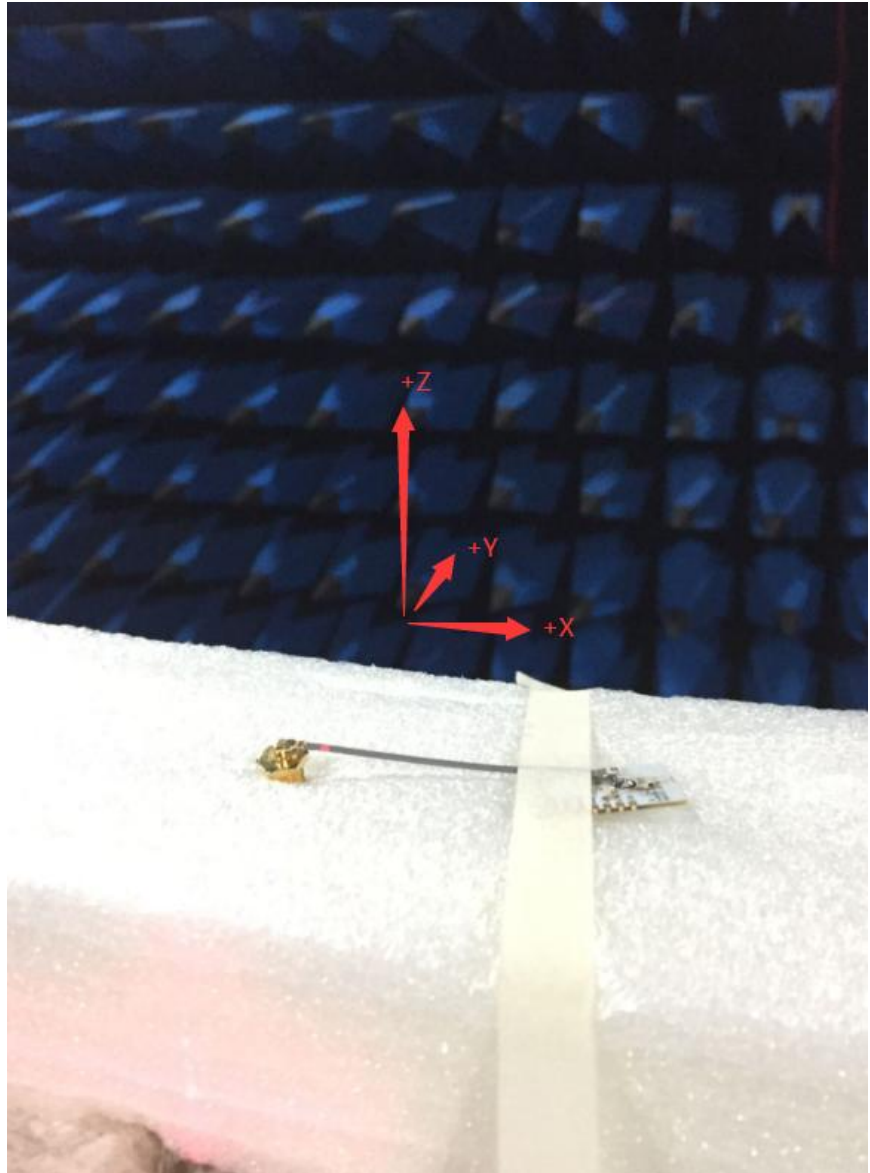


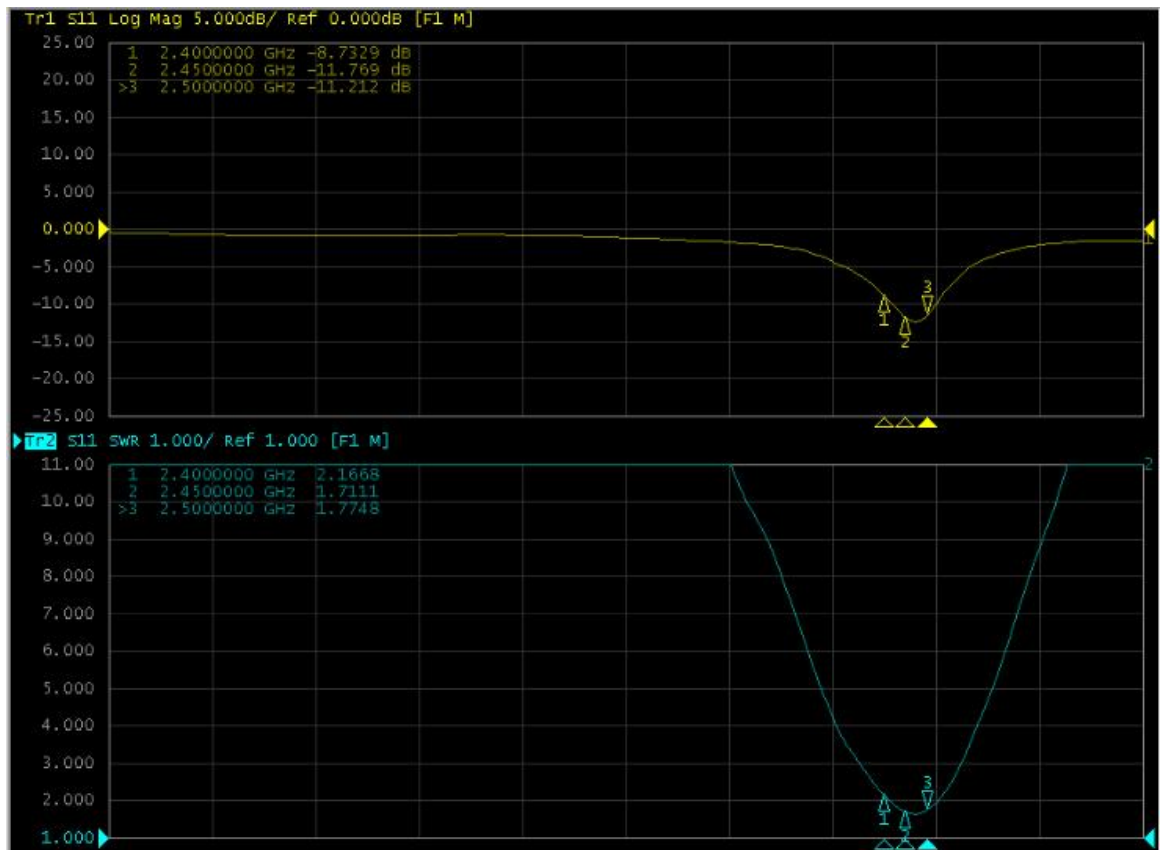
Tuya Antenna Spec

CUSTOMER NAME:	Tuya Smart Inc
PRODUCT NAME:	ZS3L
Ren Feng P/N:	Printed PCB antenna
WRITED:	Tiny
DATE:	20191120
VERSIONS:	A

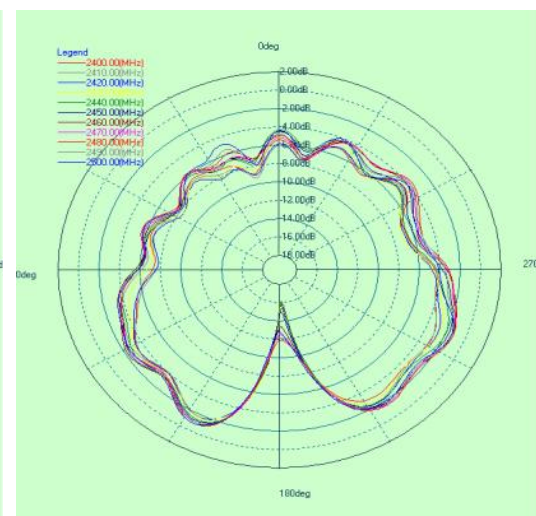
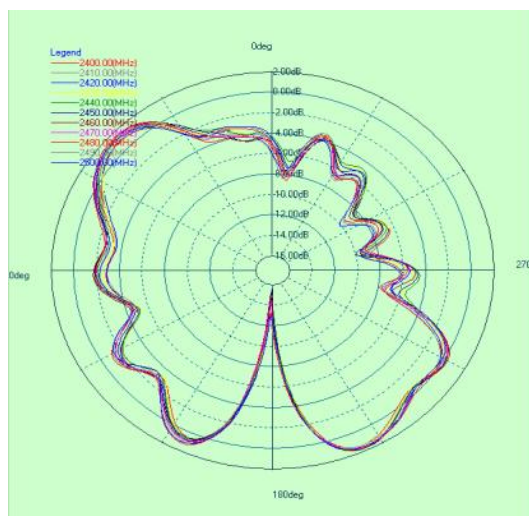
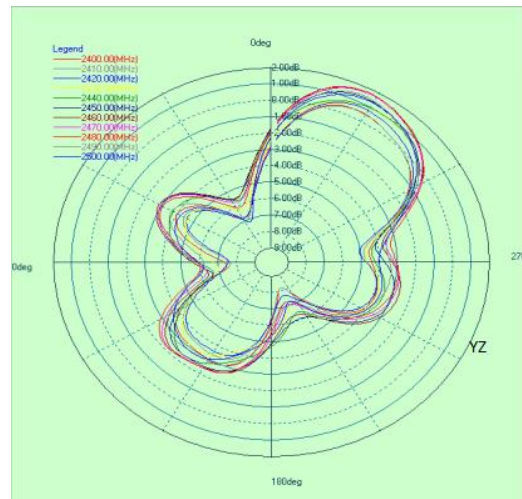
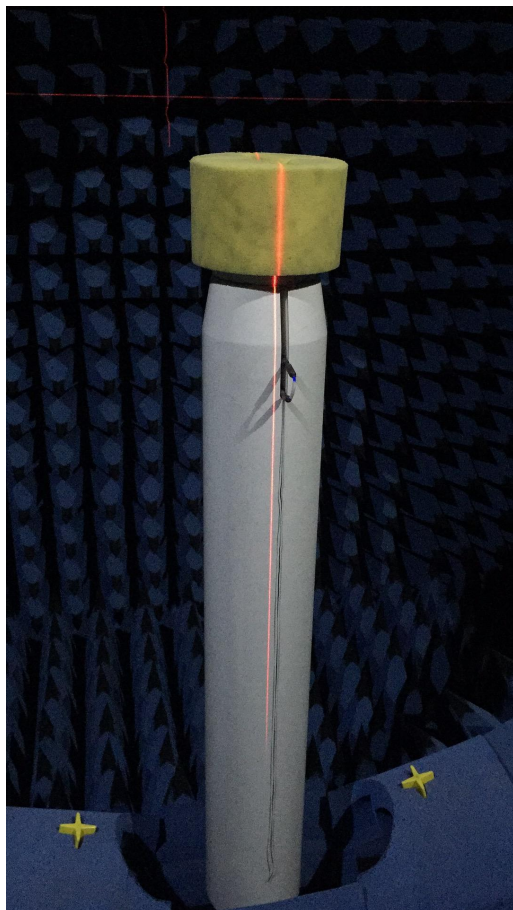
1- Test Module



2- Test Data and curve



Frequency (MHz)	2400	2450	2500
Return Loss	-8.73	-11.76	-11.21
VSWR	2.16	1.71	1.77



3- Efficiency and Gain

Frequency / MHz	Efficiency / dB	Efficiency / %	Gain/ dB
2400	-3.06	49.43	0.82
2410	-3.06	49.43	0.78
2420	-3.15	48.42	0.78
2430	-3.17	48.19	0.67

2440	-3.07	49.32	0.91
2450	-2.84	52	1.11
2460	-3.05	49.55	0.99
2470	-3.45	45.19	0.66
2480	-3.86	41.11	0.2
2490	-4.09	38.99	0.2
2500	-3.89	40.83	0.49