ENGINEERING STATEMENT

IN SUPPORT OF

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

K21MO-D

RIVERSIDE, CA

Background

Major Market Broadcasting of California, Inc. (MMBC), licensee of the LPTV station K21MO-D, has a Construction Permit (LMS File No. 0000178552) specifying a site and antenna that were destroyed by a California wildfire known as the Fairview Fire. K21MO-D has been silent since the loss of the site in October 2022, but after an extensive search, MMBC was able to identify a new site and recently filed for a modification of the Construction Permit to specify the new site. MMBC would like to begin operating K21MO-D as soon as possible from this new site so that the station will not be silent for more than one year; however, the site is located within the Mexican coordination distance and concurrence from Mexico on the proposed changes is necessary before the modification of the Construction Permit can be granted. Therefore, MMBC is seeking Special Temporary Authority to operate from the new site prior to Mexican approval.

Proposed Parameters

MMBC is proposing the following parameters for the K12OC-D STA operation:

Coordinates:	33° 43' 31.1" N (NAD83) 116° 45' 01.1" W
ERP:	0.59 kW
RCAMSL:	1630.1m
RCAGL:	8.6m
Antenna:	Kathrein 1x2 750 10210
Mask:	Full-Service

The proposed STA facility has the same parameters as the facility specified in the recent Construction Permit modification application.

Interference

An interference study was conducted of the proposed facility parameters using the FCC TVStudy software (Version 2.2.5) with the default parameters. The results of the study (copy attached hereto) show that potential interference from the proposed facility is not predicted to exceed 0.49% to any full-service DTV or Class A stations or 1.99% to any low power stations as required by the Commission's Rules.

As mentioned above, the proposed site is within the Mexican coordination distance, but the co-channel interference contour generated by the proposed facility will not cross the US/Mexican border, making it very unlikely that it will cause interference to any Mexican stations or allotments (in Mexico). Furthermore, the TVStudy interference study included "non-US stations" and the results show that no interference is predicted between the proposed facility and any Mexican stations or allotments. Figure 1, attached hereto, is a map depicting the F(50,10) 24.46 dBu co-channel interference contour of the proposed facility. As can be seen on the map, the contour is not predicted to cross the Mexican border.

Environmental/RFR

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure exists, such conditions should not be an issue requiring further consideration.

The location of the proposed facility is a multi-user site and it is assumed to currently be "in compliance" with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst-case ground level RFR contributed to the site by this proposal is calculated to be 0.016657 mW/cm^2 at 2m AGL. The calculated RFR is less than 5% of the maximum permissible exposure (MPE) for public areas (0.339333 mW/cm^2) at Ch. 21.

MMBC agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information, and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

Benjamin Pidek, P.E.
September 3, 2023

Attached:
TVStudy Interference Check Report for Proposed K21MO-D Facility
Figure 1 – Map of the F(50,10) Co-Channel Interference Contour of the Proposed Facility
Antenna Azimuth and Elevation Pattern Plots and Tabulations

TVStudy TV Interference Check Report for Proposed K21MO-D STA Facility on Ch. 21

Study created: 2023.09.02 21:39:25

Study build station data: LMS TV 2023-08-31

Proposal: K21MO-D D21 LD CP RIVERSIDE, CA
File number: K21MO_KATY_KAT10210r7_059k_090223_NUS
Facility ID: 181667
Station data: User record
Record ID: 24
Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Search options:
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	DK14JT	N14	TX	APP	JOSHUA TREE, ETC., CA	BLTVL19980330JH	83.0 km
No	K17GJ-D	N17-	TX	LIC	TWENTYNINE PALMS, CA	BLTT20080902AED	61.1
No	K20IM-D	D20	LD	LIC	BARSTOW, CA	BLDTL20100630BDO	128.7
No	KCWQ-LD	D20	LD	LIC	PALM SPRINGS, CA	BLANK0000076696	33.1
No	KZSD-LD	D20+	LD	LIC	SAN DIEGO, CA	BLANK0000067691	115.7
No	KGRF-LD	D21	LD	CP	GILA RIVER INDIAN CO, AZ	BLANK0000125236	420.8
No	K21EG-D	D21	LD	LIC	GOLDEN VALLEY, AZ	BLDTT20130308ABB	286.0
No	K21NQ-D	D21	LD	LIC	MEADVIEW, AZ	BLANK0000071717	339.3
No	K21PB-D	D21	LD	CP	PARKER, AZ	BNPDTL20100514ADI	234.1
No	KRPO-LD	D21	LD	LIC	QUARTZSITE, AZ	BLDTL20110926AEA	289.5
No	K21FU-D	D21	LD	LIC	TOPOCK, AZ	BLDTT20130308ACK	262.4
No	K21MH-D	D21	LD	LIC	DAGGETT, CA	BLANK0000004555	129.6
No	KFTV-DT	D21	DT	LIC	HANFORD, CA	BLANK0000116939	444.3
Yes	KTAV-LD	D21	LD	LIC	LOS ANGELES, CA	BLANK0000219786	134.2
Yes	K21DO-D	D21	DC	LIC	PALM SPRINGS, CA	BLANK0000191501	33.1
No	K21IN-D	D21	LD	LIC	RIDGECREST, ETC., CA	BLDTT20090622AAK	212.9
Yes	KPMR	D21	DT	LIC	SANTA BARBARA, CA	BLCDT20110607ABB	308.4
No	KPMR	D21	DT	CP	SANTA BARBARA, CA	BLANK0000190126	308.4
Yes	KPMR	D21	DT	APP	SANTA BARBARA, CA	BPCDT20120817ABD	309.5
No	K21AC-D	D21	LD	LIC	VICTORVILLE, ETC., CA	BLANK0000144363	110.1
No	K21AC-D	N21	TX	LIC	VICTORVILLE, ETC., CA	BLTT19820105IG	110.1
No	K21PA-D	D21	LD	CP	WINTERHAVEN, CA	BNPDTL20100510AAG	201.0
No	KLSV-LD	D21	LD	LIC	LAS VEGAS, NV	BLANK0000064058	299.5
No	KHSV	D21	DT	APP	LAS VEGAS, NV	BLANK0000127675	299.5
No	KMYU	D21	DT	CP	ST. GEORGE, UT	BLANK0000129216	469.5
No	KMYU	D21	DT	APP	ST. GEORGE, UT	BLANK0000151571	469.5
No	KVYE	D22	DT	LIC	EL CENTRO, CA	BLCDT20070604ABN	193.5
No	KHTV-CD	D22	DC	LIC	LOS ANGELES, CA	BLANK0000068679	132.5
No	KJHP-LD	D22	LD	LIC	MORONGO VALLEY, CA	BLANK0000125585	33.2
No	DK25GK	N25+	TX	APP	JOSHUA TREE, CA	BLTT20000605AOK	83.1
No	K25AD-D	N25	TX	LIC	VICTORVILLE, ETC., CA	BLTT19820105IE	110.1
No	K29GK-D	N29-	TX	LIC	TWENTYNINE PALMS,ETC, CA	BLTT20060119ADC	83.1
No	CFCC	D21	DT	CP	Halifax, NS	BLANK0000024584	359.6
No	XHENT	D20	DT	LIC	ENSENADA, BN	BLANKBPFS20111019ACE	206.1
No	XHILA	D20	DT	LIC	MEXICALI, BN	BLANKBPFS20160302ACO	171.1
No	XHFEC	D21	DT	LIC	SAN FELIPE, BN	BLANKBPFS20111004AAY	351.0
No	XHDTV	D21	DT	LIC	TECATE, BN	BLANKBPFS20160302ACX	157.1
No	XHPPS	D21	DT	LIC	PUERTO PENASCO, SO	BLANKBPFS20111019ACQ	403.0
No	XHUAA	D22	DT	LIC	TIJUANA, BN	BLANKBPFS20100517ADE	138.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:
Channel: D21
Mask: Full Service
Latitude: 33 43 31.10 N (NAD83)
Longitude: 116 45 1.10 W
Height AMSL: 1630.1 m
HAAT: 0.0 m
Peak ERP: 0.590 kW
Antenna: KAT-1x2 75010210 7.0 deg
Elev Pattrn: Generic

49.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.003 kW	-184.9 m	4.5 km
45.0	0.011	-611.2	6.1
90.0	0.071	-37.9	9.5
135.0	0.481	227.7	35.3
180.0	0.506	361.7	41.6
225.0	0.446	567.7	46.8
270.0	0.204	953.0	48.2
315.0	0.021	470.1	26.3

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 218 m

Distance to Canadian border: 1697.8 km

**Proposal is within coordination distance of Mexican border
Distance to Mexican border: 128.2 km

Conditions at FCC monitoring station: Livermore CA
Bearing: 316.0 degrees Distance: 633.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 51.8 degrees Distance: 1242.7 km

No land mobile station failures found

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

No IX check failures found.

Ben Pidek Consulting, LLC

K21DO-D (KATY-FM Site)
Latitude: 33-43-31.10 N
Longitude: 116-45-01.10 W
ERP: 0.59 kW
Channel: 21
Frequency: 515.0 MHz
AMSL Height: 1630.1 m

Protected Service Contour of Proposed K21MO-D Facility at KATY-FM Site (Black) and F(50,10) 24.46 dBu Co-Channel Interference Contour (Red)

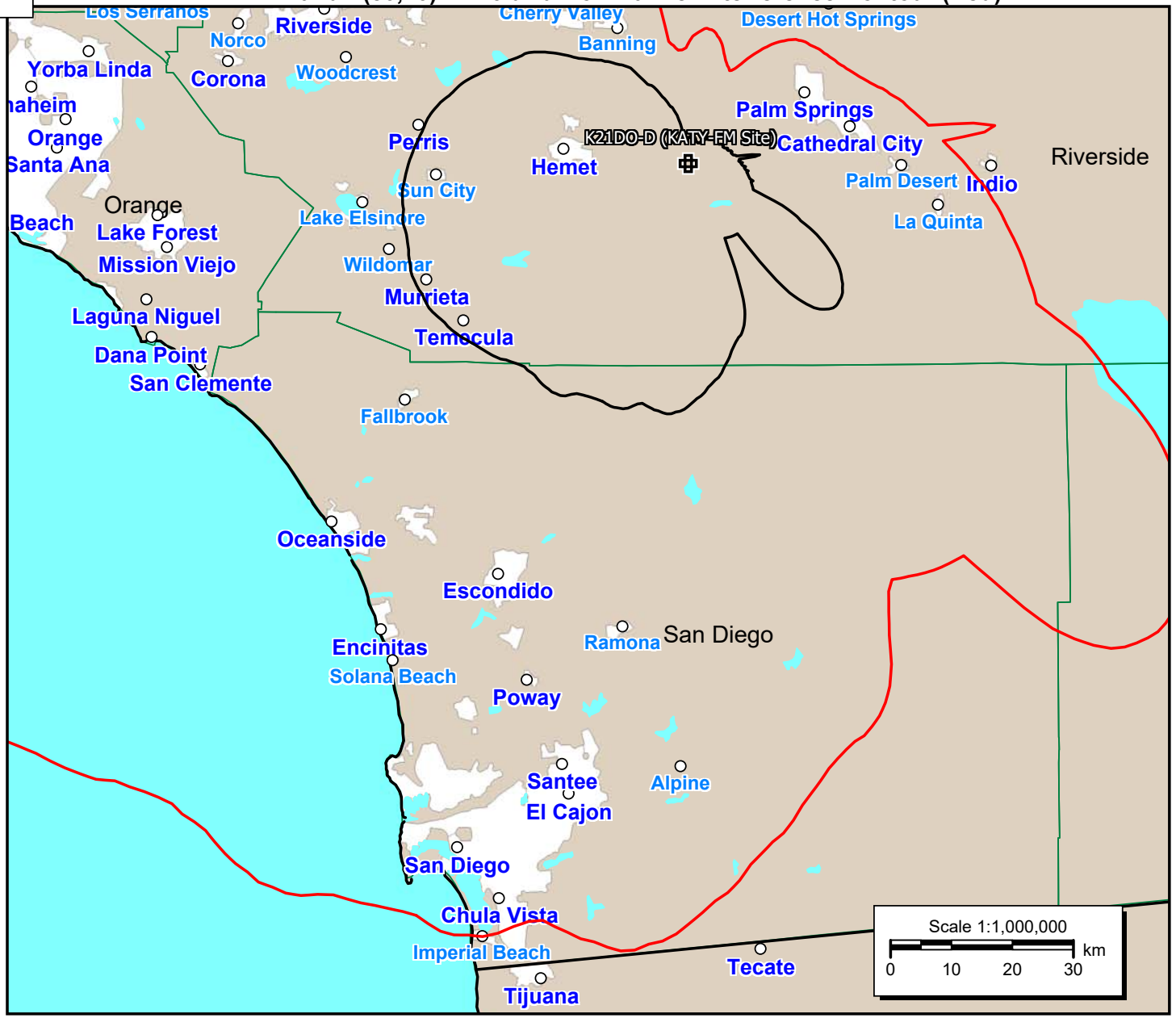
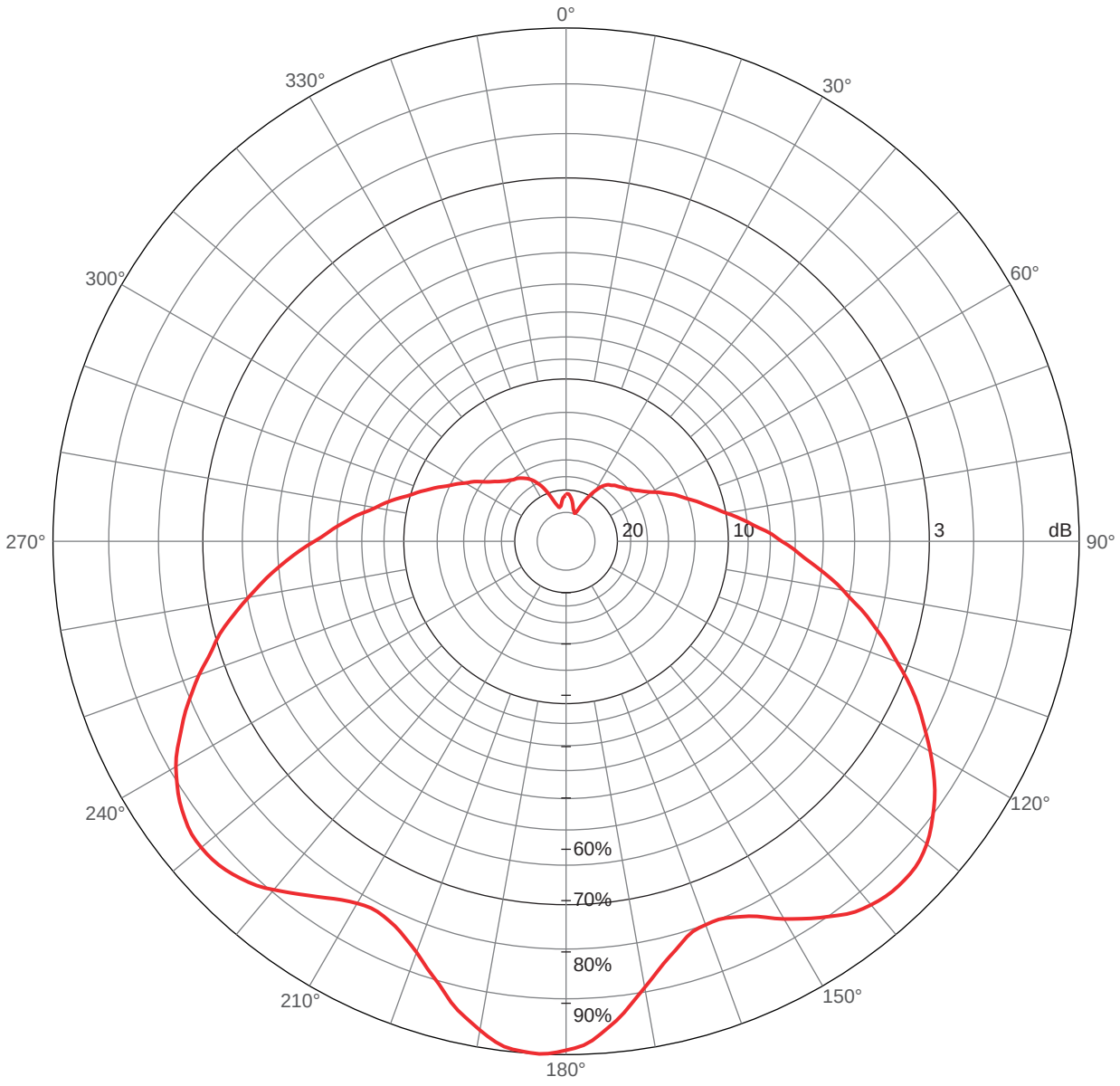


Figure 1

Azimuthal Pattern (polar-linear)



Antenna, Order No. 75010210
Panels per Bay: 2

Frequency: 515 MHz
Azimuthal Directivity: 4.41 dB
Directivity: 7.74 dBd

No.	Azimuth [°]	Radius [mm]	Offset [mm]	Power	Phase [°]
1	138	290	0	1	0
2	228	290	0	1	0

simulation with typical exactness of +/- 8% of max signal

Subject to alternation

Kathrein/Scala 1x2 750 10210 - Ch. 21

TABULATED DATA FOR AZIMUTH PATTERN

ANGLE	FIELD
0	0.092
1	0.093
2	0.092
3	0.092
4	0.091
5	0.089
6	0.086
7	0.084
8	0.081
9	0.078
10	0.074
11	0.070
12	0.067
13	0.064
14	0.062
15	0.060
16	0.059
17	0.057
18	0.058
19	0.060
20	0.063
21	0.067
22	0.072
23	0.077
24	0.082
25	0.087
26	0.093
27	0.098
28	0.104
29	0.109
30	0.114
31	0.118
32	0.123
33	0.127
34	0.131
35	0.133
36	0.136
37	0.138
38	0.139
39	0.140
40	0.142
41	0.144
42	0.146
43	0.147
44	0.148
45	0.150
46	0.151
47	0.153
48	0.155
49	0.156
50	0.158
51	0.161

ANGLE	FIELD
52	0.163
53	0.166
54	0.169
55	0.172
56	0.175
57	0.179
58	0.183
59	0.187
60	0.192
61	0.197
62	0.204
63	0.209
64	0.213
65	0.219
66	0.226
67	0.232
68	0.236
69	0.241
70	0.247
71	0.253
72	0.259
73	0.266
74	0.272
75	0.278
76	0.285
77	0.293
78	0.300
79	0.308
80	0.317
81	0.327
82	0.337
83	0.347
84	0.356
85	0.366
86	0.377
87	0.390
88	0.401
89	0.410
90	0.420
91	0.433
92	0.444
93	0.455
94	0.466
95	0.479
96	0.493
97	0.507
98	0.521
99	0.535
100	0.548
101	0.561
102	0.575
103	0.591

ANGLE	FIELD
104	0.605
105	0.618
106	0.631
107	0.646
108	0.660
109	0.672
110	0.686
111	0.701
112	0.716
113	0.731
114	0.744
115	0.757
116	0.770
117	0.782
118	0.794
119	0.807
120	0.820
121	0.832
122	0.844
123	0.856
124	0.867
125	0.877
126	0.886
127	0.894
128	0.903
129	0.911
130	0.918
131	0.923
132	0.928
133	0.931
134	0.932
135	0.933
136	0.933
137	0.933
138	0.931
139	0.928
140	0.925
141	0.921
142	0.916
143	0.909
144	0.901
145	0.892
146	0.885
147	0.876
148	0.867
149	0.858
150	0.850
151	0.840
152	0.830
153	0.820
154	0.813
155	0.807

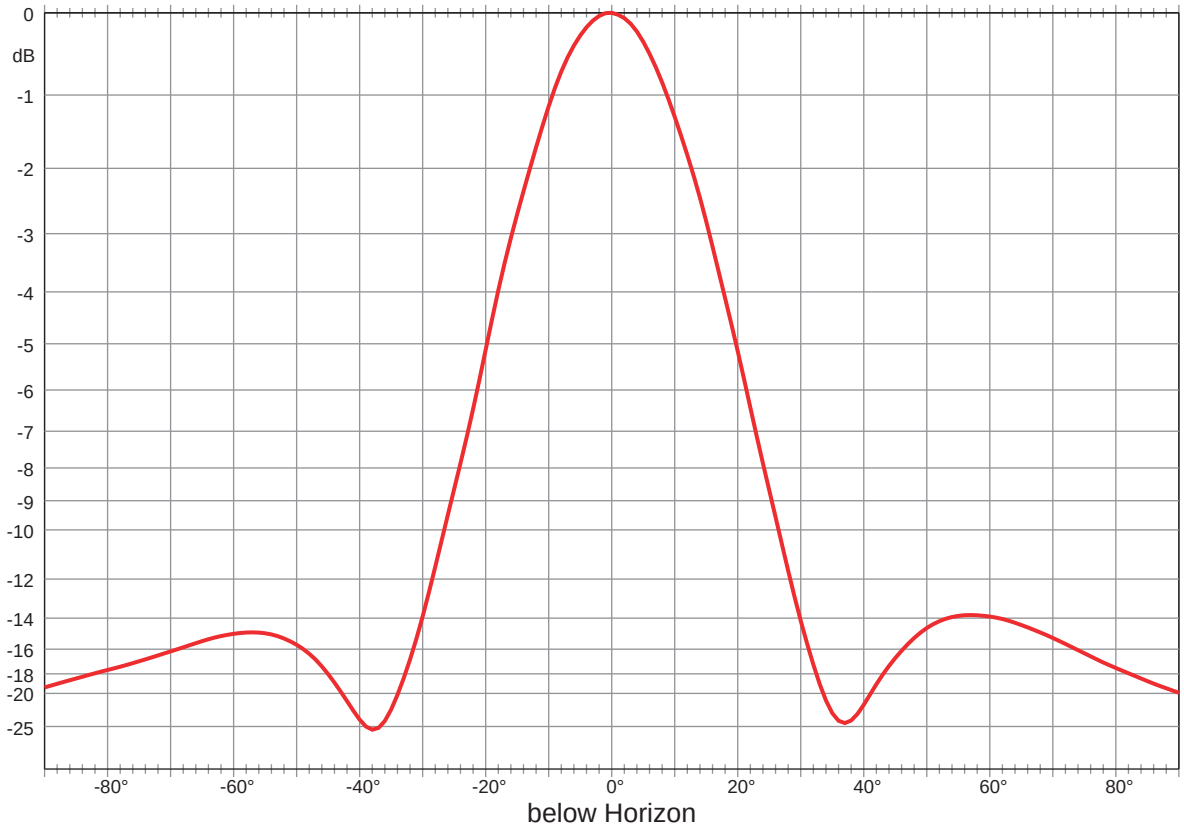
ANGLE	FIELD
156	0.802
157	0.797
158	0.795
159	0.794
160	0.795
161	0.796
162	0.799
163	0.806
164	0.815
165	0.825
166	0.834
167	0.844
168	0.857
169	0.870
170	0.883
171	0.896
172	0.911
173	0.926
174	0.939
175	0.951
176	0.962
177	0.974
178	0.982
179	0.988
180	0.992
181	0.996
182	0.999
183	1.000
184	0.999
185	0.997
186	0.995
187	0.992
188	0.985
189	0.977
190	0.967
191	0.957
192	0.947
193	0.938
194	0.926
195	0.912
196	0.898
197	0.886
198	0.875
199	0.863
200	0.852
201	0.843
202	0.834
203	0.827
204	0.820
205	0.816
206	0.812
207	0.810

ANGLE	FIELD
208	0.809
209	0.811
210	0.814
211	0.819
212	0.824
213	0.830
214	0.838
215	0.845
216	0.853
217	0.861
218	0.869
219	0.878
220	0.886
221	0.895
222	0.902
223	0.908
224	0.913
225	0.918
226	0.922
227	0.925
228	0.927
229	0.928
230	0.928
231	0.928
232	0.926
233	0.923
234	0.918
235	0.914
236	0.908
237	0.902
238	0.894
239	0.886
240	0.878
241	0.869
242	0.858
243	0.846
244	0.834
245	0.823
246	0.812
247	0.799
248	0.786
249	0.774
250	0.762
251	0.747
252	0.733
253	0.721
254	0.710
255	0.699
256	0.686
257	0.671
258	0.657
259	0.643

ANGLE	FIELD
260	0.629
261	0.615
262	0.601
263	0.588
264	0.575
265	0.560
266	0.547
267	0.533
268	0.519
269	0.505
270	0.490
271	0.477
272	0.466
273	0.455
274	0.444
275	0.433
276	0.422
277	0.412
278	0.399
279	0.387
280	0.377
281	0.369
282	0.360
283	0.351
284	0.341
285	0.331
286	0.321
287	0.313
288	0.306
289	0.299
290	0.291
291	0.284
292	0.277
293	0.270
294	0.262
295	0.255
296	0.249
297	0.244
298	0.239
299	0.233
300	0.227
301	0.222
302	0.218
303	0.214
304	0.208
305	0.203
306	0.197
307	0.192
308	0.188
309	0.185
310	0.181
311	0.177

ANGLE	FIELD
312	0.174
313	0.172
314	0.169
315	0.166
316	0.164
317	0.163
318	0.161
319	0.159
320	0.157
321	0.156
322	0.155
323	0.154
324	0.152
325	0.150
326	0.148
327	0.146
328	0.144
329	0.142
330	0.139
331	0.136
332	0.133
333	0.129
334	0.125
335	0.122
336	0.118
337	0.113
338	0.108
339	0.103
340	0.098
341	0.092
342	0.087
343	0.083
344	0.078
345	0.075
346	0.073
347	0.070
348	0.068
349	0.068
350	0.068
351	0.069
352	0.070
353	0.074
354	0.078
355	0.082
356	0.084
357	0.086
358	0.088
359	0.090

Elevation Pattern (cartesian-linear)



Antenna, Order No. 75010210
Number of Bays: 1

Frequency:	515 MHz
Elevation Directivity:	3.33 dBd
Directivity:	7.74 dBd
Downtilt:	0°
Compensation:	0 %

No.	Vert. Distance [mm]	Power	Phase [°]
1	0	1	0

Subject to alternation

Kathrein/Scala 1x2 750 10210 - Ch. 21

TABULATED DATA FOR ELEVATION PATTERN

ANGLE	FIELD
-10	0.876
-9	0.901
-8	0.922
-7	0.941
-6	0.957
-5	0.970
-4	0.981
-3	0.990
-2	0.996
-1	1.000
0	1.000
1	0.998
2	0.993
3	0.986
4	0.975
5	0.962
6	0.946
7	0.928
8	0.908
9	0.886
10	0.862
11	0.838
12	0.812
13	0.785
14	0.755
15	0.724
16	0.691
17	0.657
18	0.623
19	0.588
20	0.552
21	0.516
22	0.478
23	0.441

ANGLE	FIELD
24	0.404
25	0.369
26	0.333
27	0.298
28	0.262
29	0.228
30	0.196
31	0.166
32	0.138
33	0.113
34	0.091
35	0.074
36	0.064
37	0.061
38	0.064
39	0.073
40	0.085
41	0.099
42	0.112
43	0.125
44	0.136
45	0.147
46	0.156
47	0.165
48	0.173
49	0.180
50	0.186
51	0.192
52	0.196
53	0.199
54	0.201
55	0.203
56	0.203
57	0.204

ANGLE	FIELD
58	0.203
59	0.203
60	0.202
61	0.200
62	0.198
63	0.196
64	0.193
65	0.190
66	0.187
67	0.184
68	0.181
69	0.177
70	0.173
71	0.169
72	0.165
73	0.161
74	0.157
75	0.153
76	0.149
77	0.145
78	0.141
79	0.137
80	0.134
81	0.130
82	0.127
83	0.123
84	0.120
85	0.116
86	0.113
87	0.110
88	0.107
89	0.104
90	0.101