

RESISTIVE DIVIDER PROBES

HP 10020A Probe

Home Made Probe

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Hewlett Packard 10020A RESISTIVE DIVIDER PROBE KIT



Resistive Divider Probe Kit for the HP 10240B probe.

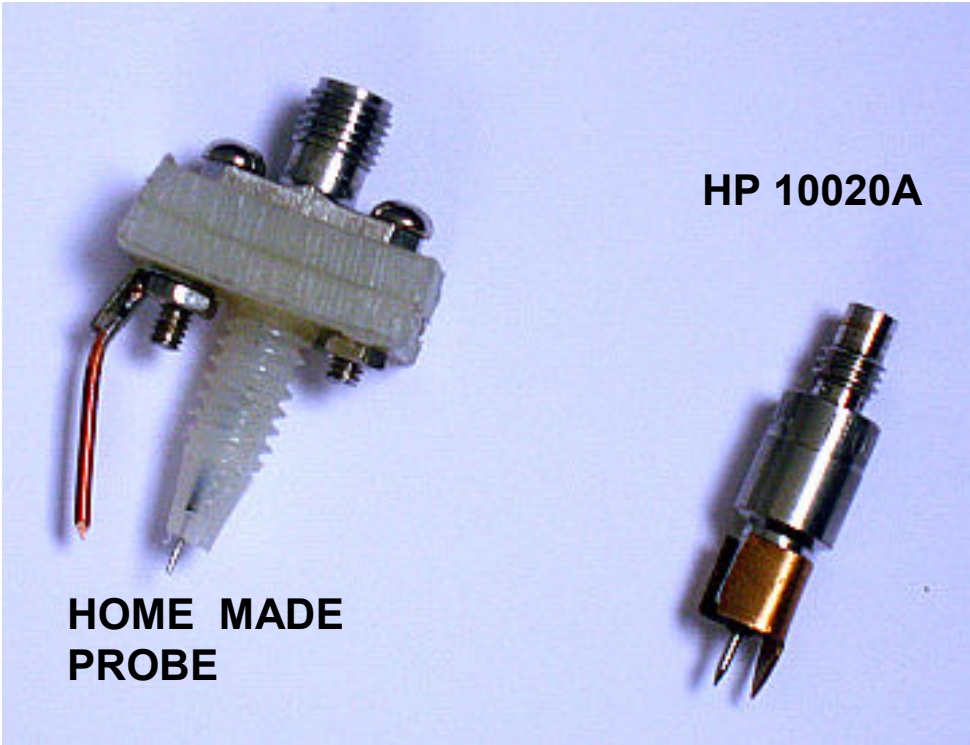
The HP 10020A Resistive Divider Kit is a signal probing system for measuring fast transition signals in high impedance systems. It is designed for use with 50W systems if a 50W feedthrough termination is used. The extremely low input RC of the this probe provides high fidelity measurements of fast transition signals.

Accessories supplied:
HP10240B blocking capacitor, BNC adapter tip , 6-32 adapter tip, alligator tip, probe handle, cable assy's 5.1cm ground, spanner tip, insulating caps, colored sleeves and the resistive divider tips shown in the chart below.

Frequency rating 700 MHz

HP 10020A Resistive Divider Tips

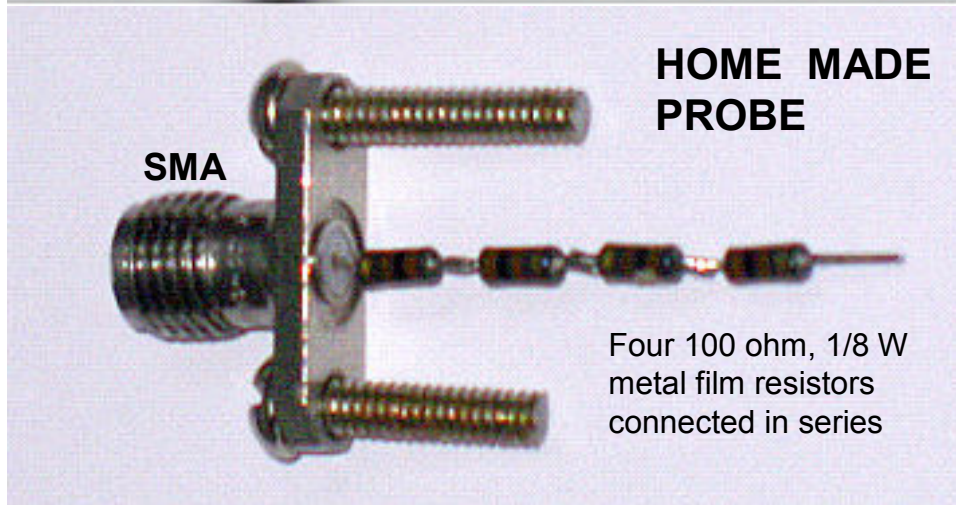
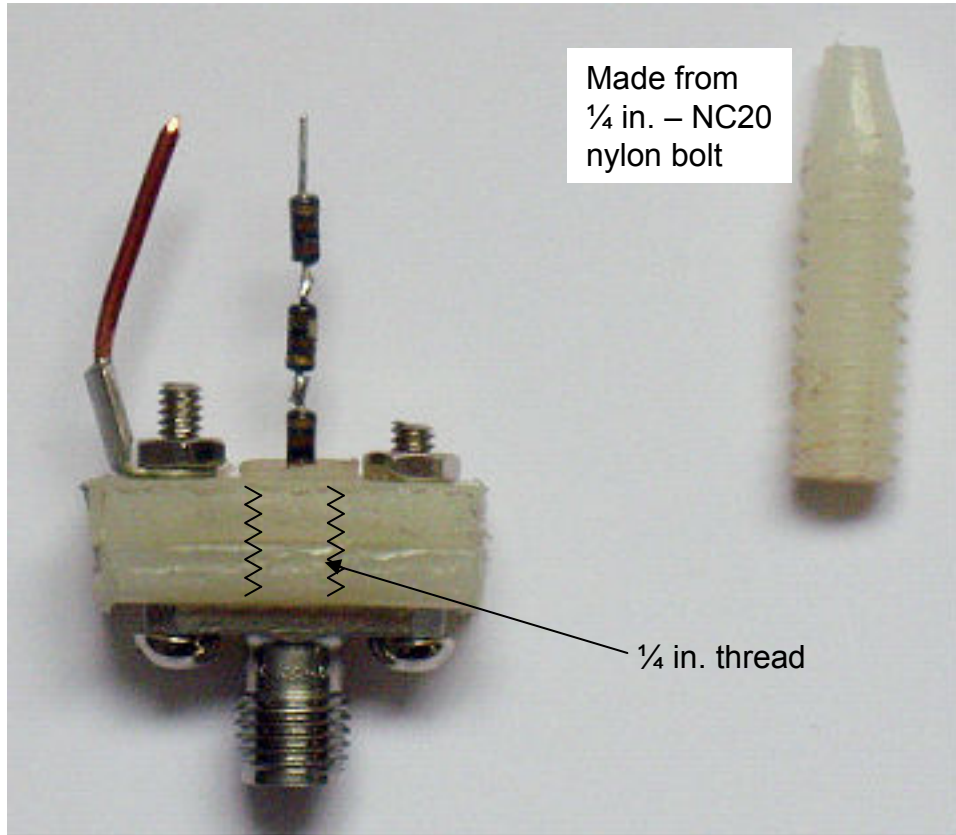
| Division Ratio | Input R (ohms) | Division Accuracy | Max V (rms) | Input C (pf) |
|----------------|----------------|-------------------|-------------|--------------|
| 1:1 | 50 | -- | 6 | -- |
| 5:1 | 250 | +/-3% | 9 | <0.7 |
| 10:1 | 500 | +/-3% | 12 | <0.7 |
| 20:1 | 1000 | +/-3% | 15 | <0.7 |
| 50:1 | 2500 | +/-3% | 25 | <0.7 |
| 100:1 | 5000 | +/-3% | 35 | <0.7 |



**HOME MADE
PROBE**

HP 10020A

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The probes were tested on a 50 Ω microstrip.

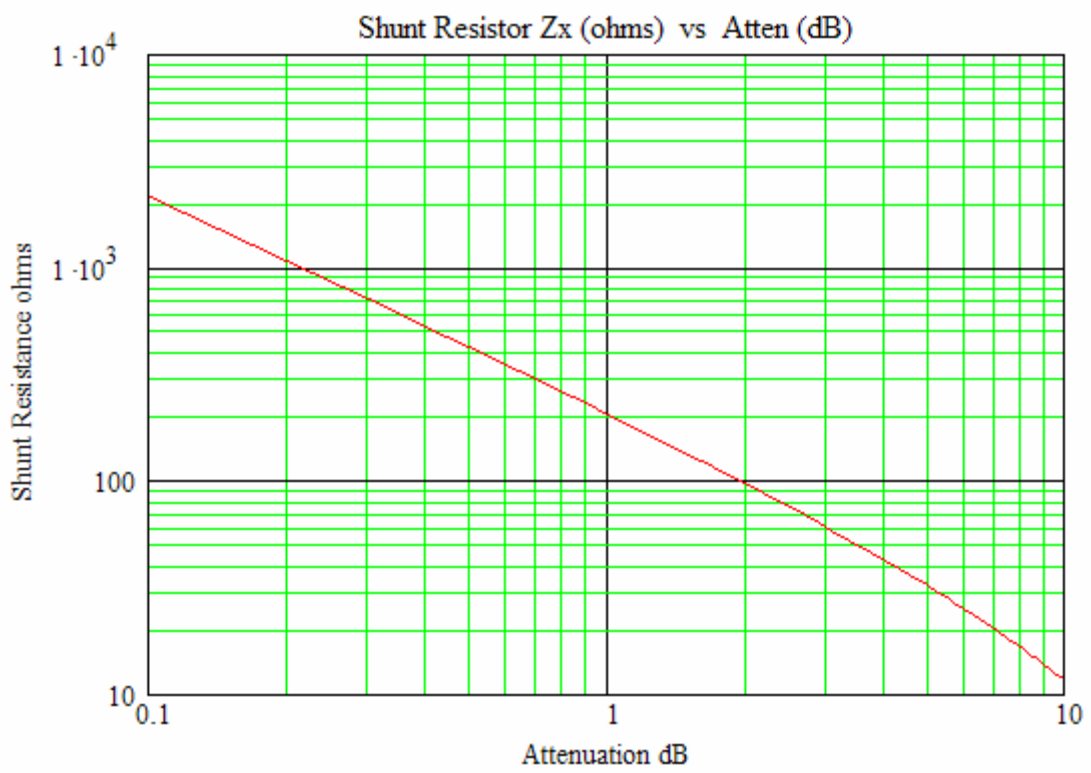


Trace Output: The signal is monitored at the trace output while

- The probe is connected on the trace
- The probe is terminated into 50 Ω

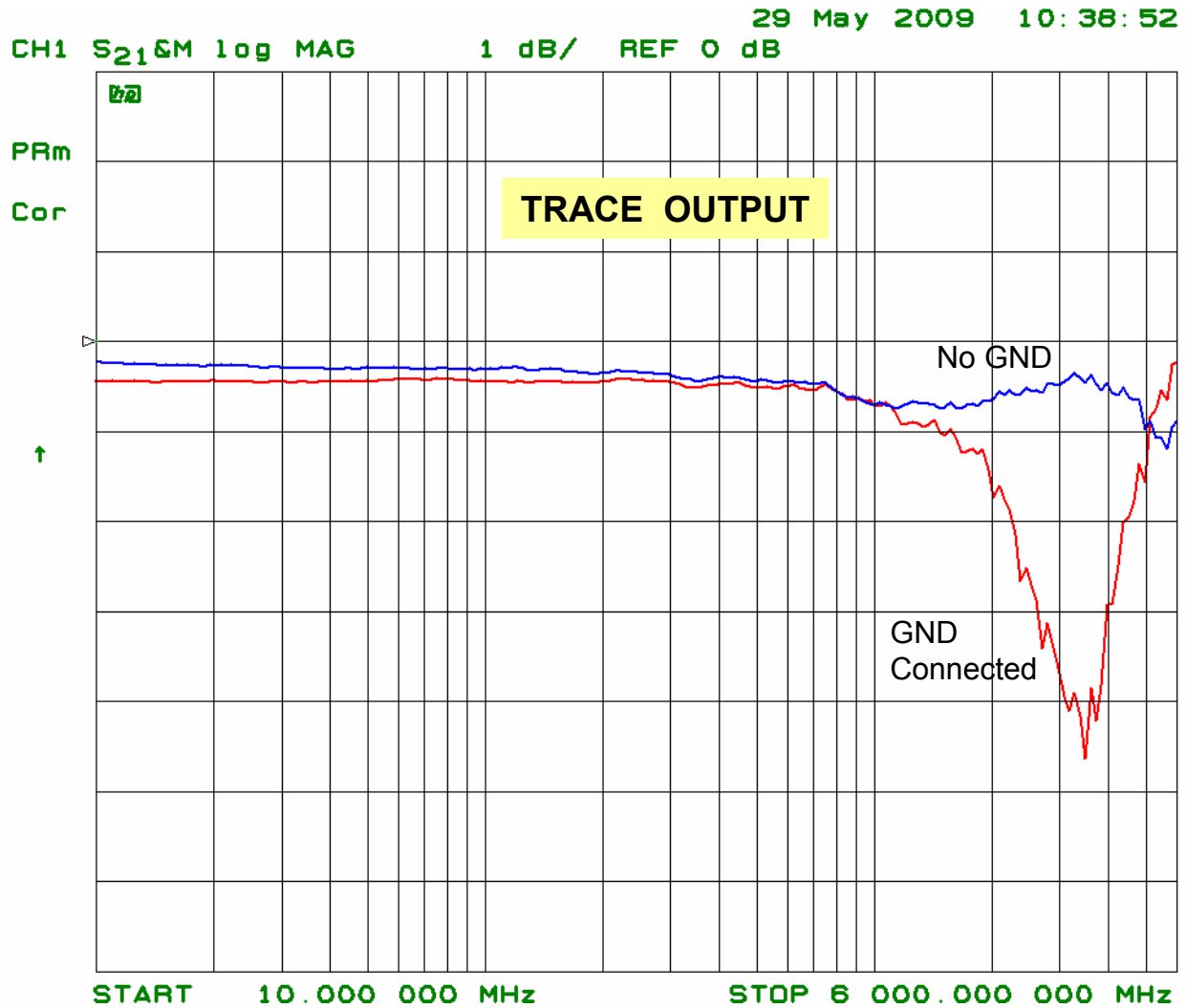
Probe Output: The probe signal is monitored while the trace is terminated into 50 Ω

Calculated shunt resistance caused by the probe vs attenuation in dB



HP 10020A probing on a 50 ohm terminated trace

(450 Ω resistor used)



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- The probe is terminated in 50 Ω

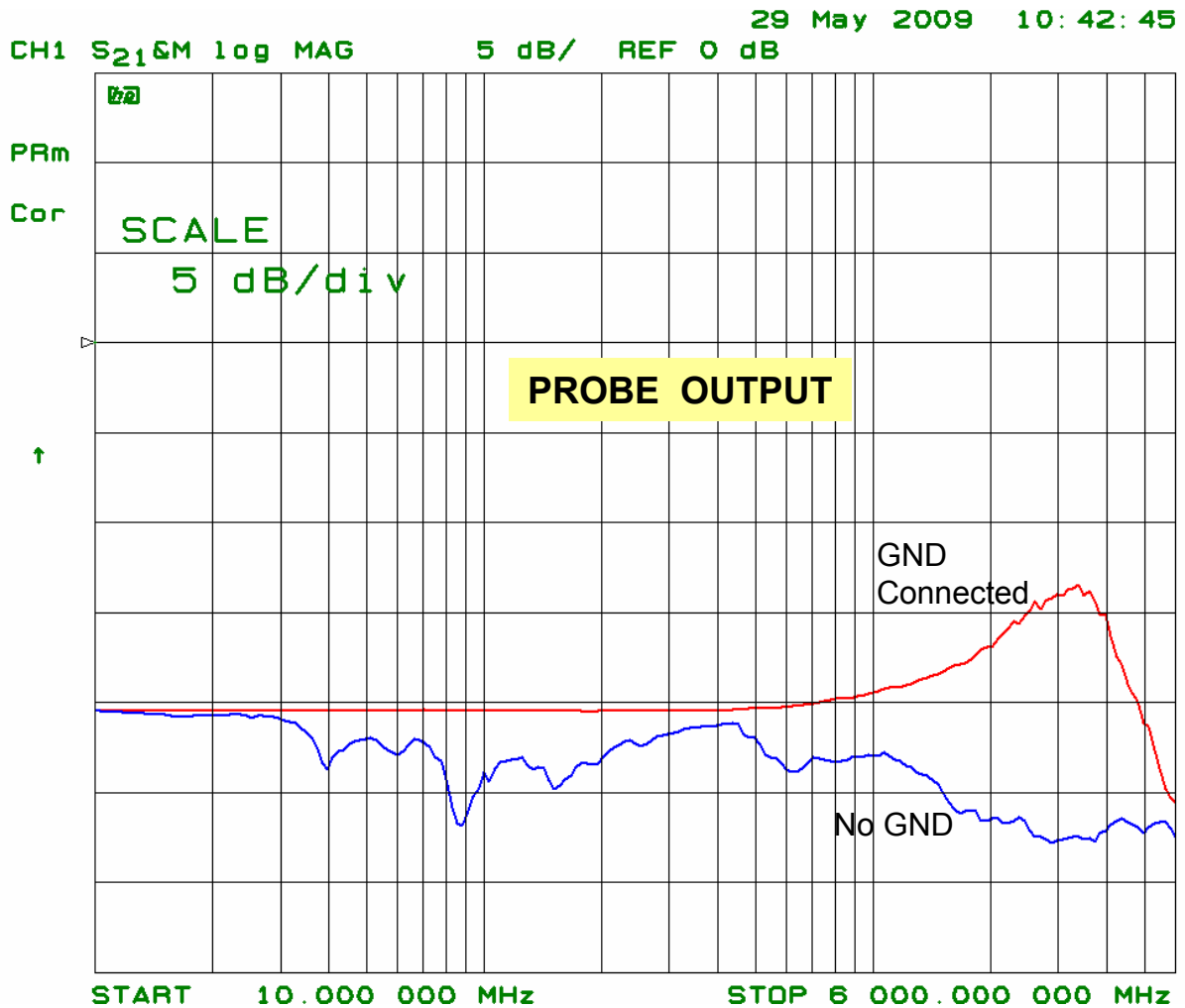
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0.5 dB attenuation gives ~ 450 ohm load across 50 ohm load

4 dB attenuation gives ~ 45 ohm load across 50 ohm load

HP 10020A probing on a 50 ohm terminated trace

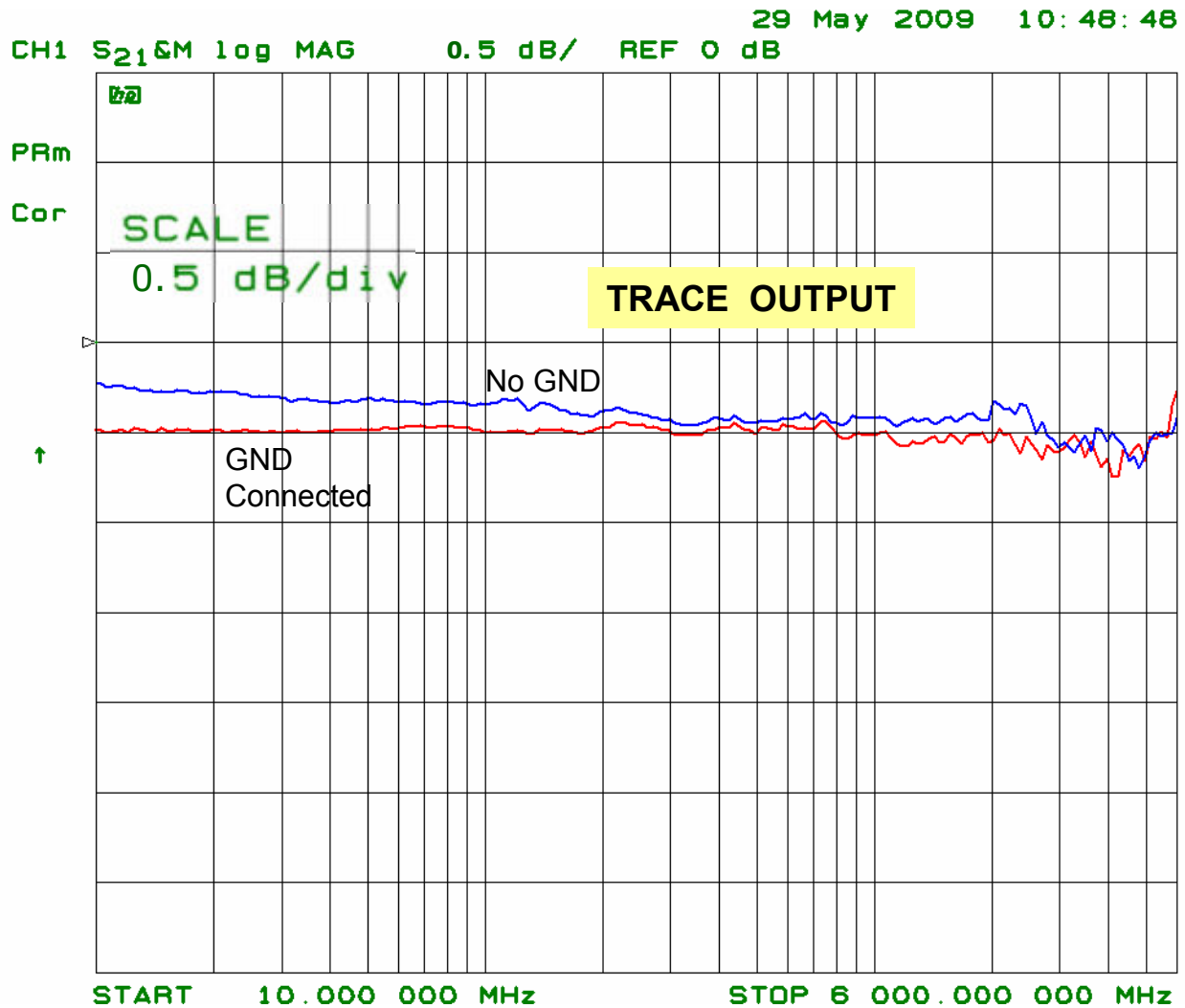
450 Ω probe resistor used)



Probe Output: The probe signal is monitored while the trace is terminated in 50 Ω

HOME MADE probe on a 50 ohm terminated trace

400 Ω probe resistor used)

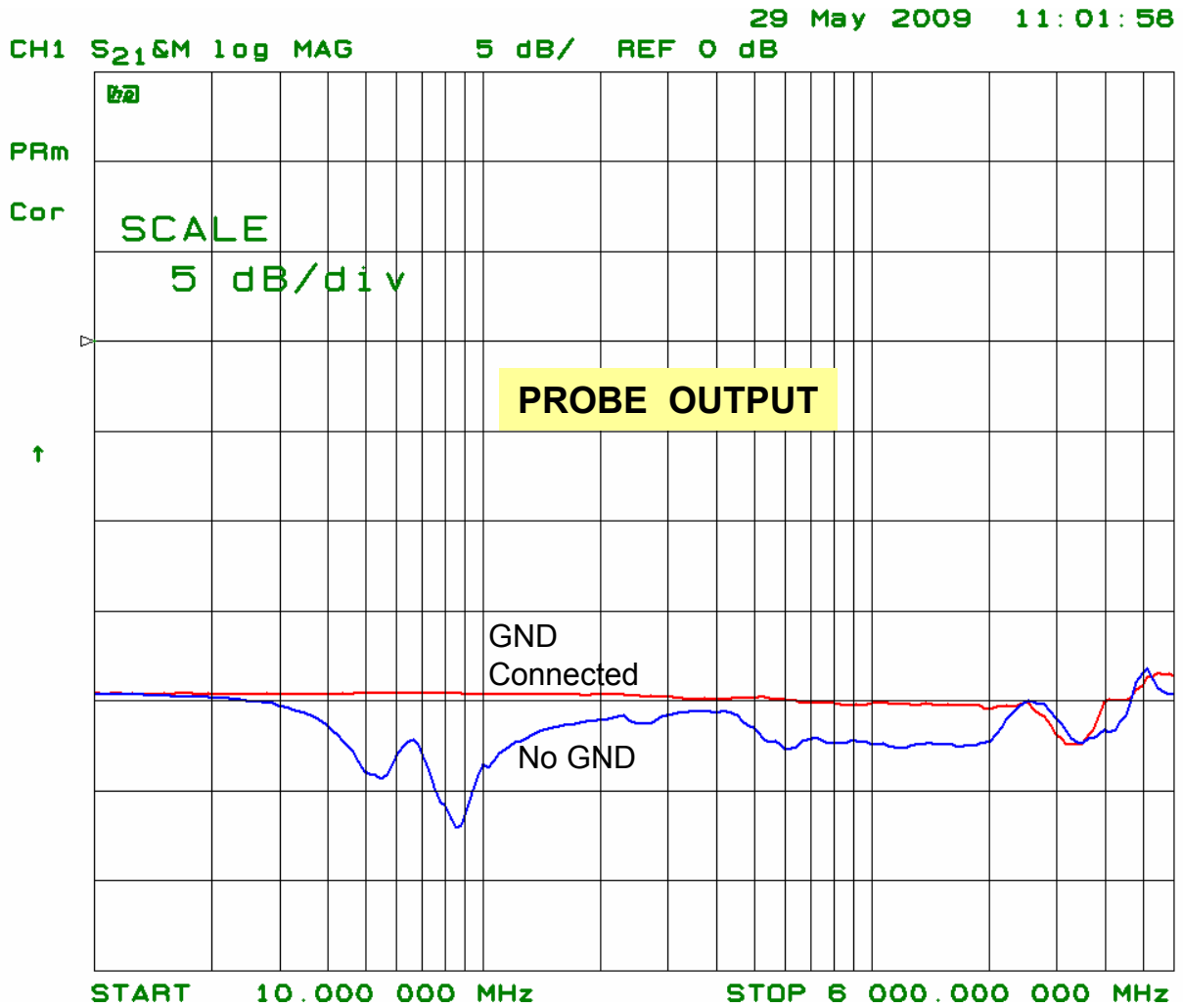


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HOME MADE probe on a 50 ohm terminated trace

400 Ω probe resistor used)



Probe Output: The probe signal is monitored while the trace is terminated in 50 Ω