

Introduction:



Fig 1: LT-100R-40G-30C Raw Cable Test Fixture

LT-100R-40G-30C 40GHz raw cable test fixture is specifically designed to test high speed twin-axial cable signal integrated quality. It's a low cost solution with flexibility and versatility. Most of the transmission interfaces recently are designed with differential impedance with range from 85 to 100 ohms, just like QSFP, SAS, HDMI, DisplayPort, USB Type C ...etc. The bandwidths of these interfaces are even up to 40GHz. In that, a good and suitable fixture that can cover UTP, STP, Twin-axial and coaxial cables, becomes very essential.

S-Parameter Measurements:

For S-Parameter measurements, one can make a Full 4-Port Calibration at the end of coaxial cables. Get the touch stone file of the LT-100R-40GA-CK and De-embed it from the VNA. Then the S-Parameter testing can be performed precisely.

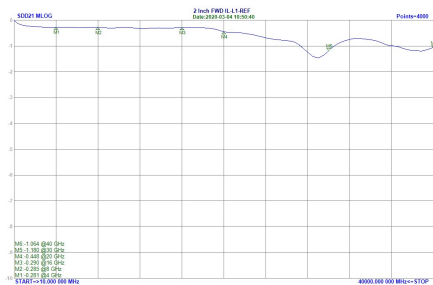


Fig 2: The SDD21 of Calibration Kit

TDR Measurements:

For TDR Parameters, LT-100R-40G-CK can be used to remove the electrical length of the fixture. Clip the raw cable then screwed on the fixture set, one can easily get the TDR parameters.

Measurement implementation:

There is a twin-groove for the conductors of twin-axial cable. User just needs put the conductors of pair and contact with the groove. Screw the knobs down and press the plate to fix the twin-axial for the measurements.



Fig 3: LT-100R-40G-30C with DUT

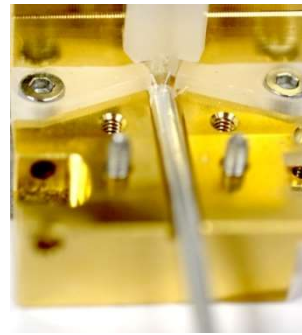


Fig 4: Twin-axial cable pressed into twin-groove

Features:

- ◆ Impedance matching: Differential $100 \pm 2.5 \Omega$
- ◆ Support Un-Shielded Twist Pair (UTP), Shielded Twist Pair (STP), Twin-axial and Coaxial cables.
- ◆ Intra Pair Skew: Less than 2ps
- ◆ Multi-AWG support: 28AWG ~ 34AWG.
- ◆ Low Loss (2X Kit): Less than -3dB @40GHz.
- ◆ Used for most of interfaces cable: Thunderbolt, Lan, HDMI, DisplayPort, SATA, USB3.1, DisplayPort, SFP/QSFP, PCI-Express Cable, ...etc.

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