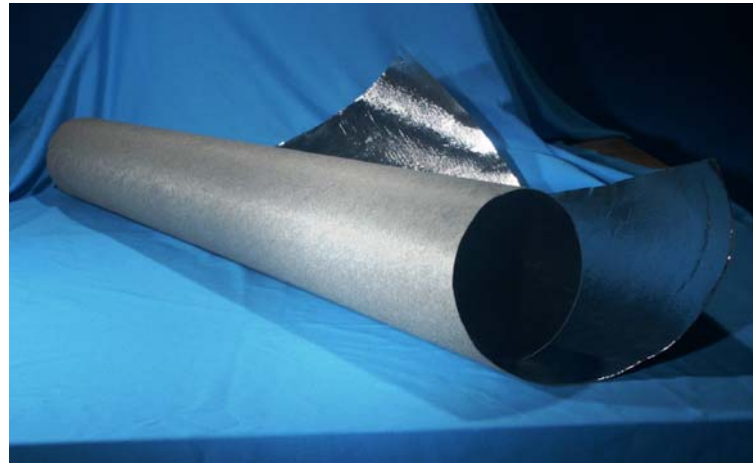


# Isolation Testing of MWT P/N MAC 2100 with Penetrations, Damage, and Repairs



Prepared by:

## Millimeter Wave Technology



**Isolation Performance Testing MWT P/N MAC 2100**

**MWT Materials, Inc. 90 Dayton Ave, Suite 6E ,Passaic NJ 07055**

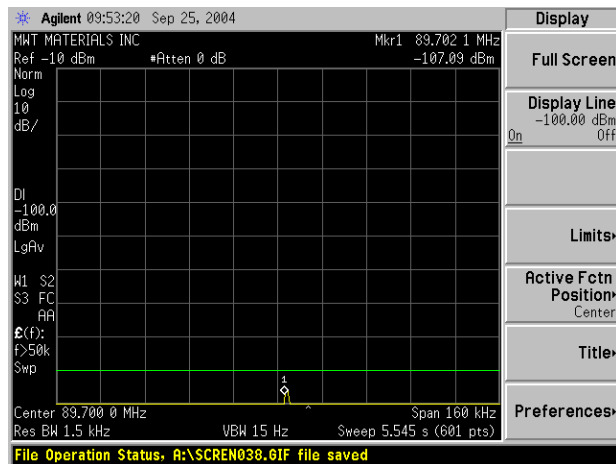
**January 28, 2004**

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# Initial Conditions



- Equipment: Agilent PSA Spectrum Analyzer
- 2 Watt Transmitter with PLL and Dipole Antenna
- Isolation Chamber 4' x 4' x 7' lined with MWT P/N MAC 2100
- Undegraded performance > 107 dB Isolation



## Isolation Performance Testing MWT P/N MAC 2100

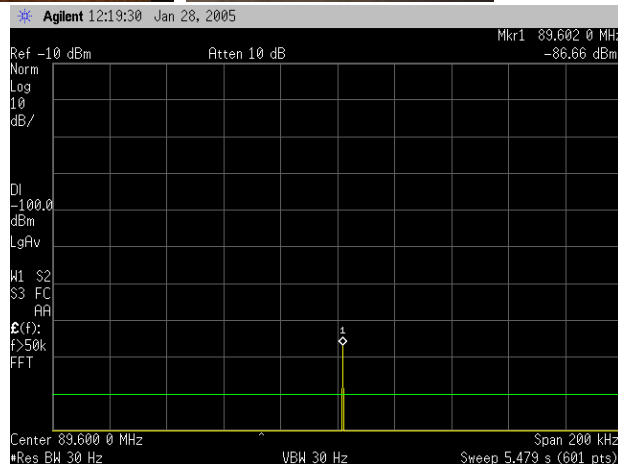
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# Pipe and Waveguide Penetration Installed



- 2 inch pipe and honeycomb protected waveguide installed
- No gasketing used
- Degredation in performance from leakage around penetrations
- Chamber isolation reduced to 85 dB

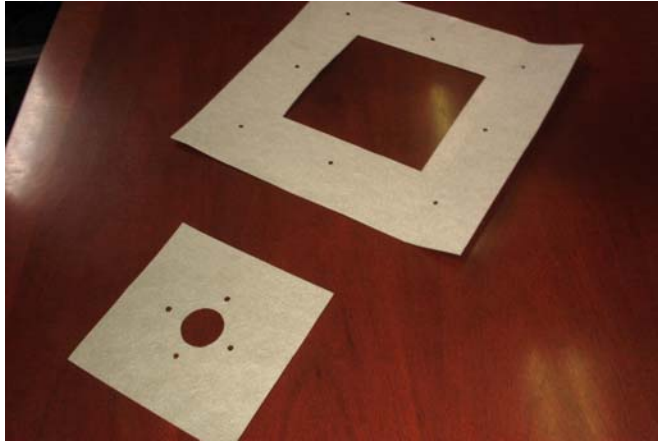


## Isolation Performance Testing MWT P/N MAC 2100

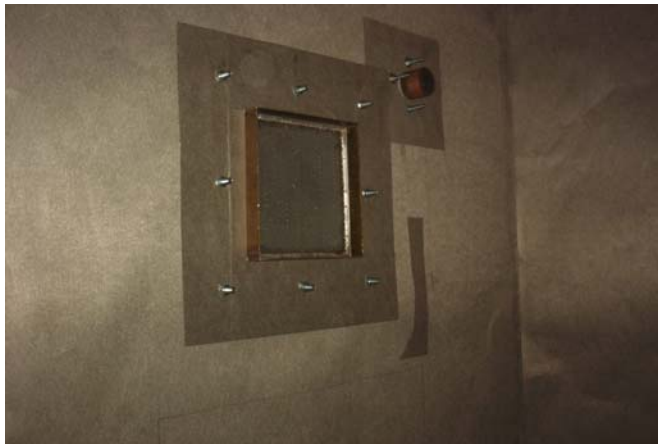
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# Detail of Gaskets



- Gaskets cut from MWT MAC 2000 ( single layer isolation material)
- Gaskets installed over penetration flange
- Note use of MAC 2000 to repair slit cut ( lower right portion of bottom picture)

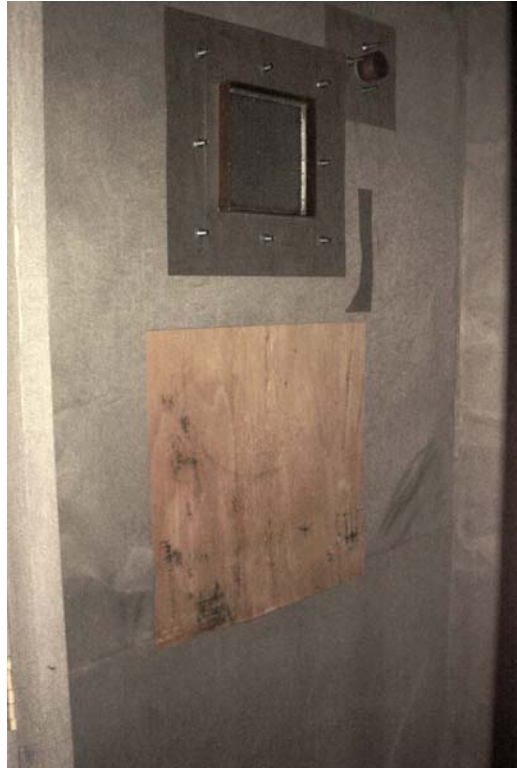


**Isolation Performance Testing MWT P/N MAC 2100**

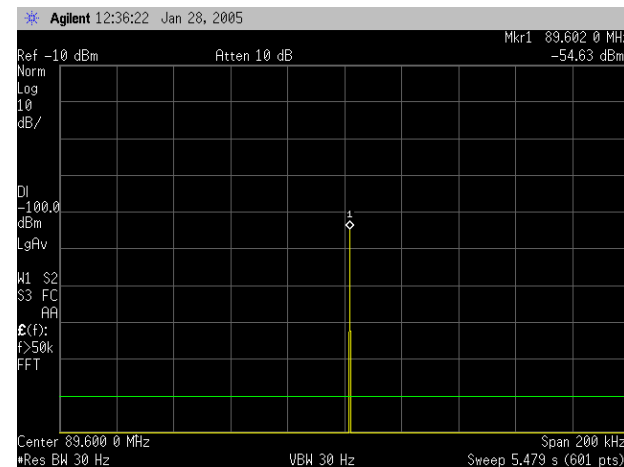
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# Section of MAC 2100 Removed



- Removal of a 2' x 2' section of the MAC 2100 further reduces isolation to 54 dB
- Note that slit repair and gaskets have been installed



## Isolation Performance Testing MWT P/N MAC 2100

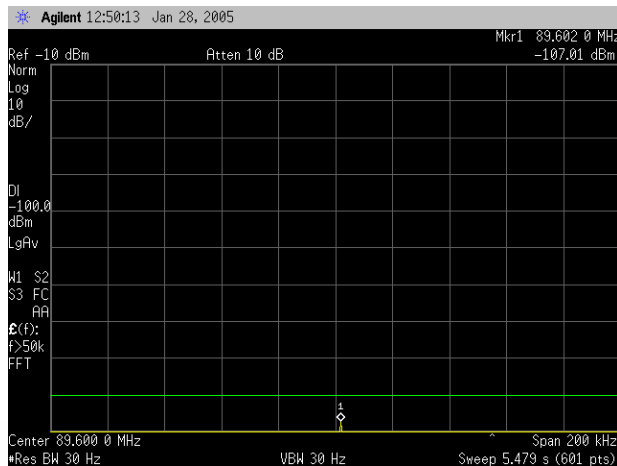
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# Copper Patch and Final Repairs



- Standard MRI grade copper sheet installed over 2' x 2' bare wood with 2" overlap between copper and MAC 2100
- Penetration Gaskets In place
- Slit repair in place
- Isolation of repaired chamber 107 dB
- **Conclusion:** MAC 2100 WP is capable of providing in excess of -100 dB Isolation with repairs and properly installed penetrations



## Isolation Performance Testing MWT P/N MAC 2100

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