

SCHWARZBECK MESS - ELEKTRONIK

An der Klinge 29 D-69250 Schönau Tel.: 06228/1001 Fax.: (49)6228/1003

HFRA 5150 HFRA 5151

H-Feld Senderahmenantenne 9 kHz - 30 MHz

H-Field Transmit Loop VLF / HF, 100 W

Eingangsspannung 1 V (120 dB μ V) entspricht Rahmenstrom von 10 mA (80 dB μ A)
Input Voltage 1 V (120 dB μ V) corresponds to a loop current of 10 mA (80 dB μ A)

Kantenlänge: <i>Edge Length:</i>	45 cm HFRA 5151	45 cm HFRA 5151	60 cm HFRA 5150	60 cm HFRA 5150
Abstand <i>Distance</i> [cm]	H [dB μ A/m]	H [dBrel]	H [dB μ A/m]	H [dBrel]
0.0	86.42	0.00	83.82	0.00
5.0	85.85	-0.57	83.50	-0.32
10.0	84.27	-2.15	82.59	-1.23
15.0	82.03	-4.39	81.21	-2.60
20.0	79.44	-6.98	79.51	-4.31
25.0	76.75	-9.67	77.62	-6.20
30.0	74.08	-12.34	75.64	-8.18
35.0	71.51	-14.91	73.64	-10.18
40.0	69.07	-17.35	71.66	-12.16
45.0	66.76	-19.66	69.74	-14.08
50.0	64.60	-21.82	67.88	-15.94
55.0	62.56	-23.86	66.10	-17.72
60.0	60.64	-25.77	64.40	-19.42
65.0	58.84	-27.58	62.77	-21.05
70.0	57.14	-29.28	61.21	-22.61
75.0	55.52	-30.89	59.72	-24.10
80.0	54.00	-32.42	58.30	-25.52
85.0	52.55	-33.87	56.94	-26.88
90.0	51.17	-35.25	55.64	-28.18
95.0	49.85	-36.56	54.39	-29.43
100.0	48.60	-37.82	53.20	-30.62
105.0	47.40	-39.02	52.05	-31.77
110.0	46.25	-40.17	50.94	-32.88
115.0	45.14	-41.28	49.88	-33.94
120.0	44.08	-42.34	48.85	-34.97
125.0	43.06	-43.36	47.86	-35.96
130.0	42.07	-44.35	46.90	-36.92
135.0	41.12	-45.30	45.98	-37.84
140.0	40.20	-46.21	45.08	-38.74
145.0	39.32	-47.10	44.22	-39.60
150.0	38.46	-47.96	43.38	-40.44
155.0	37.63	-48.79	42.56	-41.26
160.0	36.82	-49.60	41.77	-42.05
165.0	36.03	-50.38	41.00	-42.82
170.0	35.27	-51.14	40.25	-43.57
175.0	34.53	-51.88	39.52	-44.30
180.0	33.81	-52.60	38.81	-45.00
185.0	33.11	-53.31	38.12	-45.70
190.0	32.43	-53.99	37.45	-46.37
195.0	31.76	-54.65	36.79	-47.03
200.0	31.11	-55.30	36.15	-47.67

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Abstand <i>Distance</i> [cm]	H [dB μ A/m]	H [dBrel]	H [dB μ A/m]	H [dBrel]
205.0	30.48	-55.94	35.53	-48.29
210.0	29.86	-56.56	34.91	-48.91
215.0	29.26	-57.16	34.32	-49.50
220.0	28.67	-57.75	33.73	-50.09
225.0	28.09	-58.33	33.16	-50.66
230.0	27.52	-58.90	32.60	-51.22
235.0	26.97	-59.45	32.05	-51.77
240.0	26.42	-59.99	31.51	-52.31
245.0	25.89	-60.53	30.98	-52.84
250.0	25.37	-61.05	30.47	-53.35
255.0	24.86	-61.56	29.96	-53.86
260.0	24.36	-62.06	29.46	-54.36
265.0	23.87	-62.55	28.97	-54.85
270.0	23.38	-63.03	28.49	-55.33
275.0	22.91	-63.51	28.02	-55.80
280.0	22.44	-63.97	27.56	-56.26
285.0	21.99	-64.43	27.10	-56.71
290.0	21.54	-64.88	26.66	-57.16
295.0	21.09	-65.32	26.22	-57.60
300.0	20.66	-65.76	25.79	-58.03
305.0	20.23	-66.19	25.36	-58.46
310.0	19.81	-66.61	24.94	-58.88
315.0	19.40	-67.02	24.53	-59.29
320.0	18.99	-67.43	24.12	-59.70
325.0	18.59	-67.83	23.72	-60.10
330.0	18.19	-68.23	23.33	-60.49
335.0	17.80	-68.62	22.94	-60.88
340.0	17.42	-69.00	22.56	-61.26
345.0	17.04	-69.38	22.18	-61.64
350.0	16.67	-69.75	21.81	-62.01
355.0	16.30	-70.12	21.44	-62.37
360.0	15.94	-70.48	21.08	-62.74
365.0	15.58	-70.84	20.73	-63.09
370.0	15.22	-71.19	20.38	-63.44
375.0	14.88	-71.54	20.03	-63.79
380.0	14.53	-71.89	19.69	-64.13
385.0	14.19	-72.23	19.35	-64.47
390.0	13.86	-72.56	19.01	-64.81
395.0	13.53	-72.89	18.68	-65.13
400.0	13.20	-73.22	18.36	-65.46
405.0	12.88	-73.54	18.04	-65.78
410.0	12.56	-73.86	17.72	-66.10
415.0	12.25	-74.17	17.41	-66.41

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Abstand <i>Distance</i> [cm]	H [dB μ A/m]	H [dBrel]	H [dB μ A/m]	H [dBrel]
420.0	11.93	-74.48	17.10	-66.72
425.0	11.63	-74.79	16.79	-67.03
430.0	11.32	-75.09	16.49	-67.33
435.0	11.02	-75.40	16.19	-67.63
440.0	10.73	-75.69	15.89	-67.93
445.0	10.43	-75.99	15.60	-68.22
450.0	10.14	-76.28	15.31	-68.51
455.0	9.86	-76.56	15.02	-68.80
460.0	9.57	-76.85	14.74	-69.08
465.0	9.29	-77.13	14.46	-69.36
470.0	9.01	-77.41	14.18	-69.64
475.0	8.74	-77.68	13.91	-69.91
480.0	8.47	-77.95	13.64	-70.18
485.0	8.20	-78.22	13.37	-70.45
490.0	7.93	-78.49	13.10	-70.72
495.0	7.67	-78.75	12.84	-70.98
500.0	7.40	-79.01	12.58	-71.24
505.0	7.15	-79.27	12.32	-71.50
510.0	6.89	-79.53	12.06	-71.76
515.0	6.64	-79.78	11.81	-72.01
520.0	6.39	-80.03	11.56	-72.26
525.0	6.14	-80.28	11.31	-72.51
530.0	5.89	-80.53	11.07	-72.75
535.0	5.65	-80.77	10.82	-73.00
540.0	5.40	-81.01	10.58	-73.24
545.0	5.16	-81.25	10.34	-73.48
550.0	4.93	-81.49	10.10	-73.72
555.0	4.69	-81.73	9.87	-73.95
560.0	4.46	-81.96	9.64	-74.18
565.0	4.23	-82.19	9.40	-74.41
570.0	4.00	-82.42	9.18	-74.64
575.0	3.77	-82.65	8.95	-74.87
580.0	3.55	-82.87	8.72	-75.09
585.0	3.32	-83.10	8.50	-75.32
590.0	3.10	-83.32	8.28	-75.54
595.0	2.88	-83.54	8.06	-75.76
600.0	2.66	-83.75	7.84	-75.98
605.0	2.45	-83.97	7.63	-76.19
610.0	2.23	-84.18	7.41	-76.40
615.0	2.02	-84.40	7.20	-76.62
620.0	1.81	-84.61	6.99	-76.83
625.0	1.60	-84.82	6.78	-77.04
630.0	1.39	-85.02	6.58	-77.24

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Abstand <i>Distance</i> [cm]	H [dB μ A/m]	H [dBrel]		H [dB μ A/m]	H [dBrel]
635.0	1.19	-85.23		6.37	-77.45
640.0	0.98	-85.43		6.17	-77.65
645.0	0.78	-85.64		5.96	-77.85
650.0	0.58	-85.84		5.76	-78.06
655.0	0.38	-86.04		5.57	-78.25
660.0	0.18	-86.23		5.37	-78.45
665.0	-0.01	-86.43		5.17	-78.65
670.0	-0.21	-86.63		4.98	-78.84
675.0	-0.40	-86.82		4.78	-79.04
680.0	-0.59	-87.01		4.59	-79.23
685.0	-0.78	-87.20		4.40	-79.42
690.0	-0.97	-87.39		4.21	-79.61
695.0	-1.16	-87.58		4.02	-79.80
700.0	-1.35	-87.77		3.84	-79.98
705.0	-1.53	-87.95		3.65	-80.17
710.0	-1.72	-88.13		3.47	-80.35
715.0	-1.90	-88.32		3.29	-80.53
720.0	-2.08	-88.50		3.11	-80.71
725.0	-2.26	-88.68		2.93	-80.89
730.0	-2.44	-88.86		2.75	-81.07
735.0	-2.62	-89.04		2.57	-81.25
740.0	-2.79	-89.21		2.39	-81.43
745.0	-2.97	-89.39		2.22	-81.60
750.0	-3.14	-89.56		2.04	-81.78
755.0	-3.32	-89.73		1.87	-81.95
760.0	-3.49	-89.91		1.70	-82.12
765.0	-3.66	-90.08		1.53	-82.29
770.0	-3.83	-90.25		1.36	-82.46
775.0	-4.00	-90.41		1.19	-82.63
780.0	-4.16	-90.58		1.02	-82.80
785.0	-4.33	-90.75		0.86	-82.96
790.0	-4.50	-90.91		0.69	-83.13
795.0	-4.66	-91.08		0.53	-83.29
800.0	-4.82	-91.24		0.37	-83.45
805.0	-4.99	-91.40		0.20	-83.62
810.0	-5.15	-91.56		0.04	-83.78
815.0	-5.31	-91.72		-0.12	-83.94
820.0	-5.47	-91.88		-0.28	-84.10
825.0	-5.62	-92.04		-0.44	-84.25
830.0	-5.78	-92.20		-0.59	-84.41
835.0	-5.94	-92.36		-0.75	-84.57
840.0	-6.09	-92.51		-0.90	-84.72
845.0	-6.25	-92.67		-1.06	-84.88

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Abstand <i>Distance</i> [cm]	H [dBµA/m]	H [dBrel]	H [dBµA/m]	H [dBrel]
850.0	-6.40	-92.82	-1.21	-85.03
855.0	-6.55	-92.97	-1.36	-85.18
860.0	-6.71	-93.12	-1.52	-85.34
865.0	-6.86	-93.28	-1.67	-85.49
870.0	-7.01	-93.43	-1.82	-85.64
875.0	-7.16	-93.57	-1.97	-85.79
880.0	-7.30	-93.72	-2.11	-85.93
885.0	-7.45	-93.87	-2.26	-86.08
890.0	-7.60	-94.02	-2.41	-86.23
895.0	-7.74	-94.16	-2.55	-86.37
900.0	-7.89	-94.31	-2.70	-86.52
905.0	-8.03	-94.45	-2.84	-86.66
910.0	-8.18	-94.60	-2.99	-86.81
915.0	-8.32	-94.74	-3.13	-86.95
920.0	-8.46	-94.88	-3.27	-87.09
925.0	-8.60	-95.02	-3.41	-87.23
930.0	-8.74	-95.16	-3.55	-87.37
935.0	-8.88	-95.30	-3.69	-87.51
940.0	-9.02	-95.44	-3.83	-87.65
945.0	-9.16	-95.58	-3.97	-87.79
950.0	-9.30	-95.72	-4.11	-87.93
955.0	-9.43	-95.85	-4.24	-88.06
960.0	-9.57	-95.99	-4.38	-88.20
965.0	-9.71	-96.12	-4.51	-88.33
970.0	-9.84	-96.26	-4.65	-88.47
975.0	-9.97	-96.39	-4.78	-88.60
980.0	-10.11	-96.53	-4.92	-88.73
985.0	-10.24	-96.66	-5.05	-88.87
990.0	-10.37	-96.79	-5.18	-89.00
995.0	-10.50	-96.92	-5.31	-89.13
1000.0	-10.63	-97.05	-5.44	-89.26

$$P = \frac{U_{in}^2}{50\Omega}$$

$$I_{Loop} = \frac{U_{in}}{100\Omega}$$

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