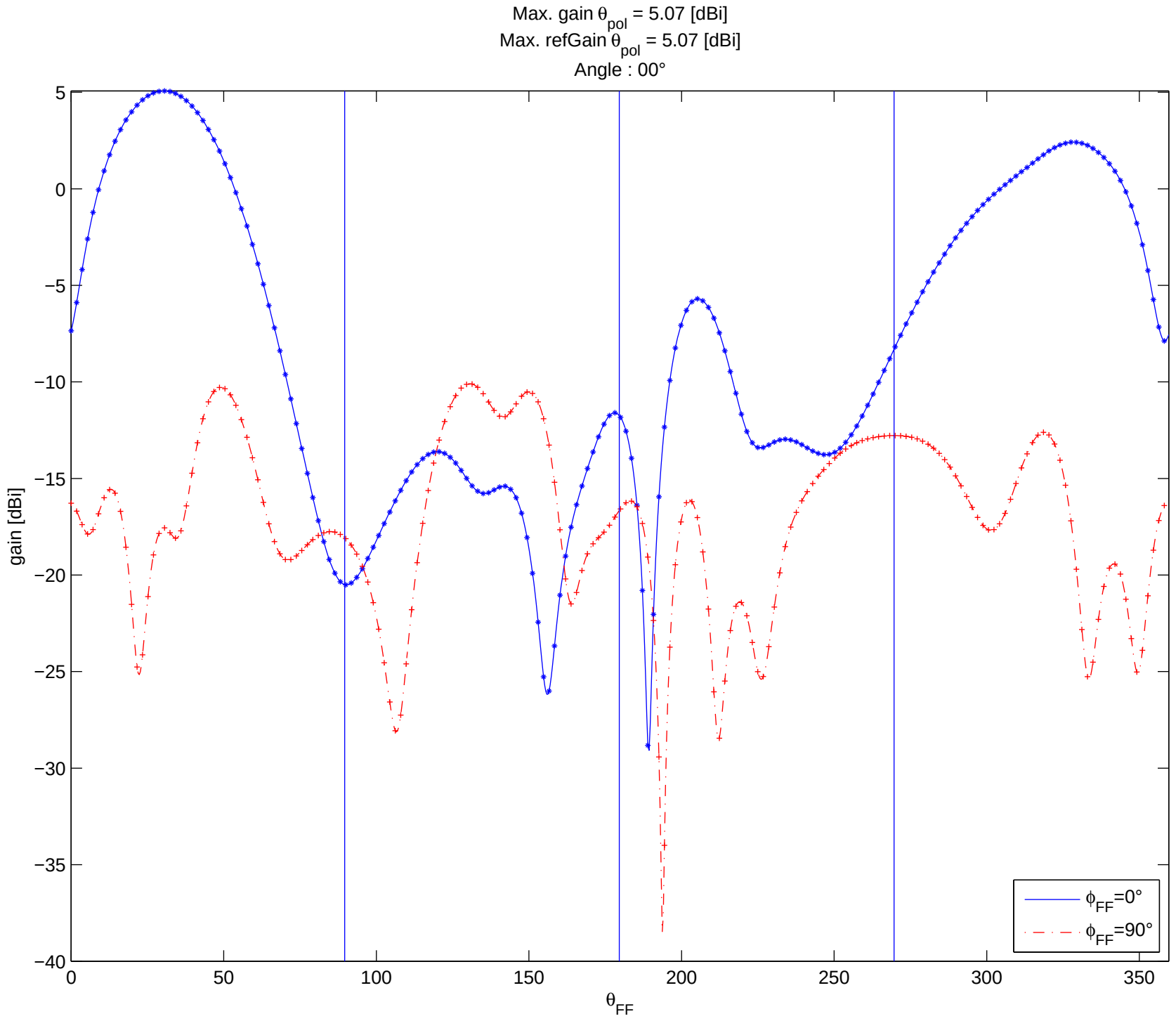
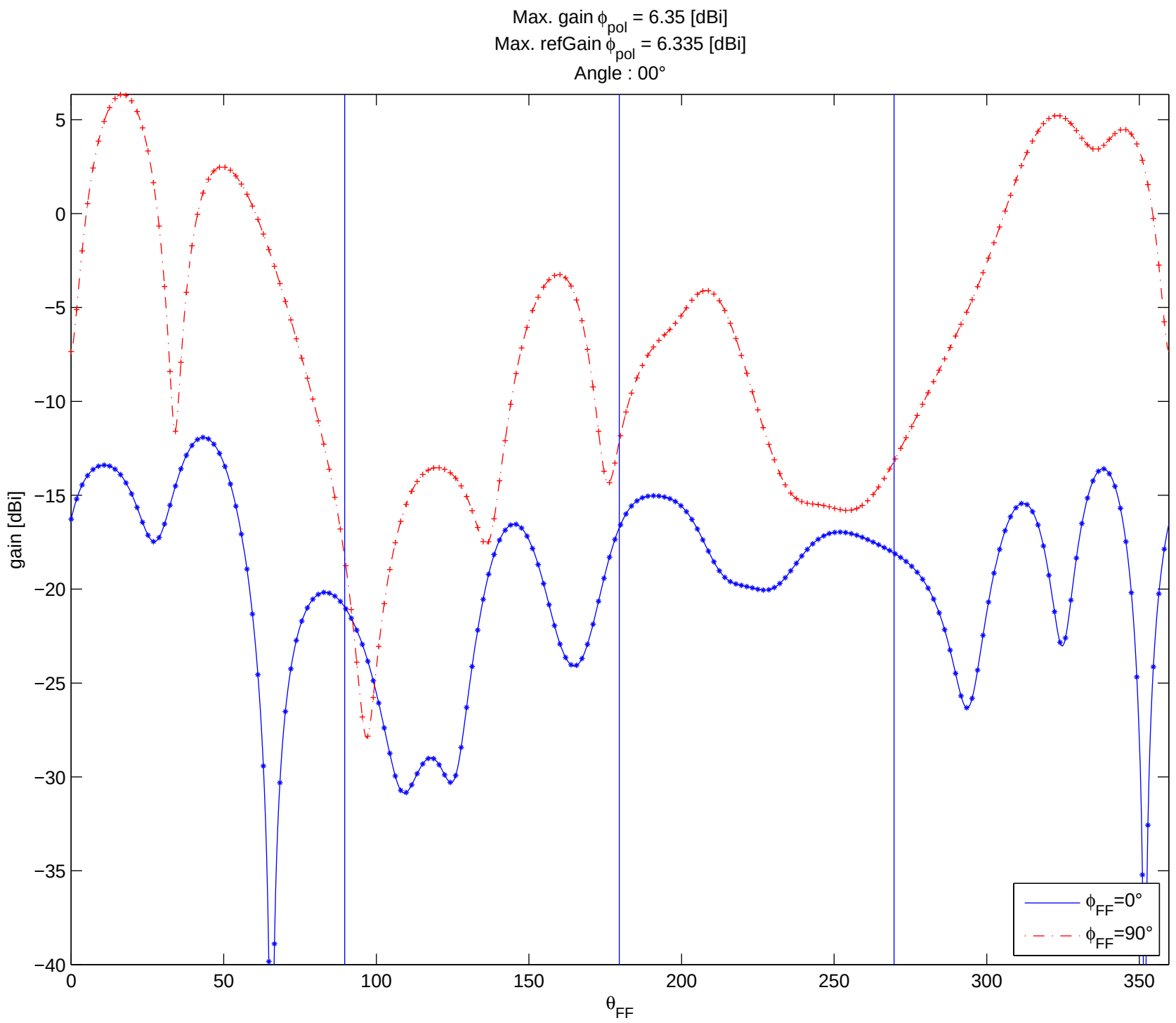
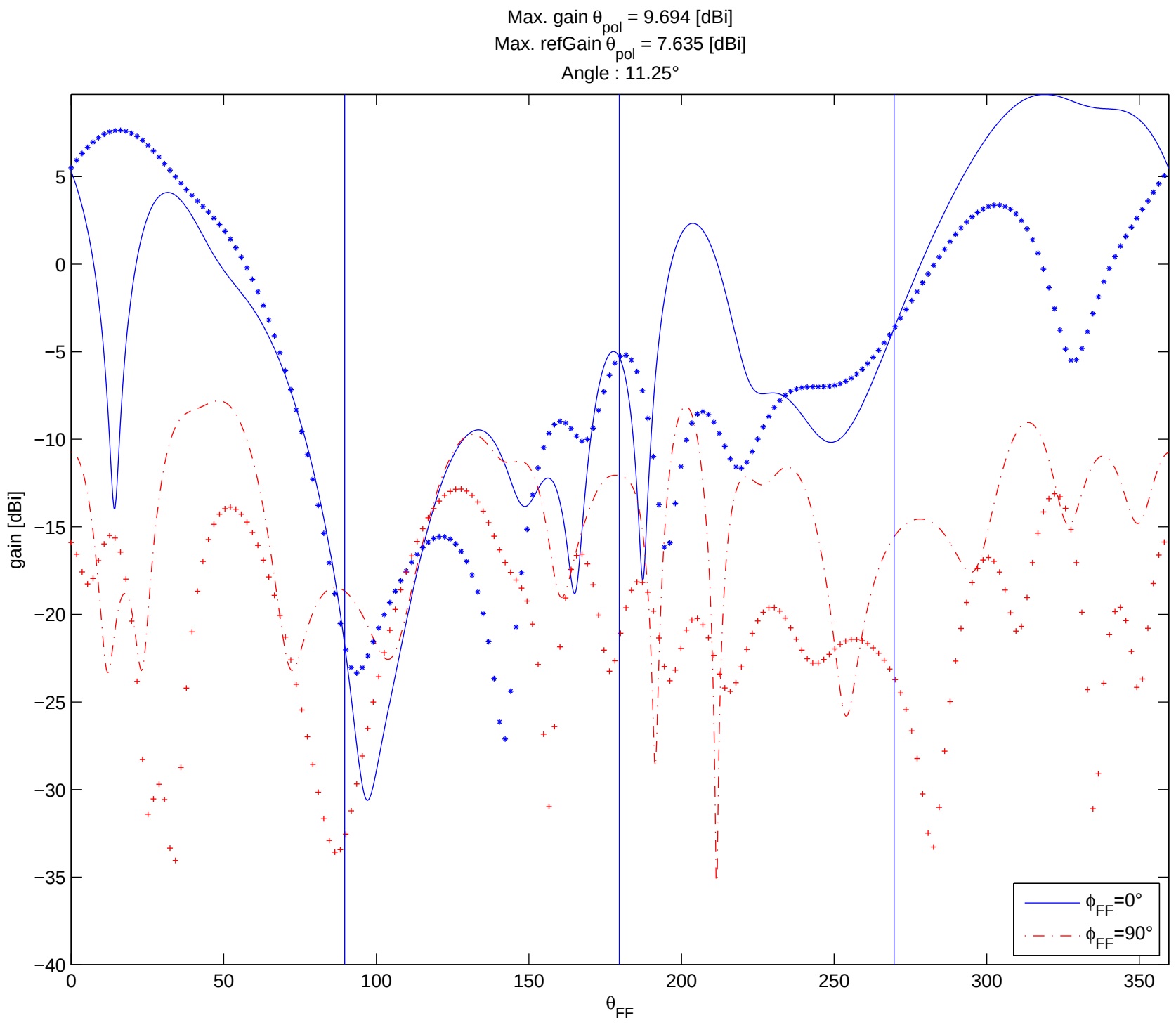
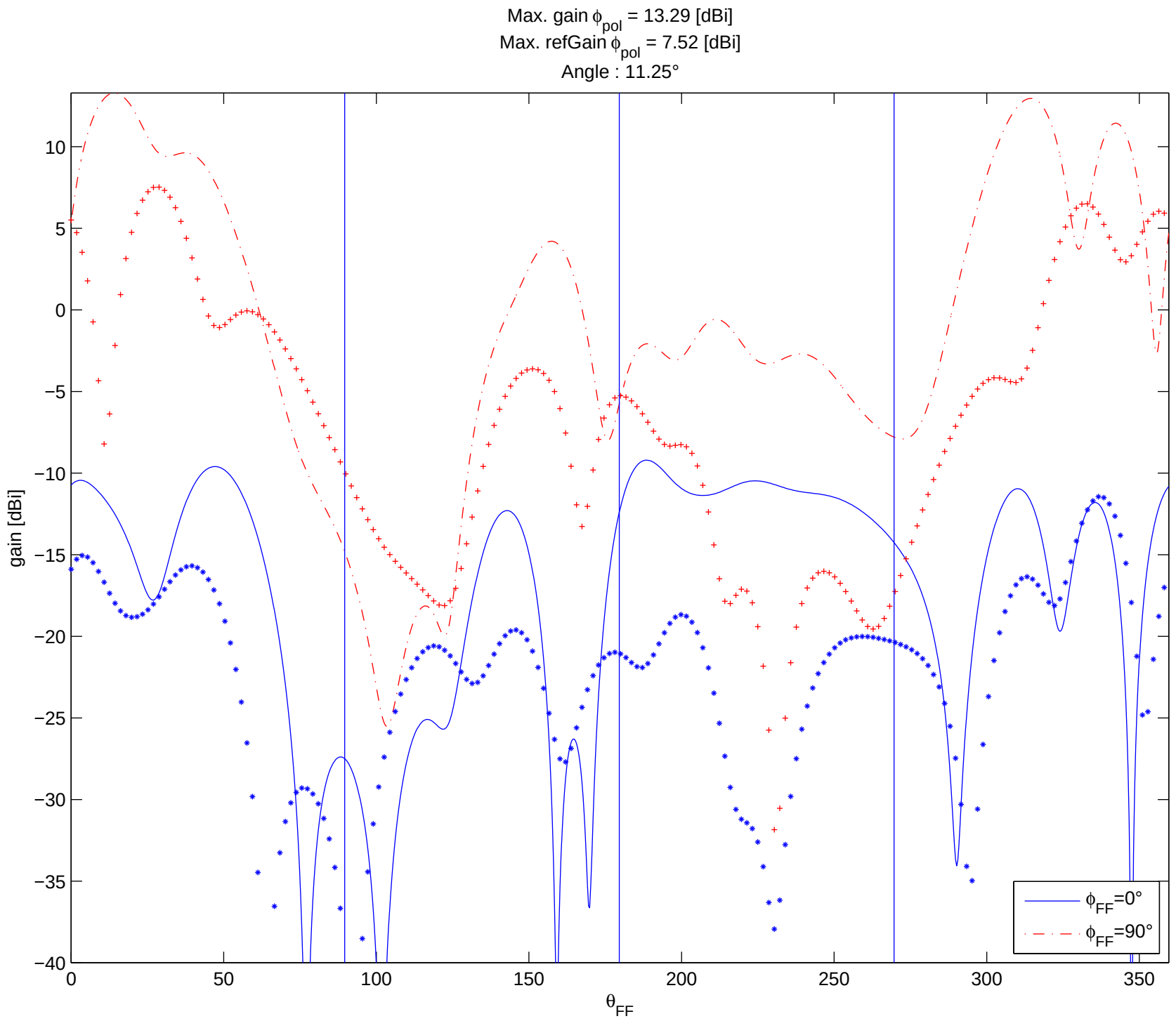
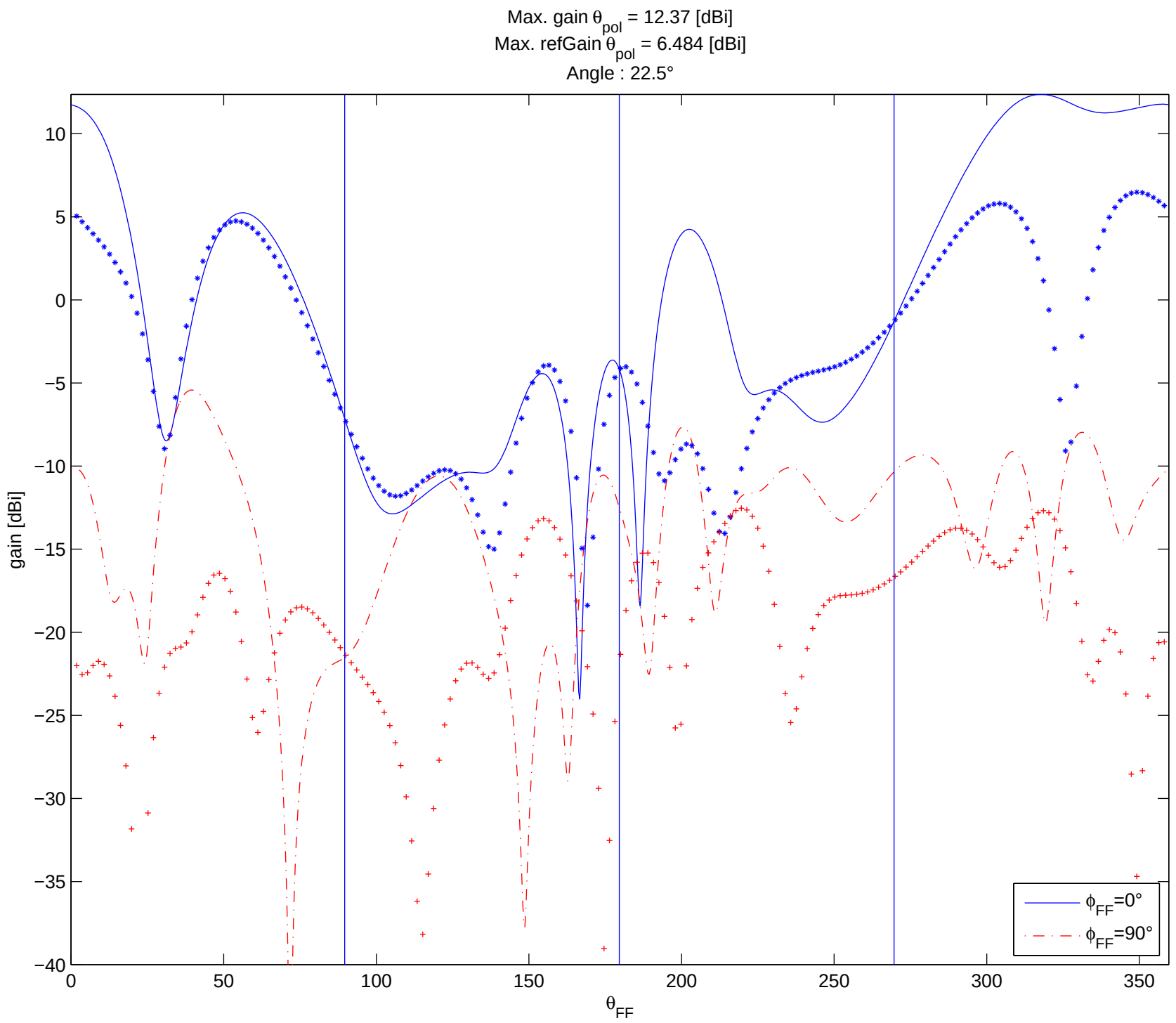
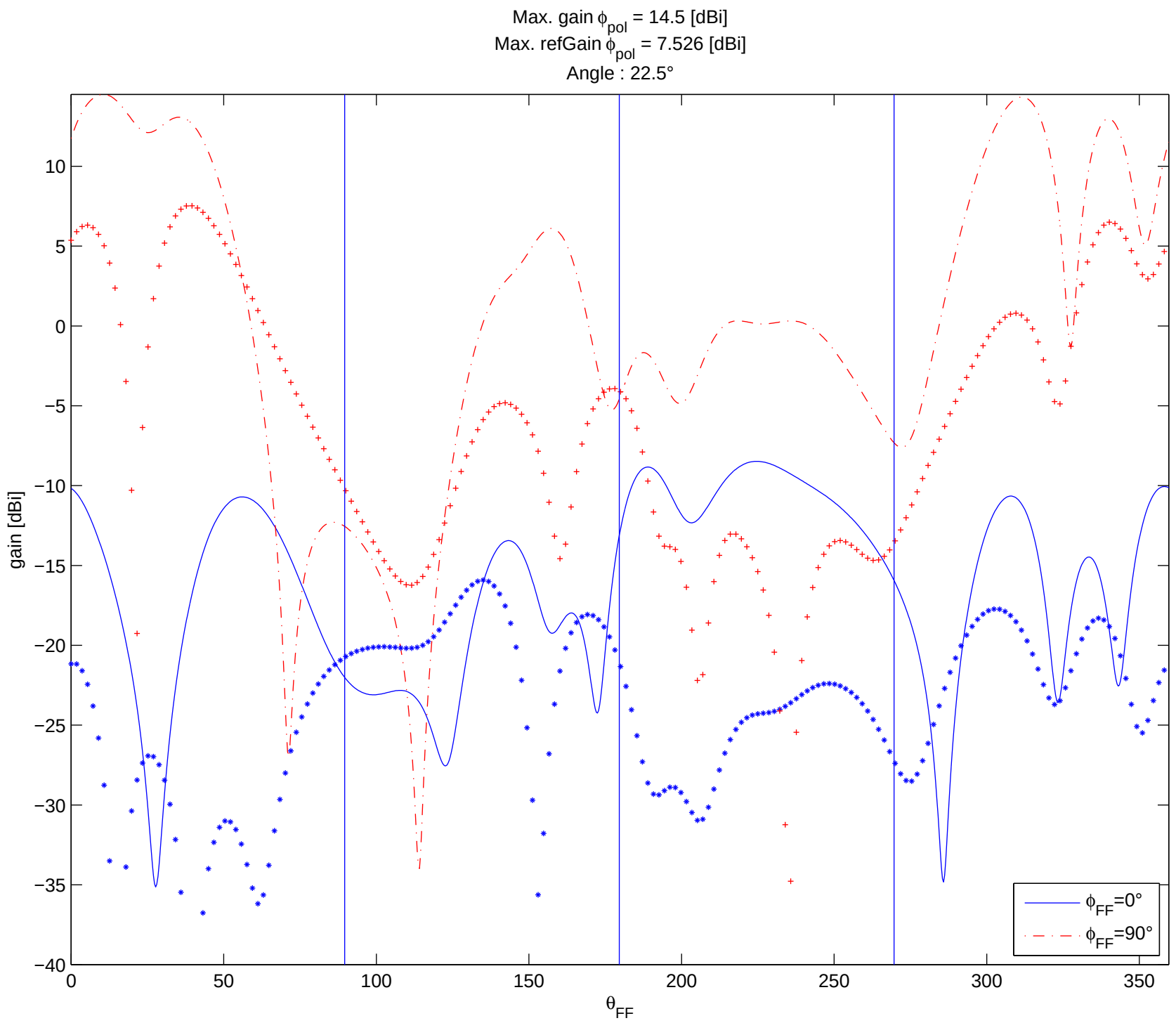

Max. gain θpol = 5.07 [dBi]
Max. refGain θpol = 5.07 [dBi]
Angle : 00°
gain [dBi]
θFF
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350
ϕFF=0°
ϕFF=90°

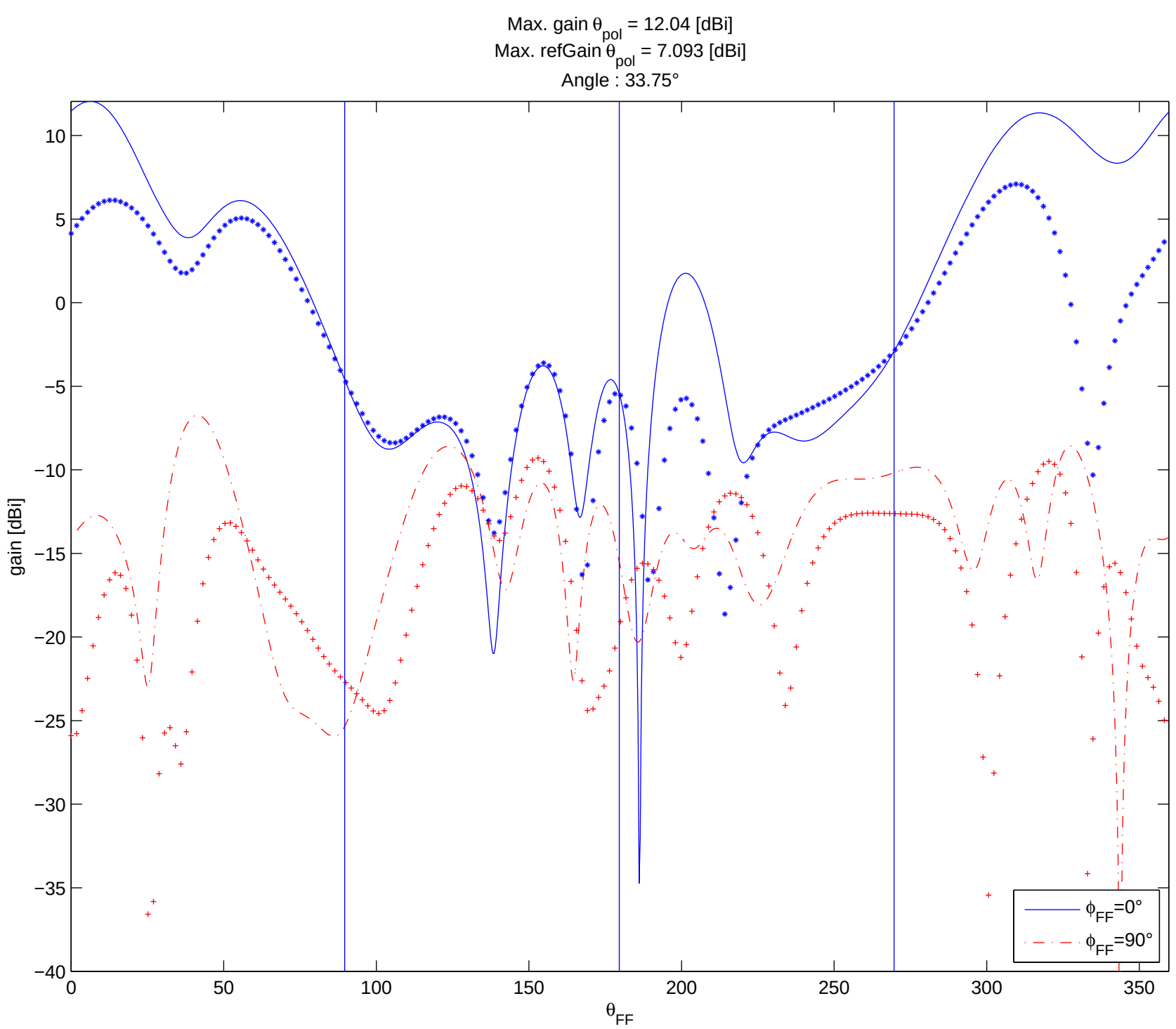

Max. gain ϕ_{pol} = 6.35 [dBi]
Max. refGain ϕ_{pol} = 6.335 [dBi]
Angle : 00°
gain [dBi]
θ_{FF}
ϕ_{FF}=0°
ϕ_{FF}=90°
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

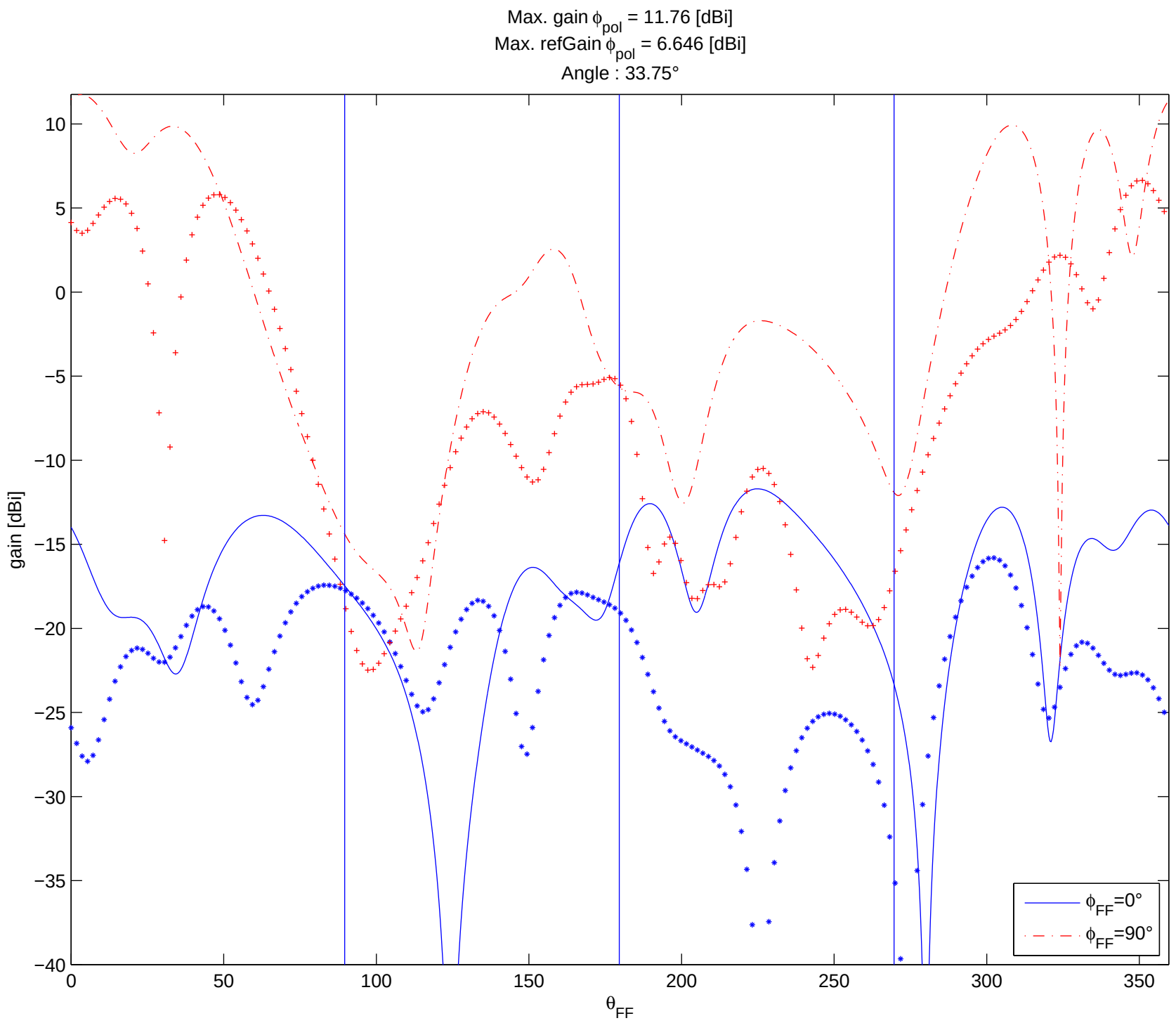

Max. gain θpol = 9.694 [dBi]
Max. refGain θpol = 7.635 [dBi]
Angle : 11.25°
gain [dBi]
θFF
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350
ϕFF=0°
ϕFF=90°

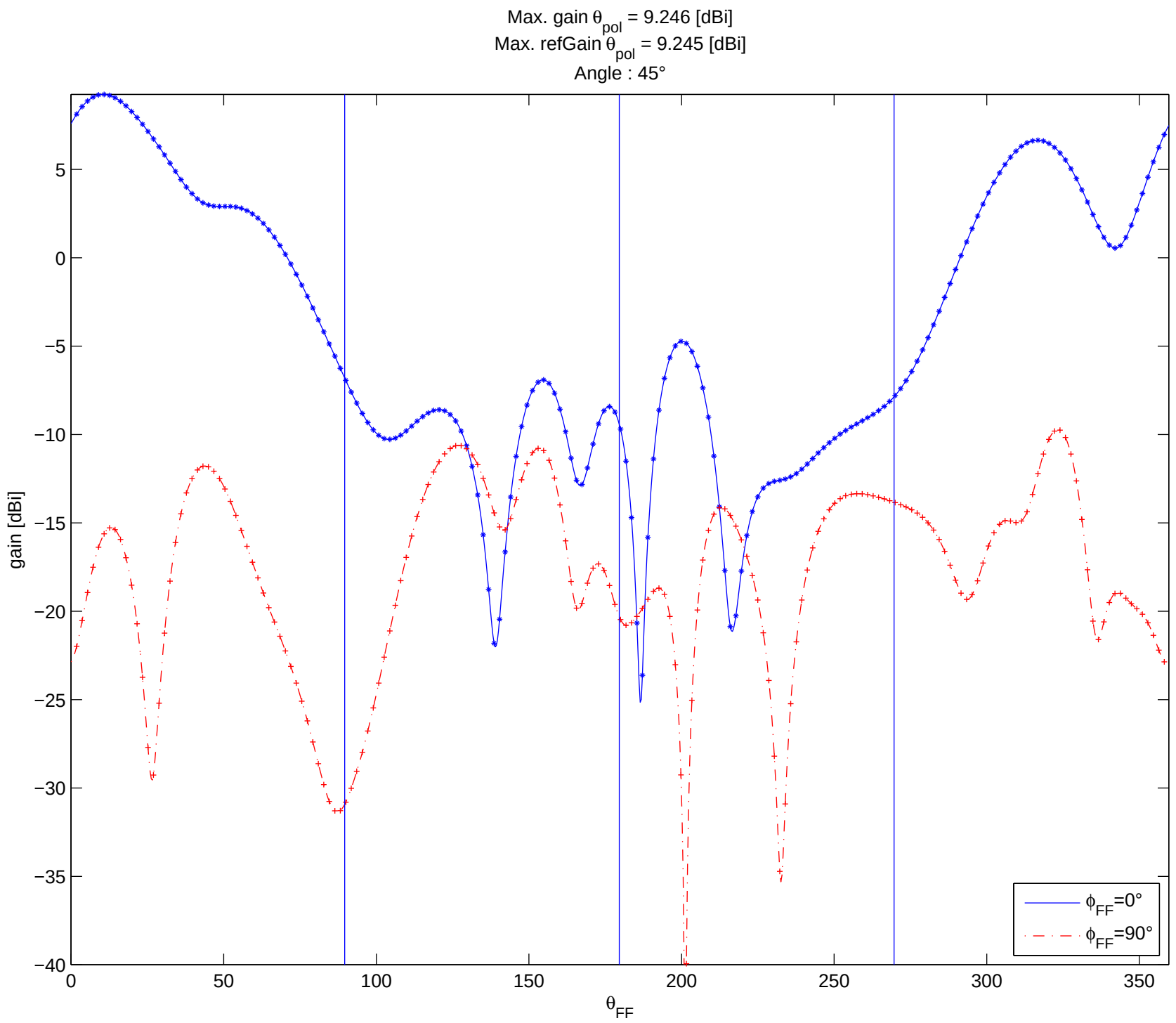

Max. gain ϕpol = 13.29 [dBi]
Max. refGain ϕpol = 7.52 [dBi]
Angle : 11.25°
gain [dBi]
θFF
ϕFF=0°
ϕFF=90°
10
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

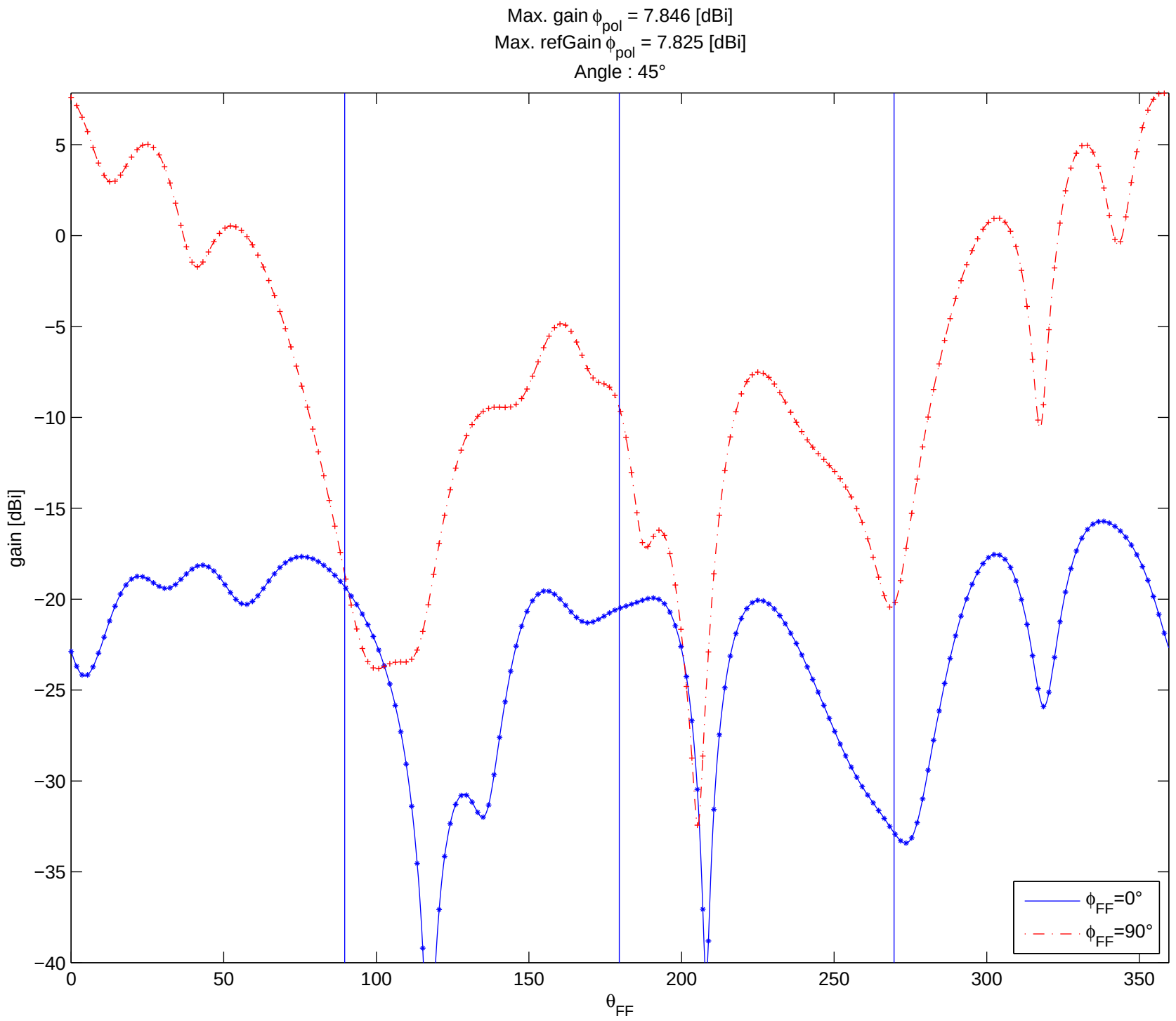

Max. gain θpol = 12.37 [dBi]
Max. refGain θpol = 6.484 [dBi]
Angle : 22.5°
gain [dBi]
θFF
ϕFF=0°
ϕFF=90°
10
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

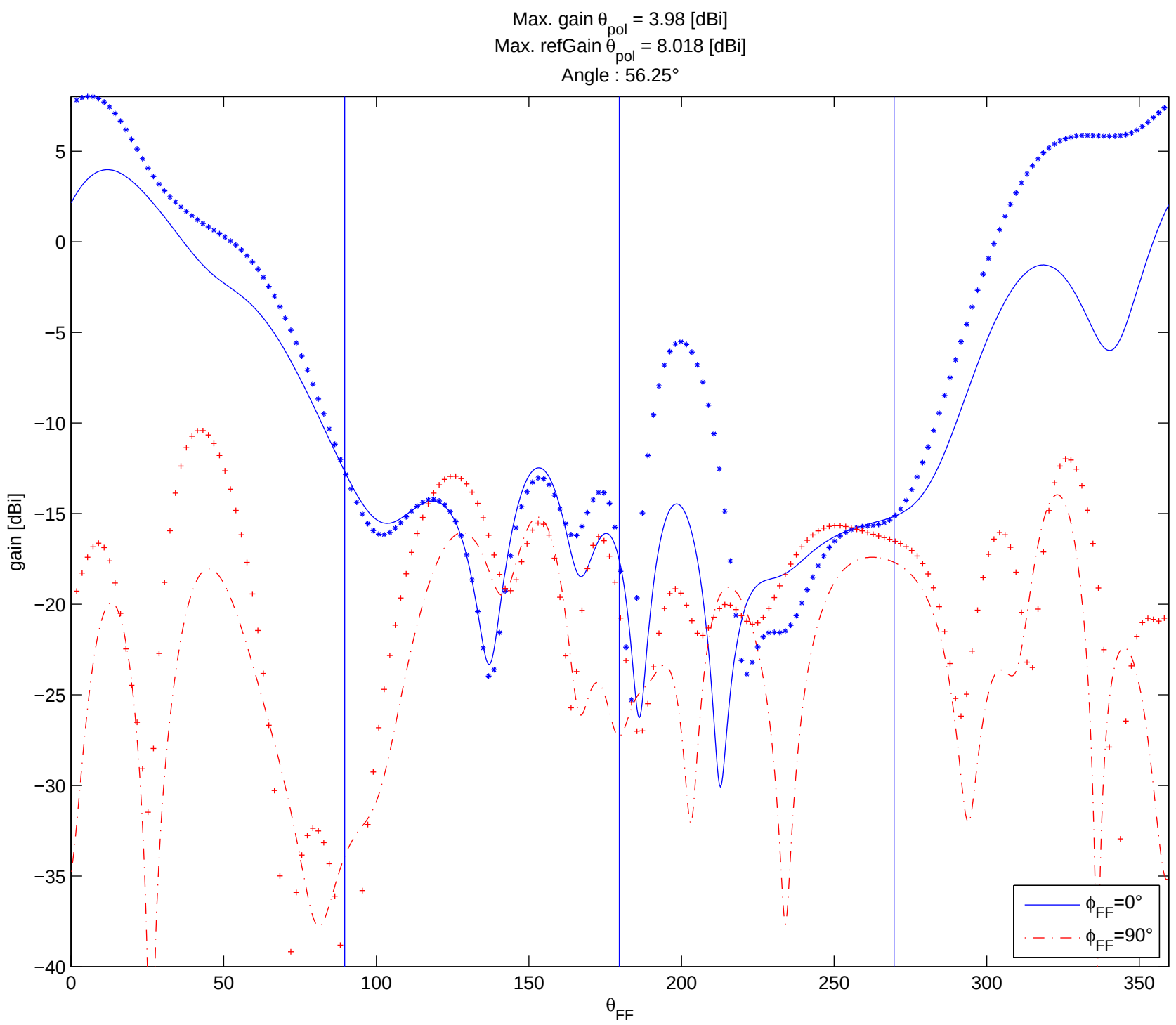

Max. gain ϕ_{pol} = 14.5 [dBi]
Max. refGain ϕ_{pol} = 7.526 [dBi]
Angle : 22.5°
gain [dBi]
θ_{FF}
ϕ_{FF}=0°
ϕ_{FF}=90°
10
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

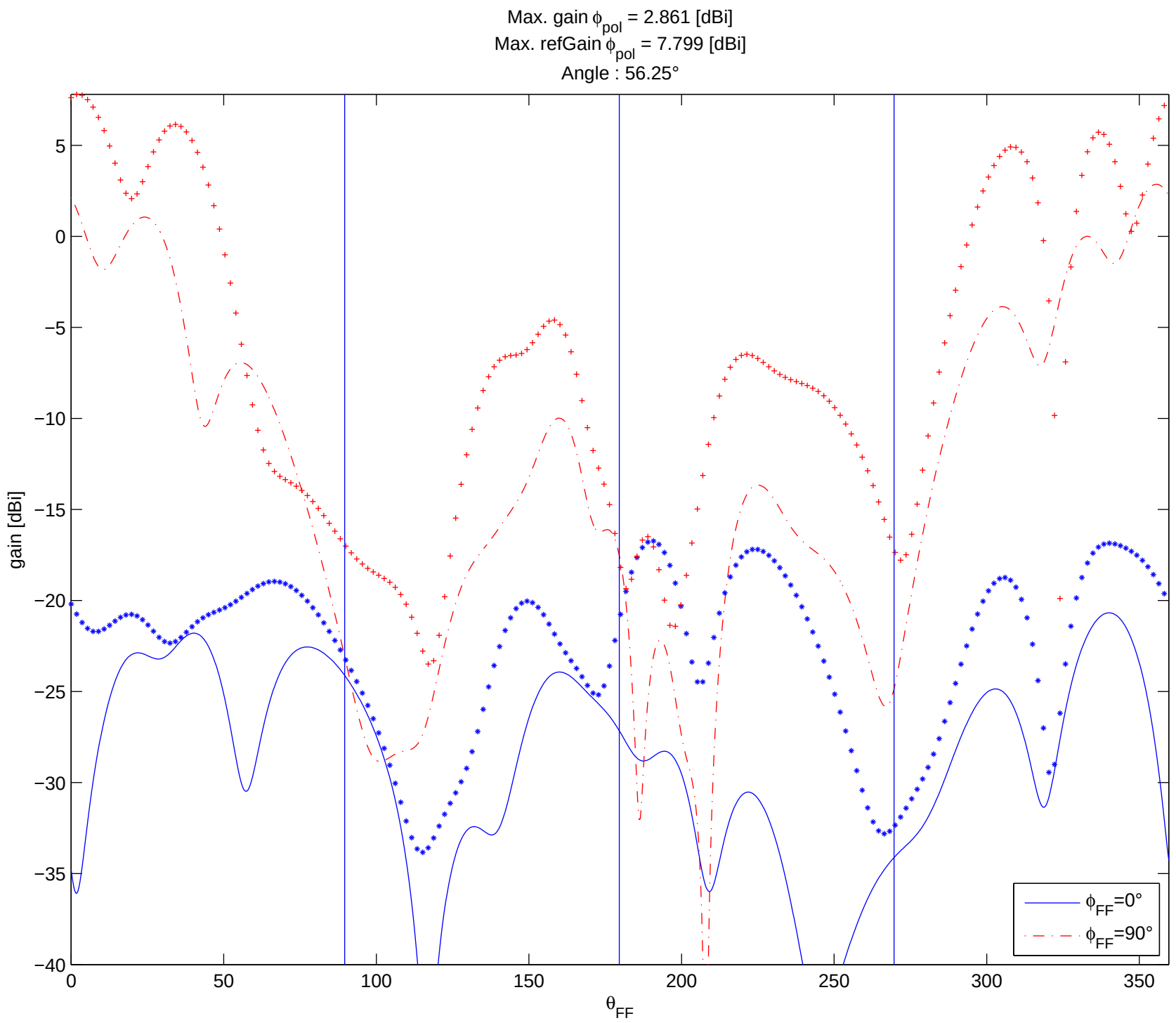

Max. gain θpol = 12.04 [dBi]
Max. refGain θpol = 7.093 [dBi]
Angle : 33.75°
gain [dBi]
θFF
ϕFF=0°
ϕFF=90°
10
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

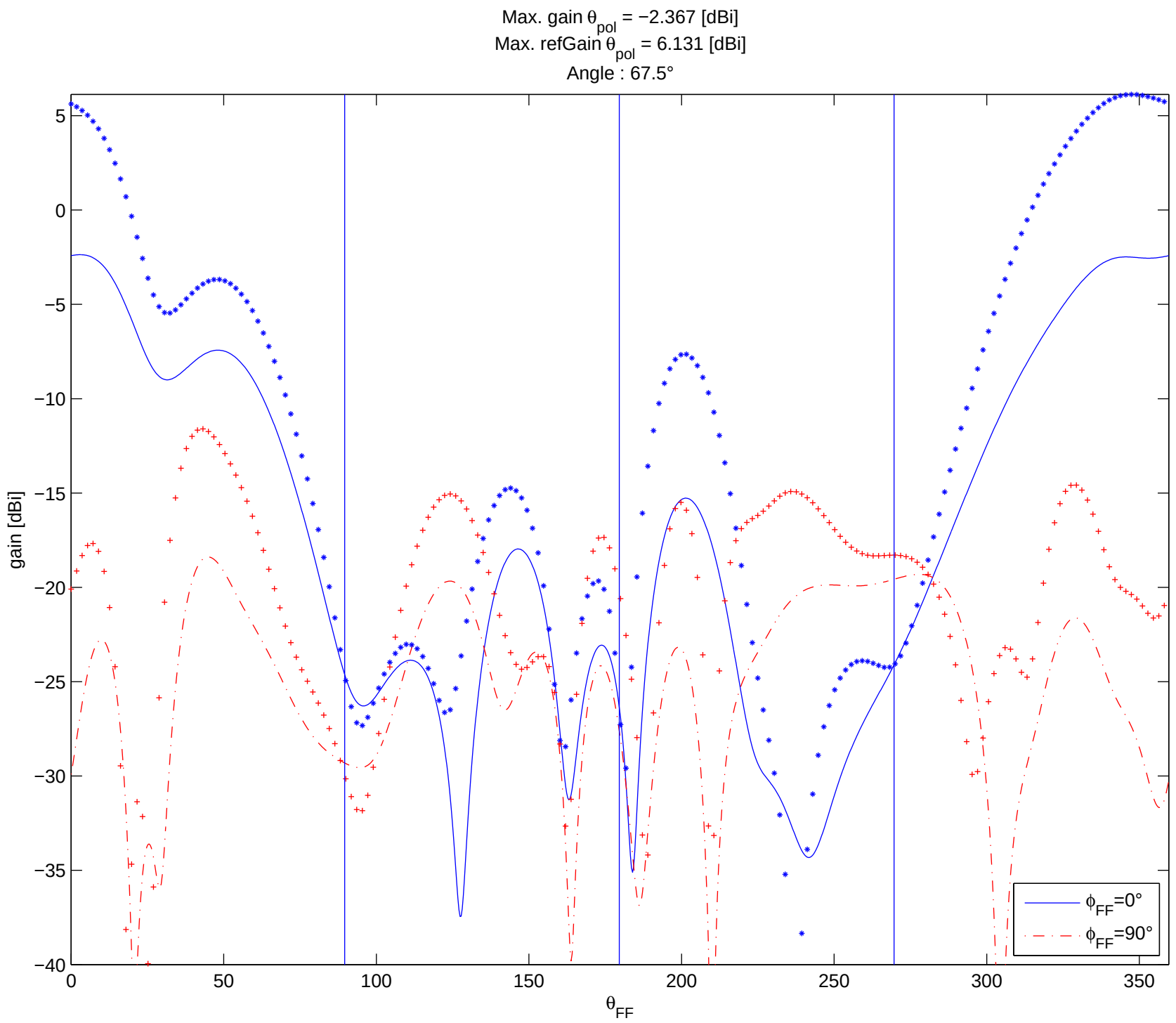

Max. gain ϕpol = 11.76 [dBi]
Max. refGain ϕpol = 6.646 [dBi]
Angle : 33.75°
gain [dBi]
θFF
ϕFF=0°
ϕFF=90°
10
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

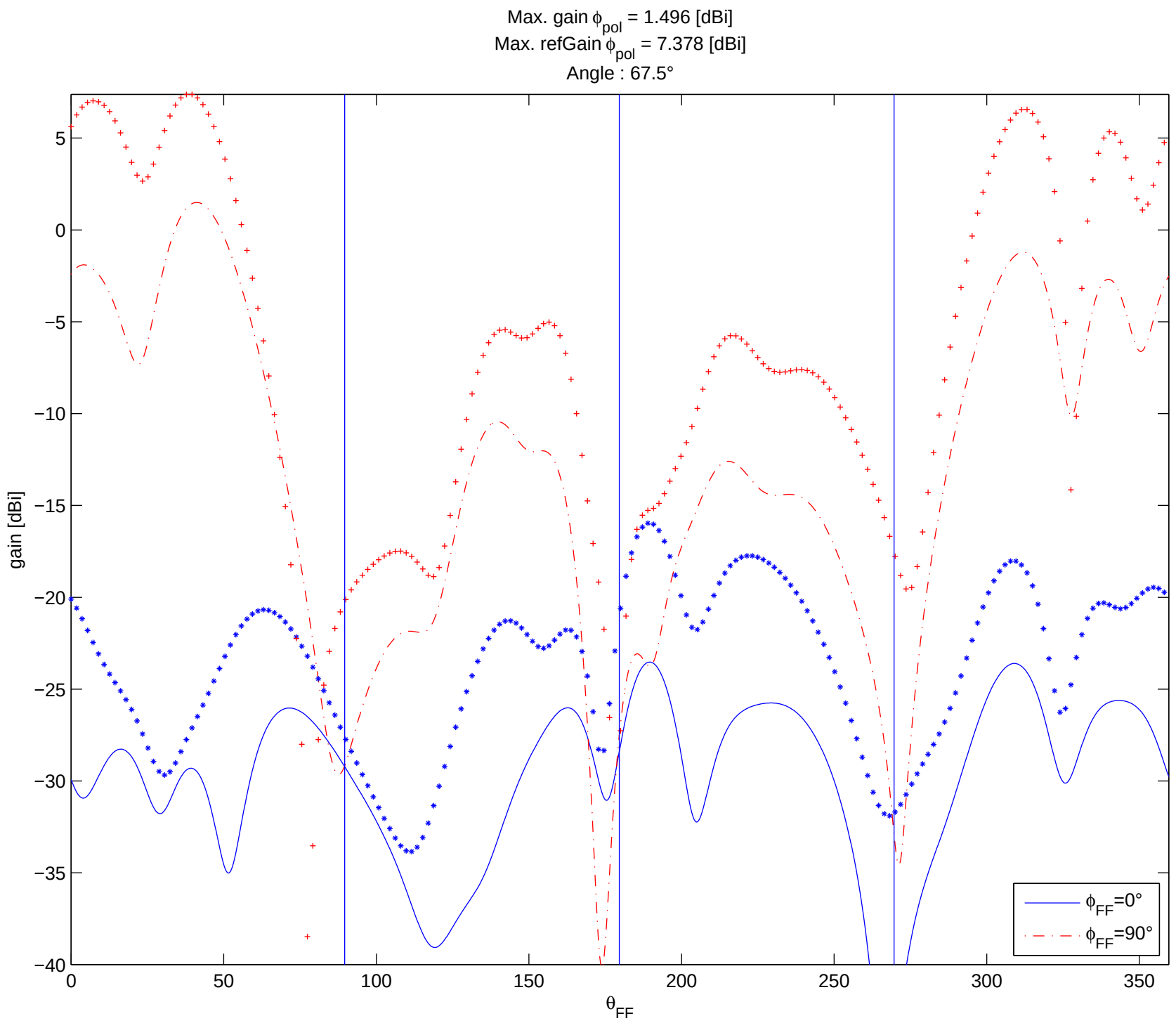

Max. gain θpol = 9.246 [dBi]
Max. refGain θpol = 9.245 [dBi]
Angle : 45°
gain [dBi]
θFF
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350
ϕFF=0°
ϕFF=90°

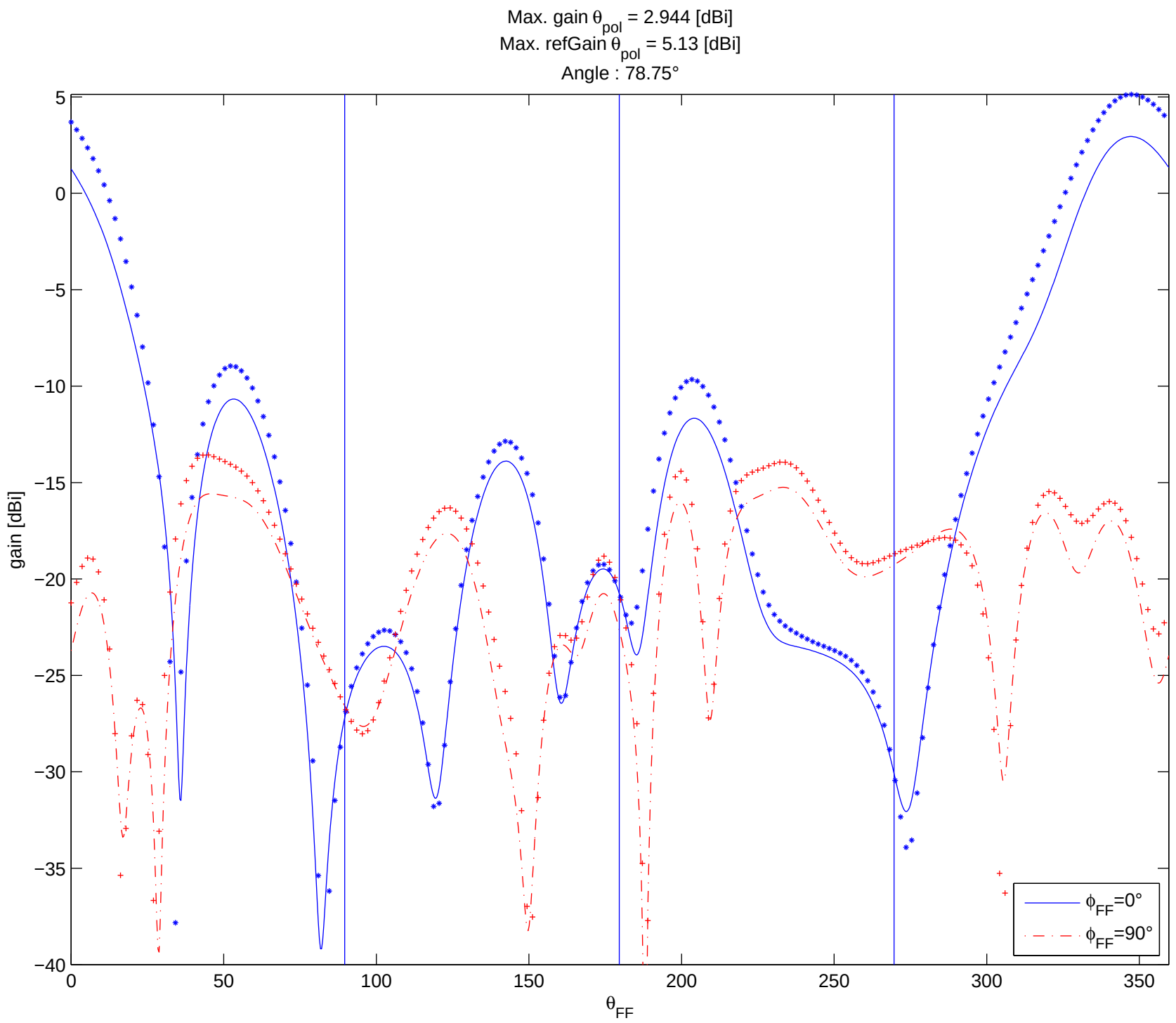

Max. gain ϕ_{pol} = 7.846 [dBi]
Max. refGain ϕ_{pol} = 7.825 [dBi]
Angle : 45°
gain [dBi]
θ_{FF}
ϕ_{FF}=0°
ϕ_{FF}=90°
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

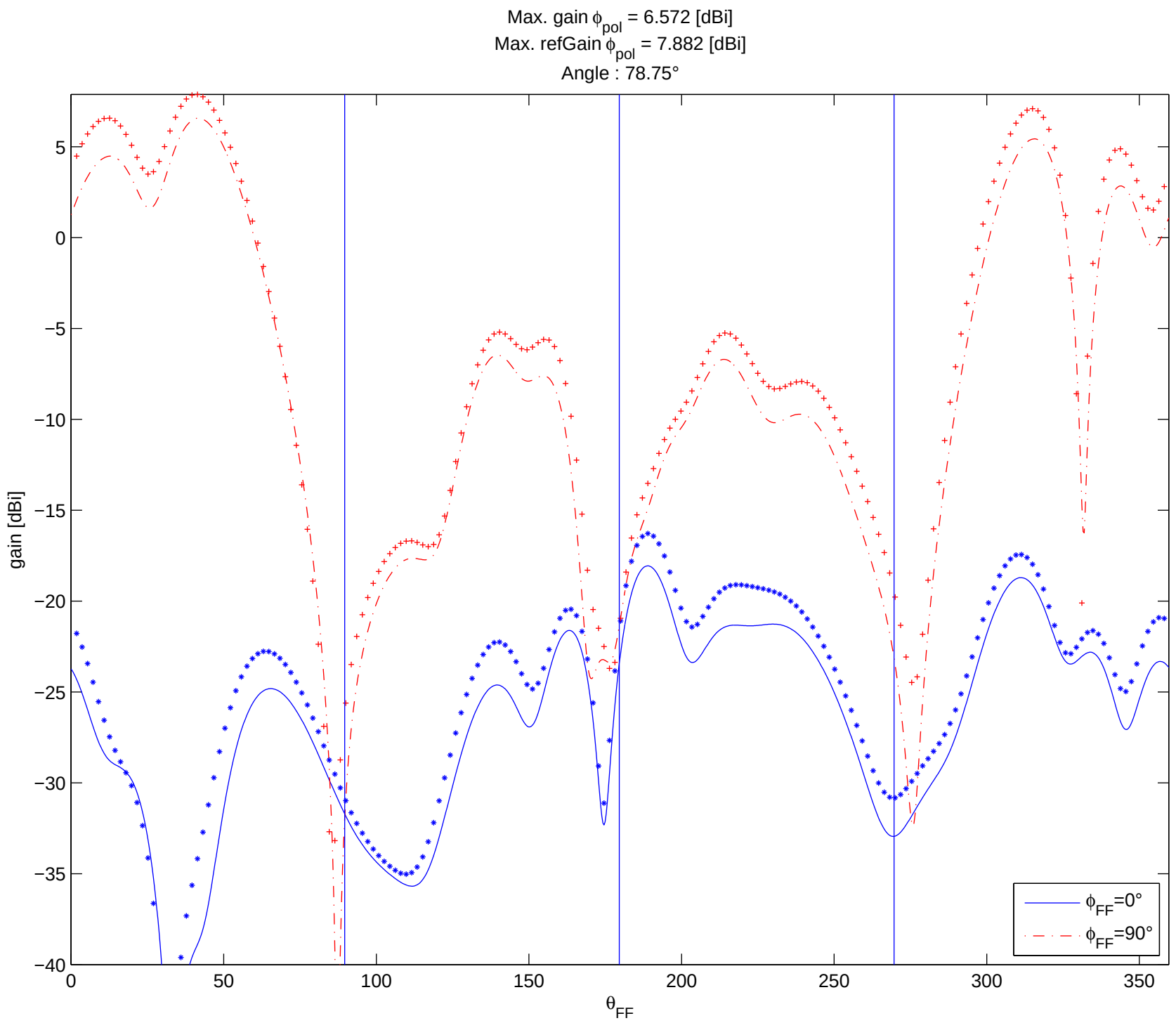

Max. gain θpol = 3.98 [dBi]
Max. refGain θpol = 8.018 [dBi]
Angle : 56.25°
gain [dBi]
θFF
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350
ϕFF=0°
ϕFF=90°

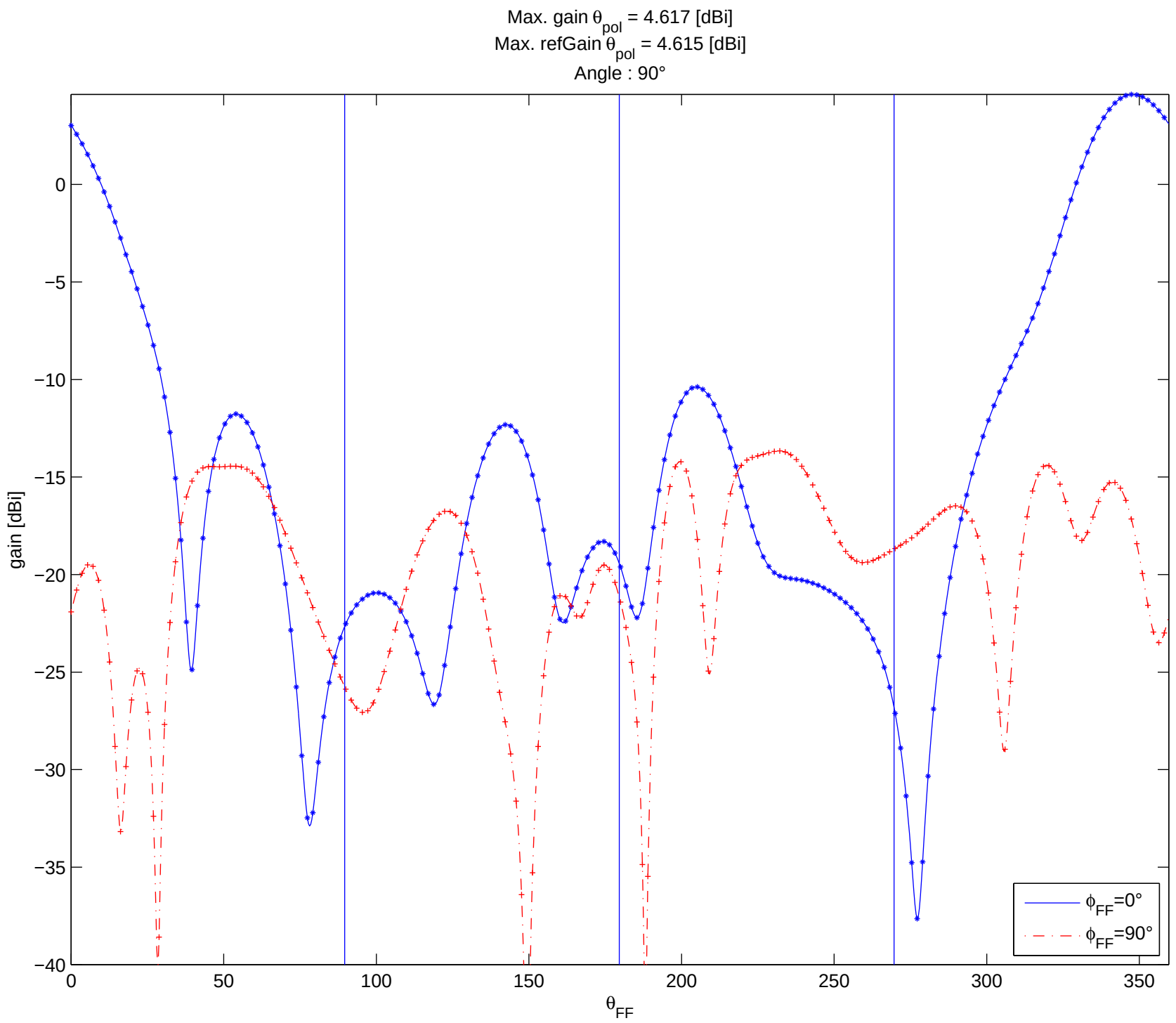

Max. gain ϕpol = 2.861 [dBi]
Max. refGain ϕpol = 7.799 [dBi]
Angle : 56.25°
gain [dBi]
θFF
ϕFF=0°
ϕFF=90°
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

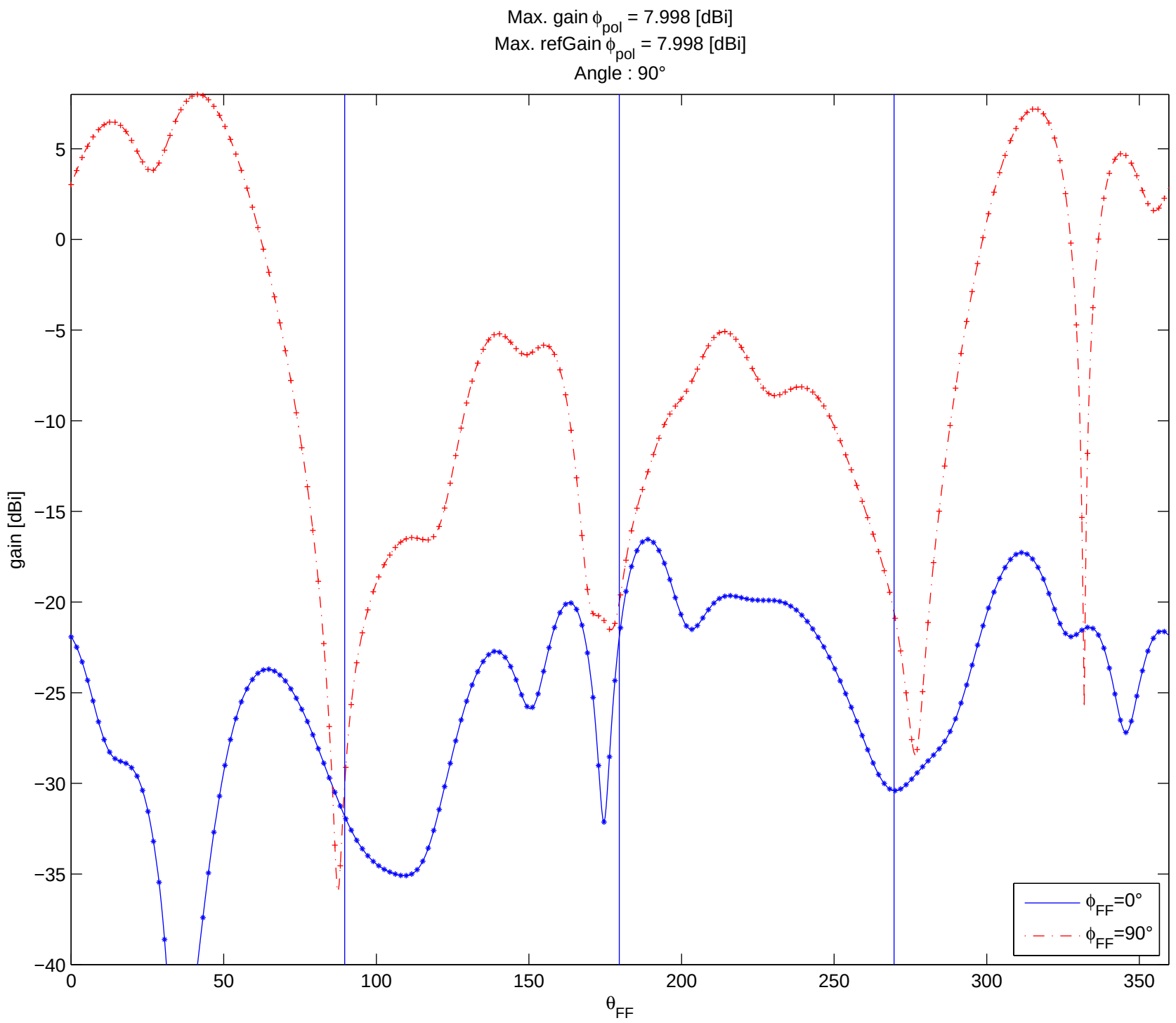

Max. gain θpol = −2.367 [dBi]
Max. refGain θpol = 6.131 [dBi]
Angle : 67.5°
gain [dBi]
θFF
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350
ϕFF=0°
ϕFF=90°

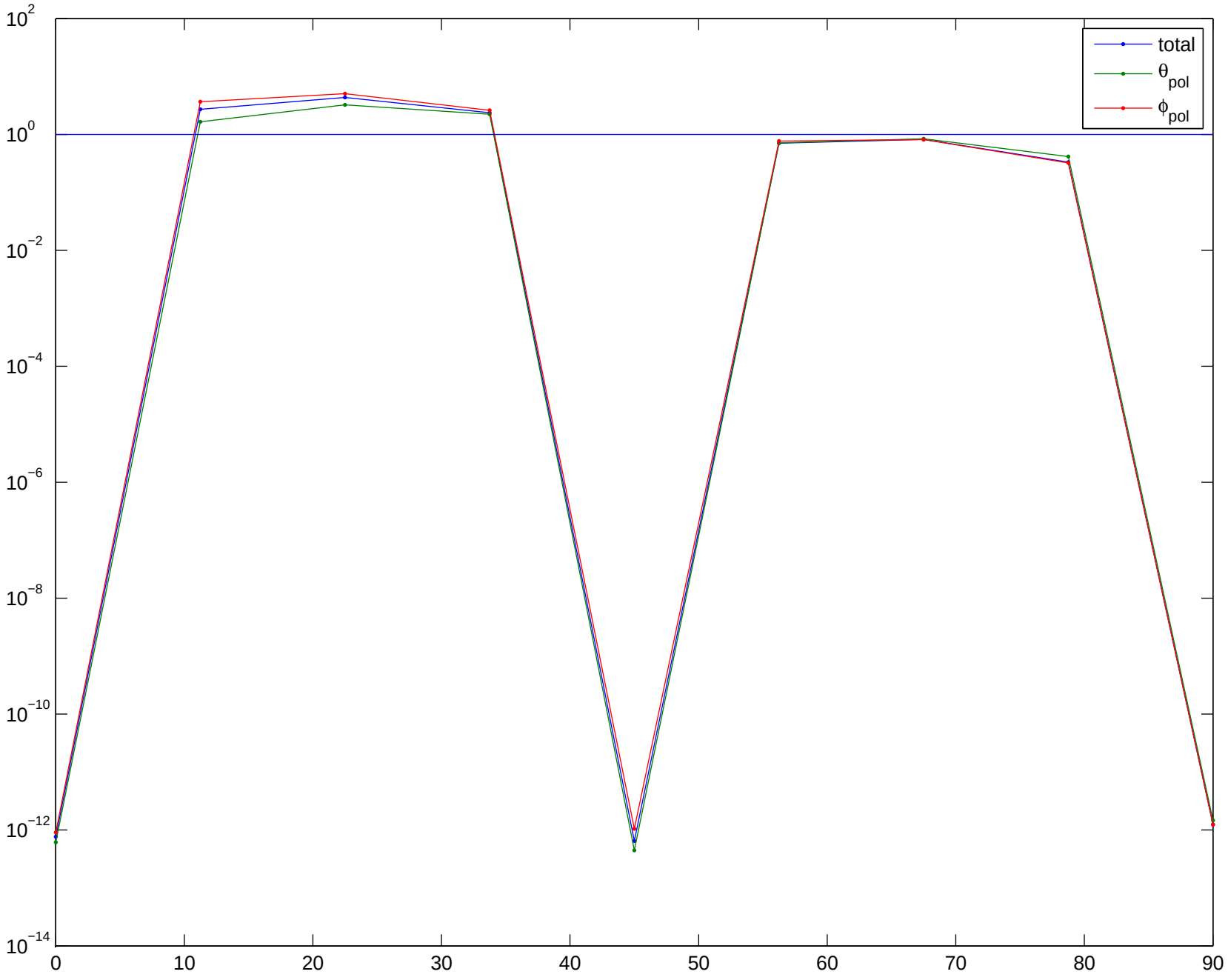

Max. gain ϕpol = 1.496 [dBi]
Max. refGain ϕpol = 7.378 [dBi]
Angle : 67.5°
gain [dBi]
θFF
ϕFF=0°
ϕFF=90°
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350

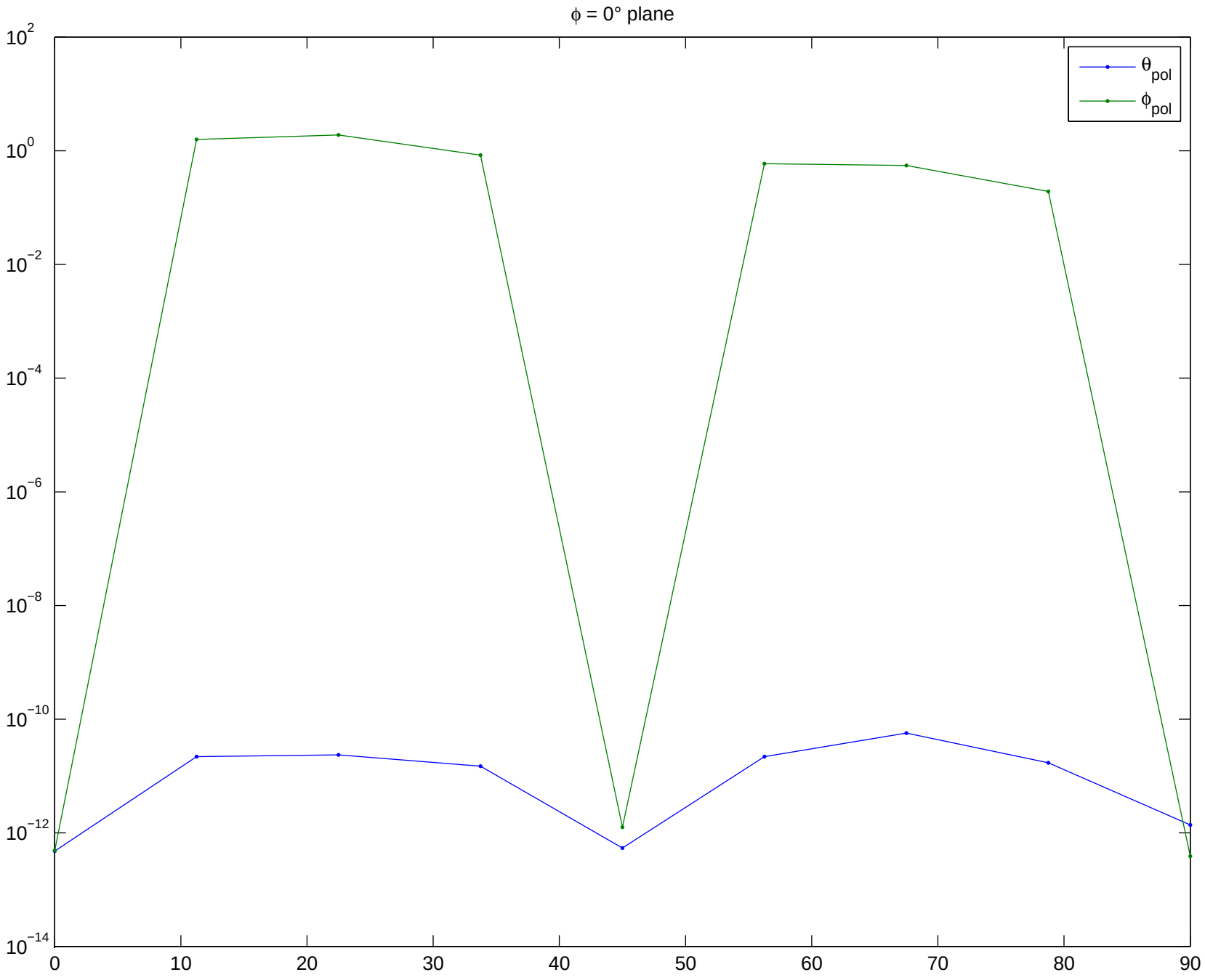

Max. gain θpol = 2.944 [dBi]
Max. refGain θpol = 5.13 [dBi]
Angle : 78.75°
gain [dBi]
θFF
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350
ϕFF=0°
ϕFF=90°

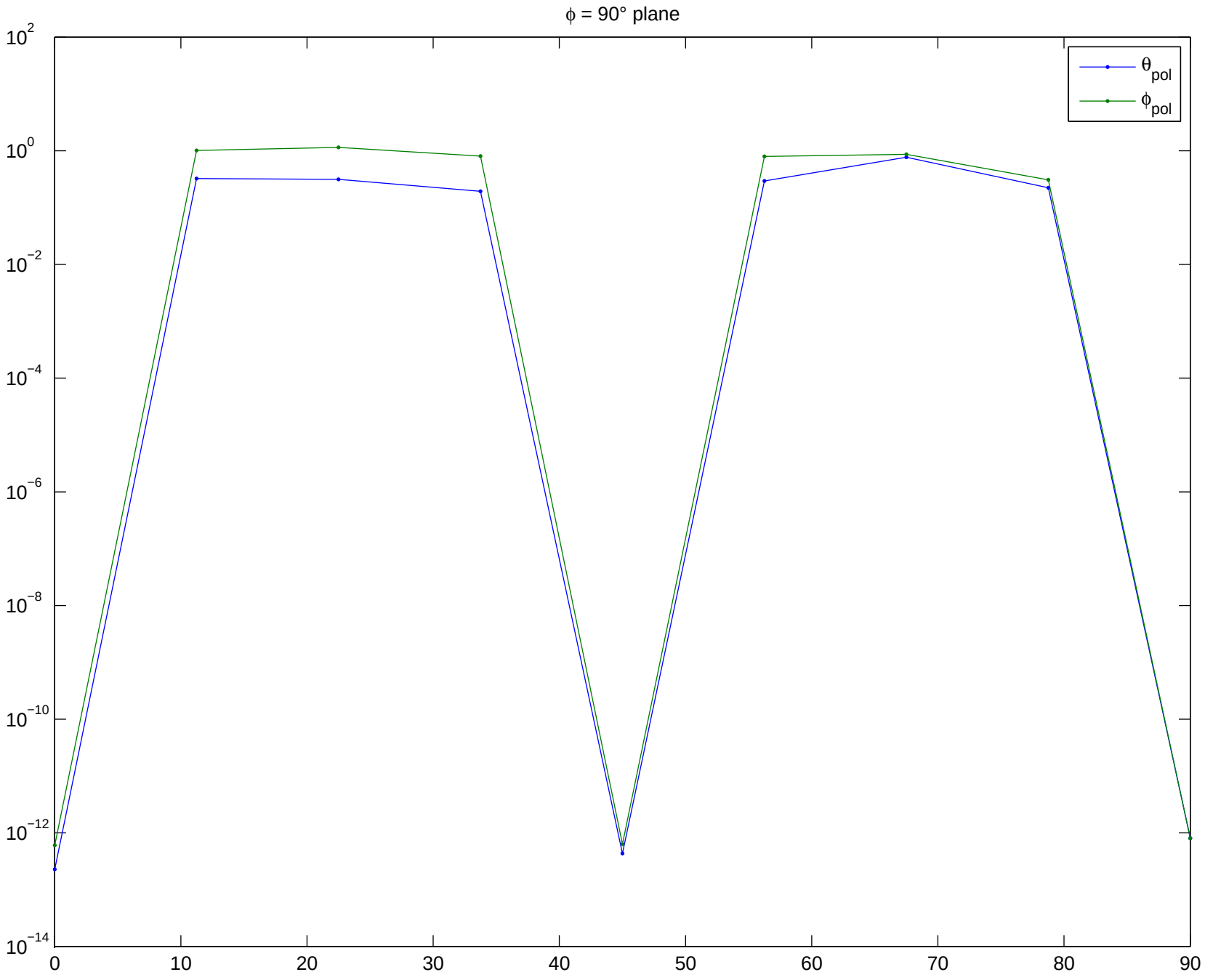

Max. gain ϕ_{pol} = 6.572 [dBi]
Max. refGain ϕ_{pol} = 7.882 [dBi]
Angle : 78.75°
gain [dBi]
θ_{FF}
ϕ_{FF}=0°
ϕ_{FF}=90°
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350


Max. gain θpol = 4.617 [dBi]
Max. refGain θpol = 4.615 [dBi]
Angle : 90°
gain [dBi]
θFF
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350
ϕFF=0°
ϕFF=90°


Max. gain ϕpol = 7.998 [dBi]
Max. refGain ϕpol = 7.998 [dBi]
Angle : 90°
gain [dBi]
θFF
ϕFF=0°
ϕFF=90°
5
0
−5
−10
−15
−20
−25
−30
−35
−40
0
50
100
150
200
250
300
350


total
θpol
ϕpol
10^2
10^0
10^-2
10^-4
10^-6
10^-8
10^-10
10^-12
10^-14
0
10
20
30
40
50
60
70
80
90


ϕ = 0° plane
10^{2}
10^{0}
10^{-2}
10^{-4}
10^{-6}
10^{-8}
10^{-10}
10^{-12}
10^{-14}
0
10
20
30
40
50
60
70
80
90
θ_{pol}
ϕ_{pol}


ϕ = 90° plane
θpol
ϕpol
10^2
10^0
10^-2
10^-4
10^-6
10^-8
10^-10
10^-12
10^-14
0
10
20
30
40
50
60
70
80
90