

INPAQ 2019 PSA

Global Components and RF Antenna Supplier



Integrated Design of LTCC/Thin Film

IOT surf on 5G mm-wave

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Customer :

Project : BT

Product : Chip Antenna

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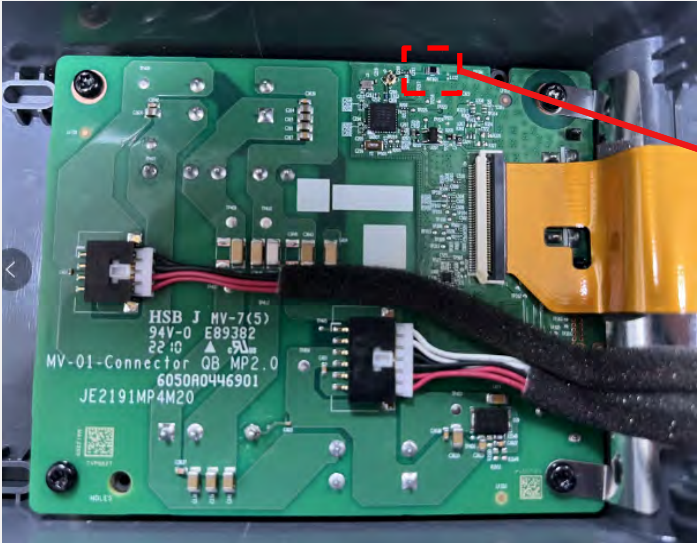
Approved by : ZhiWei Chen

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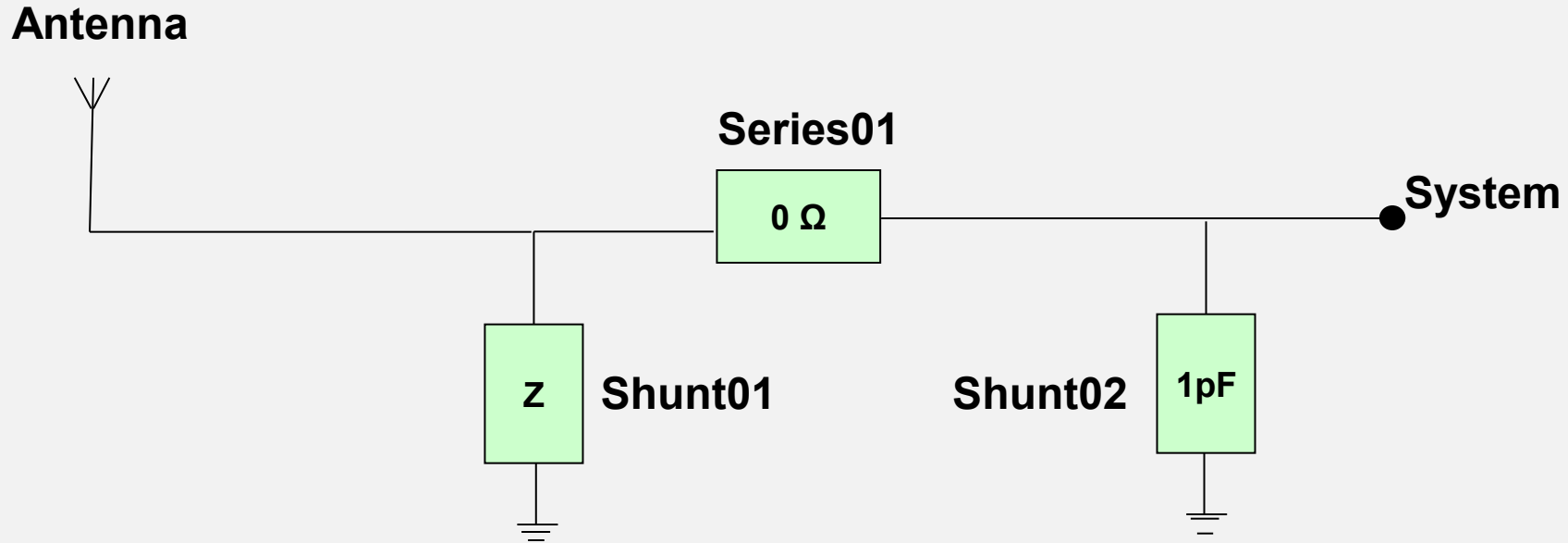
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Product / Antenna Overview



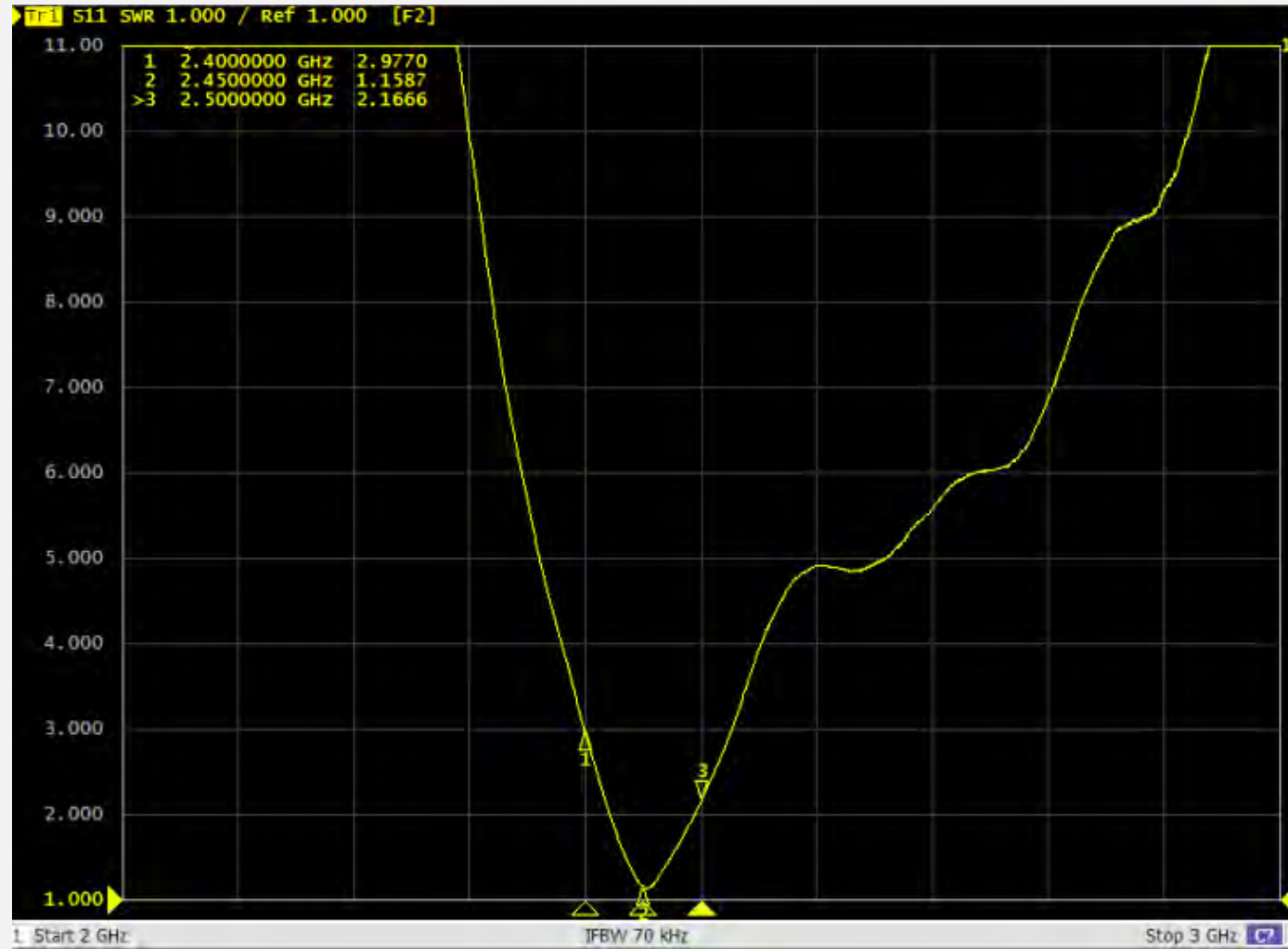
Application	Ant Type	Frequency (MHz)
BT	ACA-2012	2400 ~ 2500

Match Circuit



Location	Description	Vendor
Series01	0 Ω	Murata
Shunt01	N/A	N/A
Shunt02	1pF	Murata

Antenna VSWR



Test Setup for Radiation Pattern Measurement

ETS Ams-8600 12.91x3.05x3.05 m3 Tapered Chamber

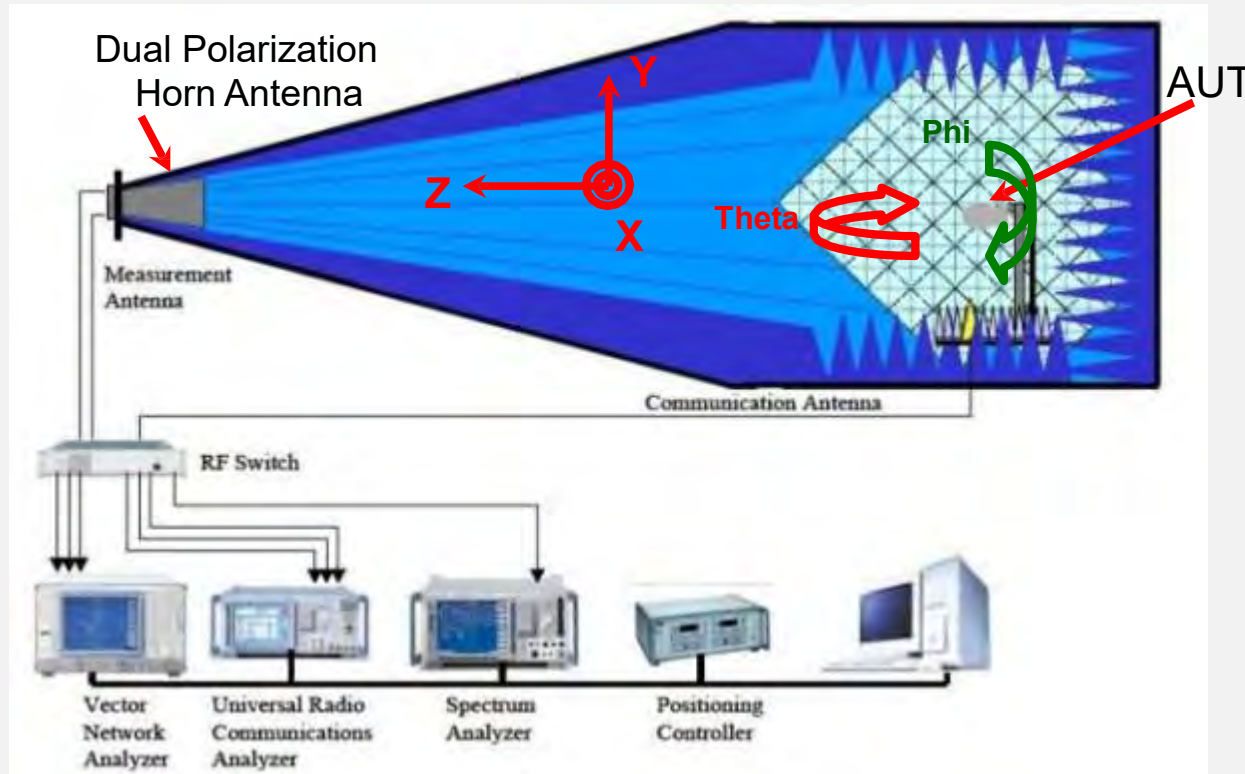


Figure 1: System diagram for test system including compact-size tapered anechoic chamber and optional test instrumentation

QUIPMENT	BRAND	MODULE TYPE
Spectrum	Agilent	E4402B
Signal Generator	Agilent	8960
Switch	Agilent	3499A
Switch	ETS	2090
Network Analyzer	Agilent	N5230A



Antenna Gain & Efficiency

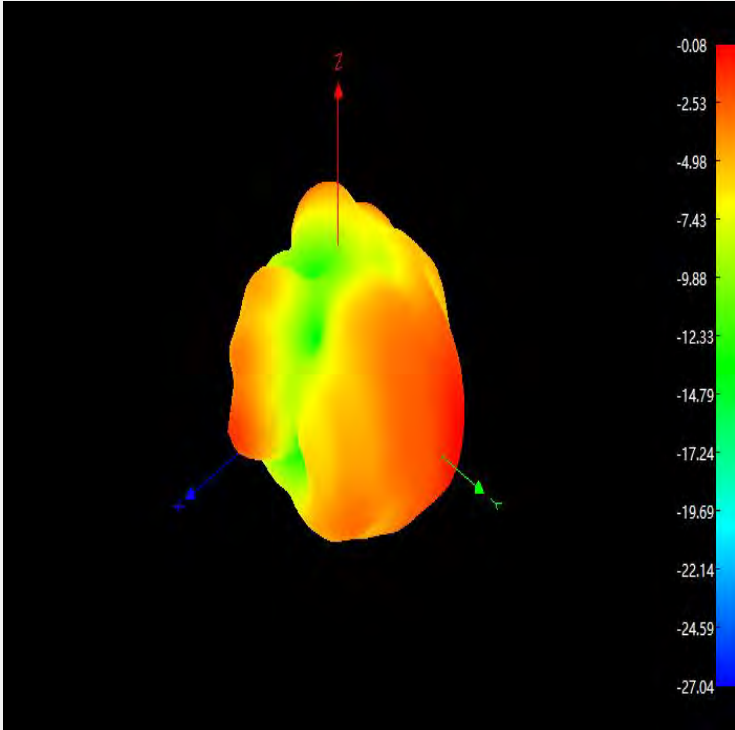


Frequency (MHz)	Peak Gain (dBi)	Average Gain (dB)	Efficiency (%)
2400	1.02	-7.39	18.22
2410	1.13	-7.16	19.25
2420	1.28	-6.92	20.33
2430	1.35	-6.67	21.54
2440	1.45	-6.45	22.63
2450	1.56	-5.96	25.36
2460	1.47	-6.20	23.99
2470	1.32	-6.24	23.77
2480	1.21	-6.44	22.70
2490	1.16	-6.65	21.64
2500	1.08	-6.85	20.65

3D Radiation Pattern Results



@ 2450MHz



Comments

1. 整機組裝後，排線會靠近Antenna，會需要固定排線避免影響到天線特性，如右圖所示
2. 天線效率18~25%

