

To: T10 Technical Committee
From: Barry Olawsky, HP (barry.olawsky@hp.com)
Date: 20 October 2005
Subject: T10/05-390r0 SAS-2 Channel Models (3-Connector, Board/Cable/Backplane/Drive)

Revision History

Revision 0 (20 October 2005) first revision

Related Documents

05-357r0 - SAS-2 External Cable Electrical Specification (Alvin Cox, Seagate)

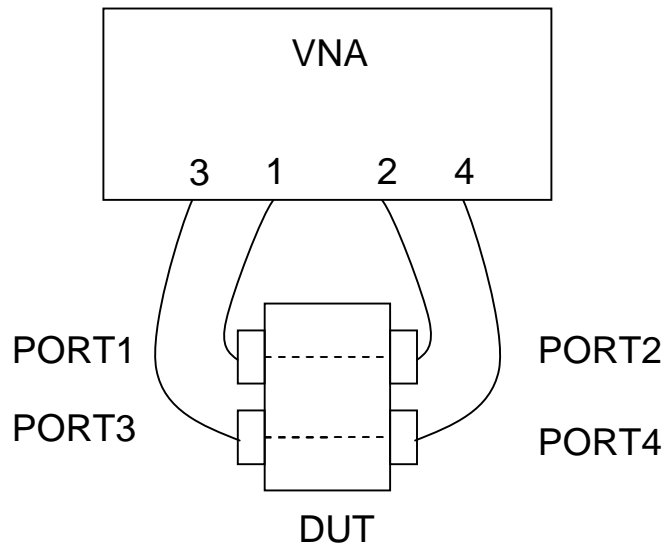
Overview

Provide sample channel models to the storage industry. Design configurations are,

- 1) HP12 consists of a 0.006" wide trace of 6 inches in length, a 1 meter SFF8484 26AWG cable, a 6 inch trace ~0.025" wide on a 0.090" backplane, and the secondary RX port of an SFF8482 connector.
- 2) HP13 consists of a 0.006" wide trace of 6 inches in length, a 6 inch SFF8484 30AWG cable, a 6 inch trace ~0.025" wide on a 0.090" backplane, and the secondary RX port of an SFF8482 connector.
- 3) HP14 consists of a 6 inch SFF8484 30AWG cable, a 6 inch trace ~0.025" wide on a 0.090" backplane, and the secondary RX port of an SFF8482 connector.

Measurement Setup

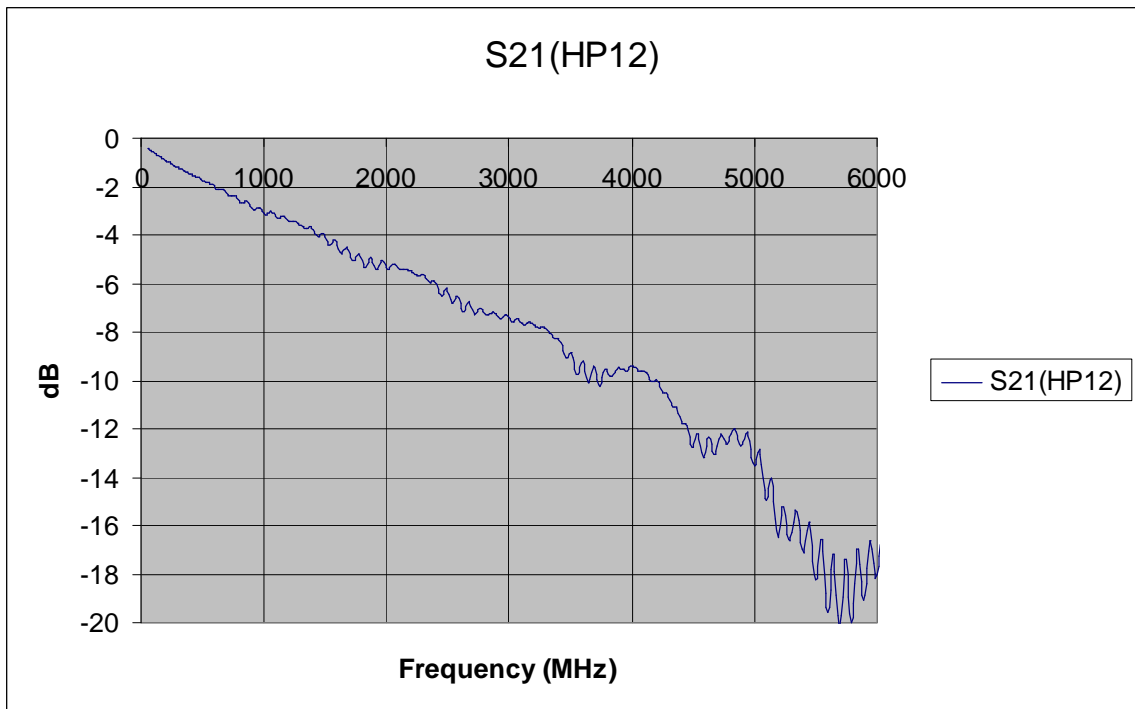
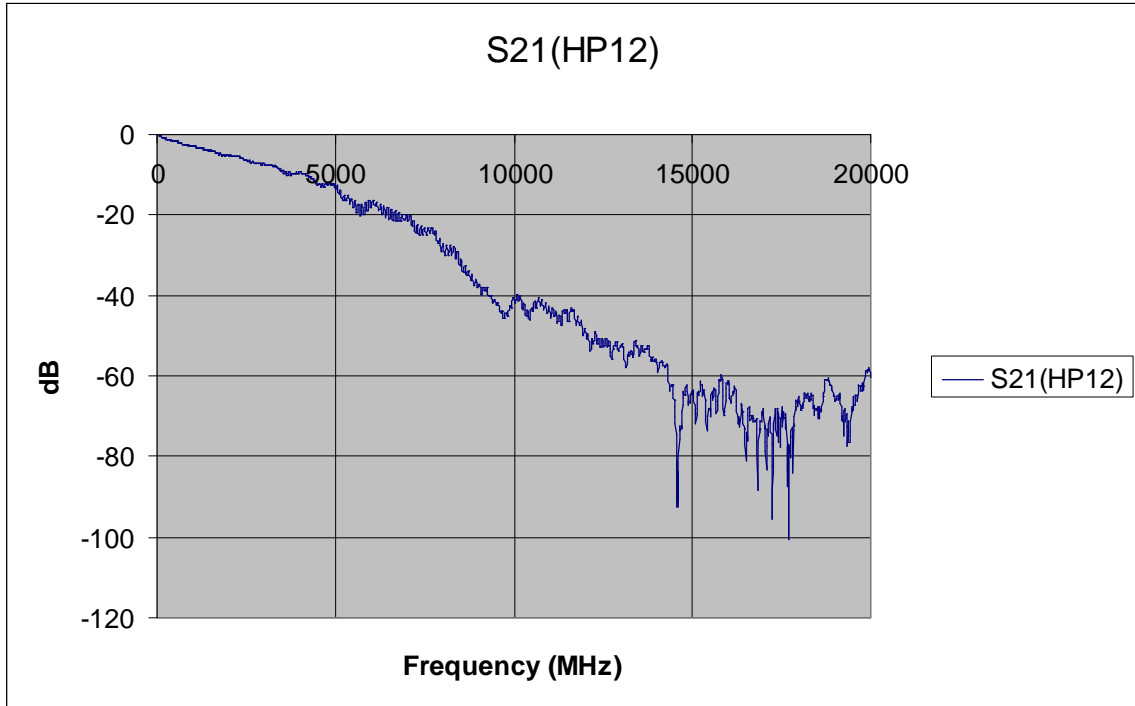
Measurements were performed with an E8362B Agilent VNA and N4419A test set. The frequency range is 50MHz to 20GHz with a 10MHz step size. The format of the data is (magnitude, angle) ... but not dB magnitude. Input to output port mapping through the DUT is shown in the following figure.



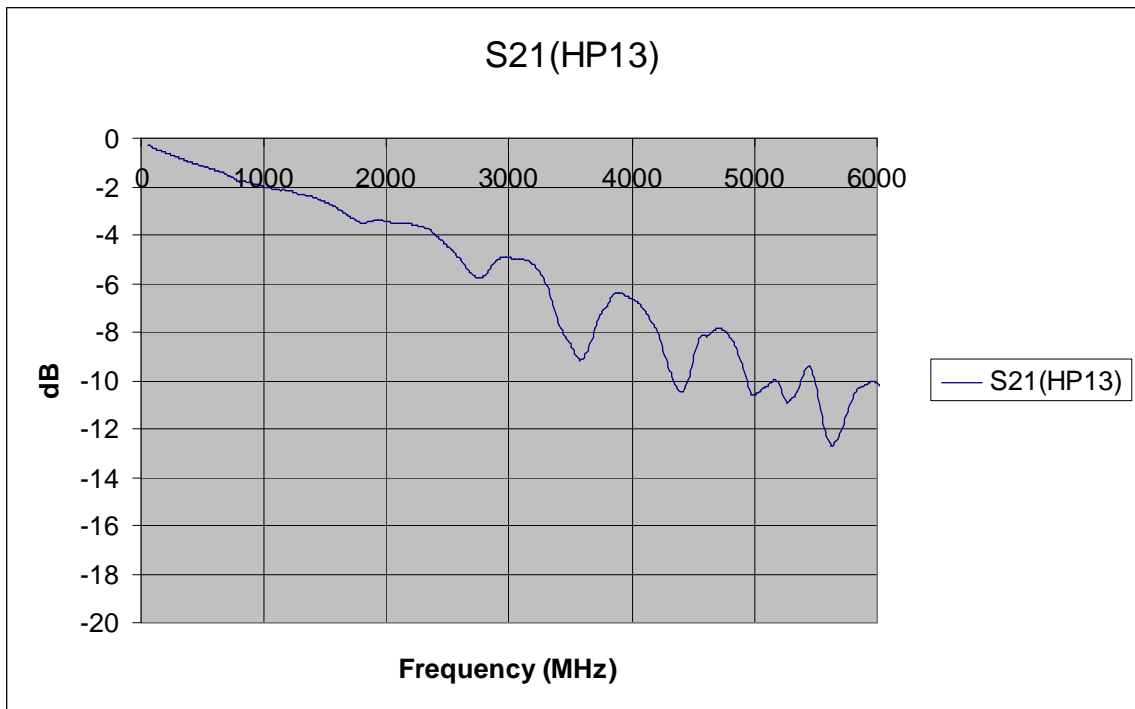
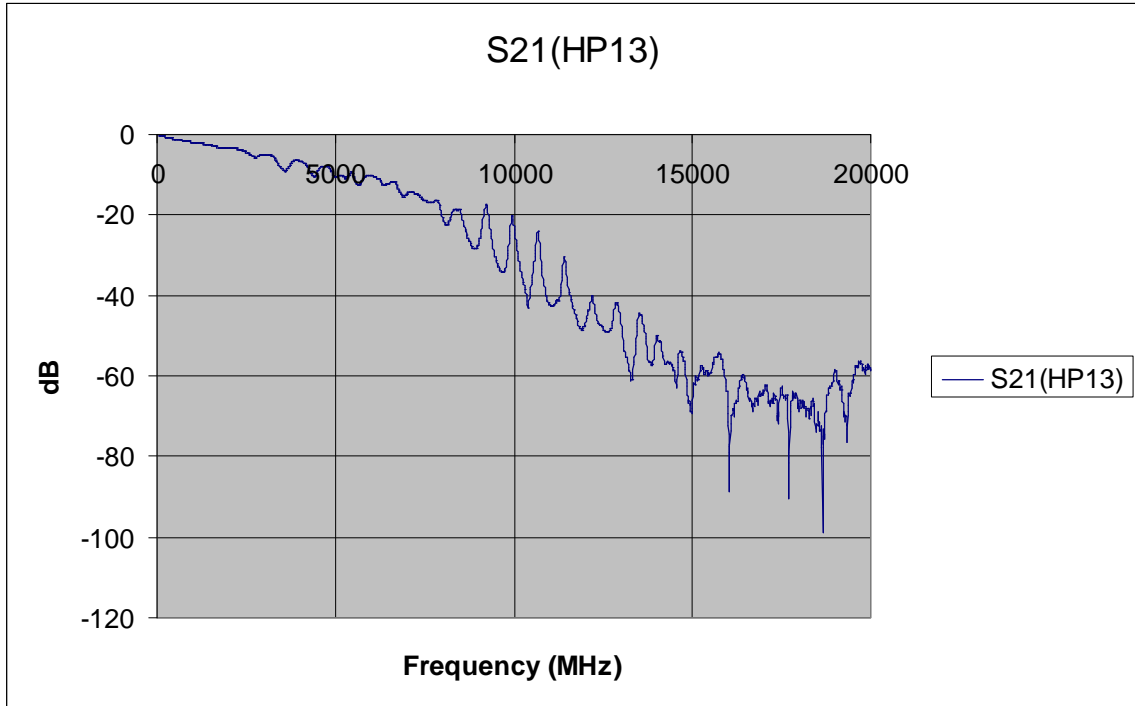
S21 Plots

S21 plots are provided below to assist in selecting sample channels to evaluate.

HP12_Brd_1mCable_Bp_Drive:



HP13_Brd_6inCable_Bp_Drive:



HP14_6inCable_Bp_Drive:

