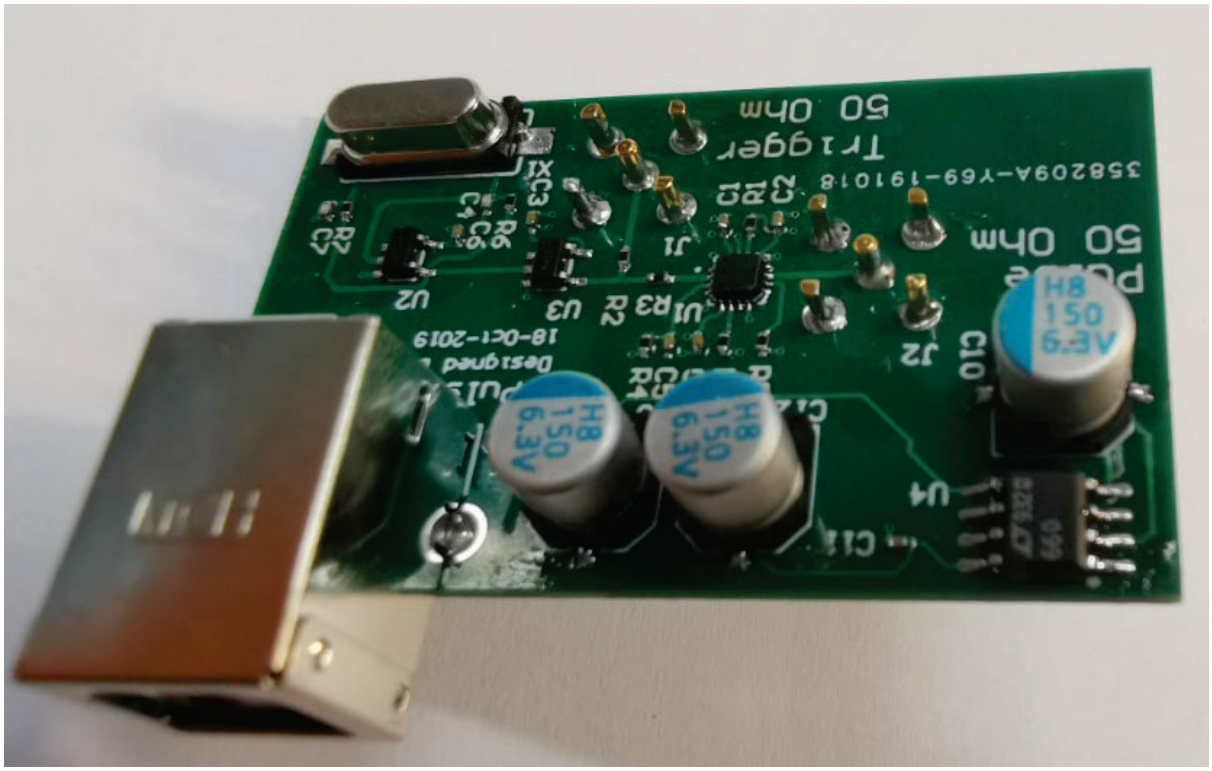
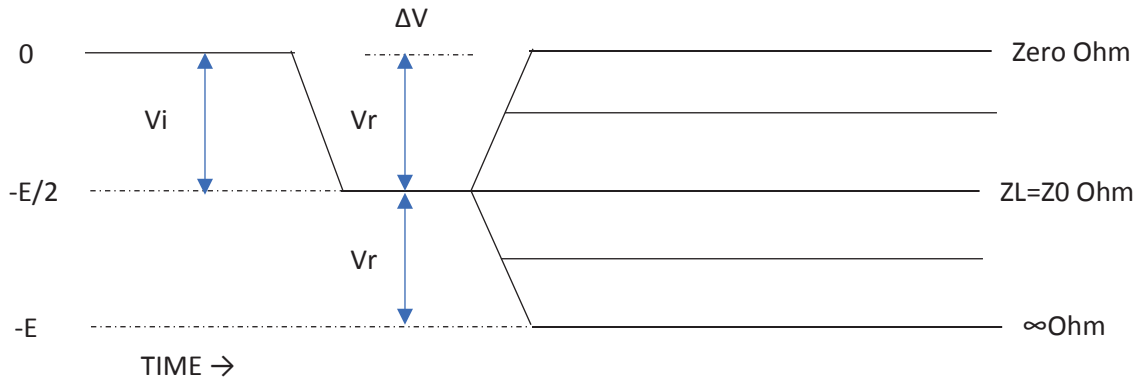
splitter. A relative low-cost TDR had been implemented by using a 10ps Falling Edge Pulse Generator which designed by myself, a SMA T piece and a Tektronix 1Ghz bandwidth MDO3104 Mixed Domain Oscilloscope.



First stage 100ps Falling Edge Pulse Generator

TDR technology can be used in multi domains, such as measuring soil moisture, dielectric properties of liquid, etc. In electrical industry, TDR is usually used to measure the impedance line on the PCB which assuring the PCB stack-up and the accuracy of the PCB microstrip lines.

Part II: Impedance measurement using TDR