S4P Files Generated by Vitesse
Using Meritec's SFF-8470 Cable Assemblies

JF Sawdy, Manager, Signal Integrity Engineering
1/25/06

The accompanying files were generated by Kevin Witt and Mahbubul Bari of Vitesse using an Anritzu 37397C 65GHz VNA. Kevin Witt presented the data at the January 10, 2006 SAS meeting. See T10 document 06-052r0 at www.T10.org.

Cables Tested

    1 meter, 28 awg
    5 meter, 28 awg
    10 meter, 24 awg
    15 meter, 24awg

Procedure

The 4X cables were plugged into the Efficere test boards, which were connected to the VNA by means of precision SMA cables. The interface was de-embedded from the VNA measurements by using calibration traces onboard the Efficere test boards.

S-Parameter Files

The reference planes for the files are the 4X receptacles located on the test boards. Therefore, the mated SFF-8470 connectors and the cable are included.
Bandwidth: 40 MHz to 20 GHz
Convention:
    Port 1 thru to Port 2
    Port 3 thru to Port 4
File names (all files are through measurements):
    meritec_1m28awg.S4P
    meritec_5m28awg.S4P
    meritec_10m24awg.S4P
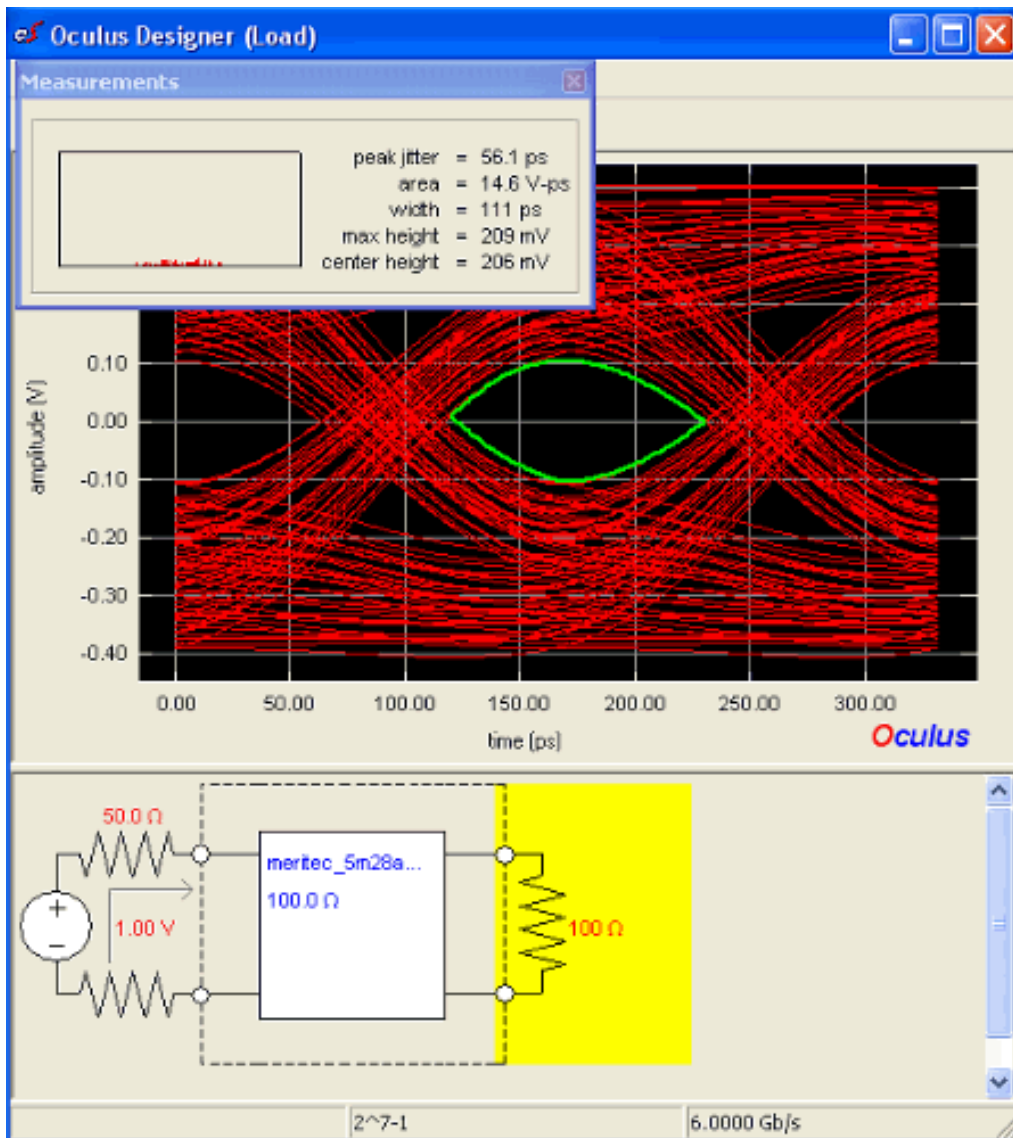   meritec_15m24awg.S4P

Test Equipment

2 Port 65GHz VNA - Anritzu 37397C
Test Fixture – Efficere Technologies P/N 4X-SMA-12R
SMA cables – Rosenberger

Eye Pattern Simulation

The following eye pattern is included for reference. It was simulated using the meritec_5m28awg.S4P file in atSpeed's Oculus software.

Source: 1 volt p-p, 6Gb/s, PRBS = 2^7-1, risetime = 42 psec (10-90%)
Eye Measurements: center height = 206 mv, jitter = 56 psec
.