

GALTRONICS

WHEN CONNECTIONS COUNT



Nokia B6

Antenna Passive Test Report

Galtronics Project: 7236

Sep 13th , 2022

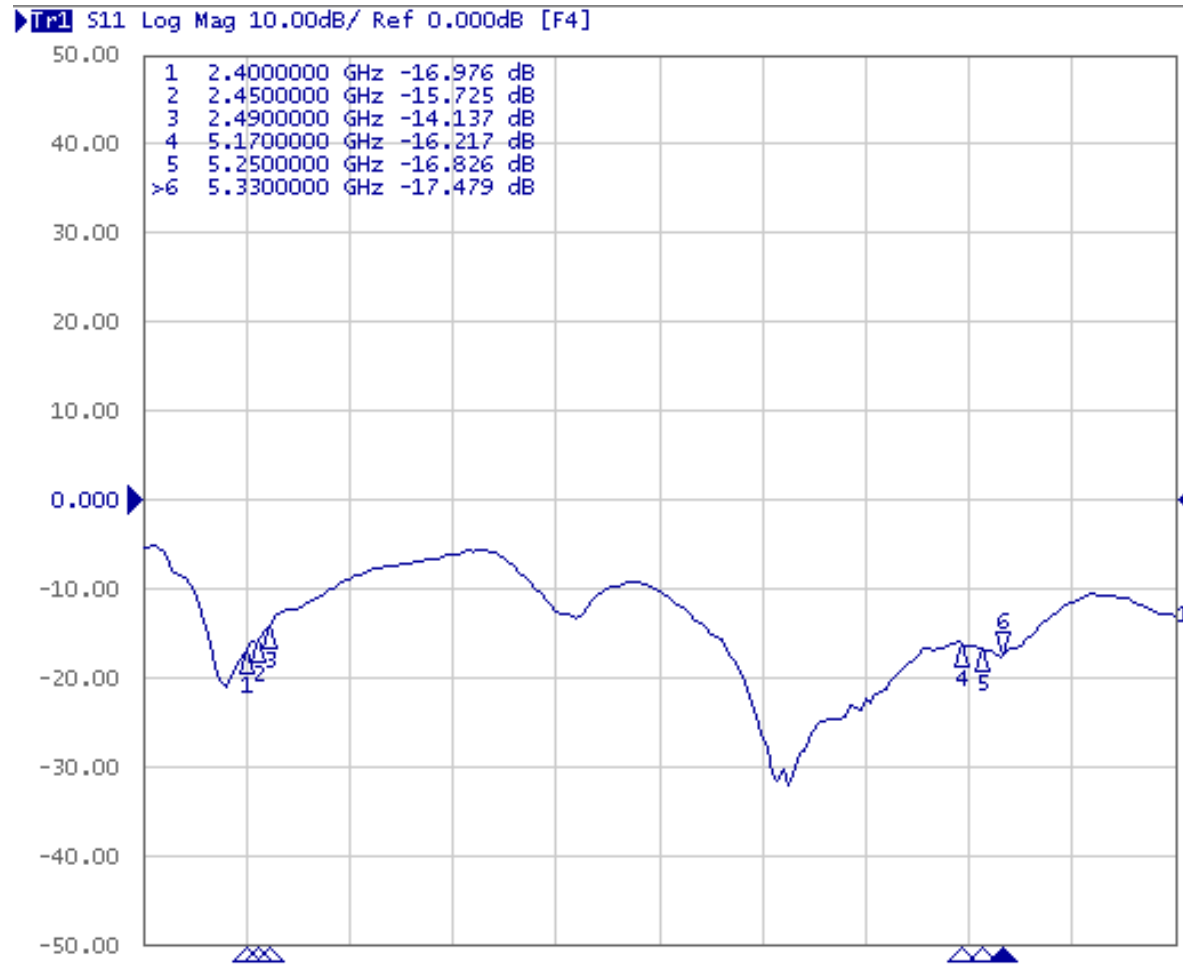
Introduction

- » Galtronics developed an antenna solution for Nokia B6
- » A Mockup is constructed consisting cabled antennas .
- » There are 6 antennas such as two cabled Dual Band antennas (DB1and DB2) and four cabled 5G Single Band antennas (SB1,SB2,SB3, and SB4).
- » The operating frequency of the Dual band is 2.4 GHz-2.49 GHz and 5.17 GHz-5.33 GHz.
- » The operating frequency of Single band is 5.49 GHz- 5.825 GHz.

Antenna Locations

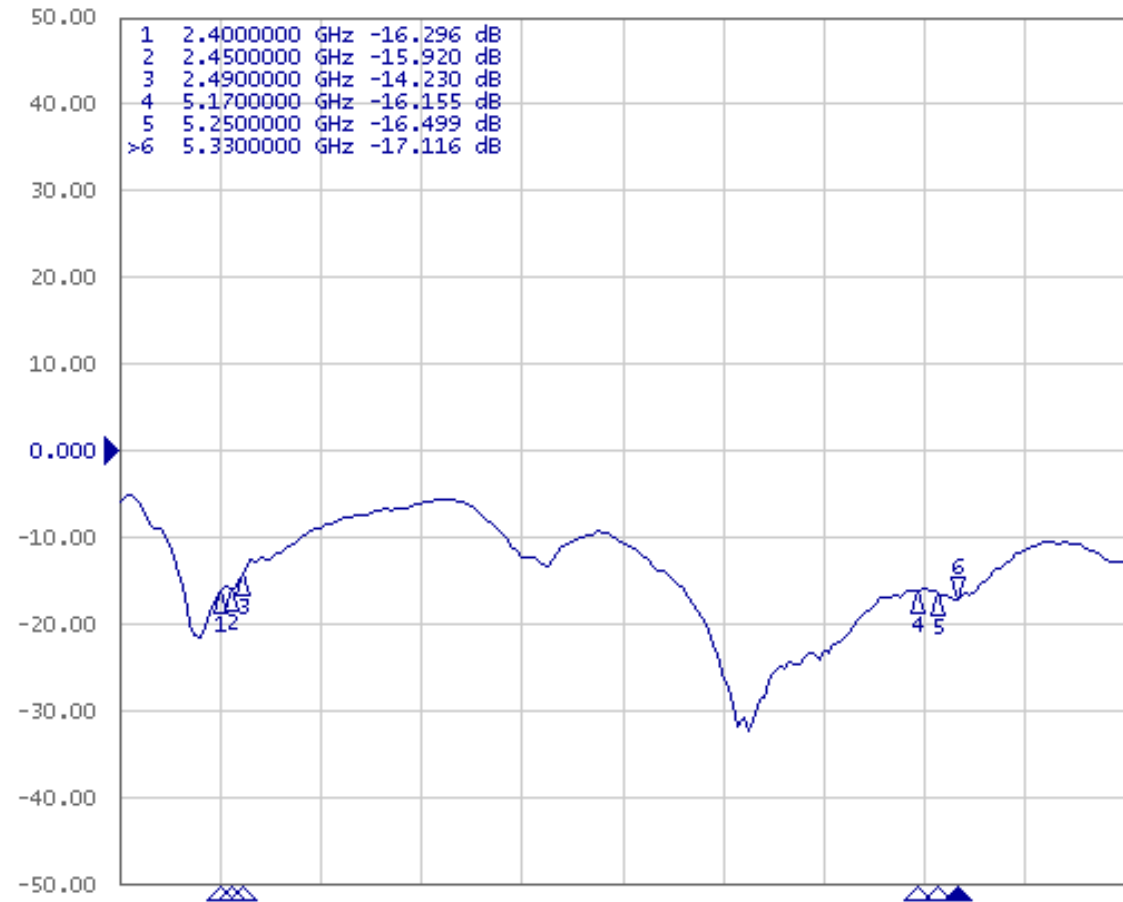


Antenna Return Loss of the Dual Band

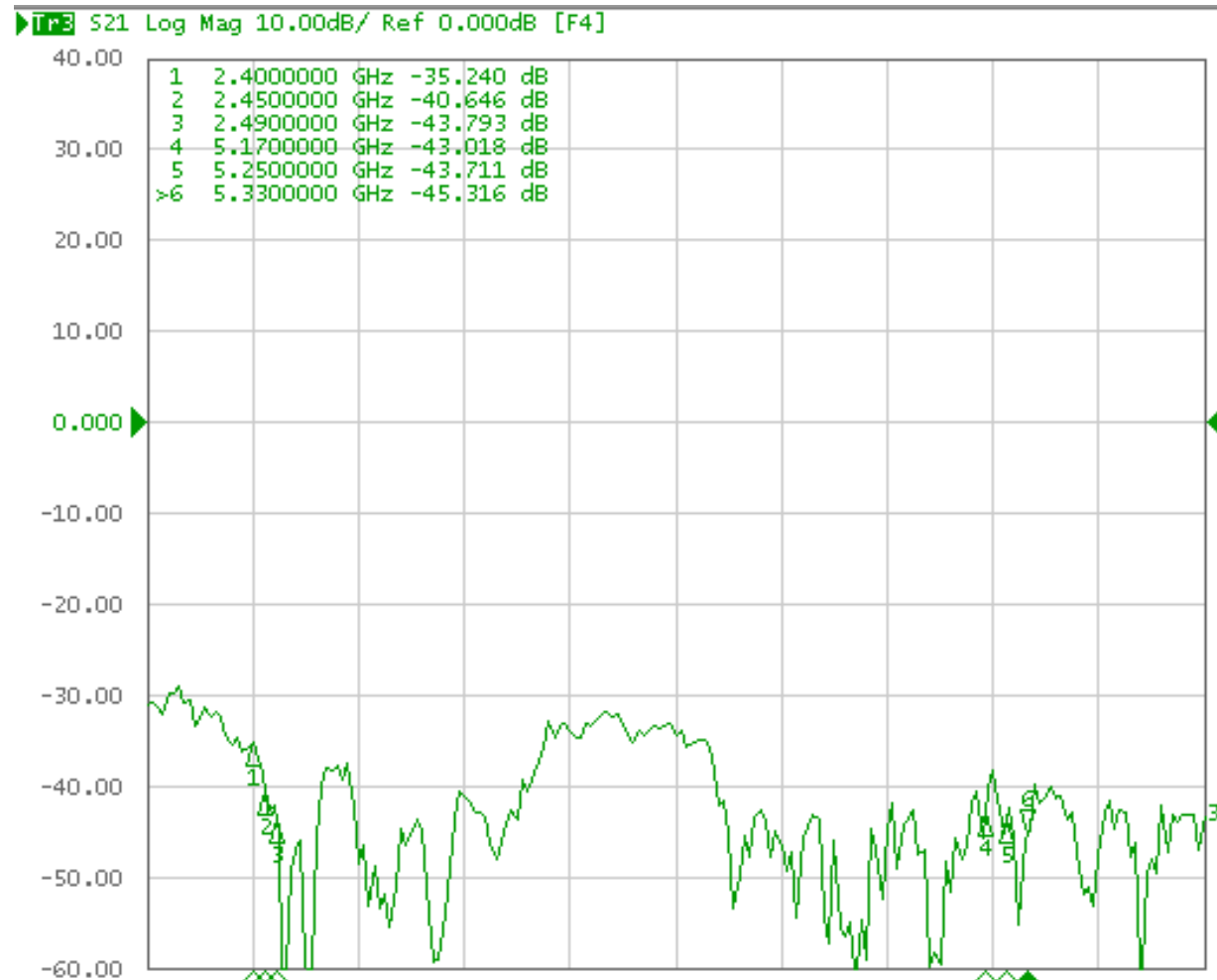


Antenna Return Loss of the Dual Band

► T1 S11 Log Mag 10.00dB/ Ref 0.000dB [F4]



Antenna Isolation of the Dual Band

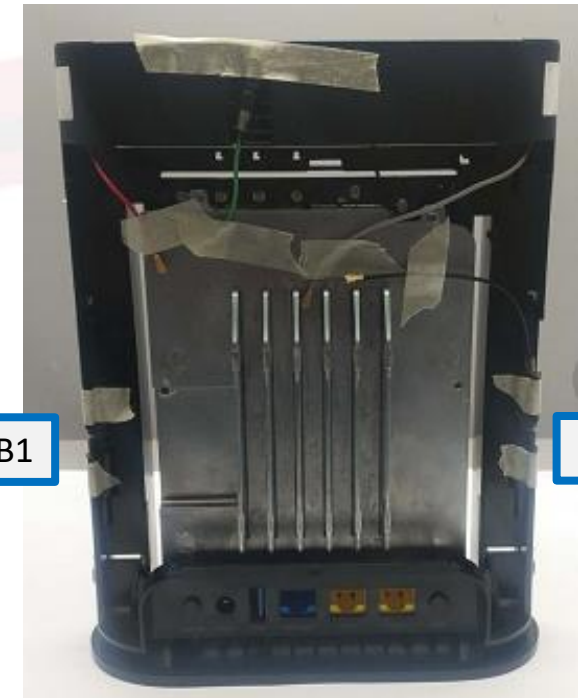


Port1= DB1

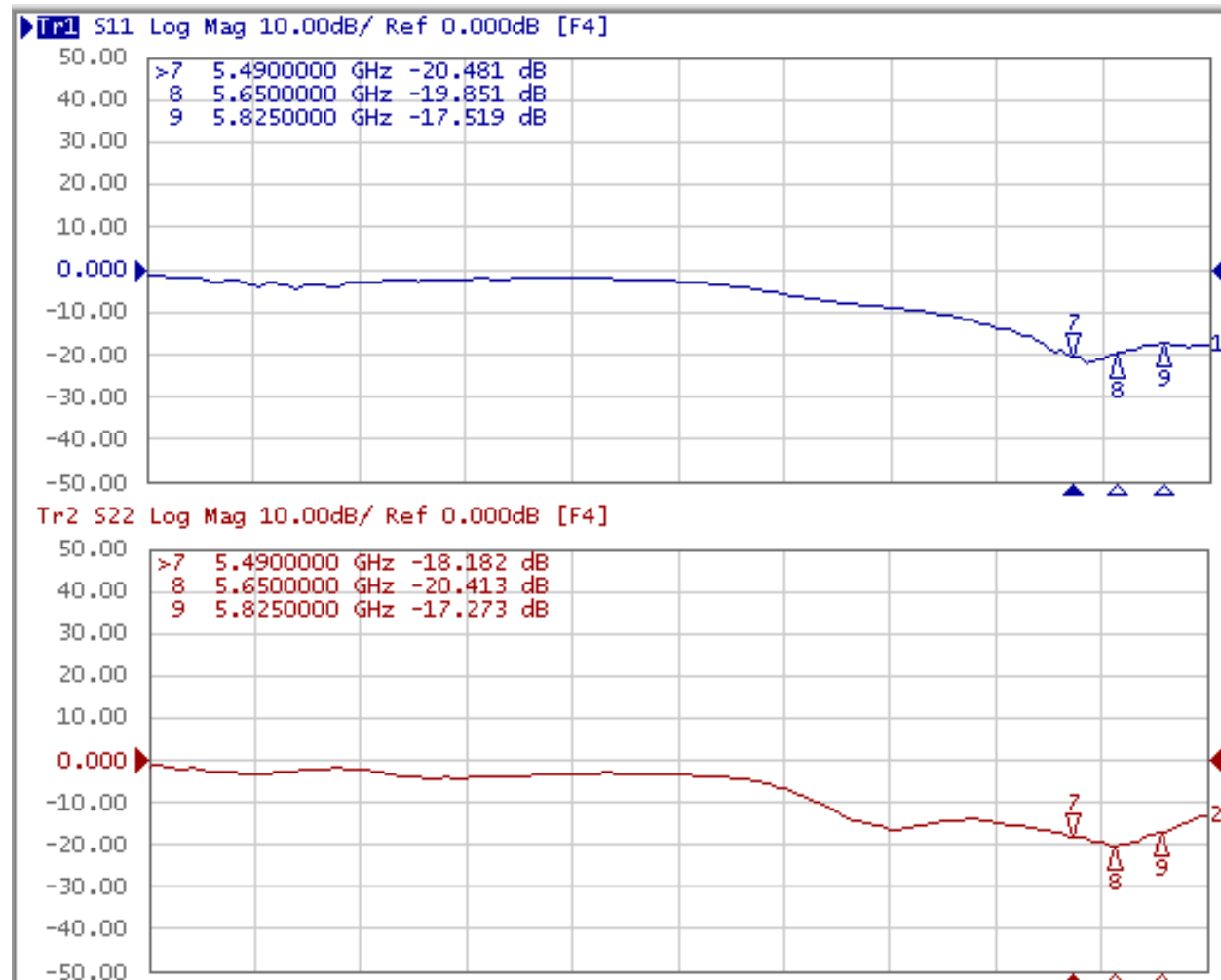
Port2= DB2

DB1

DB2



Antenna Return Loss of the Single Band

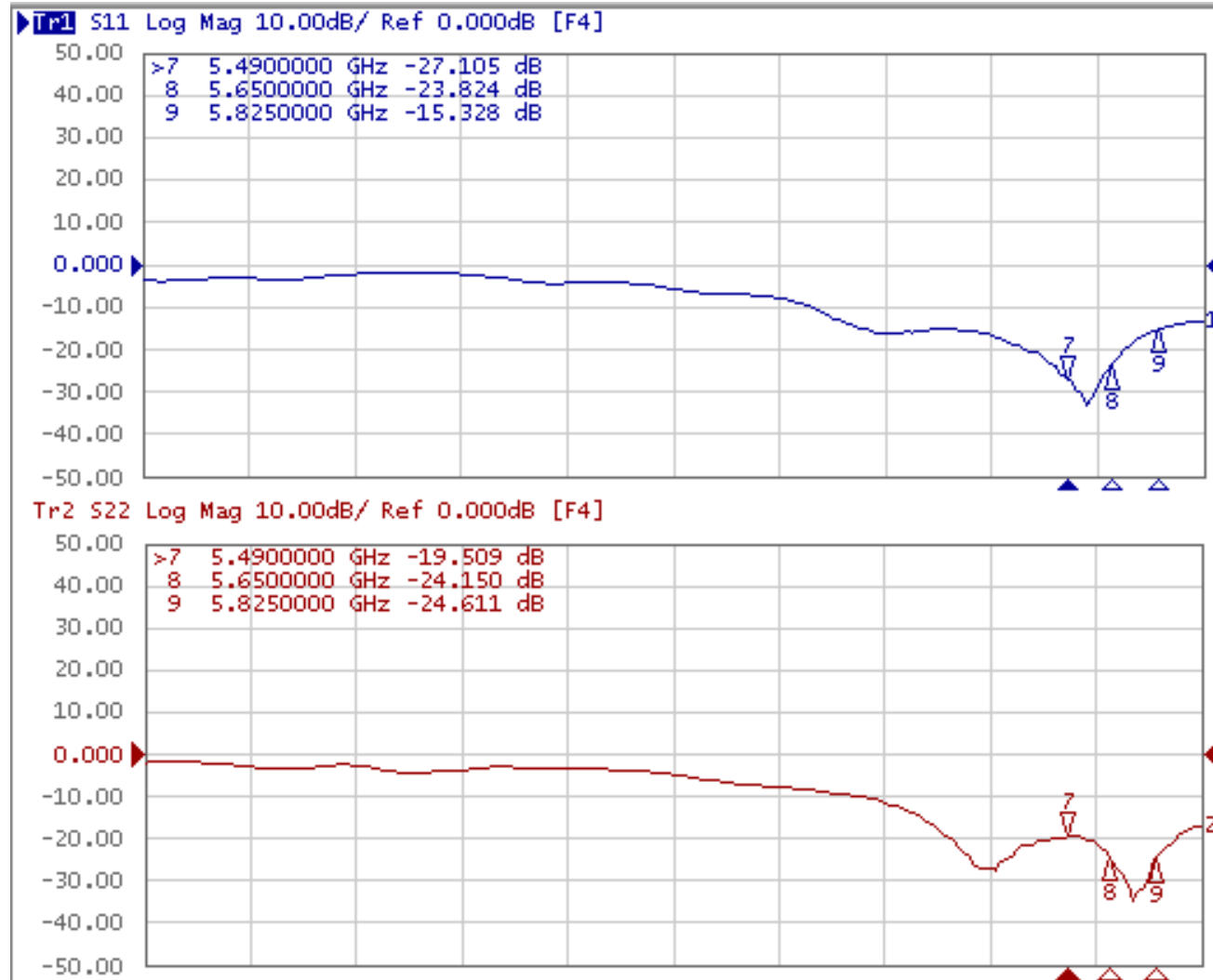


PORT1=SB1

PORT2=SB2



Antenna Return Loss of the Single Band

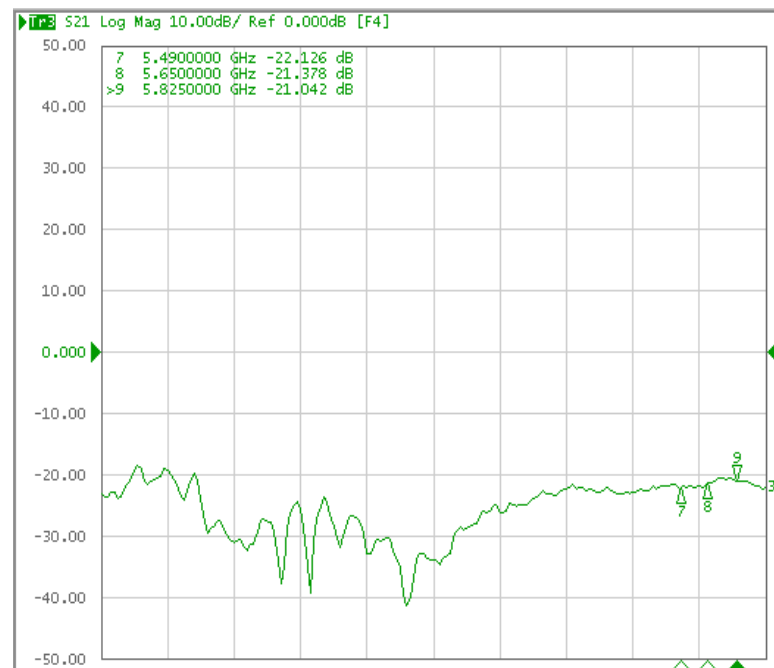


PORT1=SB3

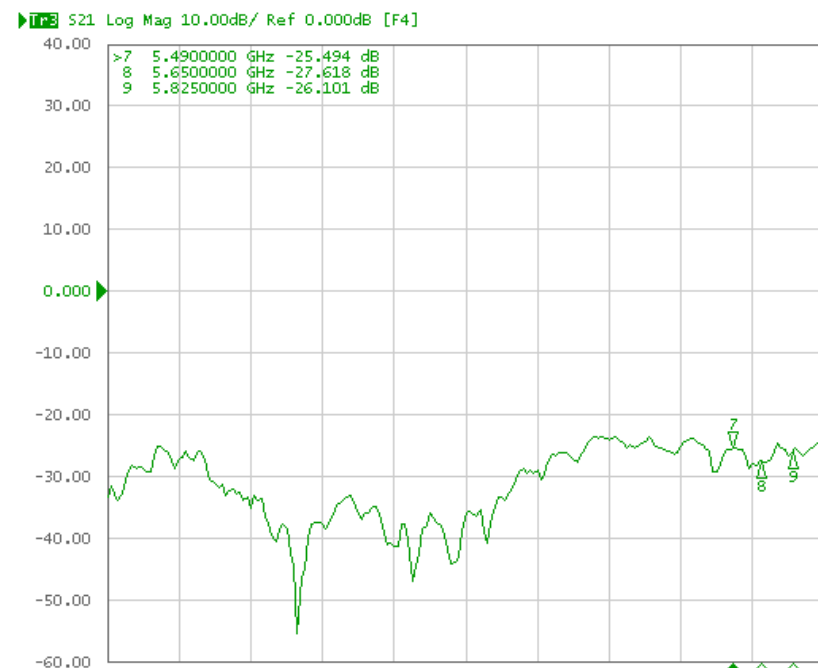
PORT2=SB4



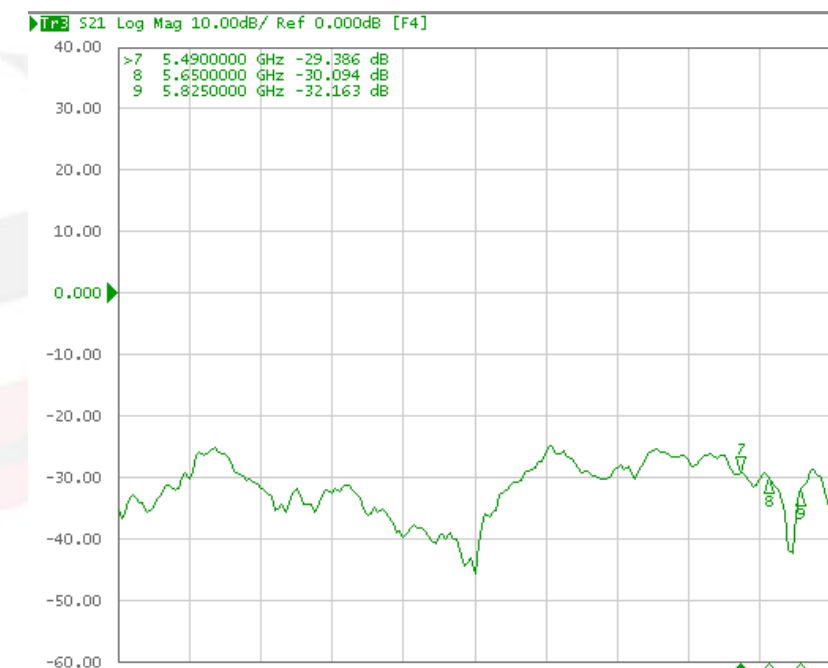
Antenna Isolation of the Single Band



S21_SB1&SB2

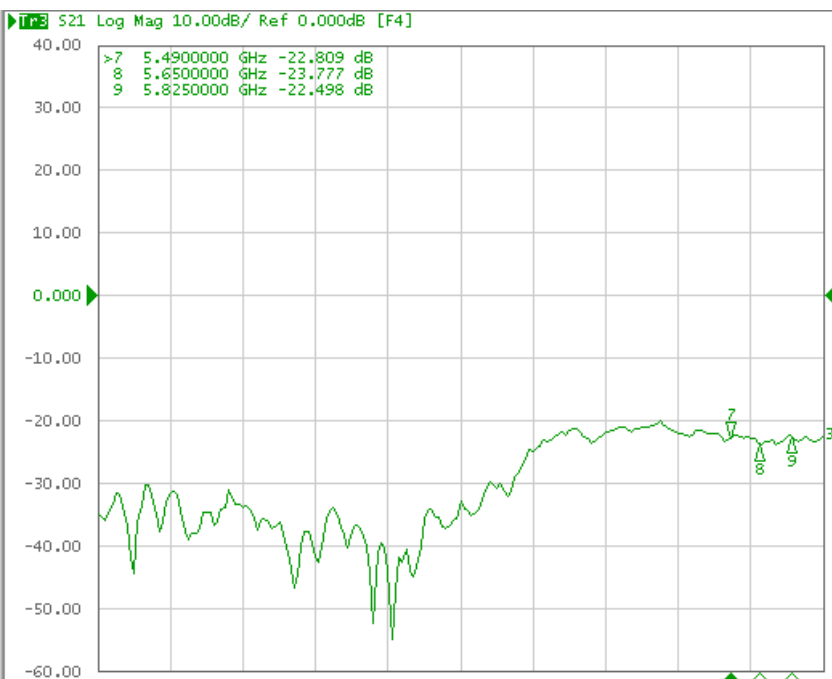


S21_SB1&SB3

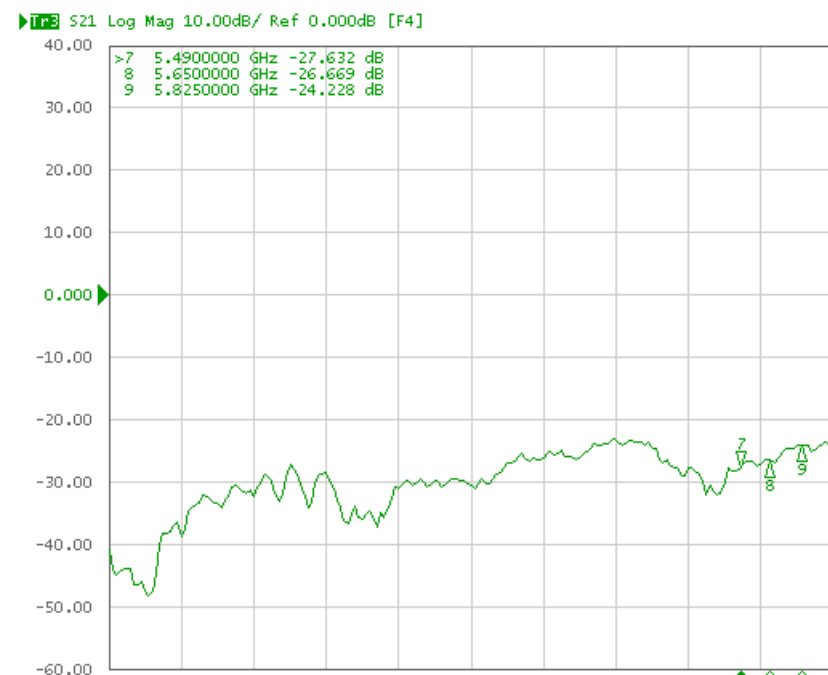


S21_SB1&SB4

Antenna Isolation of the Single Band



S21_SB2&SB3

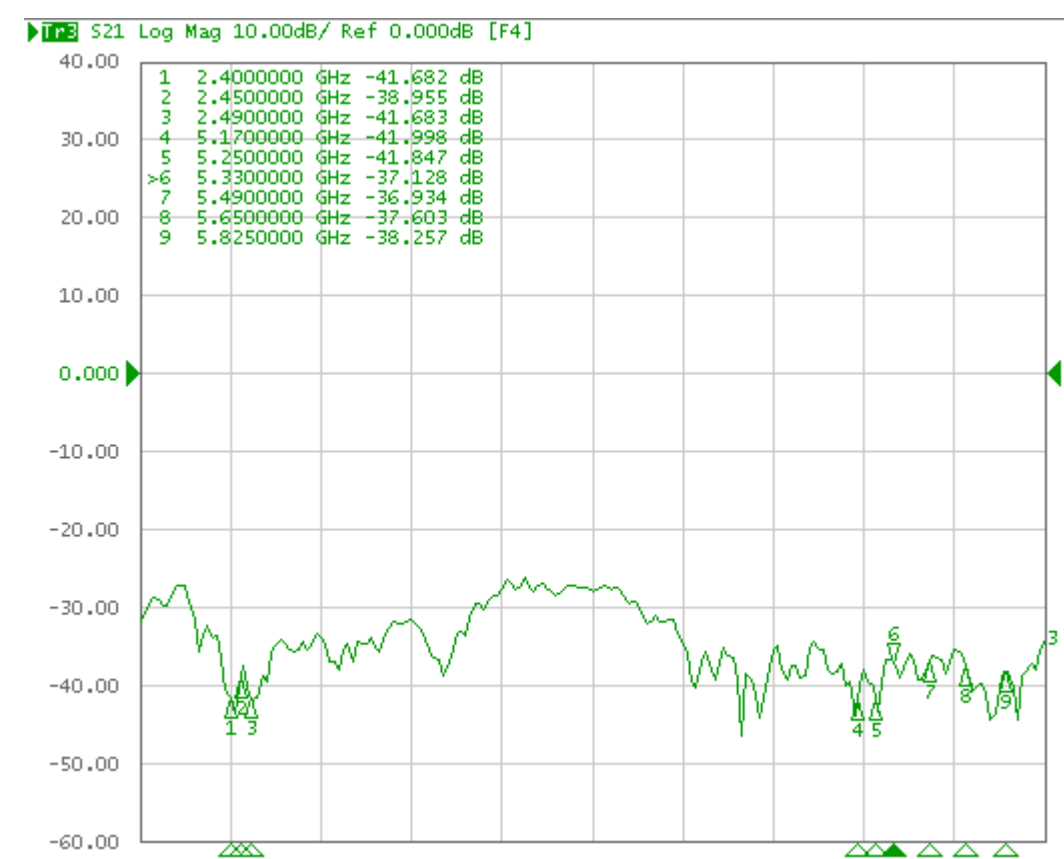


S21_SB2&SB4

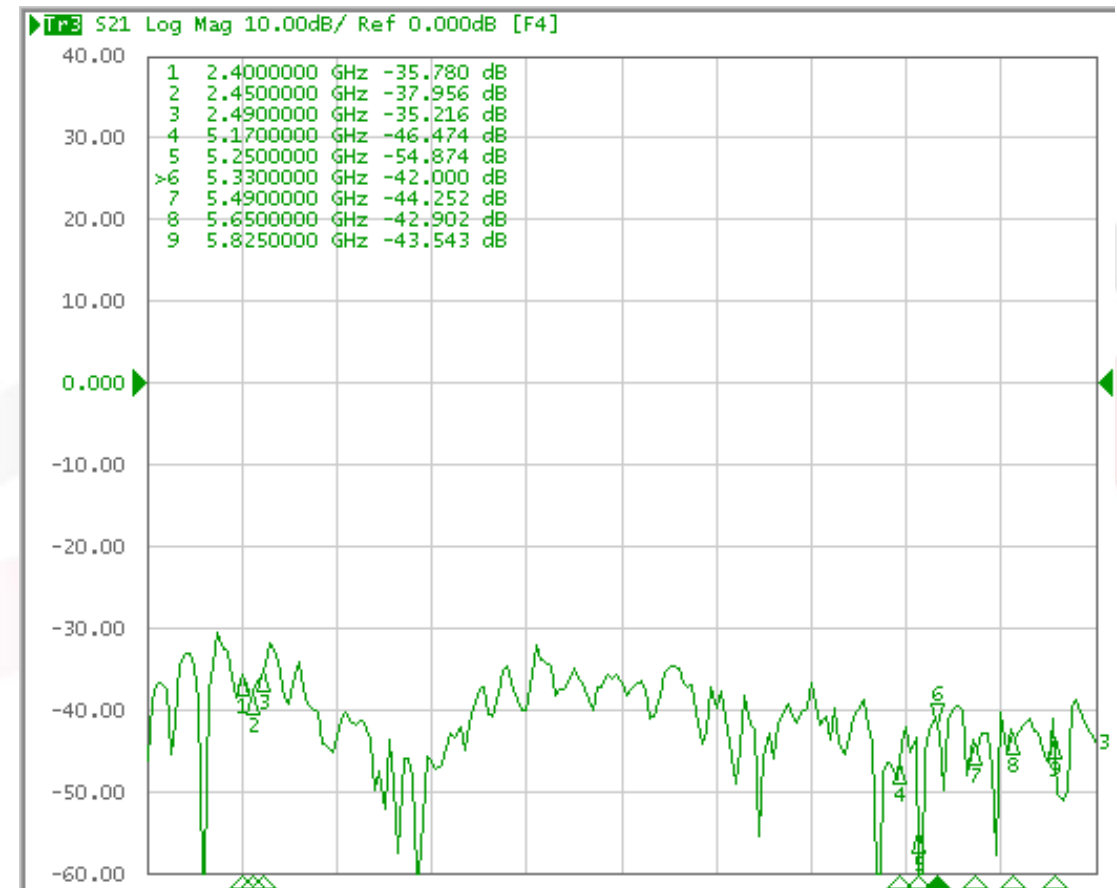


S21_SB3&SB4

Antenna Isolation between Dual Band and Single Band



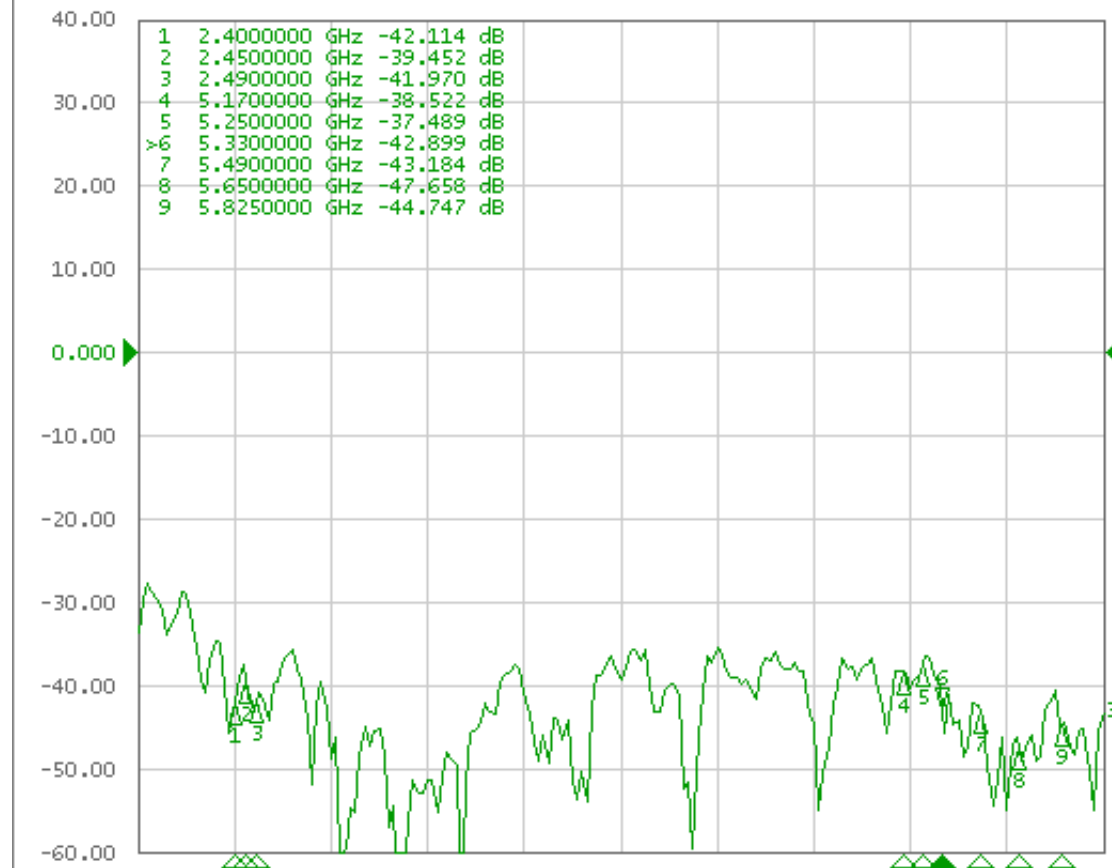
S21_DB1&SB1



S21_DB1&SB2

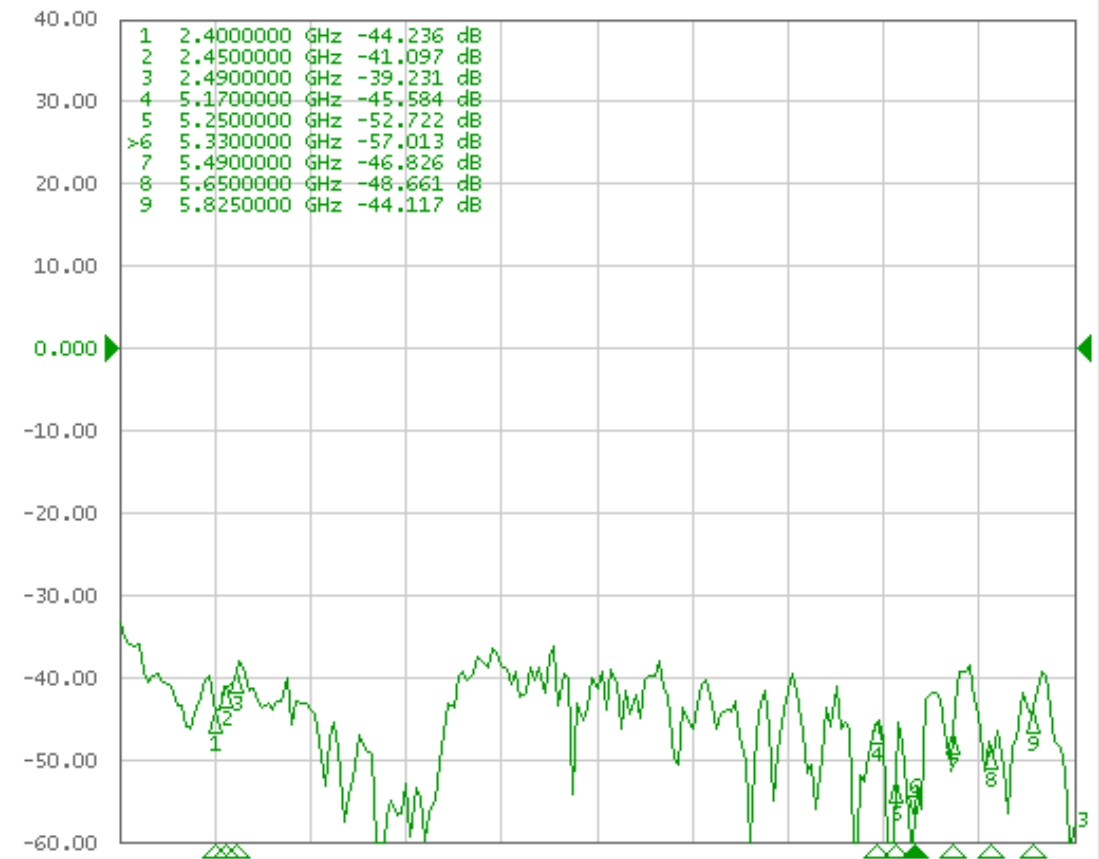
Antenna Isolation between Dual Band and Single Band

▶ S21 Log Mag 10.00dB/ Ref 0.000dB [F4]



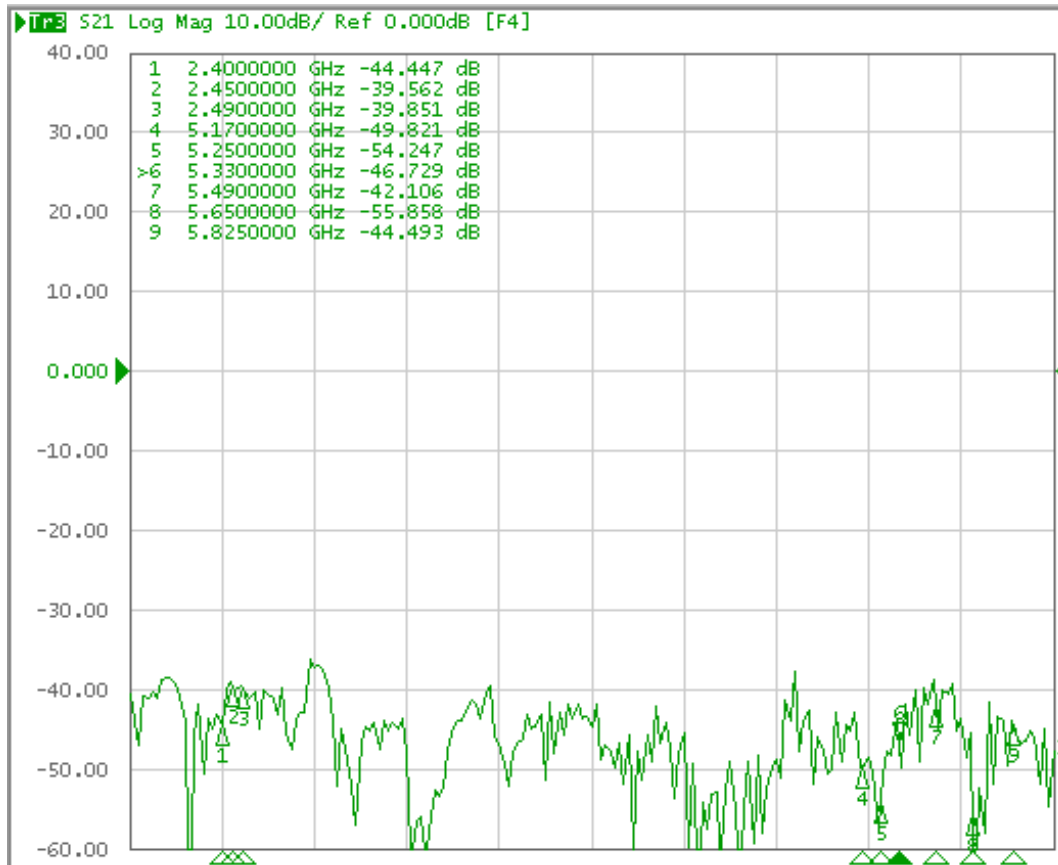
S21_DB1&SB3

▶ S21 Log Mag 10.00dB/ Ref 0.000dB [F4]

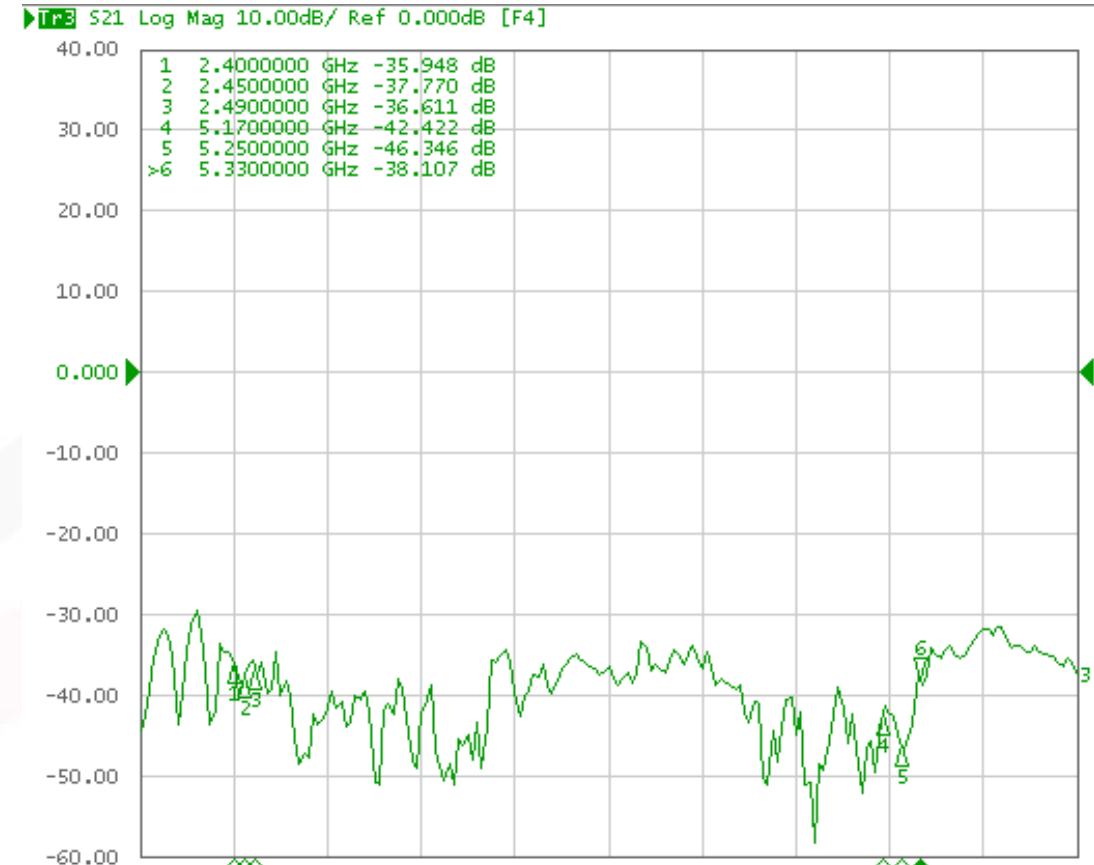


S21_DB1&SB4

Antenna Isolation between Dual Band and Single Band

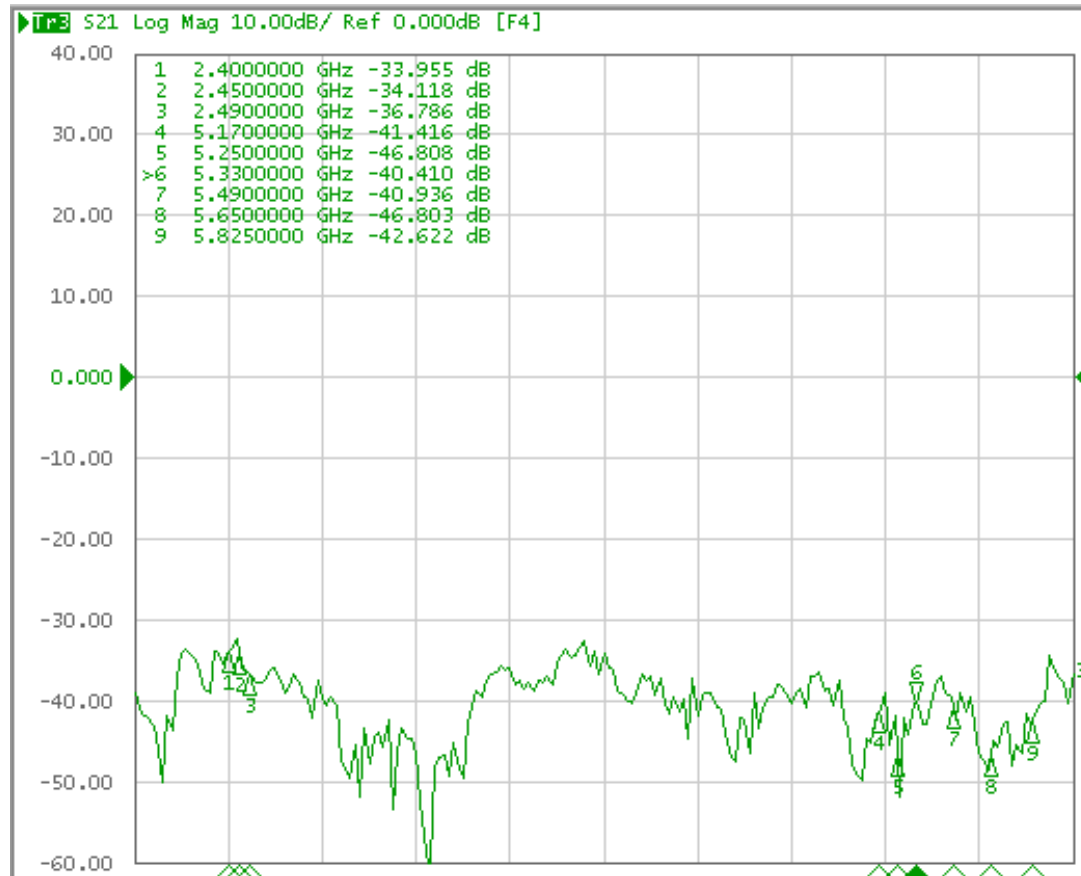


S21_DB2&SB1

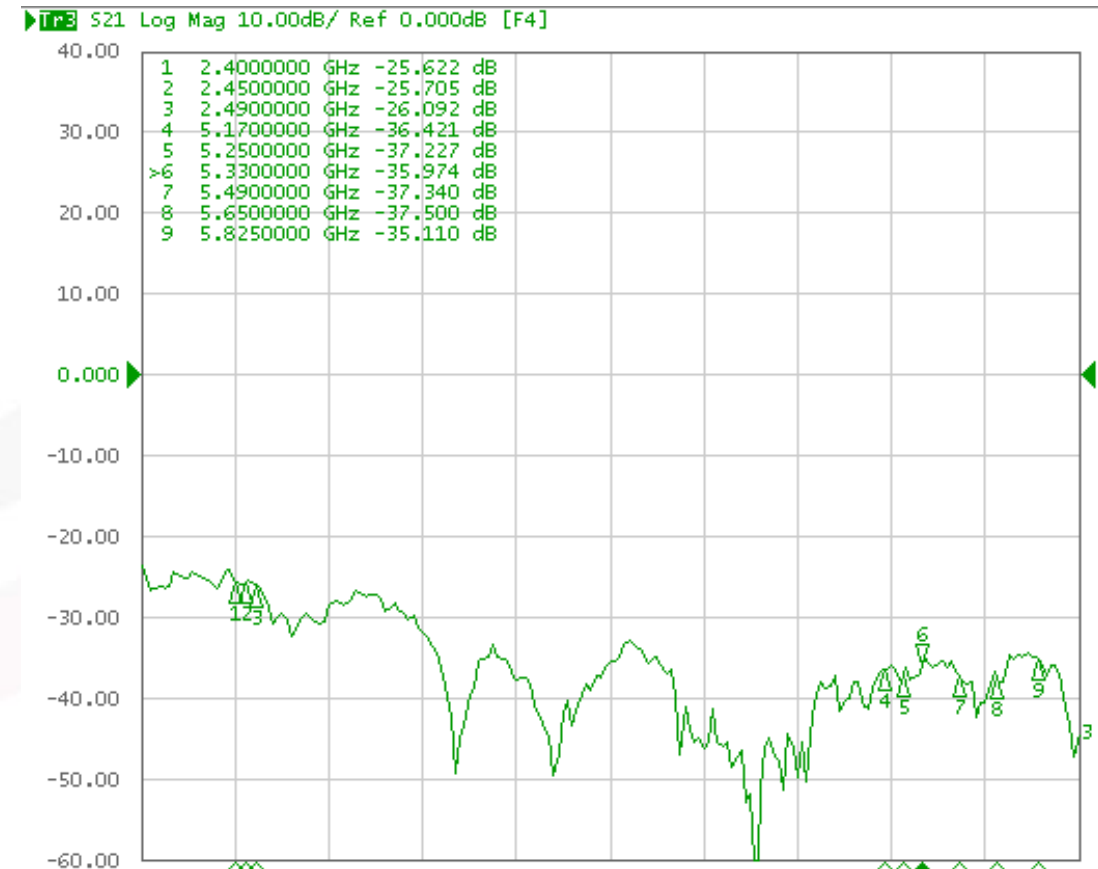


S21_DB2&SB2

Antenna Isolation between Dual Band and Single Band



S21_DB2&SB3



S21_DB2&SB4

Antenna Performance Summary

	Worst Case Return Loss(dB) 2.45GHz	Worst Case Return Loss(dB) 5GHz	Mutual Isolation(dB) 2.45GHz Band			Mutual Isolation(dB) 5GHz Band					
			DB1	DB2		DB1	DB2	SB1	SB2	SB3	SB4
DB1	-14.1	-16.2									
DB2	-14.2	-16.1	-35			-43.0					
SB1		-17.5				-36.9	-42.1				
SB2		-17.2				-42.0	-32.3	-21.0			
SB3		-15.3				-37.5	-40.4	-25.5	-22.5		
SB4		-19.5				-44.1	-35.1	-29.4	-24.2	-21.5	

Gain summary

	DB1	DB2
Frequency (MHz)	Gain (dB)	Gain (dB)
2400	2.39	2.03
2410	2.36	2.04
2420	2.41	1.97
2430	2.31	2.00
2440	1.98	1.79
2450	2.31	2.19
2460	2.46	2.04
2470	2.47	2.01
2480	2.29	2.06
2490	2.40	1.97
AVG	2.34	2.01

	DB1	DB2
Frequency (MHz)	Gain (dB)	Gain (dB)
5150	2.14	2.37
5200	2.12	2.26
5250	2.32	2.48
5300	2.20	2.28
5350	2.27	2.29
AVG	2.21	2.34

Gain summary

	SB1	SB2	SB3	SB4
Frequency	Gain	Gain	Gain	Gain
(MHz)	(dB)	(dB)	(dB)	(dB)
5450	1.85	1.94	1.78	2.15
5500	1.80	1.25	2.12	0.97
5550	2.10	1.67	2.41	0.85
5600	1.70	2.10	2.01	0.96
5650	1.77	1.94	2.22	1.98
5700	1.99	1.31	1.76	1.47
5750	1.69	1.25	1.83	1.49
5800	2.15	1.38	1.75	1.65
5850	1.92	1.14	1.51	1.82
AVG	1.89	1.55	1.93	1.48

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Thank You!

We Look Forward To Working Together

