



GPS, LTE & Wi-Fi Combo Antenna

Model: AW-9

Wide frequency range antenna support 2G, 3G, 4G & Wi-Fi applications, combo antenna



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- Features:

1. Low profile structure without a whip
2. Screw through hole mount
3. Support 2G, 3G, 4G & GPS application bands
4. Support Wi-Fi application (2.4G & 5G)

- Applications:

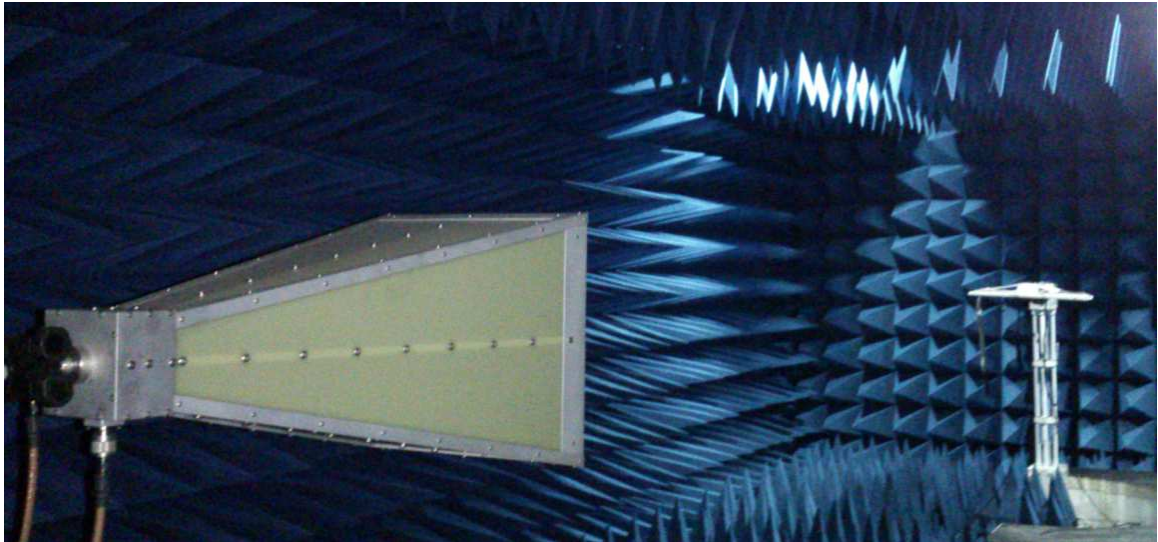
1. Vehicle tracking
2. Asset tracking
3. GPS Navigation
4. Telemetry Application
5. Fleet management

- Specification:

Category	GPS Antenna	LTE Main Antenna	WLAN Antenna
Frequency	1.57542GHz (L1 BAND)	704~960MHz; 1710~2690MHz	2400~2500MHz; 5100~5850MHz
Gain	27dB	6.1dBi @ 704~960MHZ 5.47dBi@ 1710~2690MHz, with 3m RG-58 cable	3.9dBi @ 2400~2500MHz 3.3dbi @ 5100~5850MHz, with 1m RG-58 cable
V.S.W.R	< 1.8.	<2.4	<1.7
Noise Figure	2.0 Max	-	
Band Width	2 MHz	256MHz: 704MHZ~960MHZ 980MHz: 1710MHz~2690MHz	100MHz: 2400~2500MHz 750MHz: 5100~5850MHz
Impedance	50 Ohm	50 Ohm	
Cable/Connector	3 Meter- RG174 / SMA	RG-174 or RG-58, SMA(SP) or other standard connectors	
Polarization	R.H.C.P	Linear, Vertical	
Power supply	3.0 ~ 5.5V DC	-	
Power Consumption	12mA	-	
Power Handling Capacity	-	10W	
Dimension			
Operation Temperature	-40degC to +80degC		
Storage Temperature	-45degC to +100degC		

Note: This specification is subject to change without prior notice

- Antenna Testing



The direction of rotation table & horn antenna

Note:

The test is completed in San Jose Technology, Inc. anechoic chamber, under the CTIA regulations.

- Detail Antenna Gain Table of AW-9

< LTE Antenna >

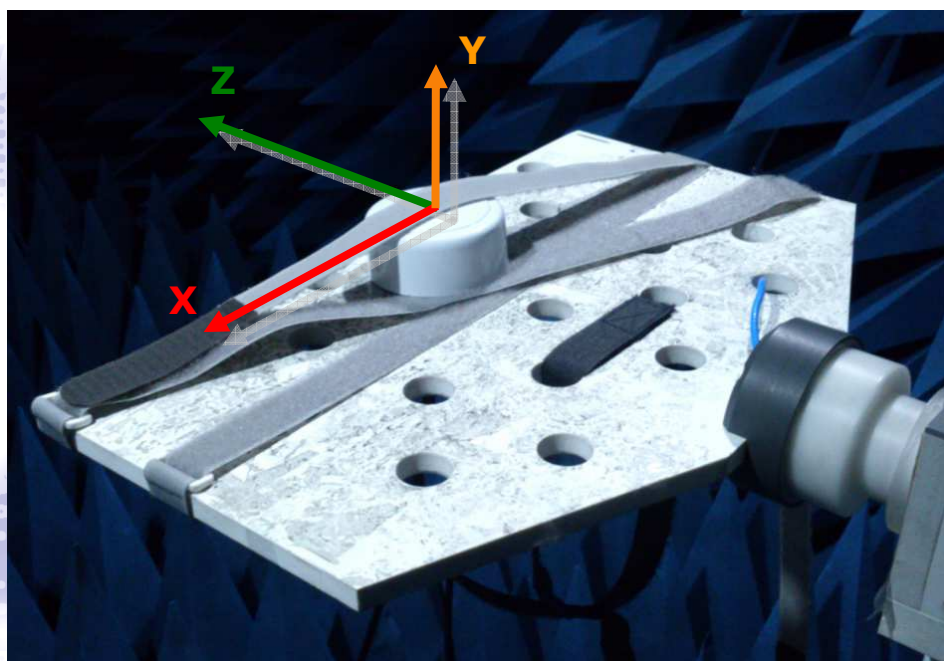
Frequency (MHz)	704	734	756	768	787	824
Efficiency (%)	21.82	44.08	49.33	46.28	45.36	32.66
Gain (dBi)	0.31	4.02	6.1	4.92	4.86	2.76
Average Gain (dB)	-6.61	-3.56	-3.07	-3.35	-3.43	-4.86

Frequency (MHz)	868	880	915	960	1710	1785
Efficiency (%)	27.45	23.75	39.36	45.05	36.29	52.78
Gain (dBi)	3.11	1.68	3.06	2.5	2.39	4.43
Average Gain (dB)	-5.61	-6.24	-4.05	-3.46	-4.4	-2.77

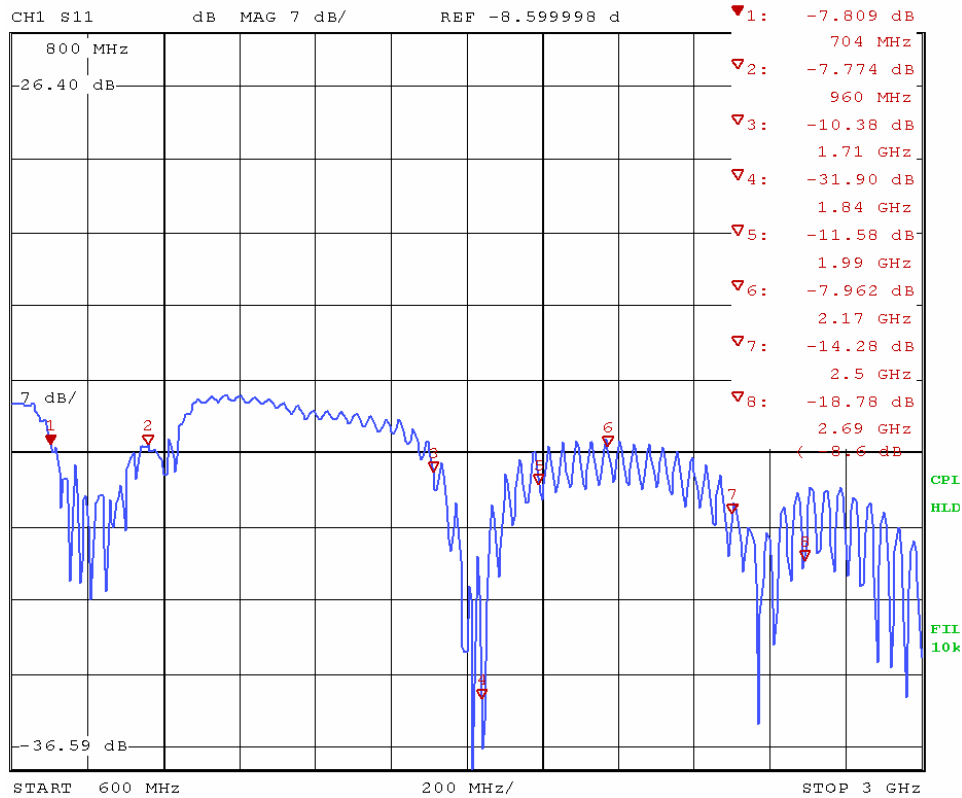
Frequency (MHz)	1805	1850	1880	1920	1990	2110	2140
Efficiency (%)	54.86	55.35	45.21	43	38.38	26.3	29.1
Gain (dBi)	5.47	4.63	4.19	3.73	3.49	1.95	2.57
Average Gain (dB)	-2.61	-2.57	-3.45	-3.67	-4.16	-5.8	-5.36

Frequency (MHz)	2170	2300	2400	2500	2570	2620	2690
Efficiency (%)	27.18	36.41	32.95	33.89	33.44	29.79	30.22
Gain (dBi)	2.25	3.3	3.12	2	1.95	1.62	1.69
Average Gain (dB)	-5.66	-4.39	-4.82	-4.7	-4.76	-5.26	-5.2

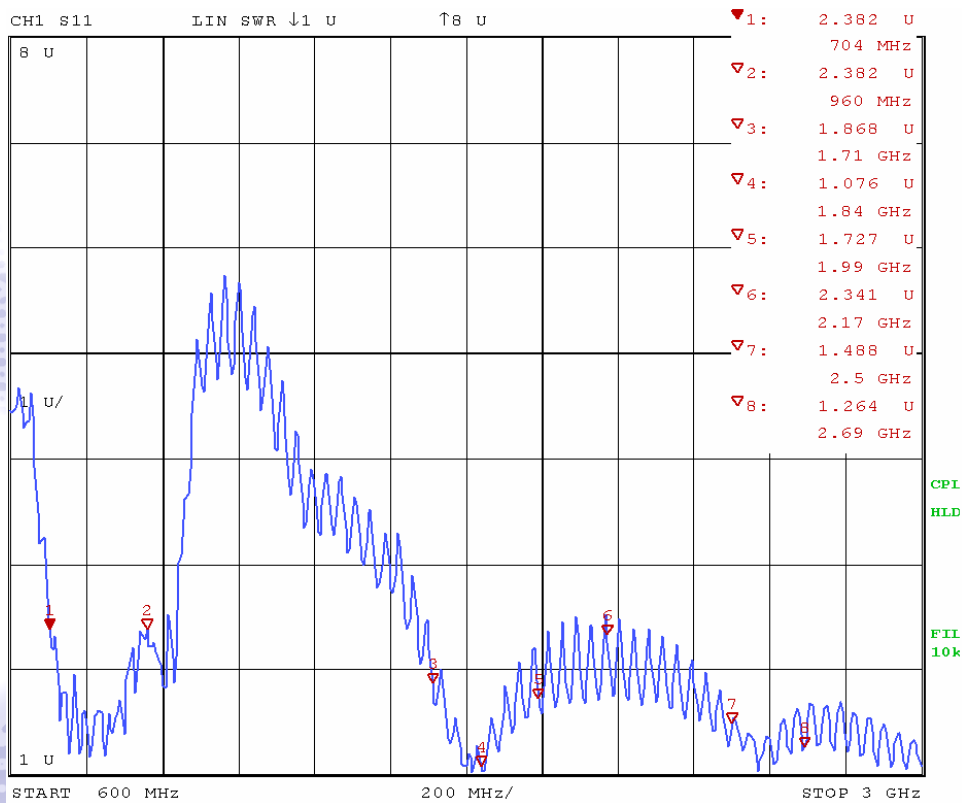
- 3 Axis of antenna



- VSWR & Return (LTE Antenna)



Return Loss



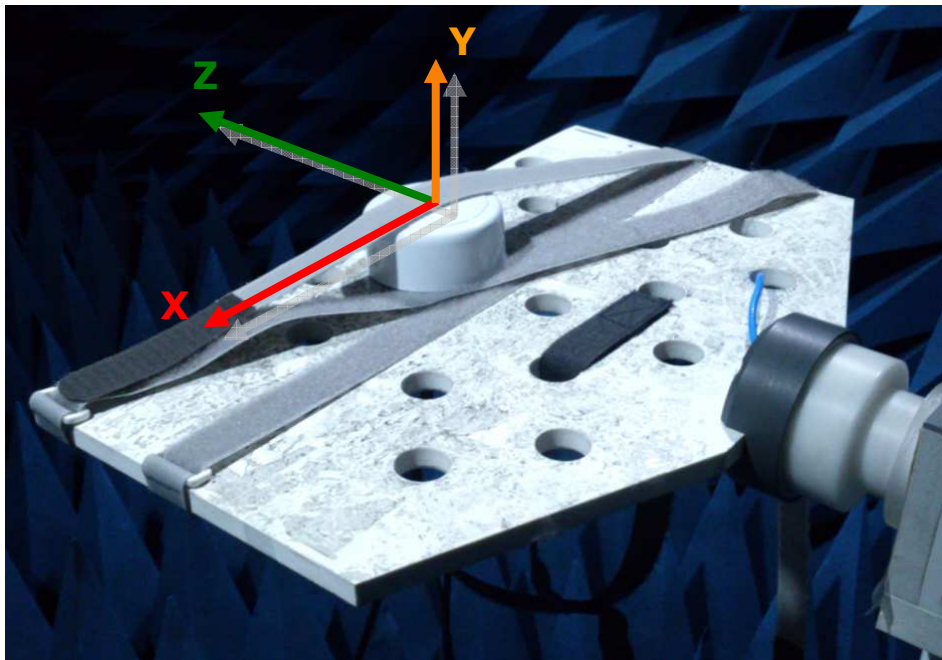
VSWR

- Detail Antenna Gain Table of AW-9

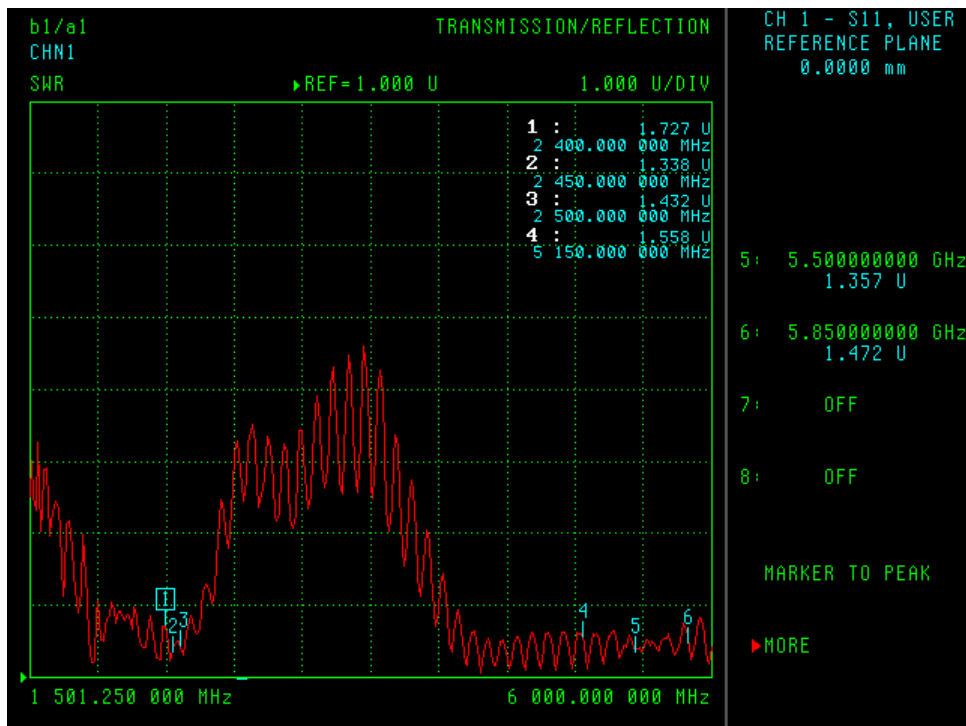
<Wi-Fi Antenna>

Frequency (MHz)	2400	2450	2500	5150	5250	5350	5500	5650	5750	5850
Efficiency (%)	45.17	50.64	49.91	25.67	34.8	29.79	38.12	37.18	37.67	46.2
Gain (dBi)	1.52	3.92	1.71	0.94	2.44	1.07	1.99	2.7	2.31	3.3
Average Gain (dB)	-3.45	-2.95	-3.02	-5.91	-4.58	-5.26	-4.19	-4.3	-4.24	-3.35

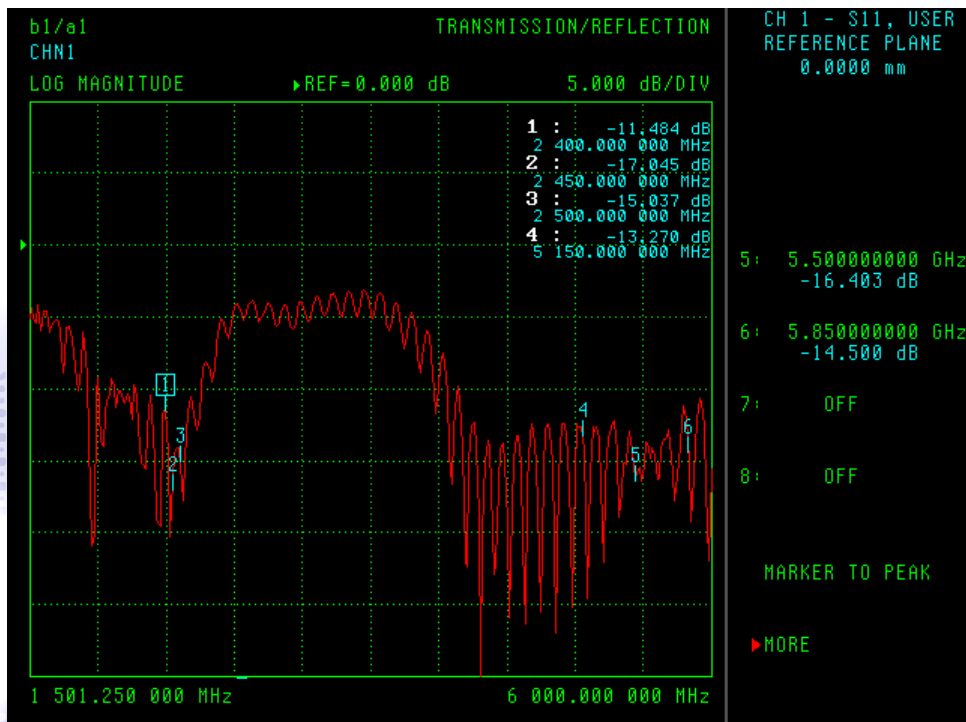
- 3 Axis of antenna



- VSWR & Return (Wi-Fi Antenna)



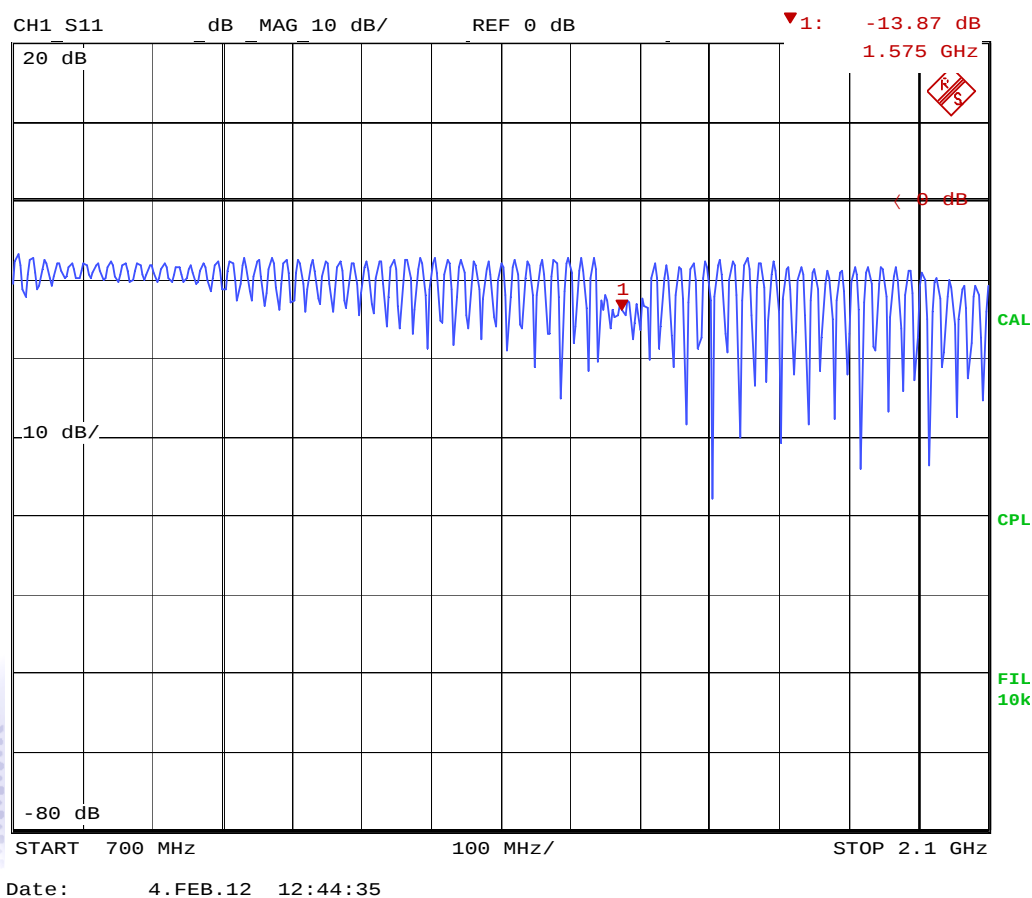
Return Loss



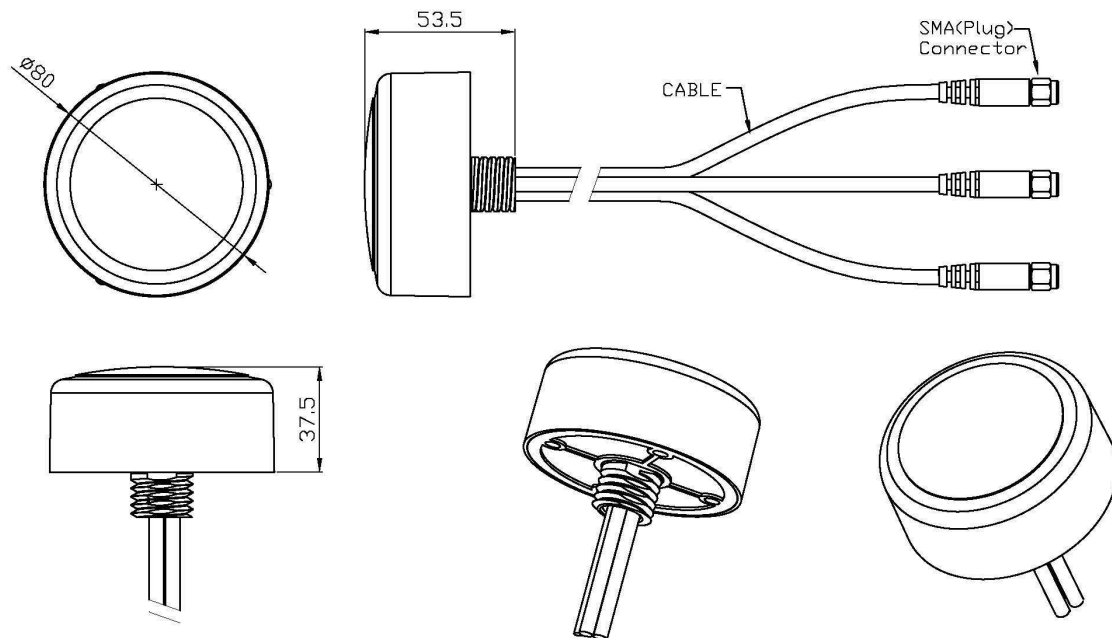
VSWR

- Detail Antenna Gain Table of AW-9
<GPS Antenna>

Frequency	Total			H			V		
	1565	1575	1585	1565	1575	1585	1565	1575	1585
Gain (dBi)	30.91	32.28	31.52	28.28	30.58	26.49	29.25	29.36	29.91
Average Gain (dB)	28.42	29.27	27.40	25.16	27.39	23.39	25.64	24.72	25.19



- Antenna Mechanism



Unit: mm