

Antenna Passive Test Report

Product Name	A23 V1.0
Product stage	prototype
Product image	

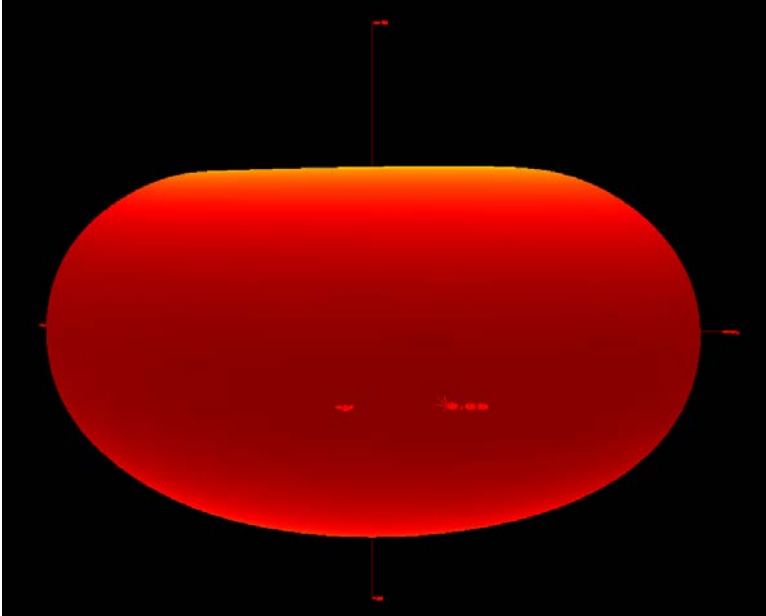


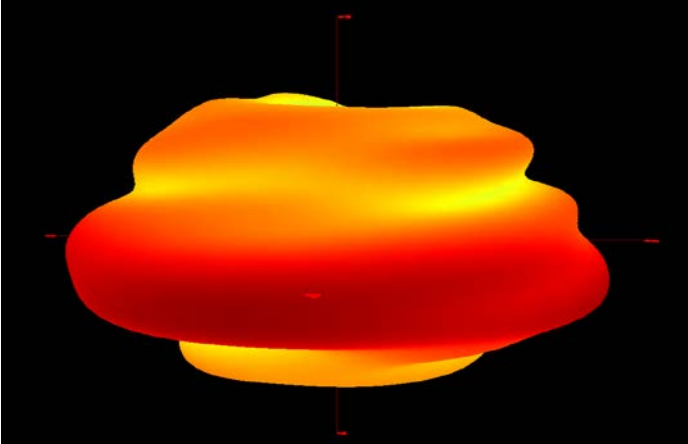
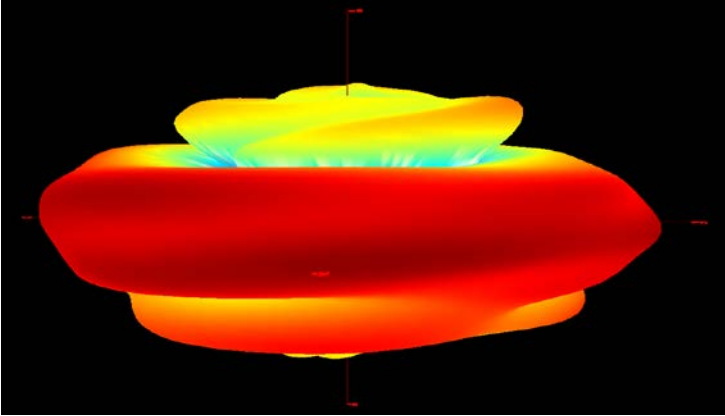
Test Information

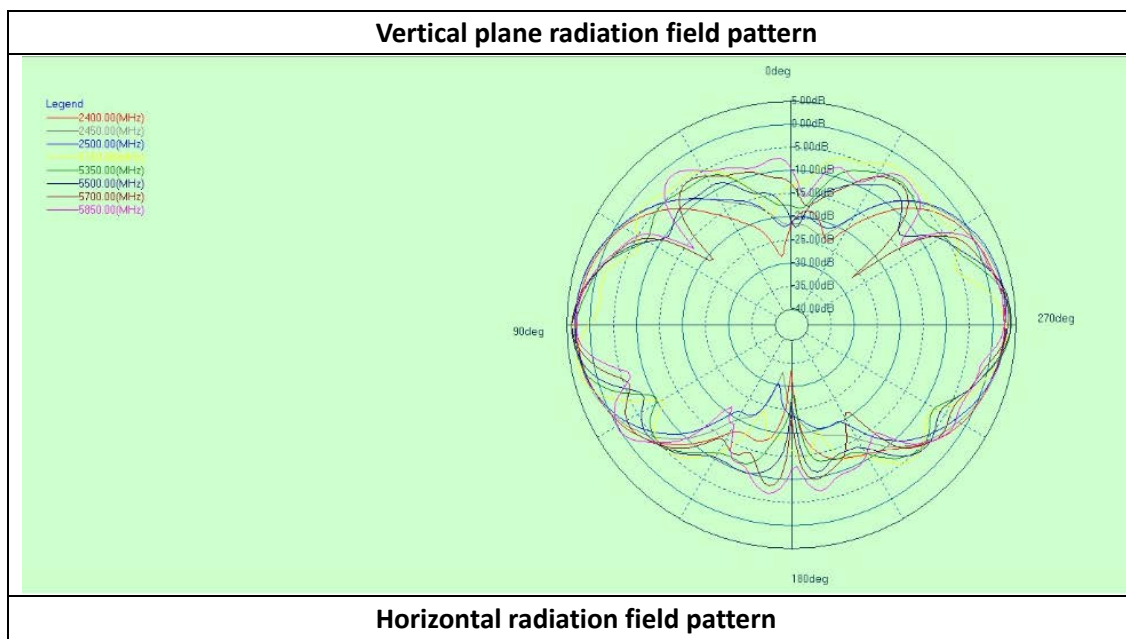
Product Name	A23V1.0		Antenna encoded	
Test Category	Antenna passive test	Test location	S parameter (laboratory) Radiation parameter (Barron test)	
Test date	2021-06-22	Tester	Xiao Pengcheng	
Test environment	temperature : 24°C-28°C	relative humidity : 56%-58%	atmospheric pressure : 100kPa-101kPa	
Test items	Normal temperature electrical performance : <input checked="" type="checkbox"/> Return loss <input checked="" type="checkbox"/> gain <input checked="" type="checkbox"/> directional diagram <input checked="" type="checkbox"/> Port isolation <input checked="" type="checkbox"/> productiveness			
Test basis	Test report, see attached test drawings			
Test Conclusion	The antenna radiation parameters and S parameters meet the requirements and the antenna matches well			

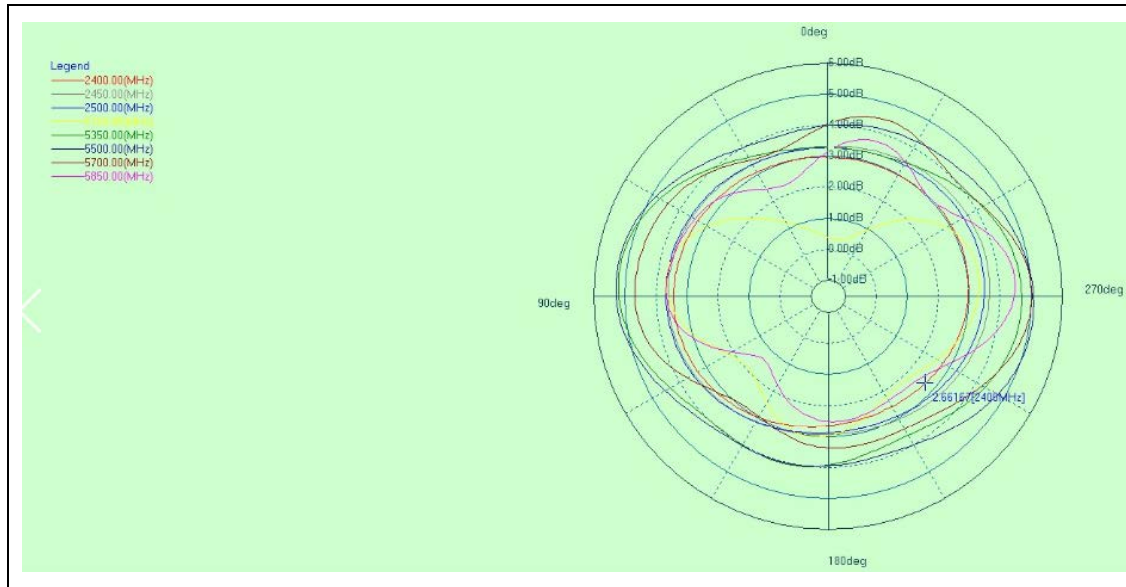
Normal temperature electrical performance test results

order number	Inspection items	units	Performance index requirements	Inspection results		sentence
				Sample No. :		
1	frequency range	MHz	2400-2500/5150-5850	2400-2500/5150-5850		OK
2	Gain	dBi	3/5	2410	3.5	OK
				2450	4.1	OK
				2500	4.1	OK
				5150	4.0	OK
				5500	5.1	OK
				5850	4.8	OK
3	Isolation degree	dB	≤ -15	2410	-24	OK
				2450	-21	OK
				2500	-21	OK
				5150	-20	OK
				5500	-25	OK
				5850	-23	OK
4	Return loss	dB	≤ -10	2410	-14	OK
				2450	-14	OK
				2500	-17	OK
				5150	-25	OK
				5500	-17	OK
				5850	-15	OK
5	productiveness /		$\geq 60\%$	2410	86%	OK
				2450	92%	OK
				2500	95%	OK
				5150	71%	OK
				5500	81%	OK
				5850	79%	OK

3Ddirectional diagram	XOY_PLANE	XOZ PLANE
2450MHz	 A 3D directional diagram of an antenna at 2450MHz. The diagram shows a toroidal radiation pattern in the XOY plane, with the main lobe centered around the origin. The radiation intensity is represented by a color gradient from red (high intensity) to yellow (low intensity). The pattern is roughly circular and symmetric about the vertical axis. The background is black, and the radiation pattern is centered in the middle of the frame.	

3Ddirectional diagram	XOY_PLANE	XOZ PLANE
5150MHz		
5850MHz		





S11

antenna1	frequency	2412MHz-2500 MHz/5150MHz-5850MHz
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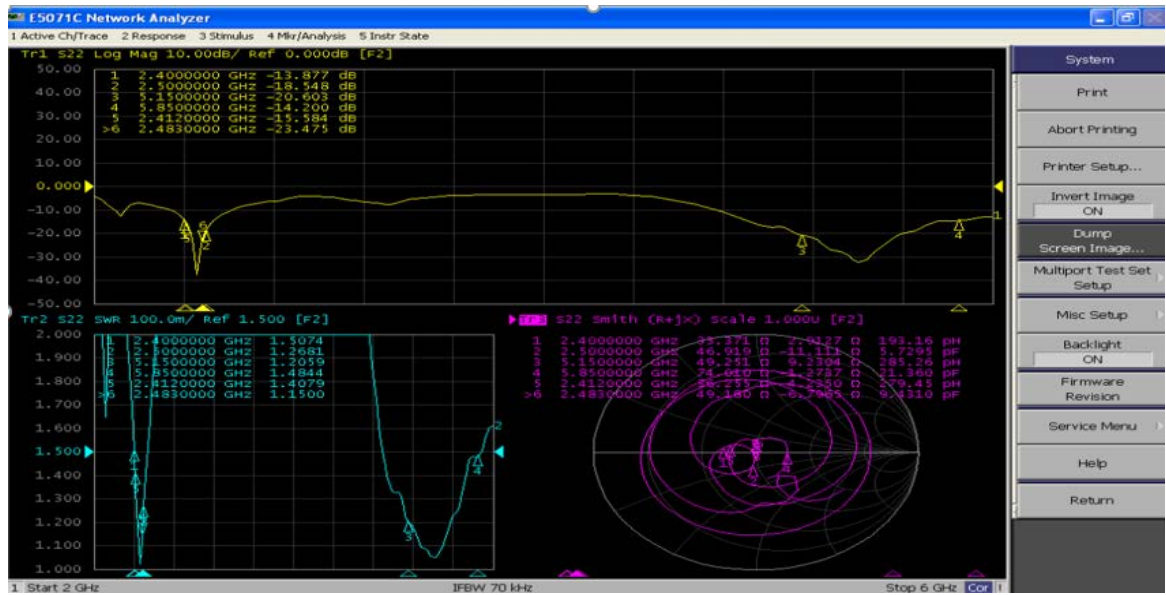
Peak	Frequency (GHz)	Log Mag (dB)
1	2.400000	-14.021
2	2.500000	-14.286
3	2.550000	-25.495
4	2.850000	-15.110
5	2.412000	-16.381
>6	2.483000	-17.911

Peak	Frequency (GHz)	SWR
1	2.400000	1.4970
2	2.500000	1.4785
3	2.550000	1.1124
4	2.850000	1.4369
5	2.412000	1.3727
>6	2.483000	1.2996

Peak	Frequency (GHz)	Real (dB)	Imag (dB)	Cap (pF)	Ind (pH)
1	2.400000	34.154	2.9309	0	459.59
2	2.500000	46.252	-18.572	0	3.4318
3	2.550000	51.113	5.2421	0	162.00
4	2.850000	69.000	-7.4244	0	201.96
5	2.412000	38.711	-2.4063	0	404.64
>6	2.483000	51.261	-1.0793	0	4304.79

S22

antenna2 frequenc 2412MHz-2500 MHz/5150MHz-5850MHz



S21 (Isolation degree)

antenna1/2 frequenc 2412MHz-2500 MHz/5150MHz-5850MHz

