3D OFHC Copper Transmon/Filter Cavity

Specifications:

- Machined from OFHC Copper
- Two-port configuration
- TE101 fundamental mode near 7.75 GHz
- Non-magnetic SMA connectors (QMC-CRYOCON-FSMA) and pins which can be adjusted to set coupling to the resonator.
- Provided SMA connector pins allows for user adjustable coupling quality factors.
- Groove for indium seal
- Brass alignment pins, for alignment of the two halves when assembling
- Typical Internal quality factor of 18k at 10 mK

Figure 1. Typical low temperature cavity response.

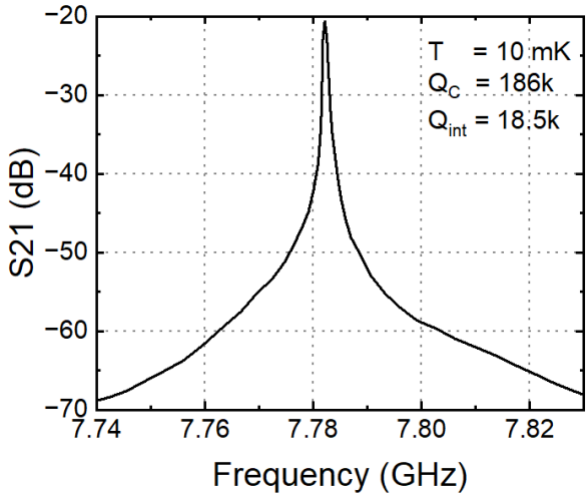
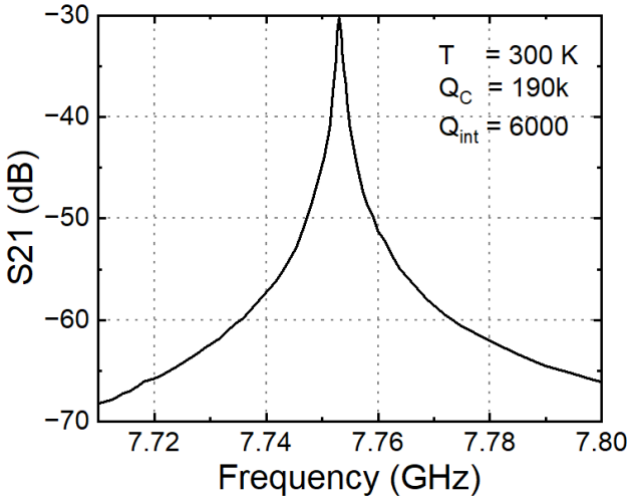


Figure 2. Room temperature cavity response.



Applications:

- Provide well defined microwave environment and readout for transmon qubits or other superconducting circuits.
- High rejection Band-pass filter

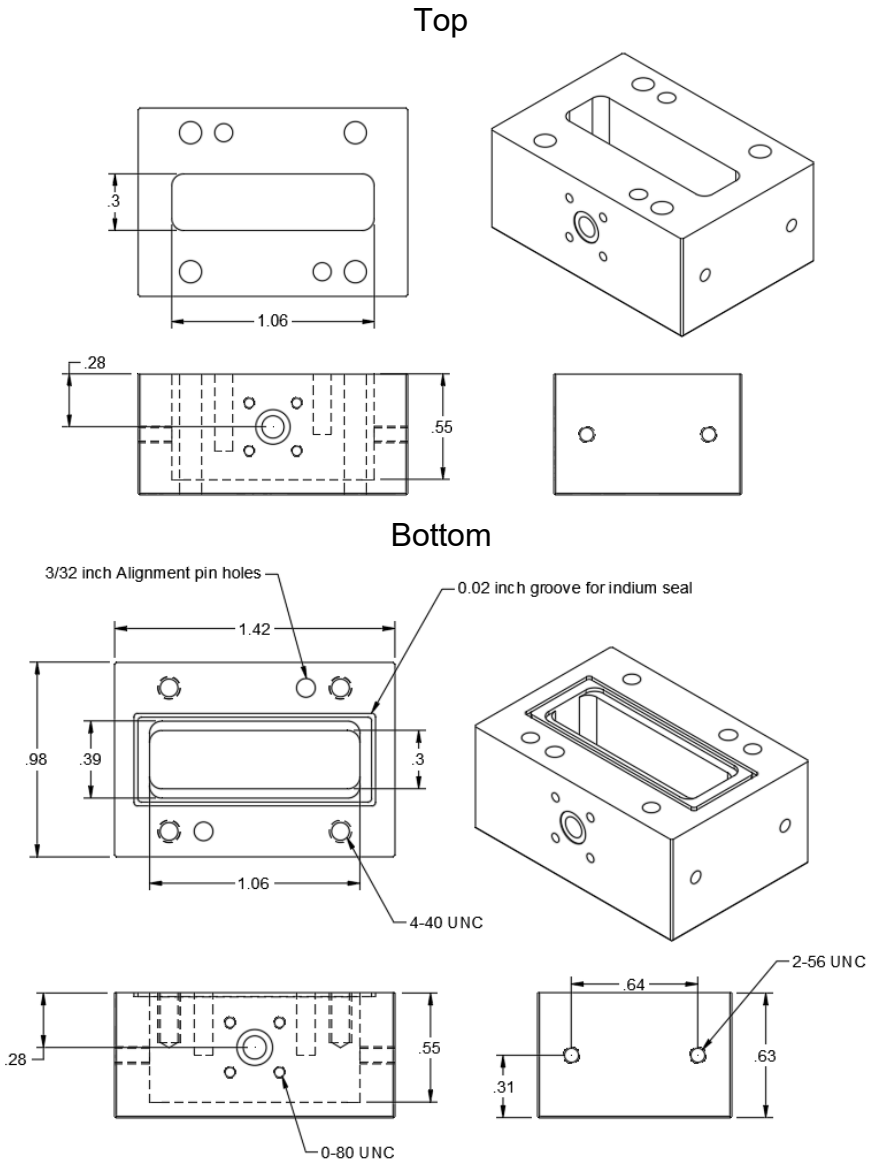


Figure 3. Schematics of resonator