

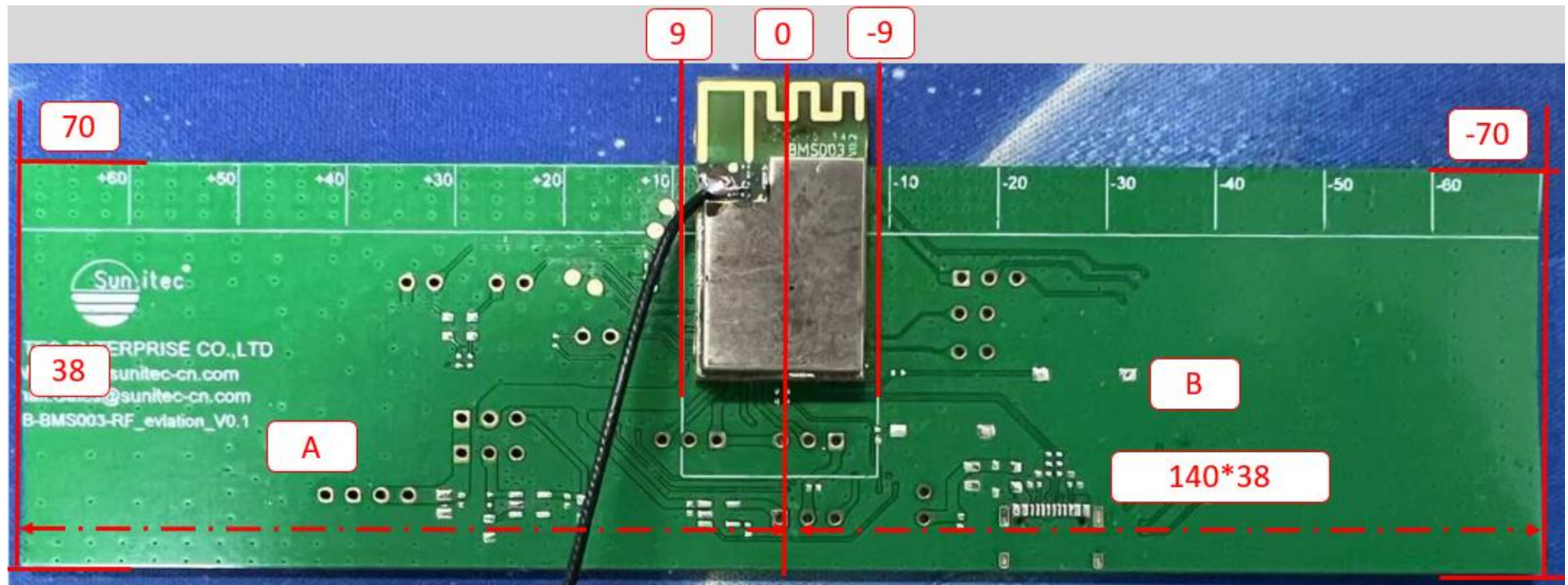


# 深圳市丰禾原电子科技有限公司 SUNITEC ENTERPRISE CO.,LTD.



Lite Mo 2024.05.05  
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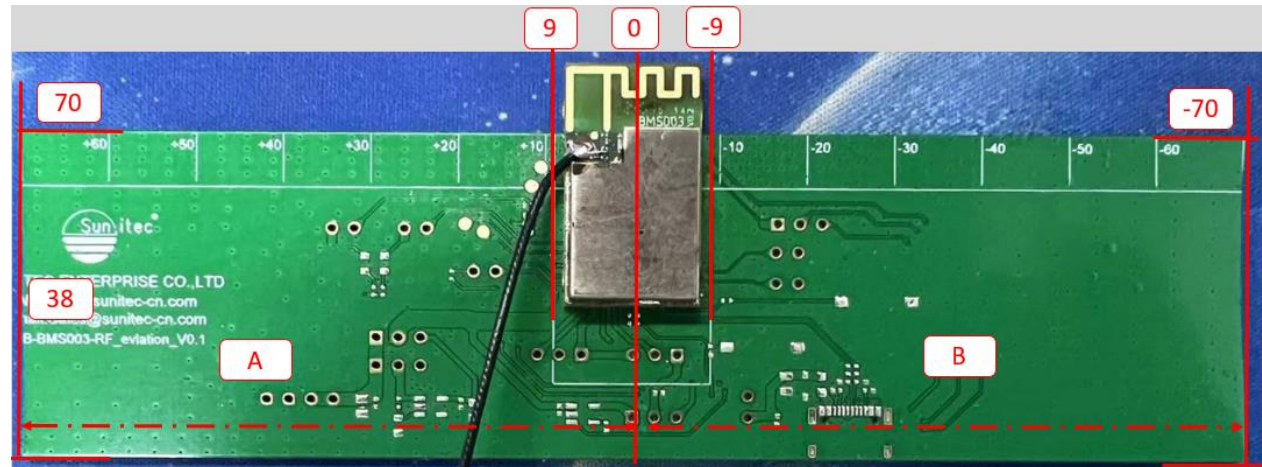
## Product Appearance



Unit:mm

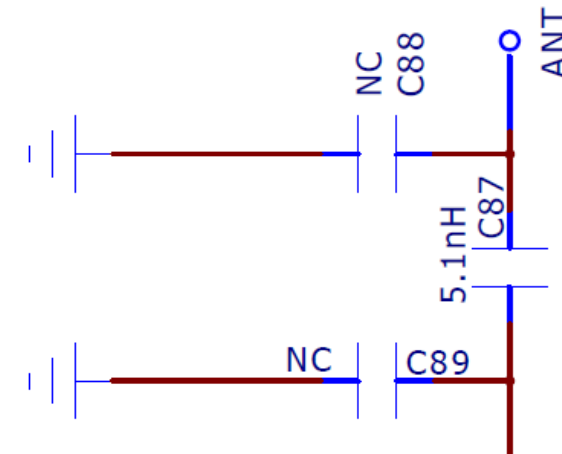
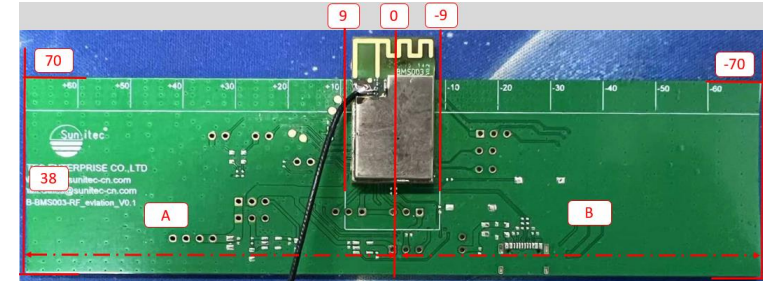
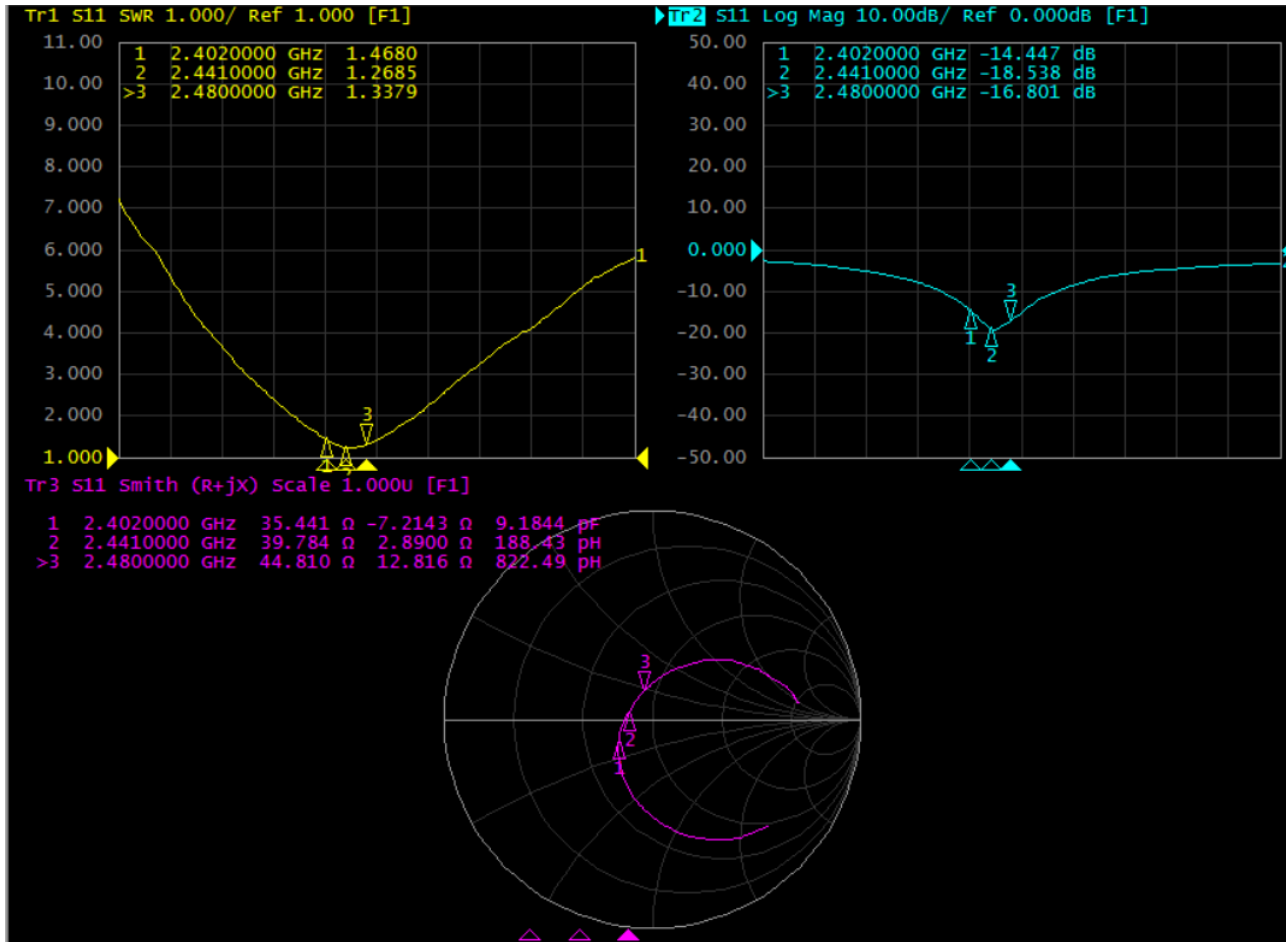
The experimental size changes are as follows:

- (1) B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)
- (2) A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)
- (3) A=B=10~70mm(sweep/10mm-step)



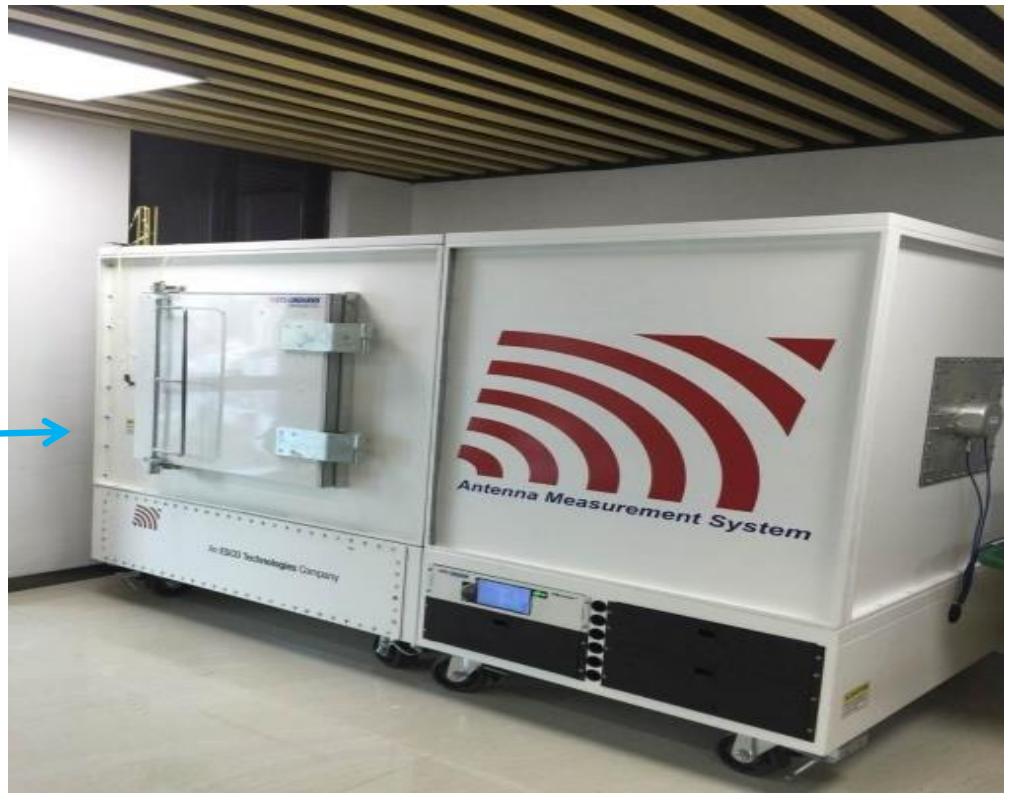
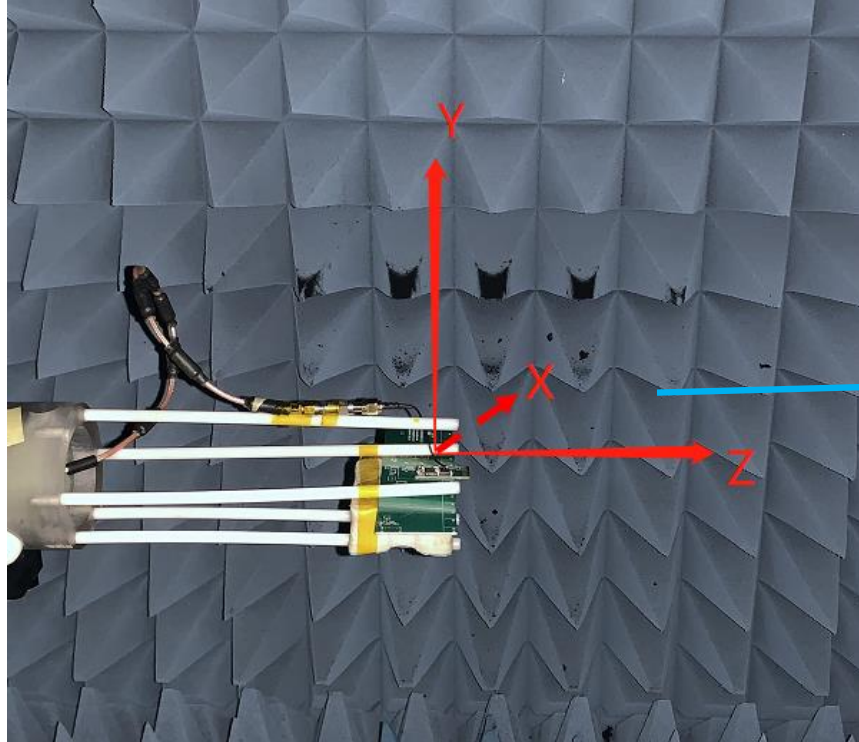
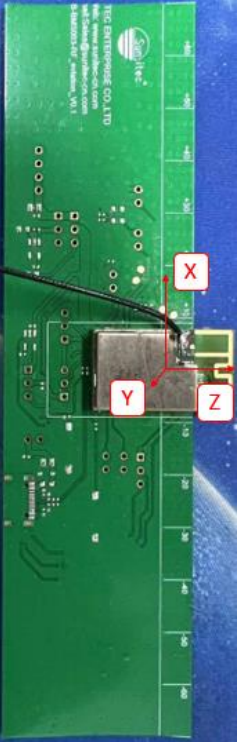
Unit:mm

## VSWR、Return loss and impedance :BMS003 EVB V0.2

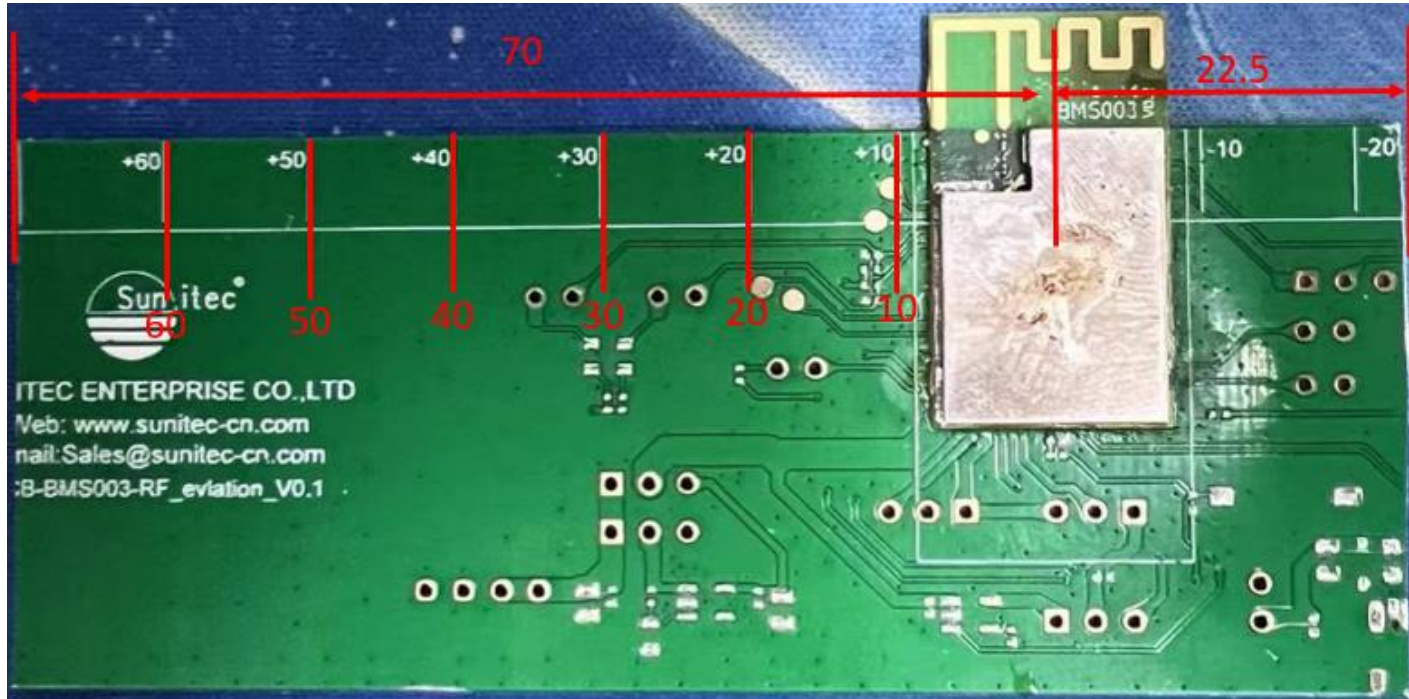


Antenna matching: C89=NC; C87=5.1nH; C88=NC

**ANT Test Settings:**



B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)

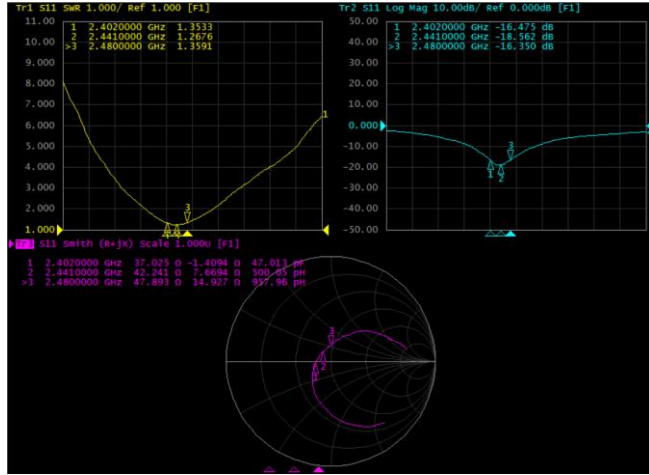


Unit:mm

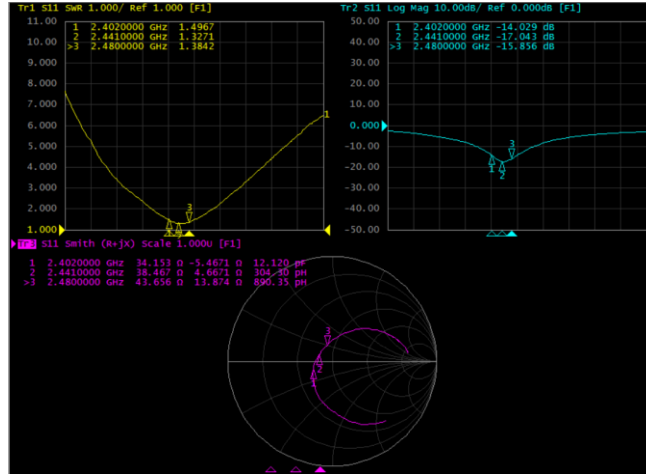


# BMS003 EVB V0.3 RF Performance Test Report

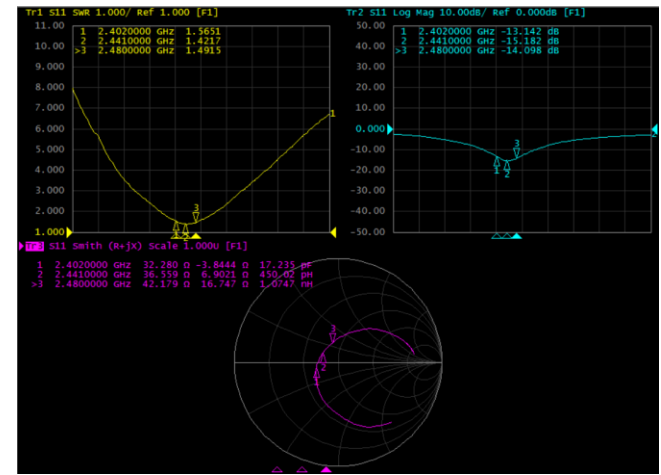
B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)---Network analyzer diagram



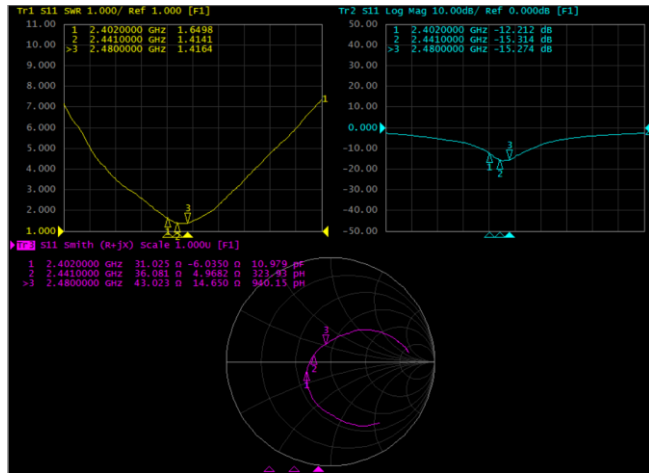
A=70mm



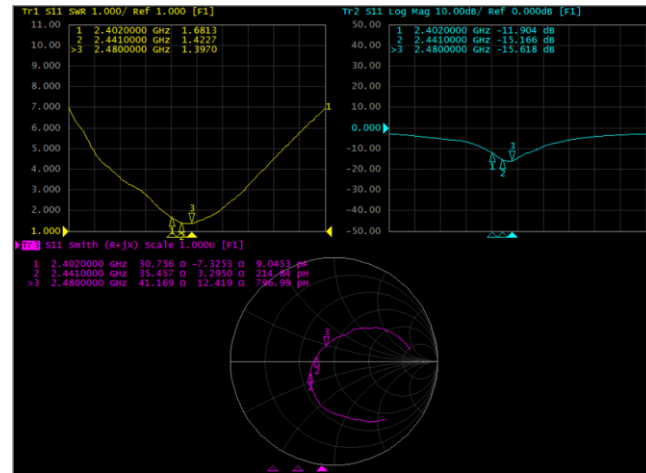
A=60mm



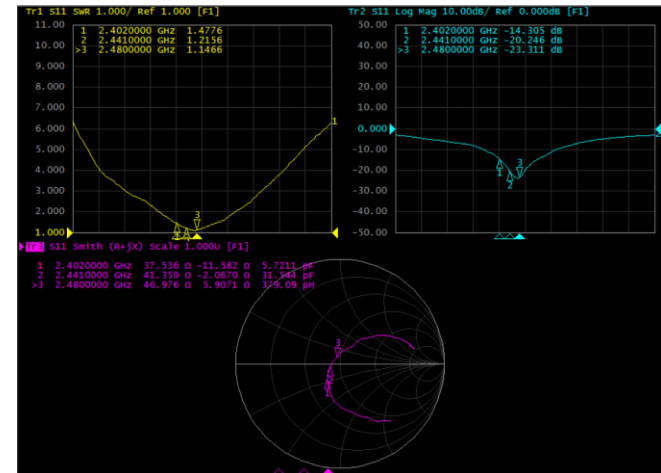
A=50mm



A=40mm

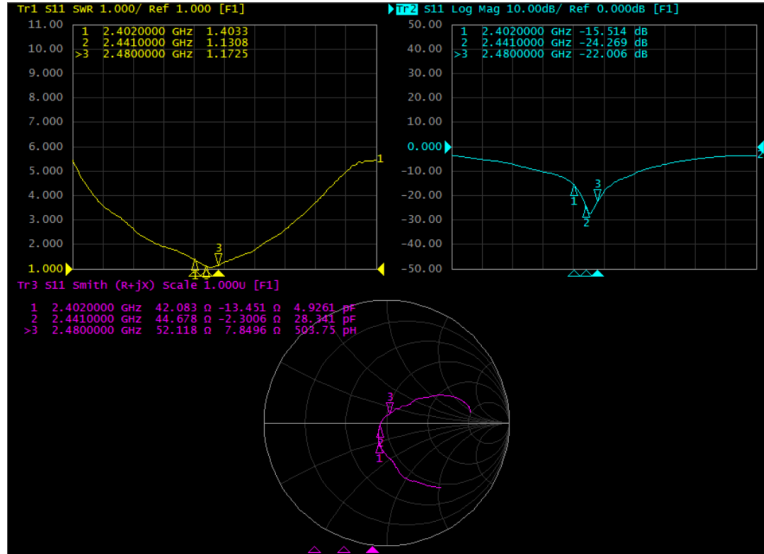


A=30mm



A=20mm

B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)---Network analyzer diagram

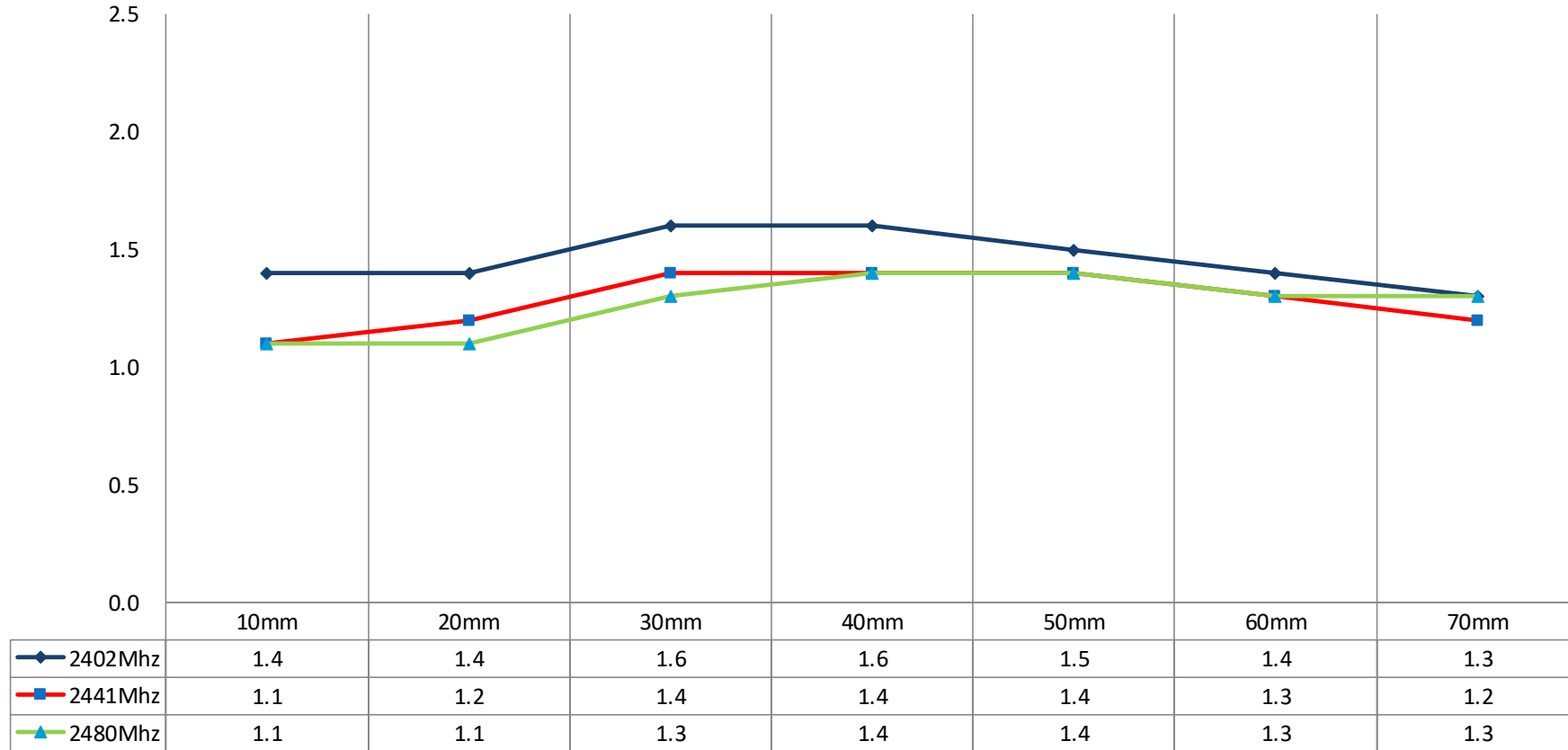


A=10mm



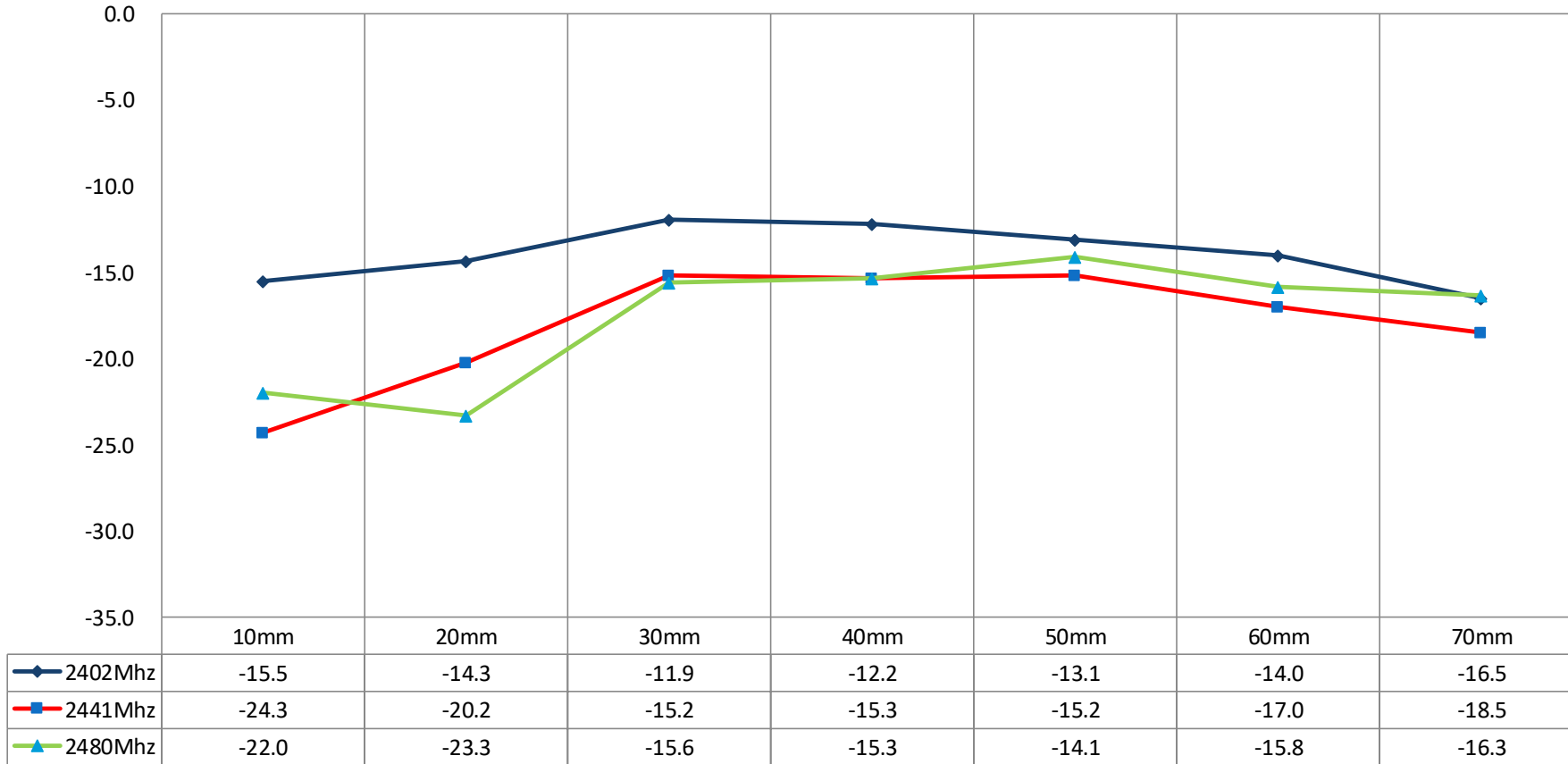
B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

VSWR table



B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

Return loss table(dB)



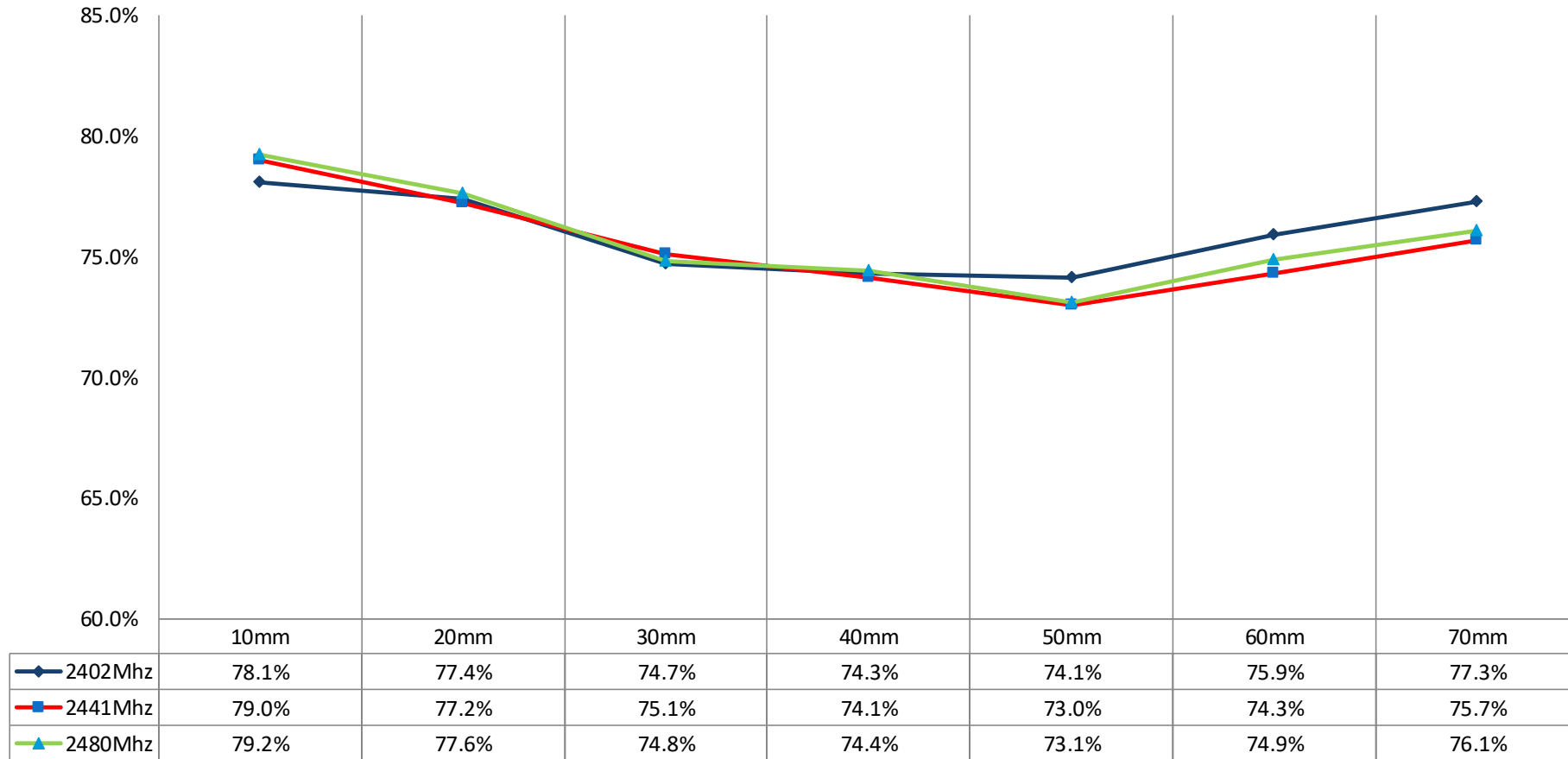
B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

Impedance table( $\Omega$ )



B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

Efficiency table(%)

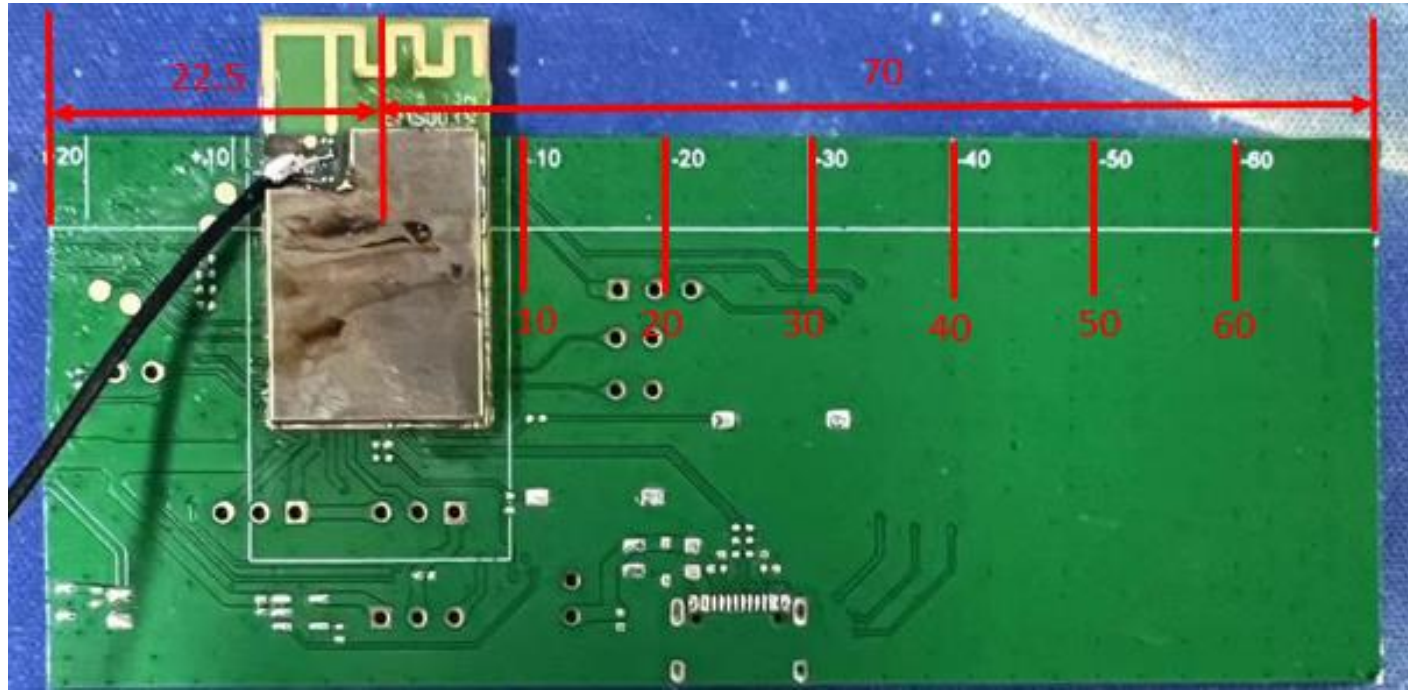


B=22.5mm(fixed), A=10~70mm(sweep/10mm-step)---Antenna performance chart

Gain table(dBi)



A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)



Unit:mm

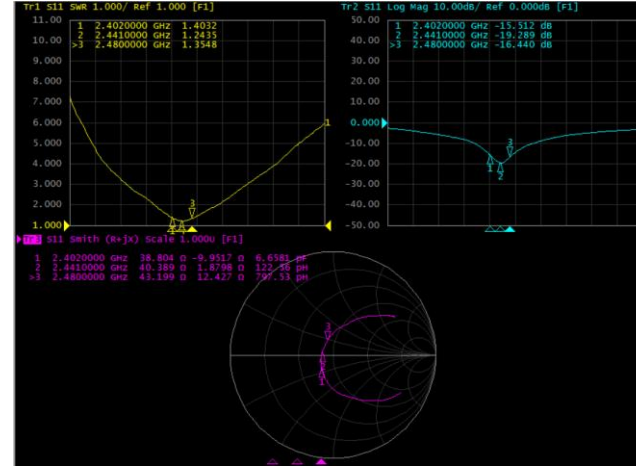


# BMS003 EVB V0.3 RF Performance Test Report

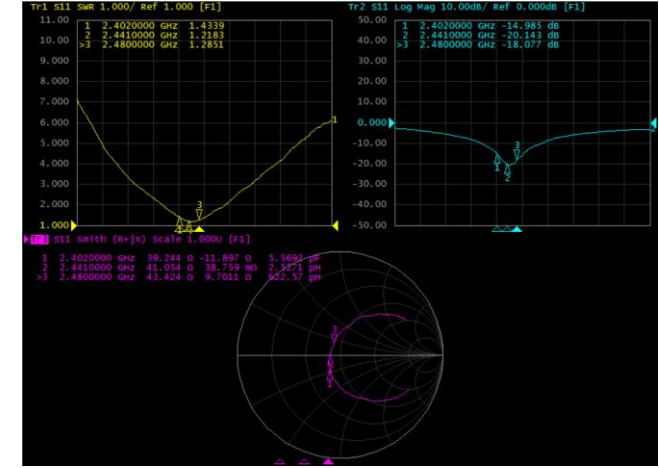
A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)---Network analyzer diagram



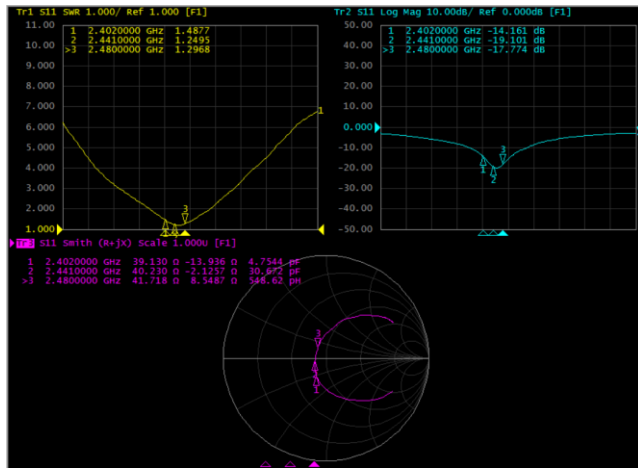
B=70mm



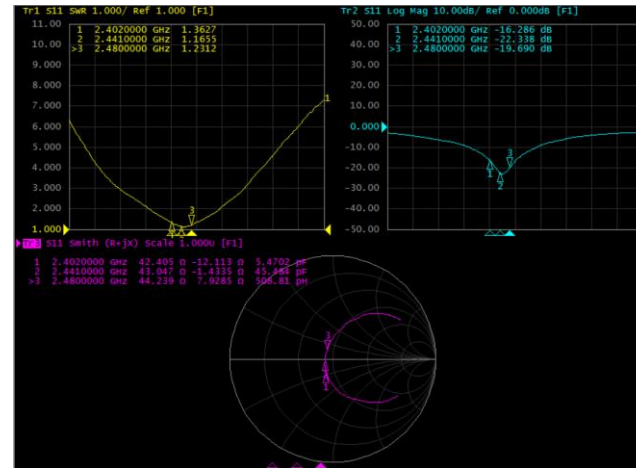
B=60mm



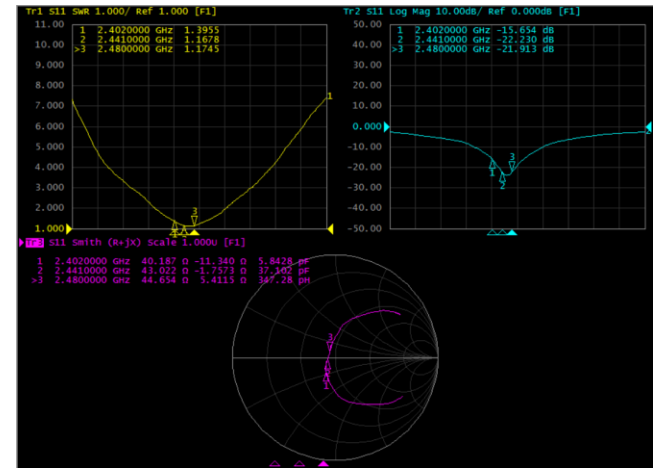
B=50mm



B=40mm

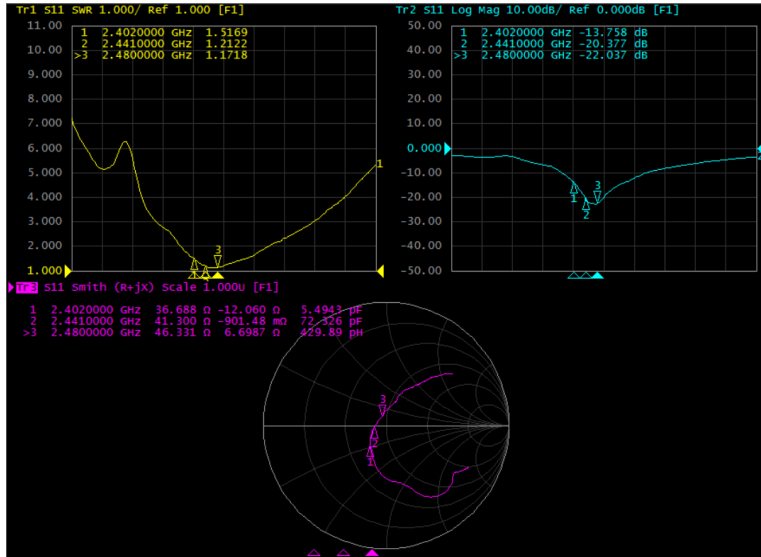


B=30mm



B=20mm

A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)---Network analyzer diagram

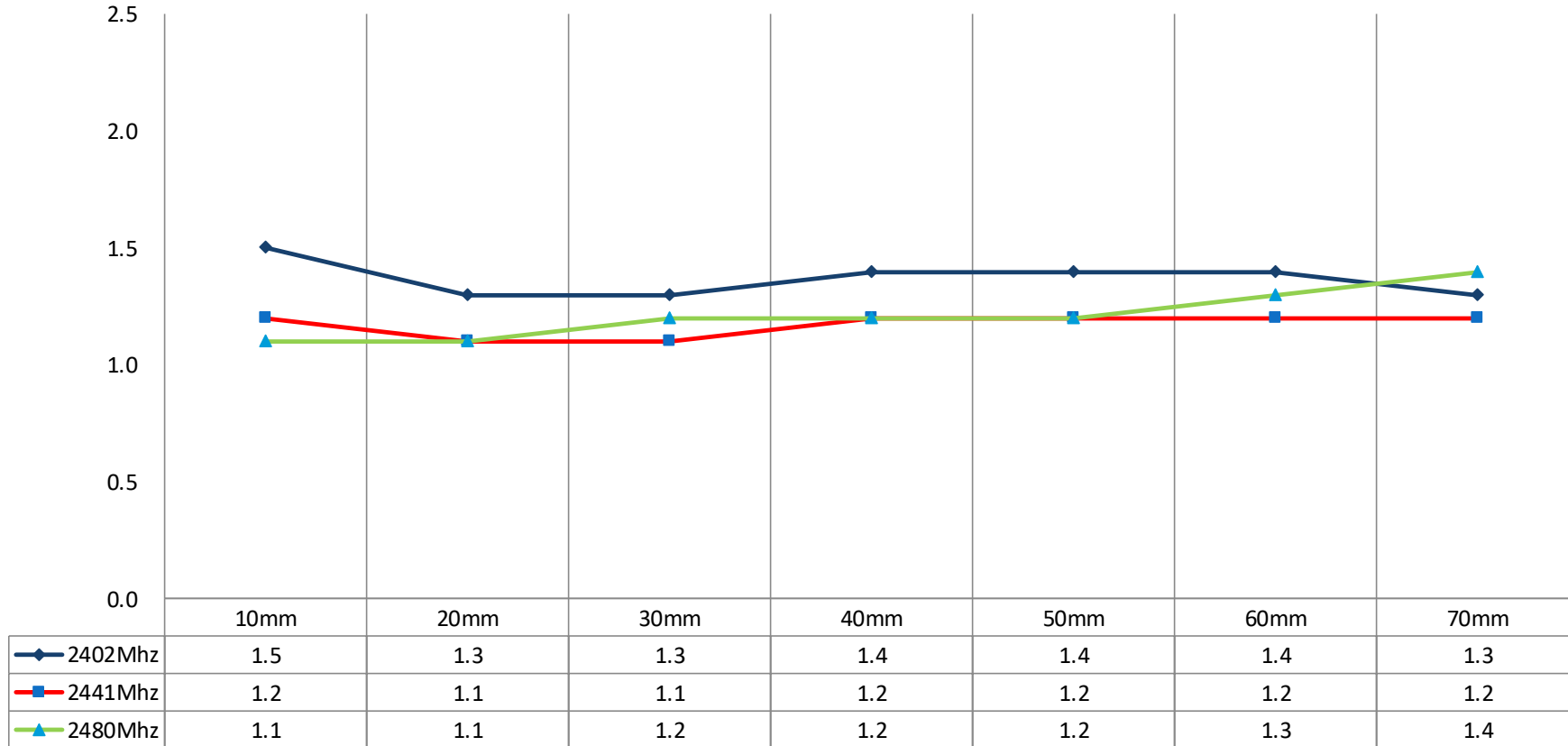


B=10mm



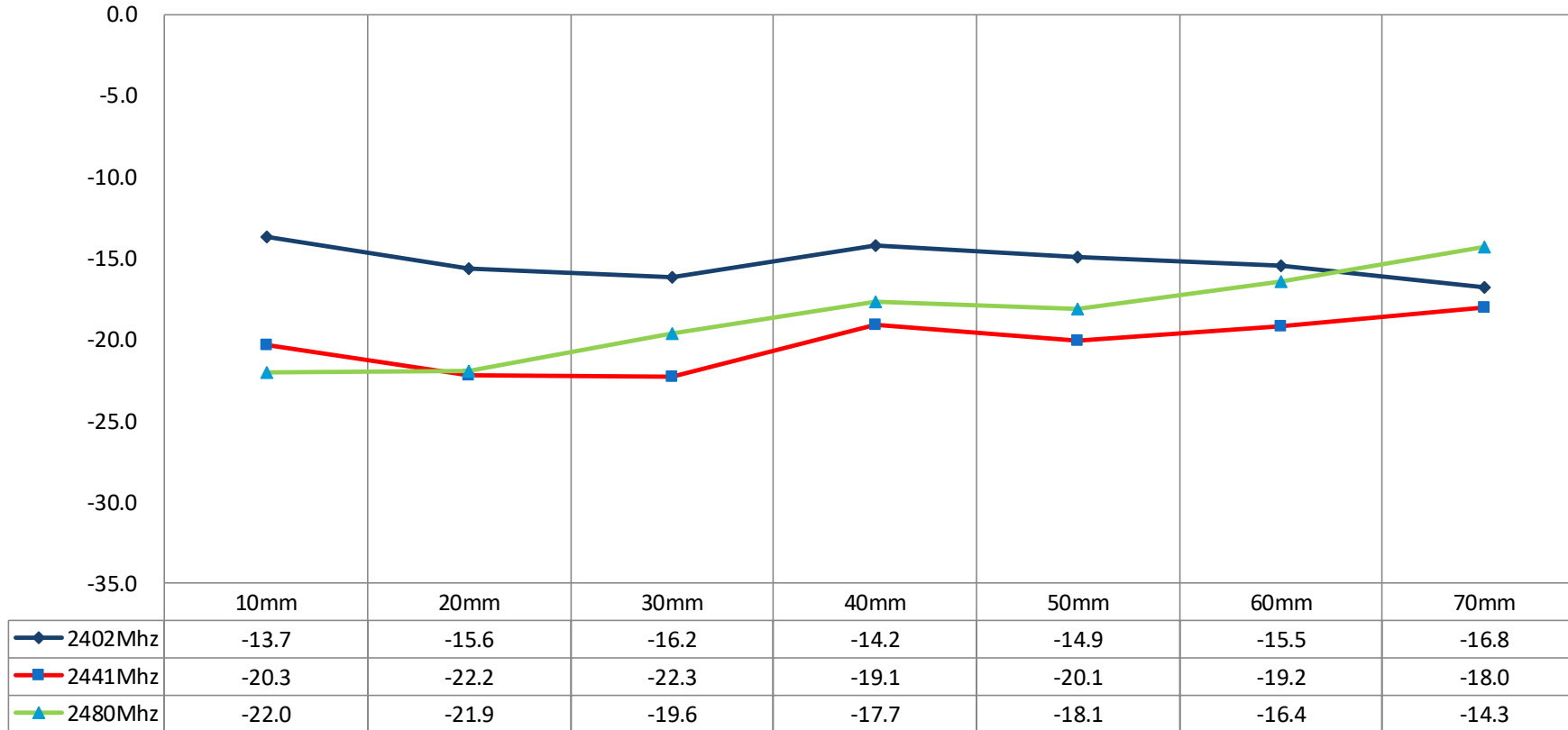
A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

VSWR table



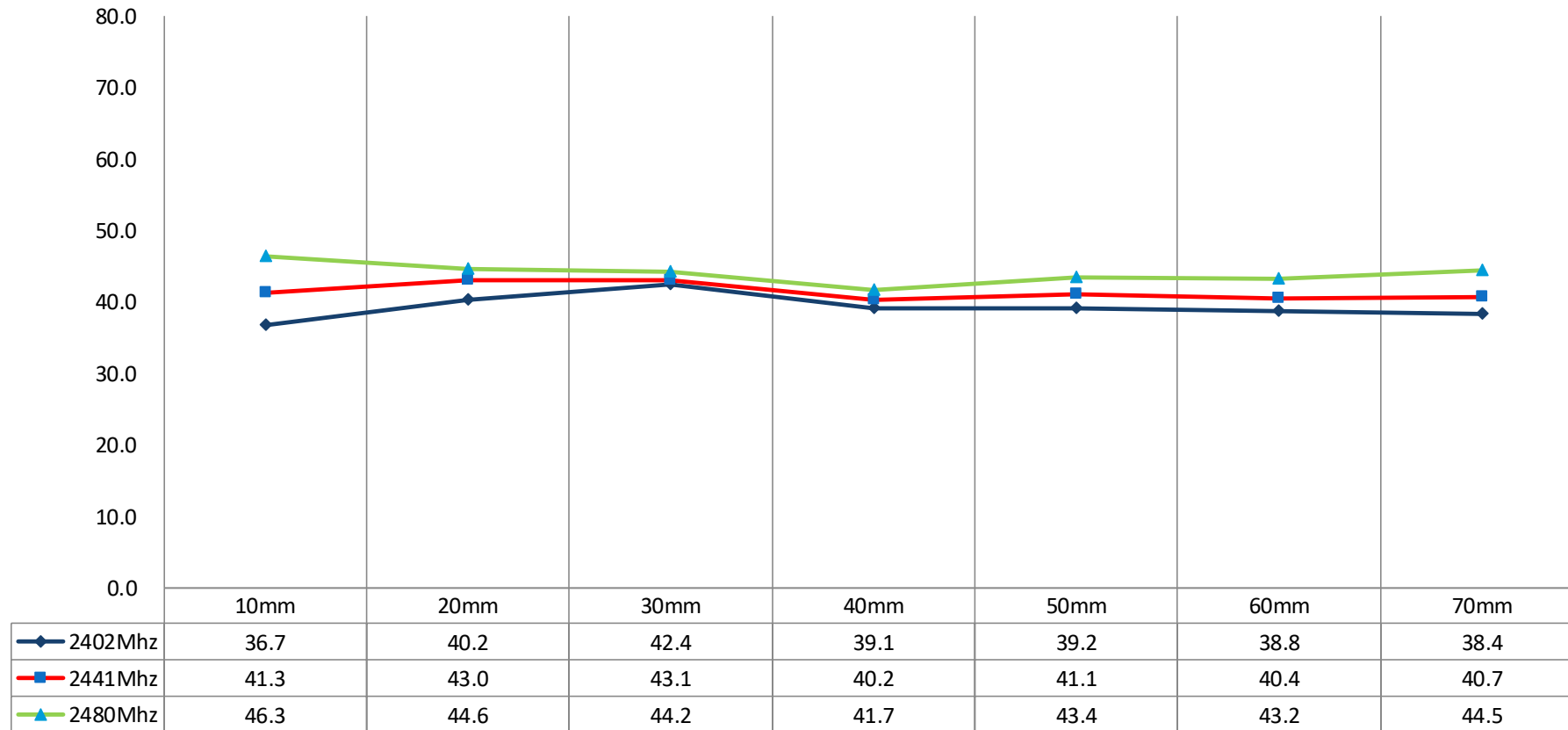
A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

Return loss table(dB)



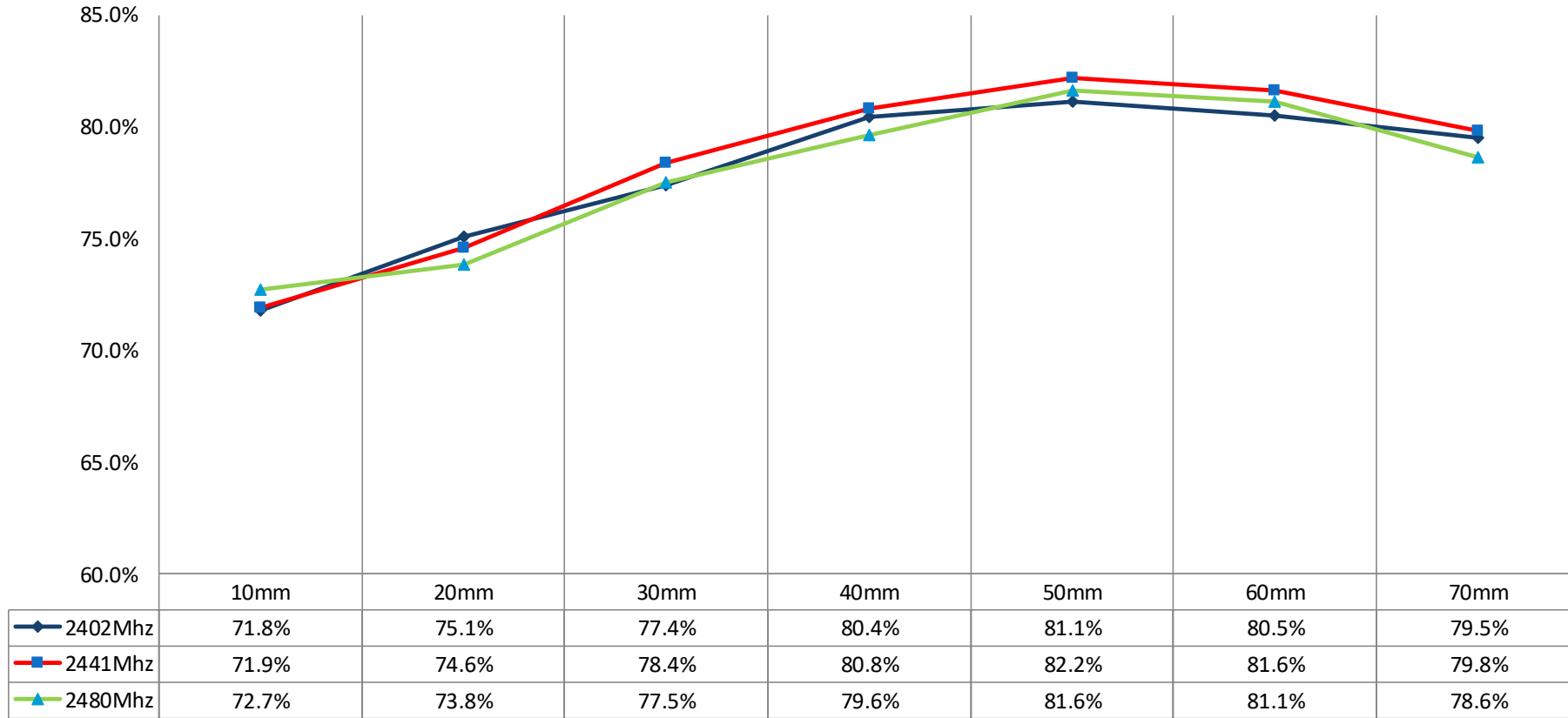
A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

Impedance table( $\Omega$ )



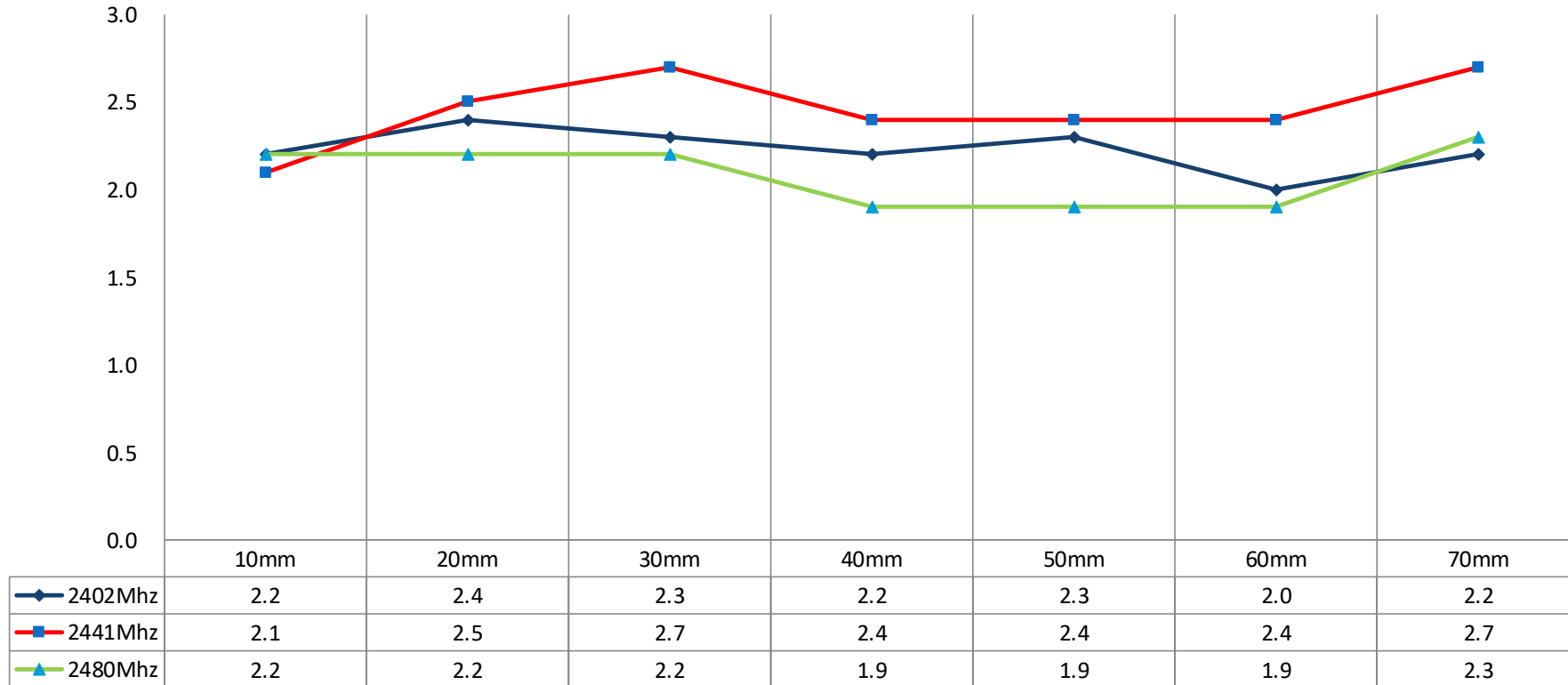
A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)---Antenna performance chart

Efficiency table(%)

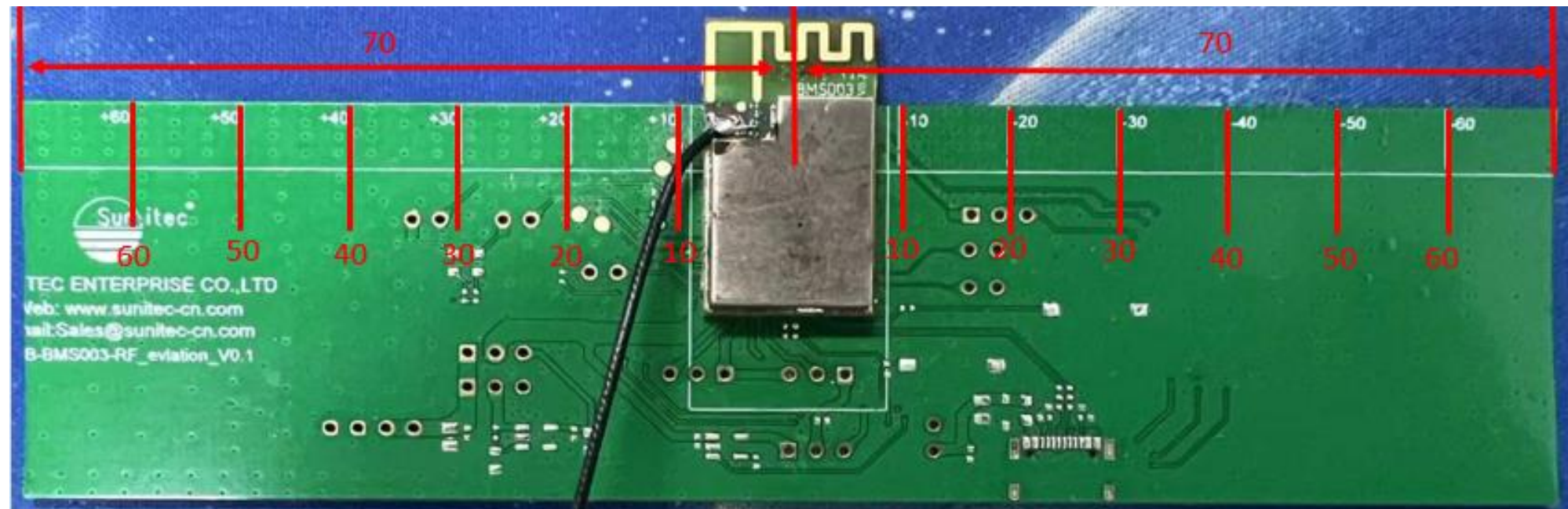


A=22.5mm(fixed), B=10~70mm(sweep/10mm-step)---Antenna performance chart

Gain table(dBi)

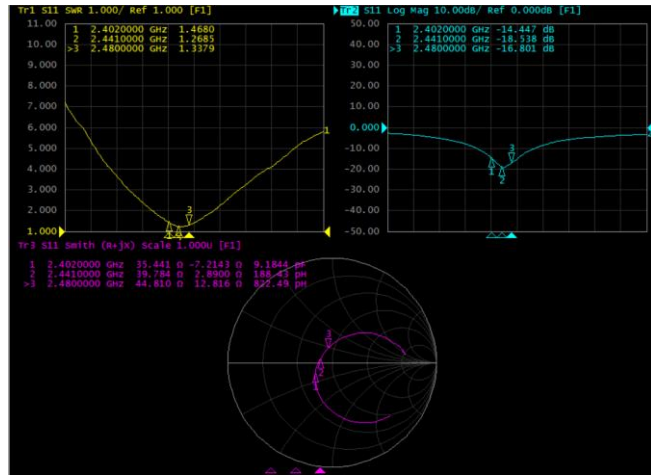


A=B=10~70mm(sweep/10mm-step)



Unit:mm

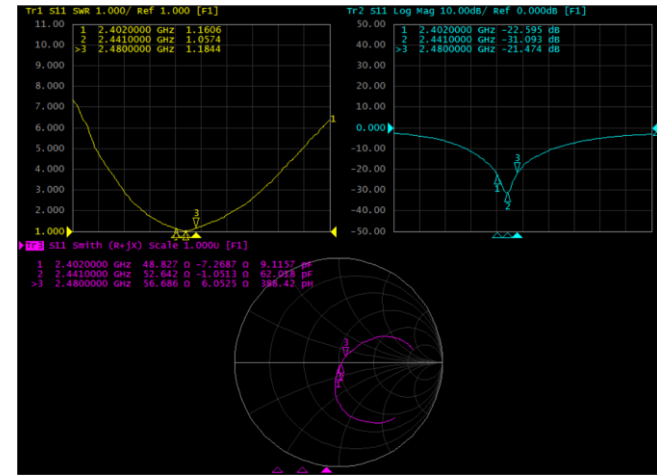
## A=B=10~70mm(sweep/10mm-step)---Network analyzer diagram



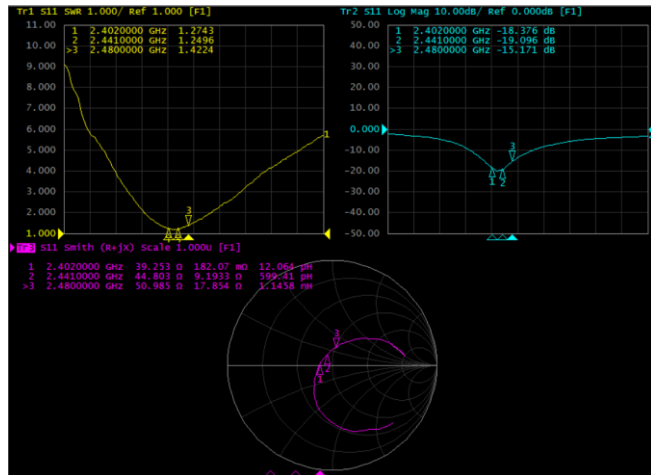
A=B=70mm



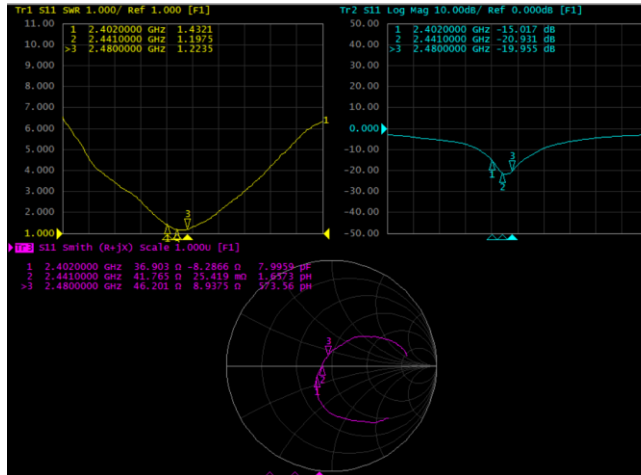
A=B=60mm



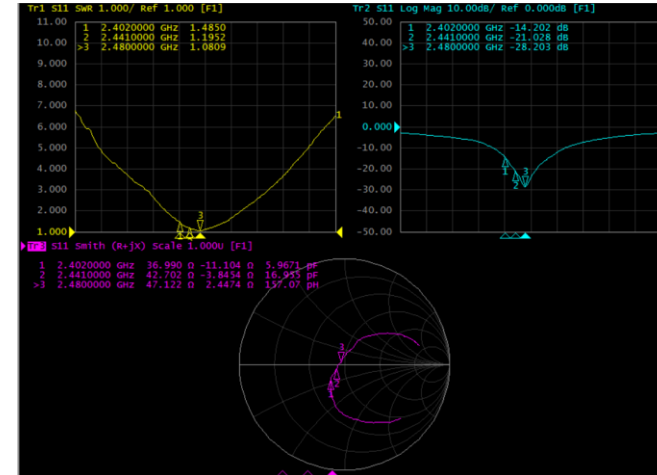
A=B=50mm



A=B=40mm

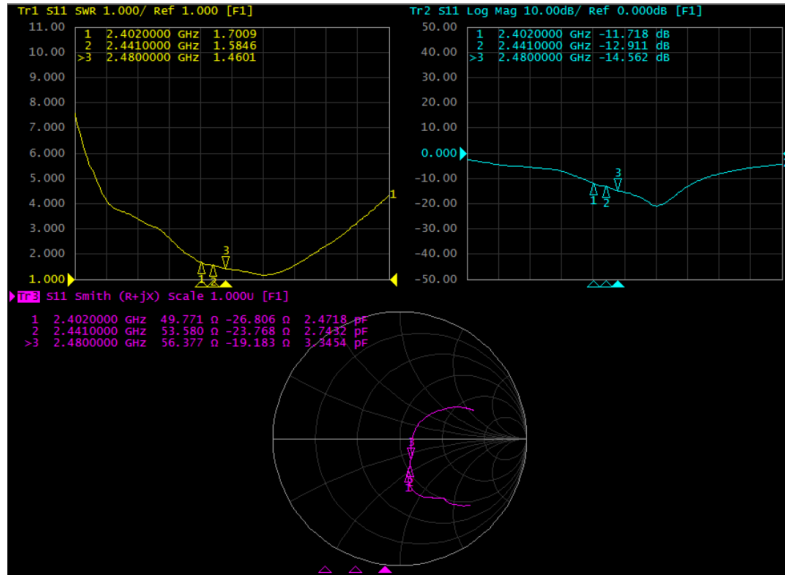


A=B=30mm



A=B=20mm

## A=B=10~70mm(sweep/10mm-step)---Network analyzer diagram

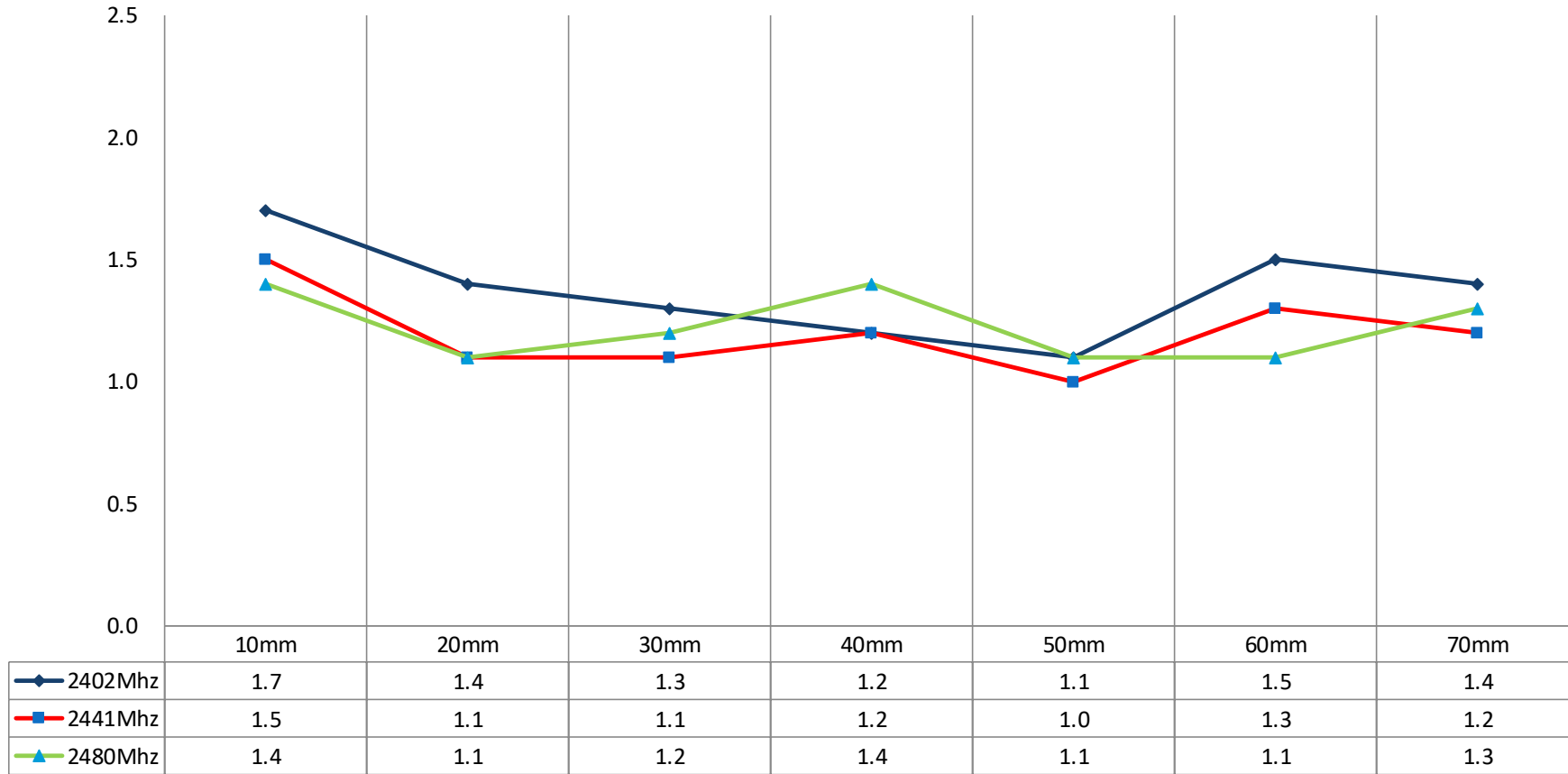


A=B=10mm



A=B=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

VSWR table



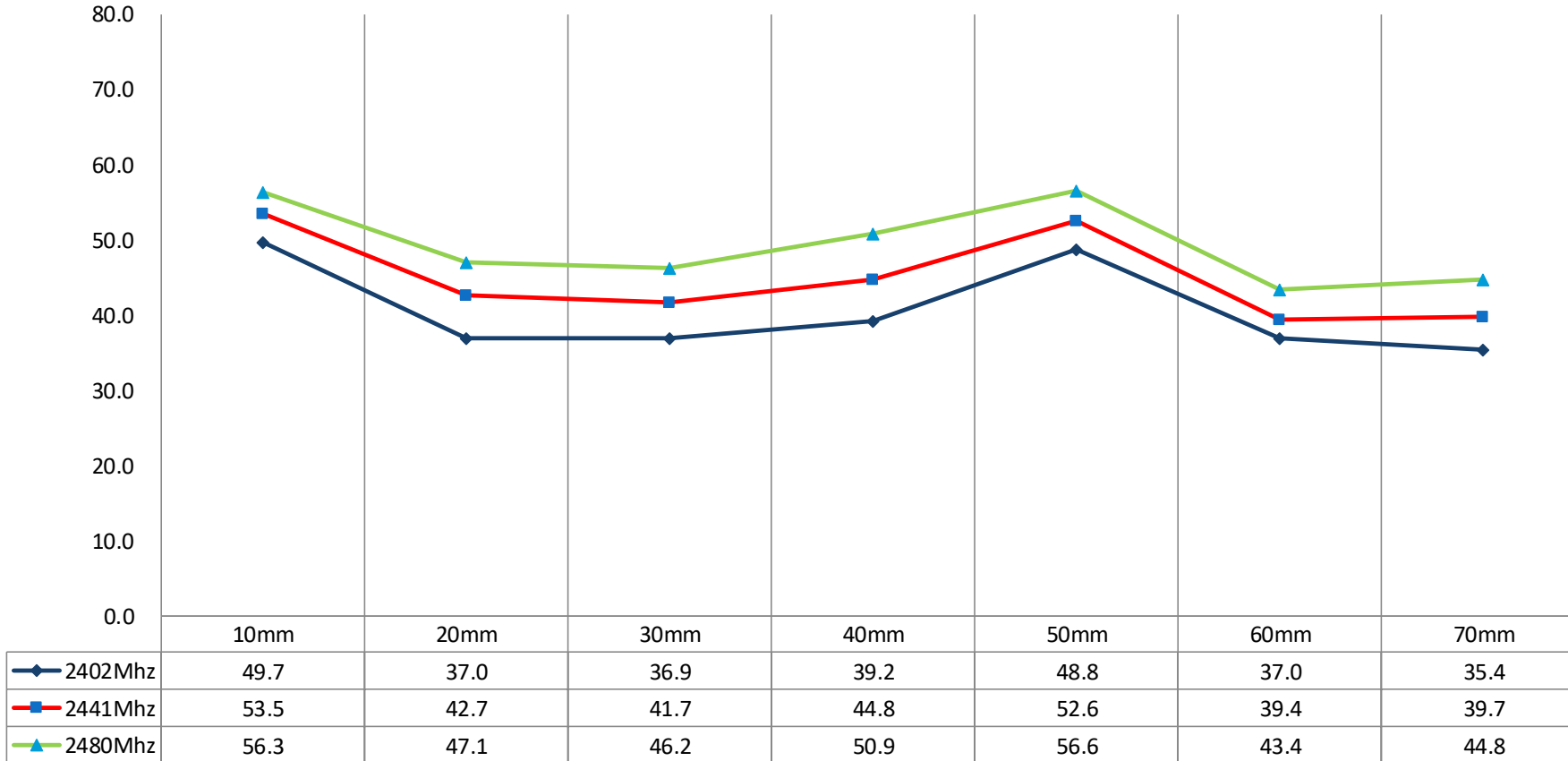
A=B=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

Return loss(dB)



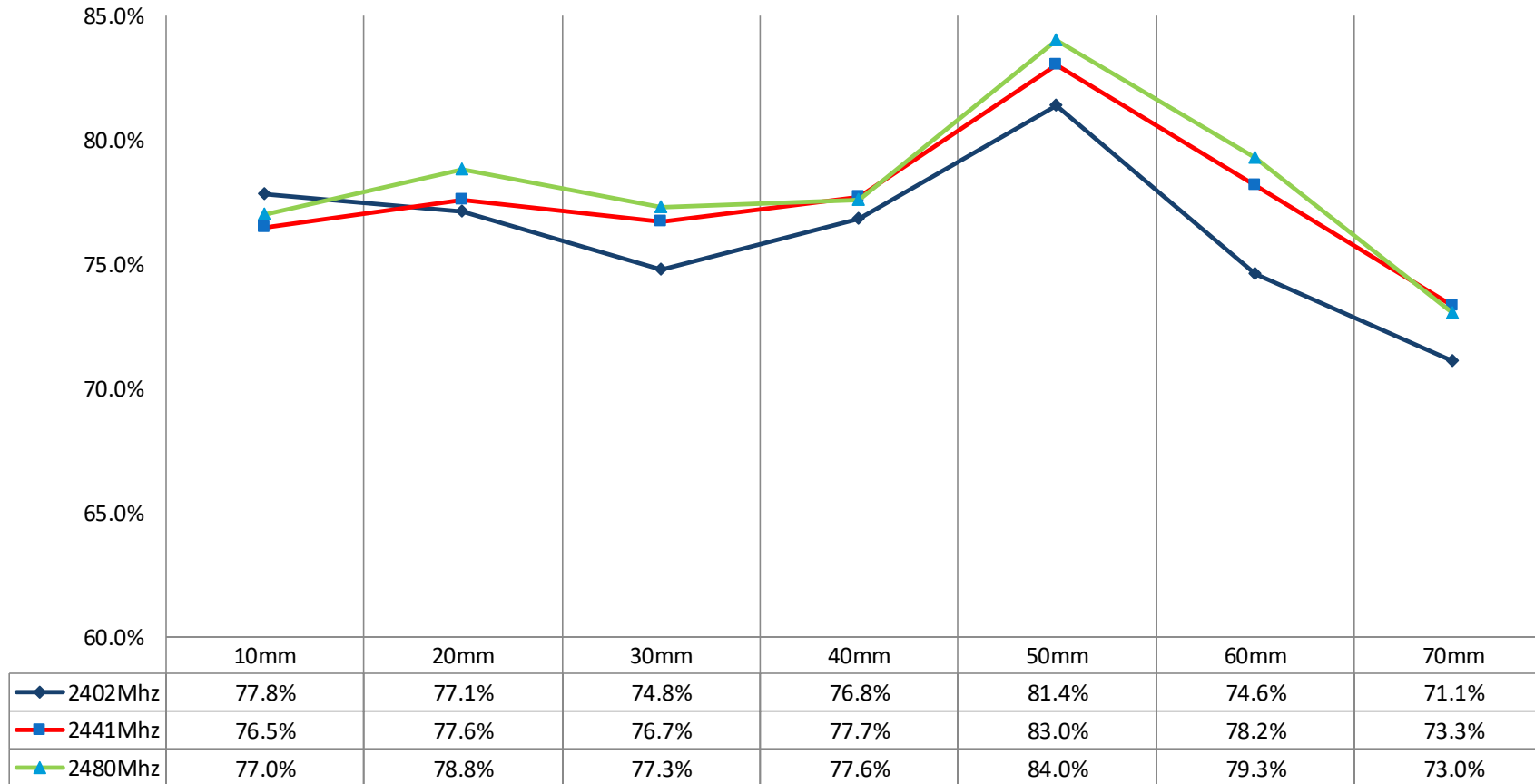
A=B=10~70mm(sweep/10mm-step)--- VSWR 、 Return loss and Impedance Data

Impedance table( $\Omega$ )



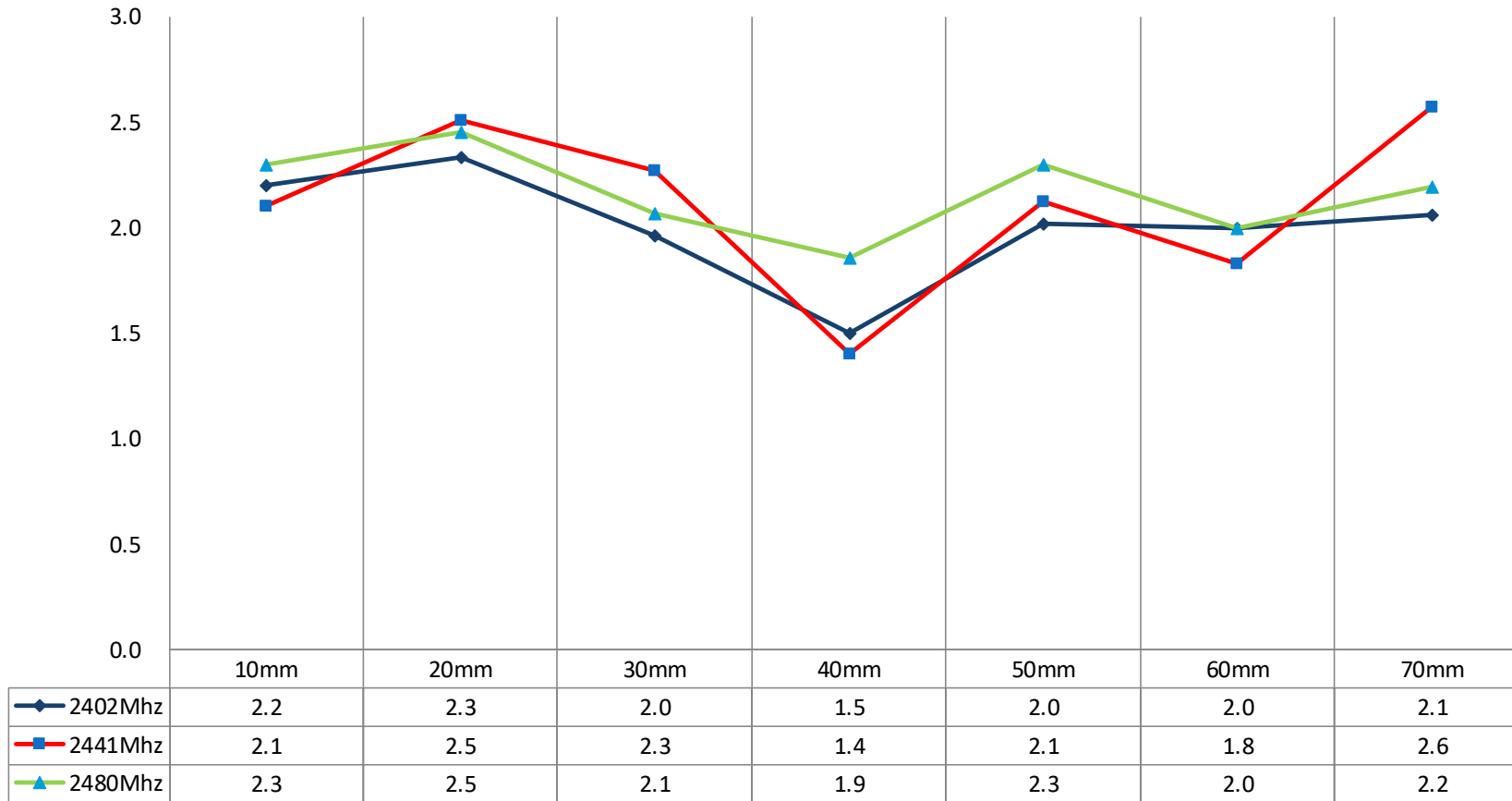
A=B=10~70mm(sweep/10mm-step)---Antenna performance chart

Efficiency table(%)



A=B=10~70mm(sweep/10mm-step)---Antenna performance chart

Gain table(dBi)



- Adding a shield has no effect on the passive efficiency of the antenna;
- Adding shield has no effect on the antenna's S11 return loss parameter, which is <-10dB;

Experimental type	Returnloss < -10dB (2.4~2.48Ghz)	Eff-Max Type	Eff-Min Type
B=22.5mm A=10~70mm	✓	Type: A=10mm Eff: ≈79%	Type: A=50mm Eff: ≈73%
A=22.5mm B=10~70mm	✓	Type: B=50mm Eff: ≈81%	Type: B=10mm Eff: ≈71%
A=B=10~70mm	✓	Type: A=B=50mm Eff: ≈83%	Type: A=B=70mm Eff: ≈72%



# Thanks