

Amplifier Module V1 for the PAM

- Frequency: 0.05-20GHz
- Gain: 18dB
- Impedance: 50Ω

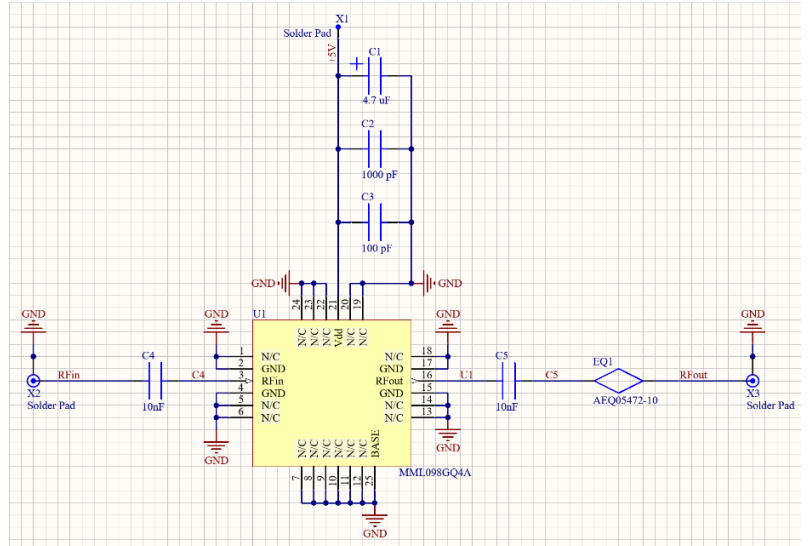
Schematic

Inputs:

- RFin: Radio signal input
- +5V: supply voltage (+5V@57mA)
- GND

Outputs:

- RFout: Radio signal output



Components - All Case Codes are metric

- | | |
|--|----------|
| 2 – SMA 2Hole (142-1701-201) | [X2, X3] |
| 1 – Feed through cap 4-40UNC-2A (B3C153B) | [X1] |
| 1 – Turret Terminal 2-56 UNC – 2A (1595-2) | |
| 1 – 23 dB amp (MML098GQ4A) | [U1] |
| 2 – 10nF 0806 (939113733510) | [C4, C5] |
| 1 – 100pF 1005 (GRM1555C2A101FA01D) | [C3] |
| 1 – 1000pF 1608 (GCM1885C1H102FA16D) | [C2] |
| 1 – 4.7uF 3216 (TH3A475K020C5000) | [C1] |
| 1 – 3.5dB equalizer 0605 (AEQ05472-T) | [EQ1] |

1 – RO4350 PCB

1 – Box

1 – Lid

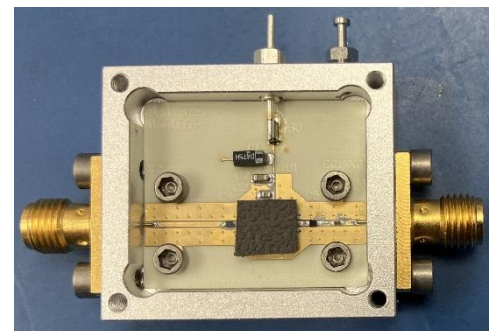
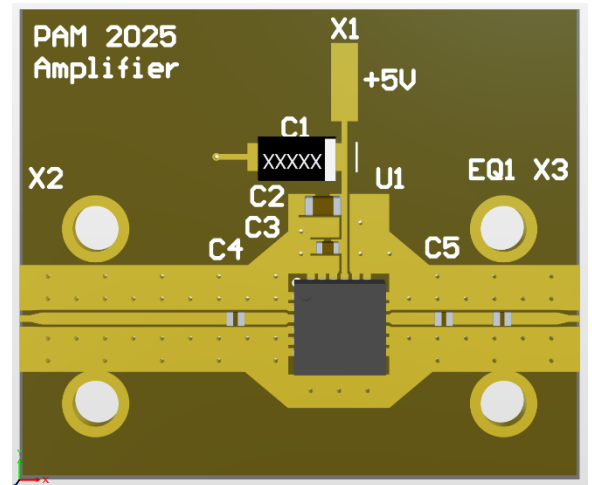
4 – Screws 3-48 UNC - 2B x 3/16 (92196A091)

4 – Screws 2-56 UNC - 2B x 1/8 (21202)

4 – Screws 2-56 UNC - 2B x 5/32 (91771A884)

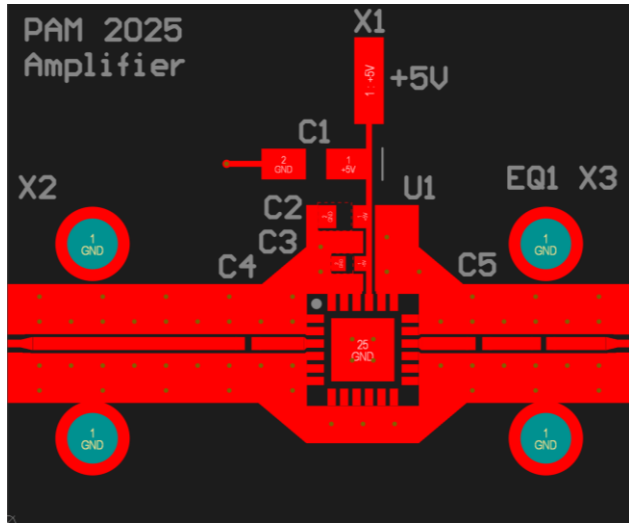
1 – RF-absorber PSA 0.08”, ca. 20 x 24 mm (MR42-0008-20)

1 – RF-absorber Urethane 0.06” ca. 5 x 5 mm (ARC-UD-11881-3)



Footprint

Ground pins surrounding the RF input and RF output are **not** connected to the central ground pad.



S-parameters

S-parameter measurement with the VNA (N5230C) of v1 amplifier module 1.

