

MQF1608G1

4-Phase Antenna Feeder



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Applications

1. Frequency range 1150– 1650 MHz
2. 4-Phased Antenna Feeder, 6dB (0°, 90°, 180°, 270°)
3. Low insertion loss type. 0.6 dB
4. RoHS compliance (Pb-Free)

Features

1. GNSS antenna
2. Satellite phone antenna

Description

MQF1608G1 is a 4-Phase antenna feeder with stable performance in different temperatures. high conductivity metal conductor enable the MQF1608G1 to minimize insertion loss and improve durability for thermal stabilization and electricity. All the components are tested 100%

Characteristics

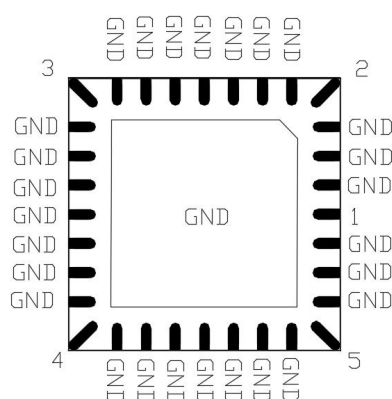
Table 1. MQF1608G1 Characteristics

Item	Min.	Type	Max.	Unit
Frequency Range	1150		1650	MHz
Isolation	20	22		dB
Insertion Loss		0.6		dB
Phase Unbalance	-8		+8	degrees
Amplitude	-1.5		+1.5	dB
Return Loss	16	20		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. MQF1608G1 (Bottom View)



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4-Phase Antenna Feeder



The MQF1608G1 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

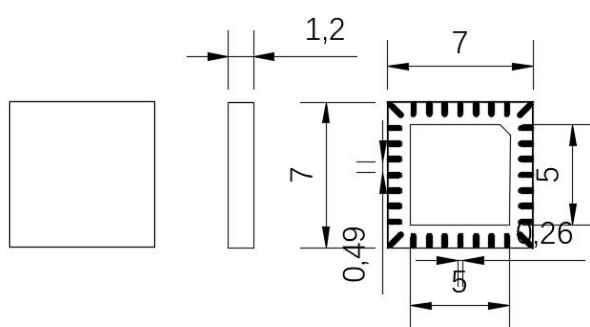
Table 2. MQF1608G1 Port Configurations

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. MQF1608G1 Outline Drawing

Top View Side View Bottom View



Unit: mm

Typical Performance (25°C, 1150-1650 MHz)

Figure 3. MQF1608G1 Coupling

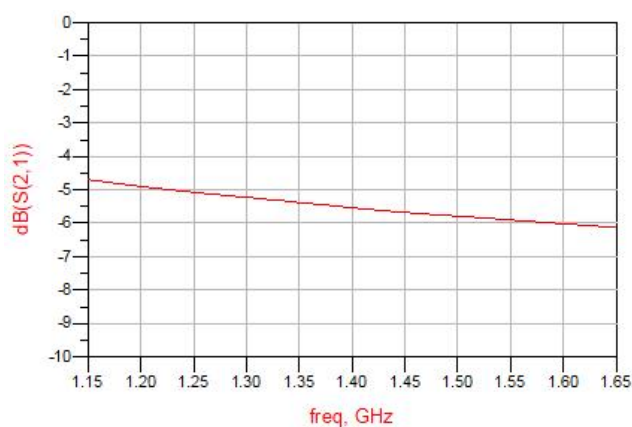
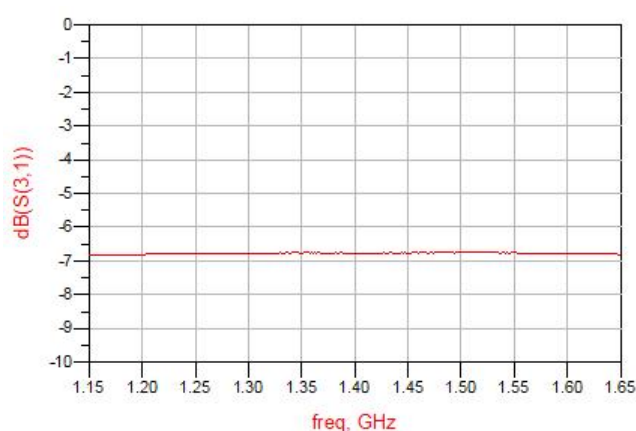


Figure 4. MQF1608G1 Coupling



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Figure 5. MQF1608G1 Coupling

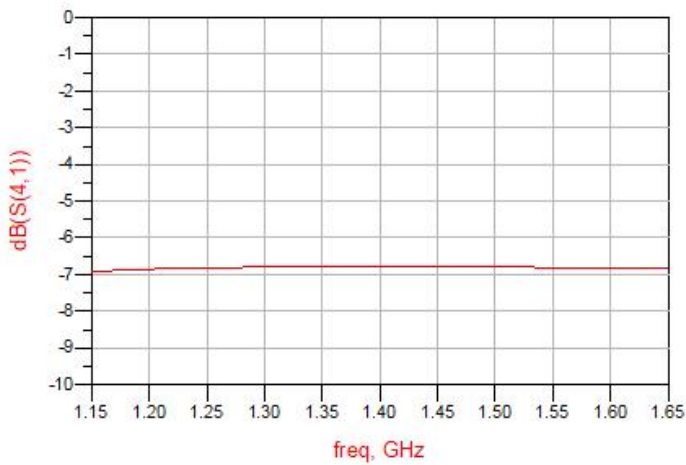


Figure 6. MQF1608G1 Coupling

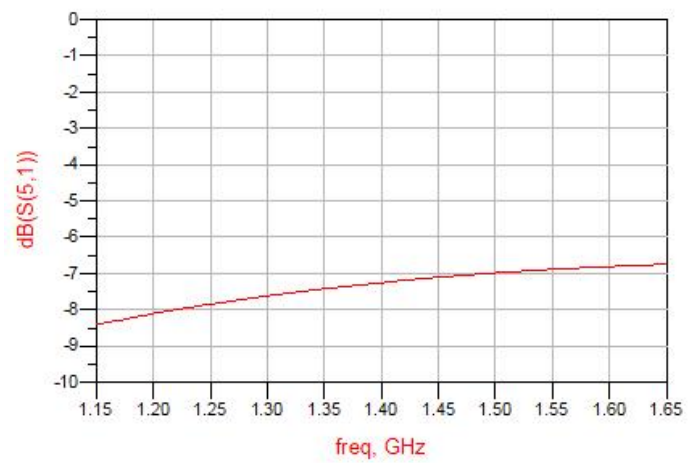


Figure 7. MQF1608G1 Return Loss (S11)

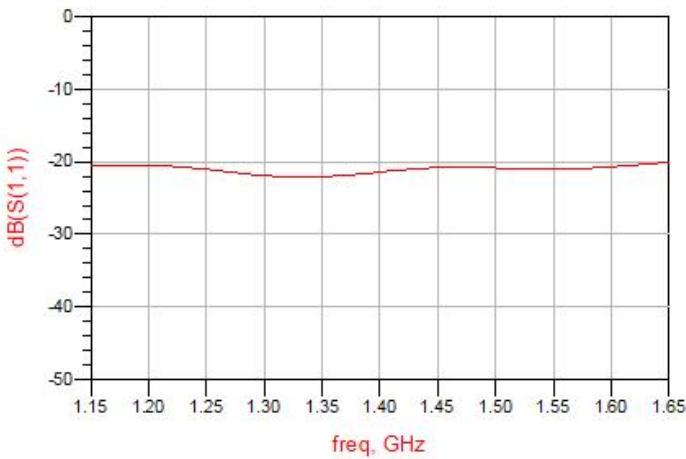


Figure 8. MQF1608G1 Return Loss (S22)

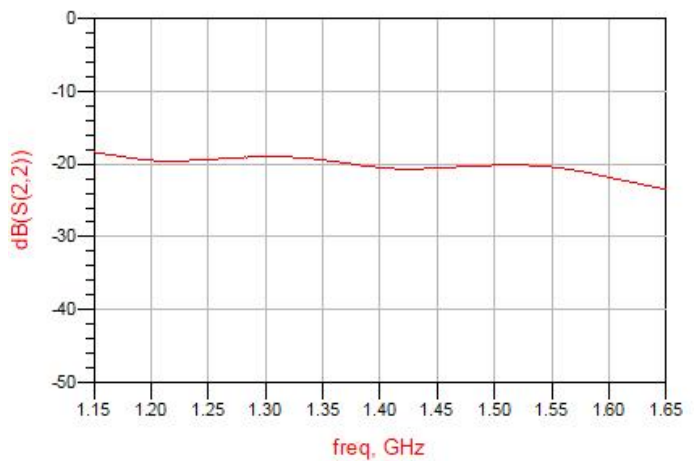


Figure 9. MQF1608G1 Return Loss (S33)

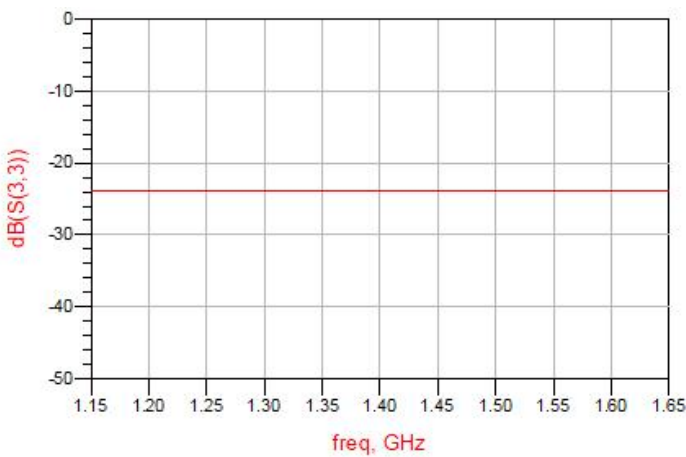
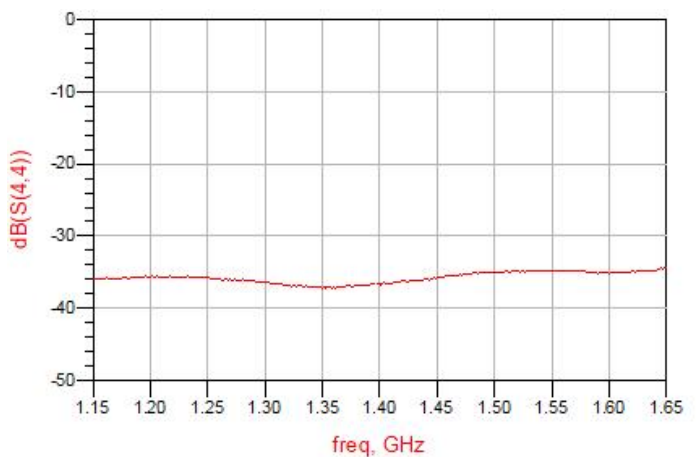


Figure 10. MQF1608G1 Return Loss (S44)



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4-Phase Antenna Feeder



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Figure 11. MQF1608G1 Return Loss (S55)

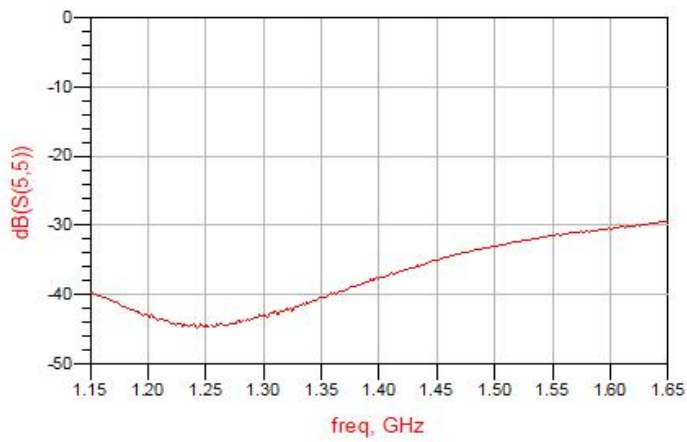
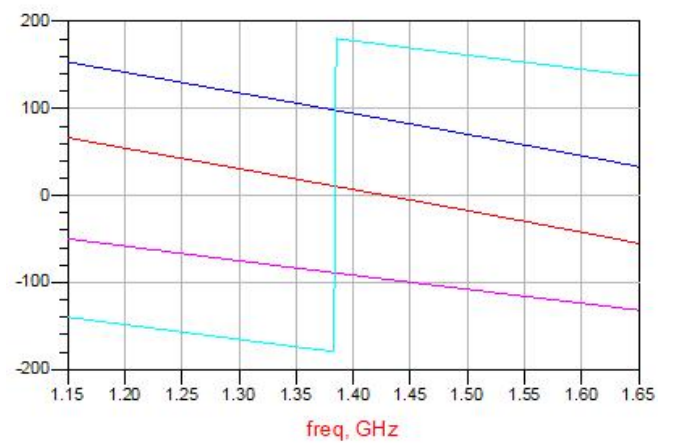


Figure 12. MQF1608G1 Phase



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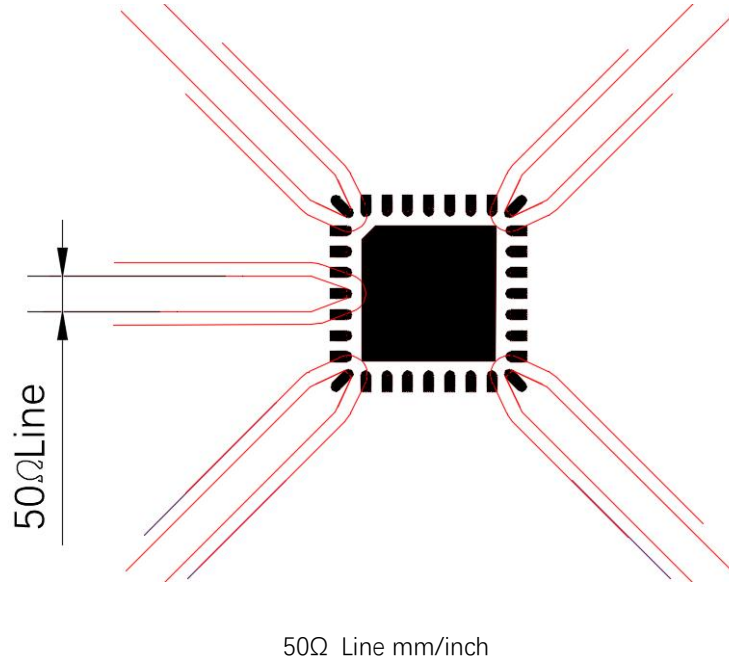
4-Phase Antenna Feeder

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Recommended PCB Layout

Figure 13. Recommended PCB Layout



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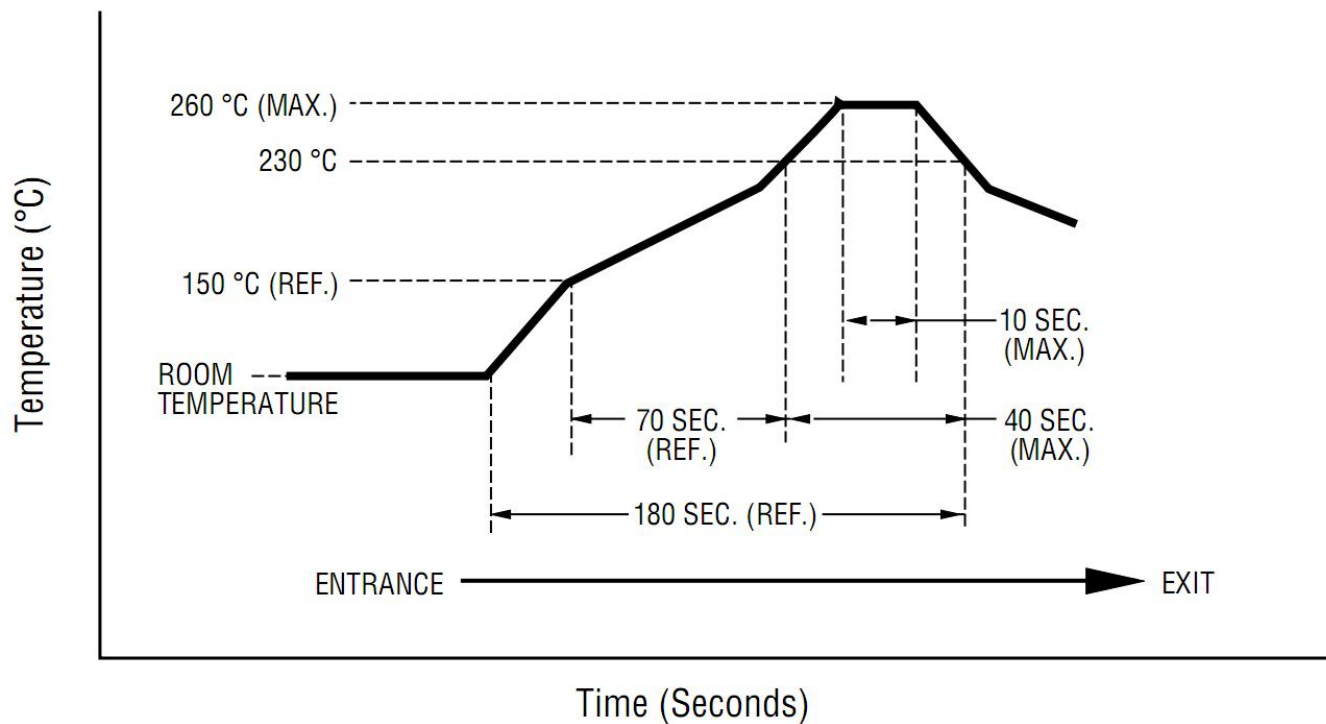
4-Phase Antenna Feeder



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Reflow Profile

Figure 14. MQF1608G1 Thermal Reflow Profile



Packaging and Ordering Information

Table 4. MQF1608G1 Ordering Information

Device	Package	Reel	Shipping
MQF1608G1	7*7mm	7"	2500 Reel

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4-Phase Antenna Feeder



Revision	Description	Date
Rev0	Preliminary	2024/2/26
Rev1	Update	2025/9/1
Rev2	Update	2026/6/3

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