

T10/06-017r0 SAS-2 Channel Models (4-Connector, Board-to-Board)

To: T10 Technical Committee  
From: Barry Olawsky, HP (barry.olawsky@hp.com)  
Date: 8 December 2005  
Subject: T10/06-017r0 SAS-2 Channel Models (4-Connector, Board-to-Board)

**Revision History**

Revision 0 (8 December 2005) first revision

**Related Documents**

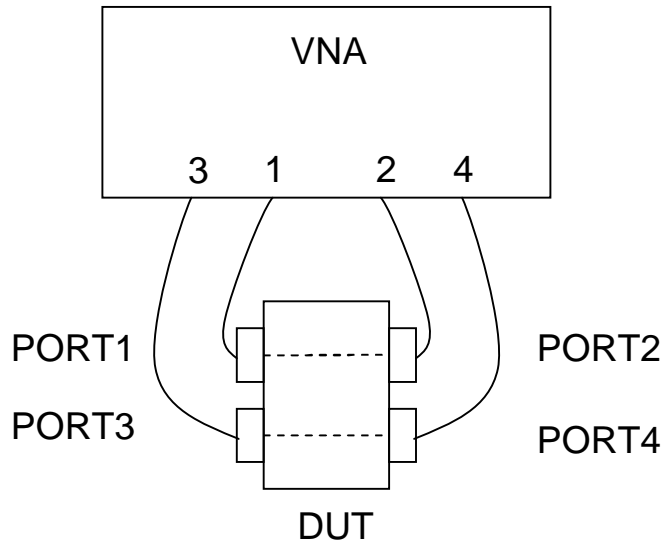
05-357r0 - SAS-2 External Cable Electrical Specification (Alvin Cox, Seagate)

**Overview**

Provide sample channel models to the storage industry. Each of the enclosed channel designs consist of four pressfit connector interfaces with a total of 18 to 20 inches of FR-4 and two vias. All four connector interfaces are grid array board-to-board designs. Excluding the SMA launch, the channel models are representative of a realistic end-to-end link.

**Measurement Setup**

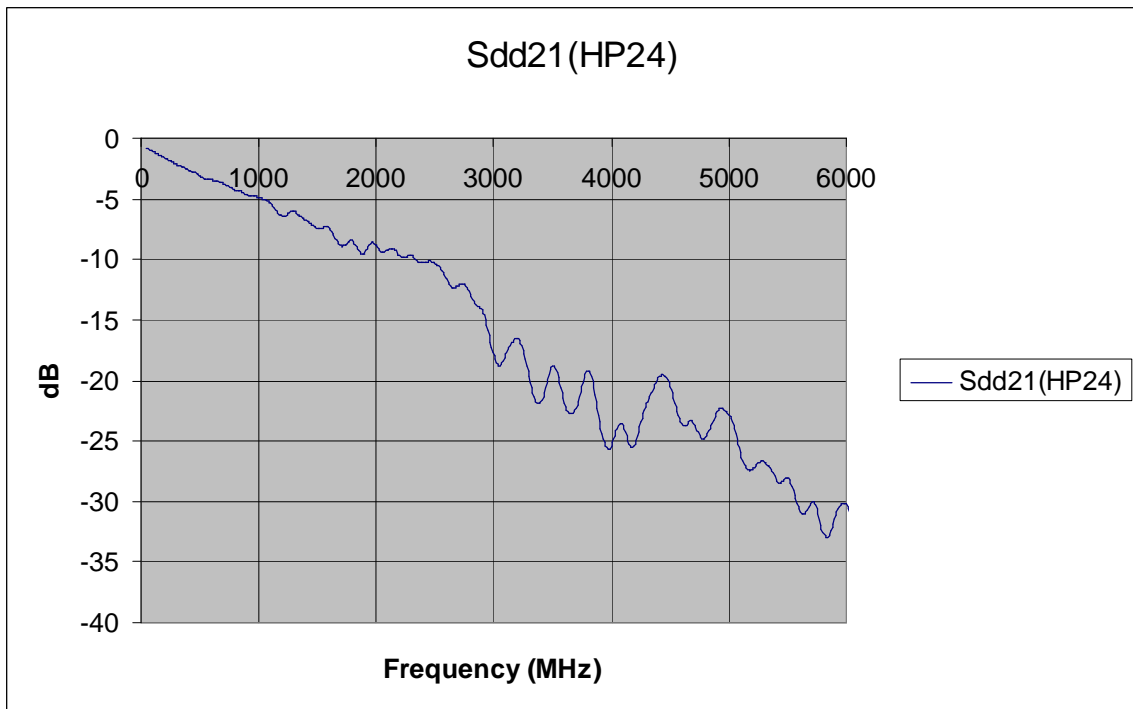
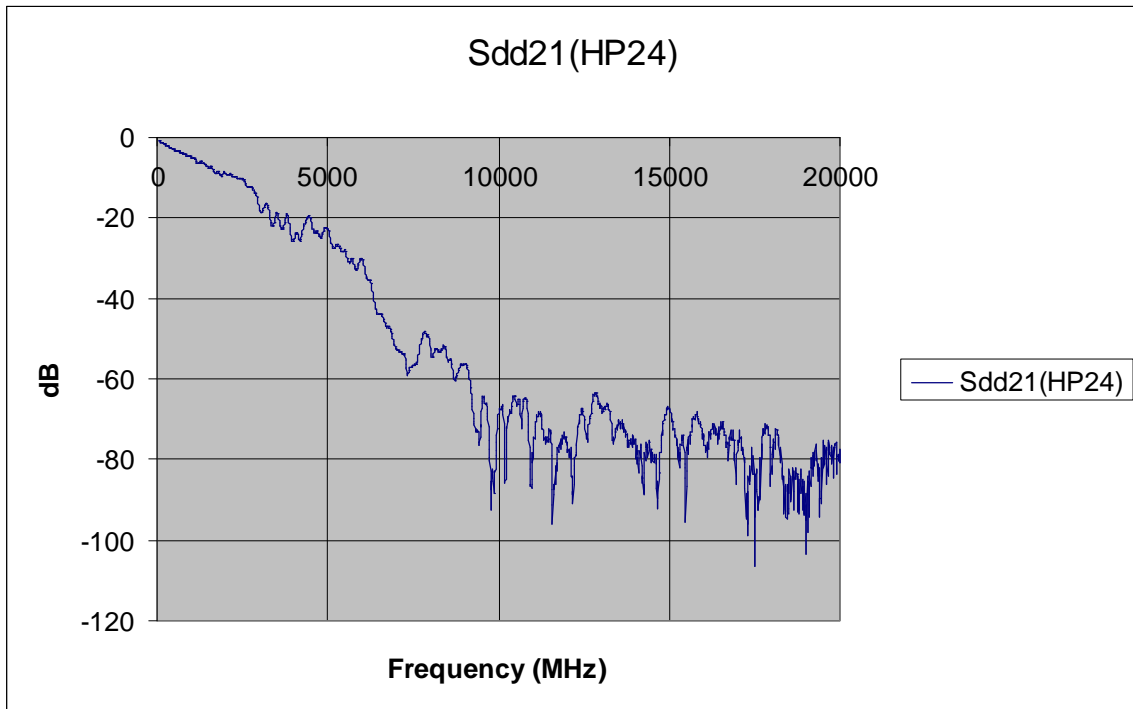
Measurements were performed with an E8362B Agilent VNA and N4419A test set. The frequency range is 50MHz to 20GHz with a 10MHz step size. The format of the data is (magnitude, angle) ... but not dB magnitude. Input to output port mapping through the DUT is shown in the following figure.



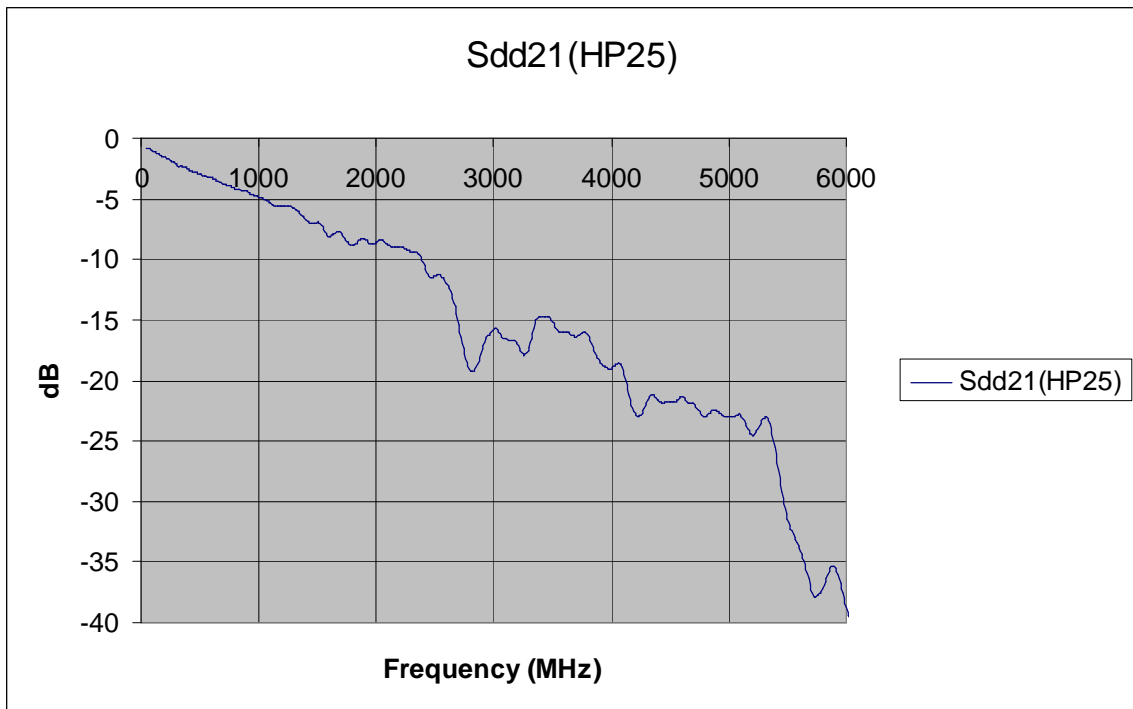
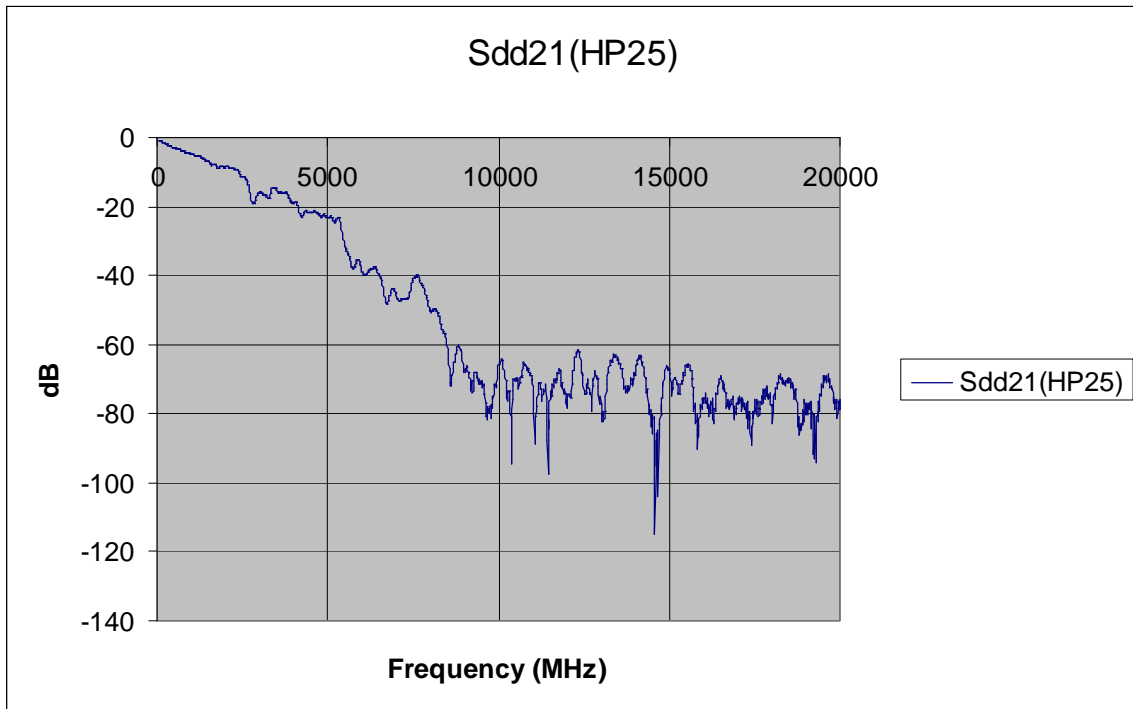
**S21 Plots**

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

HP24\_BtoB\_4Connector:



HP25\_BtoB\_4Connector:



HP26\_BtoB\_4Connector:

