

Konisch-Logarithmische Spiralantenne
Conical Logarithmic Spiral Antenna



Beschreibung:

Die CLSA 0110 bietet über etwa eine Frequenzdekade zirkulare Polarisierung bis in den Mikrowellenbereich. Die Antenne ist gleichermaßen für Sende- und Empfangsanwendungen geeignet. Die CLSA 0110 empfängt auch linear polarisierte Felder, eine Drehung der Antenne für vertikale und horizontale Polarisierung ist nicht erforderlich. Bei linear polarisierten Signalen muß das Wandlungsmaß der Antenne um 3 dB erhöht bzw. der Gewinn um 3 dB erniedrigt werden, um korrekte Ergebnisse zu erzielen. Die Datenblattangaben beziehen sich allesamt auf zirkulare Polarisierung.

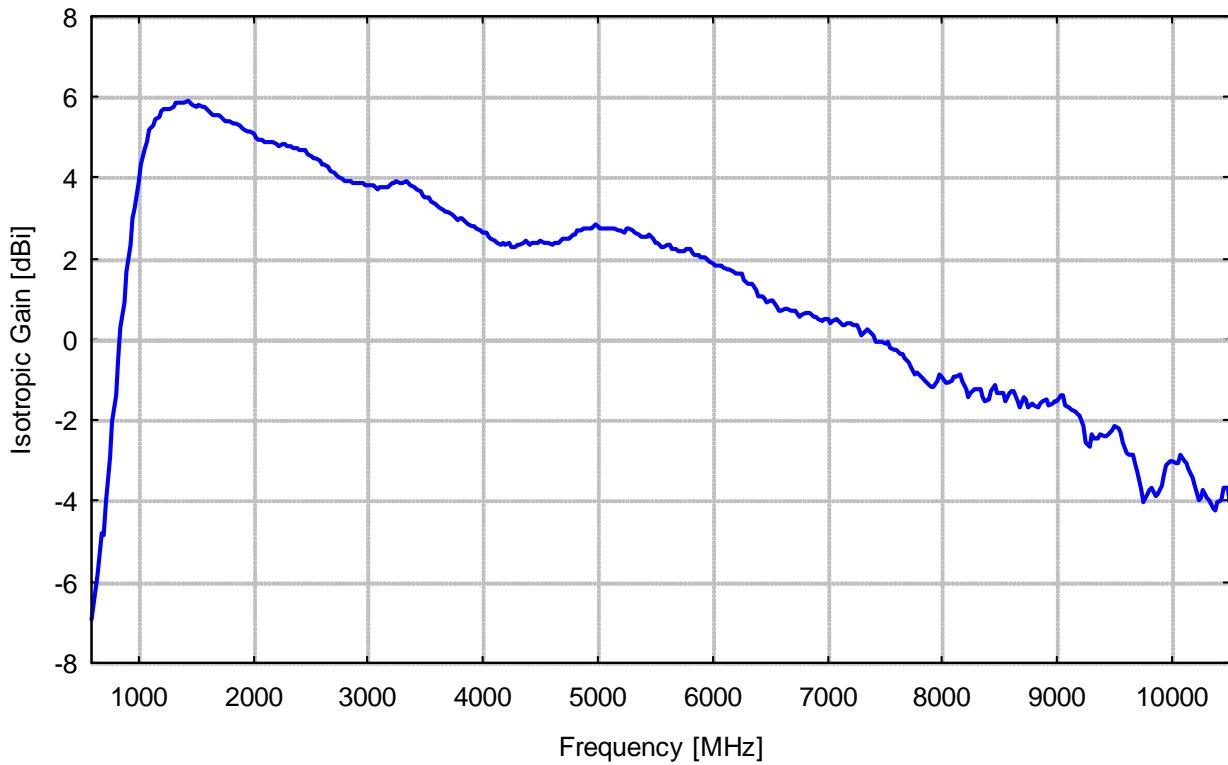
Description:

The CLSA 0110 offers circular polarisation over approx. one decade up to microwave frequencies. The antenna can be used for both, receive and transmit applications. Linear polarised fields can also be covered by this antenna without a need to arrange horizontal and vertical polarisation separately. When operating with linear polarised fields the antenna factor must be increased by 3 dB, the gain must be reduced by 3 dB to obtain correct readings. All datasheet specs refer to circular polarisation.

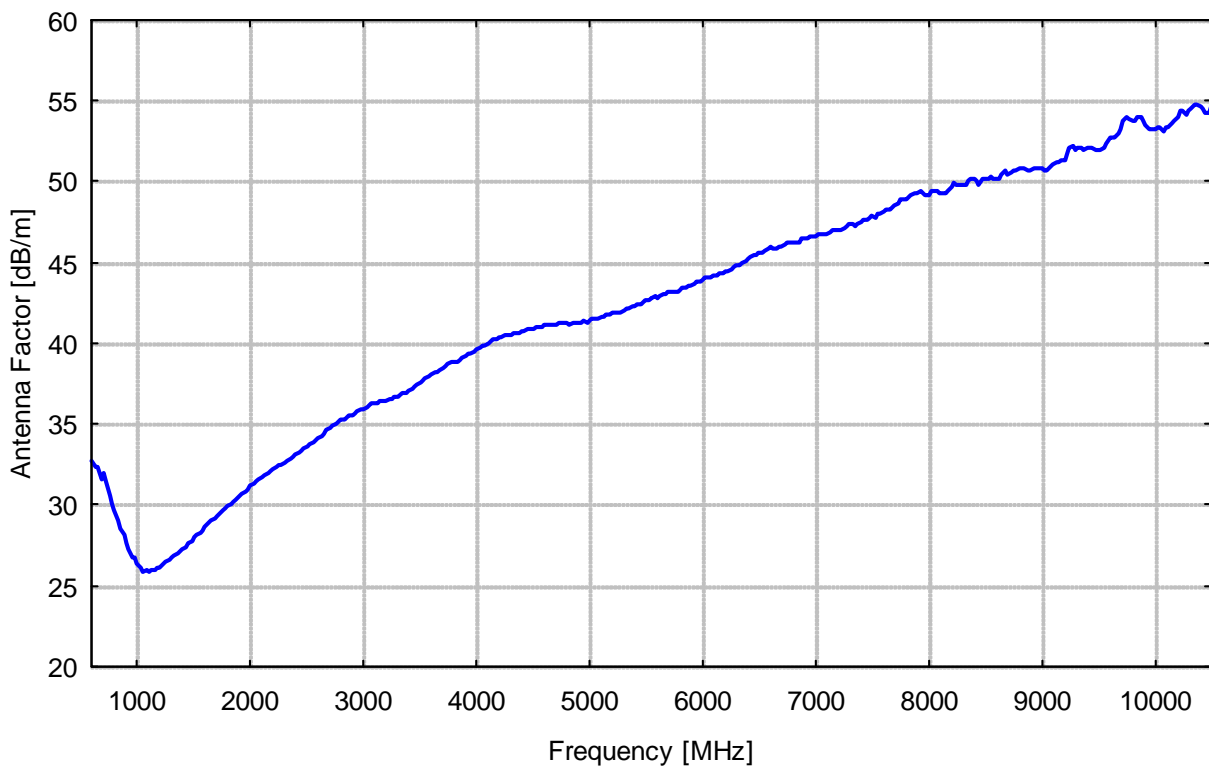
Technische Daten:		Specifications:
Breitbandige, zirkular polarisierte konisch logarithmische Spiralan- tenne		<i>Broadband circular polarised loga- rithmic periodic spiral antenna.</i>
Frequenzbereich nominell:	1 - 10 GHz	<i>Nominal frequency range:</i>
Frequenzbereich nutzbar:	0.8 - 11 GHz	<i>Useable frequency range:</i>
Anschluß: Buchse	50 Ω N	<i>Connector: female</i>
Befestigungsrohr:	L=20 cm, d=22 mm	<i>Mounting tube:</i>
Länge gesamt:	L ≈ 46.5 cm	<i>Length total:</i>
Durchmesser:	D = 92 mm	<i>Diameter:</i>
Isotropgewinn:	typ. -4...+6 dBic	<i>Isotropic gain:</i>
Antennenwandlungsmaß:	typ. 25 ... 55 dB/m	<i>Antenna Factor:</i>
SWR typ.:	1.5-3.5	<i>SWR typ.:</i>
Achsenverhältnis:	typ. < 1 dB (1 - 6 GHz) typ. < 2 dB (6 - 10 GHz)	<i>Axial ratio:</i>
Vor- Rückmaß:	< - 20 dB (1.5-8 GHz)	<i>Front to back ratio:</i>
Unterdrückung der entgegenge- setzten Polarisationsrichtung:	< - 20 dB (1 - 6 GHz)	<i>Rejection of the opposite polarisa- tion direction:</i>
Max. Eingangsdauerleistung:	60 W	<i>Max. input power (cw):</i>
Max. Spitzenleistung:	120 W	<i>Max. peak input power:</i>
Halbwertsbreite:	60° - 125°	<i>Half-power beamwidth:</i>
Gewicht:	0.6 kg	<i>Weight:</i>
Polarisationsrichtung wahlweise rechtsdrehend (RHCP) oder links- drehend (LHCP), bitte bei Bestel- lung angeben.		<i>Please specify the direction of polarisation when ordering: right hand circular polarisation (RHCP) or left hand circular polari- sation(LHCP).</i>
Option:	Radome	<i>Option:</i>



Isotropgewinn



Antennen-Wandlungsmaß



Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
800.00	-1.38	29.66
825.00	-0.53	29.08
850.00	0.30	28.51
875.00	0.89	28.17
900.00	1.68	27.62
925.00	2.35	27.19
950.00	2.98	26.79
975.00	3.28	26.72
1000.00	3.90	26.32
1025.00	4.35	26.08
1050.00	4.74	25.90
1075.00	4.89	25.96
1100.00	5.17	25.88
1125.00	5.30	25.94
1150.00	5.43	26.00
1175.00	5.50	26.12
1200.00	5.64	26.16
1225.00	5.68	26.30
1250.00	5.69	26.47
1275.00	5.70	26.63
1300.00	5.77	26.73
1325.00	5.84	26.82
1350.00	5.86	26.97
1375.00	5.84	27.15
1400.00	5.87	27.27
1425.00	5.89	27.41
1450.00	5.85	27.60
1475.00	5.80	27.80
1500.00	5.78	27.96
1525.00	5.80	28.09
1550.00	5.76	28.27
1575.00	5.73	28.44
1600.00	5.69	28.61
1625.00	5.59	28.85
1650.00	5.56	29.01
1675.00	5.54	29.16
1700.00	5.55	29.28
1725.00	5.49	29.47
1750.00	5.40	29.68
1775.00	5.39	29.81
1800.00	5.39	29.94
1825.00	5.35	30.10
1850.00	5.37	30.19
1875.00	5.32	30.36
1900.00	5.23	30.57
1925.00	5.17	30.74
1950.00	5.14	30.88
1975.00	5.14	30.99
2000.00	5.09	31.15
2025.00	4.98	31.37
2050.00	4.96	31.50
2075.00	4.93	31.63
2100.00	4.90	31.76

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
2125.00	4.91	31.86
2150.00	4.88	31.99
2175.00	4.87	32.10
2200.00	4.85	32.22
2225.00	4.81	32.36
2250.00	4.85	32.41
2275.00	4.83	32.53
2300.00	4.81	32.64
2325.00	4.78	32.77
2350.00	4.73	32.91
2375.00	4.71	33.02
2400.00	4.69	33.13
2425.00	4.67	33.24
2450.00	4.66	33.34
2475.00	4.60	33.49
2500.00	4.55	33.63
2525.00	4.50	33.77
2550.00	4.47	33.88
2575.00	4.42	34.02
2600.00	4.35	34.17
2625.00	4.34	34.26
2650.00	4.29	34.39
2675.00	4.18	34.59
2700.00	4.12	34.73
2725.00	4.06	34.87
2750.00	4.02	34.99
2775.00	3.99	35.10
2800.00	3.94	35.22
2825.00	3.93	35.31
2850.00	3.91	35.41
2875.00	3.86	35.53
2900.00	3.89	35.58
2925.00	3.89	35.65
2950.00	3.87	35.75
2975.00	3.83	35.86
3000.00	3.80	35.96
3025.00	3.82	36.01
3050.00	3.80	36.11
3075.00	3.73	36.25
3100.00	3.77	36.28
3125.00	3.77	36.35
3150.00	3.78	36.41
3175.00	3.79	36.46
3200.00	3.86	36.46
3225.00	3.87	36.52
3250.00	3.91	36.55
3275.00	3.89	36.63
3300.00	3.89	36.70
3325.00	3.90	36.76
3350.00	3.85	36.87
3375.00	3.82	36.97
3400.00	3.79	37.06
3425.00	3.74	37.17

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
3450.00	3.67	37.31
3475.00	3.57	37.47
3500.00	3.52	37.58
3525.00	3.50	37.66
3550.00	3.43	37.79
3575.00	3.36	37.93
3600.00	3.29	38.06
3625.00	3.26	38.15
3650.00	3.21	38.26
3675.00	3.16	38.37
3700.00	3.15	38.43
3725.00	3.11	38.53
3750.00	3.04	38.66
3775.00	2.97	38.79
3800.00	2.98	38.84
3825.00	3.00	38.87
3850.00	2.92	39.01
3875.00	2.85	39.14
3900.00	2.82	39.22
3925.00	2.78	39.32
3950.00	2.76	39.39
3975.00	2.69	39.52
4000.00	2.65	39.61
4025.00	2.63	39.69
4050.00	2.54	39.83
4075.00	2.51	39.91
4100.00	2.46	40.02
4125.00	2.37	40.16
4150.00	2.35	40.23
4175.00	2.37	40.26
4200.00	2.33	40.35
4225.00	2.37	40.37
4250.00	2.31	40.48
4275.00	2.30	40.54
4300.00	2.35	40.54
4325.00	2.33	40.61
4350.00	2.40	40.59
4375.00	2.43	40.61
4400.00	2.34	40.75
4425.00	2.41	40.73
4450.00	2.37	40.82
4475.00	2.37	40.87
4500.00	2.42	40.86
4525.00	2.37	40.96
4550.00	2.38	41.00
4575.00	2.37	41.06
4600.00	2.32	41.16
4625.00	2.41	41.11
4650.00	2.40	41.17
4675.00	2.43	41.19
4700.00	2.49	41.17
4725.00	2.48	41.23
4750.00	2.51	41.24
4775.00	2.57	41.23

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
4800.00	2.60	41.24
4825.00	2.70	41.19
4850.00	2.70	41.23
4875.00	2.73	41.25
4900.00	2.75	41.27
4925.00	2.76	41.31
4950.00	2.77	41.34
4975.00	2.83	41.33
5000.00	2.81	41.39
5025.00	2.75	41.49
5050.00	2.75	41.54
5075.00	2.75	41.58
5100.00	2.75	41.62
5125.00	2.75	41.66
5150.00	2.73	41.73
5175.00	2.72	41.78
5200.00	2.68	41.86
5225.00	2.67	41.91
5250.00	2.75	41.87
5275.00	2.74	41.92
5300.00	2.68	42.03
5325.00	2.65	42.10
5350.00	2.59	42.20
5375.00	2.53	42.30
5400.00	2.54	42.33
5425.00	2.55	42.36
5450.00	2.57	42.38
5475.00	2.49	42.50
5500.00	2.39	42.64
5525.00	2.37	42.70
5550.00	2.31	42.80
5575.00	2.28	42.86
5600.00	2.35	42.83
5625.00	2.35	42.87
5650.00	2.26	43.00
5675.00	2.22	43.08
5700.00	2.18	43.16
5725.00	2.21	43.17
5750.00	2.20	43.21
5775.00	2.24	43.21
5800.00	2.23	43.26
5825.00	2.15	43.38
5850.00	2.10	43.46
5875.00	2.10	43.50
5900.00	2.05	43.59
5925.00	2.01	43.66
5950.00	1.96	43.75
5975.00	1.92	43.83
6000.00	1.88	43.90
6025.00	1.81	44.01
6050.00	1.84	44.02
6075.00	1.85	44.04
6100.00	1.78	44.15
6125.00	1.71	44.25

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
6150.00	1.71	44.29
6175.00	1.69	44.34
6200.00	1.63	44.44
6225.00	1.63	44.47
6250.00	1.61	44.53
6275.00	1.46	44.71
6300.00	1.38	44.83
6325.00	1.39	44.85
6350.00	1.37	44.91
6375.00	1.24	45.07
6400.00	1.07	45.27
6425.00	1.06	45.32
6450.00	1.00	45.41
6475.00	0.93	45.51
6500.00	0.94	45.54
6525.00	0.95	45.56
6550.00	0.82	45.72
6575.00	0.70	45.88
6600.00	0.69	45.92
6625.00	0.77	45.87
6650.00	0.77	45.91
6675.00	0.70	46.01
6700.00	0.73	46.01
6725.00	0.70	46.07
6750.00	0.56	46.25
6775.00	0.60	46.24
6800.00	0.66	46.21
6825.00	0.68	46.22
6850.00	0.64	46.29
6875.00	0.54	46.43
6900.00	0.56	46.44
6925.00	0.53	46.50
6950.00	0.46	46.60
6975.00	0.50	46.59
7000.00	0.48	46.64
7025.00	0.41	46.74
7050.00	0.47	46.71
7075.00	0.48	46.73
7100.00	0.45	46.80
7125.00	0.37	46.91
7150.00	0.37	46.94
7175.00	0.40	46.94
7200.00	0.42	46.95
7225.00	0.34	47.06
7250.00	0.34	47.09
7275.00	0.27	47.19
7300.00	0.11	47.38
7325.00	0.20	47.32
7350.00	0.26	47.29
7375.00	0.16	47.42
7400.00	0.08	47.52
7425.00	-0.06	47.69
7450.00	-0.03	47.69
7475.00	-0.03	47.72

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
7500.00	-0.11	47.83
7525.00	-0.03	47.78
7550.00	-0.19	47.97
7575.00	-0.25	48.06
7600.00	-0.28	48.12
7625.00	-0.35	48.21
7650.00	-0.37	48.26
7675.00	-0.44	48.36
7700.00	-0.57	48.52
7725.00	-0.68	48.66
7750.00	-0.85	48.86
7775.00	-0.82	48.85
7800.00	-0.86	48.92
7825.00	-0.99	49.08
7850.00	-1.00	49.12
7875.00	-1.11	49.26
7900.00	-1.17	49.34
7925.00	-1.18	49.38
7950.00	-1.04	49.27
7975.00	-0.88	49.13
8000.00	-0.94	49.22
8025.00	-1.05	49.36
8050.00	-1.08	49.42
8075.00	-1.02	49.38
8100.00	-0.94	49.33
8125.00	-0.92	49.34
8150.00	-0.88	49.32
8175.00	-1.00	49.47
8200.00	-1.23	49.73
8225.00	-1.42	49.94
8250.00	-1.31	49.86
8275.00	-1.21	49.79
8300.00	-1.24	49.84
8325.00	-1.23	49.86
8350.00	-1.42	50.07
8375.00	-1.52	50.20
8400.00	-1.48	50.19
8425.00	-1.28	50.01
8450.00	-1.10	49.86
8475.00	-1.34	50.12
8500.00	-1.33	50.14
8525.00	-1.34	50.17
8550.00	-1.51	50.37
8575.00	-1.34	50.22
8600.00	-1.27	50.18
8625.00	-1.28	50.22
8650.00	-1.51	50.47
8675.00	-1.69	50.68
8700.00	-1.42	50.43
8725.00	-1.47	50.51
8750.00	-1.67	50.73
8775.00	-1.56	50.64
8800.00	-1.66	50.77
8825.00	-1.67	50.80

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
8850.00	-1.60	50.76
8875.00	-1.53	50.71
8900.00	-1.48	50.69
8925.00	-1.61	50.84
8950.00	-1.56	50.82
8975.00	-1.52	50.80
9000.00	-1.52	50.82
9025.00	-1.37	50.70
9050.00	-1.36	50.71
9075.00	-1.62	51.00
9100.00	-1.69	51.09
9125.00	-1.72	51.14
9150.00	-1.80	51.25
9175.00	-1.83	51.30
9200.00	-1.88	51.38
9225.00	-2.14	51.66
9250.00	-2.54	52.08
9275.00	-2.67	52.24
9300.00	-2.36	51.95
9325.00	-2.43	52.04
9350.00	-2.45	52.09
9375.00	-2.35	52.01
9400.00	-2.42	52.10
9425.00	-2.40	52.11
9450.00	-2.35	52.08
9475.00	-2.25	52.00
9500.00	-2.14	51.91
9525.00	-2.19	51.99
9550.00	-2.30	52.12
9575.00	-2.54	52.38
9600.00	-2.83	52.70
9625.00	-2.88	52.77
9650.00	-2.87	52.78
9675.00	-3.06	52.99

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
9700.00	-3.28	53.24
9725.00	-3.72	53.70
9750.00	-4.02	54.02
9775.00	-3.81	53.83
9800.00	-3.72	53.76
9825.00	-3.68	53.75
9850.00	-3.88	53.97
9875.00	-3.85	53.96
9900.00	-3.64	53.77
9925.00	-3.35	53.50
9950.00	-3.12	53.30
9975.00	-3.01	53.21
10000.00	-3.02	53.24
10025.00	-3.08	53.32
10050.00	-3.08	53.34
10075.00	-2.84	53.12
10100.00	-3.02	53.33
10125.00	-3.04	53.37
10150.00	-3.24	53.59
10175.00	-3.43	53.80
10200.00	-3.60	53.99
10225.00	-3.98	54.39
10250.00	-3.93	54.36
10275.00	-3.72	54.18
10300.00	-3.93	54.41
10325.00	-3.99	54.49
10350.00	-4.19	54.71
10375.00	-4.22	54.76
10400.00	-4.03	54.59
10425.00	-3.98	54.56
10450.00	-3.69	54.29
10475.00	-3.66	54.28
10500.00	-4.03	54.67

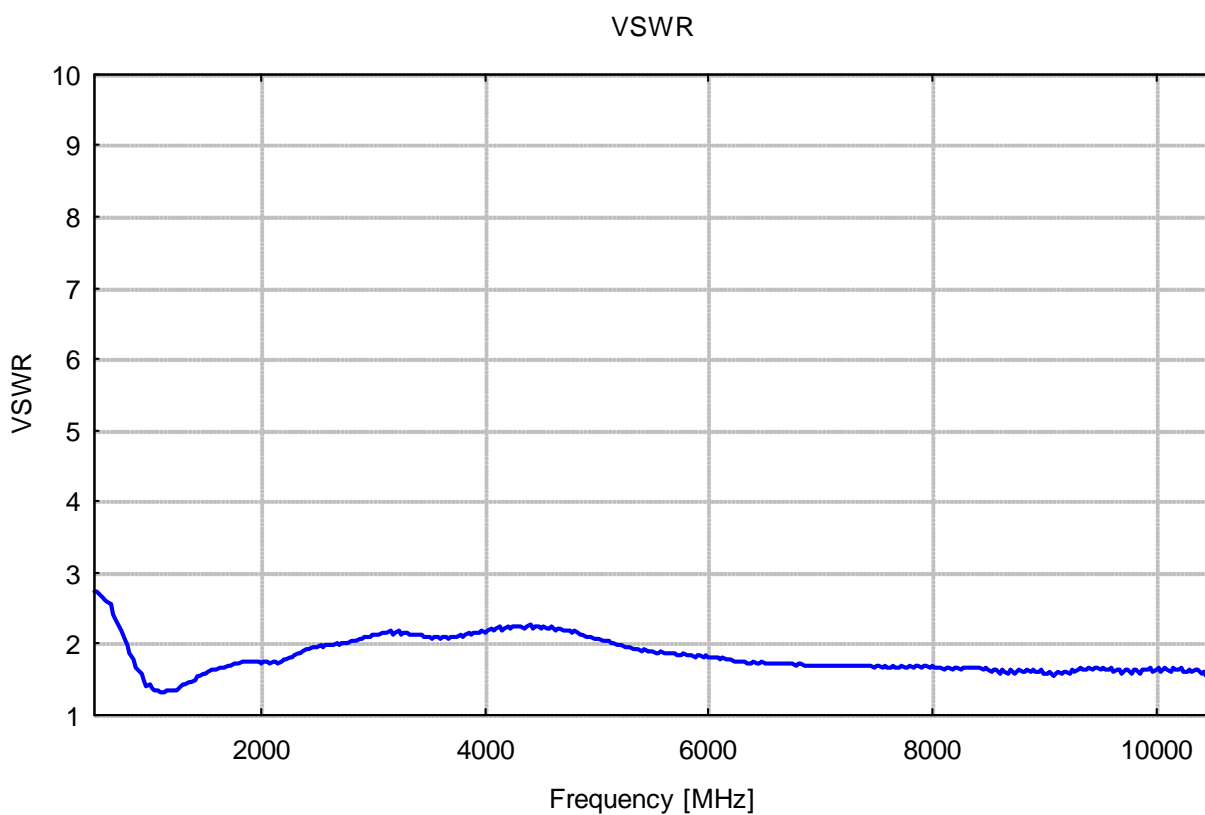


Fig.1: Conical Logarithmic Spiral Antenna CLSA 0110 with Radome (option)