



# Fabrication of Silicon Backshorts with Improved Out-of-Band Rejection for Waveguide-Coupled Superconducting Detectors



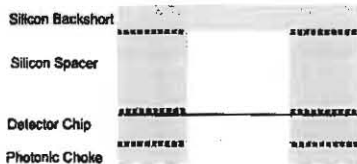
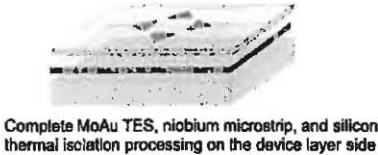
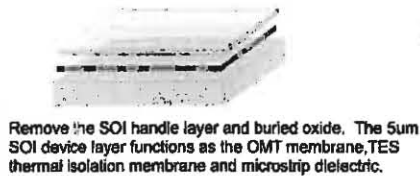
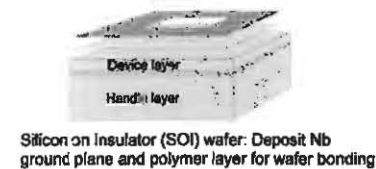
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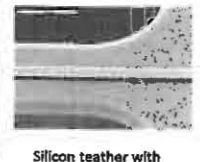
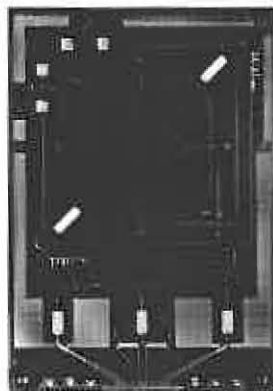
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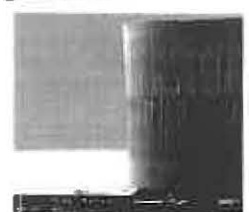
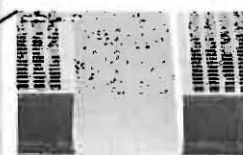
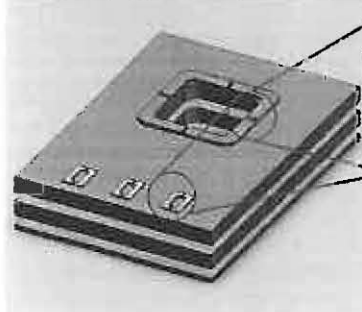
## Detector Fabrication Process 40 GHz Detector



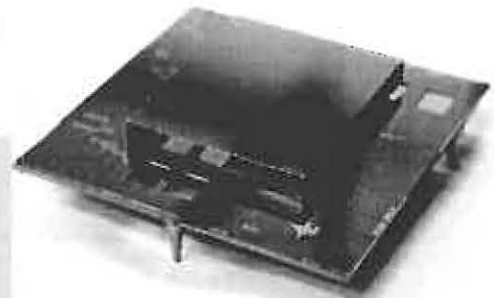
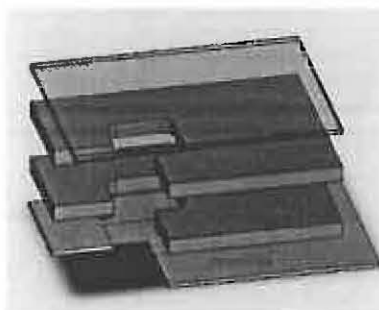
Indium bump bond separately fabricated silicon spacer and silicon backshort chip as well as silicon photonic choke chip.



## Silicon Back-short Fabrication and Integration



### Backshort assembly



### Detector integrated with backshort

### Backshort integration to detector chip