QMC-CRYOCAVITY1-SMA

3D Transmon/Filter Cavity

Specifications:

- Machined from 5N (99.999%) Purity Aluminum
- Two-port configuration
- TE101 fundamental mode near 7.75 GHz
- Non-magnetic SMA connectors (QMC-CRYOCON-FSMA) and pins.
- Provided SMA connector pins allows for user adjustable coupling quality factors.
- Groove for indium seal
- Internal quality factor > 1 million at 10 mK
- Optional Aluminum etch available for internal quality factors > 10 million.
  P/N: QMC-CAVITY2-SMA

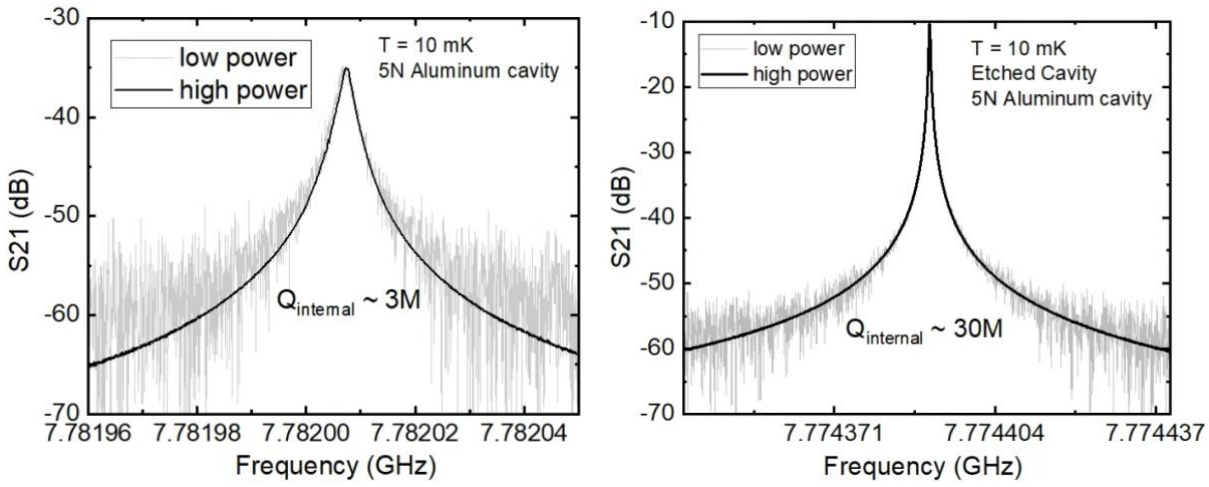

Figure 1. Typical cavity response for high and low (near single photon level) excitation powers for (left) unetched 5N aluminum cavity and (right) etched cavity option

Applications:

- Provide well defined microwave environment and readout for transmon or other superconducting circuits.
- Superconducting Aluminum provides screening of external sources of magnetic flux noise.
- High rejection Band-pass filter

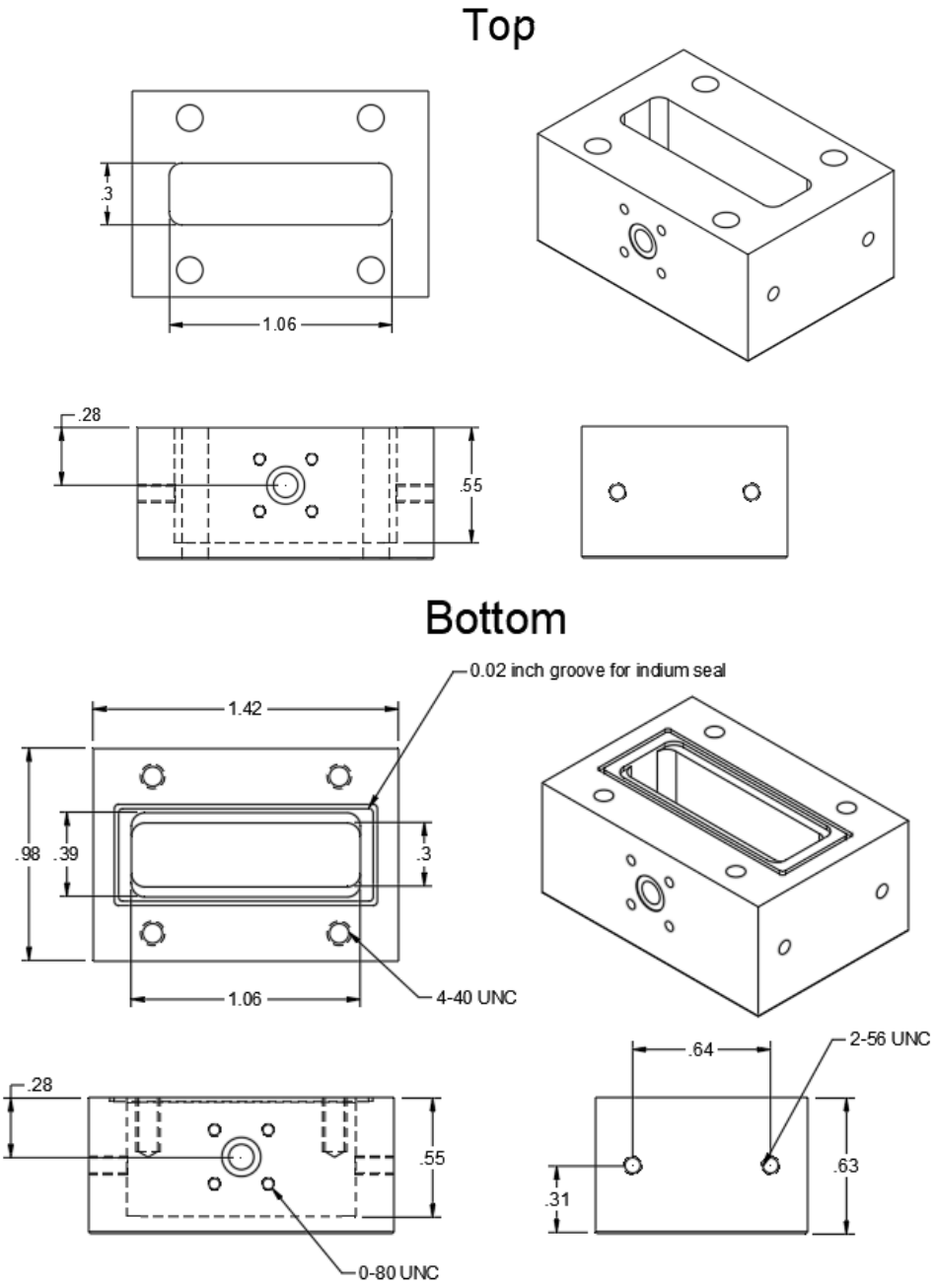

Figure 2. Schematics of resonator