

MQF2508G01

4-Phase Antenna Feeder



MECSINE 兆讯

Applications

1. Frequency range 2400– 2600 MHz
2. 4-Phased Antenna Feeder, 6dB (0°, 90°, 180°, 270°)
3. Low insertion loss type. 1.5 dB
4. RoHS compliance (Pb-Free)

Features

1. GNSS antenna
2. Satellite phone antenna

Description

MQF2508G1 is a 4-Phase antenna feeder with stable performance in different temperatures. high conductivity metal conductor enable the MQF2508G1 to minimize insertion loss and improve durability for thermal stabilization and electricity. All the components are tested 100%

Characteristics

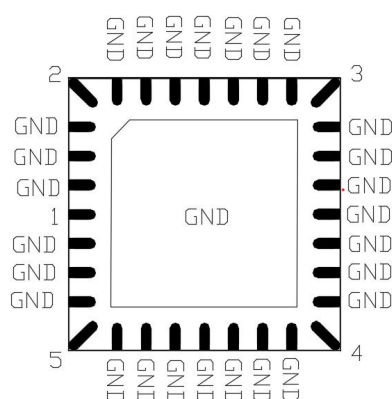
Table 1. MQF2508G1 Characteristics

Item	Min.	Type	Max.	Unit
Frequency Range	2400		2600	MHz
Isolation	16	18		dB
Insertion Loss		1.5		dB
Phase Unbalance	-8		+8	degrees
Amplitude	-1.5		+1.5	dB
Return Loss	14	16		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. MQF2508G1 (Bottom View)



All Use For RF & Microwave

MQF2508G01

4-Phase Antenna Feeder



MECSINE 兆讯

The MQF2508G1 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

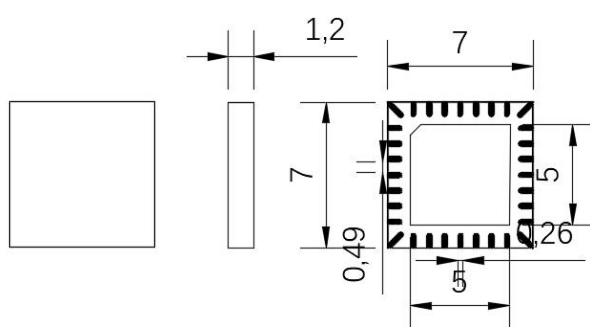
Table 2. MQF2508G1 Port Configurations

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

Outline Drawing

Figure 2. MQF2508G1 Outline Drawing

Top View Side View Bottom View



Unit: mm

Typical Performance (25°C, 2400-2600 MHz)

Figure 3. MQF2508G1 Coupling

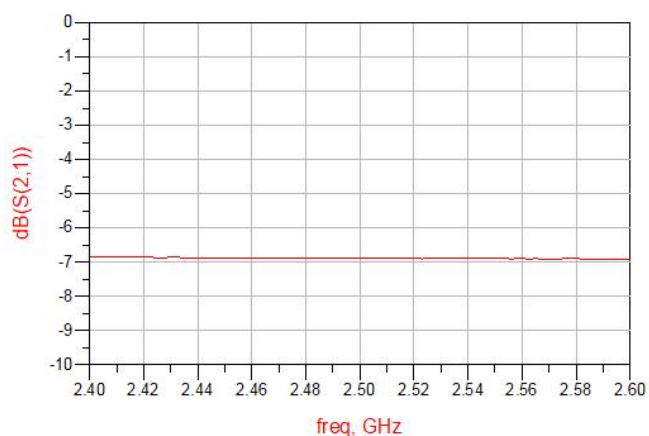
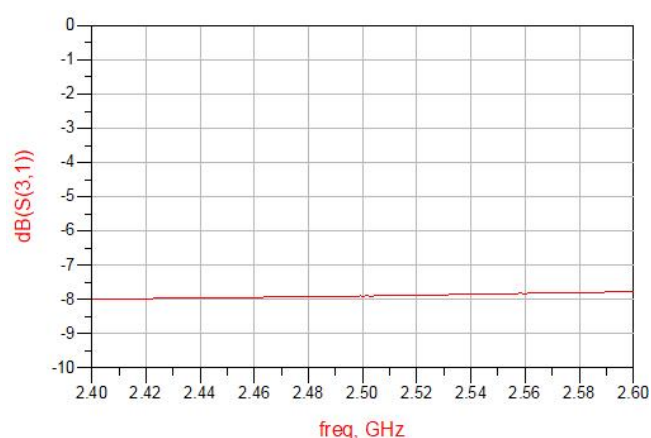


Figure 4. MQF2508G1 Coupling



All Use For RF & Microwave

MQF2508G01

4-Phase Antenna Feeder

MiPD[®]

MECSINE 兆讯

Figure 5. MQF2508G1 Coupling

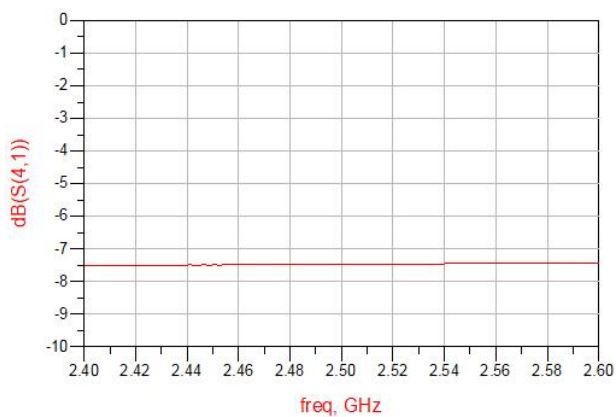


Figure 6. MQF2508G1 Coupling

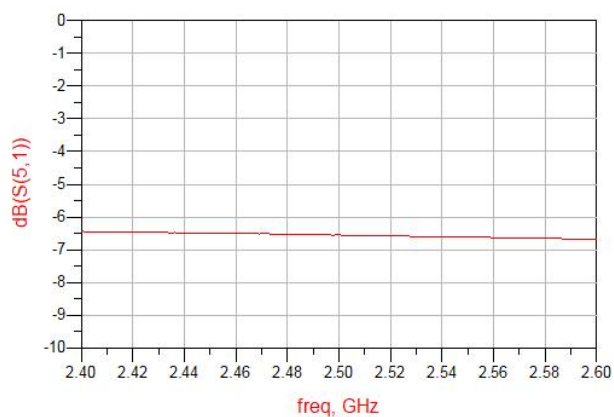


Figure 7. MQF2508G1 Return Loss (S11)

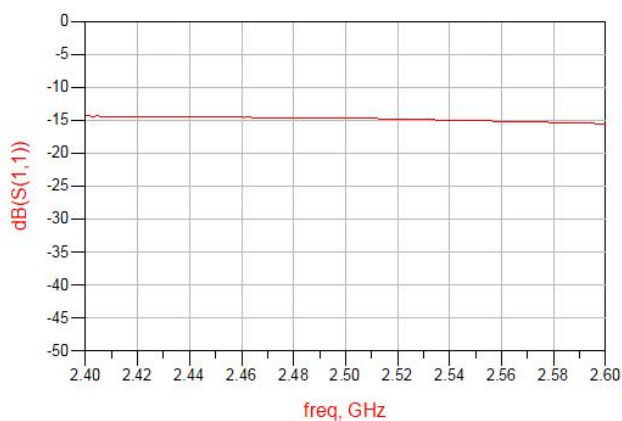


Figure 8. MQF2508G1 Return Loss (S22)

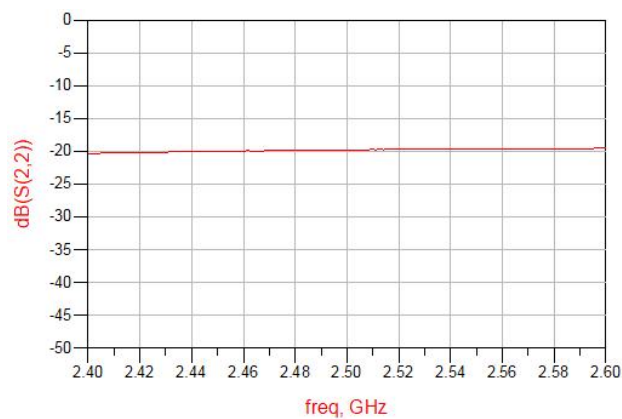


Figure 9. MQF2508G1 Return Loss (S33)

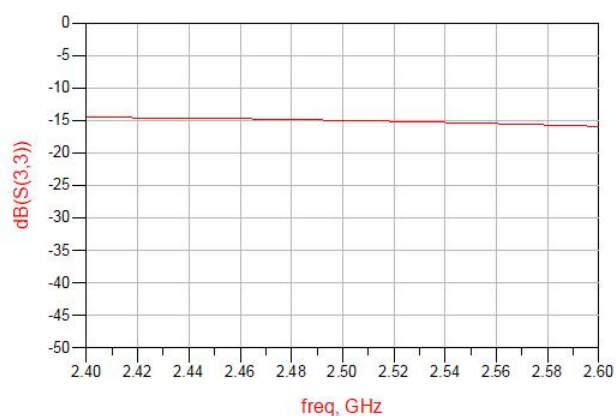
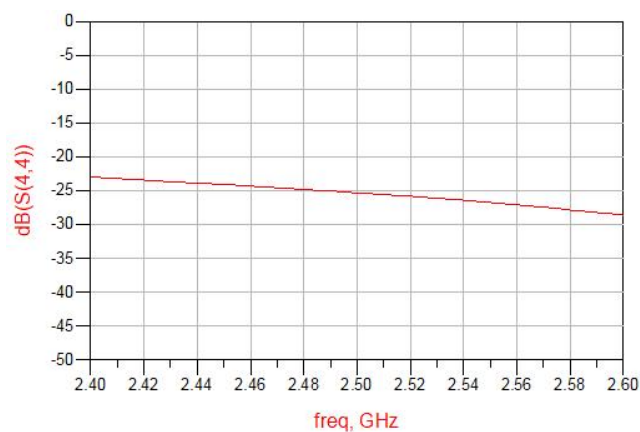


Figure 10. MQF2508G1 Return Loss (S44)



All Use For RF & Microwave

MQF2508G01

4-Phase Antenna Feeder



MECSINE 兆讯

Figure 11. MQF2508G1 Return Loss (S55)

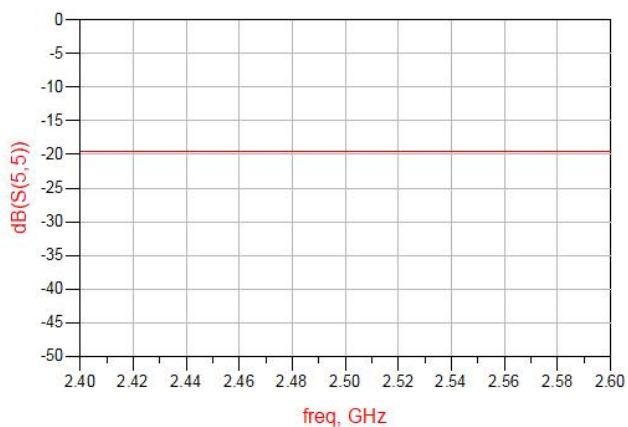
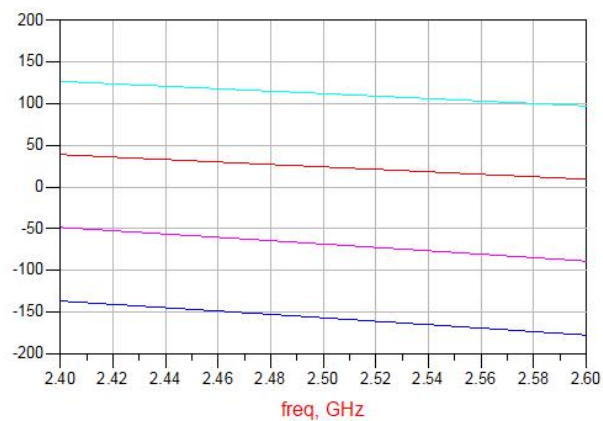


Figure 12. MQF2508G1 Phase



All Use For RF & Microwave

MQF2508G01

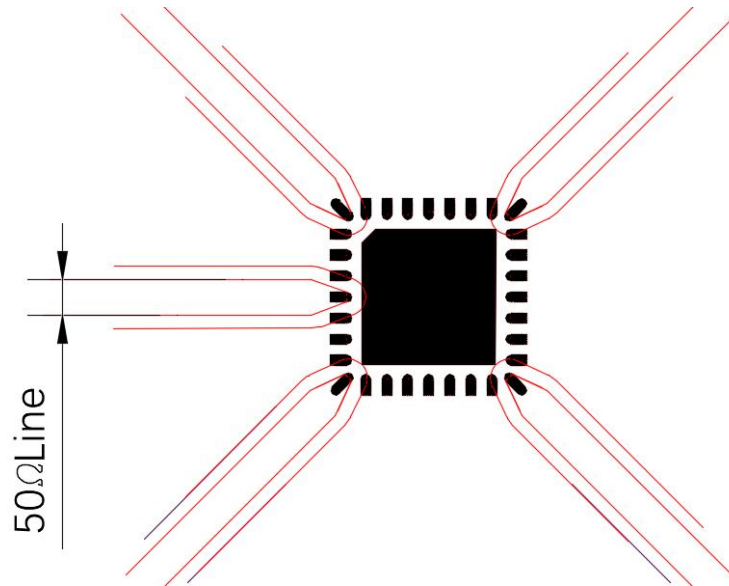
4-Phase Antenna Feeder

MiPD[®]

MECSINE 兆赫讯

Recommended PCB Layout

Figure 13. Recommended PCB Layout



50Ω Line mm/inch

All Use For RF & Microwave

MQF2508G01

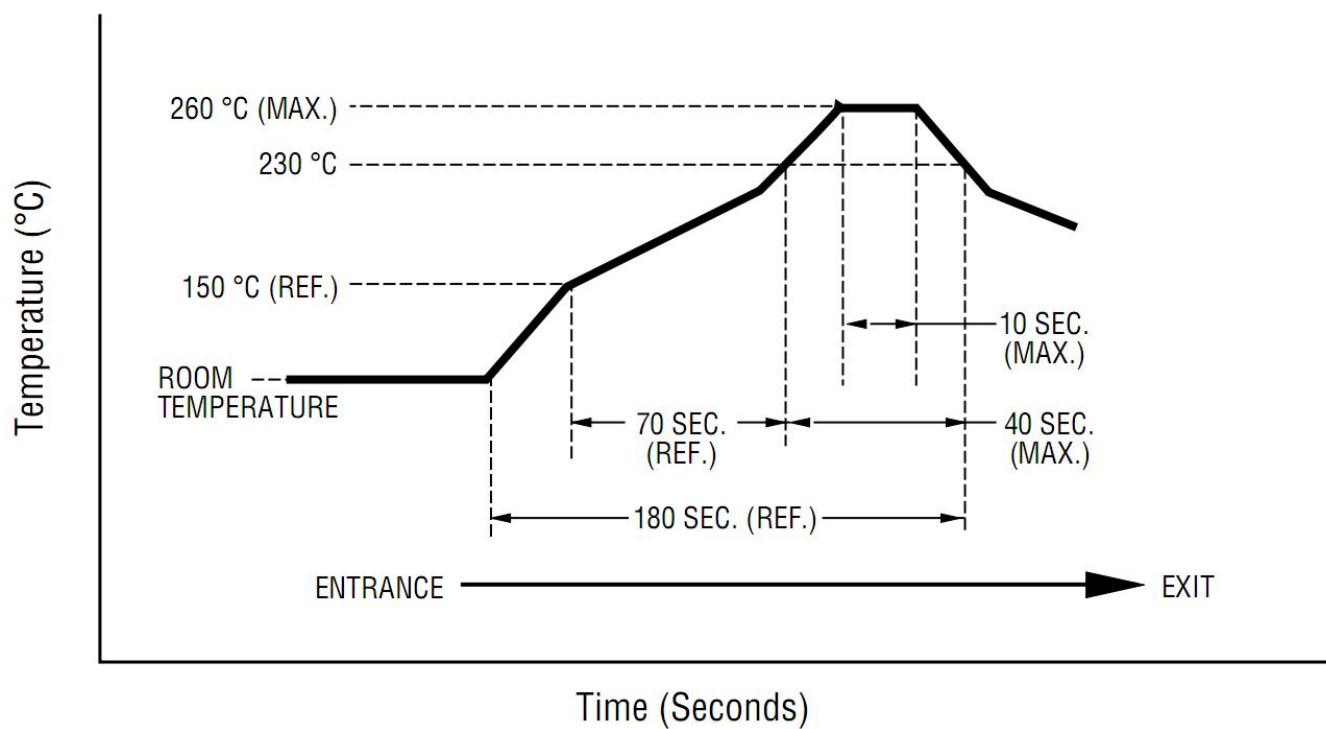
4-Phase Antenna Feeder



MECSINE 兆讯

Reflow Profile

Figure 14. MQF2508G1 Thermal Reflow Profile



Packaging and Ordering Information

Table 4. MQF2508G1 Ordering Information

Device	Package	Reel	Shipping
MQF2508G1	7*7mm	7"	2500 Reel

All Use For RF & Microwave

MQF2508G01

4-Phase Antenna Feeder

MiPD[®]

MECSINE 兆讯

Revision	Description	Date
Rev0	Preliminary	2024/2/26
Rev1	Update	2025/8/28

All Use For RF & Microwave