

$$\cos(\theta) = \frac{(1+r)/(2*rr^{0.5})}{(1-kk)/(1+kk)}$$

Npoints 50  
 KKdB -30

kk 0.001 = +10^(-KKdB/10)  
 RRmin 0.8811 + (((1+kk)/(1-kk)) - ((1+kk)/(1-kk))^2 - 1)^0.5^2

r = 1 - (1 - (RRmin^0.5)) \* COS(A14 \* PI / (2 \* Npoints))  
 Theta = @DEGREES(@ACOS(((1+B14^2)/(2\*B14)) \* (1-kk)/(1+kk)))

Point	r	-r dB	Theta (deg)
0	0.9387	0.550	0.00
1	0.9387	0.549	0.12
2	0.9388	0.548	0.23
3	0.9390	0.547	0.35
4	0.9392	0.545	0.46
5	0.9394	0.543	0.58
6	0.9398	0.539	0.69
7	0.9402	0.536	0.80
8	0.9406	0.532	0.91
9	0.9411	0.527	1.03
10	0.9417	0.522	1.14
11	0.9423	0.516	1.24
12	0.9430	0.510	1.35
13	0.9437	0.503	1.46
14	0.9445	0.496	1.56
15	0.9454	0.488	1.67
16	0.9463	0.480	1.77
17	0.9472	0.471	1.87
18	0.9482	0.462	1.96
19	0.9493	0.452	2.06
20	0.9504	0.442	2.15
21	0.9516	0.431	2.24
22	0.9528	0.420	2.33
23	0.9540	0.409	2.42
24	0.9553	0.397	2.50
25	0.9566	0.385	2.59
26	0.9580	0.372	2.66
27	0.9595	0.359	2.74
28	0.9609	0.346	2.81
29	0.9624	0.333	2.88
30	0.9640	0.319	2.95
31	0.9655	0.305	3.02
32	0.9672	0.290	3.08
33	0.9688	0.275	3.13
34	0.9705	0.260	3.19
35	0.9722	0.245	3.24
36	0.9739	0.230	3.29
37	0.9757	0.214	3.34
38	0.9774	0.198	3.38
39	0.9792	0.182	3.42
40	0.9811	0.166	3.45
41	0.9829	0.150	3.49
42	0.9848	0.133	3.51
43	0.9866	0.117	3.54
44	0.9885	0.100	3.56
45	0.9904	0.084	3.58
46	0.9923	0.067	3.60
47	0.9942	0.050	3.61
48	0.9962	0.034	3.62
49	0.9981	0.017	3.62
50	1.0000	0.000	3.62

30 dB

### LO Noise Rejection

