

### Channel Study

REFERENCE CH# 234D - 94.7 MHz, Pwr= 0.25 kW DA, HAAT= -14.8 M, COR= 687 M DISPLAY DATES  
 36 07 49.7 N. Average Protected F(50-50)= 7.1 km DATA 08-03-22  
 115 11 53.1 W. Standard Directional SEARCH 08-04-22

CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
231C Henderson	KMXB	LIC NV	CN	128.2 308.3	21.93 BMLH20130801AKK	36 00 29.90 115 00 23.00	100.000 354	12.0 1044	82.7 Audacy License, LLC	4.6	-60.9*
233C Moapa	KXLI	LIC NV	HN	59.4 240.1	111.43 BLH20080229AAT	36 38 06.90 114 07 20.80	93.000 637	146.5 1755	100.2 Radio Activo Broadcasting	-40.9*	2.7
233C Moapa	KXLI	RSV-A NV		59.4 240.1	111.43	36 38 06.91 114 07 20.88	100.000 600	145.9 1710	99.4 From CDBS	-40.3*	3.5
234D Las Vegas	K234BS!	LIC NV	DVN	252.8 72.8	0.04 BLFT20091001ABH	36 07 49.30 115 11 54.70	0.250		---Reference--- Ondas De Vida, Inc.		
236D Spring Valley	K236BM	APP NV	CN	103.8 283.8	0.63 0000192927	36 07 44.80 115 11 28.40	0.099	0.7 755	5.6 Educational Media Foundati	-5.7*	-5.2*
236D Spring Valley	K236BM	CP NV	CN	103.3 283.3	0.64 BPFT20190513AAQ	36 07 44.90 115 11 28.00	0.099	0.7 755	5.6 Educational Media Foundati	-5.7*	-5.2*
236D Spring Valley	K236BM	LIC NV	CN	103.3 283.3	0.64 BLFT20190412ABL	36 07 44.90 115 11 28.00	0.075	0.6 755	5.2 Educational Media Foundati	-5.6*	-4.8*
233D Sunrise Manor	KXLI-FM1	LIC NV	CN	48.1 228.2	32.13 BMLFTB20110404AER	36 19 23.90 114 55 52.00	0.340 59	30.9 826	20.7 Radio Activo Broadcasting	-4.4	3.4
235D North Las Vegas	K235CL	LIC NV	DVN	337.8 157.8	19.75 BLFT20170112ABR	36 17 41.90 115 16 53.00	0.075	9.6 862	5.6 Hispanic Family Christian	7.6	7.8
235D Dolan Springs	K235CJ	CP AZ	DCN	116.5 296.7	33.52 BPFT20190730AAC	35 59 42.90 114 51 53.00	0.010	16.1 1099	10.7 Legacy Preservation Founda	11.9	15.5
234C0 Big River	KFLG-FM	LIC CA	CN	152.3 332.9	197.72 BLH20080409ADN	34 33 06.00 114 11 39.80	19.500 834	174.2 1462	82.2 Cameron Broadcasting, Inc.	19.3	108.6
235D Dolan Springs	K235CJ	LIC AZ	DVN	116.5 296.7	33.52 BLFT20141106ADU	35 59 42.90 114 51 52.90	0.250	6.8 1099	3.9 Legacy Preservation Founda	21.2	22.2

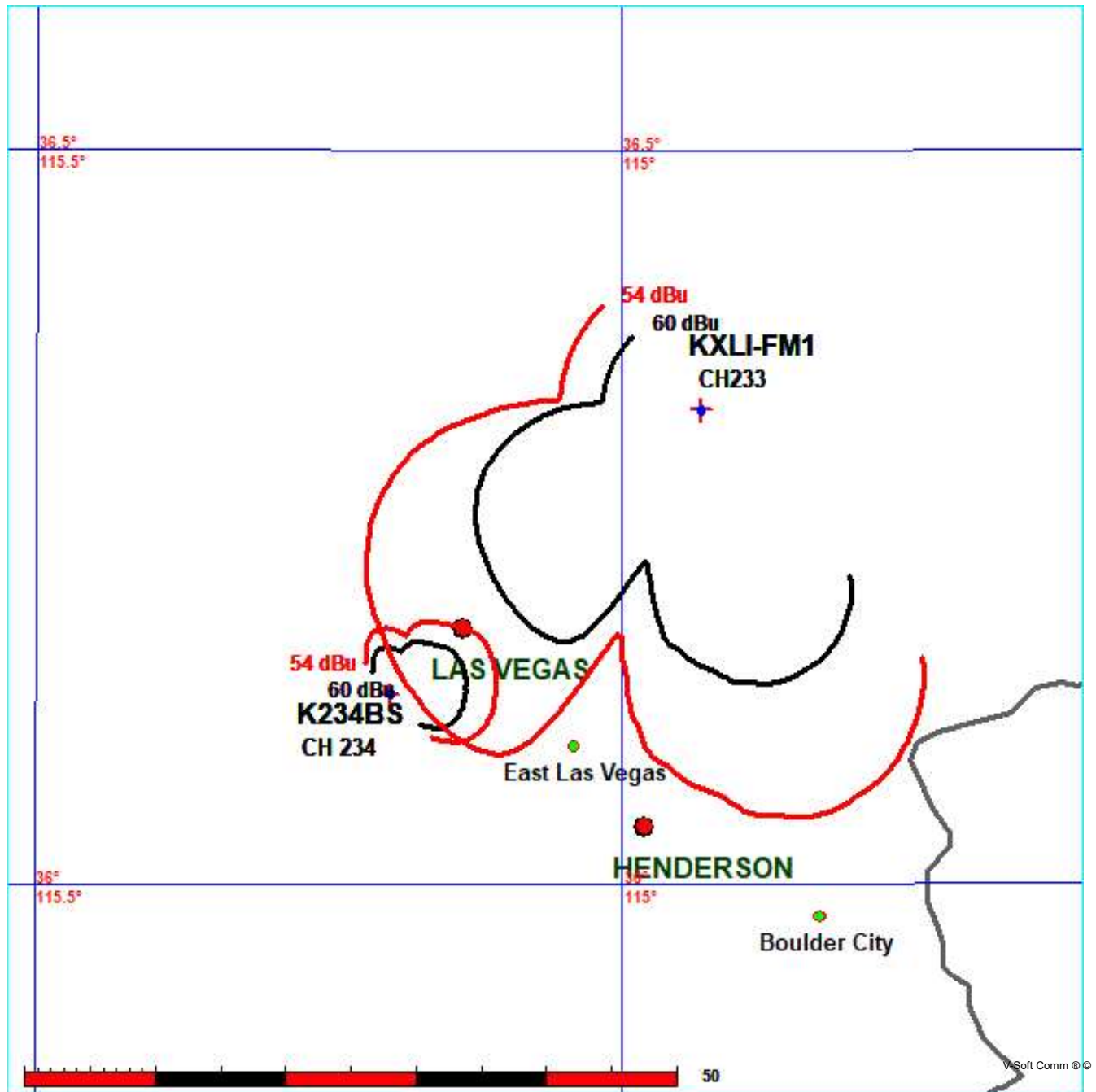
Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
 In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3rd adjacent.  
 All separation margins (if shown) include rounding. Call signs with exclamation marks 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.

Ondas De Vida, Inc.

FMCommander Single Allocation Study - 04-21-2022 - FCC NGDC 30 Sec  
K234BS's Overlaps (In= -3.84 km, Out= 4.07 km)

K234BS CH 234 D DA  
Lat= 36 07 49.70, Lng= 115 11 53.10  
0.25 kW -14.8 m HAAT, 687 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

KXLI-FM1 CH 233 D BMLFTB20110404AER  
Lat= 36 19 23.90, Lng= 114 55 52.00  
0.34 kW 59 m HAAT, 826 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

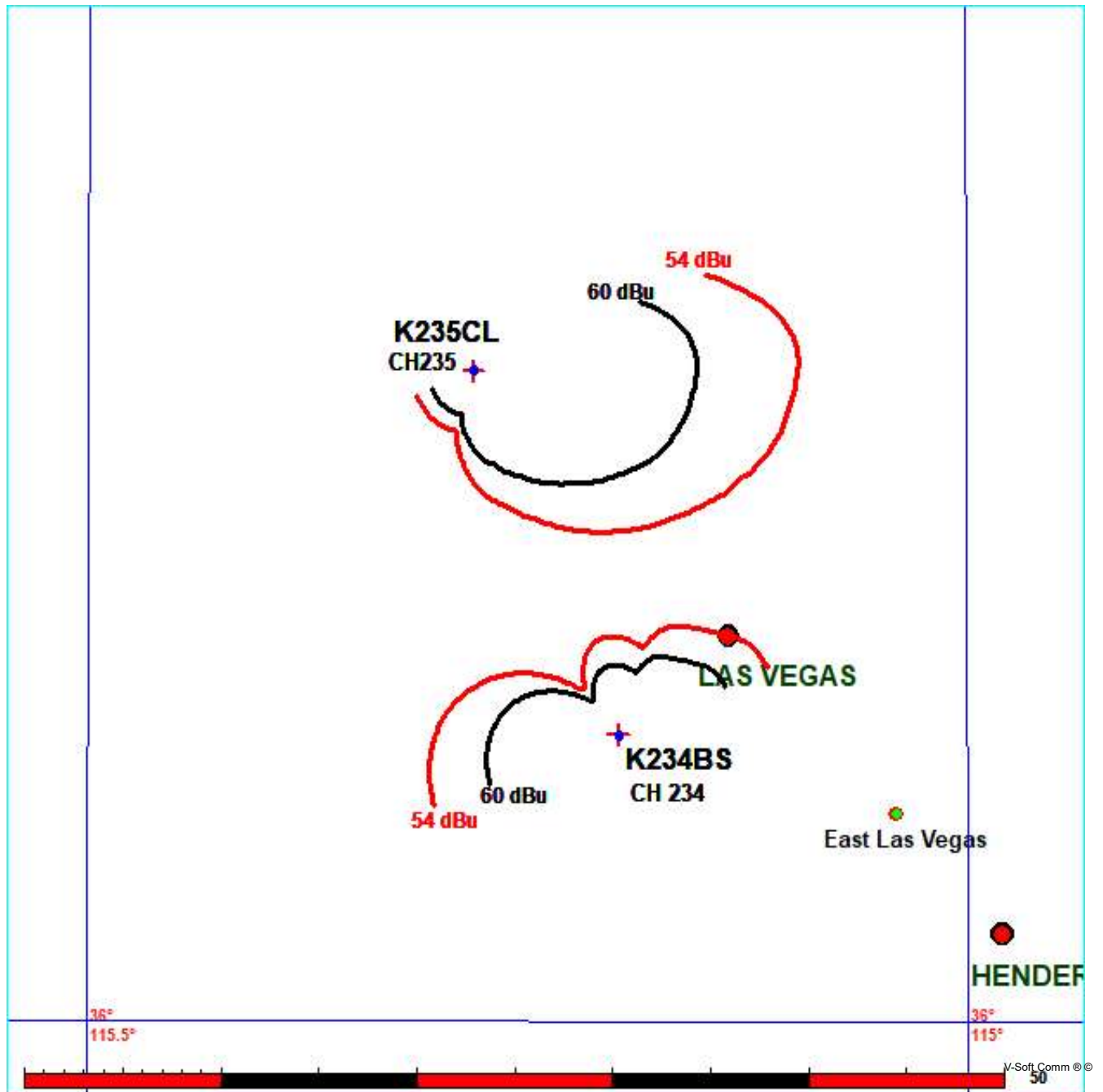


Ondas De Vida, Inc.

FMCommander Single Allocation Study - 04-21-2022 - FCC NGDC 30 Sec  
K234BS's Overlaps (In= 8.64 km, Out= 9.74 km)

K234BS CH 234 D DA  
Lat= 36 07 49.70, Lng= 115 11 53.10  
0.25 kW -14.8 m HAAT, 687 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

K235CL CH 235 D DA BLFT20170112ABR  
Lat= 36 17 41.90, Lng= 115 16 53.00  
0.075 kW 0 m HAAT, 862 m COR  
Prot.= 60 dBu, Intef.= 54 dBu



**Educational Media Foundation**

5700 W Oaks Blvd  
Rocklin, CA 95765

*Exhibit 1-A  
Las Vegas, NV*

**Compliance with C.F.R. 74.1204**

The proposed FM Translator to operate on channel 234D is located within the protected 60dBu contour of third adjacent channel station KMXB, channel 231C, Henderson, NV. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for K234BS:	250 watts
The proposed COR AGL for K234BS:	23 meters
KMXB F(50/50) contour at proposed site:	89.8dBu
The F(50/10) contour of proposed K234BS:	129.8dBu

The predicted distance to the 129.8dbu interfering contour is 35.9 meters. When taking into account the vertical elevation pattern of the Scala YA7-FML vertically polarized antenna and the height above ground of 23m, it has been determined that the interfering contour of 129.8dbu does not reach the ground. As seen in Exhibit 1-A1, the lowest elevation for this interfering contour is 11.2m above ground at a distance of 23.5m from the antenna.

There are no surrounding structures which are tall enough to enter the interfering contour within the 35.9m distance from the antenna.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 1 - A2  
74.1204(d) Showing  
K234BS  
Las Vegas, NV

ERP (kw): 0.25  
Height of Antenna above Ground (m): 23  
Translator's IX Contour: 129.8  
Antenna Type: Scala YA7-FML-V

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.2500	35.8897	23.000
5	0.988	0.2439	35.4519	19.910
10	0.956	0.2285	34.3106	17.042
15	0.901	0.2031	32.3510	14.627
20	0.831	0.1726	29.8244	12.799
25	0.748	0.1397	26.8276	11.662
30	0.656	0.1074	23.5257	11.237
35	0.559	0.0781	20.0659	11.491
40	0.462	0.0534	16.5810	12.342
45	0.371	0.0344	13.3187	13.582
50	0.286	0.0205	10.2680	15.134
55	0.216	0.0117	7.7558	16.647
60	0.156	0.0061	5.5952	18.154
65	0.110	0.0030	3.9515	19.419
70	0.076	0.0014	2.7169	20.447
75	0.050	0.0006	1.8053	21.256
80	0.032	0.0002	1.1341	21.883
85	0.018	0.0001	0.6388	22.364
90	0.008	0.0000	0.2979	22.702

**Educational Media Foundation**

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Rocklin, CA 95765

*Exhibit 1-A  
Las Vegas, NV*

**Compliance with C.F.R. 74.1204**

The proposed FM Translator to operate on channel 234D is located within the protected 60dBu contour of second adjacent channel K236BM, channel 236D, Spring Valley, NV. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for K234BS:	250 watts
The proposed COR AGL for K234BS:	23 meters
K236BM F(50/50) contour at proposed site:	99.5dBu
The F(50/10) contour of proposed K234BS:	139.5dBu

The predicted distance to the 139.5dbu interfering contour is 11.7 meters. When taking into account the vertical elevation pattern of the Scala YA7-FML vertically polarized antenna and the height above ground of 23m, it has been determined that the interfering contour of 139.5dbu does not reach the ground. As seen in Exhibit 1-A1, the lowest elevation for this interfering contour is 19.1m above ground at a distance of 7.7m from the antenna.

There are no surrounding structures which are tall enough to enter the interfering contour within the 11.7m distance from the antenna.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 1 - A2  
74.1204(d) Showing  
K234BS  
Las Vegas, NV

ERP (kw): 0.25  
Height of Antenna above Ground (m): 23  
Translator's IX Contour: 139.5  
Antenna Type: Scala YA7-FML-V

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.2500	11.7482	23.000
5	0.988	0.2439	11.6048	21.989
10	0.956	0.2285	11.2312	21.050
15	0.901	0.2031	10.5898	20.259
20	0.831	0.1726	9.7627	19.661
25	0.748	0.1397	8.7818	19.289
30	0.656	0.1074	7.7009	19.150
35	0.559	0.0781	6.5684	19.233
40	0.462	0.0534	5.4277	19.511
45	0.371	0.0344	4.3597	19.917
50	0.286	0.0205	3.3611	20.425
55	0.216	0.0117	2.5388	20.920
60	0.156	0.0061	1.8315	21.414
65	0.110	0.0030	1.2935	21.828
70	0.076	0.0014	0.8893	22.164
75	0.050	0.0006	0.5909	22.429
80	0.032	0.0002	0.3712	22.634
85	0.018	0.0001	0.2091	22.792
90	0.008	0.0000	0.0975	22.902

**Educational Media Foundation**

5700 W Oaks Blvd  
Rocklin, CA 95765

*Exhibit 1-A  
Las Vegas, NV*

**Compliance with C.F.R. 74.1204**

The proposed FM Translator to operate on channel 234D is located within the protected 60dBu contour of second adjacent channel K236BM.CP, channel 236D, Spring Valley, NV. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for K234BS:	250 watts
The proposed COR AGL for K234BS:	23 meters
K236BM.CP F(50/50) contour at proposed site:	100.7dBu
The F(50/10) contour of proposed K234BS:	140.7dBu

The predicted distance to the 140.7dbu interfering contour is 10.2 meters. When taking into account the vertical elevation pattern of the Scala YA7-FML vertically polarized antenna and the height above ground of 23m, it has been determined that the interfering contour of 140.7dbu does not reach the ground. As seen in Exhibit 1-A1, the lowest elevation for this interfering contour is 19.6m above ground at a distance of 6.7m from the antenna.

There are no surrounding structures which are tall enough to enter the interfering contour within the 10.2m distance from the antenna.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.



EXHIBIT 1 - A2  
74.1204(d) Showing  
K234BS  
Las Vegas, NV

ERP (kw): 0.25  
Height of Antenna above Ground (m): 23  
Translator's IX Contour: 140.7  
Antenna Type: Scala YA7-FML-V

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.2500	10.2322	23.000
5	0.988	0.2439	10.1074	22.119
10	0.956	0.2285	9.7820	21.301
15	0.901	0.2031	9.2233	20.613
20	0.831	0.1726	8.5030	20.092
25	0.748	0.1397	7.6486	19.768
30	0.656	0.1074	6.7072	19.646
35	0.559	0.0781	5.7208	19.719
40	0.462	0.0534	4.7273	19.961
45	0.371	0.0344	3.7972	20.315
50	0.286	0.0205	2.9274	20.757
55	0.216	0.0117	2.2112	21.189
60	0.156	0.0061	1.5952	21.619
65	0.110	0.0030	1.1266	21.979
70	0.076	0.0014	0.7746	22.272
75	0.050	0.0006	0.5147	22.503
80	0.032	0.0002	0.3233	22.682
85	0.018	0.0001	0.1821	22.819
90	0.008	0.0000	0.0849	22.915



# K234BS Las Vegas, NV

Yellow Pin Marker:

36-07-49.7 N

115-11-53.1 W

Red Line Marker: 36 meters at 240 degrees

## Legend



Feature 1



K234BS Rooftop Tower

K234BS Rooftop Tower

W Desert Inn Rd





## **Environmental Protection**

The proposed facility is to be built using a 1-bay Scala YA7-FML vertically polarized antenna.

According to OET 65, "Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% "contour" where the appropriate limits are found to be exceeded."

The proposed facility's maximum contribution to RF on the site is  $2.07\mu\text{W}/\text{cm}^2$  at a distance of 33 meters from the tower, which is 1.035% of the uncontrolled (public) exposure limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the  $200\mu\text{W}/\text{cm}^2$  limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.

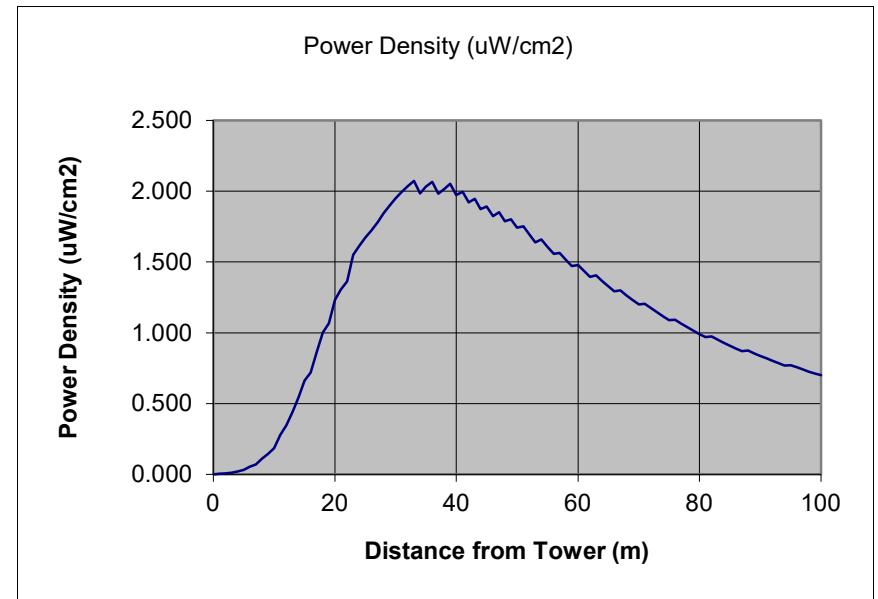
## Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

### Detailed Report

<b>ERP</b>	0.25 kW	% of OET-65
<b>Height above ground</b>	23.0 meters	1.0% Uncontrolled
<b>Height above head</b>	21.0 meters	0.2% Controlled
<b>Antenna Brand</b>	Scala	
<b>Antenna Model</b>	YA7-FML-V	

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm <sup>2</sup> )
0	90	21.0	0.008	2.075	0.001
1	87	21.0	0.014	3.375	0.003
2	85	21.1	0.018	4.45	0.006
3	82	21.2	0.026	6.4	0.012
4	79	21.4	0.035	8.725	0.022
5	77	21.6	0.042	10.575	0.032
6	74	21.8	0.055	13.775	0.053
7	72	22.1	0.064	16.075	0.070
8	69	22.5	0.082	20.375	0.110
9	67	22.8	0.095	23.8	0.145
10	65	23.3	0.11	27.525	0.187
11	62	23.7	0.137	34.225	0.278
12	60	24.2	0.156	38.975	0.347
13	58	24.7	0.179	44.725	0.438
14	56	25.2	0.204	50.875	0.543
15	54	25.8	0.23	57.475	0.663
16	53	26.4	0.245	61.25	0.719
17	51	27.0	0.275	68.675	0.863
18	49	27.7	0.303	75.775	1.003
19	48	28.3	0.32	80	1.066
20	46	29.0	0.352	88.05	1.232
21	45	29.7	0.371	92.775	1.304
22	44	30.4	0.388	97.1	1.362
23	42	31.1	0.424	106.08	1.550
24	41	31.9	0.443	110.8	1.613
25	40	32.6	0.462	115.5	1.672
26	39	33.4	0.48	119.93	1.720



27	38	34.2	0.499	124.8	1.778
28	37	35.0	0.52	130.03	1.844
29	36	35.8	0.54	134.95	1.898
30	35	36.6	0.559	139.78	1.946
31	34	37.4	0.579	144.65	1.994
32	33	38.3	0.598	149.43	2.036
33	32	39.1	0.616	154.05	2.072
34	32	40.0	0.616	154.05	1.985
35	31	40.8	0.637	159.23	2.033
36	30	41.7	0.656	163.88	2.066
37	30	42.5	0.656	163.88	1.982
38	29	43.4	0.675	168.68	2.016
39	28	44.3	0.694	173.6	2.052
40	28	45.2	0.694	173.6	1.973
41	27	46.1	0.712	178.05	1.996
42	27	47.0	0.712	178.05	1.921
43	26	47.9	0.731	182.63	1.946
44	26	48.8	0.731	182.63	1.875
45	25	49.7	0.748	186.88	1.892
46	25	50.6	0.748	186.88	1.825
47	24	51.5	0.767	191.63	1.851
48	24	52.4	0.767	191.63	1.787
49	23	53.3	0.783	195.8	1.802
50	23	54.2	0.783	195.8	1.742
51	22	55.2	0.799	199.7	1.751
52	22	56.1	0.799	199.7	1.694
53	22	57.0	0.799	199.7	1.639
54	21	57.9	0.817	204.15	1.659
55	21	58.9	0.817	204.15	1.606
56	21	59.8	0.817	204.15	1.557
57	20	60.7	0.831	207.75	1.563
58	20	61.7	0.831	207.75	1.515
59	20	62.6	0.831	207.75	1.470
60	19	63.6	0.846	211.53	1.479
61	19	64.5	0.846	211.53	1.436
62	19	65.5	0.846	211.53	1.395
63	18	66.4	0.861	215.35	1.405
64	18	67.4	0.861	215.35	1.366
65	18	68.3	0.861	215.35	1.328

66	18	69.3	0.861	215.35	1.292
67	17	70.2	0.876	218.95	1.299
68	17	71.2	0.876	218.95	1.264
69	17	72.1	0.876	218.95	1.231
70	17	73.1	0.876	218.95	1.199
71	16	74.0	0.89	222.4	1.205
72	16	75.0	0.89	222.4	1.175
73	16	76.0	0.89	222.4	1.145
74	16	76.9	0.89	222.4	1.117
75	16	77.9	0.89	222.4	1.089
76	15	78.8	0.901	225.35	1.091
77	15	79.8	0.901	225.35	1.065
78	15	80.8	0.901	225.35	1.040
79	15	81.7	0.901	225.35	1.015
80	15	82.7	0.901	225.35	0.992
81	15	83.7	0.901	225.35	0.969
82	14	84.6	0.914	228.45	0.973
83	14	85.6	0.914	228.45	0.951
84	14	86.6	0.914	228.45	0.930
85	14	87.6	0.914	228.45	0.910
86	14	88.5	0.914	228.45	0.890
87	14	89.5	0.914	228.45	0.870
88	13	90.5	0.925	231.33	0.873
89	13	91.4	0.925	231.33	0.855
90	13	92.4	0.925	231.33	0.837
91	13	93.4	0.925	231.33	0.820
92	13	94.4	0.925	231.33	0.803
93	13	95.3	0.925	231.33	0.786
94	13	96.3	0.925	231.33	0.771
95	12	97.3	0.935	233.83	0.772
96	12	98.3	0.935	233.83	0.756
97	12	99.2	0.935	233.83	0.742
98	12	100.2	0.935	233.83	0.727
99	12	101.2	0.935	233.83	0.713
100	12	102.2	0.935	233.83	0.700

YA7 FML V Antenna Pattern  
Post-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	0.2399
10.0	0.2203
20.0	0.1997
30.0	0.1889
40.0	0.1864
50.0	0.1876
60.0	0.1916
70.0	0.1892
80.0	0.187
90.0	0.1777
100.0	0.1694
110.0	0.1649
120.0	0.1598
130.0	0.138
140.0	0.0895
150.0	0.0753
160.0	0.1699
170.0	0.2987
180.0	0.4375
190.0	0.5762
200.0	0.7047
210.0	0.8209
220.0	0.9106
230.0	0.9724
240.0	0.9983
250.0	0.9894
260.0	0.9392
270.0	0.8507
280.0	0.7186
290.0	0.5568
300.0	0.3712
310.0	0.1968
320.0	0.0881
330.0	0.1392
340.0	0.2069
350.0	0.2408

Rotation Angle = 240

