

GREG BEST CONSULTING, INC.

16100 Outlook Avenue
Stilwell, KS 60085
816-792-2913

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COMPOSITE ANTENNA PATTERN AND CALCULATED RMS OF ENVELOPE

Envelope				Composite			
Angle	Field	dB	Area	Angle	Field	dB	Area
0	1.000	0.000	0.0436	0	1.000	0.000	0.0601
5	1.000	0.000	0.0436	5	0.996	-0.035	0.0433
10	1.000	0.000	0.0436	10	0.976	-0.211	0.0416
15	1.000	0.000	0.0436	15	0.950	-0.446	0.0394
20	0.950	-0.446	0.0394	20	0.911	-0.810	0.0362
25	0.920	-0.724	0.0369	25	0.866	-1.250	0.0327
30	0.900	-0.915	0.0353	30	0.810	-1.830	0.0286
35	0.850	-1.412	0.0315	35	0.749	-2.510	0.0245
40	0.800	-1.938	0.0279	40	0.682	-3.324	0.0203
45	0.720	-2.853	0.0226	45	0.605	-4.365	0.0160
50	0.650	-3.742	0.0184	50	0.525	-5.597	0.0120
55	0.600	-4.437	0.0157	55	0.441	-7.111	0.0085
60	0.550	-5.193	0.0132	60	0.350	-9.119	0.0053
65	0.500	-6.021	0.0109	65	0.258	-11.768	0.0029
70	0.450	-6.936	0.0088	70	0.167	-15.546	0.0012
75	0.420	-7.535	0.0077	75	0.088	-21.110	0.0003
80	0.400	-7.959	0.0070	80	0.055	-25.193	0.0001
85	0.360	-8.874	0.0057	85	0.106	-19.494	0.0005
90	0.360	-8.874	0.0057	90	0.170	-15.391	0.0013
95	0.360	-8.874	0.0057	95	0.226	-12.918	0.0022
100	0.360	-8.874	0.0057	100	0.270	-11.373	0.0032
105	0.360	-8.874	0.0057	105	0.303	-10.371	0.0040
110	0.360	-8.874	0.0057	110	0.323	-9.816	0.0046
115	0.350	-9.119	0.0053	115	0.329	-9.656	0.0047
120	0.350	-9.119	0.0053	120	0.320	-9.897	0.0045
125	0.330	-9.630	0.0048	125	0.298	-10.516	0.0039
130	0.310	-10.173	0.0042	130	0.266	-11.502	0.0031
135	0.280	-11.057	0.0034	135	0.226	-12.918	0.0022
140	0.250	-12.041	0.0027	140	0.183	-14.751	0.0015
145	0.250	-12.041	0.0027	145	0.157	-16.082	0.0011
150	0.250	-12.041	0.0027	150	0.176	-15.090	0.0014
155	0.250	-12.041	0.0027	155	0.194	-14.244	0.0016
160	0.250	-12.041	0.0027	160	0.209	-13.597	0.0019
165	0.250	-12.041	0.0027	165	0.222	-13.073	0.0022
170	0.250	-12.041	0.0027	170	0.231	-12.728	0.0023
175	0.250	-12.041	0.0027	175	0.234	-12.616	0.0024
180	0.250	-12.041	0.0027	180	0.232	-12.690	0.0023
185	0.250	-12.041	0.0027	185	0.223	-13.034	0.0022
190	0.250	-12.041	0.0027	190	0.208	-13.639	0.0019
195	0.250	-12.041	0.0027	195	0.187	-14.563	0.0015
200	0.250	-12.041	0.0027	200	0.164	-15.703	0.0012
205	0.250	-12.041	0.0027	205	0.150	-16.478	0.0010
210	0.250	-12.041	0.0027	210	0.158	-16.027	0.0011
215	0.250	-12.041	0.0027	215	0.167	-15.546	0.0012
220	0.250	-12.041	0.0027	220	0.177	-15.041	0.0014
225	0.280	-11.057	0.0034	225	0.187	-14.563	0.0015

230	0.310	-10.173	0.0042	230	0.192	-14.334	0.0016
235	0.330	-9.630	0.0048	235	0.193	-14.289	0.0016
240	0.350	-9.119	0.0053	240	0.189	-14.471	0.0016
245	0.350	-9.119	0.0053	245	0.182	-14.799	0.0014
250	0.360	-8.874	0.0057	250	0.175	-15.139	0.0013
255	0.360	-8.874	0.0057	255	0.167	-15.546	0.0012
260	0.360	-8.874	0.0057	260	0.163	-15.756	0.0012
265	0.360	-8.874	0.0057	265	0.162	-15.810	0.0011
270	0.360	-8.874	0.0057	270	0.166	-15.598	0.0012
275	0.360	-8.874	0.0057	275	0.171	-15.340	0.0013
280	0.400	-7.959	0.0070	280	0.183	-14.751	0.0015
285	0.420	-7.535	0.0077	285	0.208	-13.639	0.0019
290	0.450	-6.936	0.0088	290	0.252	-11.972	0.0028
295	0.500	-6.021	0.0109	295	0.307	-10.257	0.0041
300	0.550	-5.193	0.0132	300	0.377	-8.473	0.0062
305	0.600	-4.437	0.0157	305	0.452	-6.897	0.0089
310	0.650	-3.742	0.0184	310	0.530	-5.514	0.0123
315	0.720	-2.853	0.0226	315	0.612	-4.265	0.0163
320	0.800	-1.938	0.0279	320	0.686	-3.274	0.0205
325	0.850	-1.412	0.0315	325	0.756	-2.430	0.0249
330	0.900	-0.915	0.0353	330	0.821	-1.713	0.0294
335	0.920	-0.724	0.0369	335	0.878	-1.130	0.0336
340	0.950	-0.446	0.0394	340	0.923	-0.696	0.0372
345	1.000	0.000	0.0436	345	0.957	-0.382	0.0400
350	1.000	0.000	0.0436	350	0.982	-0.158	0.0421
355	1.000	0.000	0.0436	355	0.997	-0.026	0.0434
Total Area				0.1017			
Directivity				3.090			
RMS				0.569			
Total Area				0.776			
Directivity				4.051			
RMS				0.497			
Percentage				87.33%			

The RMS percentage of the envelope coverage = $0.497/0.569 = 87.3 \%$