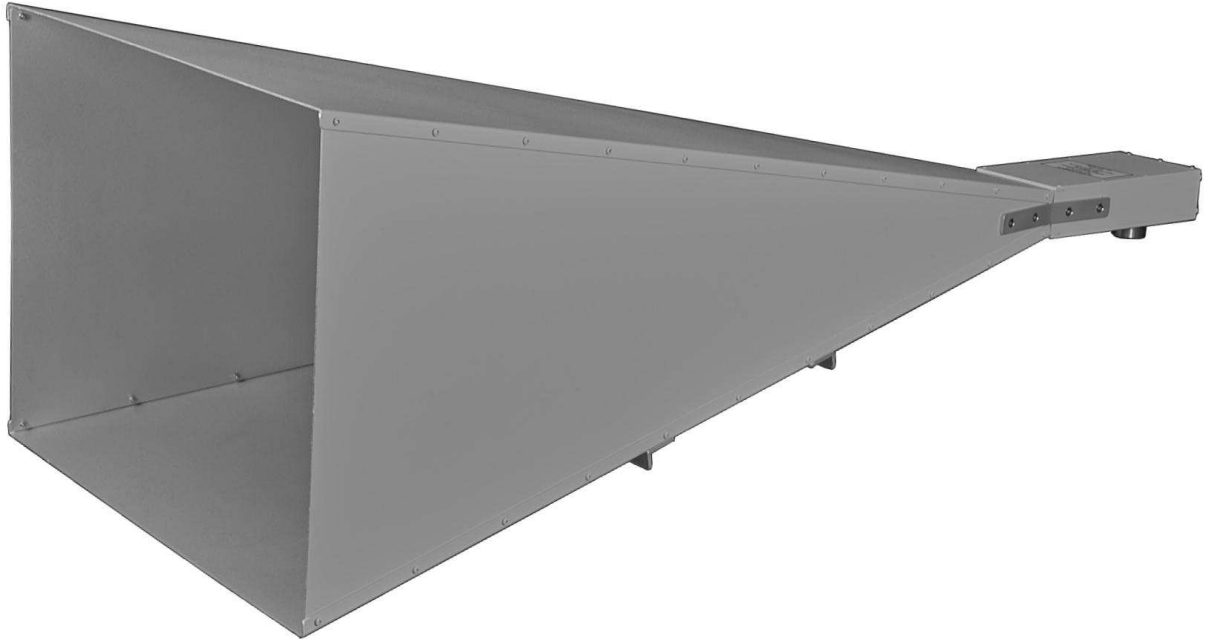


# SCHWARZBECK MESS - ELEKTRONIK

An der Klinge 29 D-69251 Schönau Tel.: 06228/1001 Fax.: (49)6228/1003

## Standard Hornantenne HA 9251-24 Standard Horn Antenna HA 9251-24



### Beschreibung:

Linear polarisierte Standard Pyramidenhornantenne mit 7/16 Koaxialanschluß für höchste Belastbarkeit. Die Antenne wurde für die Erzeugung höchster Feldstärken bei 1 m Messentfernung optimiert.

### Technische Daten:

Frequenzbereich (nominell):	2-4 GHz
Frequenzbereich (nutzbar):	1.9-4.6 GHz
Gewinn:	≈ 17-20 dBi
Antennen-Wandlungsmaß:	19...23 dB/m
Stehwellenverhältnis:	typ. < 1.5
Vor- Rückmaß:	typ. > 27 dB
3 dB Halbwertsbreite E-Ebene:	17° @ 2 GHz 13° @ 3 GHz 11° @ 4 GHz
3 dB Halbwertsbreite H-Ebene:	19° @ 2 GHz 14° @ 3 GHz 16° @ 4 GHz
Anschlußbuchse:	7/16
Max. Eingangsleistung:	2 kW (2 GHz) 1 kW (4 GHz)
Max. Impulsleistung:	10 kW
Befestigungsgewinde:	3/8" , M12
Abmessungen:	325 x 445 x 965 mm
Gewicht:	5.6 kg
Material:	Aluminium

### Description:

Linear polarized standard gain horn antenna with coaxial 7/16 connector for highest power handling. The antenna was designed to generate highest fieldstrength at 1 m distance.

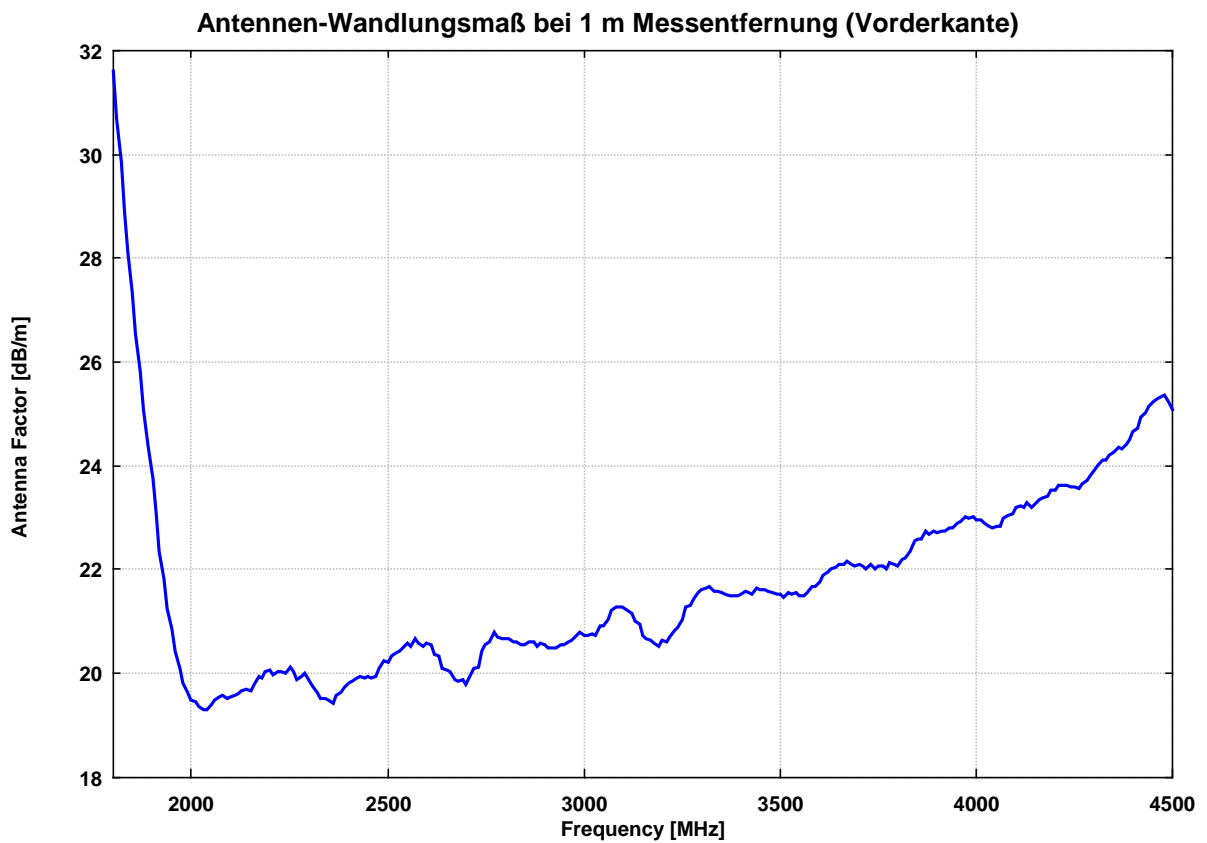
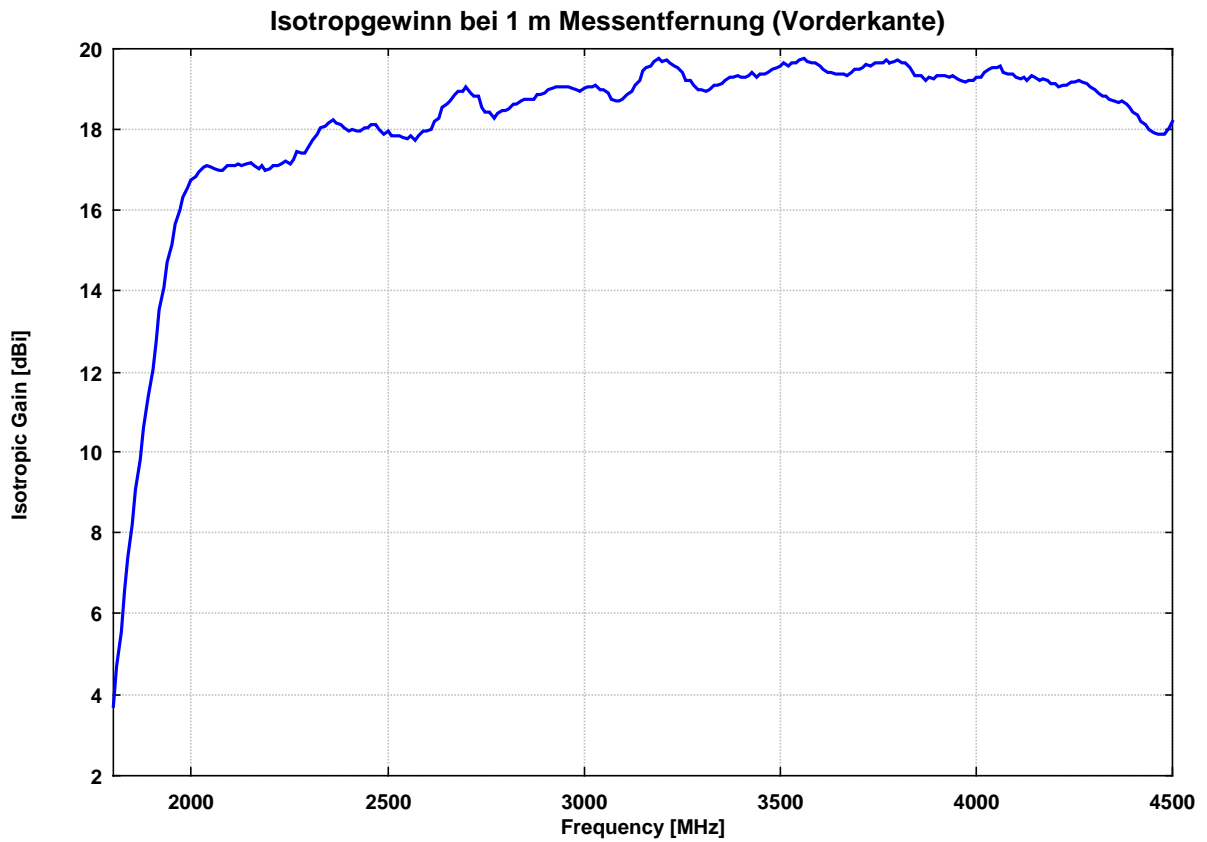
### Specifications:

Frequenz Range (nominal):	2-4 GHz
Frequenz Range (useable):	1.9-4.6 GHz
Gain:	≈ 17-20 dBi
Antenna Factor:	19...23 dB/m
VSWR:	typ. < 1.5
Front to Back Ratio:	typ. > 27 dB
Half Power Beamwidth (E-Plane):	17° @ 2 GHz 13° @ 3 GHz 11° @ 4 GHz
Half Power Beamwidth (H-Plane):	19° @ 2 GHz 14° @ 3 GHz 16° @ 4 GHz
Connector:	7/16
Max. Input Power:	2 kW (2 GHz) 1 kW (4 GHz)
Max. Peak Input Power:	10 kW
Mounting Threads:	3/8" , M12
Dimensions:	325 x 445 x 965 mm
Weight:	5.6 kg
Material:	Aluminium

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## Standard Hornantenne HA 9251-24 Standard Horn Antenna HA 9251-24

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
1800.00	3.70	31.63
1810.00	4.68	30.69
1820.00	5.56	29.86
1830.00	6.57	28.90
1840.00	7.37	28.15
1850.00	8.22	27.34
1860.00	9.07	26.54
1870.00	9.84	25.82
1880.00	10.60	25.10
1890.00	11.38	24.37
1900.00	12.04	23.76
1910.00	12.76	23.08
1920.00	13.53	22.36
1930.00	14.11	21.82
1940.00	14.72	21.26
1950.00	15.16	20.86
1960.00	15.64	20.43
1970.00	16.01	20.10
1980.00	16.34	19.81
1990.00	16.56	19.64
2000.00	16.75	19.49
2010.00	16.83	19.45
2020.00	16.97	19.36
2030.00	17.07	19.30
2040.00	17.11	19.30
2050.00	17.08	19.38
2060.00	17.02	19.48
2070.00	17.00	19.54
2080.00	17.00	19.58
2090.00	17.10	19.52
2100.00	17.11	19.55
2110.00	17.12	19.59
2120.00	17.15	19.60
2130.00	17.12	19.67
2140.00	17.14	19.69
2150.00	17.19	19.68
2160.00	17.11	19.80
2170.00	17.01	19.94
2180.00	17.09	19.90
2190.00	16.99	20.04
2200.00	17.01	20.06
2210.00	17.13	19.98
2220.00	17.11	20.04
2230.00	17.16	20.03
2240.00	17.23	19.99
2250.00	17.14	20.12
2260.00	17.27	20.03
2270.00	17.46	19.88
2280.00	17.44	19.94
2290.00	17.43	19.99
2300.00	17.61	19.84
2310.00	17.73	19.76
2320.00	17.90	19.63

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
2330.00	18.06	19.51
2340.00	18.08	19.52
2350.00	18.16	19.48
2360.00	18.24	19.44
2370.00	18.15	19.56
2380.00	18.12	19.63
2390.00	18.07	19.72
2400.00	17.99	19.83
2410.00	18.01	19.85
2420.00	17.99	19.91
2430.00	17.98	19.95
2440.00	18.06	19.91
2450.00	18.05	19.95
2460.00	18.12	19.92
2470.00	18.14	19.93
2480.00	18.02	20.09
2490.00	17.91	20.23
2500.00	17.97	20.21
2510.00	17.87	20.34
2520.00	17.84	20.41
2530.00	17.85	20.43
2540.00	17.82	20.50
2550.00	17.77	20.58
2560.00	17.86	20.52
2570.00	17.75	20.67
2580.00	17.86	20.59
2590.00	17.97	20.52
2600.00	17.95	20.57
2610.00	18.02	20.53
2620.00	18.21	20.38
2630.00	18.28	20.34
2640.00	18.56	20.09
2650.00	18.64	20.04
2660.00	18.69	20.03
2670.00	18.88	19.87
2680.00	18.94	19.84
2690.00	18.94	19.88
2700.00	19.05	19.80
2710.00	18.91	19.97
2720.00	18.83	20.08
2730.00	18.82	20.12
2740.00	18.54	20.44
2750.00	18.44	20.57
2760.00	18.44	20.60
2770.00	18.28	20.79
2780.00	18.39	20.71
2790.00	18.46	20.67
2800.00	18.48	20.68
2810.00	18.51	20.68
2820.00	18.63	20.59
2830.00	18.63	20.63
2840.00	18.72	20.57
2850.00	18.76	20.56

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## Standard Hornantenne HA 9251-24 Standard Horn Antenna HA 9251-24

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
2860.00	18.75	20.60
2870.00	18.76	20.62
2880.00	18.88	20.53
2890.00	18.86	20.58
2900.00	18.93	20.54
2910.00	19.01	20.49
2920.00	19.03	20.50
2930.00	19.08	20.48
2940.00	19.05	20.54
2950.00	19.07	20.55
2960.00	19.05	20.60
2970.00	19.04	20.64
2980.00	18.97	20.73
2990.00	18.95	20.78
3000.00	19.02	20.74
3010.00	19.05	20.74
3020.00	19.05	20.77
3030.00	19.12	20.73
3040.00	18.97	20.91
3050.00	18.98	20.93
3060.00	18.90	21.03
3070.00	18.75	21.21
3080.00	18.71	21.28
3090.00	18.73	21.29
3100.00	18.75	21.30
3110.00	18.87	21.21
3120.00	18.95	21.15
3130.00	19.11	21.02
3140.00	19.23	20.93
3150.00	19.45	20.74
3160.00	19.55	20.66
3170.00	19.59	20.65
3180.00	19.70	20.57
3190.00	19.78	20.52
3200.00	19.69	20.63
3210.00	19.75	20.60
3220.00	19.67	20.71
3230.00	19.58	20.82
3240.00	19.53	20.90
3250.00	19.41	21.05
3260.00	19.22	21.26
3270.00	19.21	21.30
3280.00	19.10	21.44
3290.00	19.00	21.56
3300.00	18.97	21.62
3310.00	18.96	21.66
3320.00	18.98	21.66
3330.00	19.09	21.58
3340.00	19.10	21.59
3350.00	19.16	21.56
3360.00	19.22	21.53
3370.00	19.29	21.48
3380.00	19.30	21.50
3390.00	19.34	21.48

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
3400.00	19.32	21.53
3410.00	19.30	21.58
3420.00	19.34	21.56
3430.00	19.40	21.53
3440.00	19.30	21.65
3450.00	19.37	21.61
3460.00	19.37	21.63
3470.00	19.43	21.60
3480.00	19.51	21.54
3490.00	19.54	21.54
3500.00	19.57	21.53
3510.00	19.66	21.47
3520.00	19.59	21.56
3530.00	19.64	21.54
3540.00	19.65	21.55
3550.00	19.73	21.49
3560.00	19.77	21.48
3570.00	19.71	21.56
3580.00	19.63	21.67
3590.00	19.64	21.68
3600.00	19.57	21.78
3610.00	19.48	21.89
3620.00	19.44	21.95
3630.00	19.42	22.00
3640.00	19.39	22.05
3650.00	19.37	22.10
3660.00	19.39	22.10
3670.00	19.34	22.17
3680.00	19.43	22.11
3690.00	19.49	22.07
3700.00	19.48	22.10
3710.00	19.55	22.06
3720.00	19.62	22.01
3730.00	19.56	22.09
3740.00	19.66	22.02
3750.00	19.64	22.06
3760.00	19.66	22.06
3770.00	19.73	22.02
3780.00	19.64	22.13
3790.00	19.69	22.10
3800.00	19.75	22.07
3810.00	19.64	22.20
3820.00	19.64	22.22
3830.00	19.52	22.36
3840.00	19.36	22.55
3850.00	19.34	22.59
3860.00	19.35	22.60
3870.00	19.23	22.74
3880.00	19.30	22.70
3890.00	19.27	22.75
3900.00	19.33	22.71
3910.00	19.33	22.73
3920.00	19.36	22.73
3930.00	19.29	22.82

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## Standard Hornantenne HA 9251-24 Standard Horn Antenna HA 9251-24

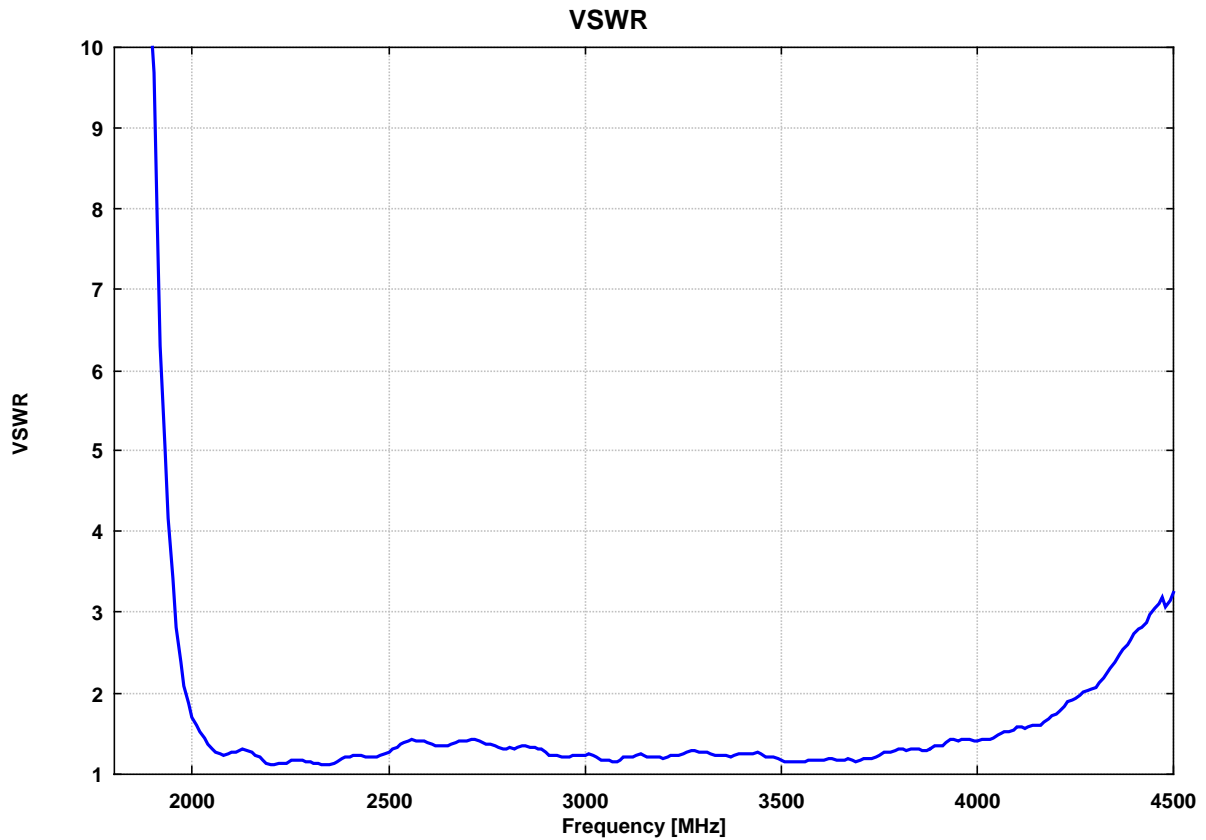
Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
3940.00	19.34	22.79
3950.00	19.26	22.89
3960.00	19.24	22.93
3970.00	19.17	23.03
3980.00	19.23	22.99
3990.00	19.23	23.01
4000.00	19.29	22.97
4010.00	19.32	22.96
4020.00	19.40	22.90
4030.00	19.50	22.83
4040.00	19.54	22.81
4050.00	19.54	22.83
4060.00	19.57	22.82
4070.00	19.43	22.98
4080.00	19.38	23.05
4090.00	19.39	23.06
4100.00	19.29	23.19
4110.00	19.27	23.23
4120.00	19.31	23.21
4130.00	19.24	23.30
4140.00	19.36	23.20
4150.00	19.31	23.27
4160.00	19.24	23.36
4170.00	19.25	23.37
4180.00	19.23	23.41
4190.00	19.13	23.53
4200.00	19.15	23.53
4210.00	19.07	23.64
4220.00	19.10	23.63
4230.00	19.12	23.63

Frequency	Isotropic gain	Antenna factor
[MHz]	[dBi]	[dB/m]
4240.00	19.18	23.59
4250.00	19.18	23.61
4260.00	19.24	23.57
4270.00	19.18	23.65
4280.00	19.13	23.72
4290.00	19.06	23.81
4300.00	18.97	23.92
4310.00	18.90	24.01
4320.00	18.82	24.11
4330.00	18.84	24.11
4340.00	18.75	24.22
4350.00	18.71	24.28
4360.00	18.66	24.35
4370.00	18.69	24.34
4380.00	18.62	24.43
4390.00	18.57	24.50
4400.00	18.43	24.66
4410.00	18.38	24.73
4420.00	18.21	24.92
4430.00	18.12	25.03
4440.00	18.02	25.15
4450.00	17.94	25.25
4460.00	17.91	25.30
4470.00	17.88	25.35
4480.00	17.89	25.36
4490.00	18.06	25.20
4500.00	18.19	25.09

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## Standard Hornantenne HA 9251-24 Standard Horn Antenna HA 9251-24



**Erzeugte Elektrische Feldstärke 1 m vor der Antennenöffnung  
unmoduliert, Eingangsleistung an 7/16-Buchse, Reflexionsfreie Umgebung**  
**Generated Electrical Fieldstrength in front of Antenna Aperture  
no modulation, Input Power at 7/16-Connector, Anechoic Environmental Conditions**

