

Frequency (GHz)	Equipments				Total Fact (dB/m)	Total Fact for EIRP (2m) (dB)
	Horn Ant. (Swarzbeck)		Cable (Hub+shuner)			
	Model:	AH-1840	Model:	SUCOFLEX 102		
	S/N:	101087	S/N:	MY3371/2(3m)		
	Calibration data	Antenna Fact(dB/m)	Cable loss (dB)			
Antenna Fact(dB/m)						
18	36.70	36.70	5.41	42.11	50.33	
18.5	36.40	36.40	5.46	41.86	50.08	
19	36.20	36.20	5.58	41.78	50.00	
19.5	36.60	36.60	5.67	42.27	50.49	
20	37.10	37.10	5.71	42.81	51.03	
20.5	37.50	37.50	5.75	43.25	51.47	
21	37.30	37.30	5.84	43.14	51.36	
21.5	36.90	36.90	5.96	42.86	51.08	
22	36.40	36.40	6	42.40	50.62	
22.5	37.10	37.10	6.08	43.18	51.40	
23	37.00	37.00	6.17	43.17	51.39	
23.5	36.70	36.70	6.19	42.89	51.11	
24	36.90	36.90	6.24	43.14	51.36	
24.5	36.50	36.50	6.38	42.88	51.10	
25	36.20	36.20	6.42	42.62	50.84	
25.5	36.40	36.40	6.5	42.90	51.12	
26	36.30	36.30	6.53	42.83	51.05	
26.5	36.30	36.30	6.56	42.86	51.08	
27	36.60	36.60	6.7	43.30	51.52	
27.5	37.50	37.50	6.72	44.22	52.44	
28	37.90	37.90	6.84	44.74	52.96	
28.5	37.70	37.70	6.97	44.67	52.89	
29	37.00	37.00	7	44.00	52.22	
29.5	37.00	37.00	7	44.00	52.22	
30	37.60	37.60	7.14	44.74	52.96	
30.5	37.80	37.80	7.29	45.09	53.31	
31	37.60	37.60	7.16	44.76	52.98	
31.5	37.50	37.50	7.18	44.68	52.90	
32	37.10	37.10	7.44	44.54	52.76	
32.5	37.90	37.90	7.51	45.41	53.63	
33	37.90	37.90	7.41	45.31	53.53	
33.5	38.10	38.10	7.48	45.58	53.80	
34	38.40	38.40	7.61	46.01	54.23	
34.5	38.70	38.70	7.7	46.40	54.62	
35	38.90	38.90	7.71	46.61	54.83	
35.5	39.60	39.60	7.78	47.38	55.60	
36	40.70	40.70	7.84	48.54	56.76	
36.5	39.70	39.70	7.88	47.58	55.80	
37	40.00	40.00	7.88	47.88	56.10	
37.5	40.60	40.60	8.03	48.63	56.85	
38	41.50	41.50	8.12	49.62	57.84	
38.5	41.80	41.80	7.98	49.78	58.00	
39	42.40	42.40	8.16	50.56	58.78	
39.5	42.10	42.10	8.18	50.28	58.50	
40	42.50	42.50	8.26	50.76	58.98	

Frequency (GHz)	Equipments				Total Fact	Total Fact for EIRP
	Horn Ant. (Quinstar)		Cable (Hub+shuner)			
	Model:	QWH-QPRR00	Model:	WCBA- WC3824M.24M3		
	S/N:		S/N:			
	Calibration data	Antenna Fact(dB/m)	Cable loss (dB)		(dB/m)	(2m)
	Antenna Gain(dBi)					(dB)
33	22	38.58	14.75		53.33	61.55
36.4	22.25	39.18	15.46		54.64	62.86
39.8	22.4	39.81	16.56		56.37	64.59
43.2	22.5	40.42	17.58		58.00	66.22
46.6	22.5	41.08	18.06		59.14	67.36
50	22.4	41.79	19		60.79	69.01

Frequency (GHz)	Equipments						Total Fact	Total Fact for EIRP
	Conical Ant.		Cable		Down convertor			
	Model:	RCH015	Model:	ROHS-095-0004-1.2MTR MFR57500	Model:	N9029AV15		
	S/N:	N/A	S/N:	189030-011	S/N:	US54250164		
	Calibration data	Antenna Fact(dB/m)	LO Cable loss (dB)		Conversion Loss (dB)		(dB/m)	(1m)
	Antenna Gain(dBi)							(dB)
50	21	43.19	1.22		10.24		54.65	56.85
50.25	21	43.23	1.22		10.44		54.89	57.09
50.5	21	43.28	1.23		10.48		54.98	57.18
50.75	21	43.32	1.23		10.77		55.32	57.52
51	21	43.36	1.23		10.32		54.91	57.11
51.25	21	43.40	1.24		10.50		55.14	57.34
51.5	21	43.45	1.24		10.68		55.37	57.57
51.75	21	43.49	1.24		10.40		55.13	57.33
52	21	43.53	1.25		10.75		55.53	57.73
52.25	21	43.57	1.25		10.85		55.67	57.87
52.5	21	43.61	1.25		10.87		55.74	57.94
52.75	21	43.65	1.25		10.36		55.27	57.47
53	21	43.70	1.26		9.76		54.71	56.91
53.25	21	43.74	1.26		9.08		54.08	56.28
53.5	21	43.78	1.26		9.37		54.41	56.61
53.75	21	43.82	1.27		9.84		54.93	57.13
54	21	43.86	1.27		10.35		55.48	57.68
54.25	21	43.90	1.27		10.23		55.40	57.60
54.5	21	43.94	1.28		10.58		55.80	58.00
54.75	21	43.98	1.28		10.58		55.84	58.04
55	21	44.02	1.28		9.94		55.25	57.45
55.25	21	44.06	1.29		10.31		55.66	57.86
55.5	21	44.10	1.29		9.56		54.94	57.14
55.75	21	44.13	1.29		10.23		55.66	57.86
56	21	44.17	1.30		11.01		56.48	58.68
56.25	21	44.21	1.30		9.64		55.15	57.35
56.5	21	44.25	1.30		9.51		55.06	57.26
56.75	21	44.29	1.31		9.66		55.26	57.46

57	21	44.33	1.31	10.35	55.99	58.19
57.25	21	44.37	1.31	9.84	55.52	57.72
57.5	21	44.40	1.32	9.44	55.16	57.36
57.75	21	44.44	1.32	9.74	55.50	57.70
58	21	44.48	1.32	10.02	55.82	58.02
58.25	21	44.52	1.32	10.33	56.17	58.37
58.5	21	44.55	1.33	9.85	55.73	57.93
58.75	21	44.59	1.33	9.78	55.70	57.90
59	21	44.63	1.33	9.95	55.91	58.11
59.25	21	44.66	1.34	9.66	55.66	57.86
59.5	21	44.70	1.34	9.42	55.46	57.66
59.75	21	44.74	1.34	9.54	55.62	57.82
60	21	44.77	1.35	9.58	55.70	57.90
60.25	21	44.81	1.35	9.40	55.56	57.76
60.5	21	44.85	1.35	9.24	55.44	57.64
60.75	21	44.88	1.36	9.11	55.34	57.54
61	21	44.92	1.36	9.35	55.62	57.82
61.25	21	44.95	1.36	9.82	56.14	58.34
61.5	21	44.99	1.37	9.27	55.62	57.82
61.75	21	45.02	1.37	9.50	55.89	58.09
62	21	45.06	1.37	9.51	55.94	58.14
62.25	21	45.09	1.38	9.16	55.63	57.83
62.5	21	45.13	1.38	9.17	55.67	57.87
62.75	21	45.16	1.38	9.33	55.87	58.07
63	21	45.20	1.38	9.35	55.93	58.13
63.25	21	45.23	1.39	9.53	56.15	58.35
63.5	21	45.27	1.39	9.90	56.56	58.76
63.75	21	45.30	1.39	10.01	56.71	58.91
64	21	45.33	1.40	10.92	57.65	59.85
64.25	21	45.37	1.40	10.22	56.99	59.19
64.5	21	45.40	1.40	10.77	57.57	59.77
64.75	21	45.43	1.41	10.38	57.22	59.42
65	21	45.47	1.41	10.76	57.64	59.84
65.25	21	45.50	1.41	10.64	57.55	59.75
65.5	21	45.53	1.42	10.61	57.56	59.76
65.75	21	45.57	1.42	10.15	57.14	59.34
66	21	45.60	1.42	10.91	57.94	60.14

66.25	21	45.63	1.43	10.13	57.19	59.39
66.5	21	45.67	1.43	10.67	57.76	59.96
66.75	21	45.70	1.43	11.31	58.44	60.64
67	21	45.73	1.44	10.17	57.34	59.54
67.25	21	45.76	1.44	10.57	57.78	59.98
67.5	21	45.80	1.44	9.73	56.97	59.17
67.75	21	45.83	1.44	9.35	56.62	58.82
68	21	45.86	1.45	9.36	56.67	58.87
68.25	21	45.89	1.45	9.89	57.24	59.44
68.5	21	45.92	1.45	9.57	56.95	59.15
68.75	21	45.96	1.46	9.51	56.93	59.13
69	21	45.99	1.46	9.35	56.79	58.99
69.25	21	46.02	1.46	9.13	56.62	58.82
69.5	21	46.05	1.47	8.94	56.46	58.66
69.75	21	46.08	1.47	9.00	56.56	58.76
70	21	46.11	1.47	9.36	56.94	59.14
70.25	21	46.14	1.48	9.57	57.19	59.39
70.5	21	46.17	1.48	9.69	57.34	59.54
70.75	21	46.20	1.48	10.34	58.03	60.23
71	21	46.24	1.49	9.77	57.49	59.69
71.25	21	46.27	1.49	9.81	57.56	59.76
71.5	21	46.30	1.49	11.05	58.84	61.04
71.75	21	46.33	1.50	10.32	58.14	60.34
72	21	46.36	1.50	9.95	57.80	60.00
72.25	21	46.39	1.50	9.74	57.63	59.83
72.5	21	46.42	1.51	9.74	57.66	59.86
72.75	21	46.45	1.51	9.78	57.74	59.94
73	21	46.48	1.51	10.30	58.29	60.49
73.25	21	46.51	1.51	10.12	58.14	60.34
73.5	21	46.54	1.52	10.76	58.81	61.01
73.75	21	46.57	1.52	10.05	58.14	60.34
74	21	46.59	1.52	10.20	58.32	60.52
74.25	21	46.62	1.53	10.23	58.38	60.58
74.5	21	46.65	1.53	10.23	58.41	60.61
74.75	21	46.68	1.53	10.30	58.51	60.71
75	21	46.71	1.54	10.72	58.97	61.17

Frequency (GHz)	Equipments						Total Fact (dB/m)	Total Fact for EIRP	
	Conical Ant.		Cable		Down convertor				
	Model:	RCH012	Model:	ROHS-095-0004-1.2MTR MFR57500	Model:	N9029AV12			
	S/N:	N/A	S/N:	189030-011	S/N:	US54250170			
	Calibration data	Antenna Fact(dB/m)	LO Cable loss (dB)		Conversion Loss (dB)				(1m)
	Antenna Gain(dBi)								(dB)
75	21	46.71	1.51	9.65	57.87	60.07			
75.3	21	46.75	1.52	9.68	57.94	60.14			
75.6	21	46.78	1.52	9.61	57.91	60.11			
75.9	21	46.81	1.52	9.54	57.88	60.08			
76.2	21	46.85	1.53	9.63	58.01	60.21			
76.5	21	46.88	1.53	9.74	58.16	60.36			
76.8	21	46.92	1.53	9.70	58.16	60.36			
77.1	21	46.95	1.54	9.55	58.04	60.24			
77.4	21	46.98	1.54	9.50	58.03	60.23			
77.7	21	47.02	1.54	9.51	58.07	60.27			
78	21	47.05	1.55	9.51	58.11	60.31			
78.3	21	47.09	1.55	9.76	58.39	60.59			
78.6	21	47.12	1.55	10.01	58.68	60.88			
78.9	21	47.15	1.56	10.03	58.74	60.94			
79.2	21	47.18	1.56	10.00	58.74	60.94			
79.5	21	47.22	1.56	10.14	58.92	61.12			
79.8	21	47.25	1.57	10.25	59.07	61.27			
80.1	21	47.28	1.57	10.20	59.06	61.26			
80.4	21	47.32	1.57	10.22	59.11	61.31			
80.7	21	47.35	1.58	10.56	59.49	61.69			
81	21	47.38	1.58	10.42	59.38	61.58			
81.3	21	47.41	1.58	10.79	59.79	61.99			
81.6	21	47.44	1.59	10.66	59.69	61.89			
81.9	21	47.48	1.59	10.52	59.59	61.79			
82.2	21	47.51	1.59	10.38	59.48	61.68			
82.5	21	47.54	1.60	10.30	59.44	61.64			
82.8	21	47.57	1.60	10.20	59.37	61.57			
83.1	21	47.60	1.60	10.31	59.51	61.71			

83.4	21	47.63	1.61	10.14	59.38	61.58
83.7	21	47.66	1.61	10.18	59.46	61.66
84	21	47.70	1.61	10.01	59.32	61.52
84.3	21	47.73	1.62	10.14	59.48	61.68
84.6	21	47.76	1.62	10.01	59.39	61.59
84.9	21	47.79	1.62	9.88	59.29	61.49
85.2	21	47.82	1.63	10.55	59.99	62.19
85.5	21	47.85	1.63	9.97	59.44	61.64
85.8	21	47.88	1.63	9.91	59.42	61.62
86.1	21	47.91	1.64	9.88	59.42	61.62
86.4	21	47.94	1.64	9.97	59.55	61.75
86.7	21	47.97	1.64	10.16	59.77	61.97
87	21	48.00	1.65	10.27	59.92	62.12
87.3	21	48.03	1.65	9.90	59.58	61.78
87.6	21	48.06	1.65	9.98	59.70	61.90
87.9	21	48.09	1.66	10.34	60.09	62.29
88.2	21	48.12	1.66	11.05	60.83	63.03
88.5	21	48.15	1.66	10.42	60.24	62.44
88.8	21	48.18	1.67	10.25	60.09	62.29
89.1	21	48.21	1.67	10.28	60.15	62.35
89.4	21	48.24	1.67	10.48	60.39	62.59
89.7	21	48.27	1.68	10.20	60.14	62.34
90	21	48.29	1.68	10.21	60.18	62.38

Frequency (GHz)	Equipments						Total Fact	Total Fact for EIRP
	Conical Ant.		Cable		Down convertor			
	Model:	RCH08	Model:	ROHS-095-0004-1.2MTR MFR57500	Model:	N9029AV08		
	S/N:	N/A	S/N:	189030-011	S/N:	US53250012		
	Calibration data	Antenna Fact(dB/m)	LO Cable loss (dB)		Conversion Loss (dB)		(dB/m)	(1m)
	Antenna Gain(dBi)							(dB)
90	21	48.29	1.68		11.13		61.10	63.30
90.5	21	48.34	1.68		11.04		61.07	63.27
91	21	48.39	1.68		10.99		61.06	63.26
91.5	21	48.44	1.68		11.06		61.18	63.38
92	21	48.49	1.68		12.22		62.39	64.59
92.5	21	48.53	1.69		10.63		60.85	63.05
93	21	48.58	1.69		10.57		60.84	63.04
93.5	21	48.63	1.69		10.66		60.97	63.17
94	21	48.67	1.69		11.73		62.09	64.29
94.5	21	48.72	1.69		10.79		61.20	63.40
95	21	48.76	1.69		11.03		61.48	63.68
95.5	21	48.81	1.69		11.02		61.52	63.72
96	21	48.86	1.69		10.97		61.52	63.72
96.5	21	48.90	1.69		10.60		61.19	63.39
97	21	48.95	1.69		10.26		60.90	63.10
97.5	21	48.99	1.70		10.24		60.93	63.13
98	21	49.03	1.70		10.16		60.89	63.09
98.5	21	49.08	1.70		10.66		61.44	63.64
99	21	49.12	1.70		11.23		62.05	64.25
99.5	21	49.17	1.70		10.78		61.65	63.85
100	21	49.21	1.70		9.94		60.85	63.05
100.5	21	49.25	1.70		9.99		60.95	63.15
101	21	49.30	1.70		10.08		61.08	63.28
101.5	21	49.34	1.70		10.76		61.81	64.01
102	21	49.38	1.70		10.82		61.90	64.10
102.5	21	49.42	1.71		10.45		61.58	63.78
103	21	49.47	1.71		10.14		61.31	63.51
103.5	21	49.51	1.71		10.70		61.91	64.11

104	21	49.55	1.71	11.65	62.91	65.11
104.5	21	49.59	1.71	11.58	62.88	65.08
105	21	49.63	1.71	10.73	62.07	64.27
105.5	21	49.68	1.71	10.44	61.83	64.03
106	21	49.72	1.71	11.06	62.49	64.69
106.5	21	49.76	1.71	11.07	62.54	64.74
107	21	49.80	1.71	10.96	62.47	64.67
107.5	21	49.84	1.72	10.14	61.69	63.89
108	21	49.88	1.72	9.93	61.52	63.72
108.5	21	49.92	1.72	10.35	61.98	64.18
109	21	49.96	1.72	10.62	62.29	64.49
109.5	21	50.00	1.72	10.68	62.40	64.60
110	21	50.04	1.72	10.05	61.81	64.01
110.5	21	50.08	1.72	9.93	61.73	63.93
111	21	50.12	1.72	9.88	61.72	63.92
111.5	21	50.16	1.72	10.09	61.97	64.17
112	21	50.19	1.72	10.21	62.13	64.33
112.5	21	50.23	1.73	10.00	61.96	64.16
113	21	50.27	1.73	9.62	61.62	63.82
113.5	21	50.31	1.73	9.57	61.60	63.80
114	21	50.35	1.73	9.61	61.69	63.89
114.5	21	50.39	1.73	9.83	61.94	64.14
115	21	50.42	1.73	9.74	61.89	64.09
115.5	21	50.46	1.73	9.73	61.92	64.12
116	21	50.50	1.73	9.56	61.79	63.99
116.5	21	50.54	1.73	9.67	61.93	64.13
117	21	50.57	1.73	9.94	62.25	64.45
117.5	21	50.61	1.74	10.23	62.58	64.78
118	21	50.65	1.74	10.59	62.97	65.17
118.5	21	50.68	1.74	10.60	63.02	65.22
119	21	50.72	1.74	10.83	63.29	65.49
119.5	21	50.76	1.74	11.01	63.51	65.71
120	21	50.79	1.74	11.16	63.70	65.90
120.5	21	50.83	1.74	11.29	63.87	66.07
121	21	50.87	1.74	11.83	64.44	66.64
121.5	21	50.90	1.74	12.10	64.75	66.95
122	21	50.94	1.74	12.25	64.93	67.13

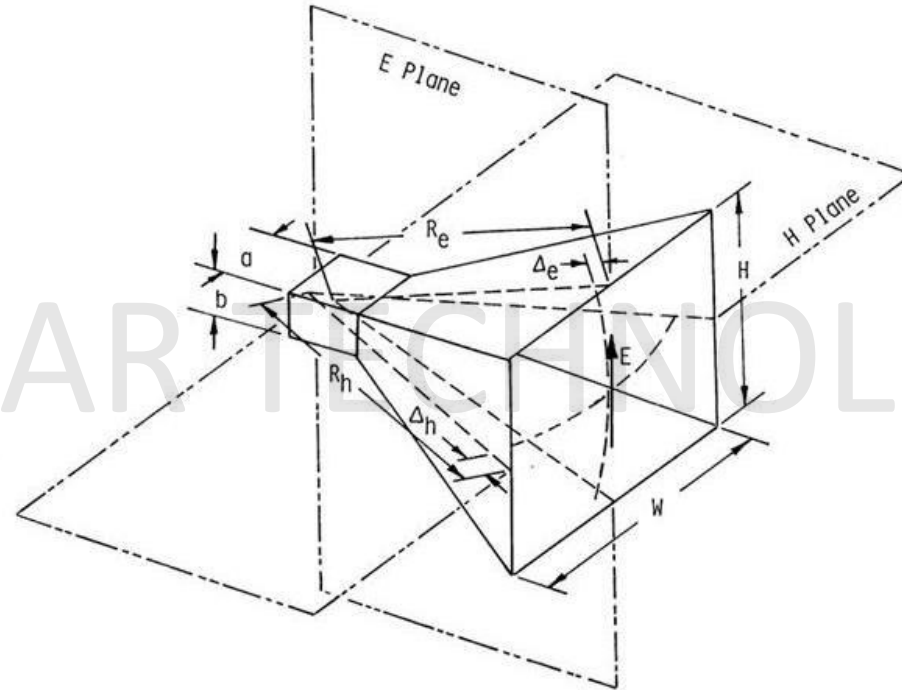
122.5	21	50.97	1.75	12.10	64.82	67.02
123	21	51.01	1.75	12.03	64.78	66.98
123.5	21	51.04	1.75	12.19	64.98	67.18
124	21	51.08	1.75	12.09	64.92	67.12
124.5	21	51.11	1.75	12.34	65.21	67.41
125	21	51.15	1.75	11.88	64.78	66.98
125.5	21	51.18	1.75	11.28	64.21	66.41
126	21	51.22	1.75	11.16	64.13	66.33
126.5	21	51.25	1.75	10.76	63.77	65.97
127	21	51.29	1.75	10.47	63.51	65.71
127.5	21	51.32	1.76	10.46	63.54	65.74
128	21	51.35	1.76	10.34	63.45	65.65
128.5	21	51.39	1.76	10.99	64.13	66.33
129	21	51.42	1.76	11.89	65.07	67.27
129.5	21	51.46	1.76	12.17	65.38	67.58
130	21	51.49	1.76	12.29	65.54	67.74
130.5	21	51.52	1.76	12.00	65.28	67.48
131	21	51.56	1.76	11.31	64.63	66.83
131.5	21	51.59	1.76	10.77	64.12	66.32
132	21	51.62	1.76	10.70	64.08	66.28
132.5	21	51.65	1.77	10.88	64.30	66.50
133	21	51.69	1.77	11.29	64.74	66.94
133.5	21	51.72	1.77	12.05	65.53	67.73
134	21	51.75	1.77	11.76	65.28	67.48
134.5	21	51.78	1.77	11.57	65.12	67.32
135	21	51.82	1.77	11.32	64.91	67.11
135.5	21	51.85	1.77	11.61	65.23	67.43
136	21	51.88	1.77	11.80	65.45	67.65
136.5	21	51.91	1.77	12.06	65.75	67.95
137	21	51.94	1.77	11.30	65.02	67.22
137.5	21	51.98	1.78	11.13	64.88	67.08
138	21	52.01	1.78	11.16	64.94	67.14
138.5	21	52.04	1.78	11.19	65.00	67.20
139	21	52.07	1.78	10.97	64.81	67.01
139.5	21	52.10	1.78	11.06	64.94	67.14
140	21	52.13	1.78	10.91	64.82	67.02

Frequency (GHz)	Equipments						Total Fact (dB/m)	Total Fact for EIRP	
	Conical Ant.		Cable		Down convertor				
	Model:	RCH05	Model:	ROHS-095-0004-1.2MTR MFR57500	Model:	N9029AV05			
	S/N:	N/A	S/N:	189030-011	S/N:	US53250019			
	Calibration data	Antenna Fact(dB/m)	LO Cable loss (dB)		Conversion Loss (dB)				(1m)
	Antenna Gain(dBi)								(dB)
140	21	52.13	1.47		12.58		66.18	68.38	
140.8	21	52.18	1.47		12.14		65.79	67.99	
141.6	21	52.23	1.48		11.01		64.72	66.92	
142.4	21	52.28	1.48		11.82		65.58	67.78	
143.2	21	52.33	1.48		12.13		65.94	68.14	
144	21	52.38	1.49		11.35		65.21	67.41	
144.8	21	52.43	1.49		11.54		65.46	67.66	
145.6	21	52.47	1.49		12.40		66.37	68.57	
146.4	21	52.52	1.49		12.17		66.19	68.39	
147.2	21	52.57	1.50		11.47		65.53	67.73	
148	21	52.62	1.50		12.61		66.73	68.93	
148.8	21	52.66	1.50		12.20		66.37	68.57	
149.6	21	52.71	1.51		11.74		65.96	68.16	
150.4	21	52.75	1.51		12.32		66.59	68.79	
151.2	21	52.80	1.51		12.39		66.71	68.91	
152	21	52.85	1.52		11.47		65.83	68.03	
152.8	21	52.89	1.52		10.56		64.98	67.18	
153.6	21	52.94	1.52		12.18		66.64	68.84	
154.4	21	52.98	1.53		11.35		65.86	68.06	
155.2	21	53.03	1.53		10.42		64.97	67.17	
156	21	53.07	1.53		10.47		65.08	67.28	
156.8	21	53.12	1.54		11.64		66.29	68.49	
157.6	21	53.16	1.54		11.03		65.73	67.93	
158.4	21	53.21	1.54		10.23		64.98	67.18	
159.2	21	53.25	1.54		10.87		65.66	67.86	
160	21	53.29	1.55		12.14		66.98	69.18	
160.8	21	53.34	1.55		11.32		66.21	68.41	
161.6	21	53.38	1.55		10.77		65.70	67.90	

162.4	21	53.42	1.56	11.84	66.82	69.02
163.2	21	53.46	1.56	12.32	67.34	69.54
164	21	53.51	1.56	11.43	66.50	68.70
164.8	21	53.55	1.57	11.20	66.32	68.52
165.6	21	53.59	1.57	12.04	67.20	69.40
166.4	21	53.63	1.57	12.14	67.35	69.55
167.2	21	53.67	1.58	11.32	66.57	68.77
168	21	53.72	1.58	11.07	66.36	68.56
168.8	21	53.76	1.58	11.91	67.24	69.44
169.6	21	53.80	1.58	11.62	67.01	69.21
170.4	21	53.84	1.59	10.75	66.18	68.38
171.2	21	53.88	1.59	11.05	66.52	68.72
172	21	53.92	1.59	11.71	67.23	69.43
172.8	21	53.96	1.60	11.43	66.99	69.19
173.6	21	54.00	1.60	10.74	66.34	68.54
174.4	21	54.04	1.60	11.00	66.65	68.85
175.2	21	54.08	1.61	11.40	67.09	69.29
176	21	54.12	1.61	11.12	66.85	69.05
176.8	21	54.16	1.61	10.91	66.68	68.88
177.6	21	54.20	1.62	11.08	66.90	69.10
178.4	21	54.24	1.62	11.40	67.26	69.46
179.2	21	54.28	1.62	11.04	66.94	69.14
180	21	54.32	1.63	11.21	67.15	69.35
180.8	21	54.35	1.63	11.83	67.81	70.01
181.6	21	54.39	1.63	11.99	68.02	70.22
182.4	21	54.43	1.63	11.77	67.84	70.04
183.2	21	54.47	1.64	11.87	67.97	70.17
184	21	54.51	1.64	12.36	68.50	70.70
184.8	21	54.54	1.64	12.49	68.68	70.88
185.6	21	54.58	1.65	11.68	67.91	70.11
186.4	21	54.62	1.65	12.00	68.27	70.47
187.2	21	54.66	1.65	12.38	68.69	70.89
188	21	54.69	1.66	11.78	68.13	70.33
188.8	21	54.73	1.66	11.14	67.53	69.73
189.6	21	54.77	1.66	11.43	67.86	70.06
190.4	21	54.80	1.67	12.22	68.69	70.89
191.2	21	54.84	1.67	11.96	68.47	70.67

192	21	54.88	1.67	11.77	68.32	70.52
192.8	21	54.91	1.67	11.82	68.41	70.61
193.6	21	54.95	1.68	12.47	69.10	71.30
194.4	21	54.98	1.68	11.74	68.40	70.60
195.2	21	55.02	1.68	10.82	67.53	69.73
196	21	55.06	1.69	10.36	67.11	69.31
196.8	21	55.09	1.69	10.74	67.52	69.72
197.6	21	55.13	1.69	10.46	67.28	69.48
198.4	21	55.16	1.70	10.28	67.13	69.33
199.2	21	55.20	1.70	10.39	67.28	69.48
200	21	55.23	1.70	10.33	67.26	69.46

Definition of Plane



QUINSTAR TECHNOLOGY INC.

Q-band QWH

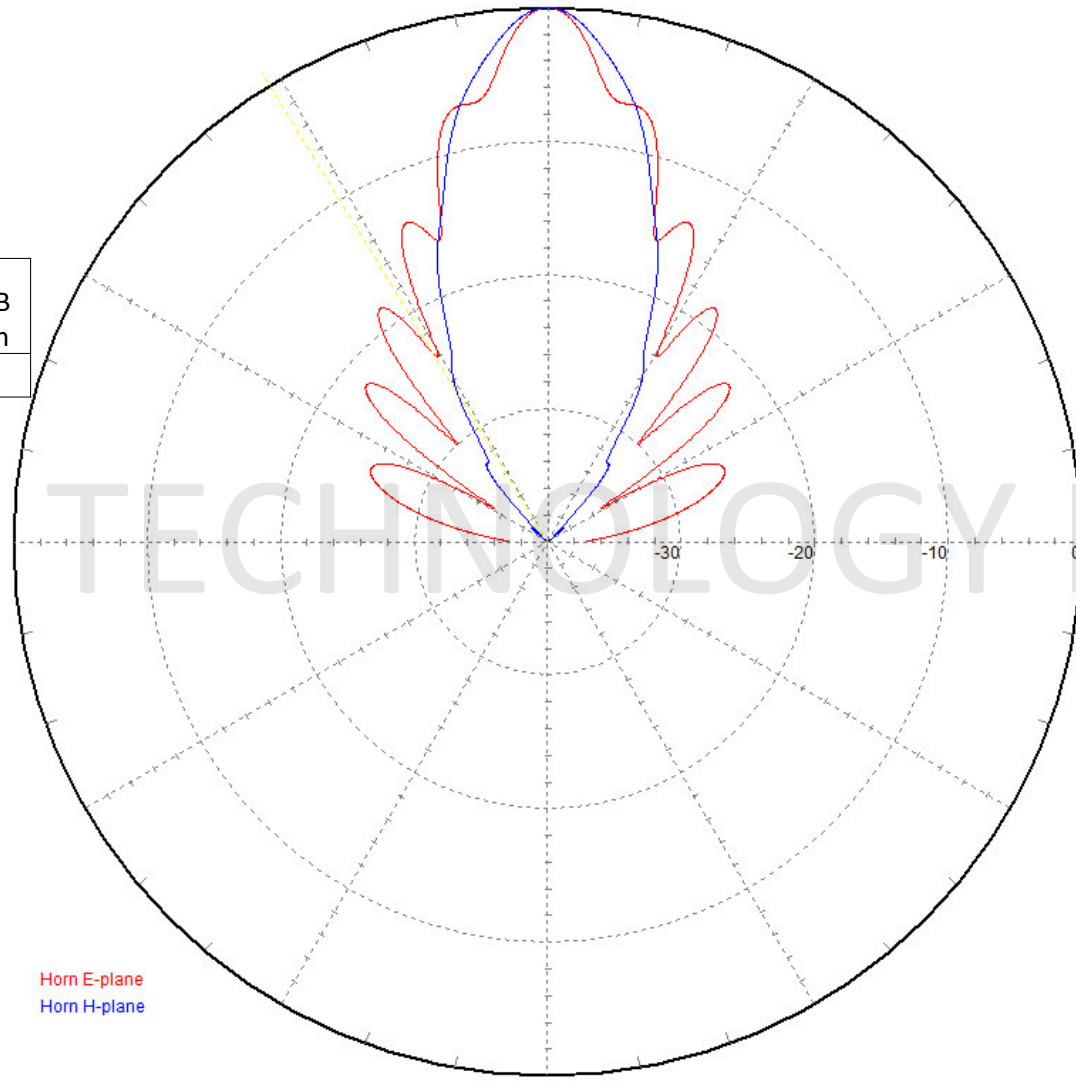
At 42 GHz

Directivity: 22.6 dB

Frequency (GHz)	Directivity (dB)	E-plan 3 dB beamwidth	H-plan 3 dB beamwidth
42	22.6	9.8	13.2

Pattern Data . . .	
Horn E-plane	
Main beam angle = 0.0°	
3 dB beamwidth = 9.9°	
Value at 0.0° = 0.0 dB	
Offset = 0 dB	
Horn H-plane	
Main beam angle = 0.0°	
3 dB beamwidth = 13.2°	
Value at 0.0° = 0.0 dB	
Offset = 0 dB	

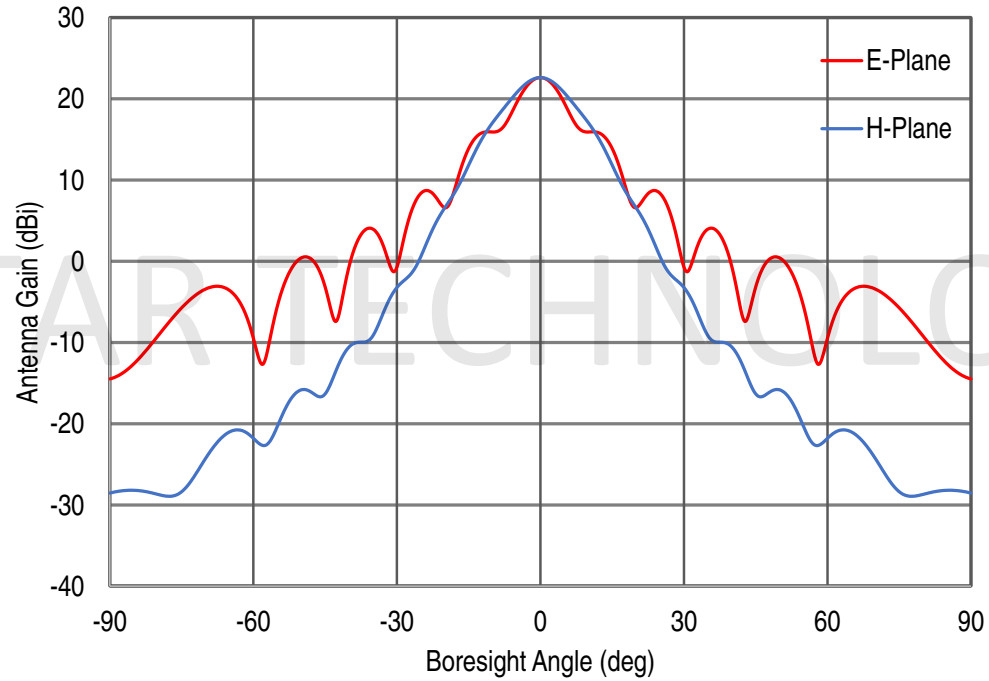
Directivity (dB)	22.6
E-plane phase center (cm)	7.487
H-plane phase center (cm)	8.575



Horn E-plane
Horn H-plane

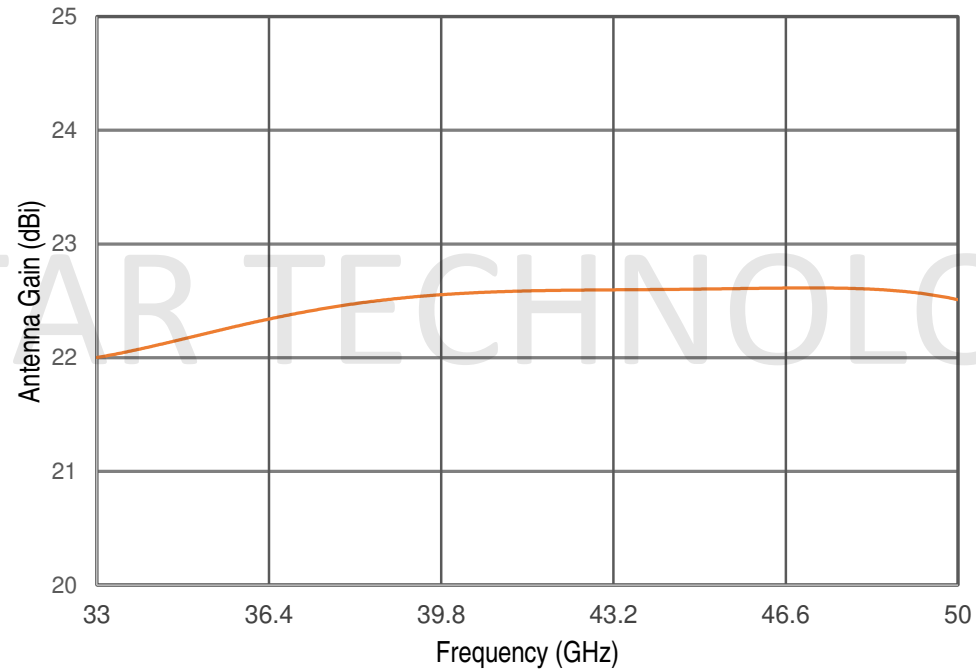
Q-band QWH
At 42GHz
Directivity: 22.6 dB

QWH-QPRR0
Radiation Pattern at 42 GHz



Q-band QWH
At 42GHz
Directivity: 22.6 dB

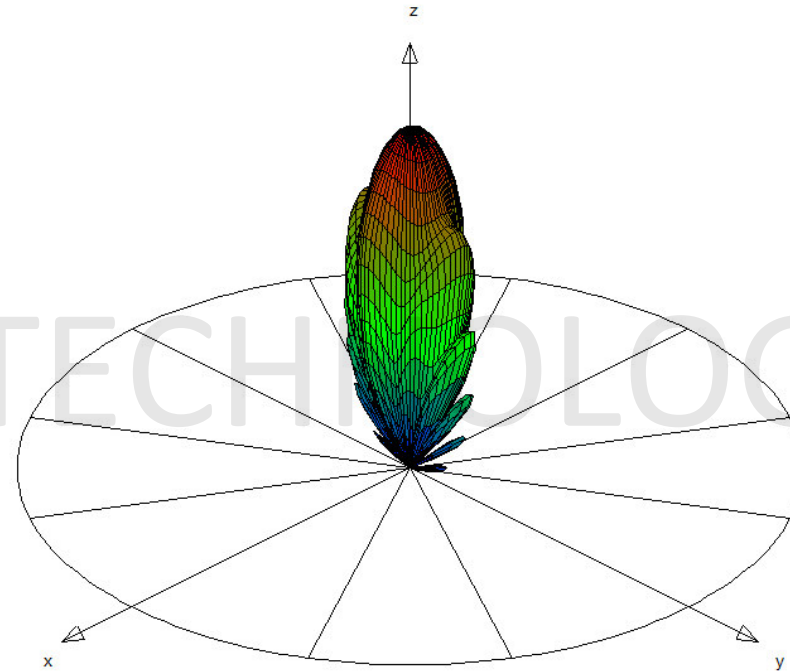
QWH-QPRR0
Antenna Gain



Q-band QWH

At 42GHz

Directivity: 22.6 dB





Virginia Diodes, Inc

979 2nd St. SE
Suite 309
Charlottesville, VA 22902
Phone: 434-297-3257
Fax: 434-297-3258

Certificate of Conformance

To: Keysight Technologies, Inc.
SPECIAL HANDLING - Dock 2LS
1400 FOUNTAINGROVE PARKWAY
SANTA ROSA, CA 95403

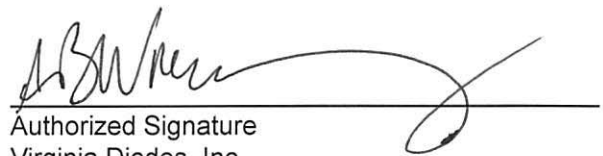
From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Packing List No: 192413	Today's Date: 08/08/19
Shipping Date: 08/08/19	PO Number: 9000862436

Attention: Ryan England
Phone: 707-577-4513
SO: 3939972
Tracking: 775936823109 / 775936823381

<u>Quantity Shipped</u>	<u>Unit</u>	<u>Description</u>	<u>Order-Job Number</u>
1	EA	VDIWR15.0SAX N9029-80057 Rev - 001 / SN: SAX 405	19311E-01
1	EA	VDIWR15.0SGX E8251-80083 Rev - 001 / SN: SGX 381	19311E-02
1	EA	VDI15.0ATTE2-36 N9029-80059 Rev - 001 / SN: 4-22	19311E-03
1	EA	VA15R E8257-80032 Rev - 001 / SN: 728636	19311E-04

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).


Authorized Signature
Virginia Diodes, Inc



Virginia Diodes, Inc

979 2nd St. SE
Suite 309
Charlottesville, VA 22902
Phone: 434-297-3257
Fax: 434-297-3258

Certificate of Conformance

To: Keysight Technologies, Inc.
SPECIAL HANDLING - Dock 2LS
1400 FOUNTAINGROVE PARKWAY
SANTA ROSA, CA 95403

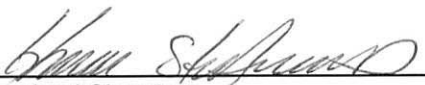
From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Packing List No: 192445	Today's Date: 08/12/19
Shipping Date: 08/12/19	PO Number: 9000862436

Attention: Ryan England
Phone: 707-577-4513
SO: 3939972
Tracking: 775958305762 / 775958306243

<u>Quantity Shipped</u>	<u>Unit</u>	<u>Description</u>	<u>Order-Job Number</u>
1	EA	VDIWR12.0SAX N9029-80054 Rev - 001 / SN: SAX 404	19311D-01
1	EA	VDIWR12.0SGX E8251-80081 Rev - 001 / SN: SGX 380	19311D-02
1	EA	VA12R E8257-80082 Rev - 001 / SN: 728612	19311D-03
1	EA	VDI12.0ATTE2-33 N9029-80056 Rev - 001 / SN: 1-06	19311D-06

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).



Authorized Signature
Virginia Diodes, Inc



Virginia Diodes, Inc

979 2nd St. SE
Suite 309
Charlottesville, VA 22902
Phone: 434-297-3257
Fax: 434-297-3258

Certificate of Conformance

To: Keysight Technologies, Inc.
SPECIAL HANDLING - Dock 2LS
1400 FOUNTAINGROVE PARKWAY
SANTA ROSA, CA 95403


From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Packing List No: 192452 Today's Date: 08/13/19
Shipping Date: 08/12/19 PO Number: 9000862436

Attention: Ryan England
Phone: 707-577-4513
SO: 3939972
Tracking: 775973395598 / 775973395874

<u>Quantity Shipped</u>	<u>Unit</u>	<u>Description</u>	<u>Order-Job Number</u>
1	EA	VDIWR8.0SAX N9029-80051 Rev - 001 / SN: SAX 403	19311C-01
1	EA	VDIWR8.0SGX E8251-80079 Rev - 001 / SN: SGX 379	19311C-02
1	EA	VA8R E8257-80040 Rev - 001 / SN: 728509	19311C-03
1	EA	VDI8.0SWG2-30 N9029-80029 Rev - 001 / SN: 1-06	19311C-04

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).



Authorized Signature
Virginia Diodes, Inc



Virginia Diodes, Inc

979 2nd St. SE
Suite 309
Charlottesville, VA 22902
Phone: 434-297-3257
Fax: 434-297-3258

Certificate of Conformance

To: Keysight Technologies, Inc.
SPECIAL HANDLING - Dock 2LS
1400 FOUNTAINGROVE PARKWAY
SANTA ROSA, CA 95403


From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Packing List No: 192441	Today's Date: 08/09/19
Shipping Date: 08/09/19	PO Number: 9000862436

Attention: Ryan England
Phone: 707-577-4513
SO: 3939972
Tracking: 775951886971 / 775951887338

Quantity Shipped	Unit	Description	Order-Job Number
1	EA	VDIWR5.1SAX N9029-80048 Rev - 001 / SN: SAX 402	19311B-01
1	EA	VDIWR5.1SGX E8251-80077 Rev - 001 / SN: SGX 378	19311B-02
1	EA	VDI5.1SWG2-20 N9029-80031 Rev - 001 / SN: 1-01	19311B-03
1	EA	VA5R E8257-80037 Rev - 001 / SN: 190217	19311B-04

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).


Authorized Signature
Virginia Diodes, Inc