



## TEST DATA

**Applicant** Hannto Technology Co., Ltd.  
**Product** Photo Printer  
**Model** DHP511  
**HW Version** RevC.1  
**SW Version** 29  
**Report No.** Y2209A0863-T1V2  
**Issue Date** October 28, 2022

### **TA Technology (Shanghai) Co., Ltd.**

*Building 3, No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China*

*TEL: +86-021-50791141/2/3*

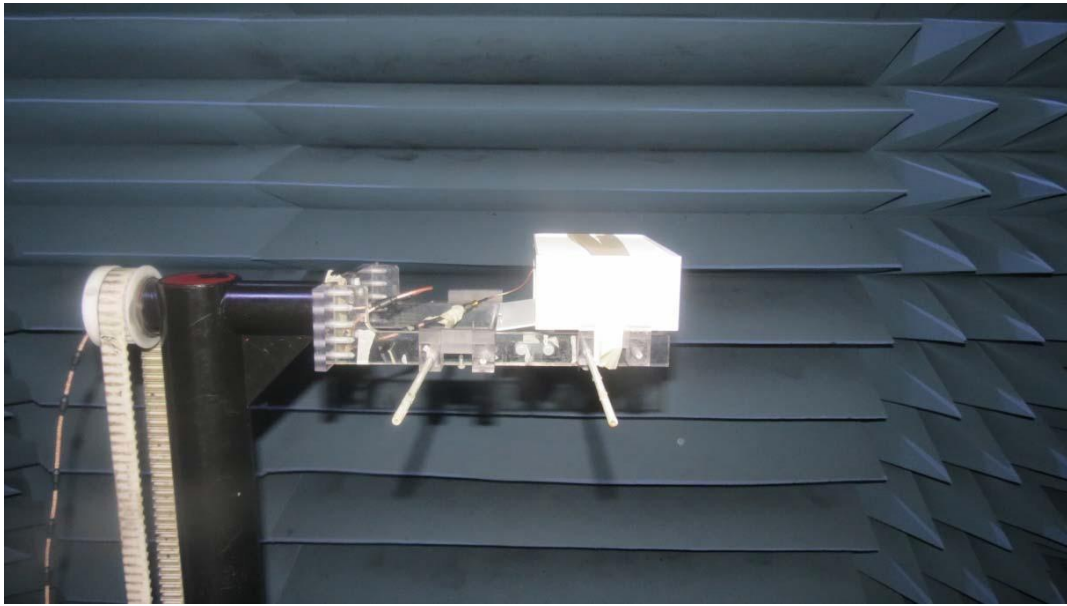
*FAX: +86-021-50791141/2/3-8000*



Version	Revision description	Issue Date
Rev.0	Initial issue of report.	September 14, 2022
Rev.1	Update data.	September 15, 2022
Rev.2	Update information.	October 28, 2022

Note: This revised report (Report No. Y2209A0863-T1V2) supersedes and replaces the previously issued report (Report No. Y2209A0863-T1V1). Please discard or destroy the previously issued report and dispose of it accordingly.

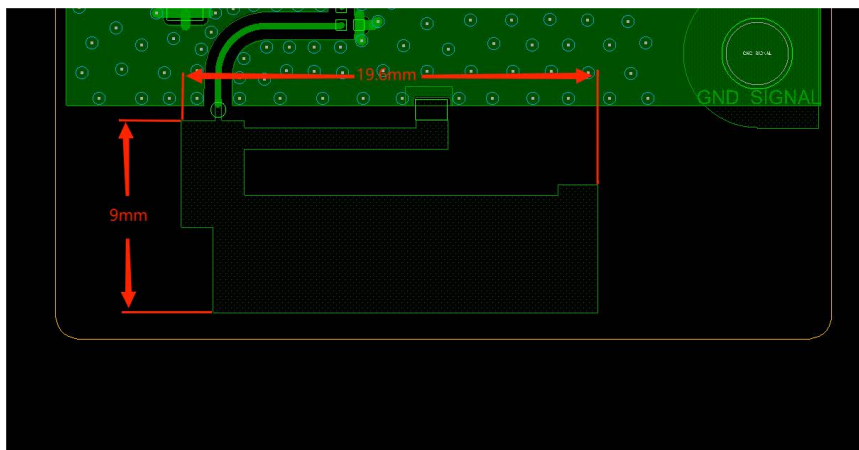
### 1. Test Setup



### 2. Antenna Sample

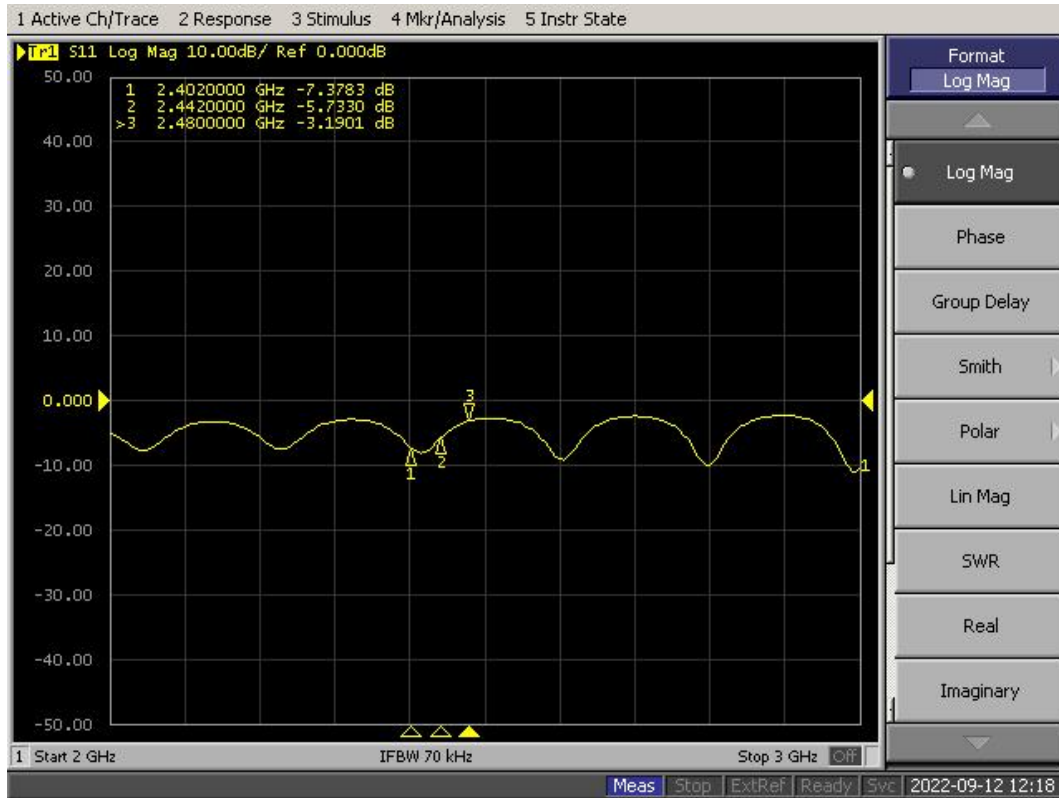


peak Gain=0.34dBi

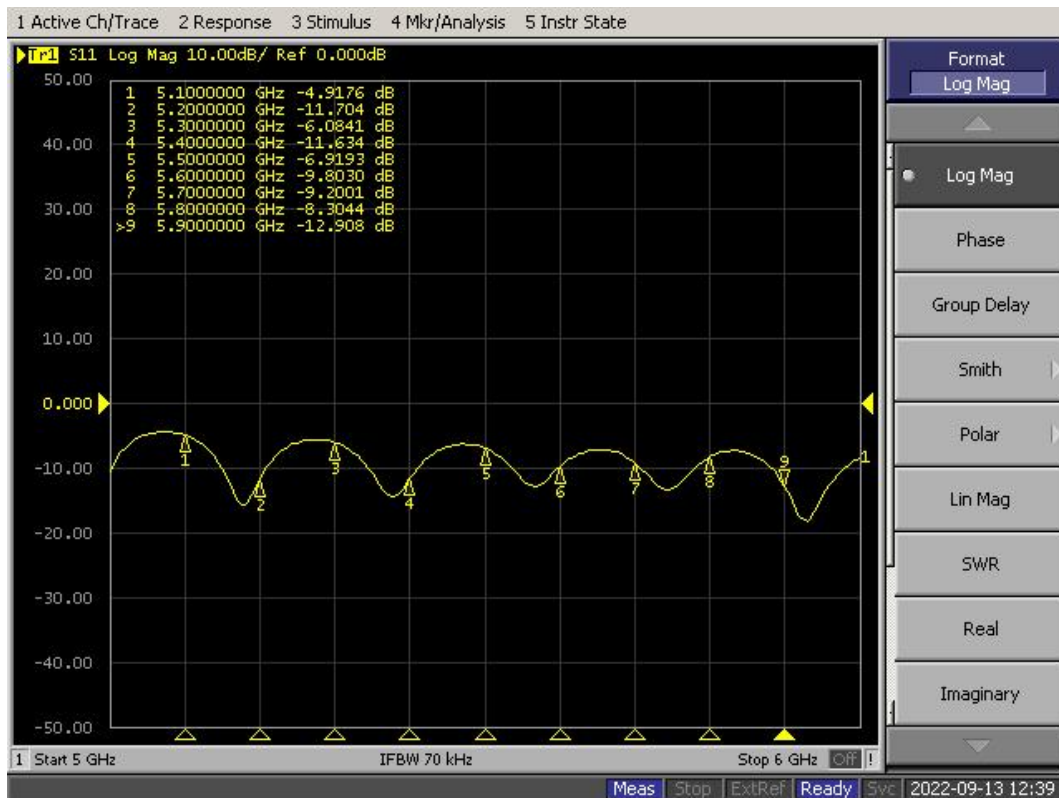




### 3. Return Loss

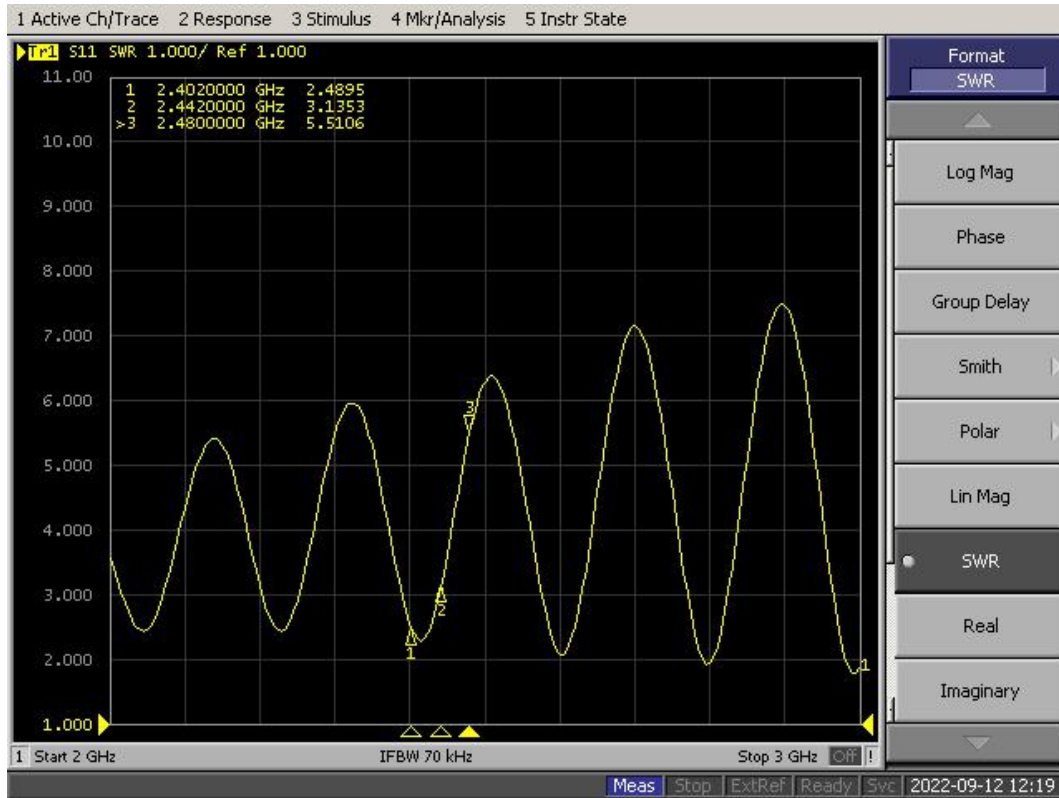


Wi-Fi 2.4G/Bluetooth

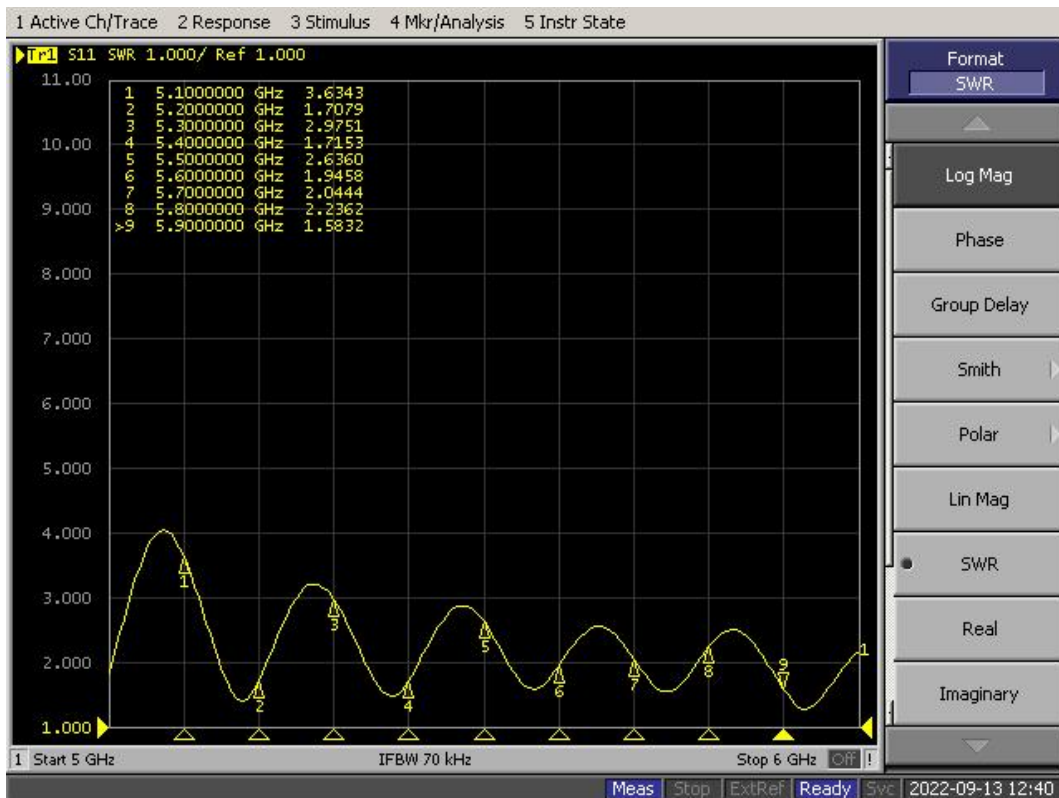


Wi-Fi 5G

4. VSWR



Wi-Fi 2.4G/Bluetooth



Wi-Fi 5G



## 5. Efficiency and Gain

Model	Test Item	Test State	Frequency (MHz)	Efficiency (%)	Gain(dBi)	Note
Wi-Fi 2.4G/ Bluetooth	GAIN	FS	2400	5.37	-8.43	/
			2410	5.22	-8.64	
			2420	5.25	-8.26	
			2430	5.10	-7.95	
			2440	5.03	-8.47	
			2450	5.01	-8.13	
			2460	5.24	-7.91	
			2470	5.35	-7.69	
			2480	5.63	-7.13	
			2490	5.78	-7.01	
			2500	5.83	-7.53	
Wi-Fi 5G	GAIN	FS	5100	13.07	-2.10	/
			5110	11.58	-2.30	
			5120	11.45	-2.63	
			5130	12.60	-2.02	
			5140	13.63	-1.52	
			5150	13.62	-1.64	
			5160	12.33	-1.44	
			5170	12.96	-1.93	
			5180	15.19	-1.45	
			5190	17.13	-0.78	
			5200	17.38	-0.78	
			5210	16.80	-0.80	
			5220	17.72	-0.36	
			5230	18.43	-0.30	
			5240	18.99	-0.02	
			5250	18.12	-0.57	
			5260	17.66	-0.92	
			5270	16.89	-0.96	
			5280	15.55	-1.24	
			5290	14.39	-1.72	
			5300	14.14	-1.59	
			5310	13.89	-1.72	
			5320	14.63	-1.24	
			5330	13.72	-2.03	
5340	13.27	-2.02				
5350	14.18	-1.87				
5360	14.55	-1.70				
5370	15.70	-1.47				
5380	15.81	-1.43				
5390	15.10	-1.49				



			5400	16.54	-0.69
			5410	17.76	-0.80
			5420	18.37	-0.43
			5430	18.51	-0.73
			5440	17.56	-0.75
			5450	17.51	-0.87
			5460	17.43	-1.00
			5470	16.53	-1.19
			5480	16.03	-1.26
			5490	15.79	-0.98
			5500	14.35	-1.80
			5510	13.10	-2.02
			5520	12.56	-2.45
			5530	12.77	-2.17
			5540	13.33	-1.83
			5550	13.18	-1.83
			5560	12.46	-2.50
			5570	13.08	-2.32
			5580	15.05	-1.48
			5590	16.40	-1.13
			5600	17.63	-0.58
			5610	16.91	-1.02
			5620	18.59	-0.61
			5630	20.76	-0.03
			5640	21.70	-0.08
			5650	21.42	0.34
			5660	21.65	0.29
			5670	20.71	0.07
			5680	19.23	-0.12
			5690	18.13	0.06
			5700	17.26	-0.79
			5710	16.42	-0.94
			5720	14.19	-1.51
			5730	13.18	-1.97
			5740	12.36	-1.82
			5750	11.94	-1.75
			5760	12.02	-1.90
			5770	11.14	-2.07
			5780	10.87	-2.70
			5790	11.26	-2.19
			5800	11.50	-1.96
			5810	12.60	-1.86
			5820	13.11	-1.60
			5830	14.18	-0.99

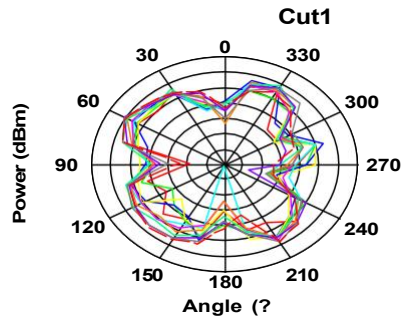


			5840	15.09	-1.25	
			5850	16.47	-0.66	
			5860	17.64	-0.62	
			5870	17.80	-0.16	
			5880	18.41	-0.17	
			5890	18.18	-0.45	
			5900	17.99	-0.44	





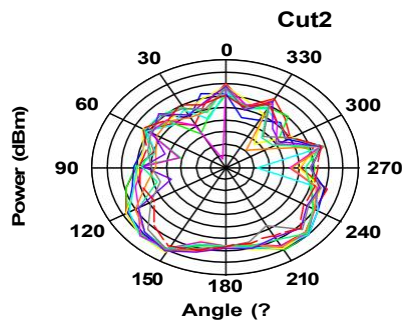
### Wi-Fi 2.4G/Bluetooth



Max: -5  
 Min: -40  
 Scale: 5/div

2400 MHz	2500 MHz
2410 MHz	
2420 MHz	
2430 MHz	
2440 MHz	
2450 MHz	
2460 MHz	
2470 MHz	
2480 MHz	
2490 MHz	

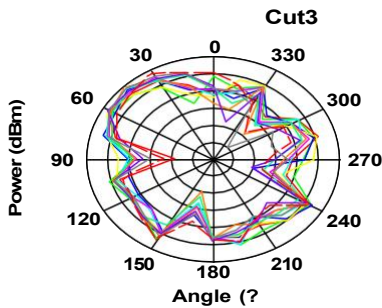
Horizontally Polarized XY plane



Max: -5  
 Min: -50  
 Scale: 5/div

2400 MHz	2500 MHz
2410 MHz	
2420 MHz	
2430 MHz	
2440 MHz	
2450 MHz	
2460 MHz	
2470 MHz	
2480 MHz	
2490 MHz	

Horizontally Polarized XZ plane



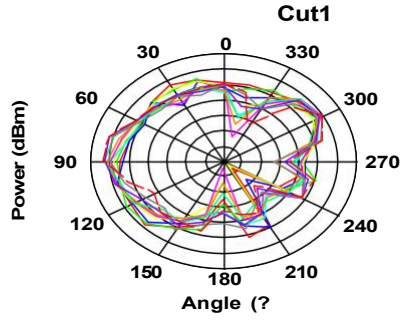
Max: -10  
 Min: -40  
 Scale: 5/div

2400 MHz	2500 MHz
2410 MHz	
2420 MHz	
2430 MHz	
2440 MHz	
2450 MHz	
2460 MHz	
2470 MHz	
2480 MHz	
2490 MHz	

Horizontally Polarized YZ plane



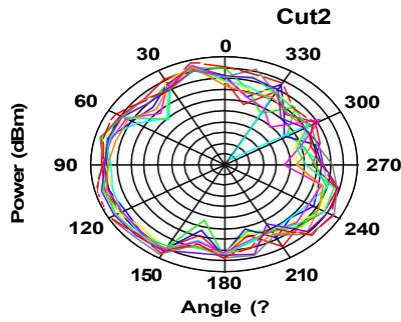
Max: -5  
Min: -40  
Scale: 5/div



2400 MHz	2500 MHz
2410 MHz	
2420 MHz	
2430 MHz	
2440 MHz	
2450 MHz	
2460 MHz	
2470 MHz	
2480 MHz	
2490 MHz	

Vertical Polarization XY plane

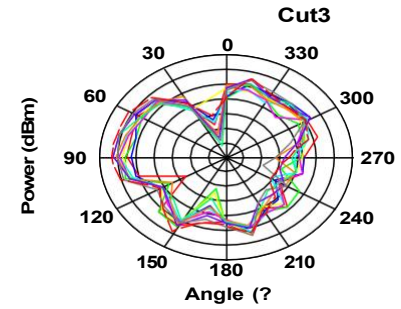
Max: -10  
Min: -60  
Scale: 5/div



2400 MHz	2500 MHz
2410 MHz	
2420 MHz	
2430 MHz	
2440 MHz	
2450 MHz	
2460 MHz	
2470 MHz	
2480 MHz	
2490 MHz	

Vertical Polarization XZ plane

Max: -5  
Min: -40  
Scale: 5/div



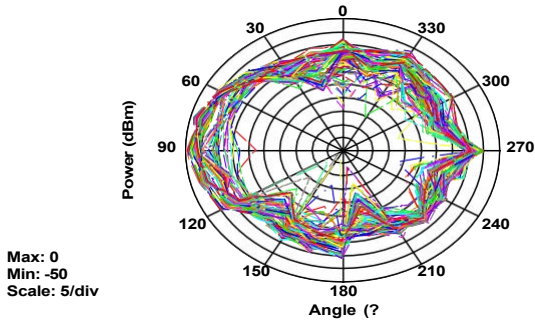
2400 MHz	2500 MHz
2410 MHz	
2420 MHz	
2430 MHz	
2440 MHz	
2450 MHz	
2460 MHz	
2470 MHz	
2480 MHz	
2490 MHz	

Vertical Polarization YZ plane



Wi-Fi 5G

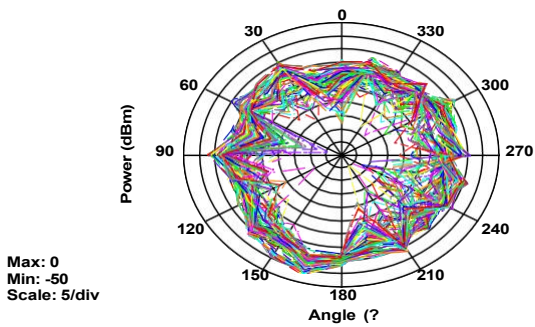
Cut1



5100 MHz	5250 MHz	5400 MHz	5550 MHz	5700 MHz	5850 MHz
5110 MHz	5260 MHz	5410 MHz	5560 MHz	5710 MHz	5860 MHz
5120 MHz	5270 MHz	5420 MHz	5570 MHz	5720 MHz	5870 MHz
5130 MHz	5280 MHz	5430 MHz	5580 MHz	5730 MHz	5880 MHz
5140 MHz	5290 MHz	5440 MHz	5590 MHz	5740 MHz	5890 MHz
5150 MHz	5300 MHz	5450 MHz	5600 MHz	5750 MHz	5900 MHz
5160 MHz	5310 MHz	5460 MHz	5610 MHz	5760 MHz	
5170 MHz	5320 MHz	5470 MHz	5620 MHz	5770 MHz	
5180 MHz	5330 MHz	5480 MHz	5630 MHz	5780 MHz	
5190 MHz	5340 MHz	5490 MHz	5640 MHz	5790 MHz	
5200 MHz	5350 MHz	5500 MHz	5650 MHz	5800 MHz	
5210 MHz	5360 MHz	5510 MHz	5660 MHz	5810 MHz	
5220 MHz	5370 MHz	5520 MHz	5670 MHz	5820 MHz	
5230 MHz	5380 MHz	5530 MHz	5680 MHz	5830 MHz	
5240 MHz	5390 MHz	5540 MHz	5690 MHz	5840 MHz	

Horizontally Polarized XY plane

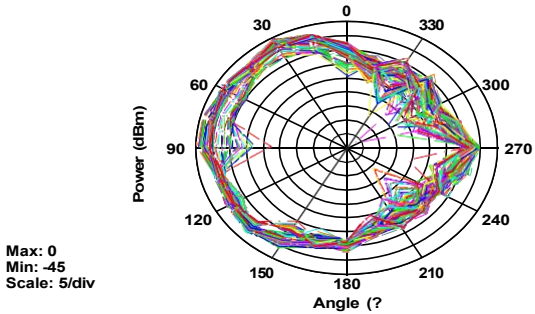
Cut2



5100 MHz	5250 MHz	5400 MHz	5550 MHz	5700 MHz	5850 MHz
5110 MHz	5260 MHz	5410 MHz	5560 MHz	5710 MHz	5860 MHz
5120 MHz	5270 MHz	5420 MHz	5570 MHz	5720 MHz	5870 MHz
5130 MHz	5280 MHz	5430 MHz	5580 MHz	5730 MHz	5880 MHz
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5150 MHz	5300 MHz	5450 MHz	5600 MHz	5750 MHz	5900 MHz
5160 MHz	5310 MHz	5460 MHz	5610 MHz	5760 MHz	
5170 MHz	5320 MHz	5470 MHz	5620 MHz	5770 MHz	
5180 MHz	5330 MHz	5480 MHz	5630 MHz	5780 MHz	
5190 MHz	5340 MHz	5490 MHz	5640 MHz	5790 MHz	
5200 MHz	5350 MHz	5500 MHz	5650 MHz	5800 MHz	
5210 MHz	5360 MHz	5510 MHz	5660 MHz	5810 MHz	
5220 MHz	5370 MHz	5520 MHz	5670 MHz	5820 MHz	
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Horizontally Polarized XZ plane

Cut3

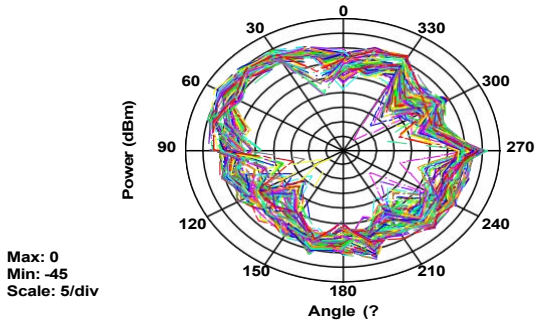


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5110 MHz	5260 MHz	5410 MHz	5560 MHz	5710 MHz	5860 MHz
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5180 MHz	5330 MHz	5480 MHz	5630 MHz	5780 MHz	
5190 MHz	5340 MHz	5490 MHz	5640 MHz	5790 MHz	
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5210 MHz	5360 MHz	5510 MHz	5660 MHz	5810 MHz	
5220 MHz	5370 MHz	5520 MHz	5670 MHz	5820 MHz	
5230 MHz	5380 MHz	5530 MHz	5680 MHz	5830 MHz	
5240 MHz	5390 MHz	5540 MHz	5690 MHz	5840 MHz	

Horizontally Polarized YZ plane



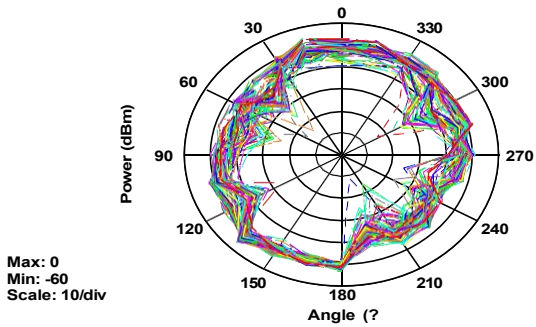
Cut1



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Vertical Polarization XY plane

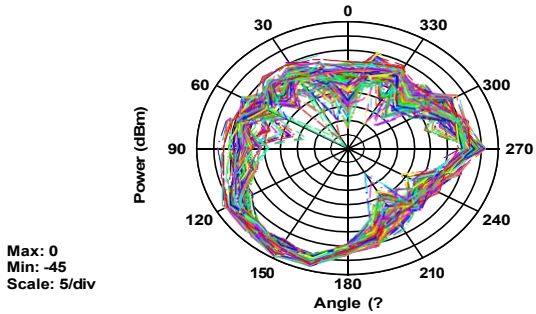
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Vertical Polarization XZ plane

Cut3



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Vertical Polarization YZ plane