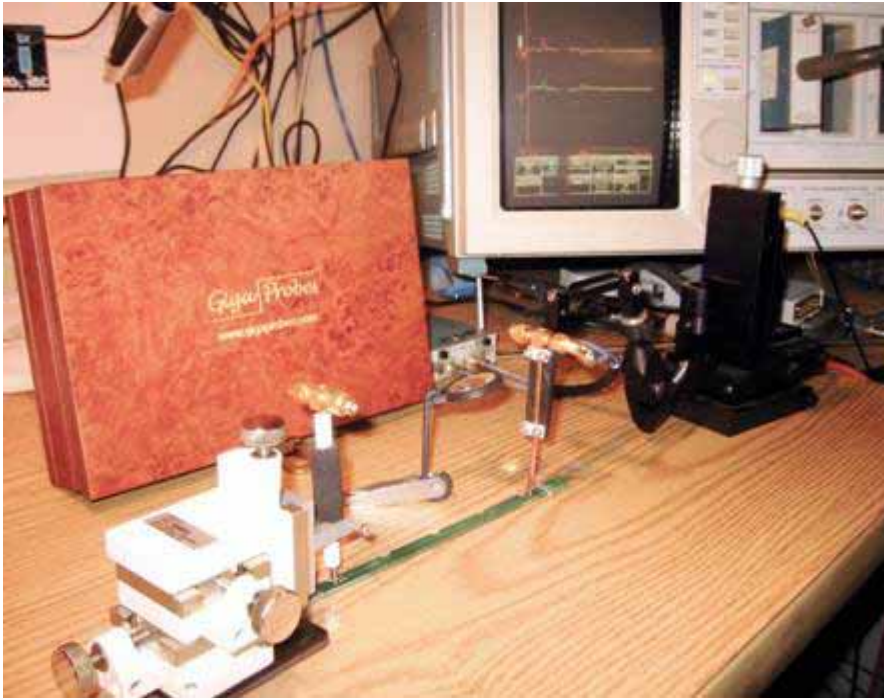


Application Note

Creating S11 or Return loss using two Gigaprobes



To create a S11 return loss measurement from TDR with s-parameters conversion capability the far end of the transmission line must be terminated. In this example, the left probe has two 50 ohm SMA terminators to terminate the far end of this test coupon into 100 ohms. The other probe launches the differential TDR signal and using the oscilloscope's or simulation software convert the time domain reflection signal to a frequency domain return loss S11 plot as seen below. The blue impedance plot below shows the test coupon impedance profile using the same TDR reflection waveforms.



Parts List

- (2) 30 GHz GigaProbes and 1 Accessory Kit
- (2) 50 ohm SMA terminators
- (2) DVT24GHZ-10 24GHz Ultra flex cables
- (2) GPMMA - GigaProbes™ Micromanipulator adapters
- (1) Differential TDR with S-parameter conversion function: Lecroy WaveExpert, Agilent 86100 or IConnect® SI software
- (1) Sampling Head Extender
- (2) MicroManipulators

Parts can be ordered from DVT Solutions, LLC 650 593-7083 www.gigaprobes.com

