



Master Wave

權億科技股份有限公司  
Master Wave Technology Co., Ltd.

## 98PS5PIPF000 Antenna Test Report

Report	Review
Tony ( <a href="mailto:tony.cheng@masterwave.com.tw">tony.cheng@masterwave.com.tw</a> ) #209	Tony ( <a href="mailto:tony.cheng@masterwave.com.tw">tony.cheng@masterwave.com.tw</a> ) #209

Version: X01

Website : [www.masterwave.com.tw](http://www.masterwave.com.tw)

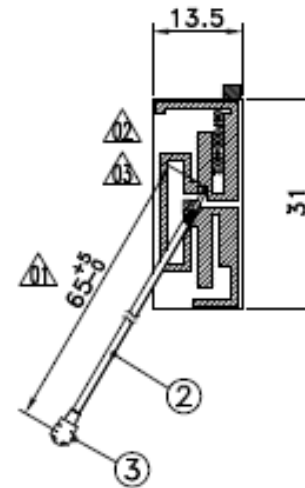
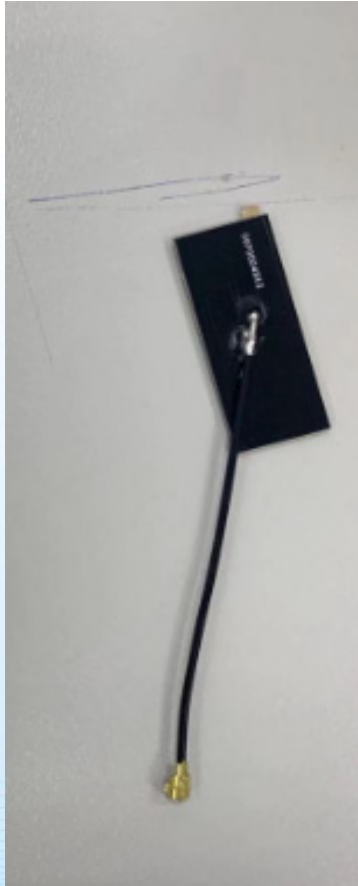


# Contents



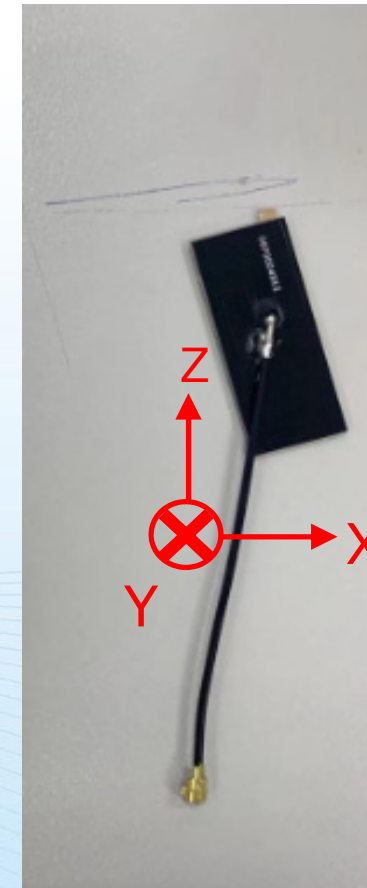
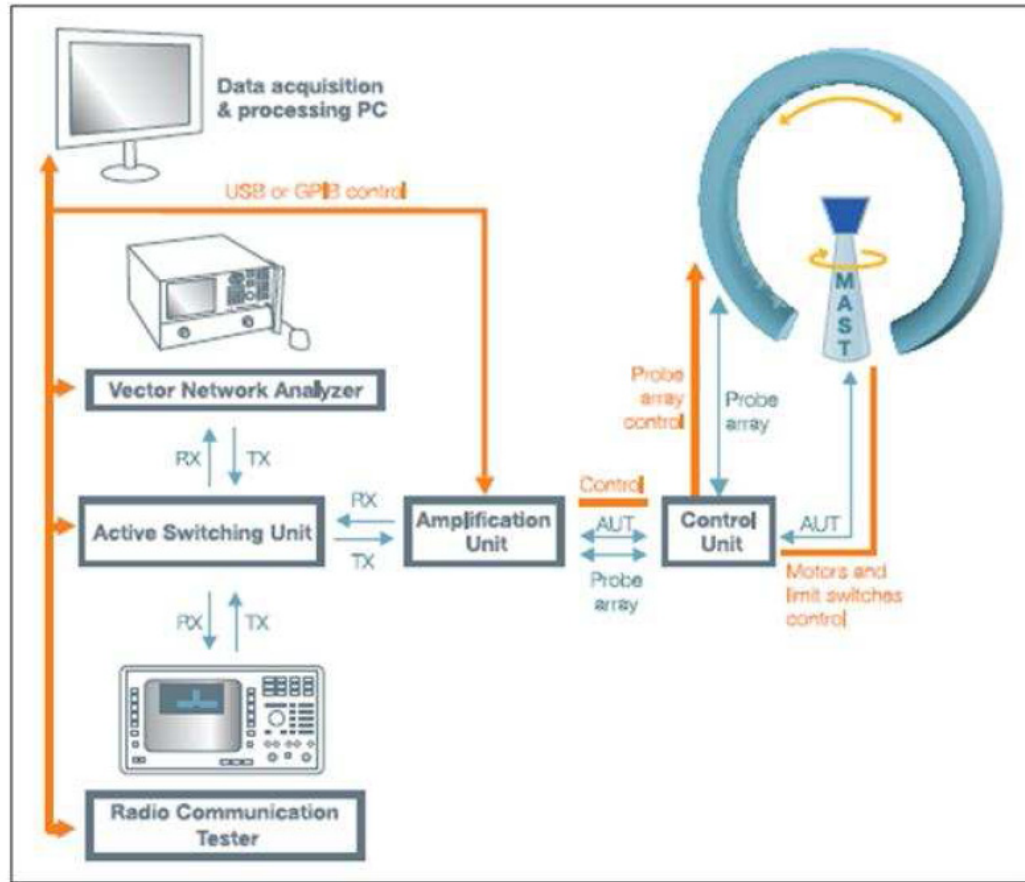
- Antenna Information
- Antenna Performance

# Antenna Information



# Measurement equipment

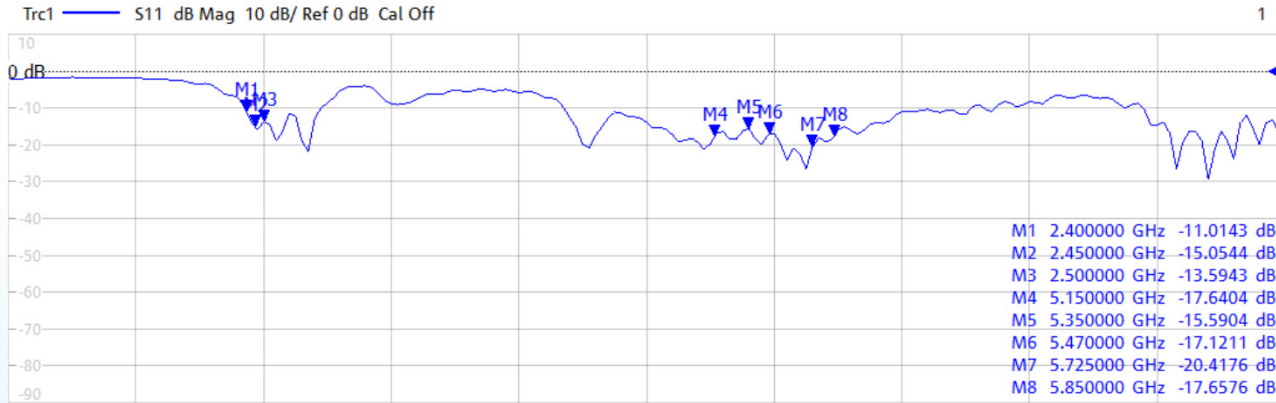
## Satimo SG-24



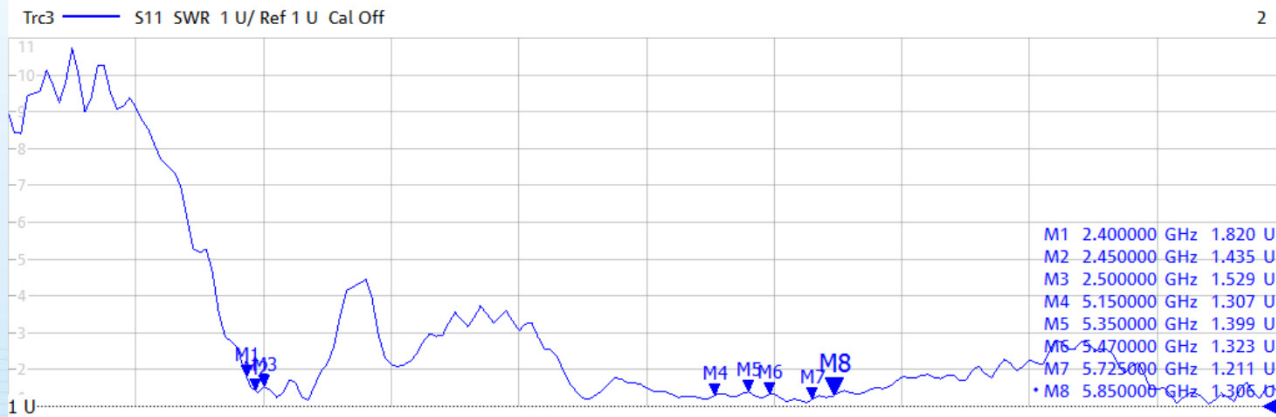
# Antenna Performance – S11



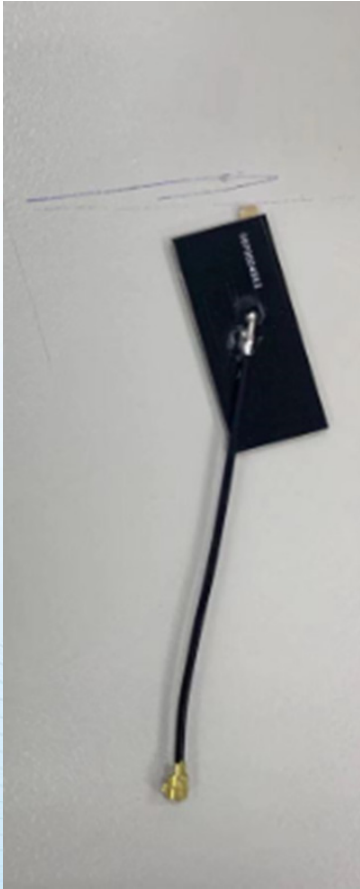
9/16/2020 5:27:22 PM  
1311.6010K42-105528-ws



Ch1 Start 1 GHz Pwr -10 dBm Bw 10 kHz Stop 8.5 GHz



Ch1 Start 1 GHz Pwr -10 dBm Bw 10 kHz Stop 8.5 GHz



Freq. (MHz)	2400	2500	5150	5850
VSWR	1.8	1.5	1.3	1.3

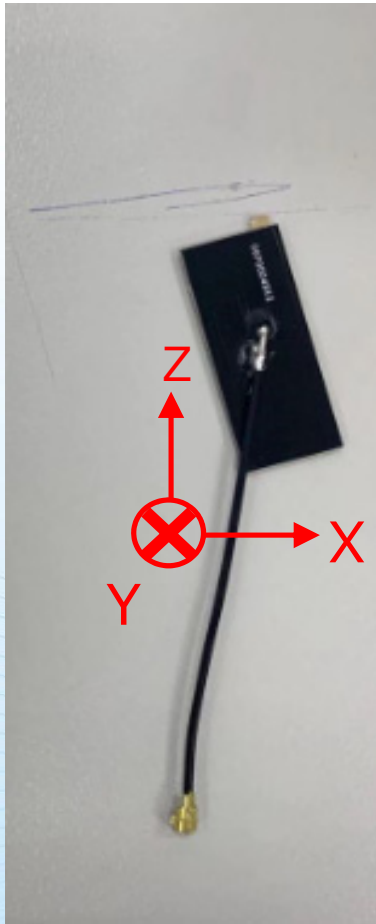


# Antenna Performance – Gain & Efficiency

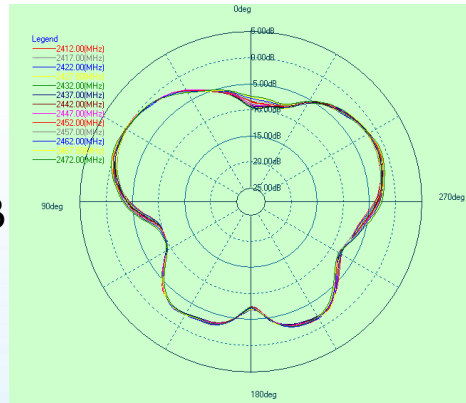


Freq.(MHz)	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462	2467	2472
Efficiency	43%	43%	43%	44%	44%	44%	45%	46%	46%	46%	47%	47%	47%
Peak Gain(dBi)	-0.13	-0.23	-0.16	-0.17	-0.13	-0.05	0.06	0.12	0.14	0.06	0.27	0.28	0.42
Freq.(MHz)	5180	5200	5220	5240	5260	5280	5300	5320	5500	5520	5540	5560	5580
Efficiency	62%	61%	62%	64%	67%	70%	73%	70%	72%	66%	70%	70%	73%
Peak Gain(dBi)	3.25	3.34	3.37	3.28	3.41	3.37	3.44	3.39	3.36	3.45	3.44	3.42	3.33
Freq.(MHz)	5600	5620	5640	5660	5680	5700	5745	5765	5785	5805	5825		
Efficiency	73%	73%	73%	72%	70%	69%	69%	70%	73%	70%	71%		
Peak Gain(dBi)	3.25	3.42	3.18	3.42	3.33	3.31	3.19	3.06	2.97	2.95	3.15		

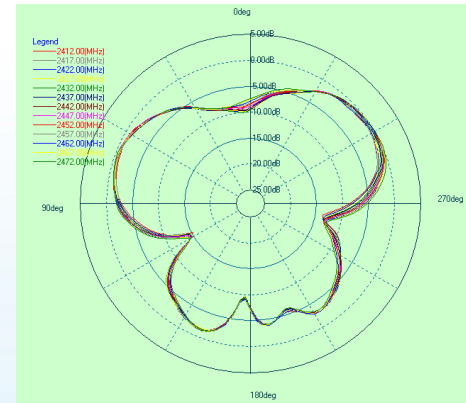
# Antenna Performance – 2D Radiation Pattern



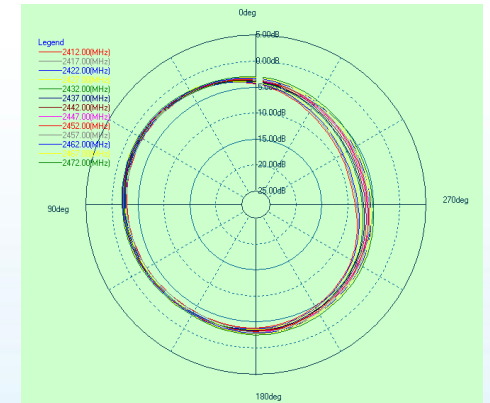
LB



XZ

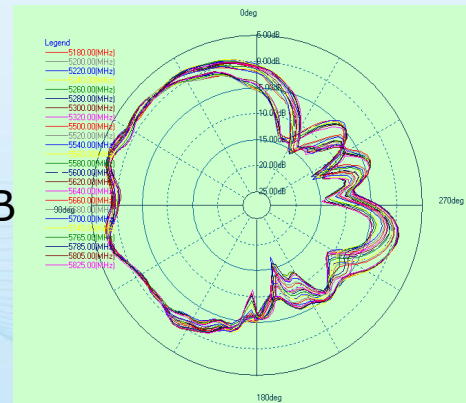


YZ

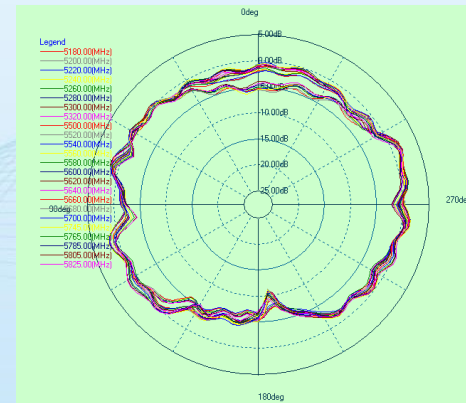


XY

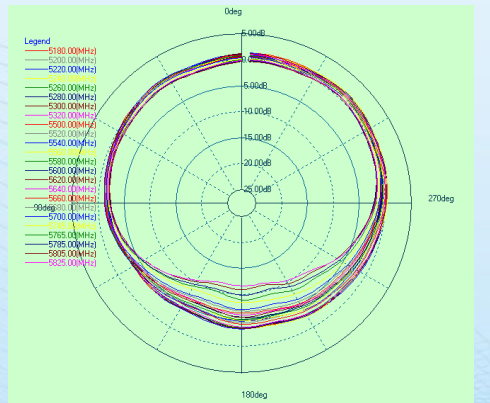
HB



XZ



YZ



XY



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## 98PS5PIPF001 Antenna Test Report

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Version: X01

Website : [www.masterwave.com.tw](http://www.masterwave.com.tw)



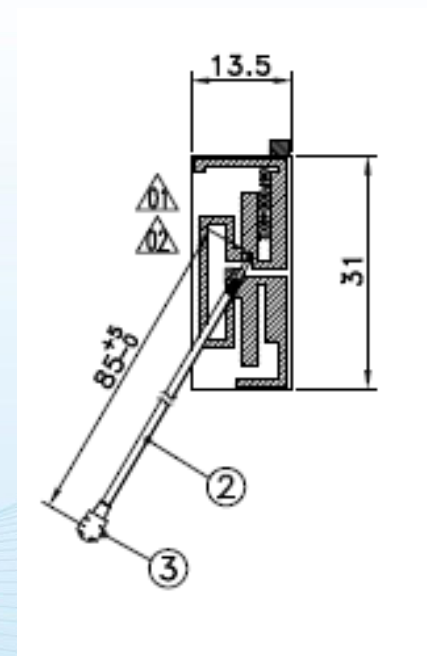


# Contents



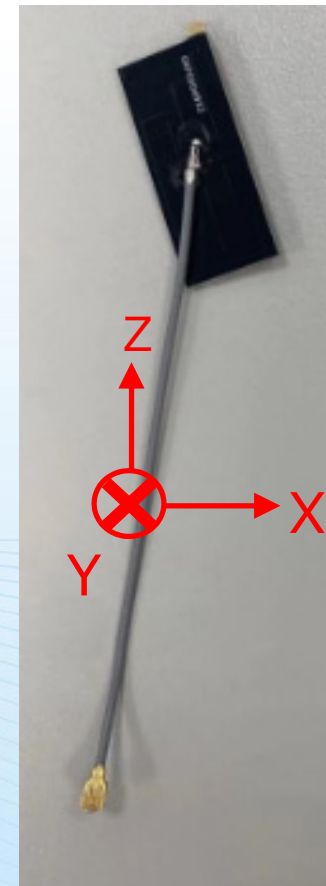
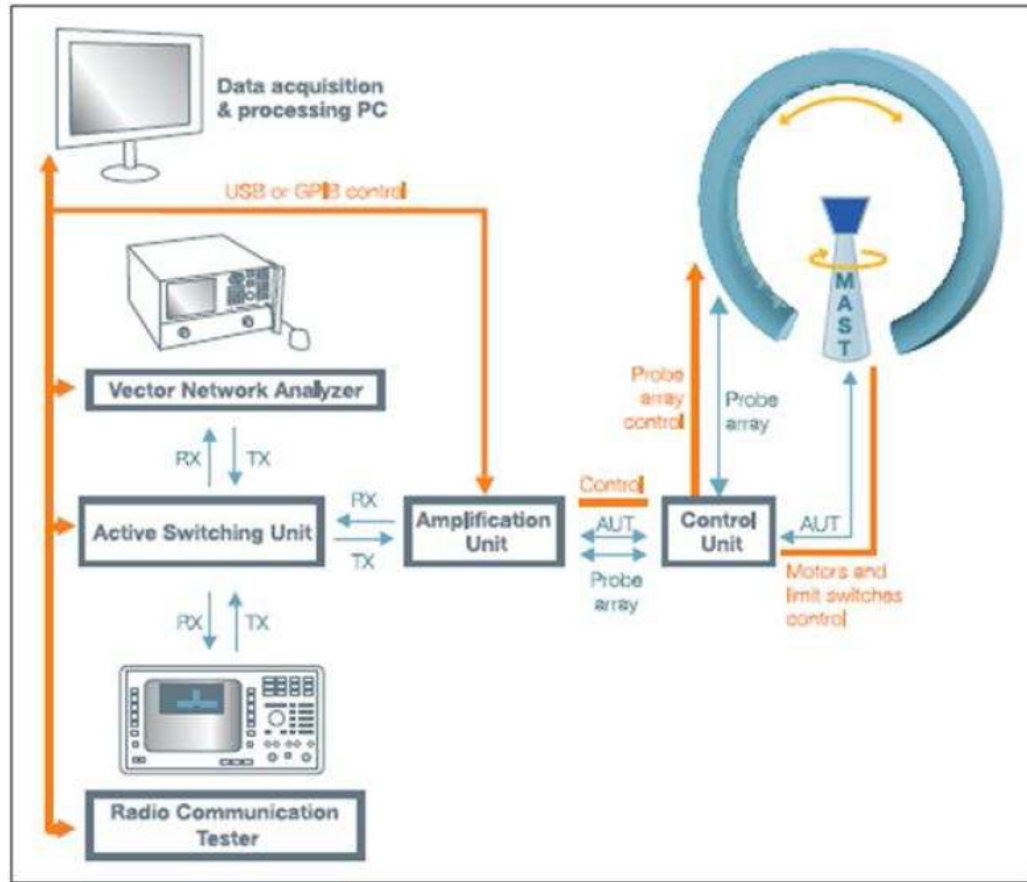
- Antenna Information
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# Antenna Information

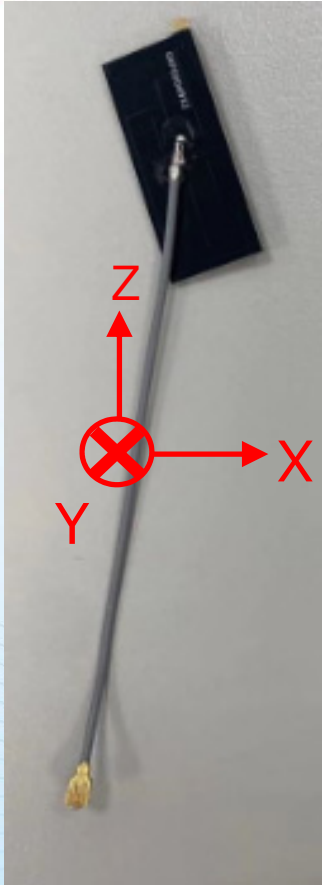


# Measurement equipment

## Satimo SG-24

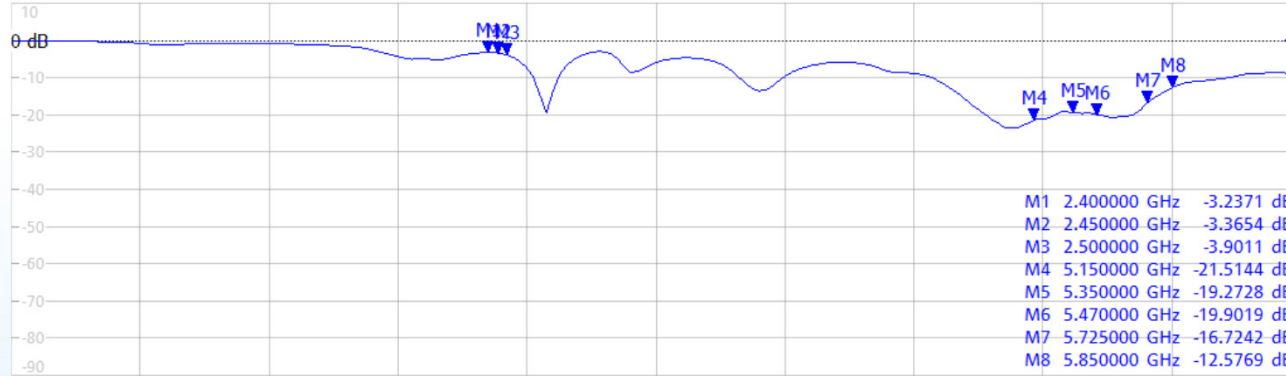


# Antenna Performance – S11



9/14/2020 3:47:04 PM  
1311.6010K42-105528-ws

Trc1 — S11 dB Mag 10 dB/ Ref 0 dB Cal

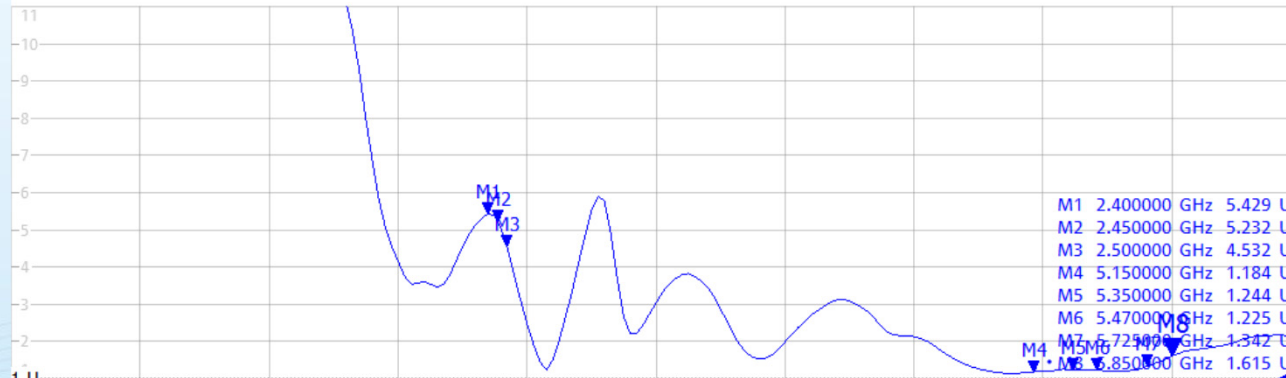


Ch1 Start 100 kHz

Pwr -10 dBm Bw 10 kHz

Stop 6.5 GHz

Trc3 — S11 SWR 1 U/ Ref 1 U Cal



Ch1 Start 100 kHz

Pwr -10 dBm Bw 10 kHz

Stop 6.5 GHz

Freq. (MHz)	2400	2500	5150	5850
VSWR	5.4	4.5	1.2	1.6

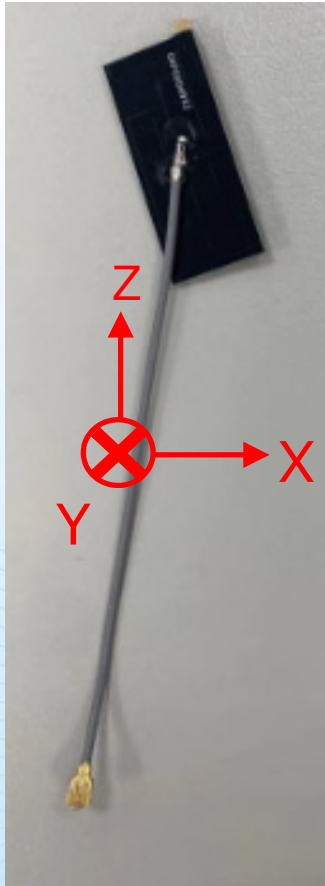


# Antenna Performance – Gain & Efficiency

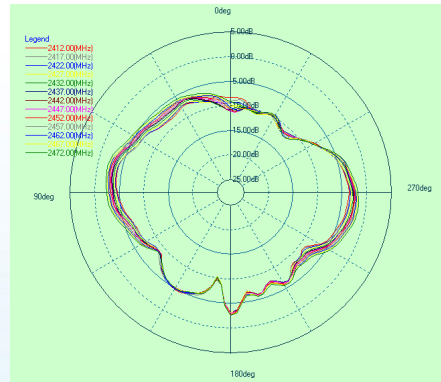


Freq.(MHz)	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462	2467	2472
Efficiency	23%	23%	24%	25%	27%	27%	25%	28%	29%	29%	29%	31%	32%
Peak Gain(dBi)	-2.52	-2.43	-2.40	-2.27	-1.94	-1.76	-1.56	-1.44	-1.24	-1.17	-1.03	-1.02	-0.70
Freq.(MHz)	5180	5200	5220	5240	5260	5280	5300	5320	5500	5520	5540	5560	5580
Efficiency	79%	79%	80%	81%	80%	80%	79%	79%	79%	76%	75%	77%	75%
Peak Gain(dBi)	3.21	3.28	3.27	3.12	3.18	3.16	3.24	3.13	3.15	3.23	3.34	3.17	3.25
Freq.(MHz)	5600	5620	5640	5660	5680	5700	5745	5765	5785	5805	5825		
Efficiency	74%	73%	73%	74%	74%	72%	73%	68%	68%	69%	63%		
Peak Gain(dBi)	3.25	3.12	3.02	3.15	3.23	3.15	3.27	3.21	3.29	3.14	2.91		

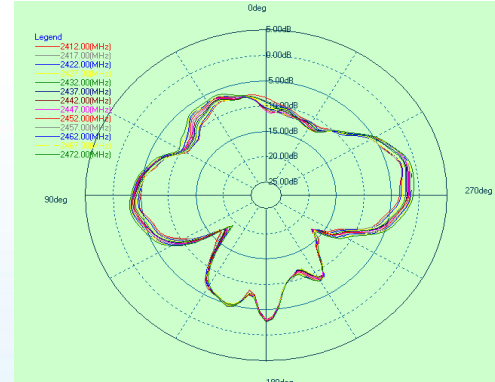
# Antenna Performance – 2D Radiation Pattern



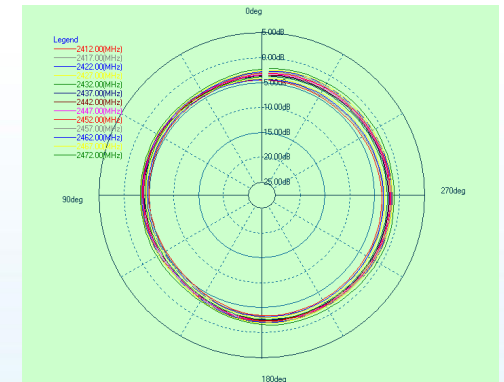
LB



XZ

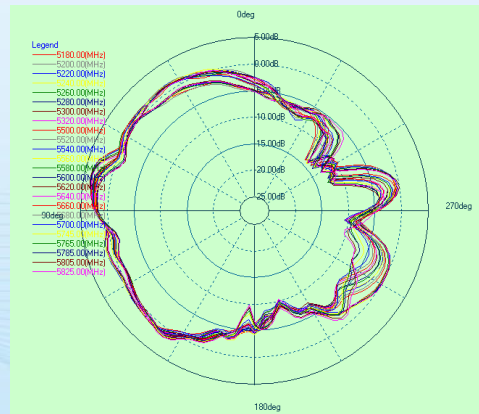


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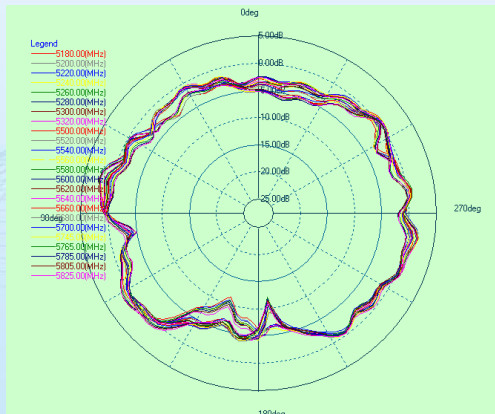


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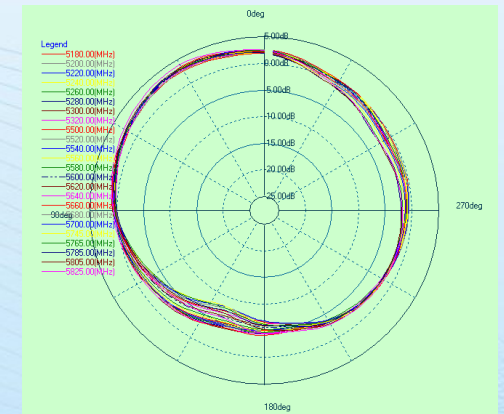
HB



XZ



YZ



XY



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# 907X00748X61

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Version: X01

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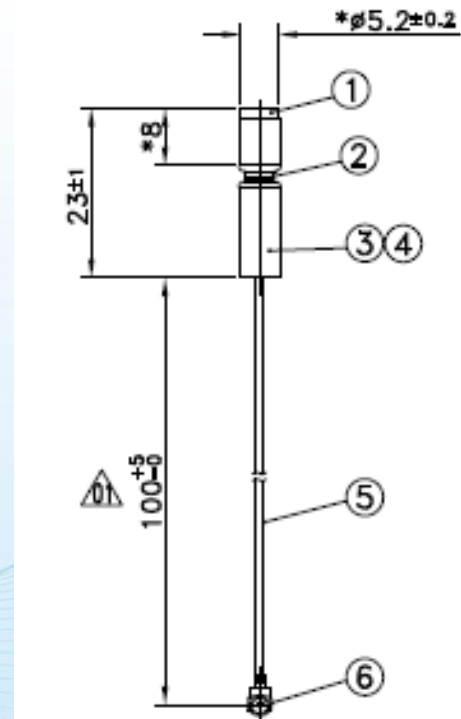
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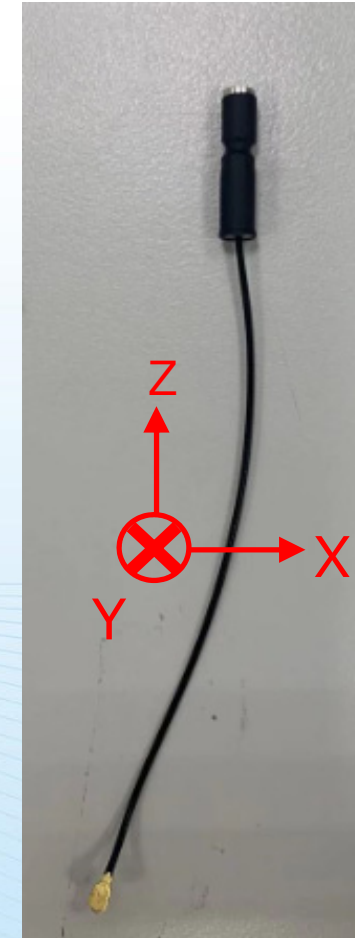
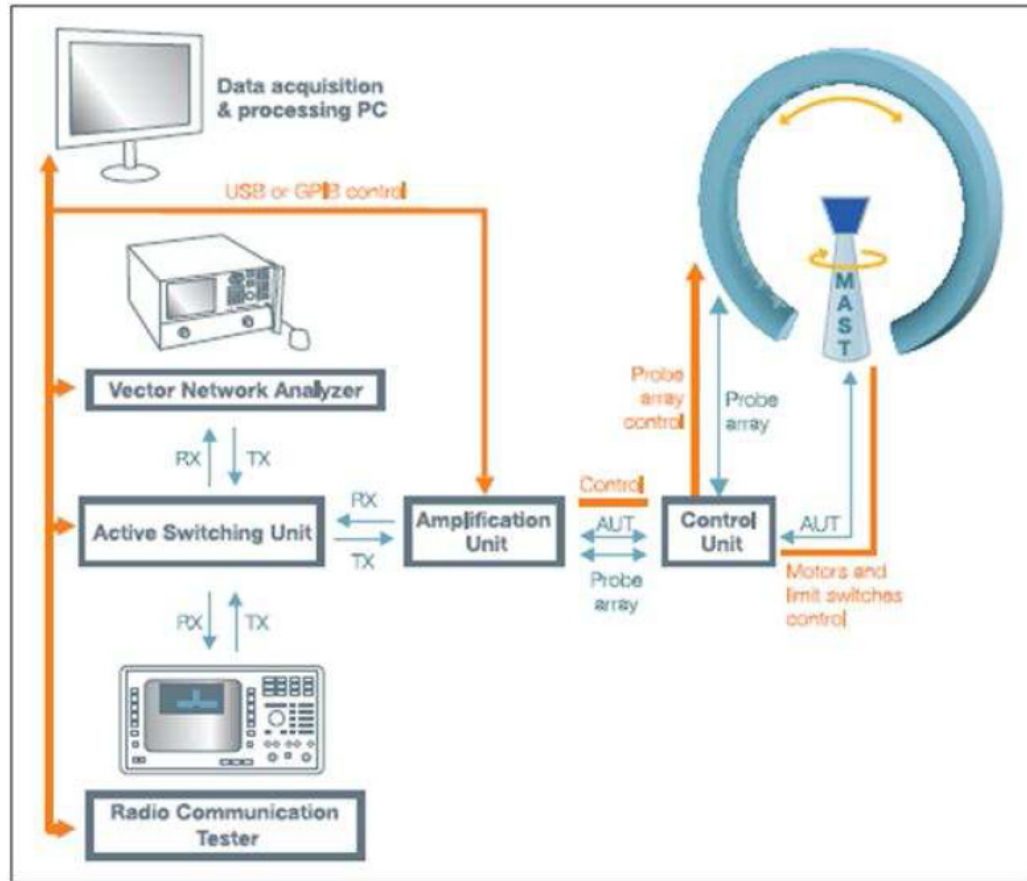


# Antenna Information



# Measurement equipment

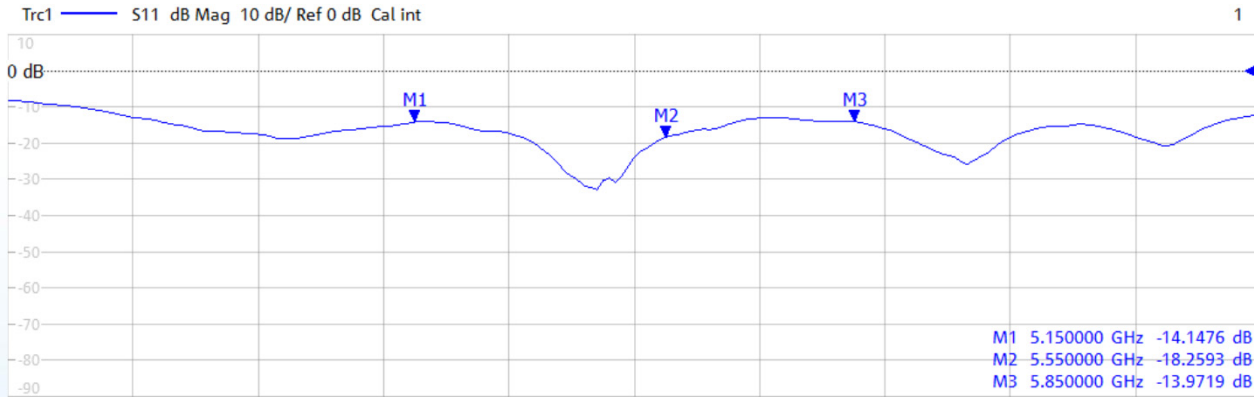
## Satimo SG-24



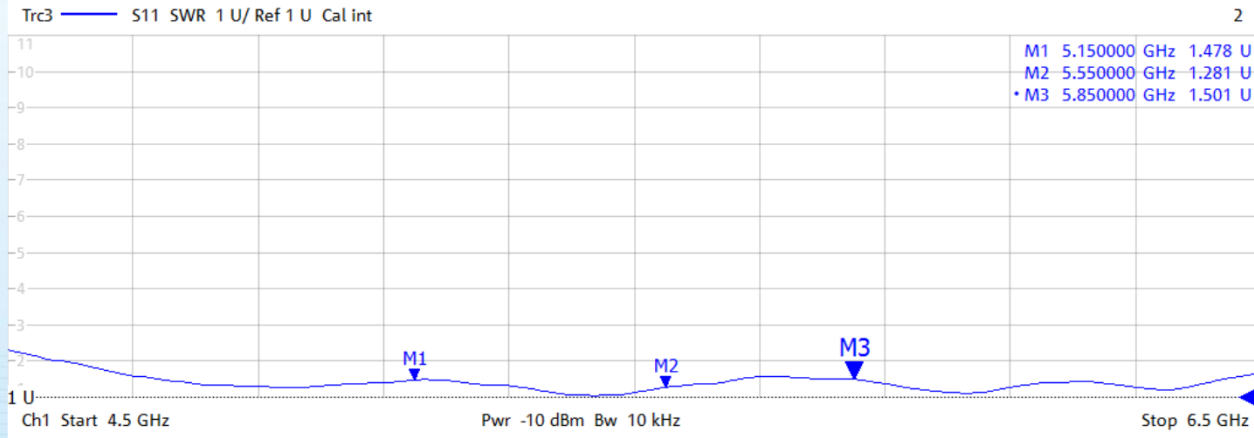
# Antenna Performance – S11



9/11/2020 1:46:12 PM  
1311.6010K42-105528-ws



Ch1 Start 4.5 GHz Pwr -10 dBm Bw 10 kHz Stop 6.5 GHz



Ch1 Start 4.5 GHz Pwr -10 dBm Bw 10 kHz Stop 6.5 GHz

<b>Freq. (MHz)</b>	<b>5150</b>	<b>5850</b>
<b>VSWR</b>	<b>1.5</b>	<b>1.5</b>

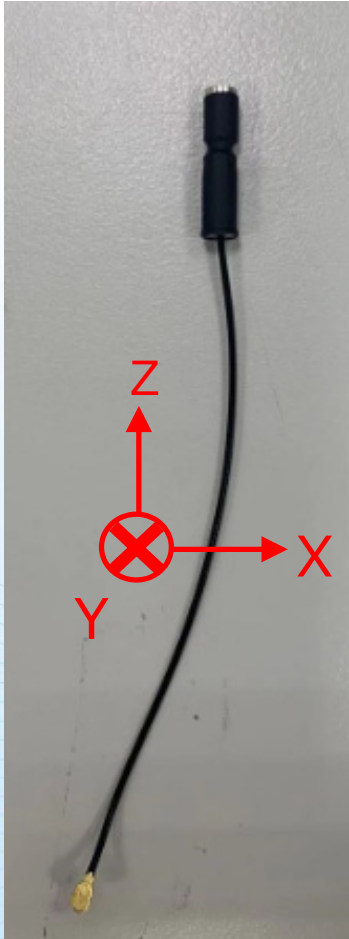


# Antenna Performance – Gain & Efficiency

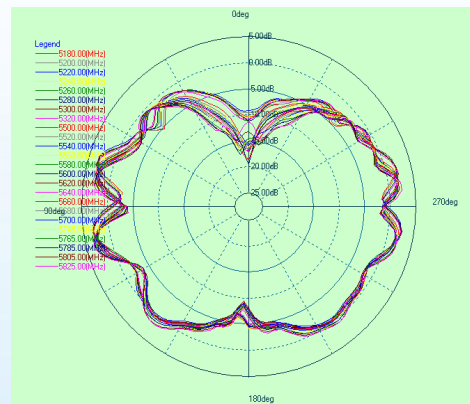


Freq.(MHz)	5180	5200	5220	5240	5260	5280	5300	5320	5500	5520	5540	5560	5580
Efficiency	73%	74%	76%	75%	74%	75%	76%	75%	73%	73%	74%	73%	72%
Peak Gain(dBi)	2.18	2.46	2.43	2.74	2.43	2.50	2.56	2.59	2.54	2.50	2.78	3.10	3.35
Freq.(MHz)	5600	5620	5640	5660	5680	5700	5745	5765	5785	5805	5825		
Efficiency	77%	76%	78%	78%	77%	76%	76%	77%	77%	79%	78%		
Peak Gain(dBi)	3.68	3.45	3.69	3.80	3.84	3.84	4.15	4.17	4.25	4.21	4.22		

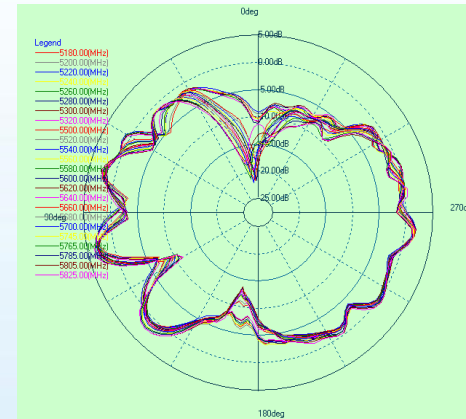
# Antenna Performance – 2D Radiation Pattern



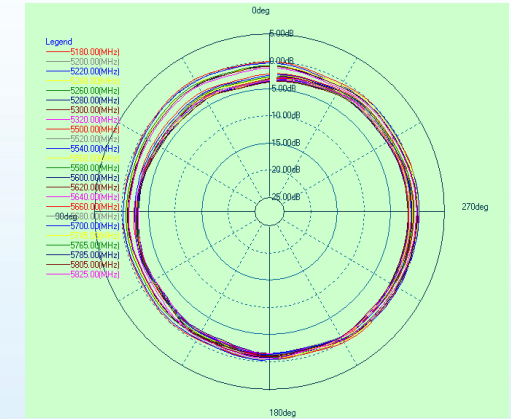
HB



XZ



YZ



XY