



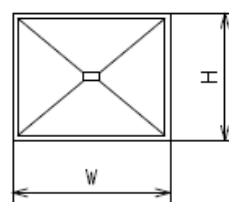
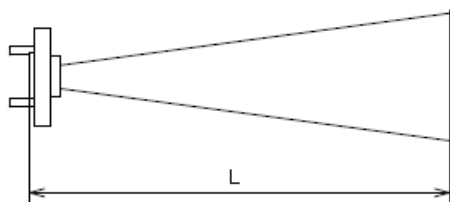
STD. Gain Horn Antenna

Product Line-up & Specifications

Product Type	Waveguide	Gain (typ.)	3dB Beamwidth deg.(typ.)	VSWR (typ.)	Interface *	Size (mm)		Material
						Opening Size	Length	
Frequency Bandwidth ; 26.5GHz - 40GHz								
MSGH28-10	WR28	10dBi	55	1.25:1	FBP320	14 x 12.4	31	Cu
MSGH28-15		15dBi	30			20.2 x 16.6	36	
MSGH28-20		20dBi	18			40.4 x 31.9	70	
MSGH28-25		25dBi	10			71 x 59	172	
Frequency Bandwidth ; 50GHz - 75GHz								
MSGH15-10	WR15	10dBi	44	1.2:1	FUGP620	9.0 x 7.2	40	Cu
MSGH15-15		15dBi	29	1.15:1		13.5 x 10	40	
MSGH15-20		20dBi	16.5	1.1:1		21.6 x 16.6	47.3	
MSGH15-25		25dBi	10	1.1:1		36.8 x 29.8	91.4	
Frequency Bandwidth ; 75GHz - 110GHz								
MSGH10-10	WR10	10dBi	52	1.15:1	FUGP900	5.3 x 4.0	20	Cu
MSGH10-15		15dBi	28.5	1.1:1		9.0 x 6.5	25	
MSGH10-20		20dBi	18	1.1:1		14.6 x 11.6	31.4	
MSGH10-25		25dBi	9.5	1.1:1		26.8 x 20.8	70	

* Available Connector option

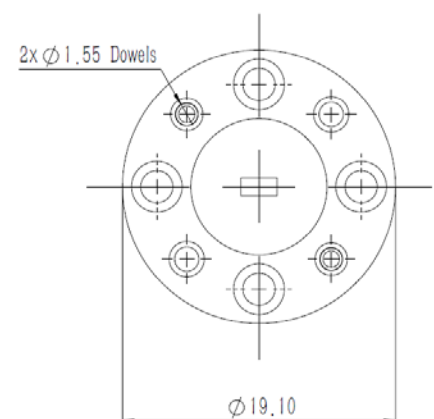
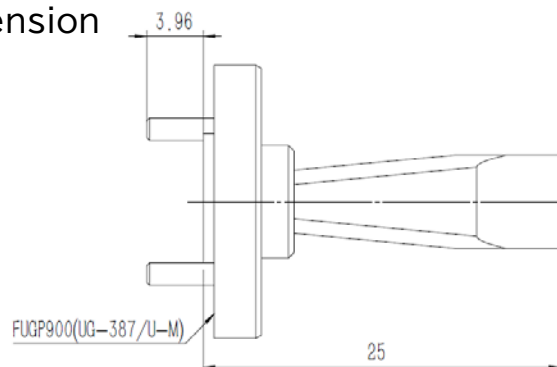
Outline Drawing (mm) ; MSGH10-15



W x H x L: 9.0 x 6.5 x 25 (mm)

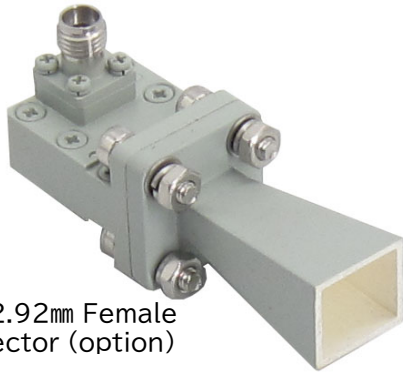
Flange Dimension

FUGP900

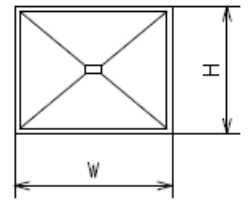
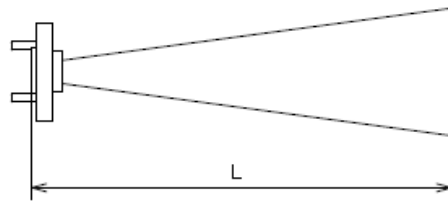


The other 2 Flanges shown in later

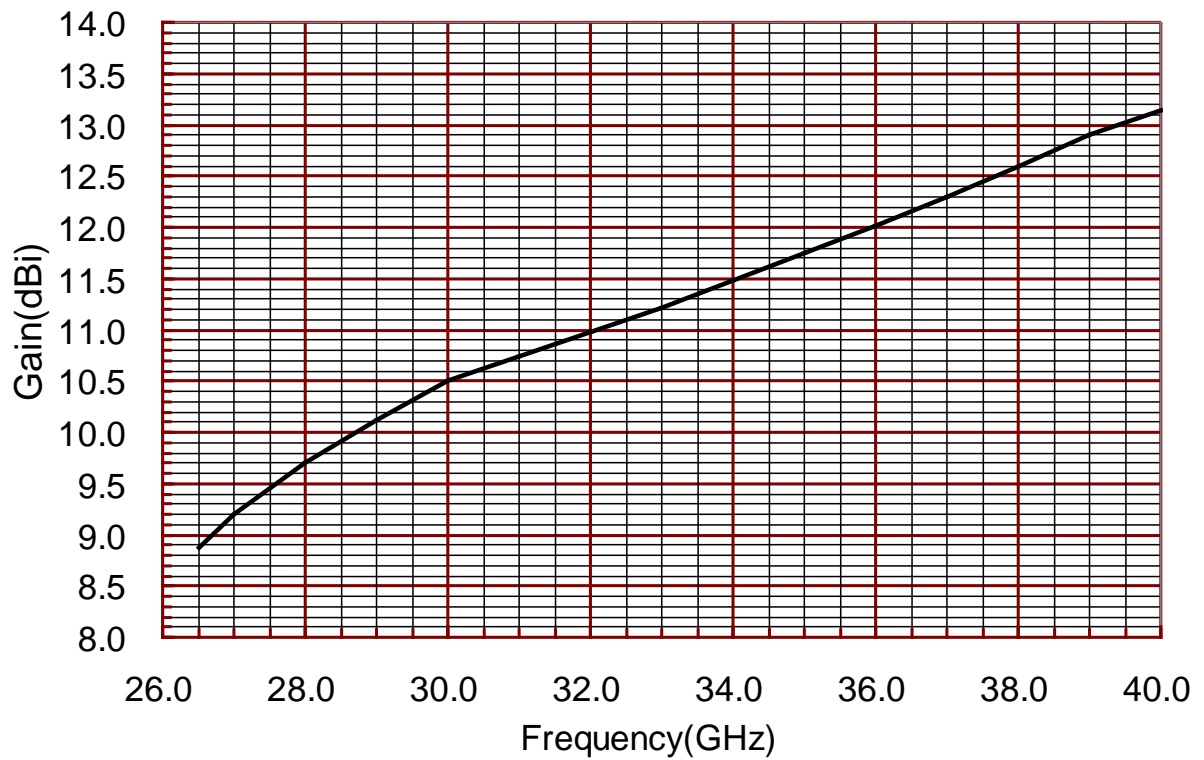
MSGH28-10



with 2.92mm Female connector (option)

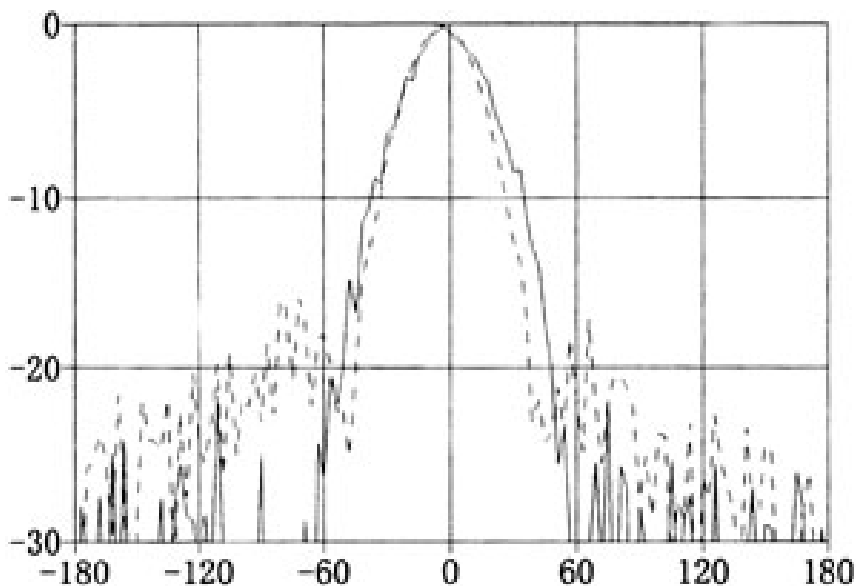
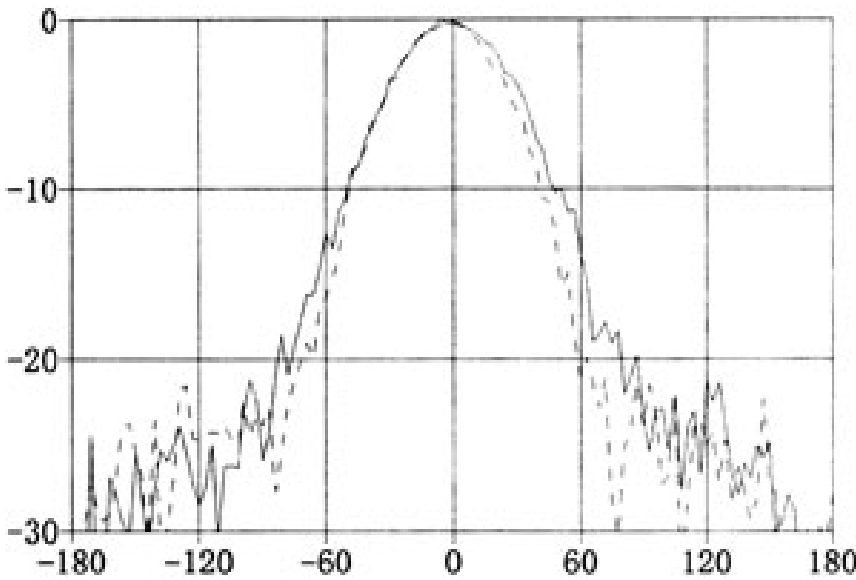
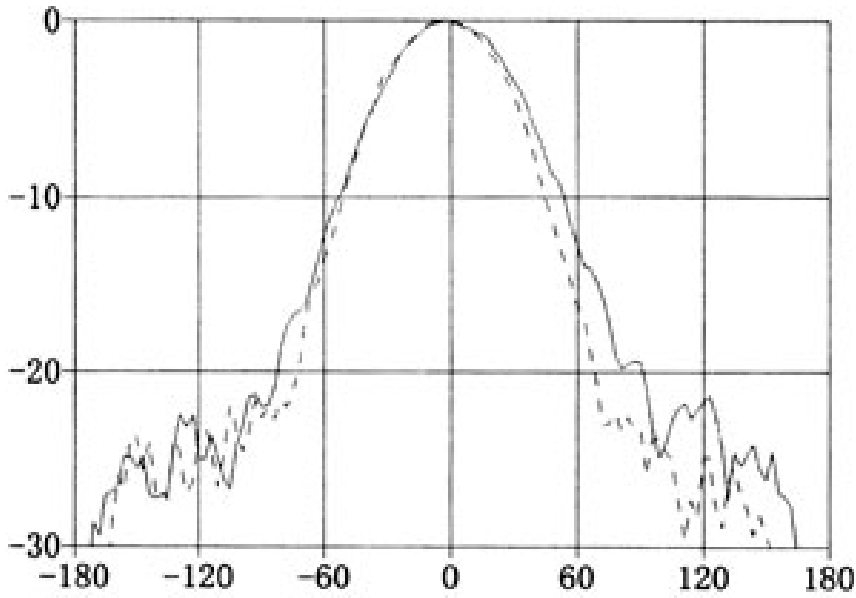


W x H x L: 14 x 12.4 x 31 (mm)

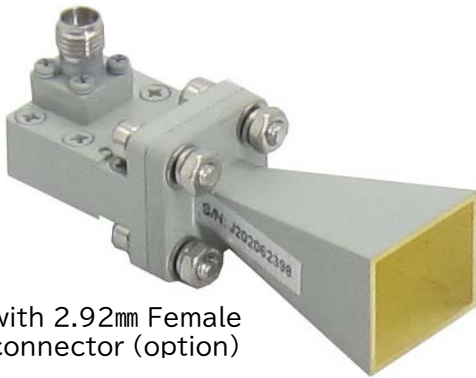


Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
26.5	8.88	49.79
27.0	9.20	49.64
28.0	9.70	49.45
29.0	10.12	49.34
30.0	10.50	49.25
31.0	10.74	49.30
32.0	10.98	49.33
33.0	11.22	49.36
34.0	11.48	49.36
35.0	11.75	49.34
36.0	12.02	49.32
37.0	12.30	49.27
38.0	12.60	49.21
39.0	12.90	49.13
40.0	13.14	49.11

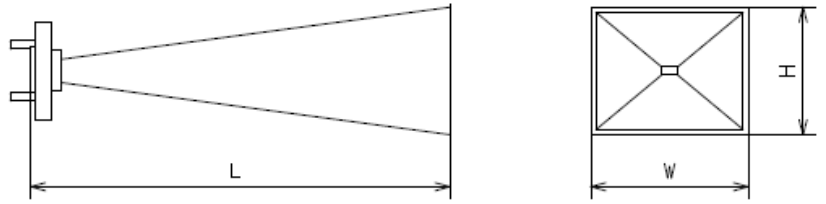
MSGH28-10 Radiation Patterns (typ.) @26.5 / 28 / 40GHz



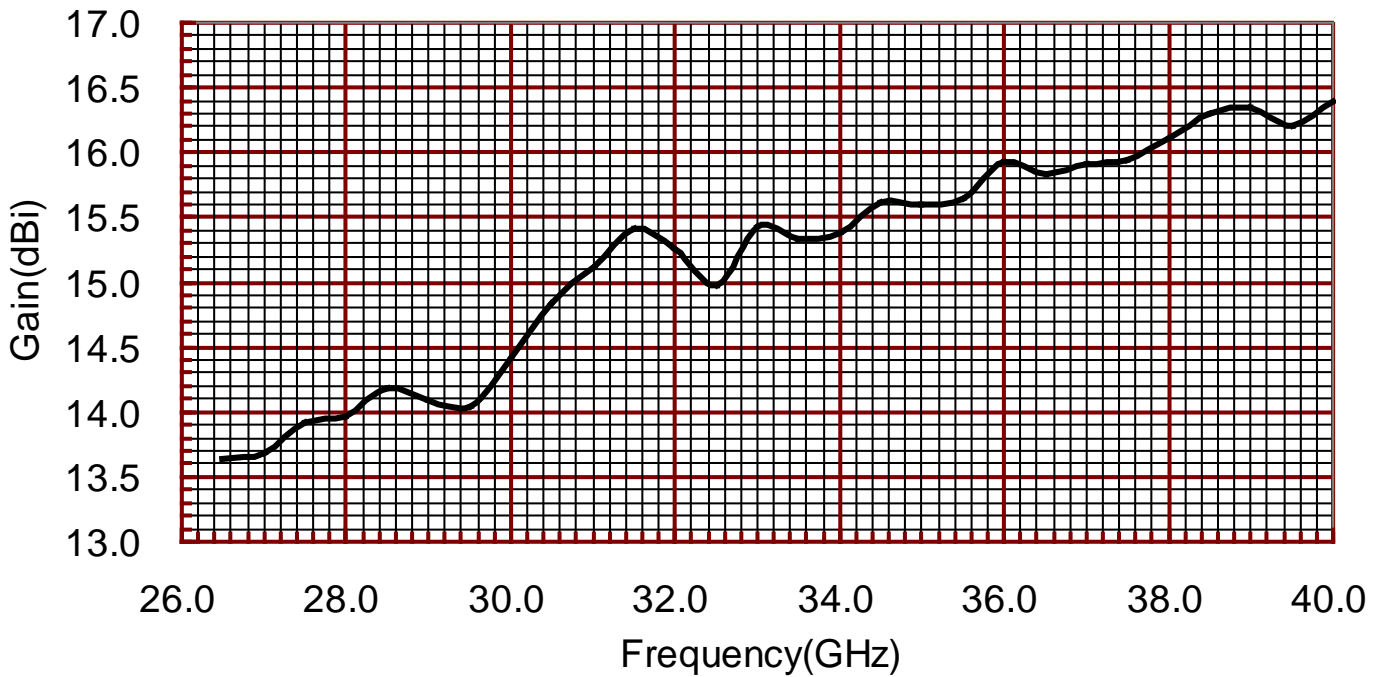
MSGH28-15



with 2.92mm Female connector (option)



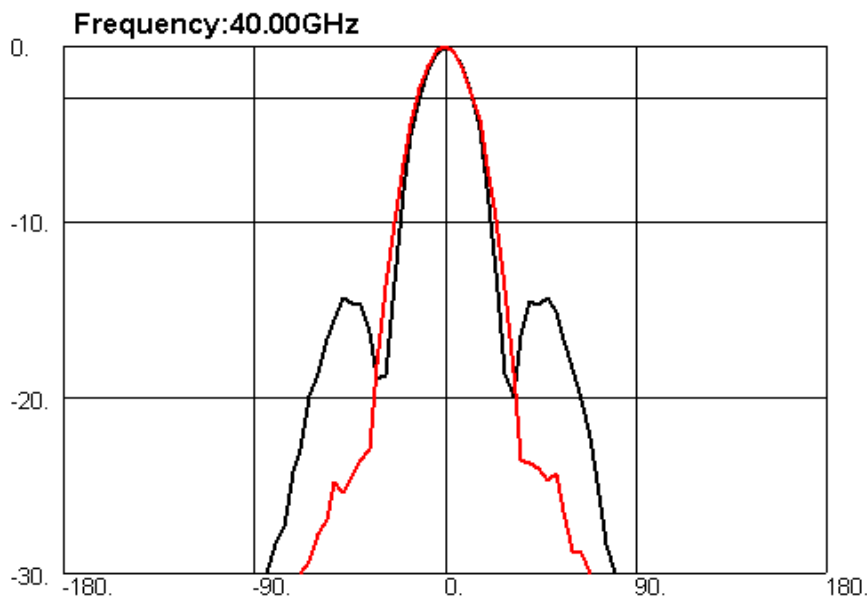
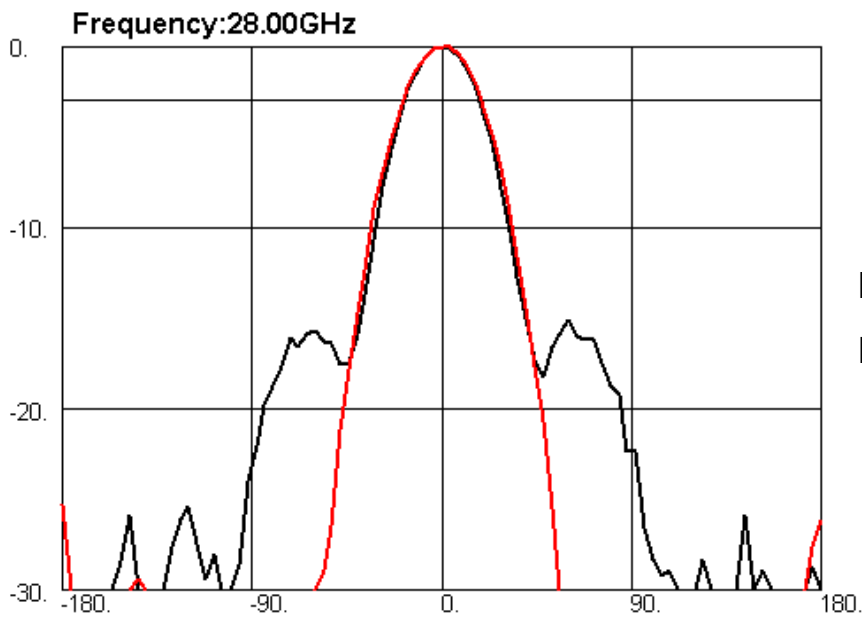
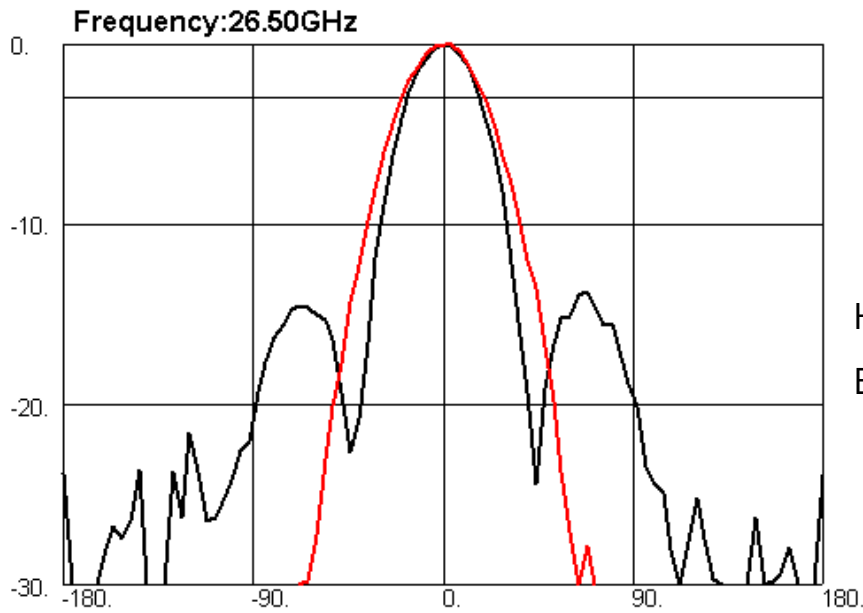
W x H x L: 20.2 x 16.6 x 36 (mm)



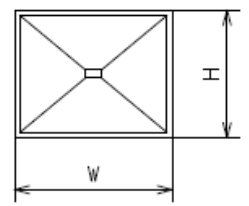
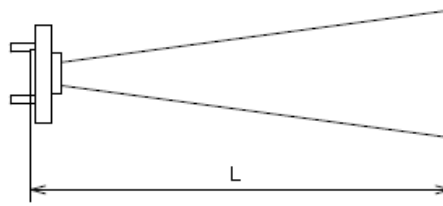
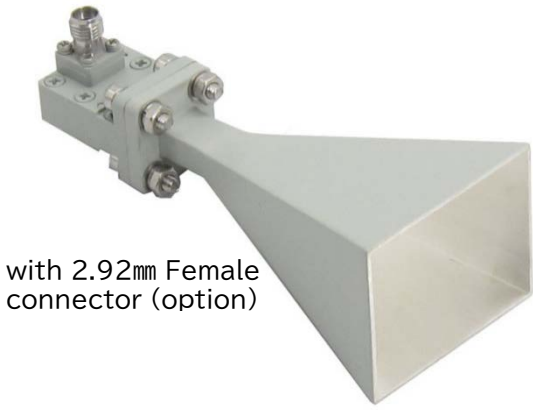
Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
26.5	13.63	45.04
27.0	13.68	45.15
27.5	13.91	45.08
28.0	13.97	45.18
28.5	14.17	45.12
29.0	14.09	45.37
29.5	14.04	45.57
30.0	14.42	45.33
30.5	14.83	45.06
31.0	15.11	44.92
31.5	15.41	44.76
32.0	15.26	45.05
32.5	14.97	45.48
33.0	15.42	45.16

Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
33.5	15.34	45.37
34.0	15.37	45.46
34.5	15.62	45.34
35.0	15.60	45.49
35.5	15.65	45.57
36.0	15.92	45.41
36.5	15.83	45.63
37.0	15.91	45.66
37.5	15.94	45.75
38.0	16.11	45.69
38.5	16.29	45.62
39.0	16.35	45.68
39.5	16.21	45.93
40.0	16.39	45.86

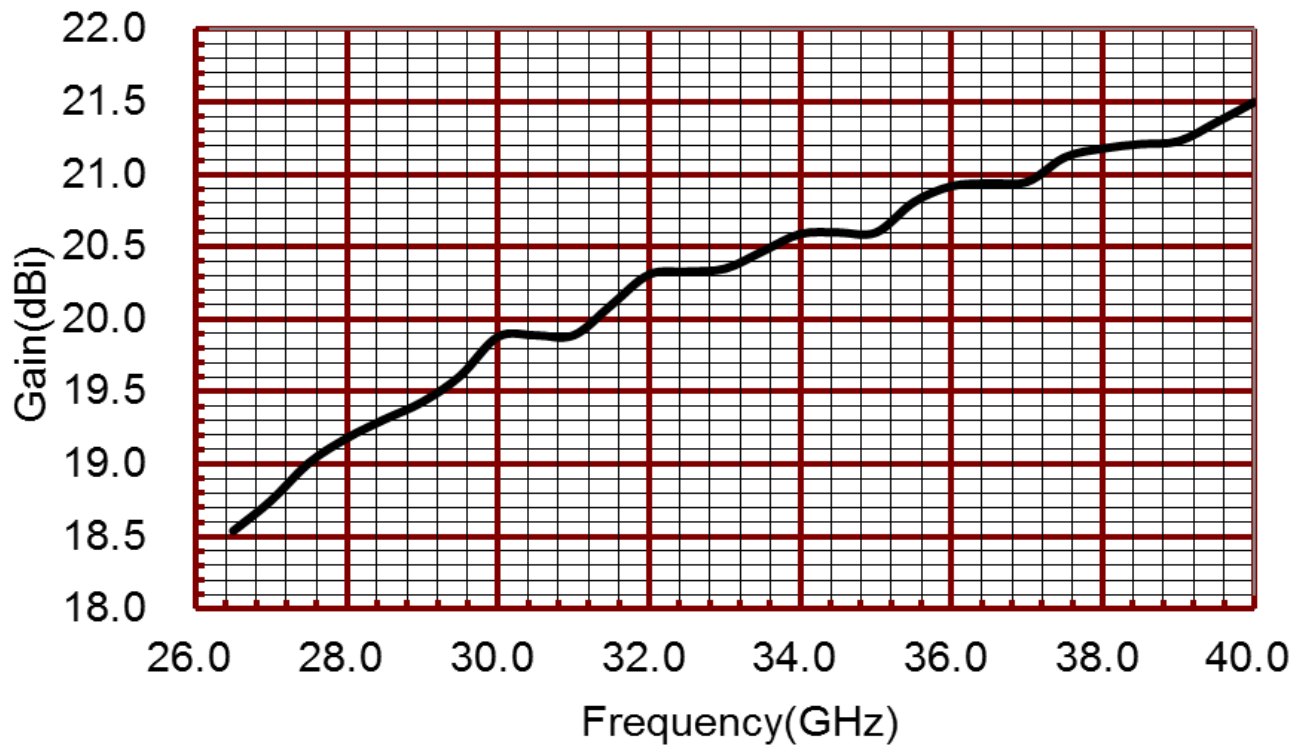
MSGH28-15 Radiation Patterns (typ.) @26.5 / 28 / 40GHz



MSGH28-20



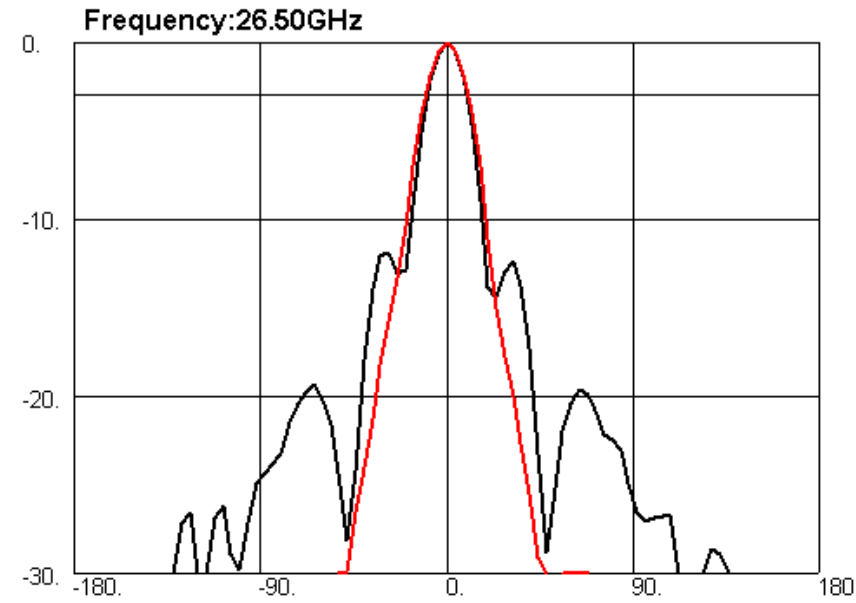
W x H x L: 40.5 x 31.9 x 70 (mm)



Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
26.5	18.54	40.13
27.0	18.75	40.09
27.5	19.01	39.99
28.0	19.18	39.97
28.5	19.31	40.00
29.0	19.43	40.03
29.5	19.61	40.00
30.0	19.88	39.87
30.5	19.89	40.01
31.0	19.89	40.15
31.5	20.10	40.08
32.0	20.31	40.00
32.5	20.33	40.12
33.0	20.35	40.23

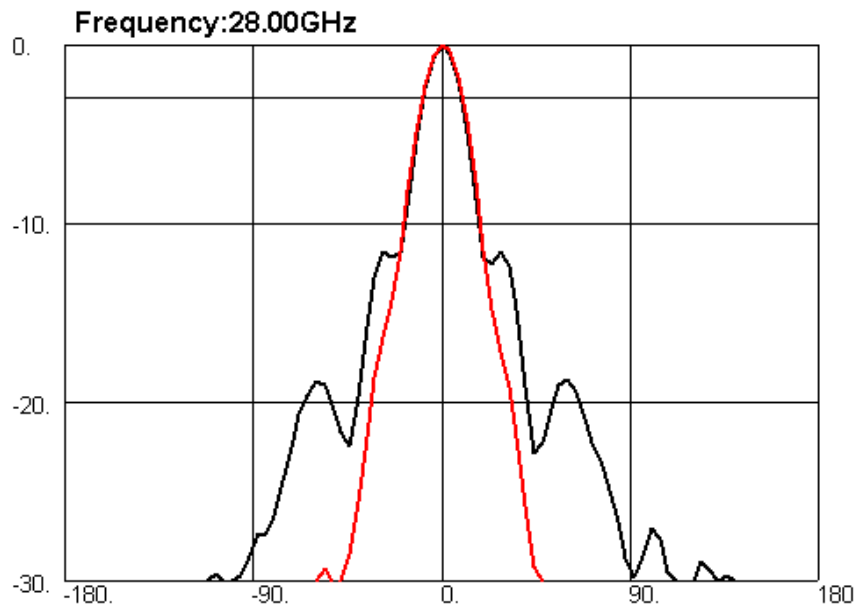
Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
33.5	20.47	40.24
34.0	20.59	40.25
34.5	20.60	40.37
35.0	20.60	40.49
35.5	20.81	40.40
36.0	20.92	40.42
36.5	20.94	40.52
37.0	20.95	40.62
37.5	21.12	40.57
38.0	21.18	40.63
38.5	21.21	40.71
39.0	21.23	40.80
39.5	21.36	40.78
40.0	21.50	40.75

MSGH28-20 Radiation Patterns (typ.) @26.5 / 28 / 40GHz



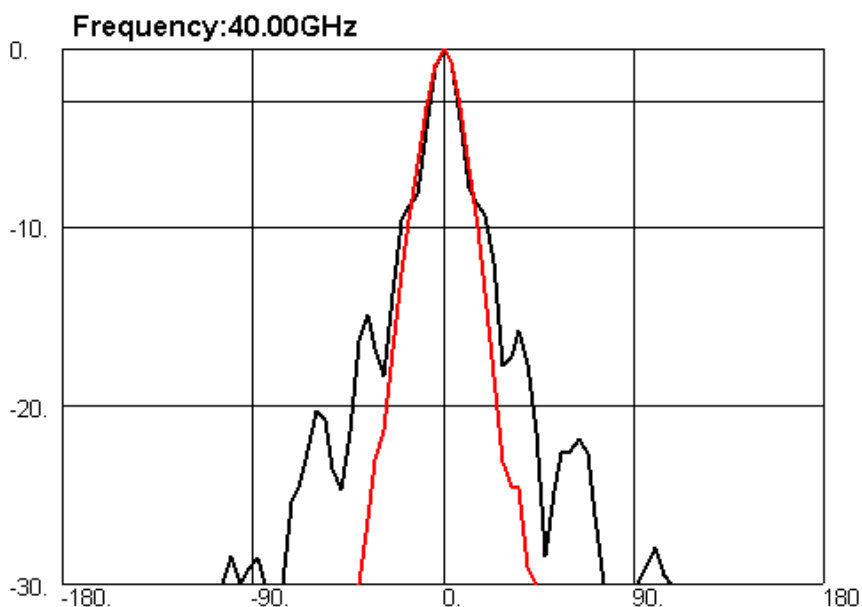
3dB Beamwidth(deg)

H-Plane	20.20
E-Plane	18.66



3dB Beamwidth(deg)

H-Plane	19.06
E-Plane	17.95



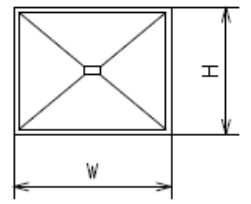
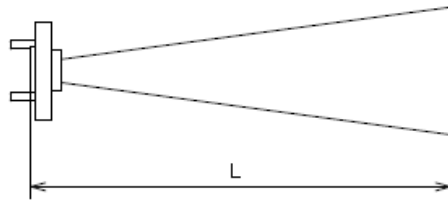
3dB Beamwidth(deg)

H-Plane	15.13
E-Plane	13.09

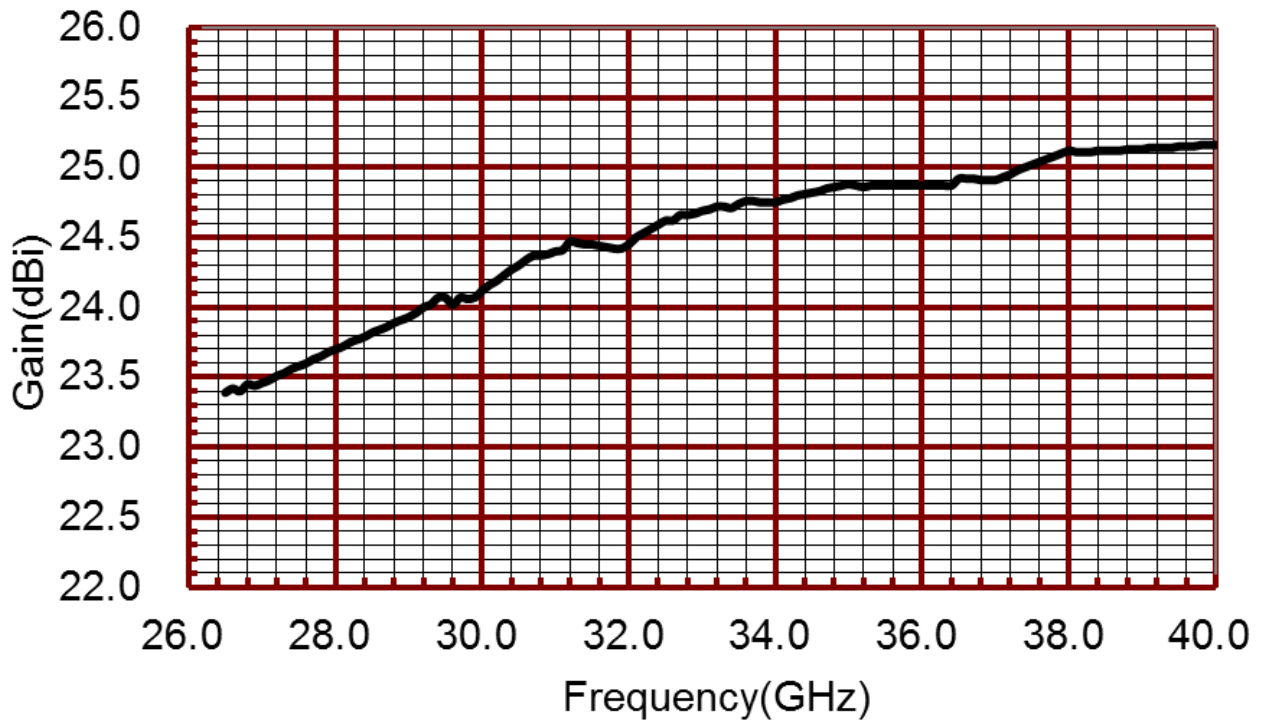
MSGH28-25



with 2.92mm Female connector (option)



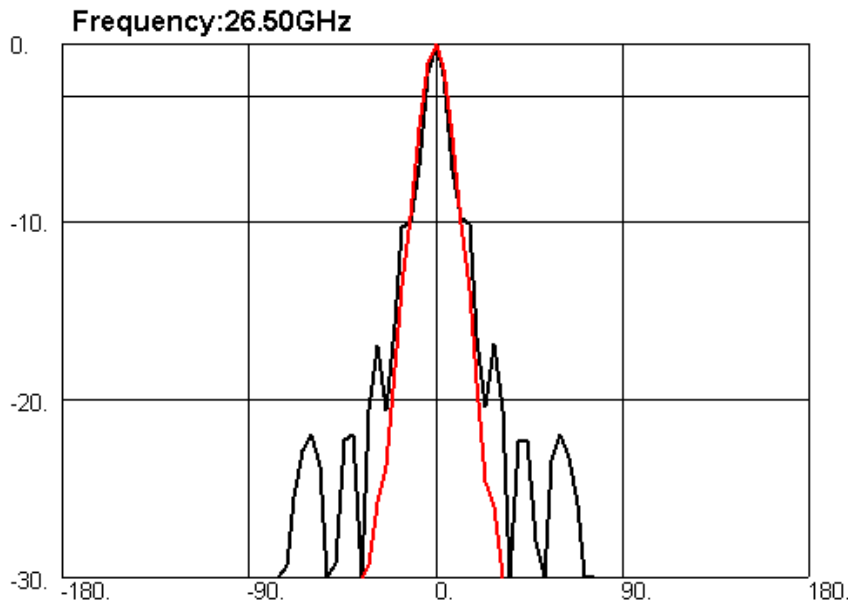
W x H x L: 71 x 59 x 172 (mm)



Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
26.50	23.39	35.28
27.00	23.46	35.38
27.50	23.58	35.42
28.00	23.70	35.45
28.50	23.82	35.49
29.00	23.93	35.53
29.50	24.07	35.54
30.00	24.12	35.63
30.50	24.30	35.60
31.00	24.40	35.64
31.50	24.45	35.73
32.00	24.45	35.86
32.50	24.62	35.83
33.00	24.69	35.89

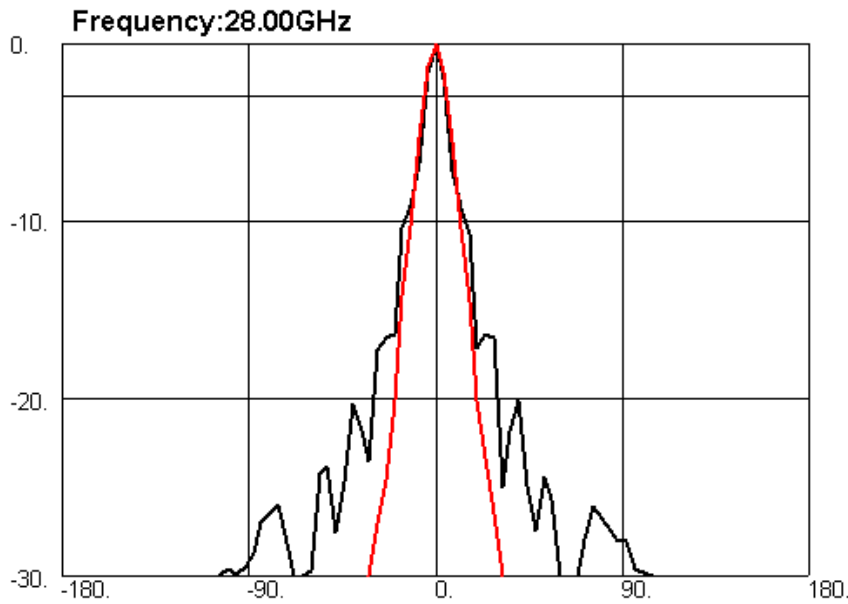
Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
33.50	24.74	35.97
34.00	24.75	36.09
34.50	24.82	36.15
35.00	24.88	36.21
35.50	24.87	36.34
36.00	24.87	36.47
36.50	24.92	36.54
37.00	24.91	36.66
37.50	25.02	36.67
38.00	25.12	36.69
38.50	25.12	36.80
39.00	25.13	36.90
39.50	25.15	36.99
40.00	25.16	37.09

MSGH28-25 Radiation Patterns(typ.) @26.5 / 28 / 40GHz



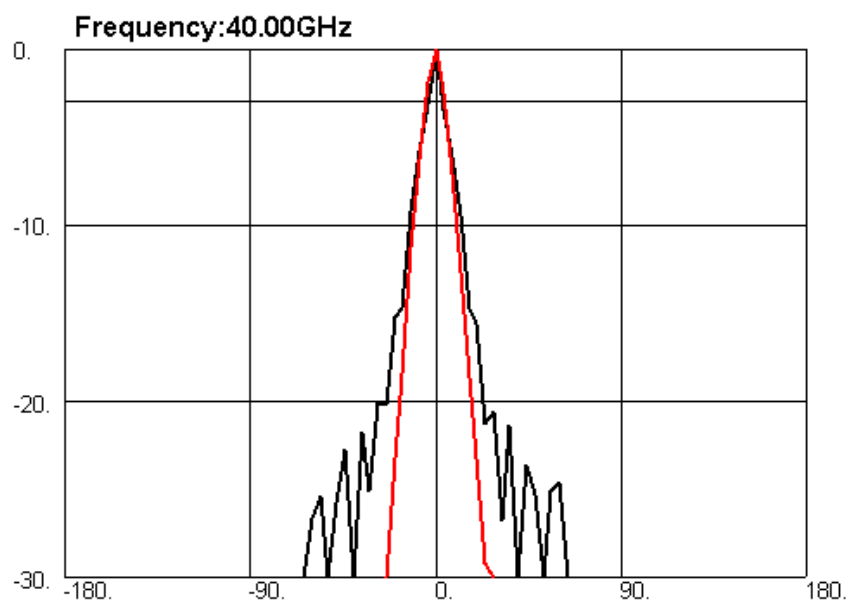
3dB Beamwidth(deg)

H-Plane	—	11.71
E-Plane	—	9.92



3dB Beamwidth(deg)

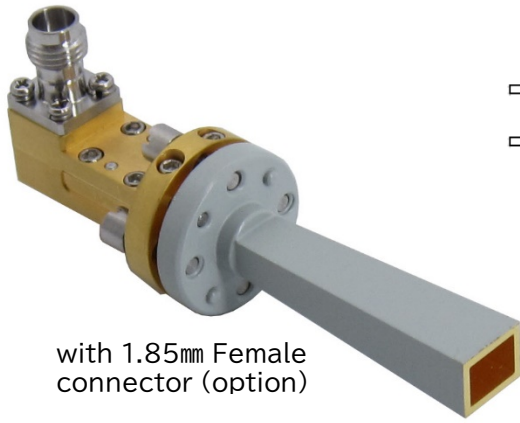
H-Plane	—	11.11
E-Plane	—	9.76



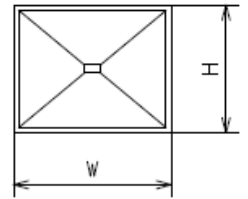
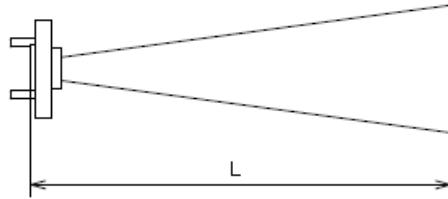
3dB Beamwidth(deg)

H-Plane	—	9.43
E-Plane	—	7.32

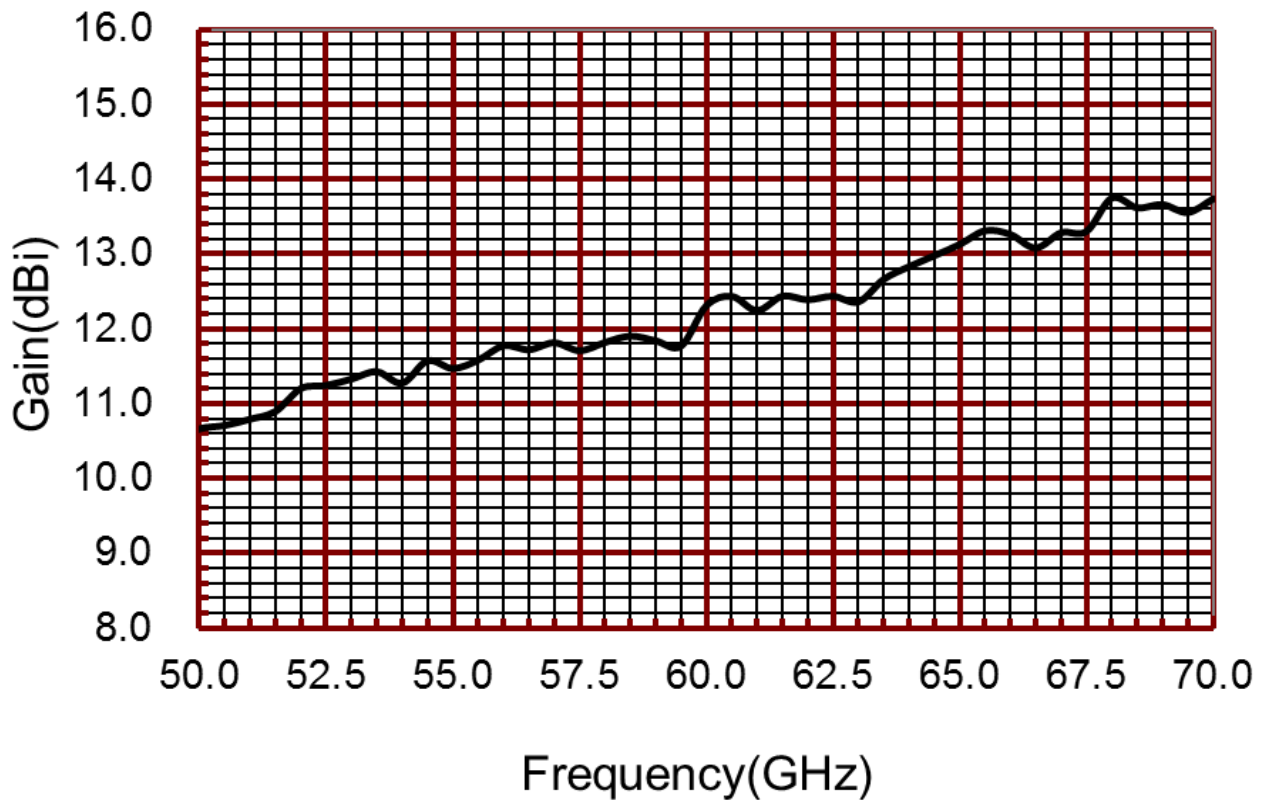
MSGH15-10



with 1.85mm Female connector (option)

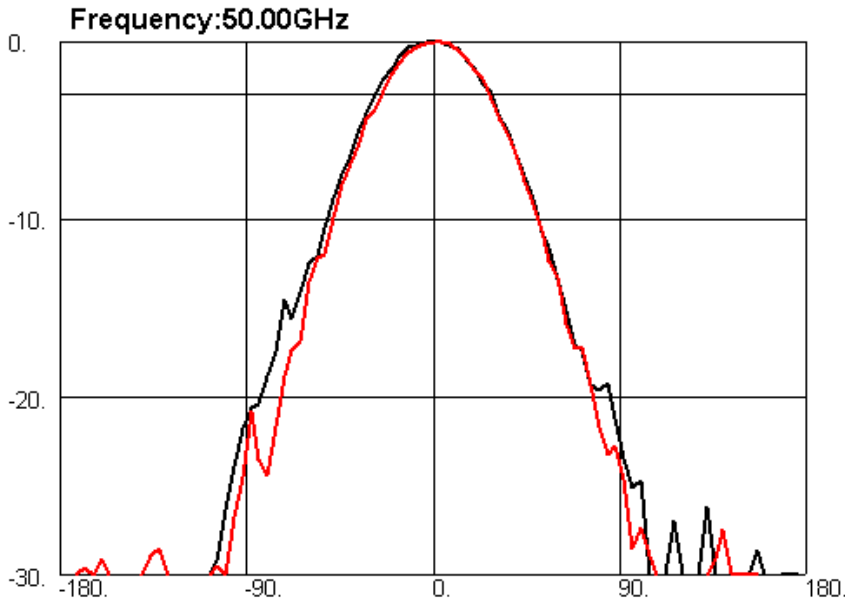


W x H x L: 9.0 x 7.2 x 40 (mm)

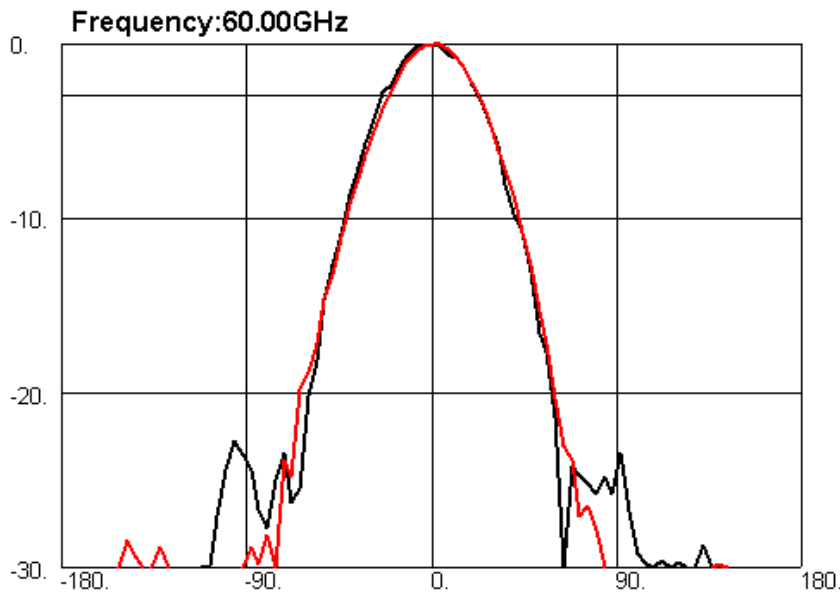


Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
50.0	10.67	53.53
52.0	11.20	53.33
54.0	11.27	53.58
56.0	11.77	53.40
58.0	11.82	53.66
60.0	12.31	53.46
62.0	12.39	53.67
64.0	12.83	53.50
66.0	13.26	53.24
68.0	13.75	53.11
70.0	13.74	53.38

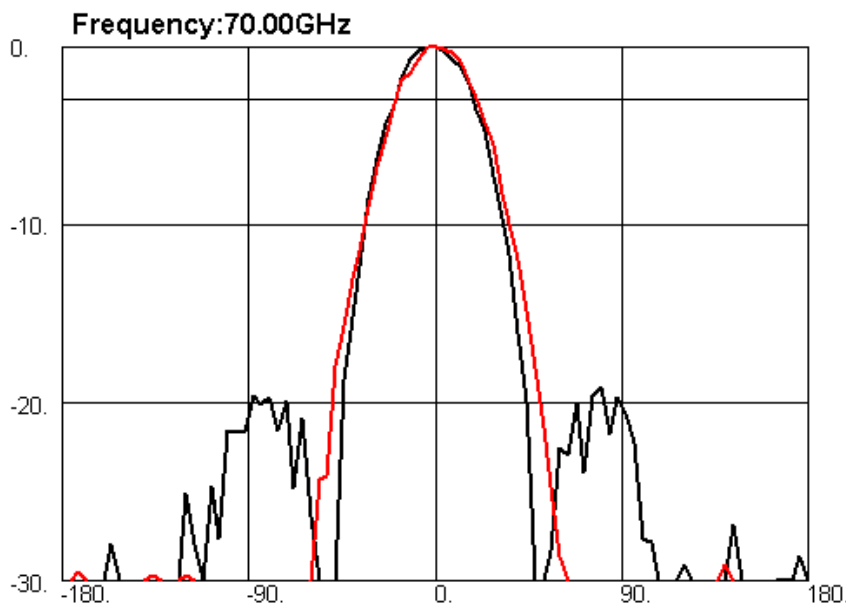
MSGH15-10 Radiation Patterns (typ.) @50 / 60 / 70GHz



		3dB Beamwidth(deg)
H-Plane	—	51.93
E-Plane	—	56.34

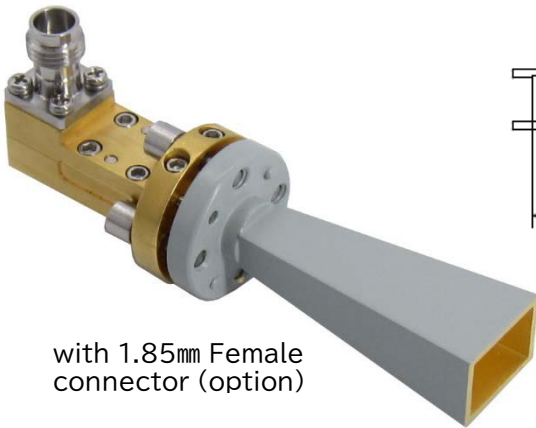


		3dB Beamwidth(deg)
H-Plane	—	43.98
E-Plane	—	47.18

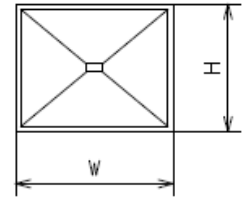
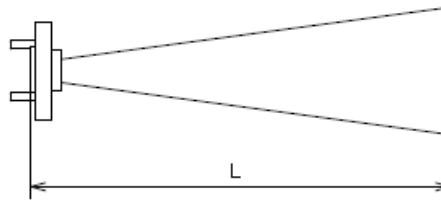


		3dB Beamwidth(deg)
H-Plane	—	39.50
E-Plane	—	37.66

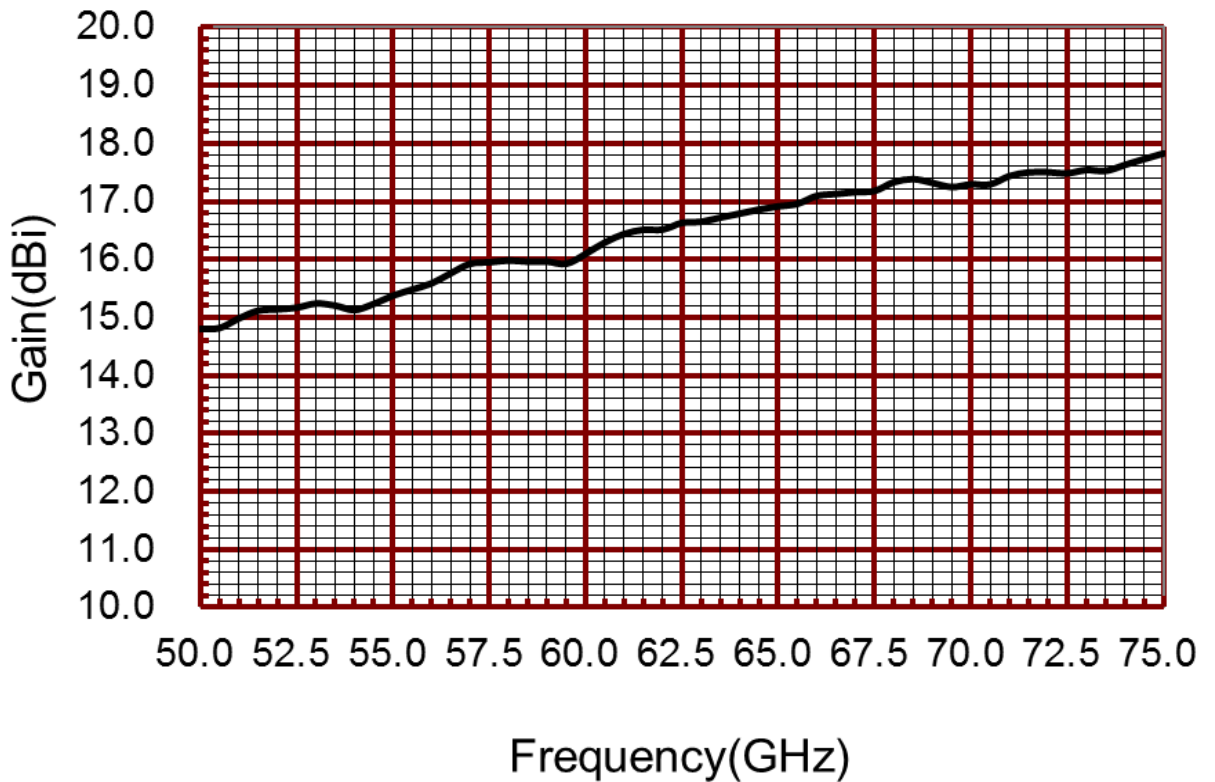
MSGH15-15



with 1.85mm Female connector (option)

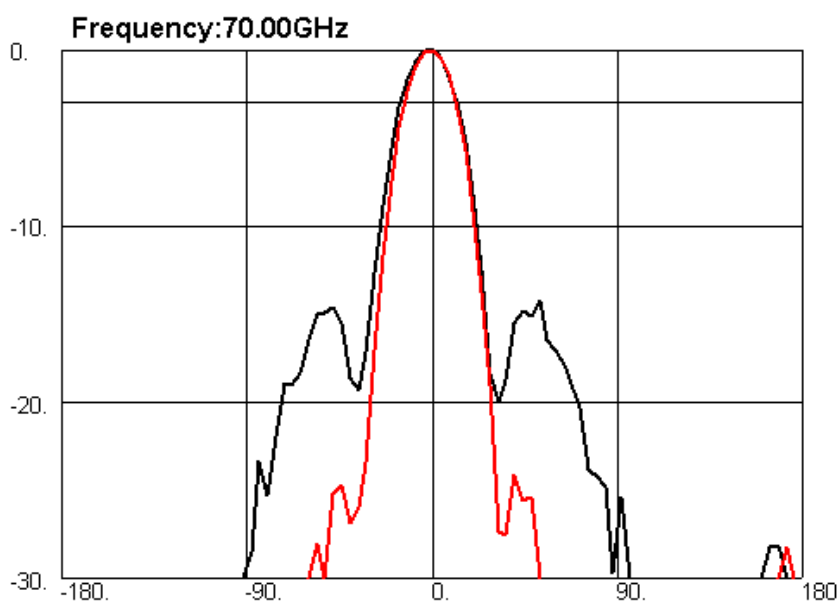
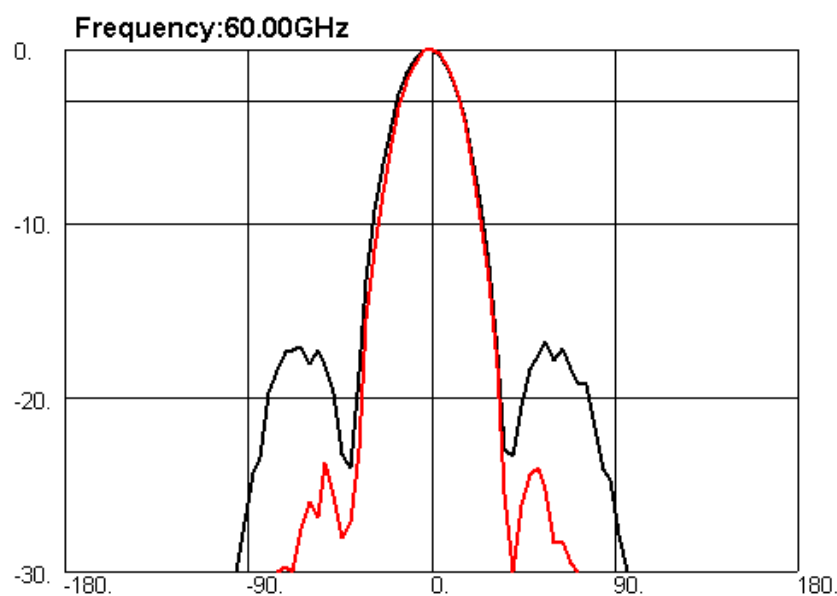
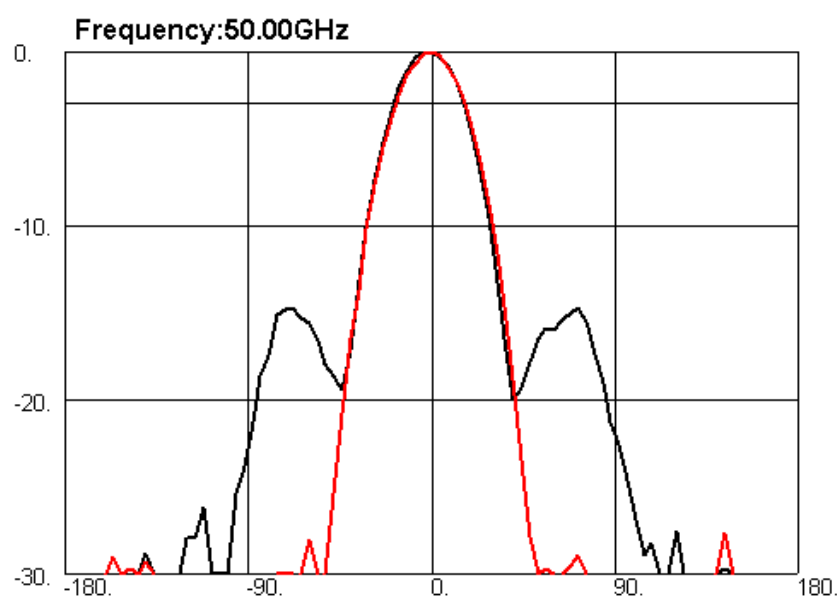


W x H x L: 13.5 x 10 x 40 (mm)

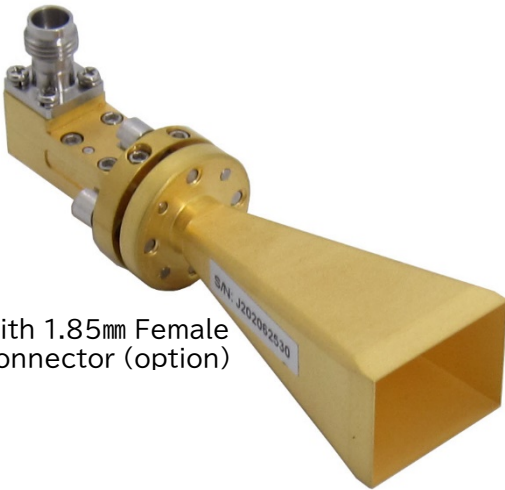


Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
50.0	14.80	49.39
52.0	15.14	49.39
54.0	15.13	49.73
56.0	15.59	49.59
58.0	15.98	49.50
60.0	16.10	49.68
62.0	16.51	49.54
64.0	16.79	49.54
66.0	17.10	49.51
68.0	17.33	49.53
70.0	17.29	49.82
72.0	17.50	49.85
74.0	17.63	49.96
75.0	17.83	49.88

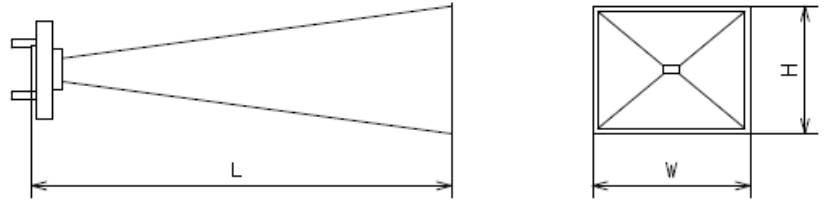
MSGH15-15 Radiation Patterns (typ.) @50 / 60 / 70GHz



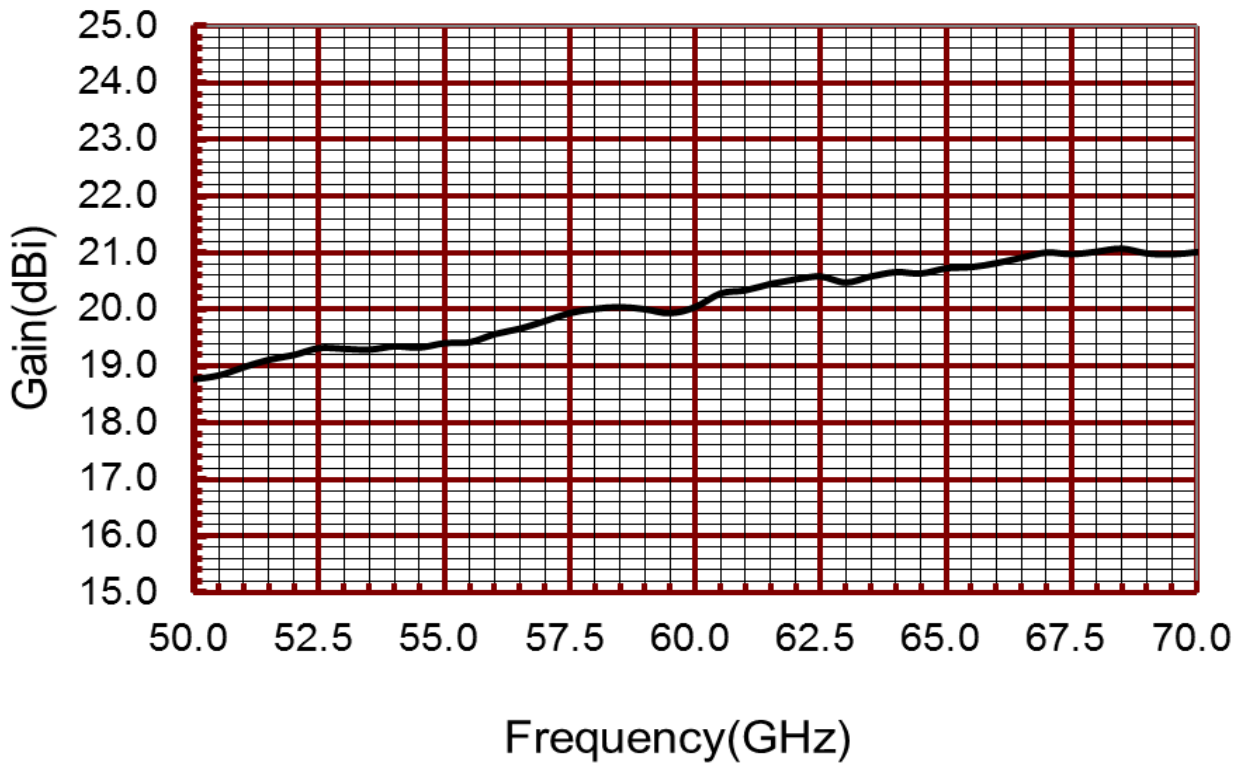
MSGH15-20



with 1.85mm Female connector (option)

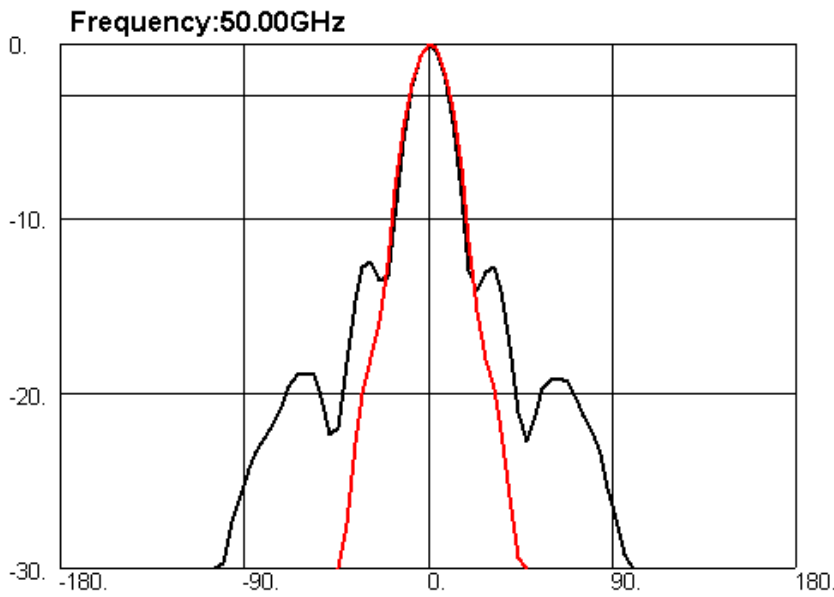


W x H x L: 21.6 x 16.6 x 47.3 (mm)

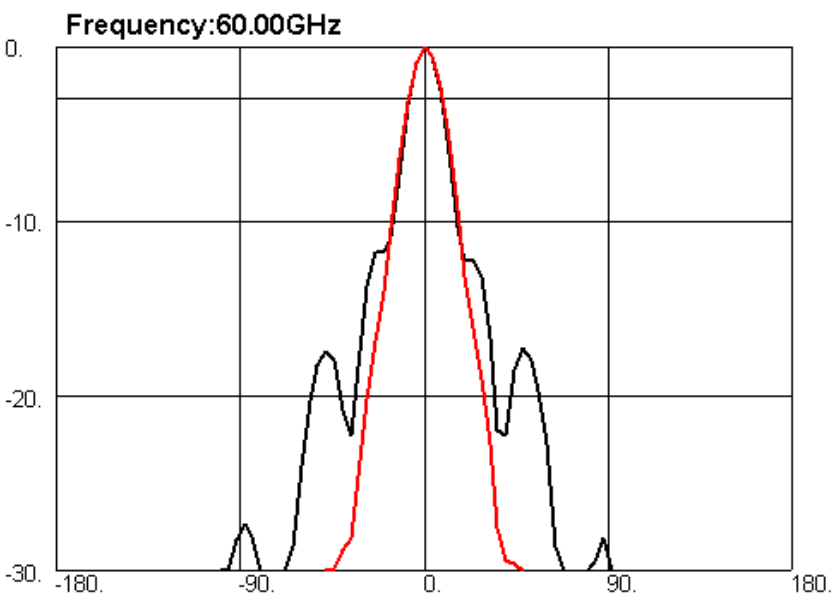


Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
50.0	18.77	45.42
52.0	19.19	45.33
54.0	19.35	45.51
56.0	19.56	45.61
58.0	20.01	45.47
60.0	20.04	45.73
62.0	20.53	45.53
64.0	20.66	45.68
66.0	20.82	45.78
68.0	21.02	45.84
70.0	21.01	46.10

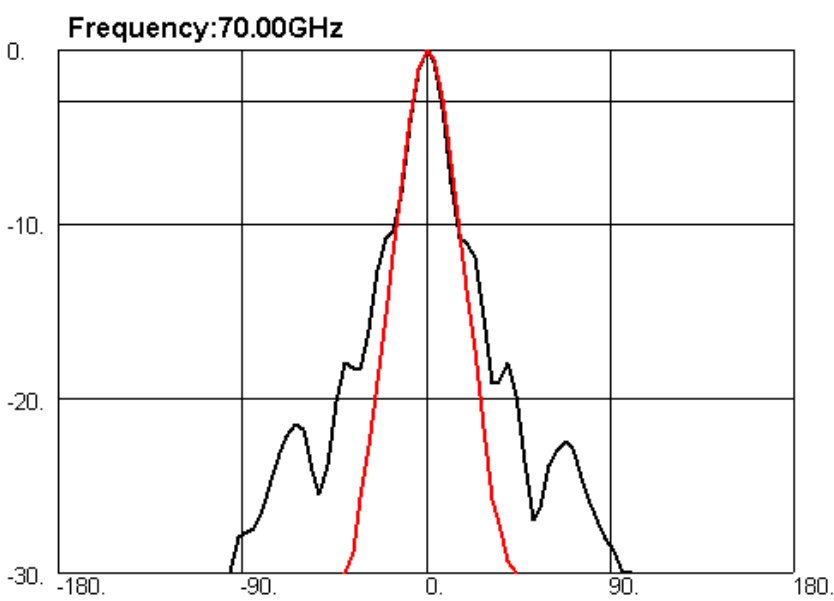
MSGH15-20 Radiation Patterns (typ.) @50 / 60 / 70GHz



		3dB Beamwidth(deg)
H-Plane		19.66
E-Plane		18.36



		3dB Beamwidth(deg)
H-Plane		16.71
E-Plane		15.94

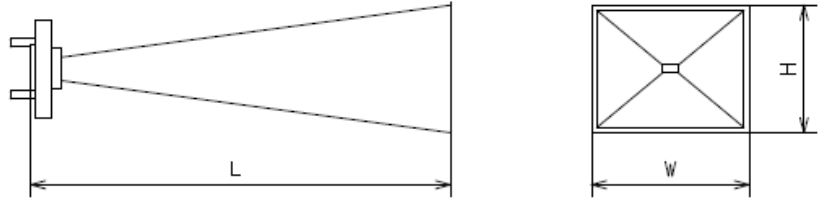


		3dB Beamwidth(deg)
H-Plane		14.89
E-Plane		13.76

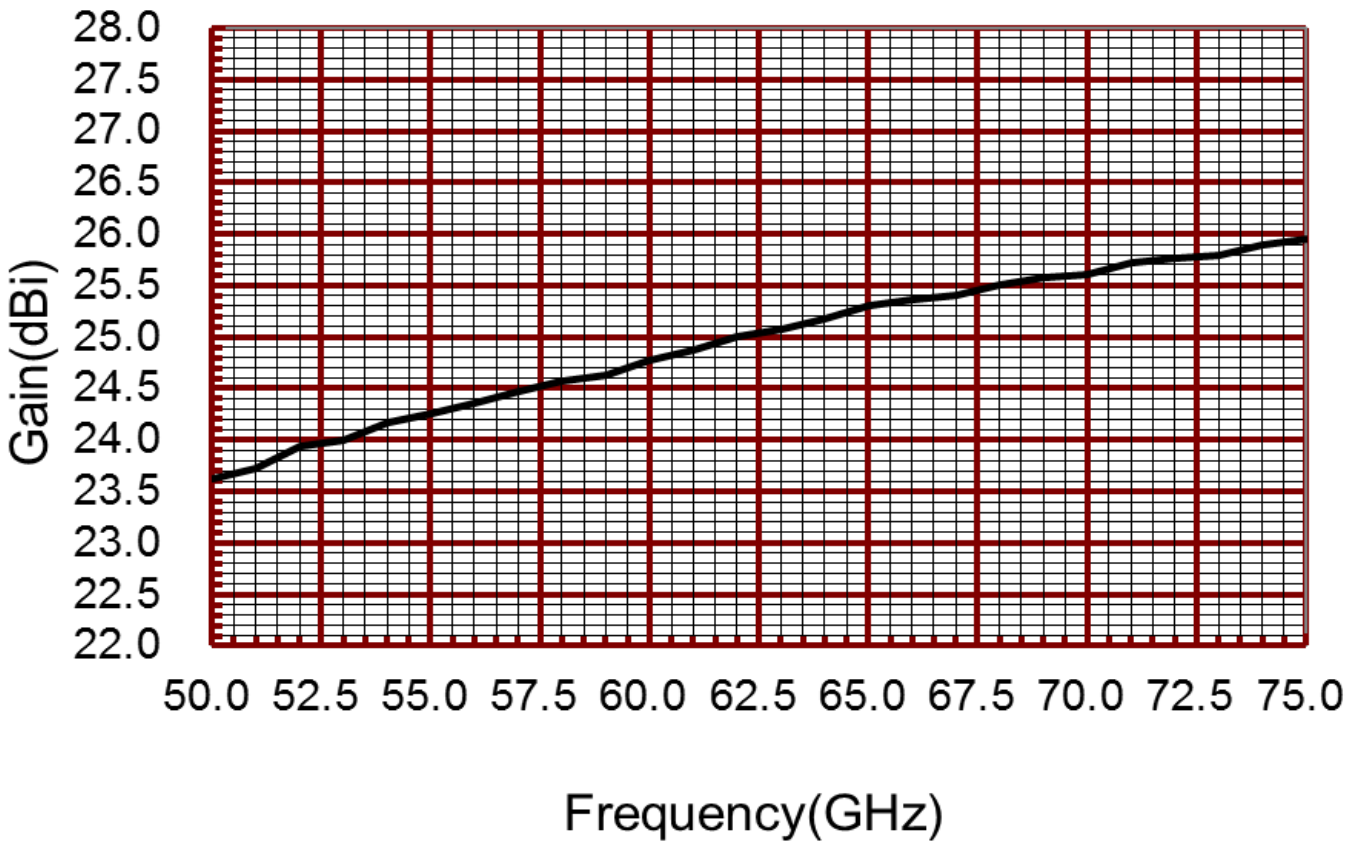
MSGH15-25



with 1.85mm Female connector (option)



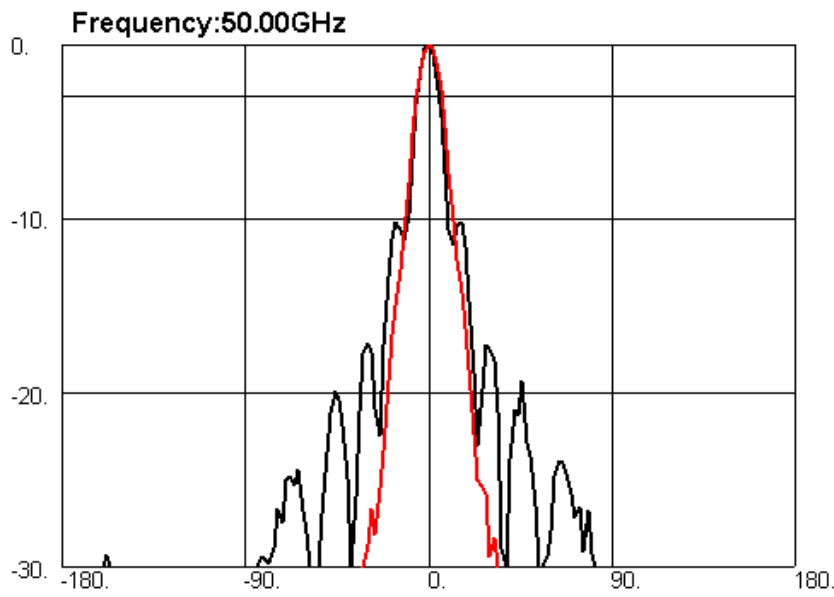
W x H x L: 36.8 x 29.8 x 91.4 (mm)




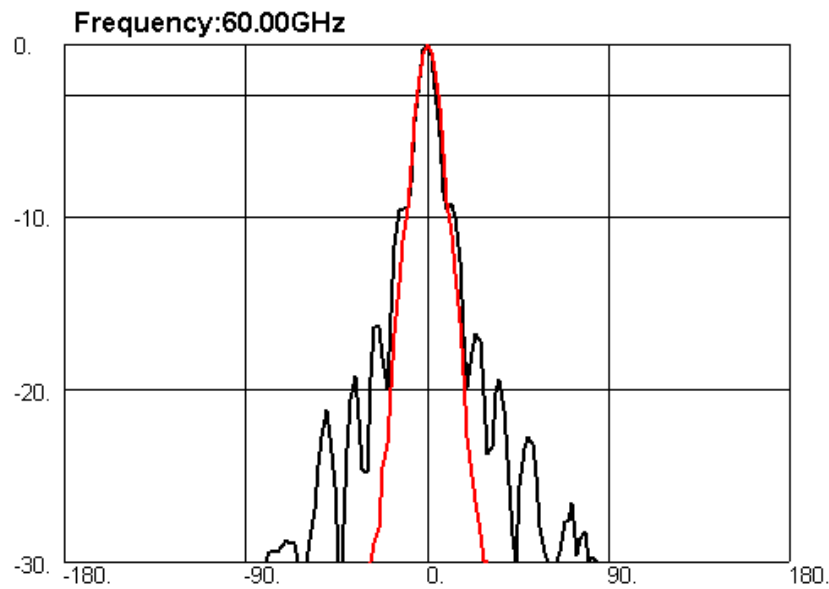
Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
50	23.63	40.56
51	23.73	40.63
52	23.94	40.59
53	24.00	40.70
54	24.17	40.69
55	24.26	40.76
56	24.36	40.81
57	24.47	40.86
58	24.57	40.91
59	24.63	41.00
60	24.78	40.99
61	24.87	41.05
62	25.00	41.06


Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
63	25.07	41.13
64	25.18	41.15
65	25.30	41.17
66	25.36	41.24
67	25.40	41.33
68	25.51	41.35
69	25.58	41.41
70	25.60	41.51
71	25.72	41.52
72	25.76	41.60
73	25.79	41.69
74	25.89	41.70
75	25.95	41.76

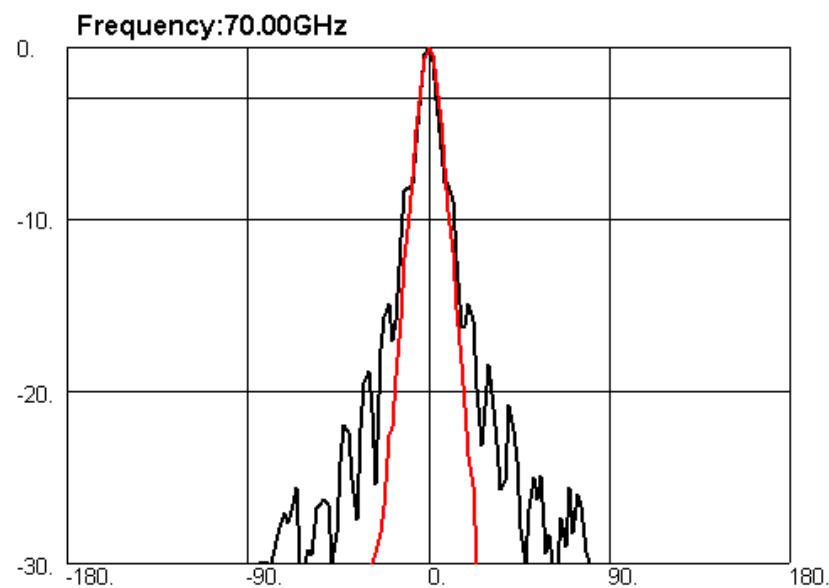
MSGH15-25 Radiation Patterns (typ.) @50 / 60 / 70GHz





		3dB Beamwidth(deg)
H-Plane		12.28
E-Plane		10.56

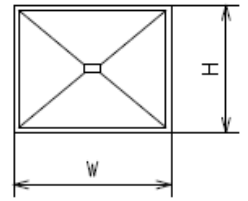
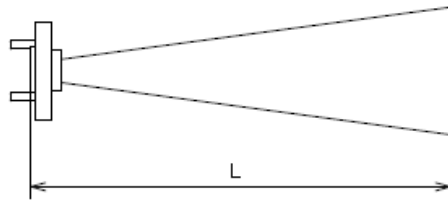
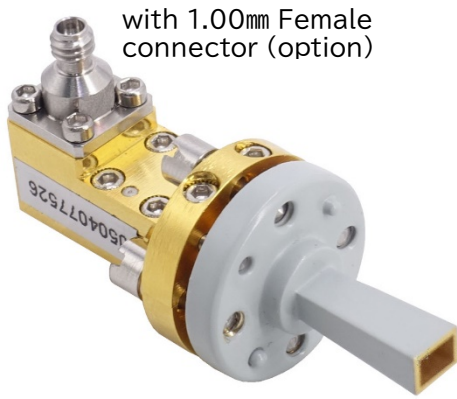


		3dB Beamwidth(deg)
H-Plane		10.32
E-Plane		9.09

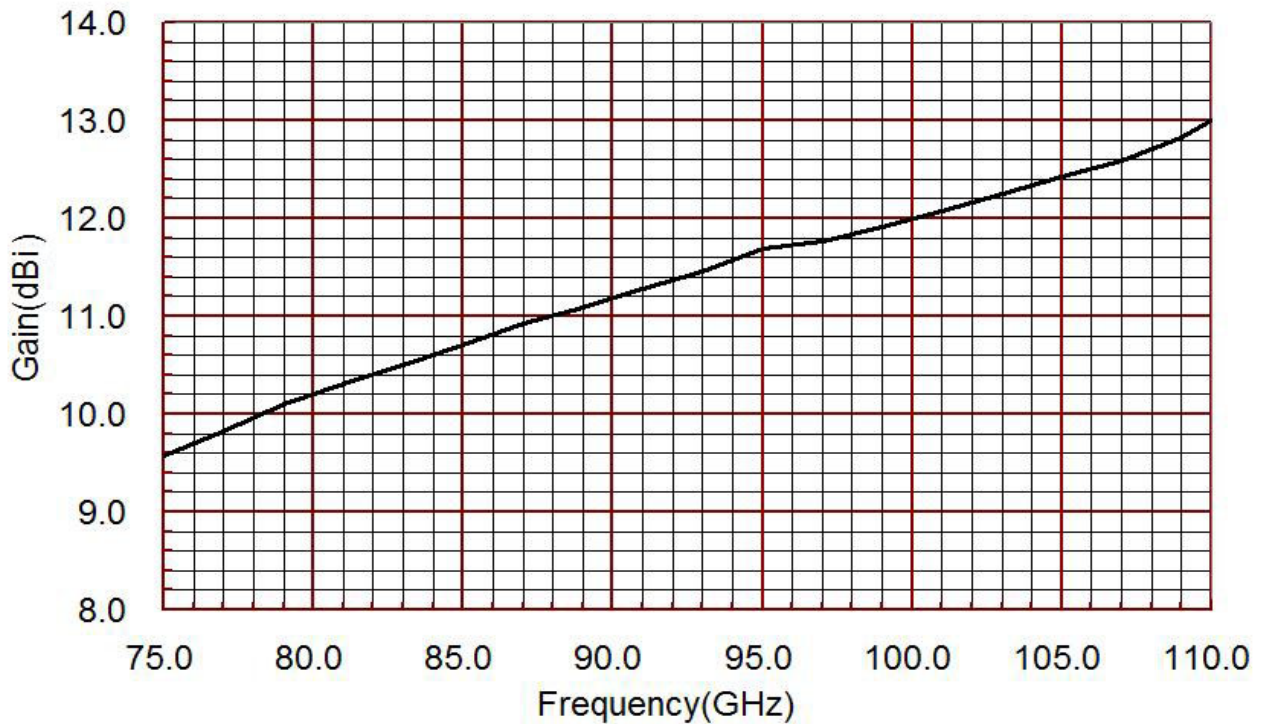


		3dB Beamwidth(deg)
H-Plane		9.42
E-Plane		8.30

MSGH10-10

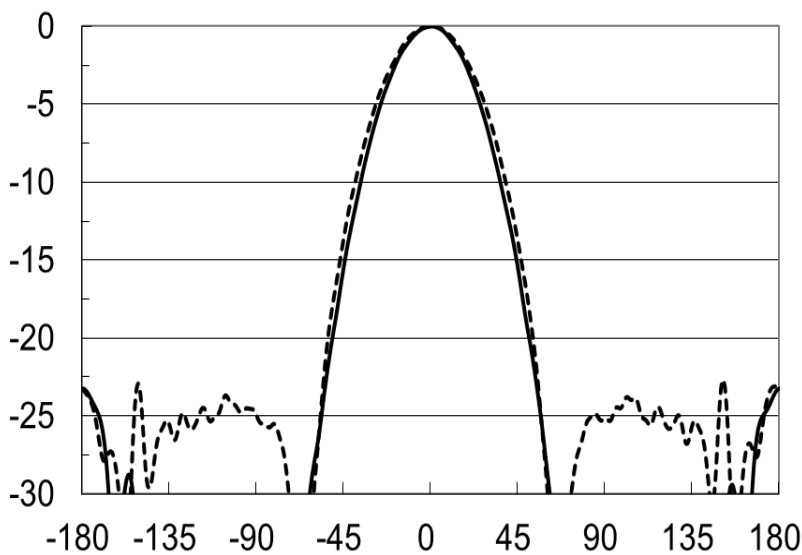
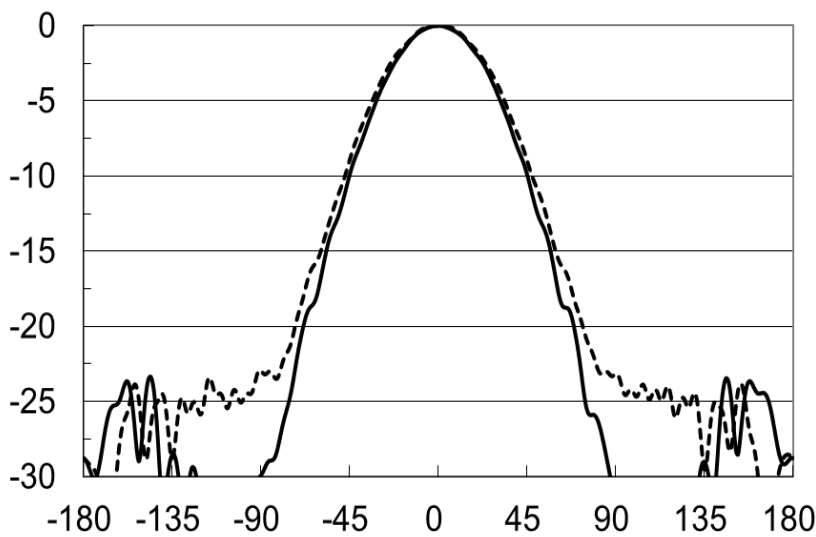
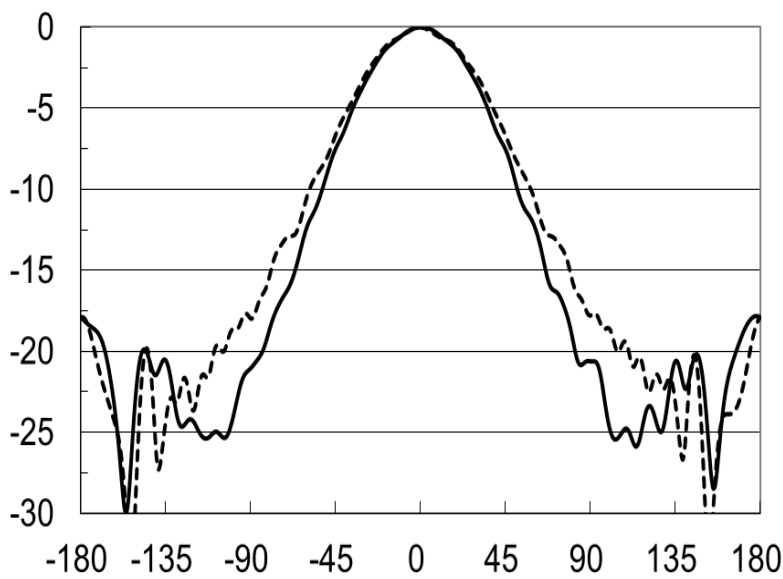


W x H x L: 5.4 x 4.0 x 20 (mm)

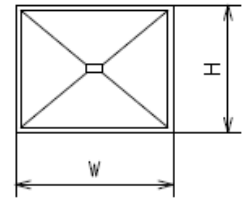
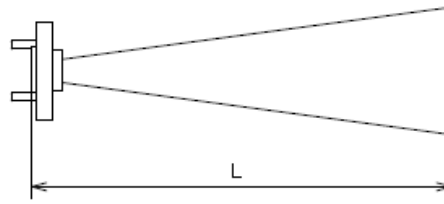


Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
75	9.57	58.14
77	9.83	58.11
79	10.10	58.06
81	10.31	58.07
83	10.50	58.09
85	10.71	58.09
87	10.93	58.07
89	11.09	58.11
91	11.28	58.11
93	11.45	58.13
95	11.69	58.07
97	11.76	58.19
99	11.91	58.21
101	12.08	58.22
103	12.25	58.22
105	12.42	58.21
107	12.59	58.21
109	12.83	58.13
110	13.00	58.12

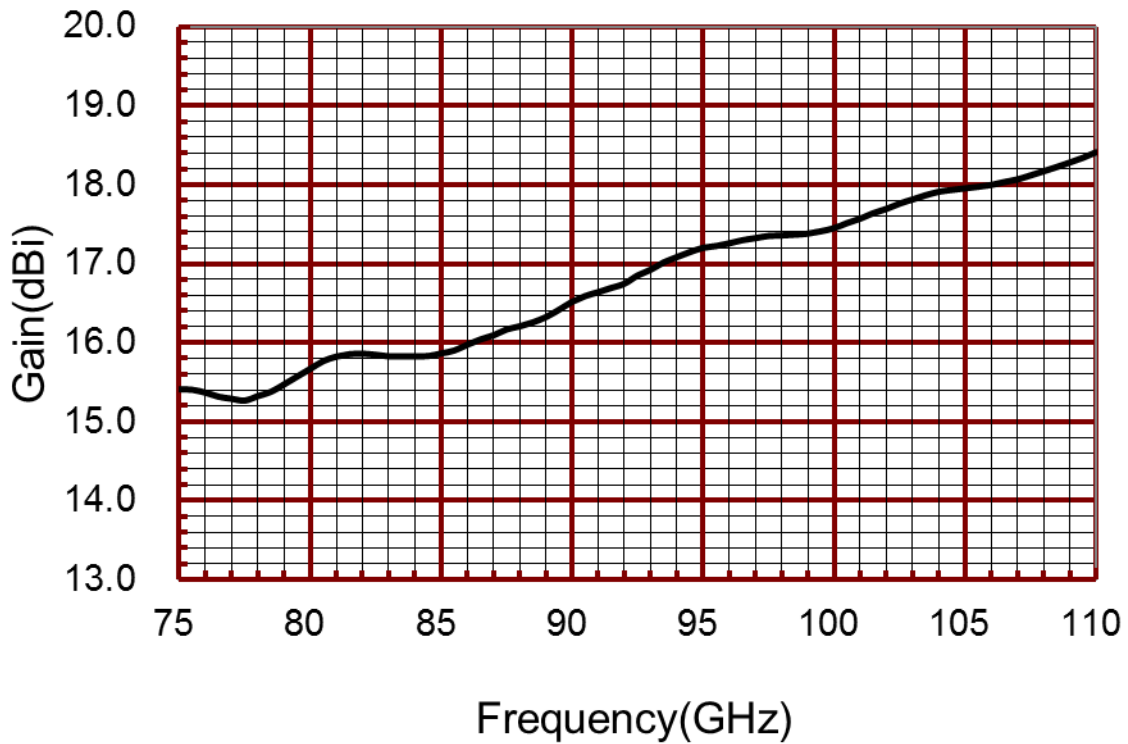
MSGH10-10 Radiation Patterns (typ.) @75 / 92.5 / 110GHz



MSGH10-15

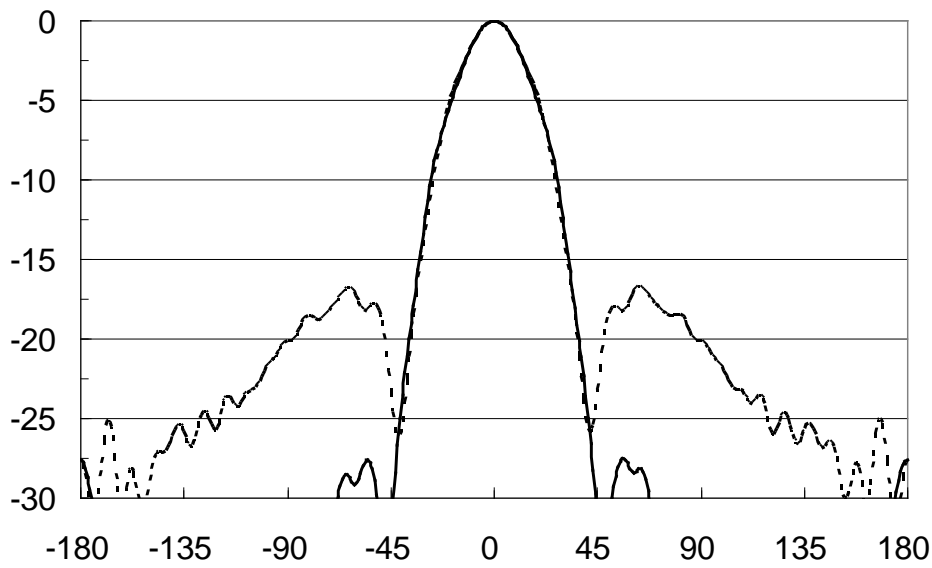


W x H x L: 9.0 x 6.5 x 25 (mm)

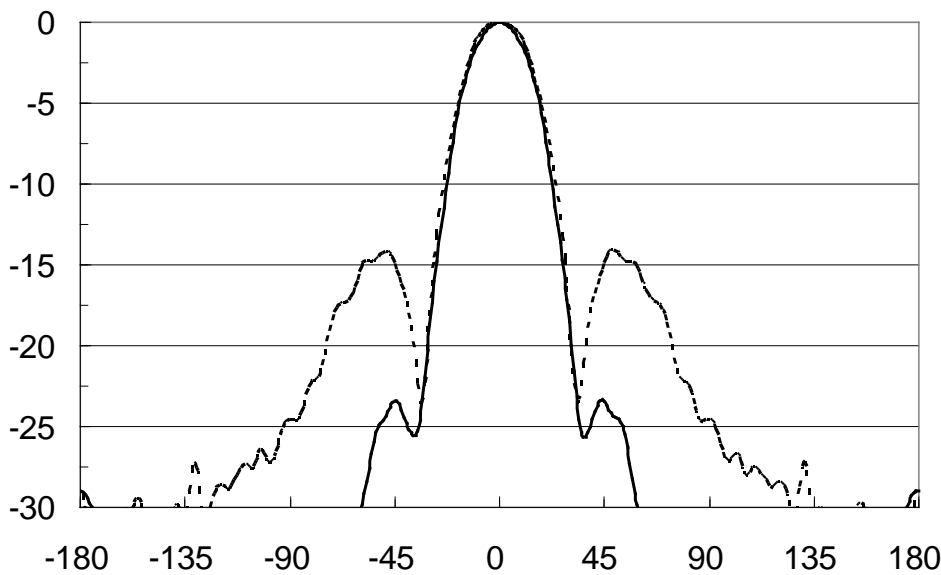


Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
75.0	15.41	52.30
77.5	15.27	52.73
80.0	15.67	52.61
82.5	15.85	52.69
85.0	15.86	52.94
87.5	16.17	52.88
90.0	16.52	52.78
92.5	16.85	52.68
95.0	17.20	52.56
97.5	17.35	52.64
100.0	17.45	52.76
102.5	17.76	52.66
105.0	17.95	52.68
107.5	18.12	52.72
110.0	18.41	52.63

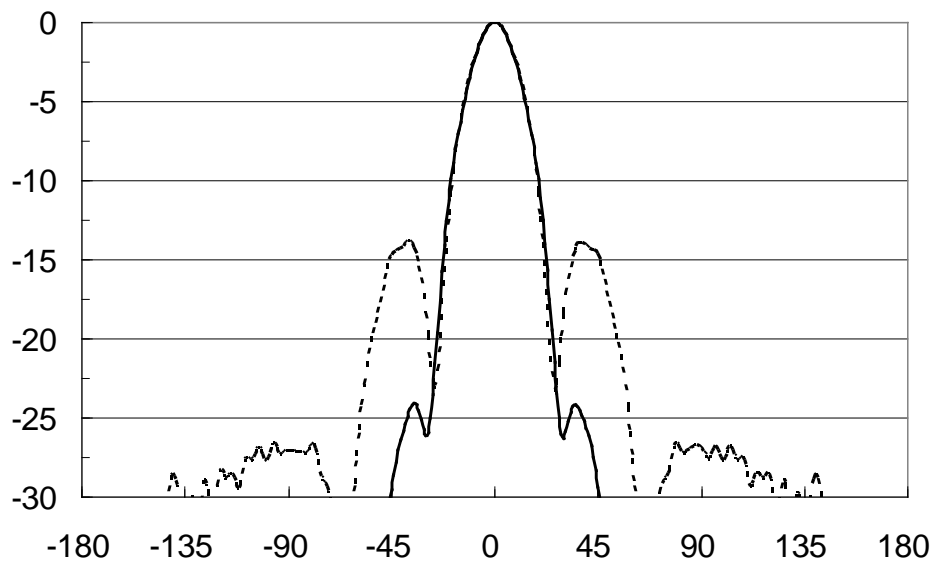
MSGH10-15 Radiation Patterns (typ.) @75 / 92.5 / 110GHz



75GHz	
3dB Beamwidth(deg)	
H-Plane	— 27.60
E-Plane	- - - 28.35

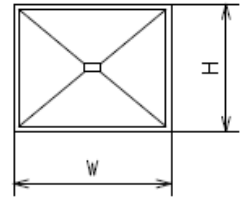
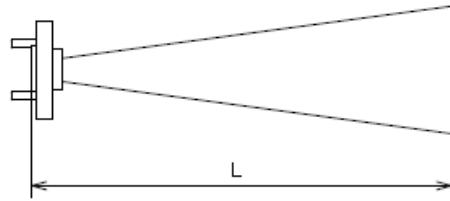
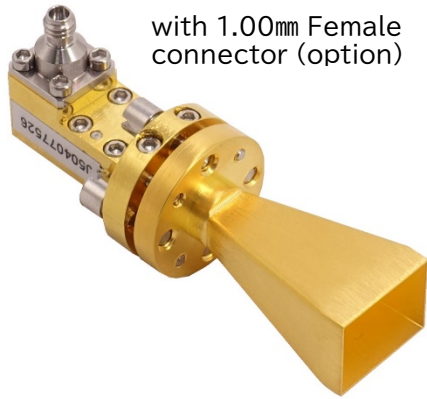


92.5GHz	
3dB Beamwidth(deg)	
H-Plane	— 27.45
E-Plane	- - - 28.85

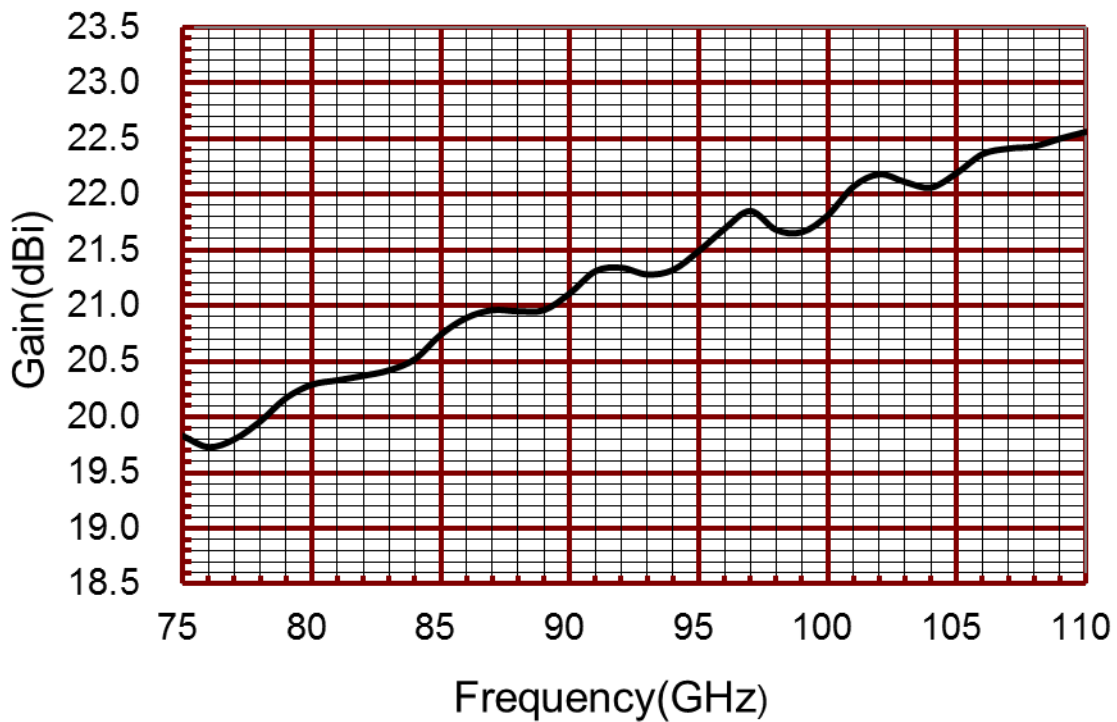


110GHz	
3dB Beamwidth(deg)	
H-Plane	— 20.20
E-Plane	- - - 20.65

MSGH10-20

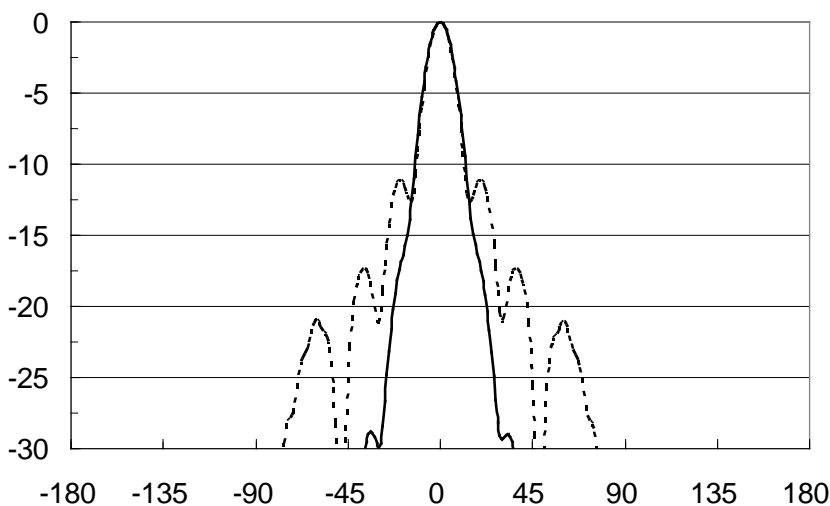
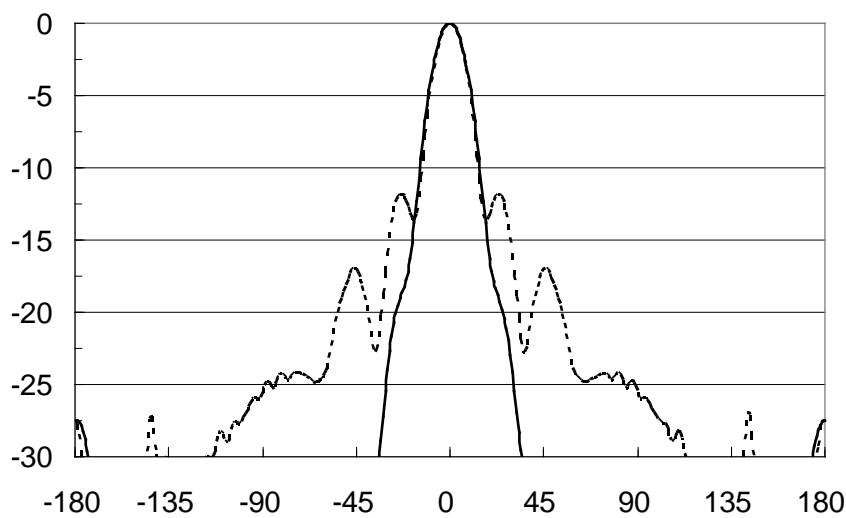
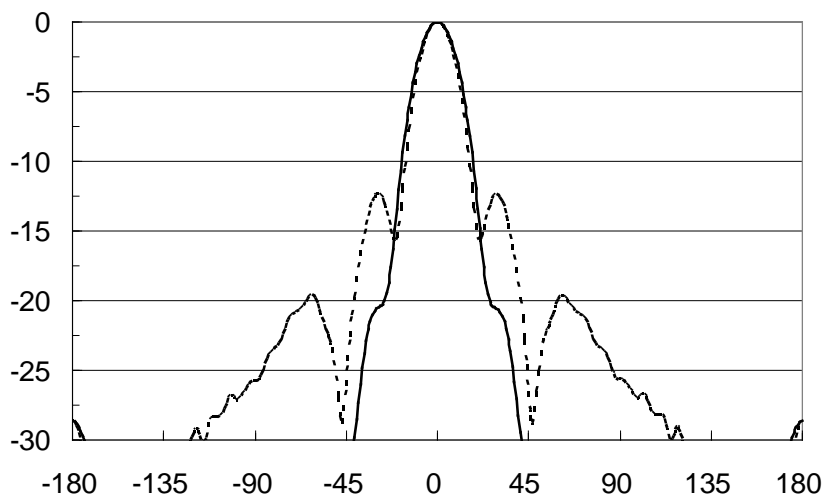


W x H x L: 14.6 x 11.6 x 31.4 (mm)

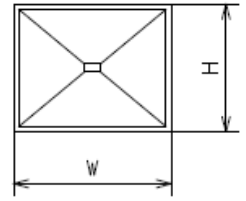
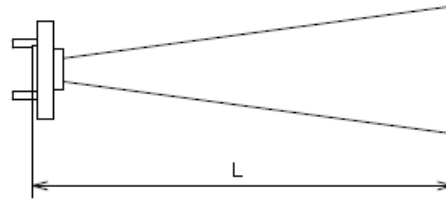
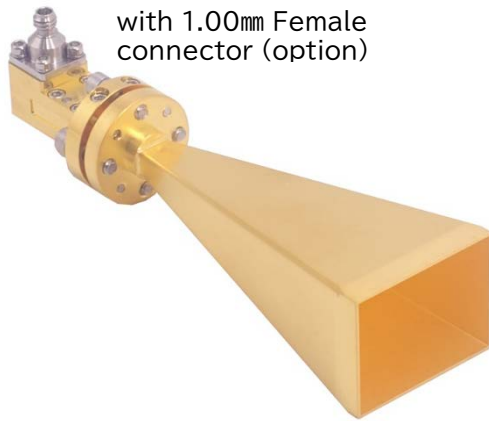


Frequency GHz)	Gain (dBi)	Antenna Factor (dB/m)
75	19.83	47.88
76	19.73	48.10
78	19.96	48.09
80	20.29	47.98
82	20.37	48.12
84	20.52	48.18
86	20.89	48.01
88	20.95	48.15
90	21.11	48.18
92	21.34	48.15
94	21.32	48.35
96	21.69	48.17
98	21.68	48.35
100	21.81	48.40
102	22.18	48.20
104	22.06	48.49
106	22.36	48.36
108	22.43	48.45
110	22.56	48.48

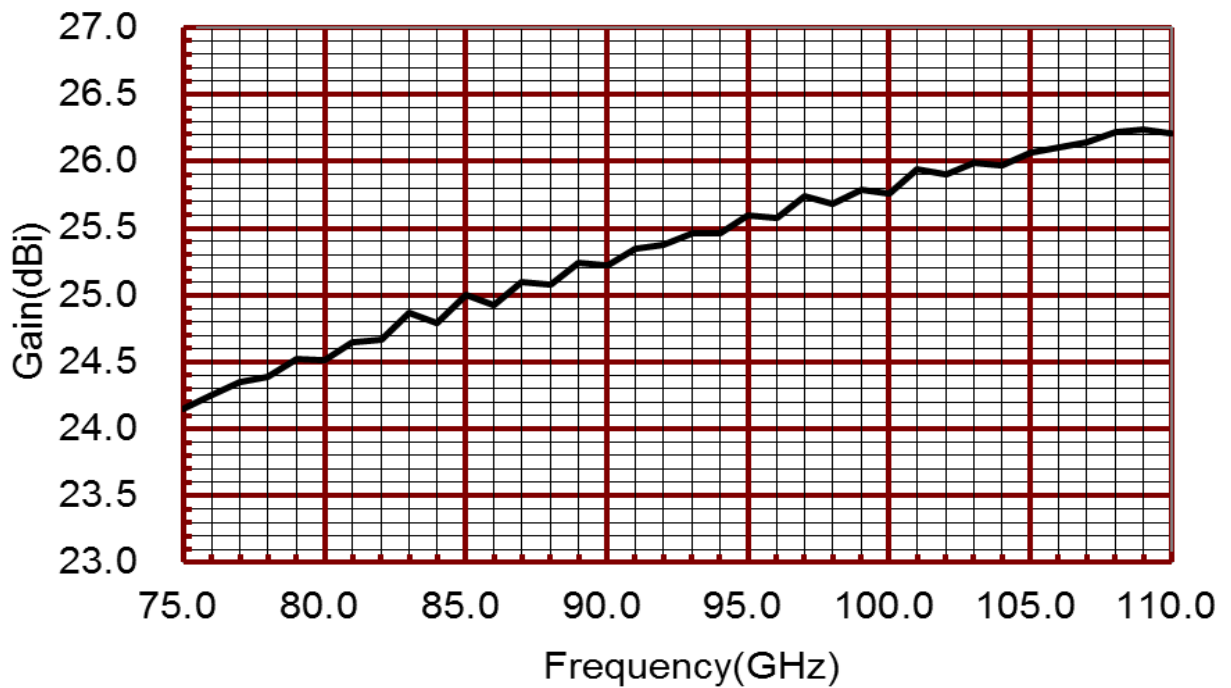
MSGH10-20 Radiation Patterns (typ.) @75 / 92.5 / 110GHz



MSGH10-25

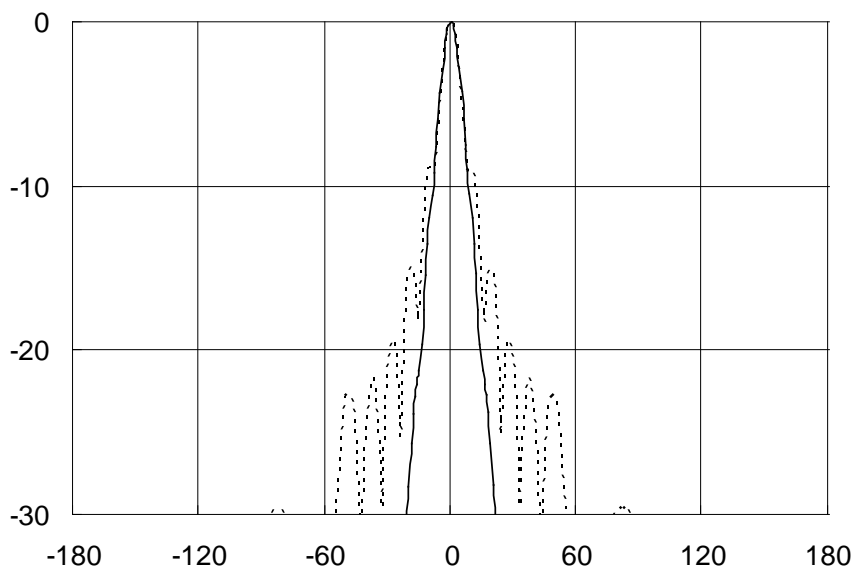
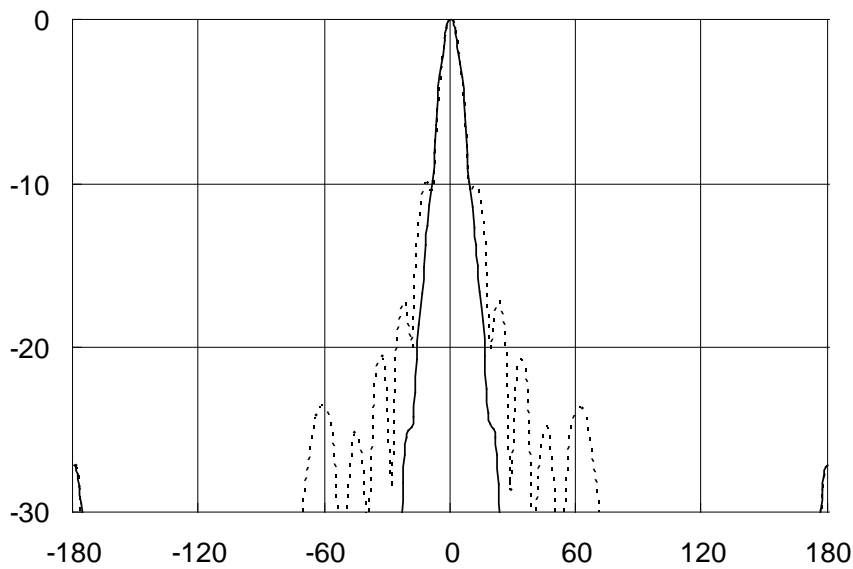
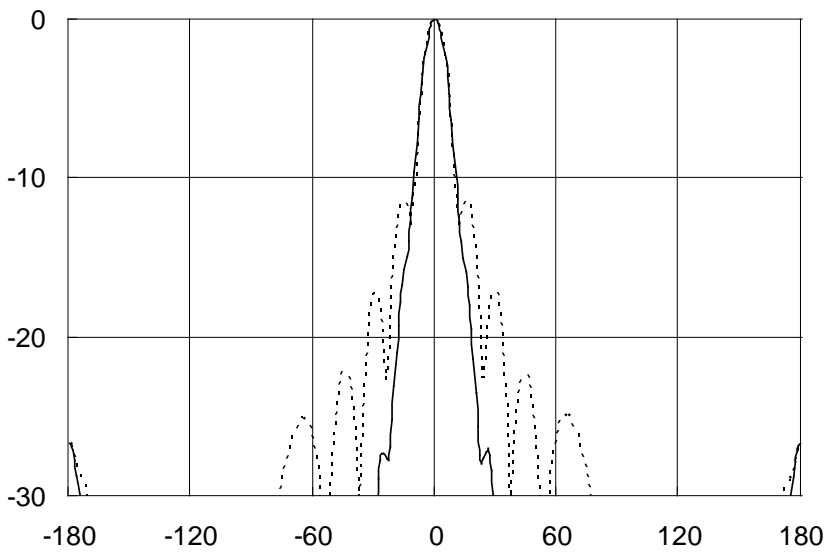


W x H x L: 26.8 x 20.8 x 70 (mm)



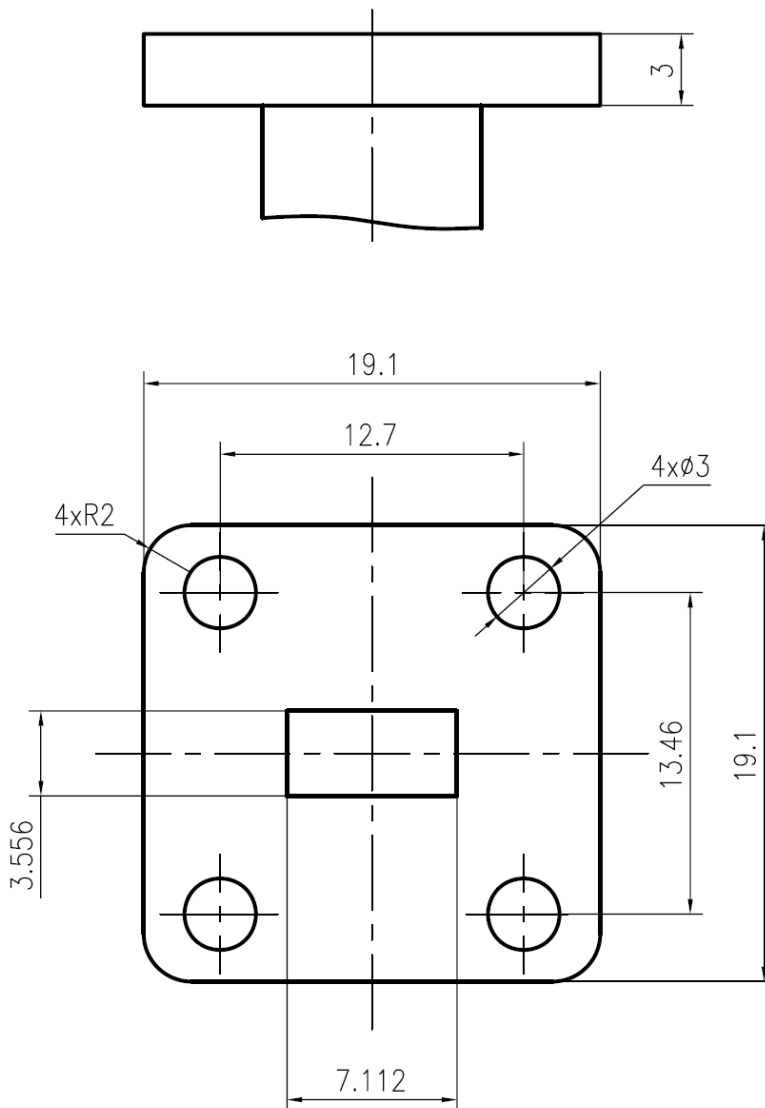
Frequency (GHz)	Gain (dBi)	Antenna Factor (dB/m)
75	24.15	43.56
76	24.25	43.58
78	24.39	43.66
80	24.51	43.76
82	24.67	43.82
84	24.79	43.91
86	24.93	43.97
88	25.08	44.02
90	25.22	44.07
92	25.38	44.11
94	25.46	44.21
96	25.58	44.28
98	25.68	44.35
100	25.76	44.45
102	25.90	44.48
104	25.97	44.58
106	26.10	44.62
108	26.22	44.66
110	26.21	44.83

MSGH10-25 Radiation Patterns (typ.) @75 / 92.5 / 110GHz



Flange Outline Drawing (mm)

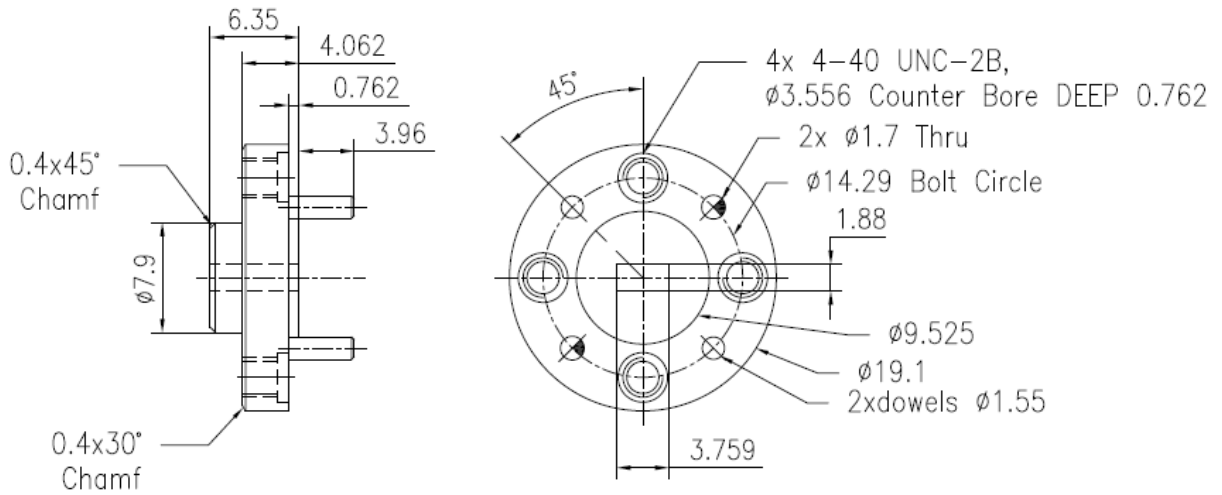
1. MSGH28 series @ FBP320



FBP320

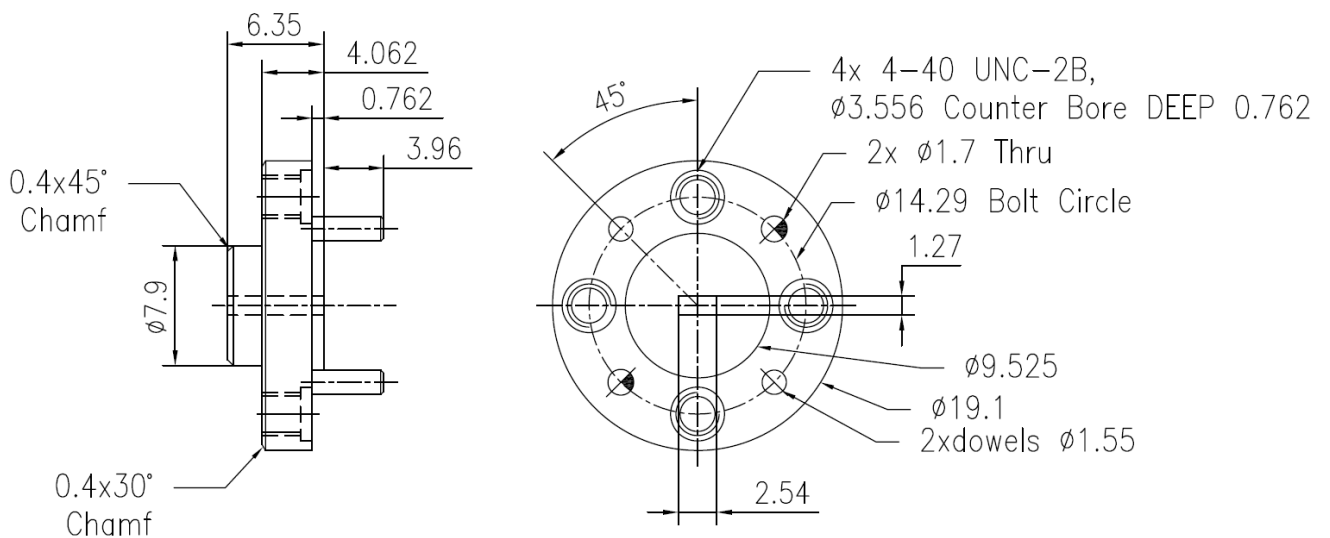
Flange Outline Drawing (mm)

2. MSGH15 series @ FUGP620



FUGP620
(equivalent to UG-385/U)

3. MSGH-10 series @ FUGP900



FUGP900
(equivalent to UG-387/U-M)