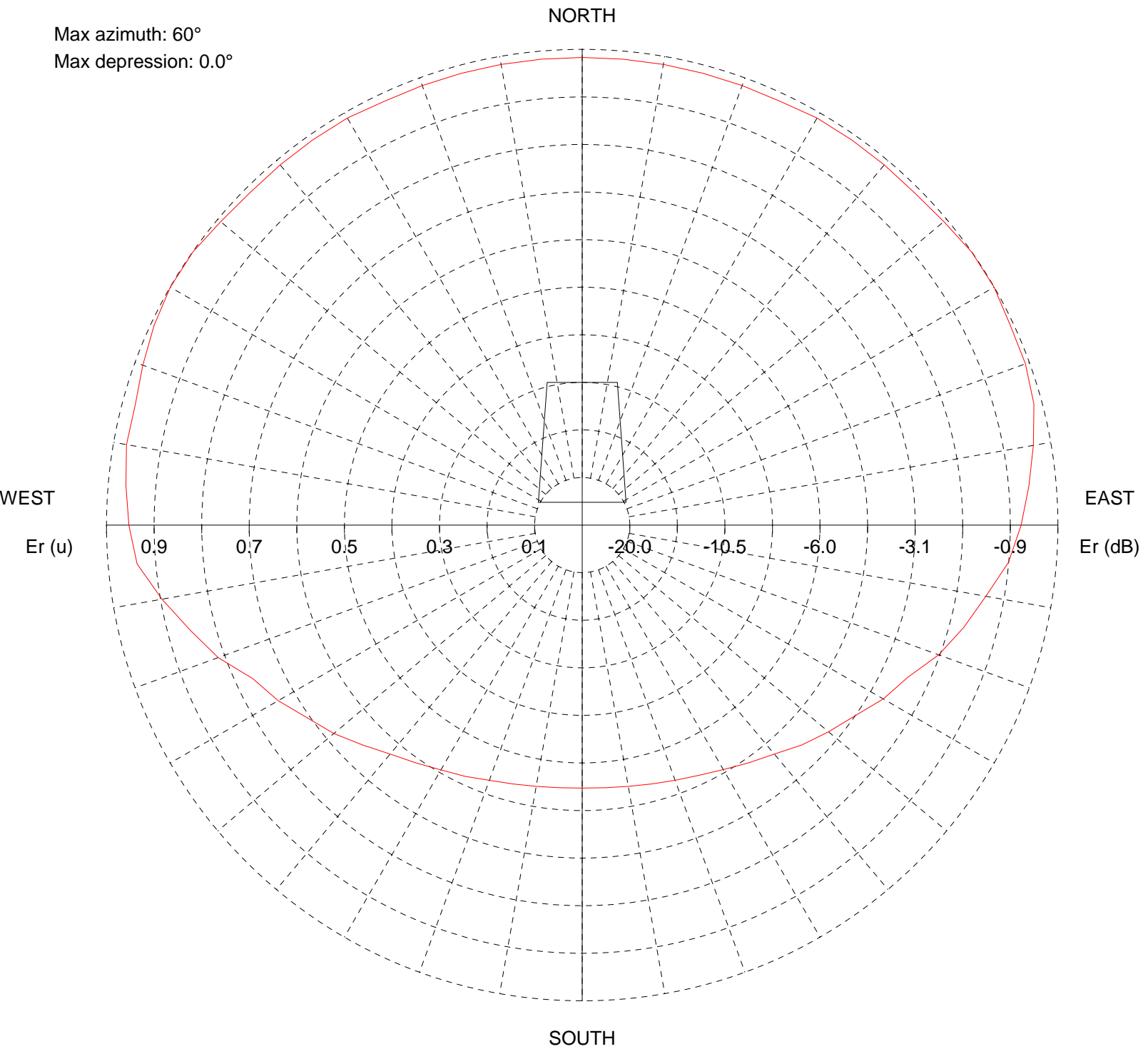
Site name:

Frequency: 100.00 MHz

Horizontal diagram of Maxima

Max azimuth: 60°

Max depression: 0.0°



— 0.0° depres. (Total antenna), Gain (dBd): -3.03 ERP T.max (KW): 0.498

ERP E.max (KW): 0.387

TX station:

Site name:

Frequency: 100.00 MHz

Horizontal diagram of Maxima

Az (°)	Dep (°)	Er (%)	ERP (W)	Az (°)	Dep (°)	Er (%)	ERP (W)	Az (°)	Dep (°)	Er (%)	ERP (W)
0.0	0.0	98.3	373.6	120.0	0.0	73.1	206.6	240.0	0.0	73.8	210.7
5.0	0.0	98.3	373.6	125.0	0.0	69.9	189.2	245.0	0.0	76.4	225.7
10.0	0.0	98.3	373.6	130.0	0.0	67.6	176.7	250.0	0.0	81.5	256.6
15.0	0.0	98.3	373.6	135.0	0.0	65.3	165.1	255.0	0.0	85.3	281.6
20.0	0.0	98.3	373.6	140.0	0.0	62.8	152.7	260.0	0.0	89.7	311.1
25.0	0.0	98.3	373.6	145.0	0.0	61.0	144.0	265.0	0.0	93.9	341.1
30.0	0.0	98.8	377.5	150.0	0.0	59.4	136.3	270.0	0.0	95.3	351.1
35.0	0.0	98.8	377.5	155.0	0.0	58.0	130.3	275.0	0.0	96.3	358.5
40.0	0.0	98.8	377.5	160.0	0.0	57.1	126.1	280.0	0.0	97.3	366.1
45.0	0.0	98.8	377.5	165.0	0.0	56.3	122.8	285.0	0.0	97.3	366.1
50.0	0.0	99.2	380.8	170.0	0.0	55.8	120.3	290.0	0.0	98.3	373.6
55.0	0.0	100.0	386.5	175.0	0.0	55.4	118.7	295.0	0.0	99.3	381.4
60.0	0.0	100.0	386.7	180.0	0.0	55.3	118.2	300.0	0.0	100.0	386.7
65.0	0.0	99.3	381.4	185.0	0.0	55.4	118.7	305.0	0.0	100.0	386.5
70.0	0.0	99.1	380.0	190.0	0.0	55.8	120.3	310.0	0.0	99.2	380.8
75.0	0.0	98.3	373.6	195.0	0.0	56.3	122.8	315.0	0.0	98.8	377.5
80.0	0.0	96.3	358.5	200.0	0.0	57.1	126.1	320.0	0.0	98.8	377.5
85.0	0.0	94.3	343.8	205.0	0.0	58.3	131.4	325.0	0.0	98.8	377.5
90.0	0.0	92.3	329.3	210.0	0.0	59.4	136.5	330.0	0.0	98.8	377.5
95.0	0.0	90.0	312.9	215.0	0.0	61.0	144.0	335.0	0.0	98.3	373.6
100.0	0.0	86.2	287.1	220.0	0.0	62.8	152.7	340.0	0.0	98.3	373.6
105.0	0.0	83.0	266.7	225.0	0.0	65.3	165.1	345.0	0.0	98.3	373.6
110.0	0.0	79.7	245.9	230.0	0.0	68.2	179.6	350.0	0.0	98.3	373.6
115.0	0.0	75.6	221.0	235.0	0.0	70.6	192.7	355.0	0.0	98.3	373.6