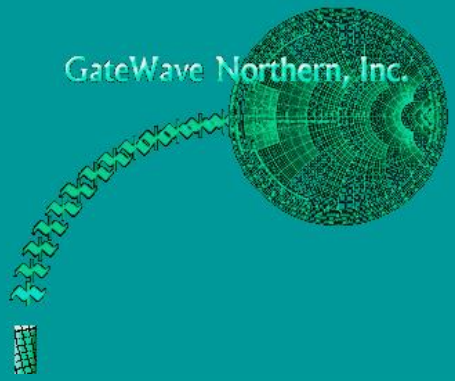
DUT Electronics

047 Coax Interconnect Cycling Test Results



11/24/2021

GateWave Northern, Inc.
6200 Gisholt Dr. Ste. 205
MADISON,WI 53713 USA
608-224-1250
g.hohenwarter@gatewave.com

Objective

- Test socket
  - TDR
  - TDT
  - Insertion loss
  - Return loss
- Cycle mechanically to 100k

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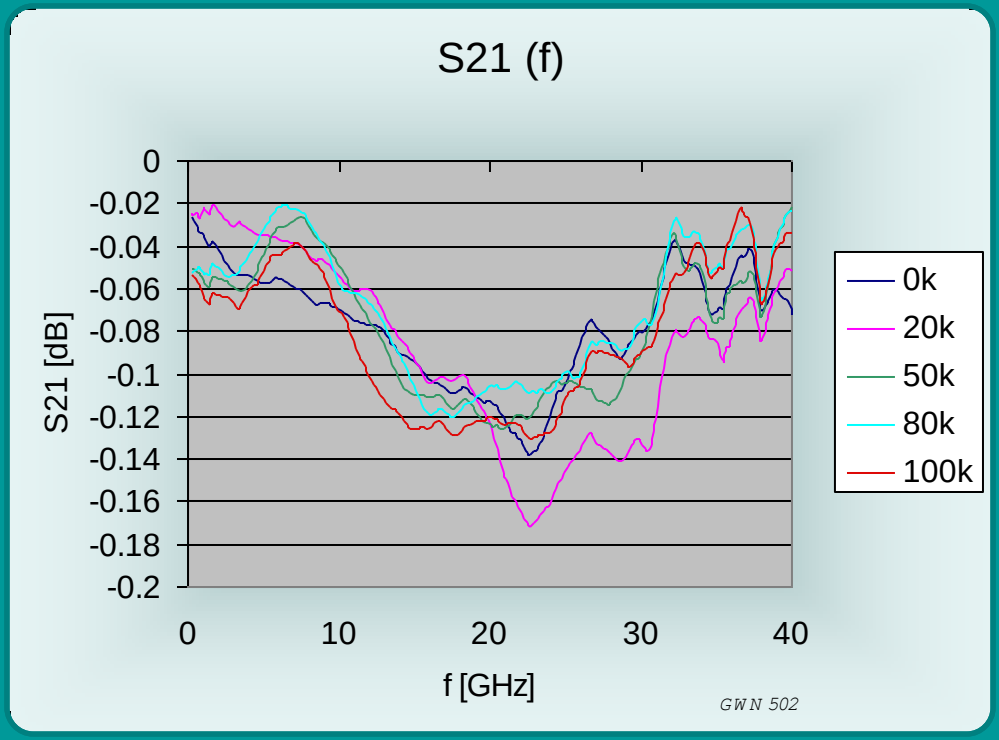
Setup

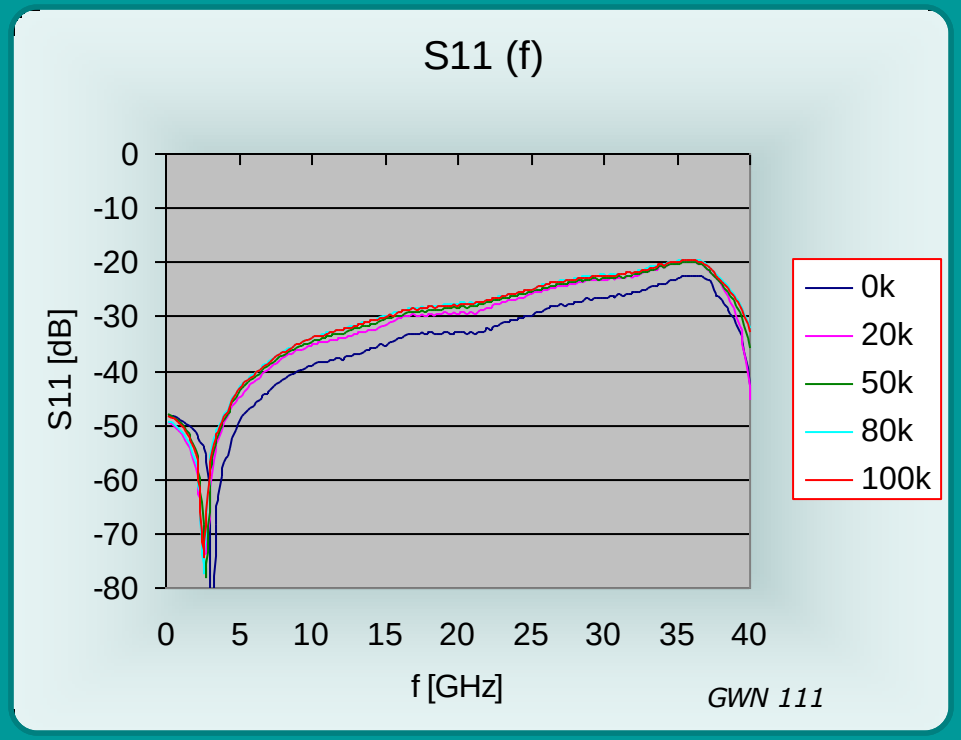
- Agilent HP8722C VNA option 10
- 50 MHz-40.05 GHz
- Effective risetime ~ 25 ps
- Custom DUT holder

Insertion loss



Some measurement to measurement variations must also be taken into account. Contributions may come from planarity and force of compression.

Return loss



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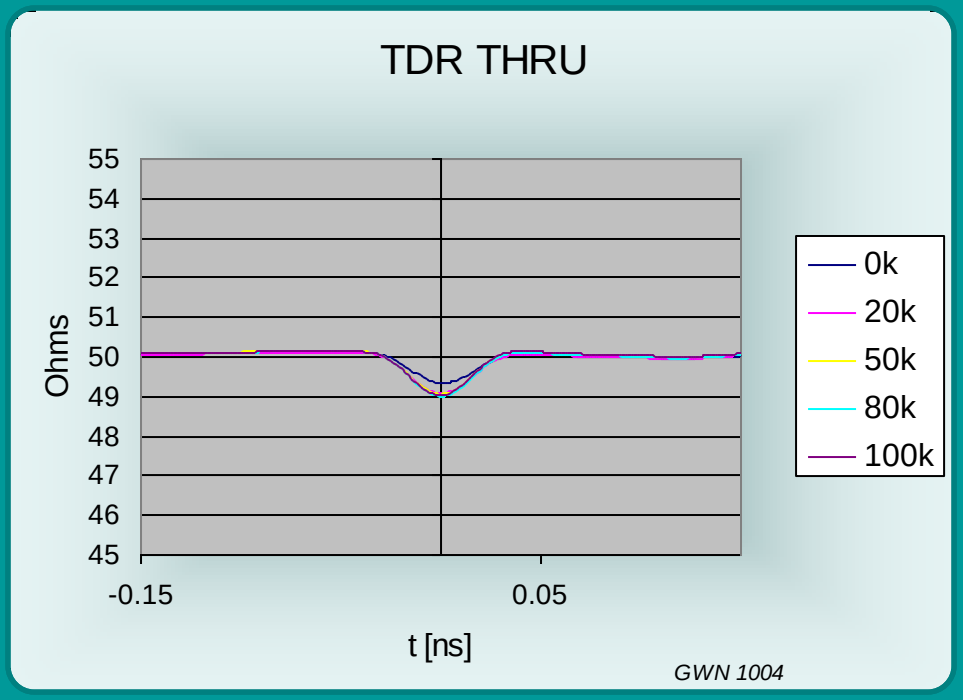
TDR



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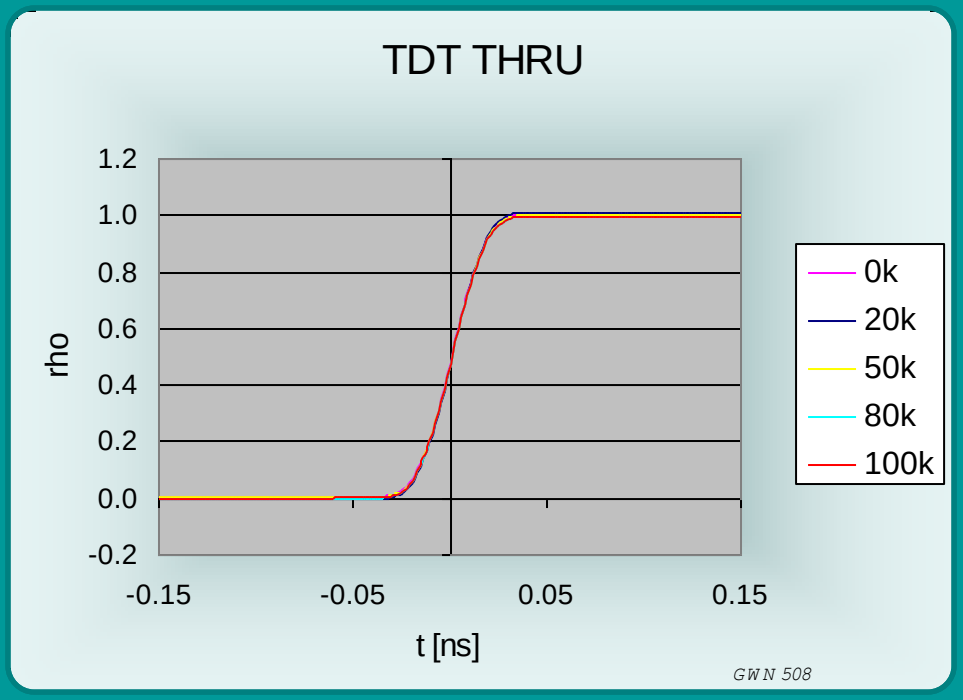
TDT



TDT is not affected noticeably by the small changes

Summary

- Variations in electrical performance found during cycling are small.
- Au over Ni plated surfaces were used during cycling.
- After 100k cycles the sample showed almost no metallic deposits around the center conductor: