

RFspin s.r.o.

Na Berance 57/2
160 00 Prague 6 – Czech Republic
www.rfspin.com

Double Ridged Broadband Horn Antenna DRH110

s.n. 181101A110



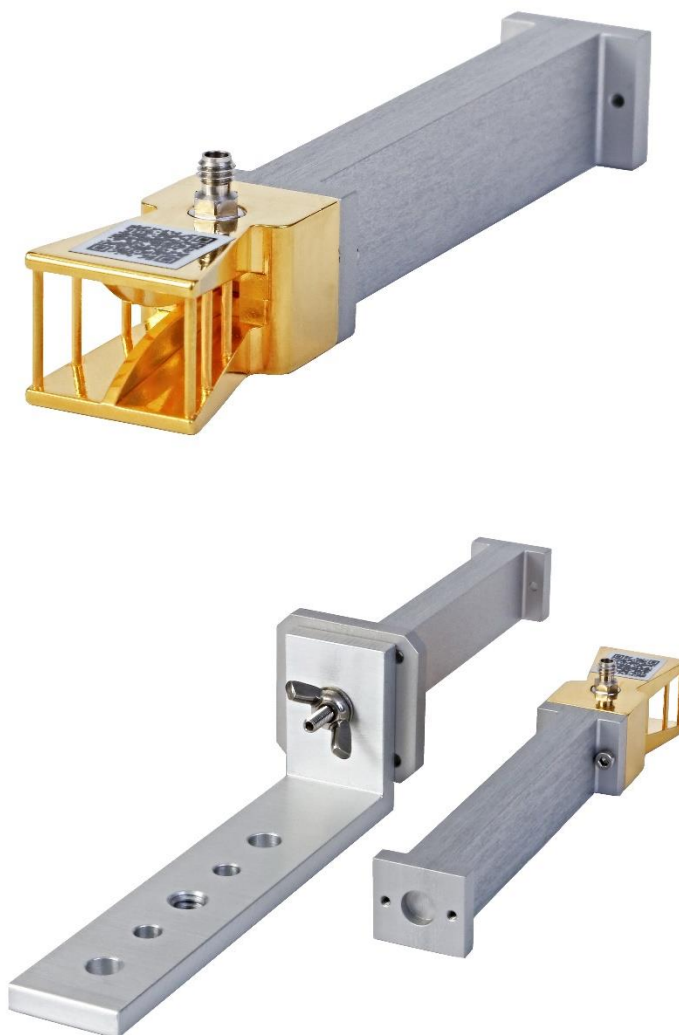
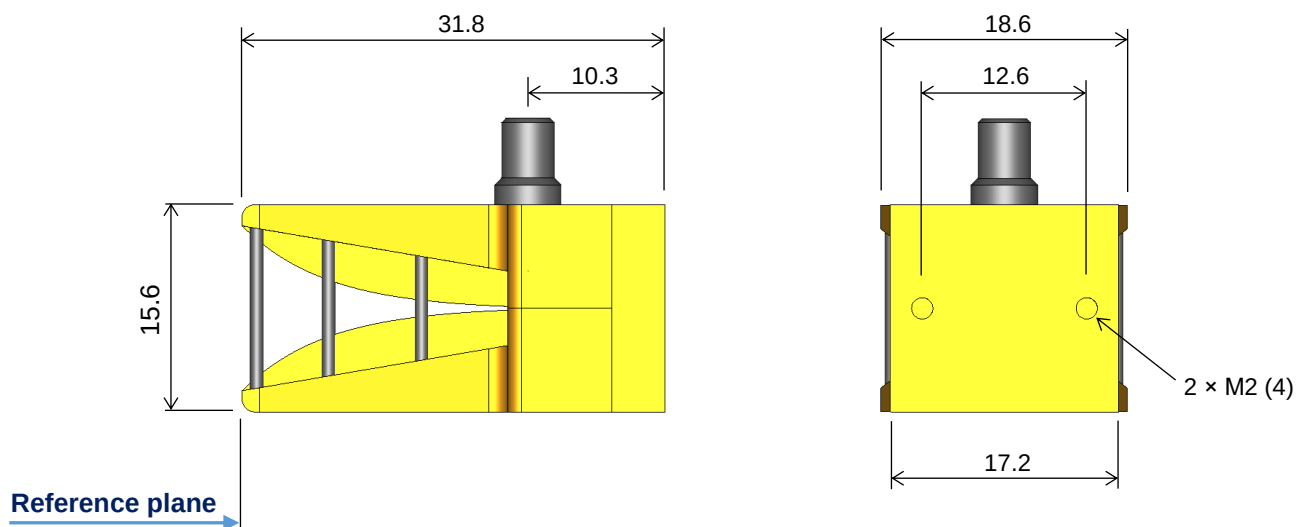
January 2019

Linear polarized double ridged broadband horn antenna for receiving and transmitting applications made of aluminum alloy.

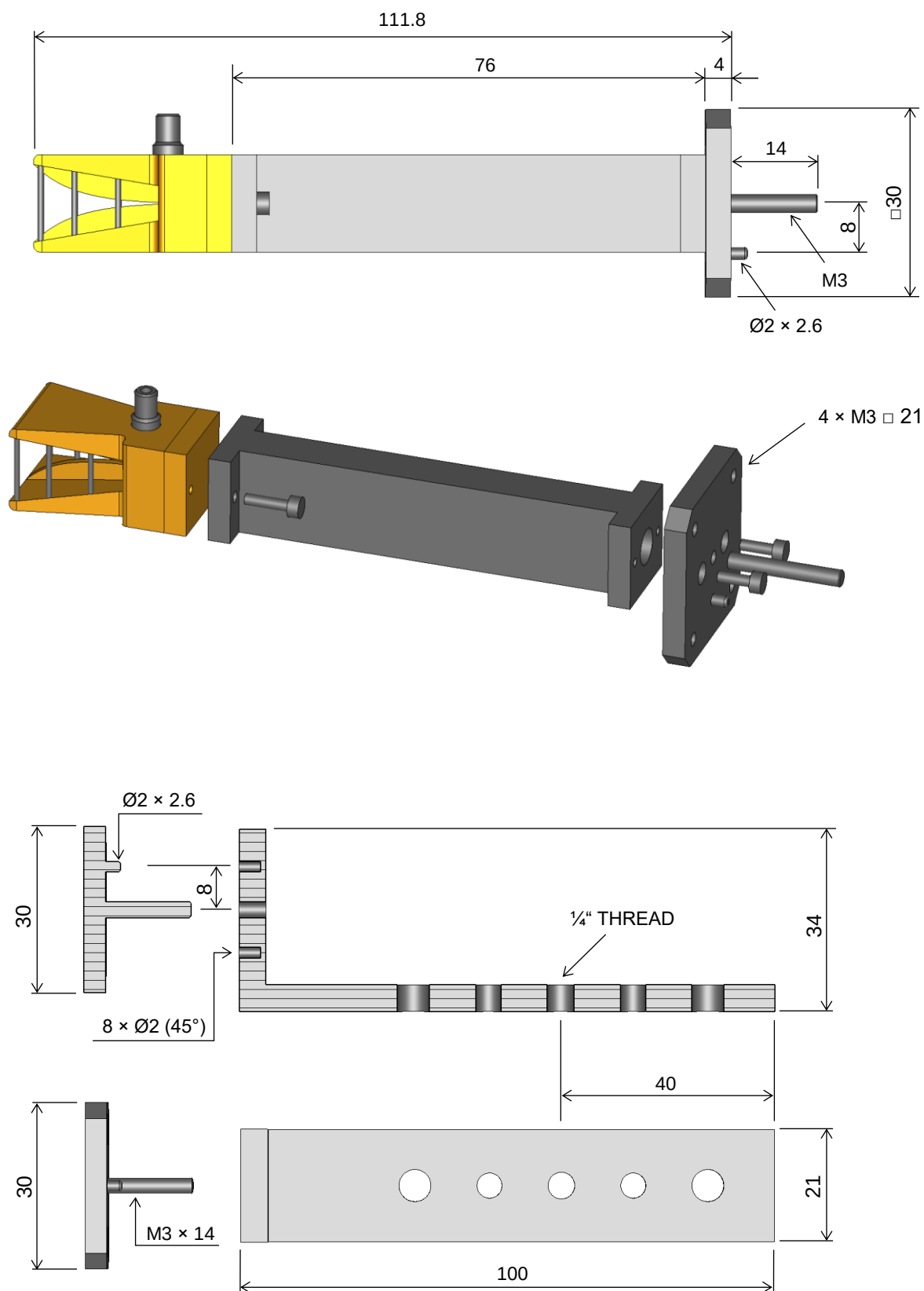
Specifications

Frequency range	14 GHz – 110 GHz
RF connector	1.0 mm female
Nominal impedance	50 Ω
VSWR max.	2.1
Gain	6.5 – 19 dBi (referring to antenna front edge)
Antenna factor	45 – 53.5 dB/m
Cross polarization	> 25 dB
Max. RF input power	4 W CW / 8 W Peak
Width x height x depth	18.6 x 15.6 x 31.8 mm
Weight	22 g
Material	Aluminum (Gold-plated) / Stainless steel
Mounting	adapter with ¼ inch inner thread, supplied with antenna
Environmental conditions	
Rated temperature range	0 °C – +50 °C
Storage temperature range	-20 °C – +70 °C

Schematic drawing



Flange / adapter for DRH110



Calibration report of the double ridged broadband horn DRH110

s.n. 181101A110
November 27, 2018

Frequency (GHz)	Antenna factor (dB/m)	Gain (dBi)	VSWR
13	45.0	7.6	1.67
14	45.5	7.7	1.49
15	46.9	6.8	1.62
16	46.8	7.5	1.81
17	46.4	8.5	1.96
18	46.2	9.2	1.94
19	46.2	9.6	1.81
20	46.6	9.7	1.66
21	46.7	10.0	1.51
22	46.7	10.4	1.42
23	47.1	10.4	1.36
24	47.3	10.6	1.37
25	47.3	10.9	1.61
26	47.4	11.1	1.77
27	47.9	11.0	1.53
28	48.7	10.5	1.52
29	48.9	10.6	1.69
30	48.6	11.2	1.71
31	48.0	12.0	1.56
32	47.9	12.5	1.36
33	48.3	12.3	1.25
34	48.9	12.0	1.35
35	49.2	11.9	1.54
36	49.5	11.9	1.64
37	49.4	12.2	1.60
38	49.3	12.5	1.48
39	49.3	12.7	1.44
40	49.6	12.7	1.48
41	49.7	12.8	1.51
42	49.7	13.0	1.52
43	49.4	13.5	1.48
44	49.2	13.9	1.41

Frequency (GHz)	Antenna factor (dB/m)	Gain (dBi)	VSWR
45	49.1	14.2	1.36
46	48.9	14.6	1.34
47	49.2	14.5	1.28
48	49.5	14.4	1.25
49	49.8	14.3	1.24
50	49.7	14.6	1.23
51	49.6	14.8	1.20
52	49.7	14.9	1.17
53	49.9	14.8	1.16
54	50.2	14.7	1.23
55	50.6	14.5	1.34
56	50.8	14.4	1.40
57	50.8	14.6	1.37
58	50.9	14.6	1.28
59	51.2	14.5	1.23
60	51.4	14.4	1.25
61	51.4	14.6	1.27
62	51.4	14.8	1.25
63	51.1	15.1	1.17
64	51.3	15.1	1.09
65	51.7	14.8	1.12
66	52.1	14.6	1.18
67	52.1	14.7	1.17
68	52.5	14.4	1.12
69	52.7	14.3	1.09
70	52.9	14.2	1.10
71	53.1	14.2	1.16
72	53.4	14.0	1.22
73	53.4	14.1	1.26
74	53.1	14.6	1.22
75	52.5	15.2	1.16
76	52.4	15.5	1.11

Calibration report of the double ridged broadband horn DRH110

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Frequency (GHz)	Antenna factor (dB/m)	Gain (dBi)	VSWR
77	52.3	15.6	1.11
78	52.5	15.6	1.14
79	52.5	15.7	1.16
80	52.5	15.8	1.15
81	52.4	16.0	1.12
82	52.3	16.2	1.08
83	52.1	16.5	1.07
84	52.0	16.8	1.07
85	51.7	17.2	1.09
86	51.6	17.4	1.10
87	51.5	17.6	1.10
88	51.5	17.7	1.10
89	51.5	17.7	1.12
90	51.7	17.7	1.16
91	51.8	17.6	1.18
92	51.8	17.7	1.19
93	51.8	17.8	1.17

Frequency (GHz)	Antenna factor (dB/m)	Gain (dBi)	VSWR
94	51.7	18.1	1.16
95	51.7	18.1	1.13
96	52.2	17.7	1.20
97	52.2	17.8	1.32
98	51.8	18.3	1.33
99	51.7	18.4	1.31
100	51.9	18.4	1.28
101	51.9	18.4	1.24
102	51.9	18.5	1.24
103	51.8	18.7	1.29
104	51.8	18.8	1.32
105	51.9	18.7	1.32
106	52.1	18.7	1.28
107	52.1	18.8	1.23
108	52.0	18.9	1.23
109	52.0	19.0	1.33
110	52.0	19.1	1.47

Test method

anechoic chamber – three antenna method

Distance

1 m

Calibration reference point

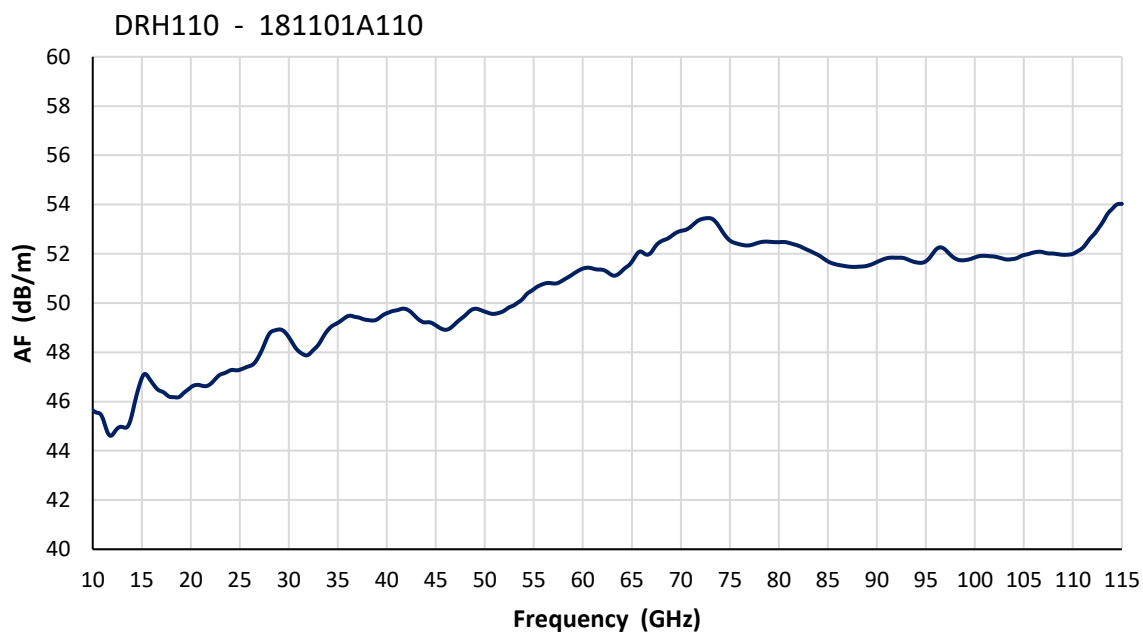
referring to aperture plane

Measurement info:

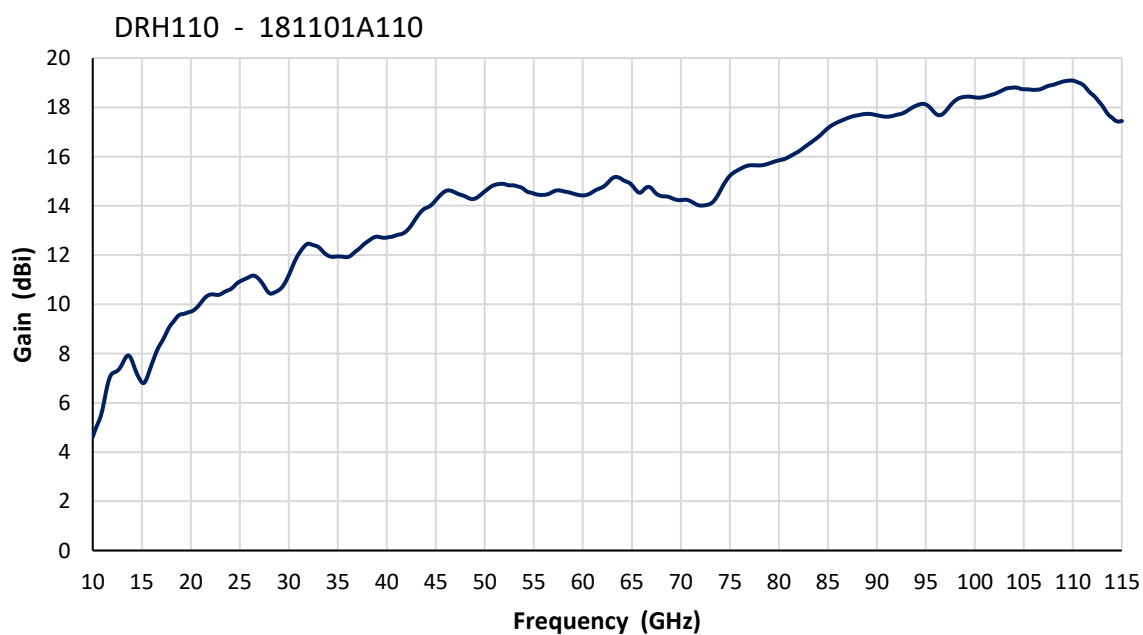
Factory calibration

Measured by R&S ZVA110 in unaccredited chamber

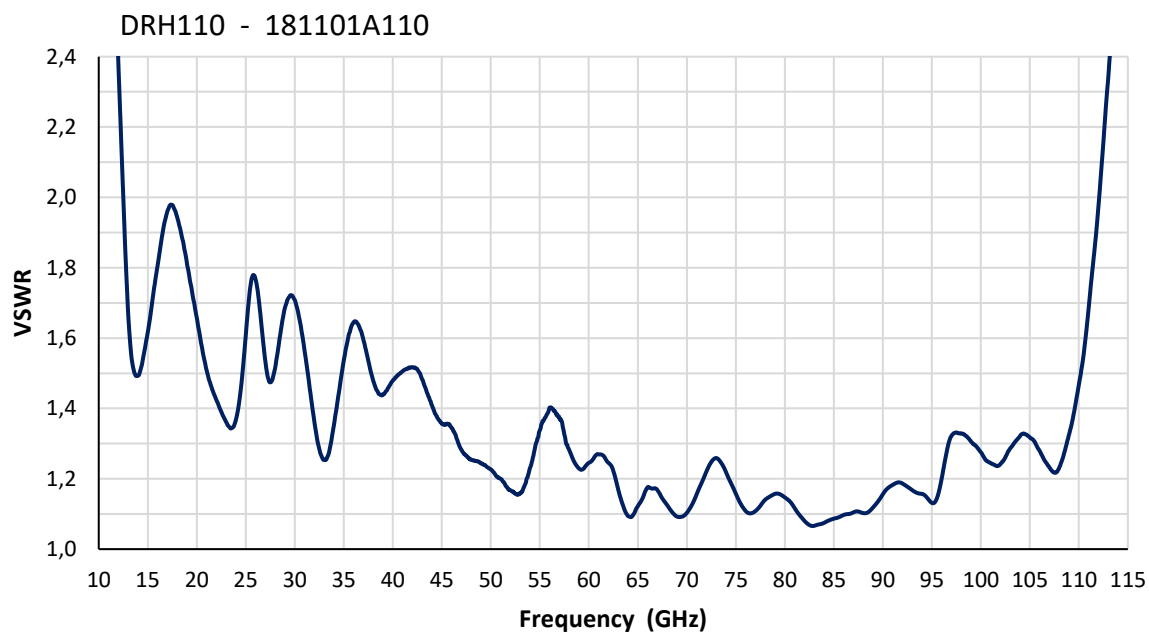
Antenna factor AF



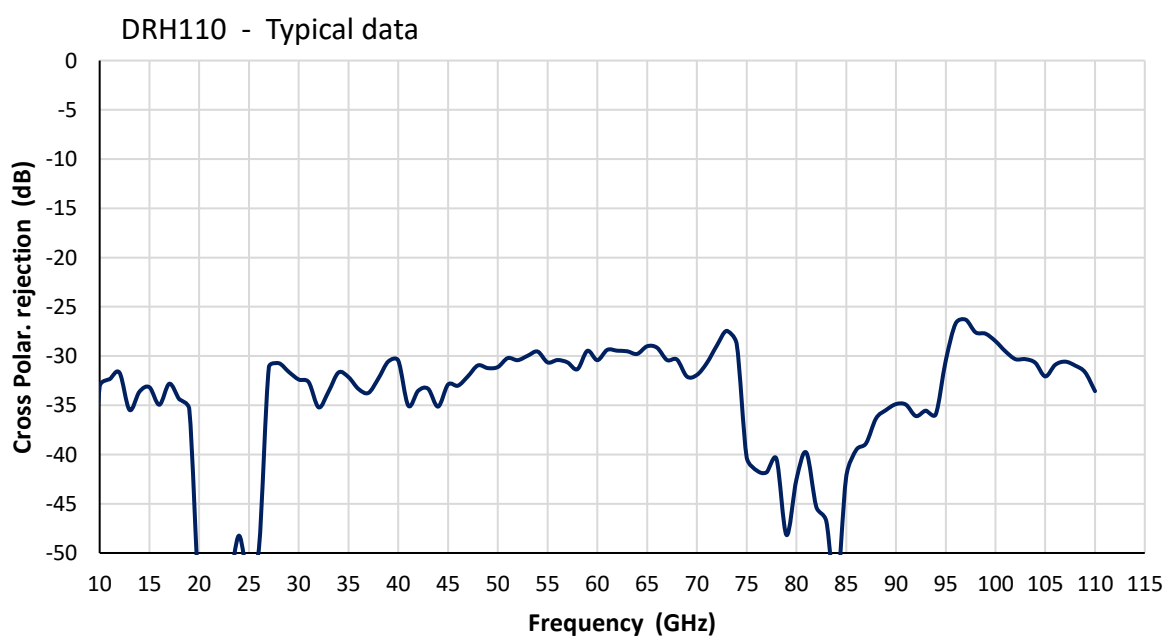
Gain



VSWR



Cross Polarization



Beamwidth

Typical data

