

台湾永旭科技股份有限公司

产品承认书

产品名称 (Product Name): 天线

规格型号描述 (Specification Mdel): S30, L450, 黑色

客户名称 (Customer): 瀚王

物料编码 (Material Number): 07530450

送样时间 (Date): 2020-09-22

台湾永旭科技股份有限公司 (Supplier Signature)		
工程部 (Design)	品质部 (Check)	市场部 (Approval)
袁宗麟	王玉娣	邓小梅

广州市瀚王计算机有限公司 (Customer Approved By)		
确认 (Signature)	审核 (Check)	批准 (Approval)
结果：接受 (Pass) 拒绝 (NG)		
意见 (Remark):		

一、PRODUCT DESCRIPTION

Series S30 is a balanced, side-fed, dipole-type, high efficiency antenna for 2.4/5 GHz applications, including WiFi, Bluetooth, Zigbee and others.

This antenna is made from poly-flexible material with small size 35*11*0.1mm, and has double-sided adhesive tape for easy “peel and stick” mounting.

This balanced antenna with ground plane independent design offers various cable length options for ease of integration into various devices.



二、ANTENNA PERFORMANCE

1、RF TEST CONDITIONS

All measurements are done of the antenna mounted on a PC/ABS material block of 1mm thickness with VNA Agilent 5071C and Over-The-Air (OTA) chamber.

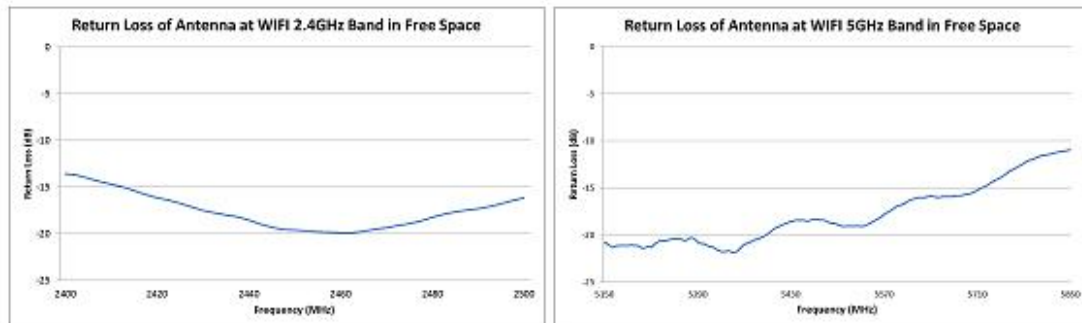


2、ANTENNA PERFORMANCE

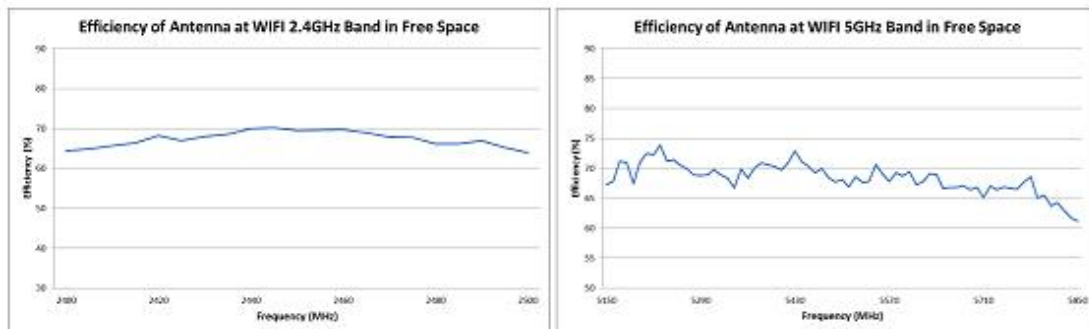
Description	Equipment	Requirement	
Frequency Range	VNA E5071C	2.4-2.5GHz	5.15-5.85GHz
Return Loss	VNA E5071C	< -10 dB	
Peak Gain (Max)	OTA Chamber	2.0dBi	2.0dBi
Average Total Efficiency	OTA Chamber	>65%	>68%
Polarization	OTA Chamber	Linear	
Input Impedance	VNA E5071C	50 ohms	

When implement into the system, the frequency resonant might be off-tune due to the loading of surrounding components especially metal plane. Yongxu can offer assistant to choose the best location and best tuning in-order to meet this peak gain requirement.

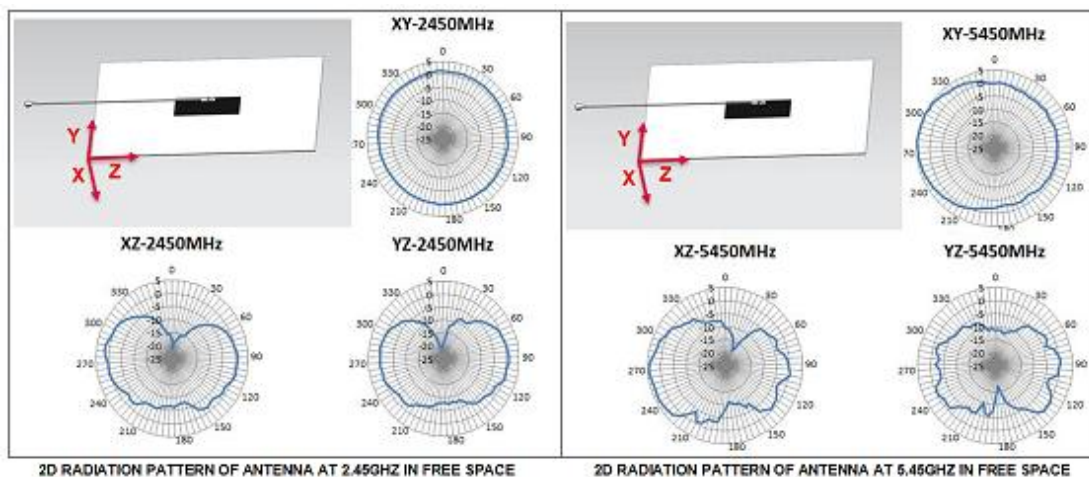
3、RETURN LOSS PLOT

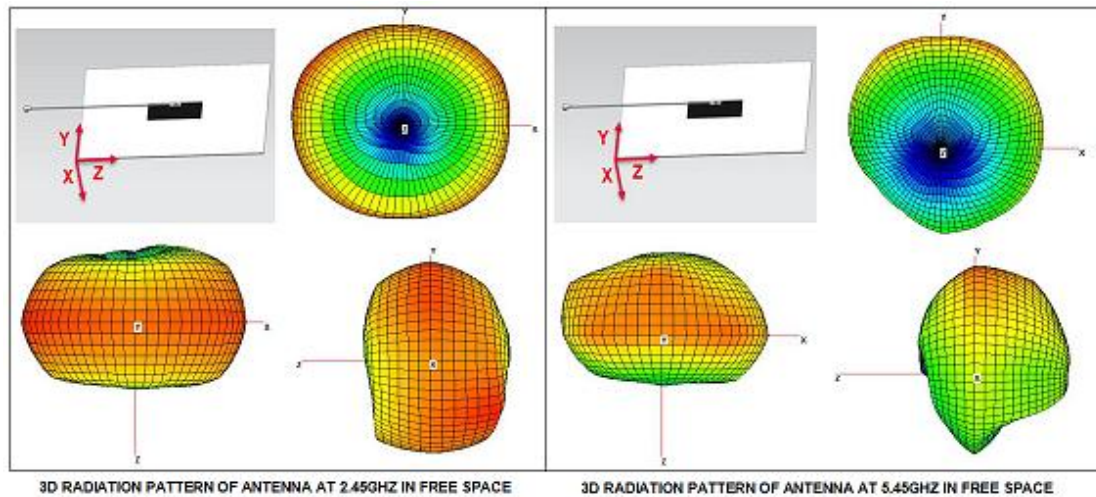


4、EFFICIENCY PLOT



5、RADIATION PATTERN

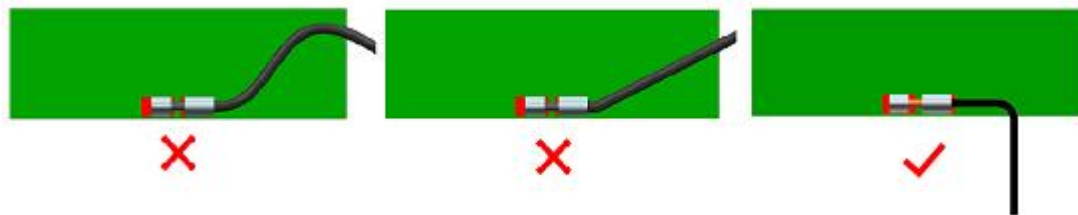




三、 ASSEMBLY GUIDELINE

The flex antenna comes with an adhesive 3M467 for assemble onto the plastic wall of the system. The surface should be smooth with $Ra < 1.6\mu m$, and need to clean the surface before sticking this product. The antenna cannot be placed on a metallic surface.

During the assembly of the antenna in a device, the cable needs to be positioned away from the antenna flex to achieve best performance. If the cable crosses into the antenna flex, the antenna performance will be degraded.



四、 THE ANTENNA PERFORMANCE VARIATION WITH CABLE LENGTH

1、 CABLE LOSS

DESCRIPTION	TEST CONDITION	REQUIREMENTS	
Frequency Range	2.4GHz/5GHz	2GHz~3GHz	5GHz~6.0GHz
Attenuation	1m cable measured by VNA5071C	$\leq 0.5dB/m$	$\leq 0.5dB/m$

2、 CABLE LENGTH AFFECT THE ANTENNA PERFORMANCE

Balance antenna resonance is insensitive by cable's length, but the cable's loss will affect the total efficiency.

3、FOR EXAMPLE

Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Note
2400	-2.61	54.85	
2420	-2.36	58.06	
2440	-2.25	59.52	
2460	-2.26	59.36	
2480	-2.49	56.33	
2500	-2.64	54.49	
5150	-2.72	53.42	
5200	-2.49	56.40	
5250	-2.46	56.71	
5300	-2.62	54.69	
5350	-2.56	55.52	
5400	-2.53	55.84	
5450	-2.53	55.85	
5500	-2.67	54.08	
5550	-2.51	56.10	
5600	-2.59	55.13	
5650	-2.76	52.95	
5700	-2.75	53.04	
5750	-2.76	52.96	
5800	-2.84	52.01	
5850	-3.13	48.62	

The data is just for your reference, all accurate performance should be according to the test results in the OTA chamber.