



HDCA-5

FM

Maximum gain: 7.5 dBd

Horizontal polarization

Horizontal radiation pattern

0 degree electrical downtilt



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Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	7.50	5.62	45	0.372	-8.60	-1.10	0.78
1	0.995	-0.04	7.46	5.57	46	0.353	-9.04	-1.54	0.70
2	0.991	-0.08	7.42	5.52	47	0.335	-9.50	-2.00	0.63
3	0.987	-0.12	7.38	5.47	48	0.317	-9.99	-2.49	0.56
4	0.982	-0.16	7.34	5.42	49	0.299	-10.50	-3.00	0.50
5	0.978	-0.20	7.30	5.37	50	0.280	-11.06	-3.56	0.44
6	0.971	-0.26	7.24	5.30	51	0.262	-11.63	-4.13	0.39
7	0.964	-0.32	7.18	5.23	52	0.244	-12.25	-4.75	0.33
8	0.957	-0.38	7.12	5.16	53	0.226	-12.92	-5.42	0.29
9	0.951	-0.44	7.06	5.08	54	0.208	-13.64	-6.14	0.24
10	0.944	-0.50	7.00	5.01	55	0.190	-14.42	-6.92	0.20
11	0.933	-0.60	6.90	4.90	56	0.174	-15.19	-7.69	0.17
12	0.923	-0.70	6.80	4.79	57	0.158	-16.03	-8.53	0.14
13	0.911	-0.80	6.70	4.67	58	0.142	-16.95	-9.45	0.11
14	0.901	-0.91	6.59	4.57	59	0.126	-17.99	-10.49	0.09
15	0.890	-1.01	6.49	4.45	60	0.110	-19.17	-11.67	0.07
16	0.874	-1.16	6.34	4.30	61	0.100	-20.00	-12.50	0.06
17	0.859	-1.32	6.18	4.15	62	0.090	-20.92	-13.42	0.05
18	0.844	-1.48	6.02	4.00	63	0.080	-21.94	-14.44	0.04
19	0.828	-1.64	5.86	3.86	64	0.070	-23.10	-15.60	0.03
20	0.812	-1.80	5.70	3.71	65	0.060	-24.44	-16.94	0.02
21	0.796	-1.99	5.51	3.56	66	0.055	-25.19	-17.69	0.02
22	0.778	-2.18	5.32	3.40	67	0.050	-26.02	-18.52	0.01
23	0.761	-2.37	5.13	3.26	68	0.045	-26.94	-19.44	0.01
24	0.743	-2.57	4.93	3.11	69	0.040	-27.96	-20.46	0.01
25	0.727	-2.78	4.72	2.97	70	0.035	-29.12	-21.62	0.01
26	0.709	-2.99	4.51	2.83	71	0.030	-30.46	-22.96	0.01
27	0.692	-3.19	4.31	2.70	72	0.025	-32.04	-24.54	0.00
28	0.675	-3.41	4.09	2.56	73	0.020	-33.98	-26.48	0.00
29	0.658	-3.63	3.87	2.44	74	0.015	-36.48	-28.98	0.00
30	0.641	-3.86	3.64	2.31	75	0.010	-40.00	-32.50	0.00
31	0.623	-4.11	3.39	2.18	76	0.010	-40.00	-32.50	0.00
32	0.604	-4.37	3.13	2.05	77	0.010	-40.00	-32.50	0.00
33	0.586	-4.63	2.87	1.93	78	0.010	-40.00	-32.50	0.00
34	0.568	-4.91	2.59	1.81	79	0.010	-40.00	-32.50	0.00
35	0.550	-5.19	2.31	1.70	80	0.010	-40.00	-32.50	0.00
36	0.532	-5.48	2.02	1.59	81	0.010	-40.00	-32.50	0.00
37	0.514	-5.78	1.72	1.49	82	0.010	-40.00	-32.50	0.00
38	0.496	-6.09	1.41	1.38	83	0.010	-40.00	-32.50	0.00
39	0.478	-6.41	1.09	1.28	84	0.010	-40.00	-32.50	0.00
40	0.460	-6.74	0.76	1.19	85	0.010	-40.00	-32.50	0.00
41	0.442	-7.08	0.42	1.10	86	0.010	-40.00	-32.50	0.00
42	0.425	-7.44	0.06	1.01	87	0.010	-40.00	-32.50	0.00
43	0.407	-7.81	-0.31	0.93	88	0.010	-40.00	-32.50	0.00
44	0.389	-8.20	-0.70	0.85	89	0.010	-40.00	-32.50	0.00



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Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
90	0.010	-40.00	-32.50	0.00	135	0.072	-22.79	-15.29	0.03
91	0.010	-40.00	-32.50	0.00	136	0.076	-22.38	-14.88	0.03
92	0.010	-40.00	-32.50	0.00	137	0.079	-21.99	-14.49	0.04
93	0.010	-40.00	-32.50	0.00	138	0.083	-21.62	-14.12	0.04
94	0.010	-40.00	-32.50	0.00	139	0.086	-21.26	-13.76	0.04
95	0.010	-40.00	-32.50	0.00	140	0.090	-20.92	-13.42	0.05
96	0.010	-40.00	-32.50	0.00	141	0.093	-20.63	-13.13	0.05
97	0.010	-40.00	-32.50	0.00	142	0.096	-20.35	-12.85	0.05
98	0.010	-40.00	-32.50	0.00	143	0.099	-20.09	-12.59	0.06
99	0.010	-40.00	-32.50	0.00	144	0.102	-19.83	-12.33	0.06
100	0.010	-40.00	-32.50	0.00	145	0.105	-19.58	-12.08	0.06
101	0.010	-40.00	-32.50	0.00	146	0.108	-19.33	-11.83	0.07
102	0.010	-40.00	-32.50	0.00	147	0.111	-19.09	-11.59	0.07
103	0.010	-40.00	-32.50	0.00	148	0.114	-18.86	-11.36	0.07
104	0.010	-40.00	-32.50	0.00	149	0.117	-18.64	-11.14	0.08
105	0.010	-40.00	-32.50	0.00	150	0.120	-18.42	-10.92	0.08
106	0.010	-40.00	-32.50	0.00	151	0.122	-18.27	-10.77	0.08
107	0.010	-40.00	-32.50	0.00	152	0.124	-18.13	-10.63	0.09
108	0.010	-40.00	-32.50	0.00	153	0.126	-17.99	-10.49	0.09
109	0.010	-40.00	-32.50	0.00	154	0.128	-17.86	-10.36	0.09
110	0.010	-40.00	-32.50	0.00	155	0.130	-17.72	-10.22	0.10
111	0.010	-40.00	-32.50	0.00	156	0.132	-17.62	-10.12	0.10
112	0.010	-40.00	-32.50	0.00	157	0.133	-17.52	-10.02	0.10
113	0.010	-40.00	-32.50	0.00	158	0.134	-17.43	-9.93	0.10
114	0.010	-40.00	-32.50	0.00	159	0.136	-17.33	-9.83	0.10
115	0.010	-40.00	-32.50	0.00	160	0.138	-17.23	-9.73	0.11
116	0.014	-37.08	-29.58	0.00	161	0.138	-17.23	-9.73	0.11
117	0.018	-34.89	-27.39	0.00	162	0.138	-17.23	-9.73	0.11
118	0.022	-33.15	-25.65	0.00	163	0.138	-17.23	-9.73	0.11
119	0.026	-31.70	-24.20	0.00	164	0.138	-17.23	-9.73	0.11
120	0.030	-30.46	-22.96	0.01	165	0.138	-17.23	-9.73	0.11
121	0.032	-29.90	-22.40	0.01	166	0.138	-17.20	-9.70	0.11
122	0.034	-29.37	-21.87	0.01	167	0.139	-17.17	-9.67	0.11
123	0.036	-28.87	-21.37	0.01	168	0.139	-17.14	-9.64	0.11
124	0.038	-28.40	-20.90	0.01	169	0.139	-17.11	-9.61	0.11
125	0.040	-27.96	-20.46	0.01	170	0.140	-17.08	-9.58	0.11
126	0.043	-27.33	-19.83	0.01	171	0.139	-17.11	-9.61	0.11
127	0.046	-26.74	-19.24	0.01	172	0.139	-17.11	-9.61	0.11
128	0.049	-26.20	-18.70	0.01	173	0.139	-17.14	-9.64	0.11
129	0.052	-25.68	-18.18	0.02	174	0.139	-17.14	-9.64	0.11
130	0.055	-25.19	-17.69	0.02	175	0.139	-17.17	-9.67	0.11
131	0.058	-24.66	-17.16	0.02	176	0.138	-17.20	-9.70	0.11
132	0.062	-24.15	-16.65	0.02	177	0.137	-17.27	-9.77	0.11
133	0.065	-23.68	-16.18	0.02	178	0.137	-17.30	-9.80	0.10
134	0.069	-23.22	-15.72	0.03	179	0.135	-17.36	-9.86	0.10



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180	0.135	-17.39	-9.89	0.10	225	0.072	-22.79	-15.29	0.03
181	0.135	-17.36	-9.86	0.10	226	0.069	-23.22	-15.72	0.03
182	0.137	-17.30	-9.80	0.10	227	0.065	-23.68	-16.18	0.02
183	0.137	-17.27	-9.77	0.11	228	0.062	-24.15	-16.65	0.02
184	0.138	-17.20	-9.70	0.11	229	0.058	-24.66	-17.16	0.02
185	0.139	-17.17	-9.67	0.11	230	0.055	-25.19	-17.69	0.02
186	0.139	-17.14	-9.64	0.11	231	0.052	-25.68	-18.18	0.02
187	0.139	-17.14	-9.64	0.11	232	0.049	-26.20	-18.70	0.01
188	0.139	-17.11	-9.61	0.11	233	0.046	-26.74	-19.24	0.01
189	0.139	-17.11	-9.61	0.11	234	0.043	-27.33	-19.83	0.01
190	0.140	-17.08	-9.58	0.11	235	0.040	-27.96	-20.46	0.01
191	0.139	-17.11	-9.61	0.11	236	0.038	-28.40	-20.90	0.01
192	0.139	-17.14	-9.64	0.11	237	0.036	-28.87	-21.37	0.01
193	0.139	-17.17	-9.67	0.11	238	0.034	-29.37	-21.87	0.01
194	0.138	-17.20	-9.70	0.11	239	0.032	-29.90	-22.40	0.01
195	0.138	-17.23	-9.73	0.11	240	0.030	-30.46	-22.96	0.01
196	0.138	-17.23	-9.73	0.11	241	0.026	-31.70	-24.20	0.00
197	0.138	-17.23	-9.73	0.11	242	0.022	-33.15	-25.65	0.00
198	0.138	-17.23	-9.73	0.11	243	0.018	-34.89	-27.39	0.00
199	0.138	-17.23	-9.73	0.11	244	0.014	-37.08	-29.58	0.00
200	0.138	-17.23	-9.73	0.11	245	0.010	-40.00	-32.50	0.00
201	0.136	-17.33	-9.83	0.10	246	0.010	-40.00	-32.50	0.00
202	0.134	-17.43	-9.93	0.10	247	0.010	-40.00	-32.50	0.00
203	0.133	-17.52	-10.02	0.10	248	0.010	-40.00	-32.50	0.00
204	0.132	-17.62	-10.12	0.10	249	0.010	-40.00	-32.50	0.00
205	0.130	-17.72	-10.22	0.10	250	0.010	-40.00	-32.50	0.00
206	0.128	-17.86	-10.36	0.09	251	0.010	-40.00	-32.50	0.00
207	0.126	-17.99	-10.49	0.09	252	0.010	-40.00	-32.50	0.00
208	0.124	-18.13	-10.63	0.09	253	0.010	-40.00	-32.50	0.00
209	0.122	-18.27	-10.77	0.08	254	0.010	-40.00	-32.50	0.00
210	0.120	-18.42	-10.92	0.08	255	0.010	-40.00	-32.50	0.00
211	0.117	-18.64	-11.14	0.08	256	0.010	-40.00	-32.50	0.00
212	0.114	-18.86	-11.36	0.07	257	0.010	-40.00	-32.50	0.00
213	0.111	-19.09	-11.59	0.07	258	0.010	-40.00	-32.50	0.00
214	0.108	-19.33	-11.83	0.07	259	0.010	-40.00	-32.50	0.00
215	0.105	-19.58	-12.08	0.06	260	0.010	-40.00	-32.50	0.00
216	0.102	-19.83	-12.33	0.06	261	0.010	-40.00	-32.50	0.00
217	0.099	-20.09	-12.59	0.06	262	0.010	-40.00	-32.50	0.00
218	0.096	-20.35	-12.85	0.05	263	0.010	-40.00	-32.50	0.00
219	0.093	-20.63	-13.13	0.05	264	0.010	-40.00	-32.50	0.00
220	0.090	-20.92	-13.42	0.05	265	0.010	-40.00	-32.50	0.00
221	0.086	-21.26	-13.76	0.04	266	0.010	-40.00	-32.50	0.00
222	0.083	-21.62	-14.12	0.04	267	0.010	-40.00	-32.50	0.00
223	0.079	-21.99	-14.49	0.04	268	0.010	-40.00	-32.50	0.00
224	0.076	-22.38	-14.88	0.03	269	0.010	-40.00	-32.50	0.00



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Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
270	0.010	-40.00	-32.50	0.00	315	0.372	-8.60	-1.10	0.78
271	0.010	-40.00	-32.50	0.00	316	0.389	-8.20	-0.70	0.85
272	0.010	-40.00	-32.50	0.00	317	0.407	-7.81	-0.31	0.93
273	0.010	-40.00	-32.50	0.00	318	0.425	-7.44	0.06	1.01
274	0.010	-40.00	-32.50	0.00	319	0.442	-7.08	0.42	1.10
275	0.010	-40.00	-32.50	0.00	320	0.460	-6.74	0.76	1.19
276	0.010	-40.00	-32.50	0.00	321	0.478	-6.41	1.09	1.28
277	0.010	-40.00	-32.50	0.00	322	0.496	-6.09	1.41	1.38
278	0.010	-40.00	-32.50	0.00	323	0.514	-5.78	1.72	1.49
279	0.010	-40.00	-32.50	0.00	324	0.532	-5.48	2.02	1.59
280	0.010	-40.00	-32.50	0.00	325	0.550	-5.19	2.31	1.70
281	0.010	-40.00	-32.50	0.00	326	0.568	-4.91	2.59	1.81
282	0.010	-40.00	-32.50	0.00	327	0.586	-4.63	2.87	1.93
283	0.010	-40.00	-32.50	0.00	328	0.604	-4.37	3.13	2.05
284	0.010	-40.00	-32.50	0.00	329	0.623	-4.11	3.39	2.18
285	0.010	-40.00	-32.50	0.00	330	0.641	-3.86	3.64	2.31
286	0.015	-36.48	-28.98	0.00	331	0.658	-3.63	3.87	2.44
287	0.020	-33.98	-26.48	0.00	332	0.675	-3.41	4.09	2.56
288	0.025	-32.04	-24.54	0.00	333	0.692	-3.19	4.31	2.70
289	0.030	-30.46	-22.96	0.01	334	0.709	-2.99	4.51	2.83
290	0.035	-29.12	-21.62	0.01	335	0.727	-2.78	4.72	2.97
291	0.040	-27.96	-20.46	0.01	336	0.743	-2.57	4.93	3.11
292	0.045	-26.94	-19.44	0.01	337	0.761	-2.37	5.13	3.26
293	0.050	-26.02	-18.52	0.01	338	0.778	-2.18	5.32	3.40
294	0.055	-25.19	-17.69	0.02	339	0.796	-1.99	5.51	3.56
295	0.060	-24.44	-16.94	0.02	340	0.812	-1.80	5.70	3.71
296	0.070	-23.10	-15.60	0.03	341	0.828	-1.64	5.86	3.86
297	0.080	-21.94	-14.44	0.04	342	0.844	-1.48	6.02	4.00
298	0.090	-20.92	-13.42	0.05	343	0.859	-1.32	6.18	4.15
299	0.100	-20.00	-12.50	0.06	344	0.874	-1.16	6.34	4.30
300	0.110	-19.17	-11.67	0.07	345	0.890	-1.01	6.49	4.45
301	0.126	-17.99	-10.49	0.09	346	0.901	-0.91	6.59	4.57
302	0.142	-16.95	-9.45	0.11	347	0.911	-0.80	6.70	4.67
303	0.158	-16.03	-8.53	0.14	348	0.923	-0.70	6.80	4.79
304	0.174	-15.19	-7.69	0.17	349	0.933	-0.60	6.90	4.90
305	0.190	-14.42	-6.92	0.20	350	0.944	-0.50	7.00	5.01
306	0.208	-13.64	-6.14	0.24	351	0.951	-0.44	7.06	5.08
307	0.226	-12.92	-5.42	0.29	352	0.957	-0.38	7.12	5.16
308	0.244	-12.25	-4.75	0.33	353	0.964	-0.32	7.18	5.23
309	0.262	-11.63	-4.13	0.39	354	0.971	-0.26	7.24	5.30
310	0.280	-11.06	-3.56	0.44	355	0.978	-0.20	7.30	5.37
311	0.299	-10.50	-3.00	0.50	356	0.982	-0.16	7.34	5.42
312	0.317	-9.99	-2.49	0.56	357	0.987	-0.12	7.38	5.47
313	0.335	-9.50	-2.00	0.63	358	0.991	-0.08	7.42	5.52
314	0.353	-9.04	-1.54	0.70	359	0.995	-0.04	7.46	5.57