



Quectel Wireless Solutions

FCM260S Antenna Debugging Report

RF: Mayes.Li
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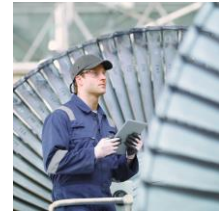
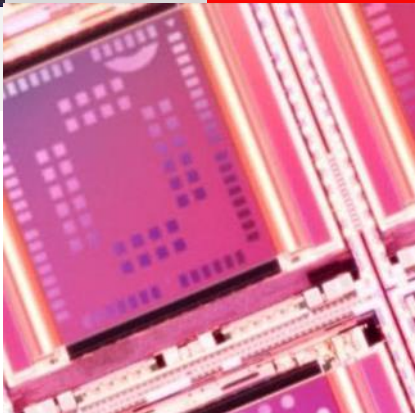
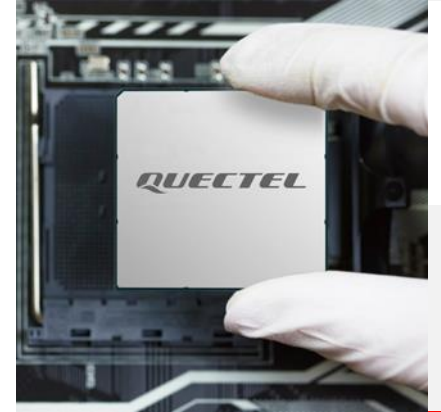
1. Project Overview

2. Antenna Performance

3. Conclusion

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- Customer Name: FCM260S
- PCBA Dimensions: 20.0*18.0mm
- Antenna Dimensions: 6.8*18.0mm
- Antenna Number: 1
- Antenna Network Type & Frequency Band:
 - WIFI: 2400-2500MHz



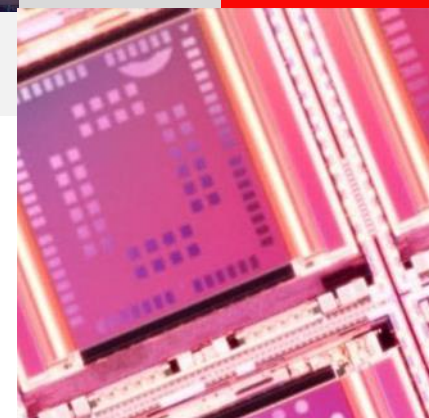
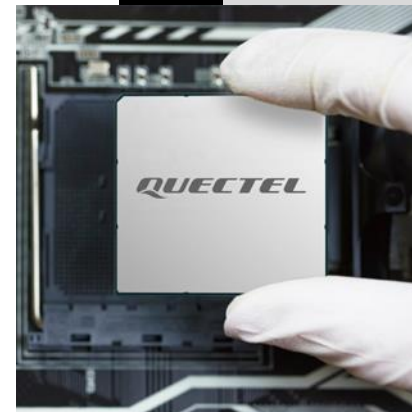
1. Project Overview

2. Antenna Performance

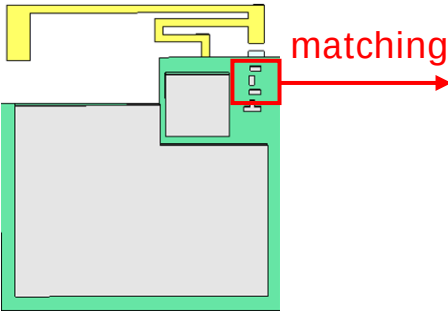
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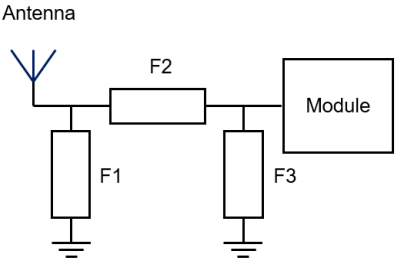
Antenna Placement



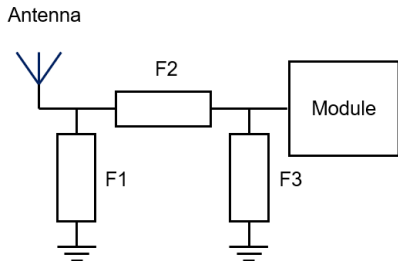
initial

optimized

• 匹配电路示意图



• 匹配电路示意图



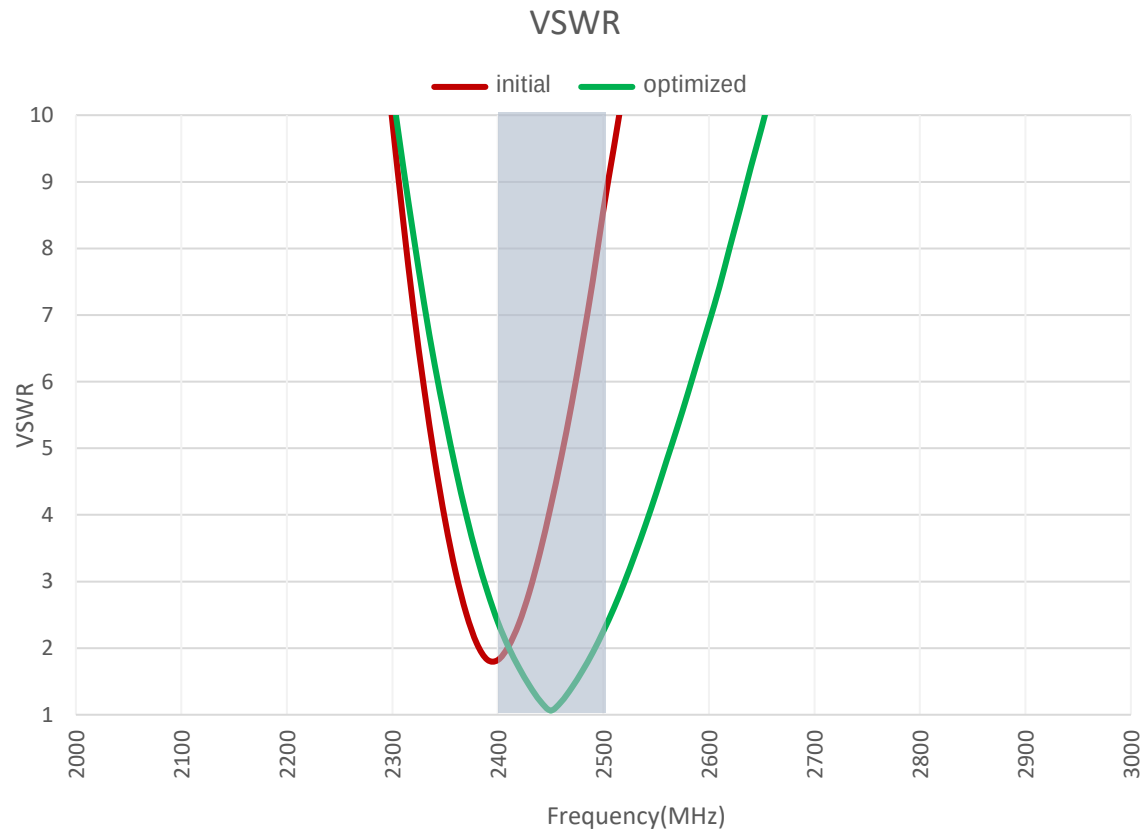
• 匹配值:

No.	L/C-0201
F1	NA
F2	9.1nH
F3	NA

• 匹配值:

No.	L/C-0201
F1	NA
F2	6.2nH
F3	NA

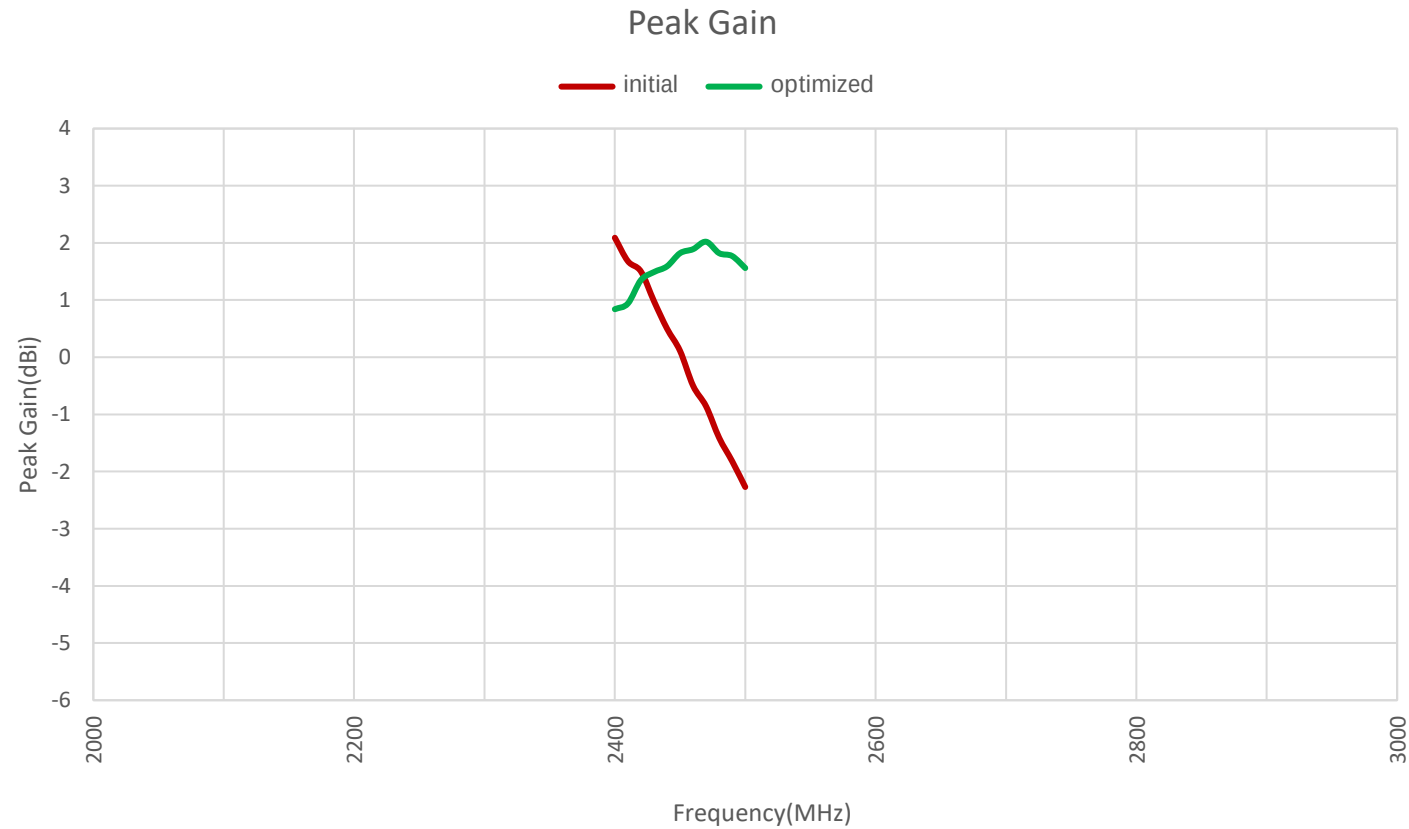
- VSWR&Efficiency



Antenna Performance



- Peak Gain(dBi)





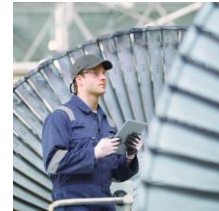
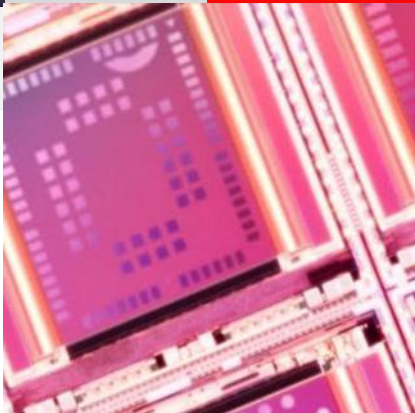
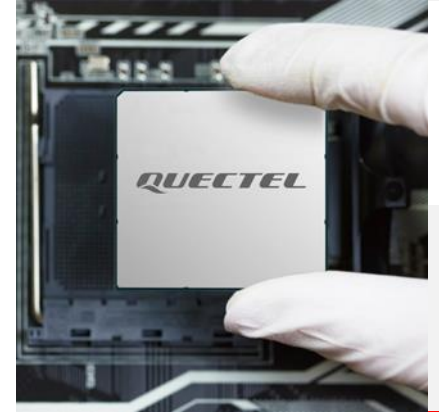
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➤ Antenna Performance

- The average efficiency after antenna optimization is 53.5% (-2.7d B), initial average efficiency of 32.0% (-4.9d B), improved by 2.2d B after optimization compared to before optimization

WIFI 2.4G		
Frequency(MHz)	2400-2500	
Initial/optimized	Initial	optimized
Max VSWR	8.6	2.4
Average Efficiency(%)	32.0	53.5
Average Average Gain(dB)	-4.9	-2.7
Max Peak Gain(dBi)	2.1	2.0

- The maximum gain after antenna optimization is 2.0d Bi.



**We are a global IoT solutions provider,
backed by outstanding support and
services, to deliver a smarter world.**

- Unbeatable choice from the broadest module portfolio in the world
- High quality range of off-the-shelf and customized antennas
- Providing Connectivity-as-a-Service
- Superb support with the largest R&D team in the industry
- Continuous innovation – in 5G, LPWA, CV2X, Smart Modules
- A passionate, dedicated team of “Quectelers” ensure our customers always come first

Thank You

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