

Technical Report K242BI Minor Modification

This technical report is submitted for a minor modification to K242BI, FCC file no. BLFT-20131021AHH. Following the waiver window allowing relocation of translators within a 250 mile radius and move to a non-adjacent channel, this application is submitted for a tower site move and corresponding change to channel 223. The translator is to serve as a fill-in facility to rebroadcast KVOM(AM) 800 kHz at Morrilton, AR, FCC facility I.D. 43830.

K242BI Modification Analysis:

An overlap study (exhibit E-1) shows the K242BI modification will not produce any interference overlap to other facilities. Exhibit E-2 shows the K242BI relocation is within the allowed 250 mile waiver.

Antenna System:

K242BI is to be relocated to an existing tower at coordinates:

35 08 52N 092 52 05W NAD 27.

A Nicom BKG-77 two bay, full wavelength-spaced, directional antenna rotated at a 90 degree azimuth (exhibit E-3) will be mounted at a COR AGL of 28 meters, 346 meters AMSL and operate at 0.250 kW ERP. The 60 dBu contour is within the primary KVOM(AM) 2.0 mV/m daytime contour, as shown in exhibit E-4.

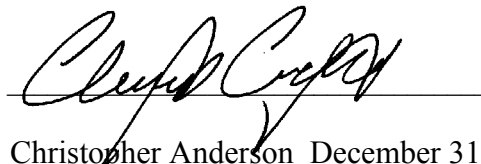
RF Exposure Calculation:

The RF contribution was calculated using the FMModel program. The resulting RF is $3.56 \mu\text{W}/\text{cm}^2$ at a distance of 17.5 meters from the base of the tower, which is well

below 5% of the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure allowing exclusion from consideration.

Conclusion:

It is concluded that the K242BI modification complies with all Commission rules and policies.

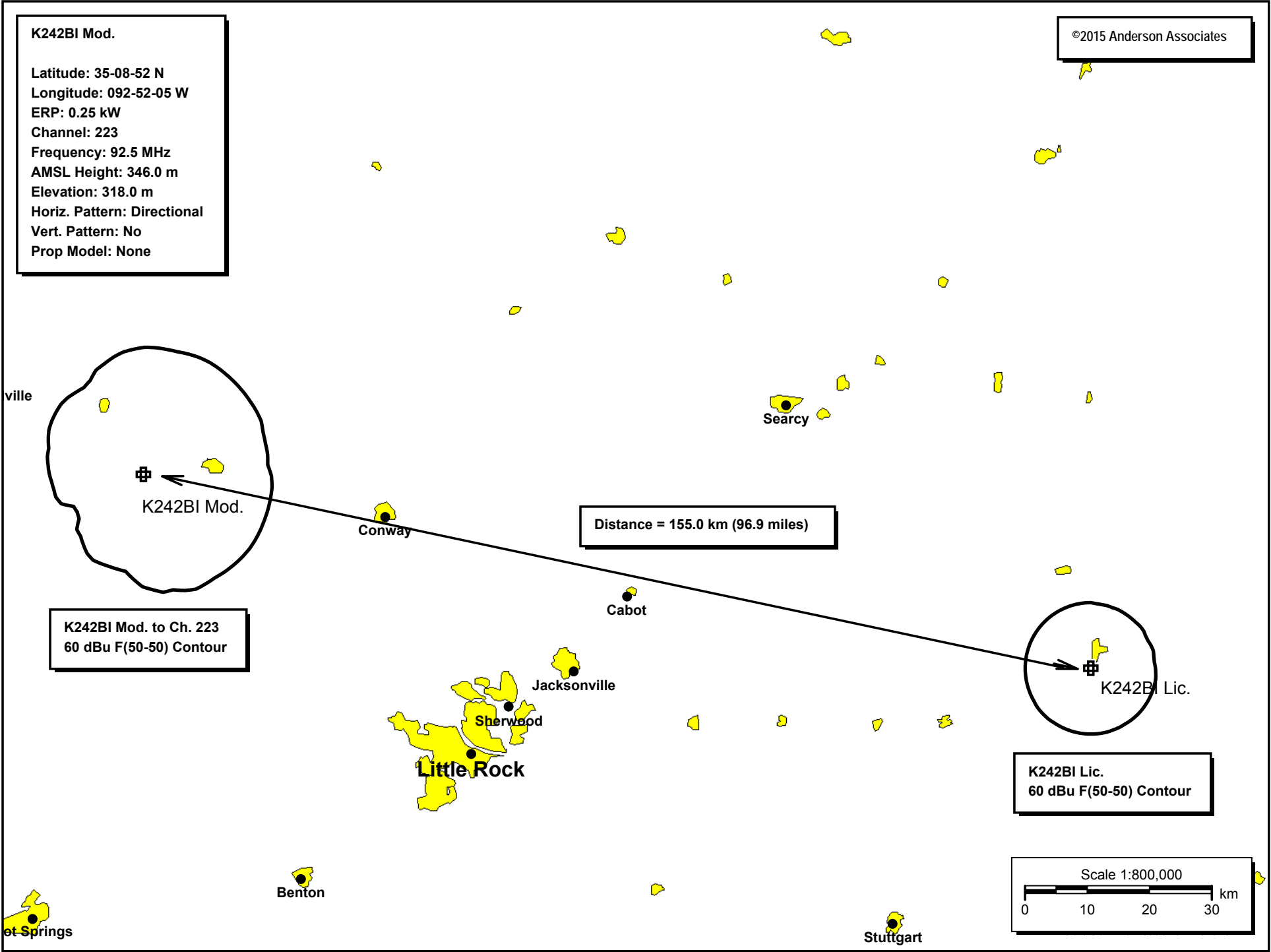
A handwritten signature in black ink, appearing to read 'Christopher Anderson', is written over a horizontal line.

Christopher Anderson December 31, 2015
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REFERENCE	CH#	223D	-	92.5 MHz	Pwr=	0.25 kW	DA,	HAAT=	224 M,	COR=	346 M	DISPLAY DATES		
35 08 52.0 N.					Average	Protected	F(50-50)=	19.59	km			DATA	12-30-15	
92 52 05.0 W.					Standard	Directional						SEARCH	12-31-15	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kW)	INT(km)	PRO(km)	*IN*	*OUT*			
CITY		STATE		<--	FILE #	LANG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)			
222C1	KIPR	LIC_CN		143.3	107.51	34 22 12.0	100.000	103.0	70.7	-15.8	6.8			
Pine Bluff		AR		323.7	BLH19860501KF	92 10 07.0	286	371	Radio Li	cense	Hol di ng	Cbc,		
224C3	KASR	LIC_C_		97.7	73.18	35 03 26.0	25.000	61.9	40.5	-9.4	1.9			
Vilonia		AR		278.1	BLH20050721ABN	92 04 16.0	100	207	Creative Medi	a	Incorporate			
220A	KWOX	LIC_CX		176.2	27.05	34 54 16.0	0.140	0.8	13.5	25.5R	1.6M			
Perryville		AR		356.2	BLEDD20111021AAA	92 50 54.0	75	282	Perry County	Educational	M			
220A	KXRJ	LIC_HN		304.0	29.61	35 17 47.0	0.100	0.7	5.6	25.5R	4.1M			
Russellville		AR		123.9	BLEDD19890405KB	93 08 18.0	-28	124	Arkansas Tech	Uni versi ty				
226D	KHDX	LIC_CN		97.6	39.15	35 06 01.0	0.008	0.2	3.0	18.2	35.1			
Conway		AR		277.9	BLEDD19810327AB	92 26 29.0	18	120	Hendri x	College				
224C3	KDYN-FM	LIC_CX		292.3	100.16	35 29 09.1	12.500	64.2	43.6	19.1	31.7			
Coal Hill		AR		111.7	BLH20130417ABG	93 53 29.5	144	327	Ozark Communi	cations, Inc.				
225C3	KVRE	LIC_CX		198.1	59.05	34 38 34.0	25.000	3.9	31.1	38.4	20.6			
Hot Springs Village		AR		18.0	BLH20051207AAA	93 04 08.0	100	339	Caddo Broadcasti	ng Company				
221C3	KHPQ	LIC_NCN		33.8	66.42	35 38 37.0	10.000	4.4	44.5	41.1	20.7			
Clinton		AR		214.0	BLH19940712KZ	92 27 33.0	156	439	King-sulli van	Radio				
225C3	KVRE	LIC_C_		198.3	59.18	34 38 32.0	25.000	3.9	31.0	38.6	20.8			
Hot Springs Village		AR		18.2	BLH20140828ACW	93 04 17.0	99	338	Caddo Broadcasti	ng Company				

Terrain database is FCC NGDC 30 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.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

E-2 K242BI Mod. 250 Mlle Waiver Relocation Plot

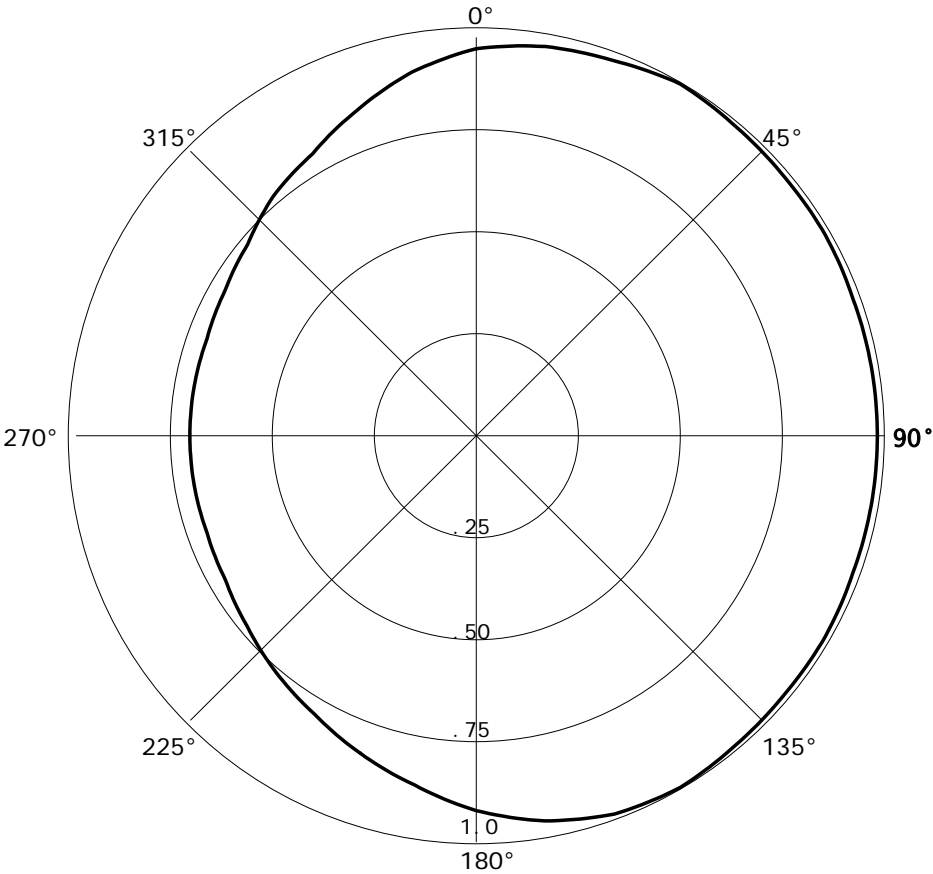


E-3 K242BI Mod. Directional Antenna Pattern

RMS(V) = .886

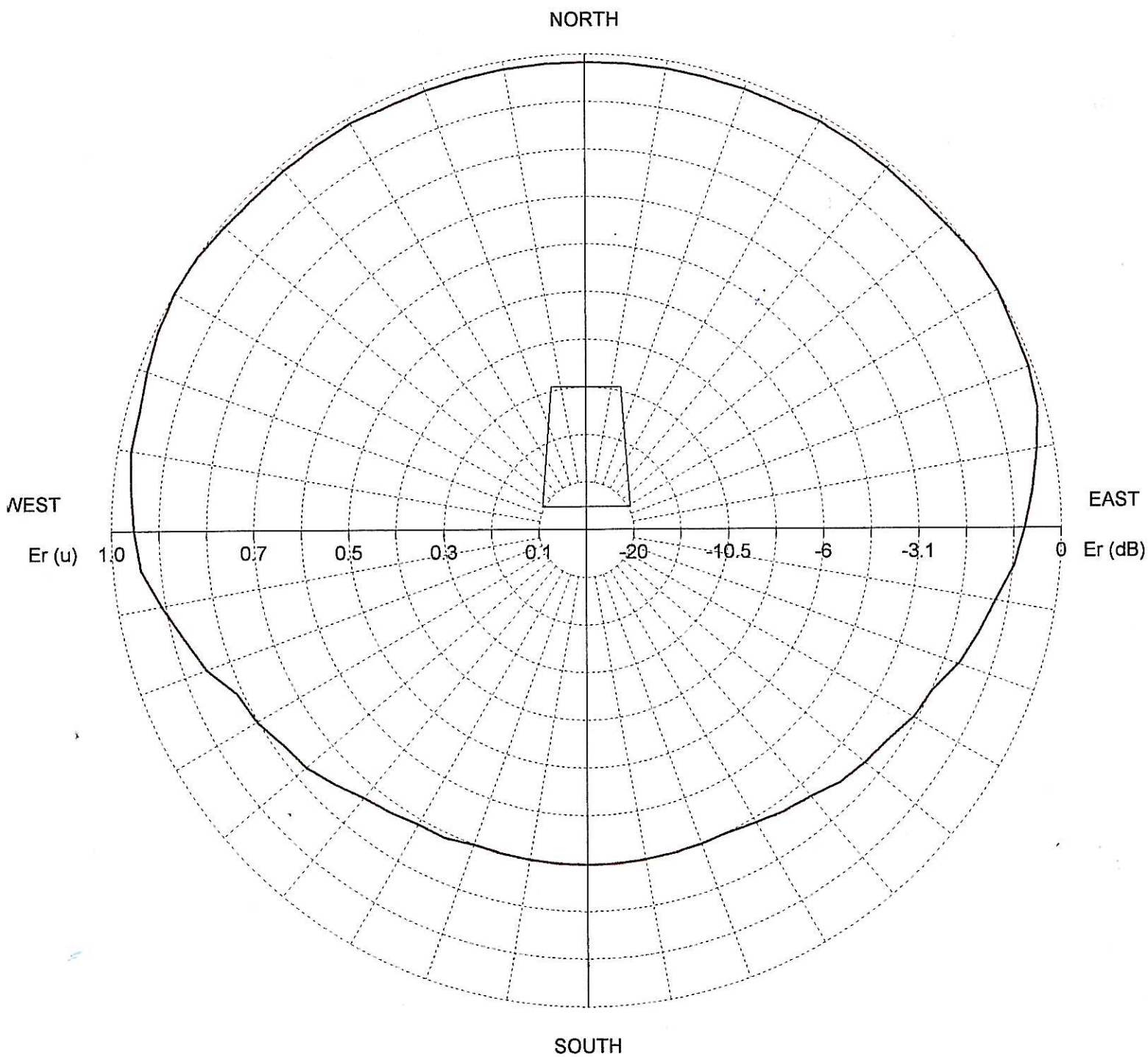
Graph is Relative Field

Azi	Field	dBk	kW
000	0.953	-06.439	0.227
010	0.973	-06.258	0.237
020	0.983	-06.170	0.242
030	1.000	-06.021	0.250
040	0.992	-06.090	0.246
050	0.988	-06.125	0.244
060	0.988	-06.125	0.244
070	0.983	-06.170	0.242
080	0.983	-06.170	0.242
090	0.983	-06.170	0.242
100	0.983	-06.170	0.242
110	0.983	-06.170	0.242
120	0.988	-06.125	0.244
130	0.988	-06.125	0.244
140	0.992	-06.090	0.246
150	1.000	-06.021	0.250
160	0.991	-06.099	0.246
170	0.963	-06.348	0.232
180	0.923	-06.717	0.213
190	0.873	-07.200	0.191
200	0.832	-07.618	0.173
210	0.792	-08.046	0.157
220	0.762	-08.382	0.145
230	0.732	-08.730	0.134
240	0.710	-08.995	0.126
250	0.702	-09.094	0.123
260	0.702	-09.094	0.123
270	0.702	-09.094	0.123
280	0.702	-09.094	0.123
290	0.702	-09.094	0.123
300	0.712	-08.971	0.127
310	0.732	-08.730	0.134
320	0.772	-08.268	0.149
330	0.802	-07.937	0.161
340	0.853	-07.402	0.182
350	0.909	-06.849	0.207



Frequency: 98.00 MHz

Horizontal diagram



—— 0.0° depres. (Total antenna), Gain (dBd): 0.2 ERP T.max (KW): 1.037 ERP E.max (KW): 0.805

TX station: BGK77/2

Site name:

Frequency: 98.00 MHz

Horizontal diagram at 0.0° depres. (Total antenna)

Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)
0.0	98.3	778.1	120.0	79.2	505.6	240.0	80.2	518.5
10.0	98.3	778.1	130.0	76.2	468.0	250.0	85.3	585.4
20.0	98.3	778.1	140.0	73.2	431.7	260.0	90.9	666.0
30.0	98.8	786.1	150.0	71.0	406.5	270.0	95.3	731.2
40.0	98.8	786.1	160.0	70.2	397.0	280.0	97.3	762.3
50.0	99.2	792.9	170.0	70.2	397.0	290.0	98.3	778.1
60.0	100.0	805.3	180.0	70.2	397.0	300.0	100.0	805.3
70.0	99.1	791.4	190.0	70.2	397.0	310.0	99.2	792.9
80.0	96.3	746.7	200.0	70.2	397.0	320.0	98.8	786.1
90.0	92.3	685.7	210.0	71.2	408.4	330.0	98.8	786.1
100.0	87.3	613.2	220.0	73.2	431.7	340.0	98.3	778.1
110.0	83.2	558.1	230.0	77.2	480.4	350.0	98.3	778.1

E-4 K242BI Mod. 60 dBu Contour Plot

