

MQF2108G1

4-Phase Antenna Feeder



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Applications

1. Frequency range 1980– 2200 MHz
2. 4-Phased Antenna Feeder, 6dB (0°, 90°, 180°, 270°)
3. Low insertion loss type. 0.8 dB
4. RoHS compliance (Pb-Free)

Features

1. GNSS antenna
2. Satellite phone antenna

Description

MQF2108G1 is a 4-Phase antenna feeder with stable performance in different temperatures. high conductivity metal conductor enable the MQF2108G1 to minimize insertion loss and improve durability for thermal stabilization and electricity. All the components are tested 100%

Characteristics

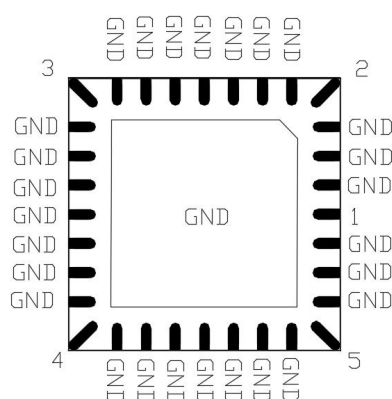
Table 1. MQF2108G1 Characteristics

Item	Min.	Type	Max.	Unit
Frequency Range	1980		2200	MHz
Isolation	19	20		dB
Insertion Loss		0.8		dB
Phase Unbalance	-8		+8	degrees
Amplitude	-1.5		+1.5	dB
Return Loss	15	18		dB
Operating Temp.	-55		+105	°C

All the above data are based on specified demo board and tested in 25° environment.

Port Configuration

Figure 1. MQF2108G1 (Bottom View)



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The MQF2108G1 port configurations depending on how input signals are split. The Case 1, Case 2, Case 3, Case 4, and Case 5 configurations mean that one input signal is split into two output signals. When port 1 is defined, the other ports are defined automatically

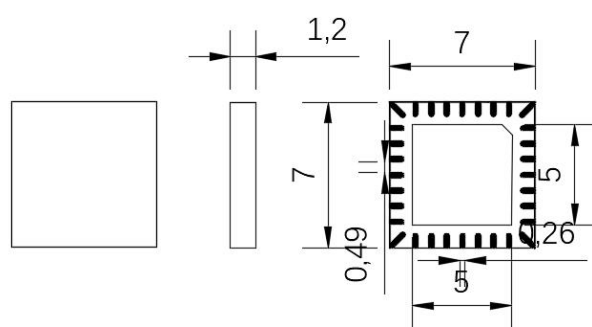
Table 2. MQF2108G1 Port Configurations

Port 1	Port 2	Port 3	Port 4	Port 5
Input	output	output	output	output
Input 0°	Output1-6 dB, -270°	Output1-6 dB, -180°	Output1-6 dB, -90°	Output1-6 dB, 0°

Outline Drawing

Figure 2. MQF2108G1 Outline Drawing

Top View Side View Bottom View



Unit: mm

Typical Performance (25°C, 1980-2200 MHz)

Figure 3. MQF2108G1 Coupling

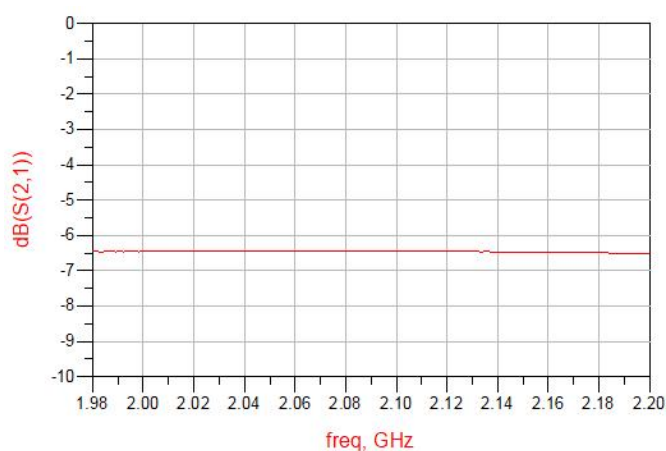
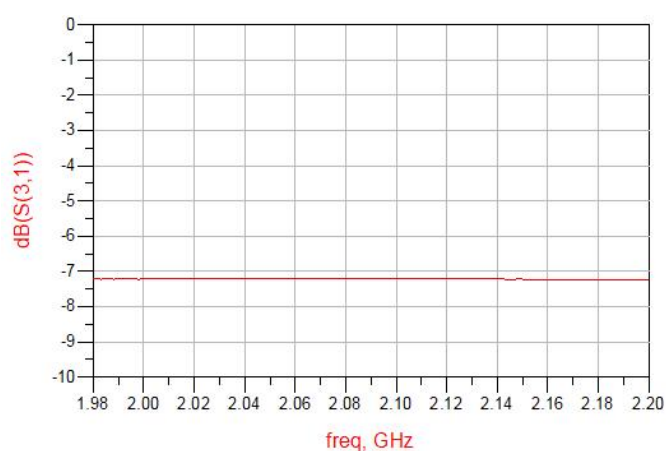


Figure 4. MQF2108G1 Coupling



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Figure 5. MQF2108G1 Coupling

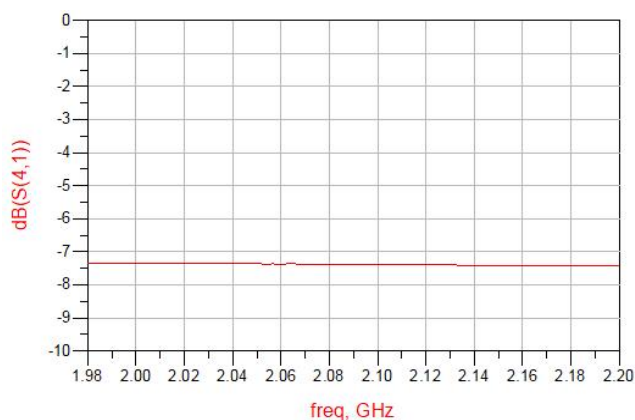


Figure 6. MQF2108G1 Coupling

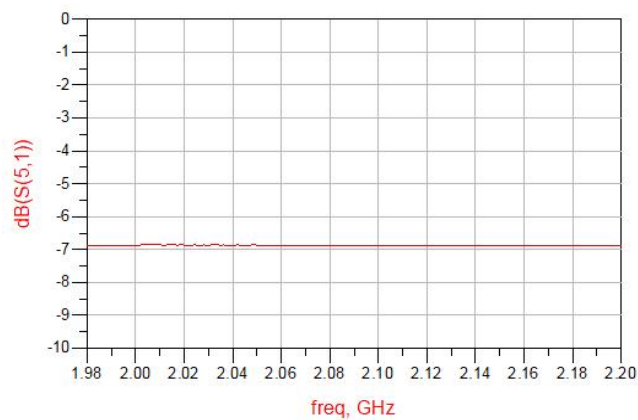


Figure 7. MQF2108G1 Return Loss (S11)

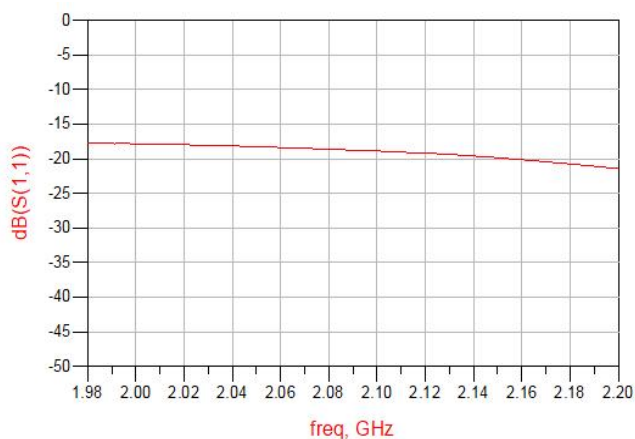


Figure 8. MQF2108G1 Return Loss (S22)

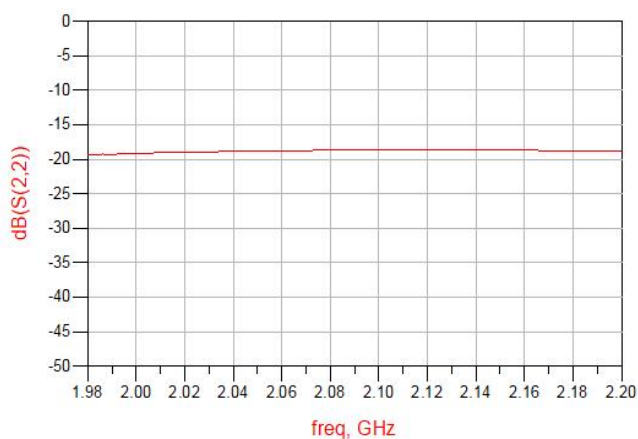


Figure 9. MQF2108G1 Return Loss (S33)

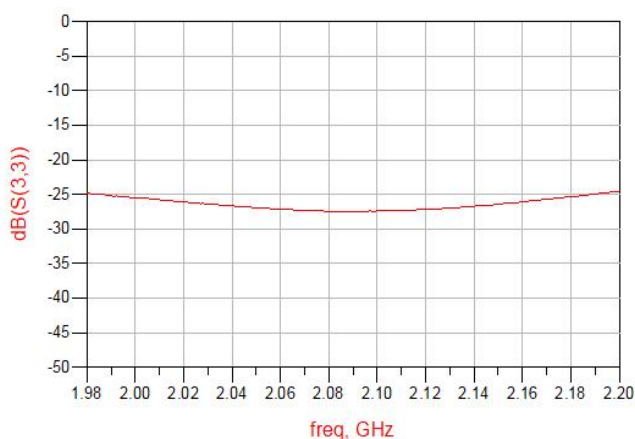
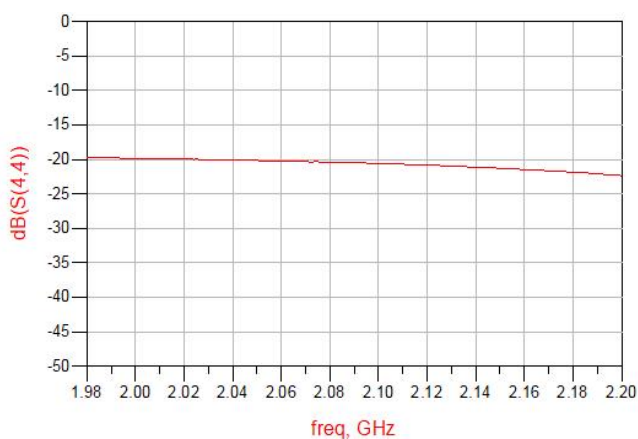


Figure 10. MQF2108G1 Return Loss (S44)



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Figure 11. MQF2108G1 Return Loss (S55)

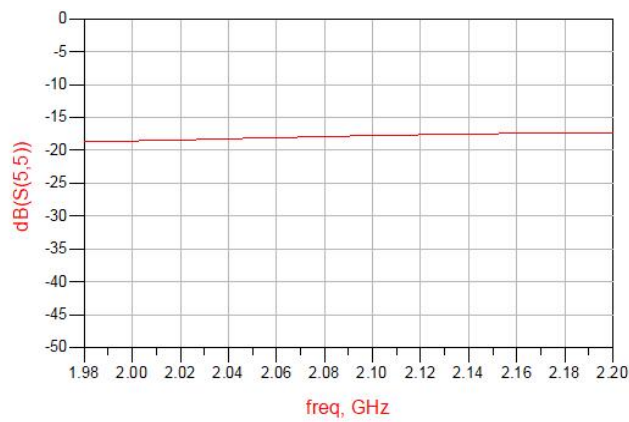
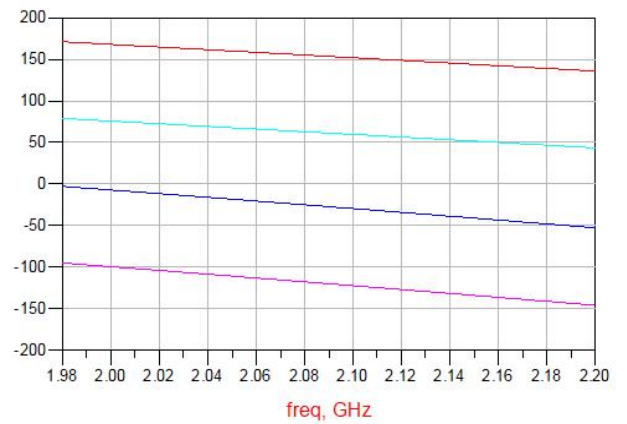


Figure 12. MQF2108G1 Phase



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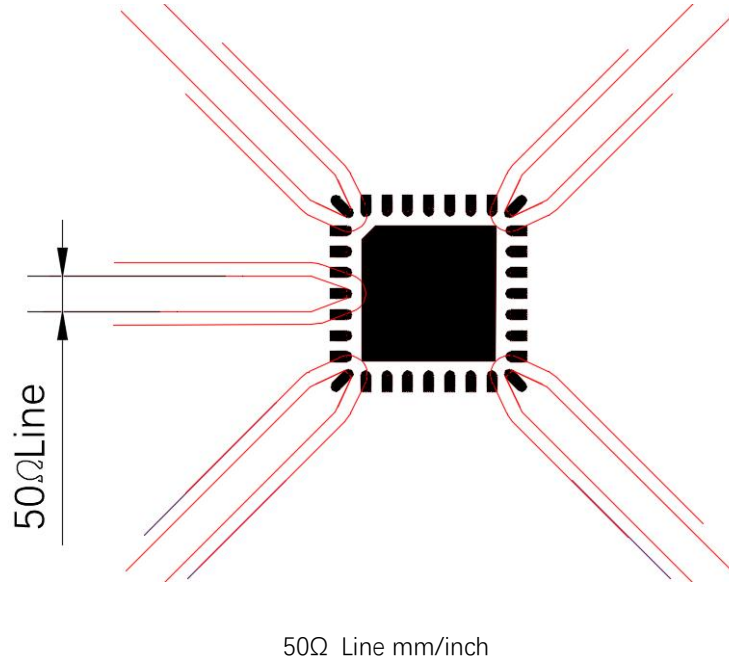
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Recommended PCB Layout

Figure 13. Recommended PCB Layout



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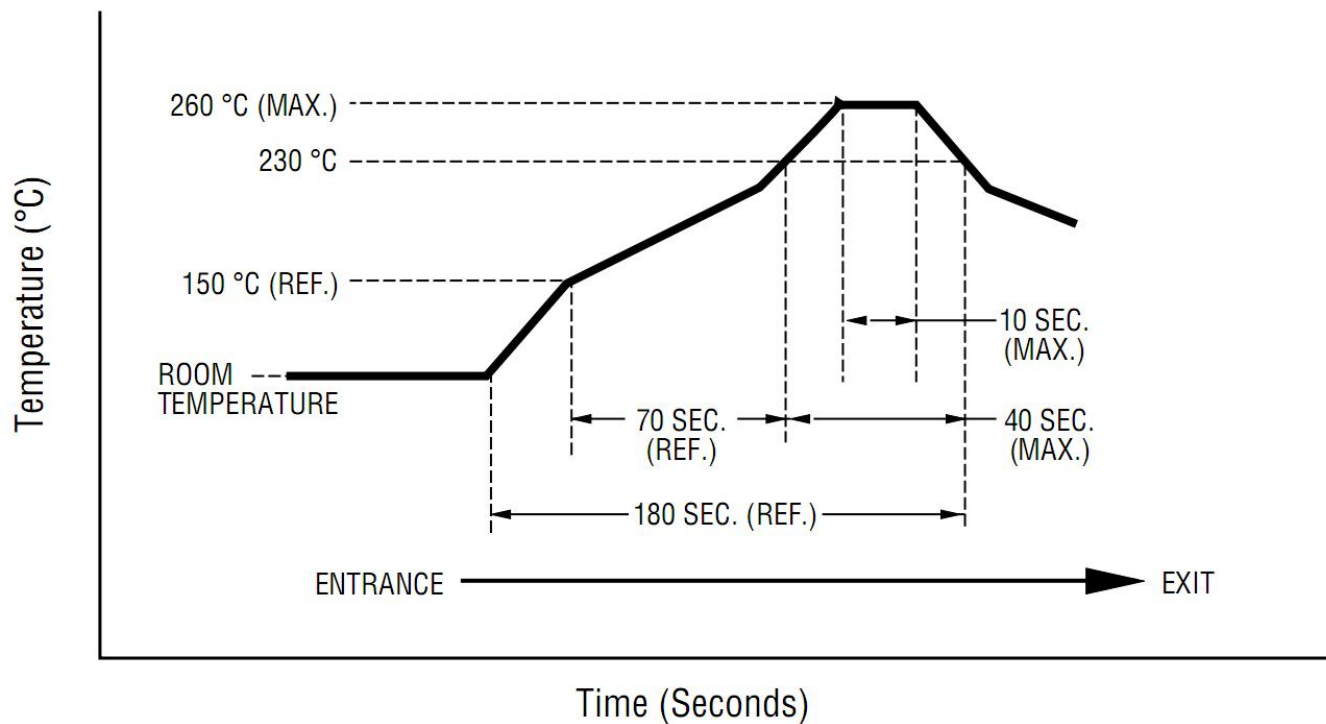
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4-Phase Antenna Feeder



Reflow Profile

Figure 14. MQF2108G1 Thermal Reflow Profile



Packaging and Ordering Information

Table 4. MQF2108G1 Ordering Information

Device	Package	Reel	Shipping
MQF2108G1	7*7mm	7"	2500 Reel

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Revision	Description	Date
Rev0	Preliminary	2024/2/26
Rev1	Update	2025/9/1
Rev2	Update	2023/6/3

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