

T10/05-384r0 SAS-2 Channel Models (3-Connector, Board-to-Board)

To: T10 Technical Committee  
From: Barry Olawsky, HP (barry.olawsky@hp.com)  
Date: 14 October 2005  
Subject: T10/05-384r0 SAS-2 Channel Models (3-Connector, Board-to-Board)

### **Revision History**

Revision 0 (14 October 2005) first revision

### **Related Documents**

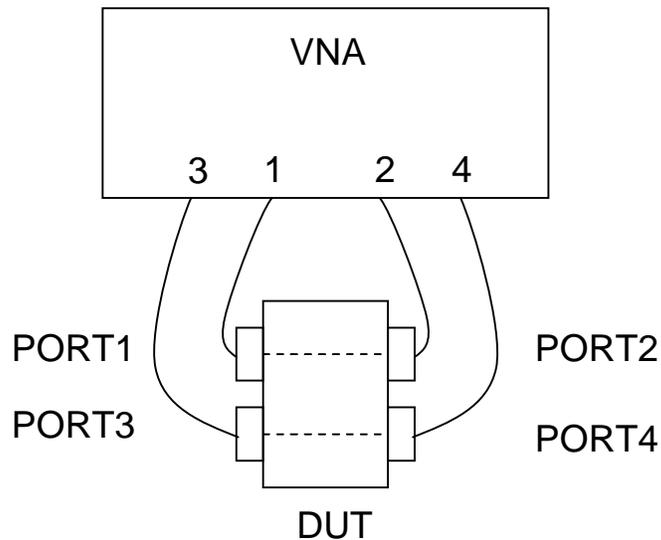
05-357r0 - SAS-2 External Cable Electrical Specification (Alvin Cox, Seagate)

### **Overview**

Provide sample channel models to the storage industry. Each of the enclosed channel designs consist of three connector interfaces with a total of 12 to 18 inches of FR-4. Two of the connector interfaces are grid array board-to-board designs and the third one is an SFF8482 hybrid.

### **Measurement Setup**

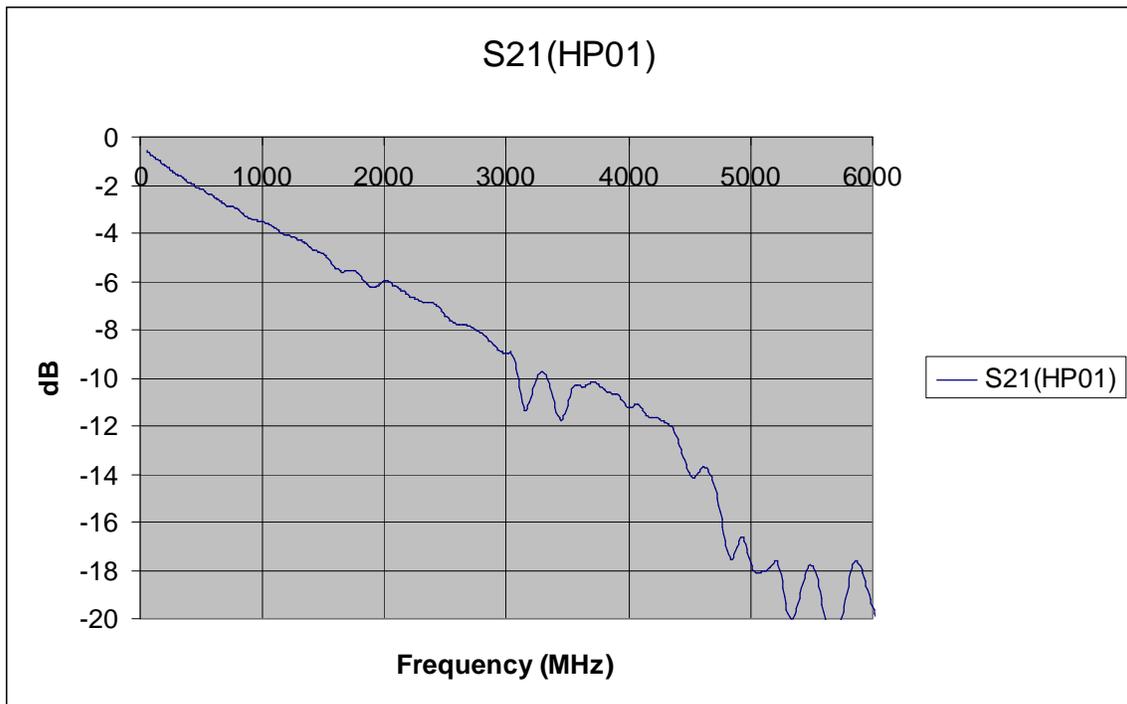
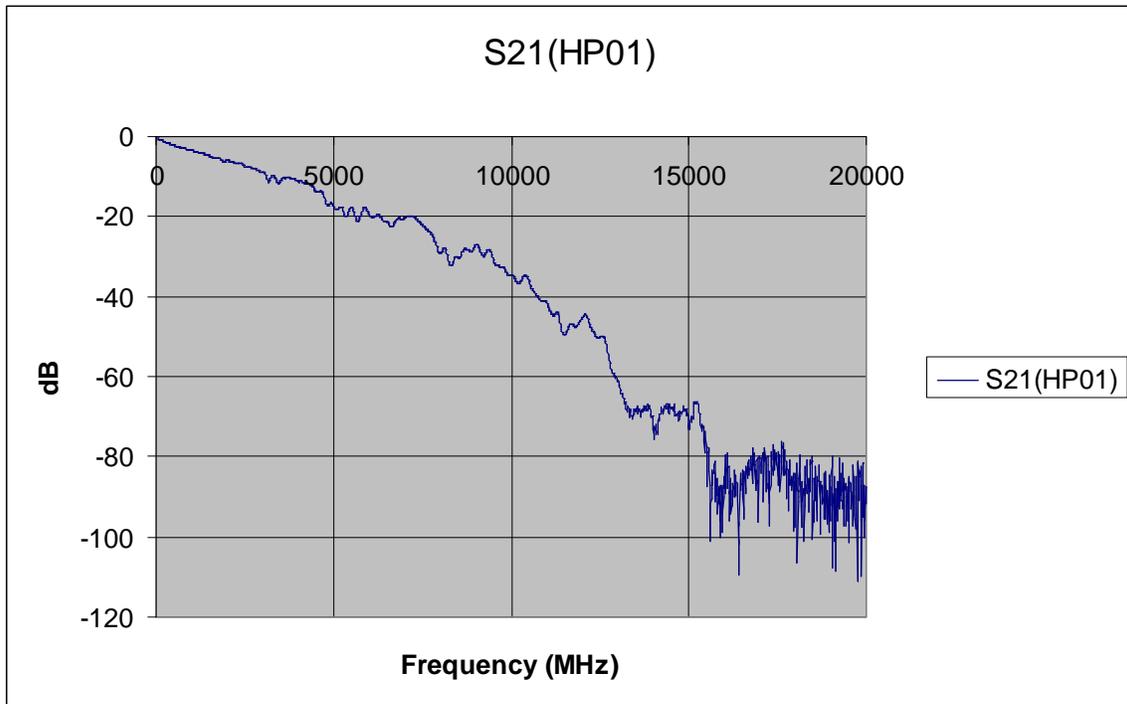
Measurements were performed with an E8362B Agilent VNA and N4419A test set. The frequency range is 50MHz to 20GHz with a 10MHz step size. The format of the data is (magnitude, angle) ... but not dB magnitude. Input to output port mapping through the DUT is shown in the following figure. Ports 2 and 4 are connected to the SFF8482 end of the DUT.



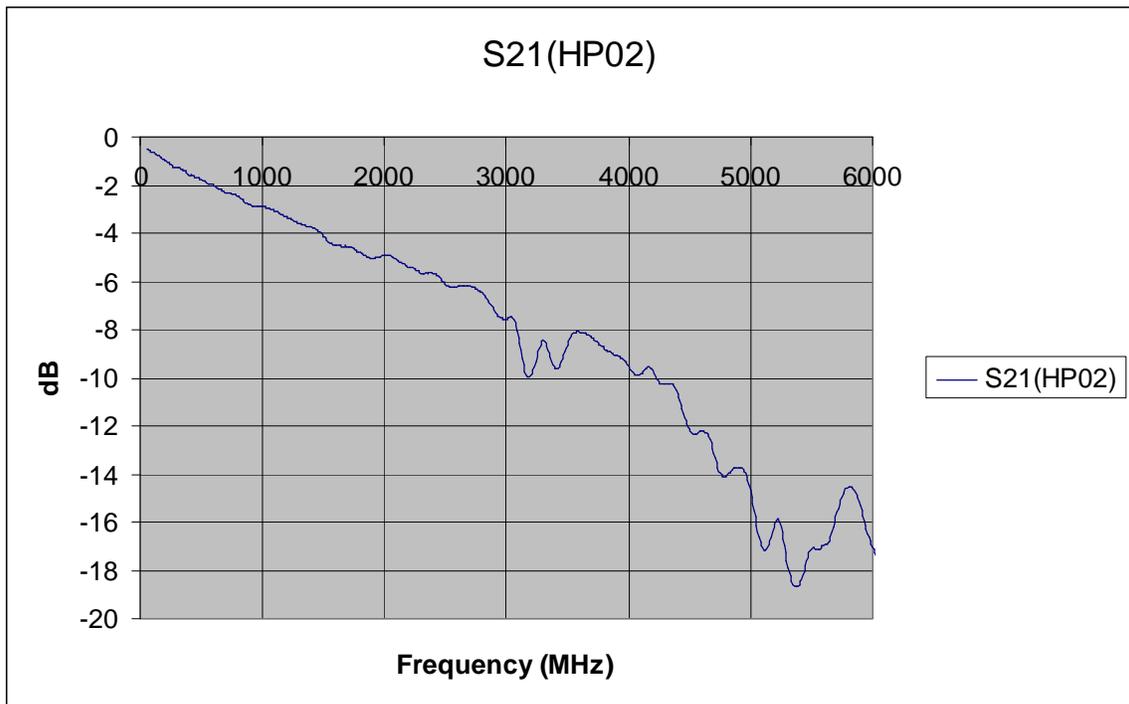
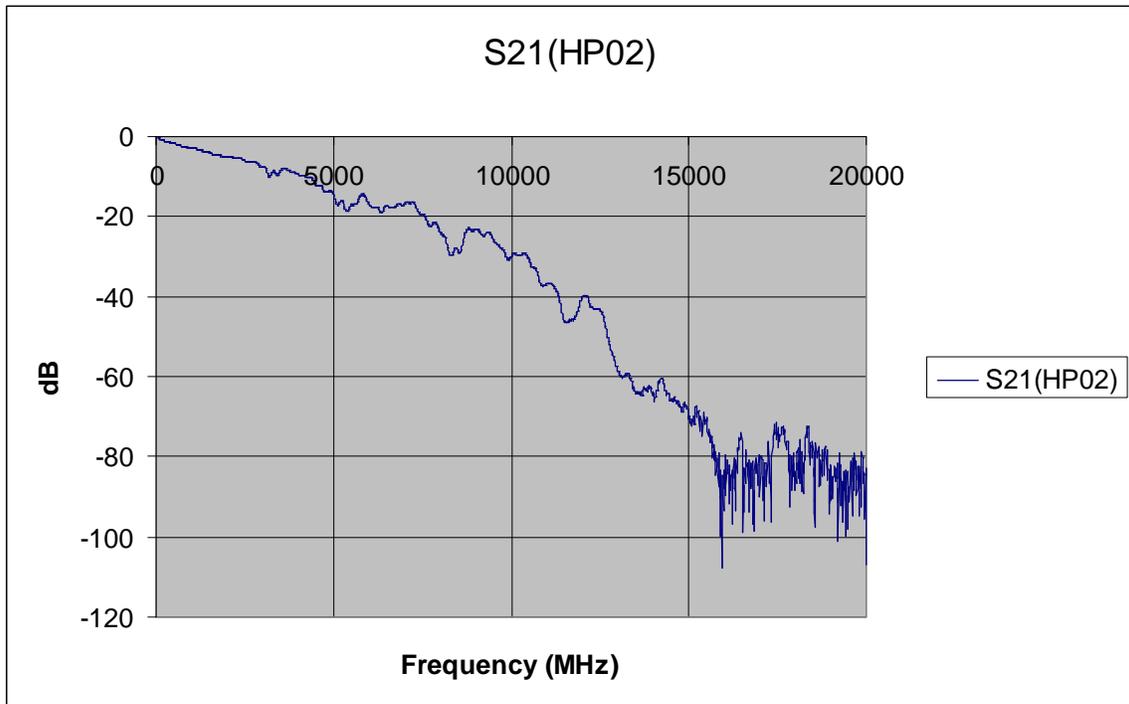
### **S21 Plots**

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

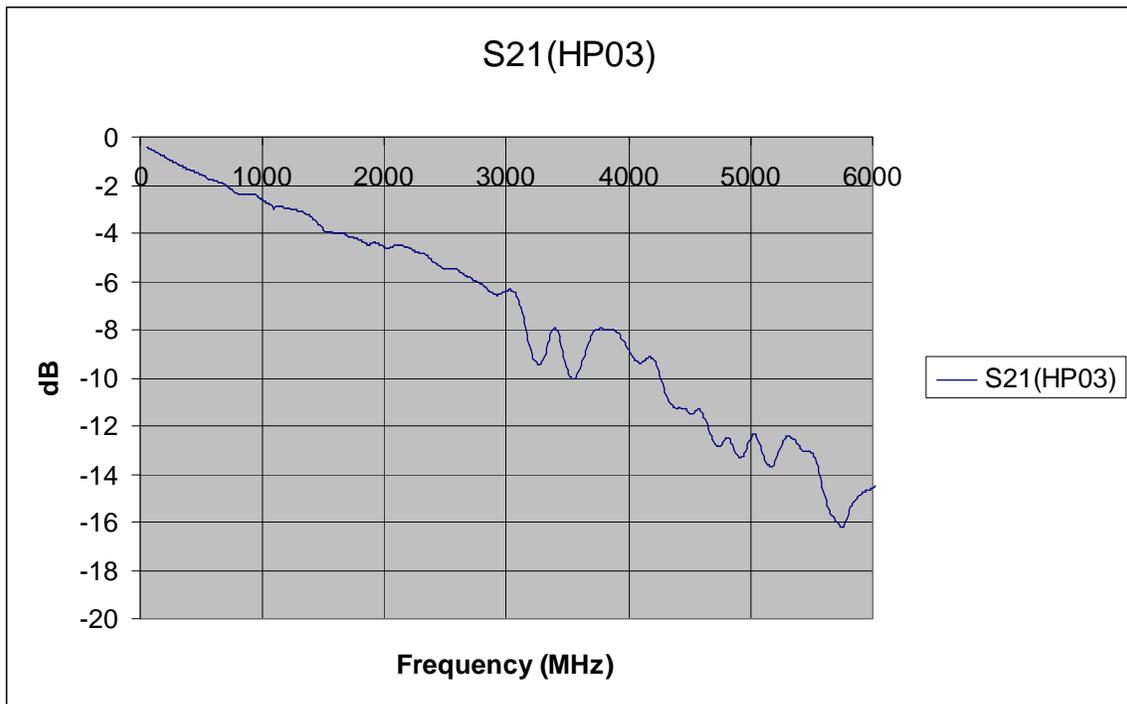
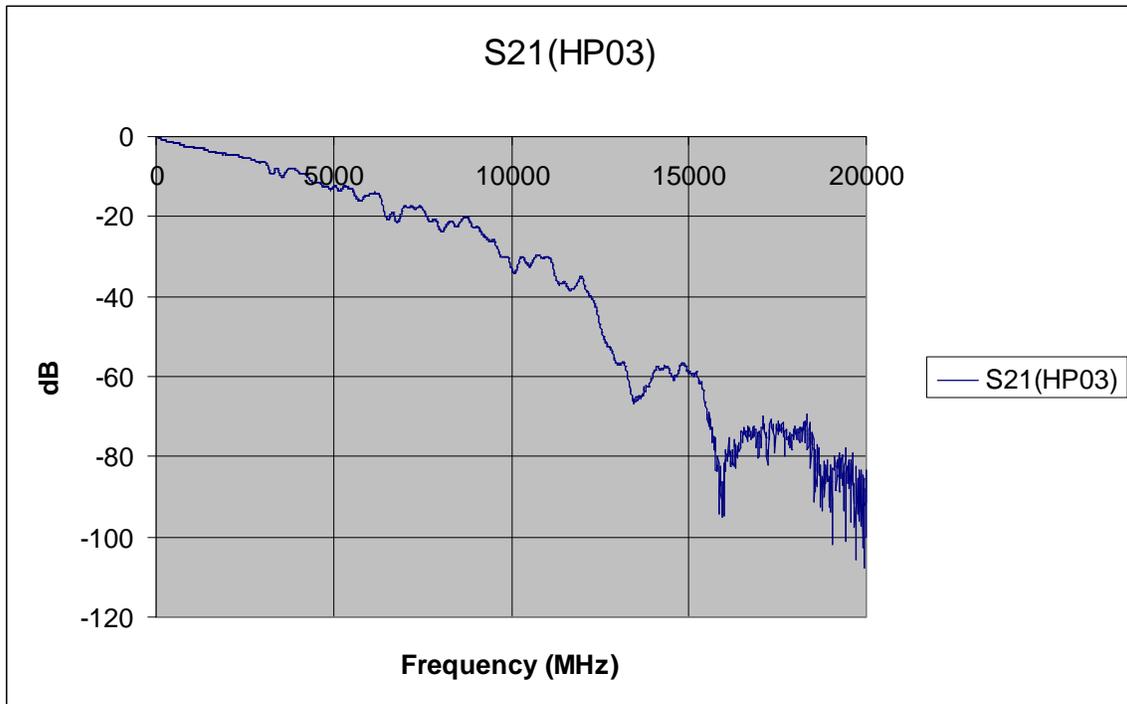
HP01\_BtoB\_3Connector:



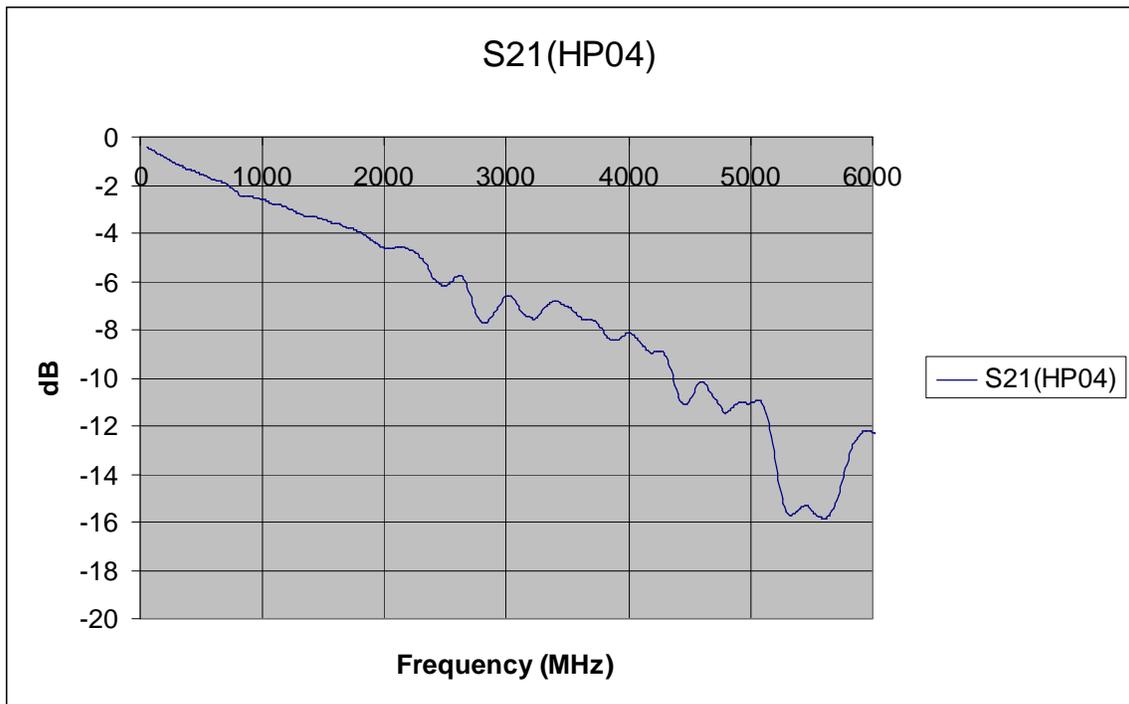
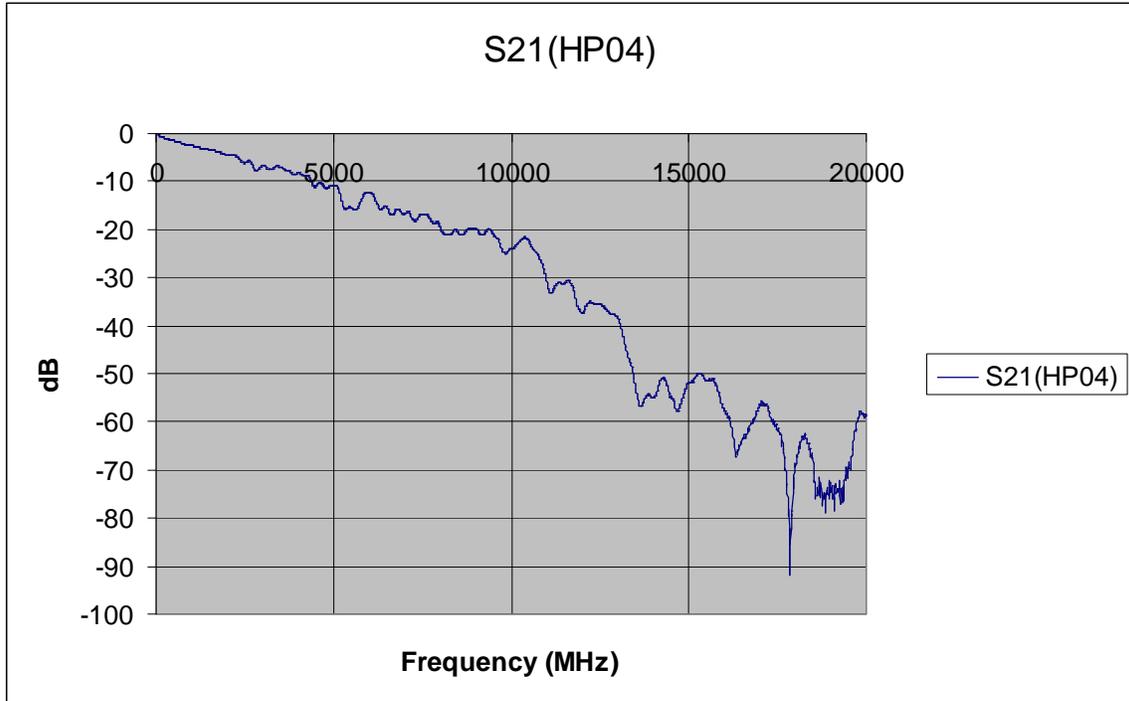
HP02\_BtoB\_3Connector:



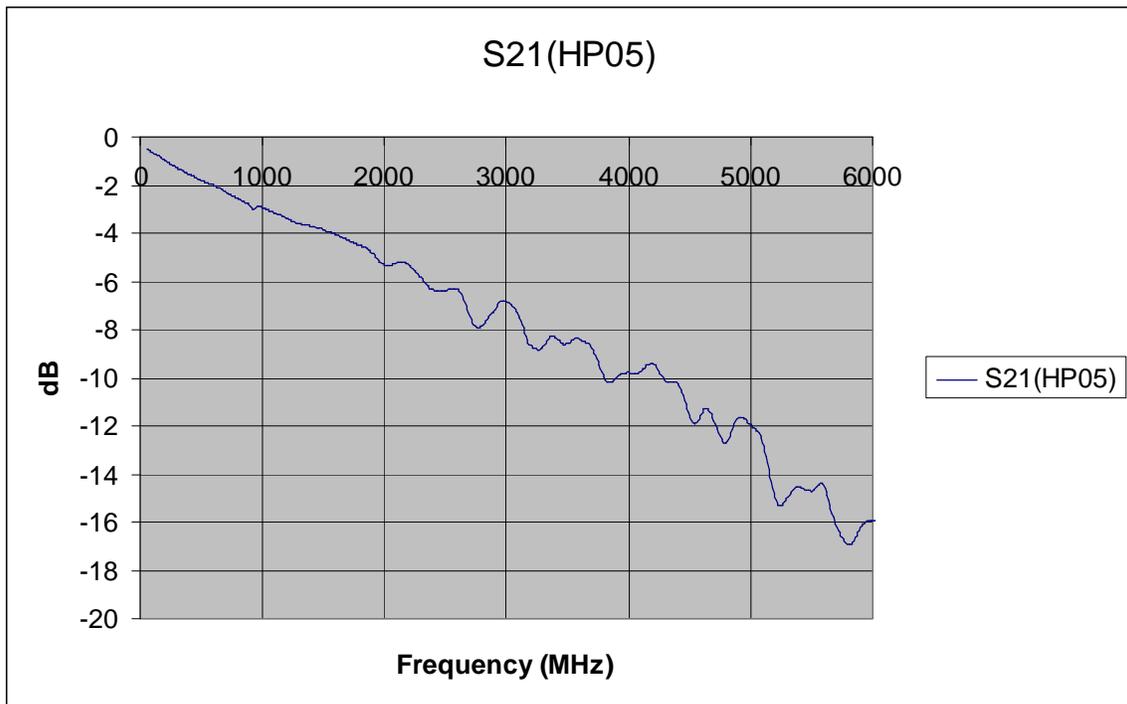
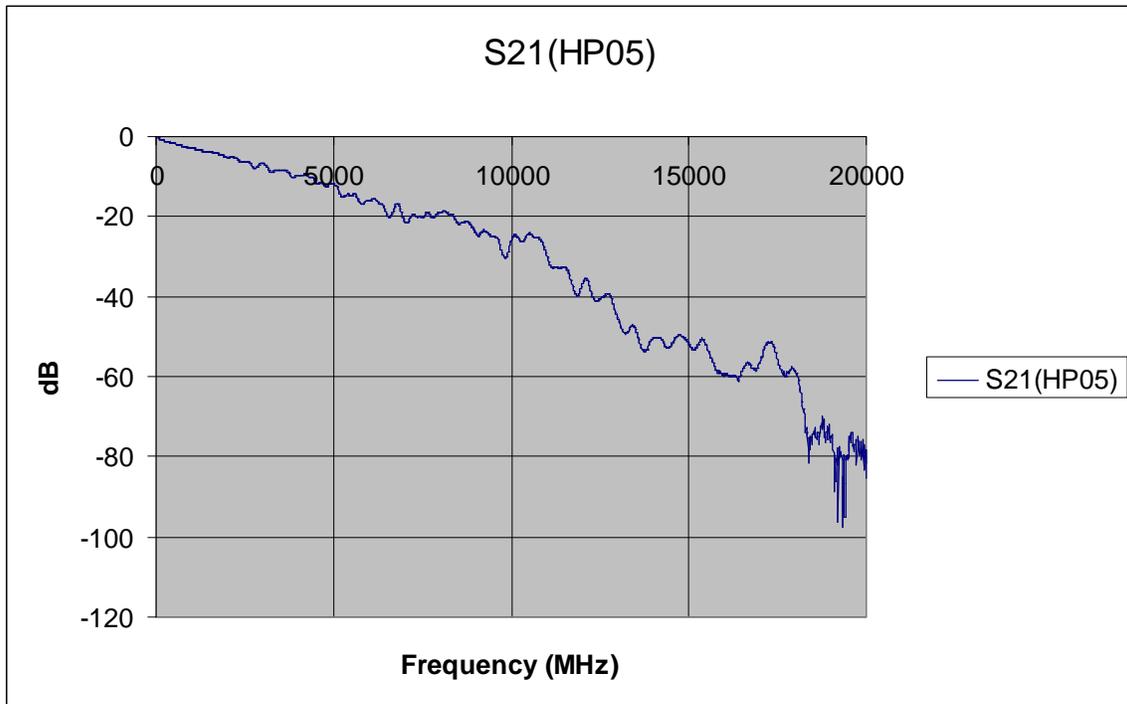
HP03\_BtoB\_3Connector:



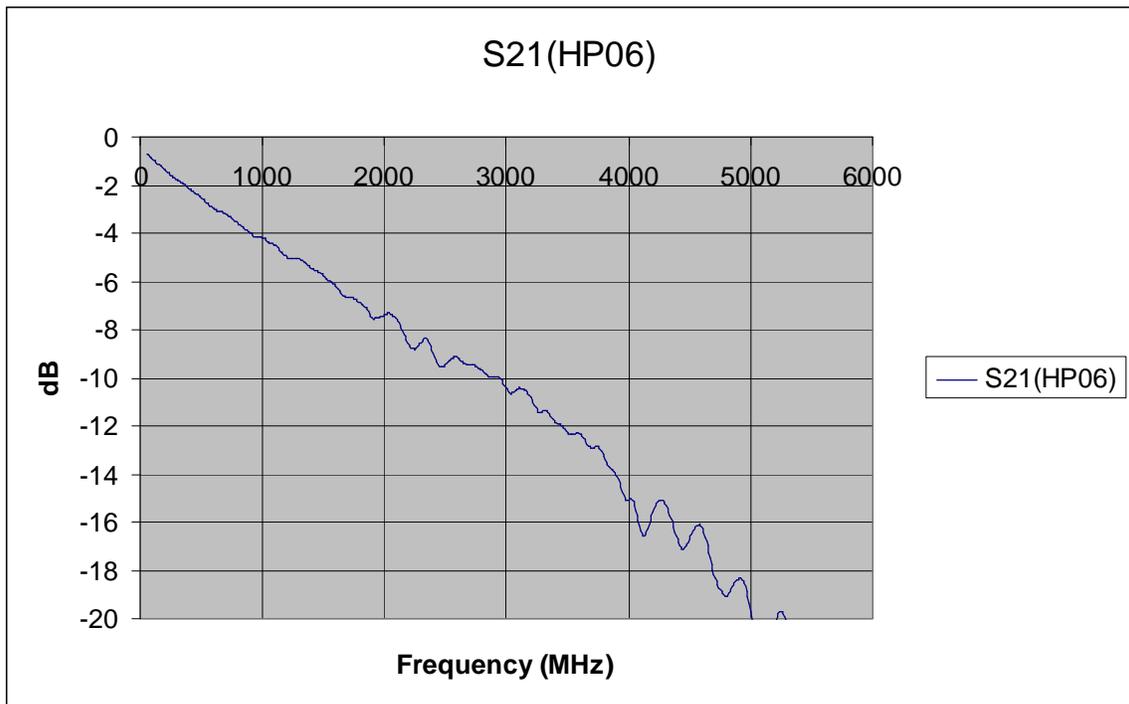
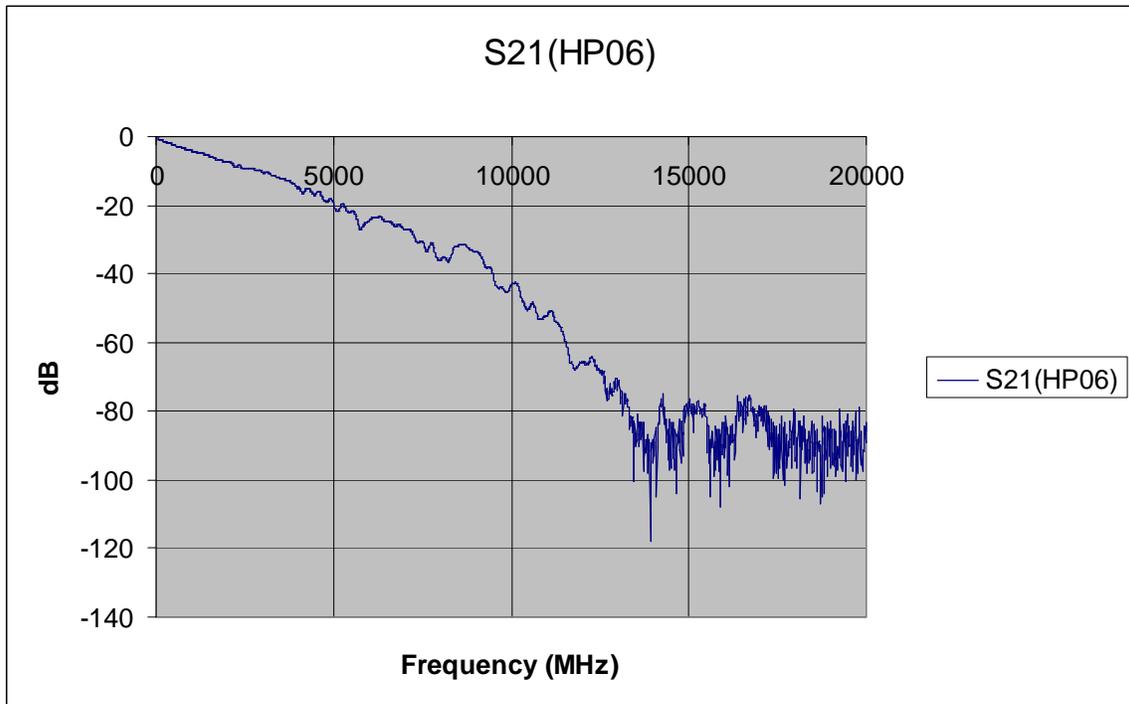
HP04\_BtoB\_3Connector:



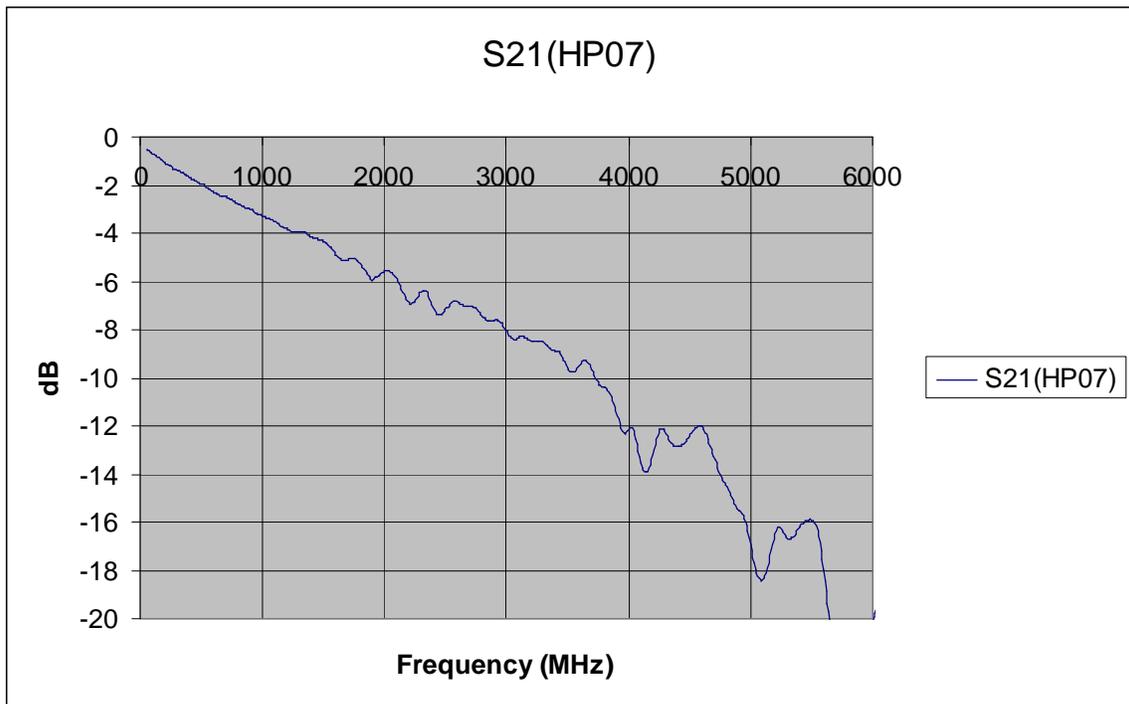
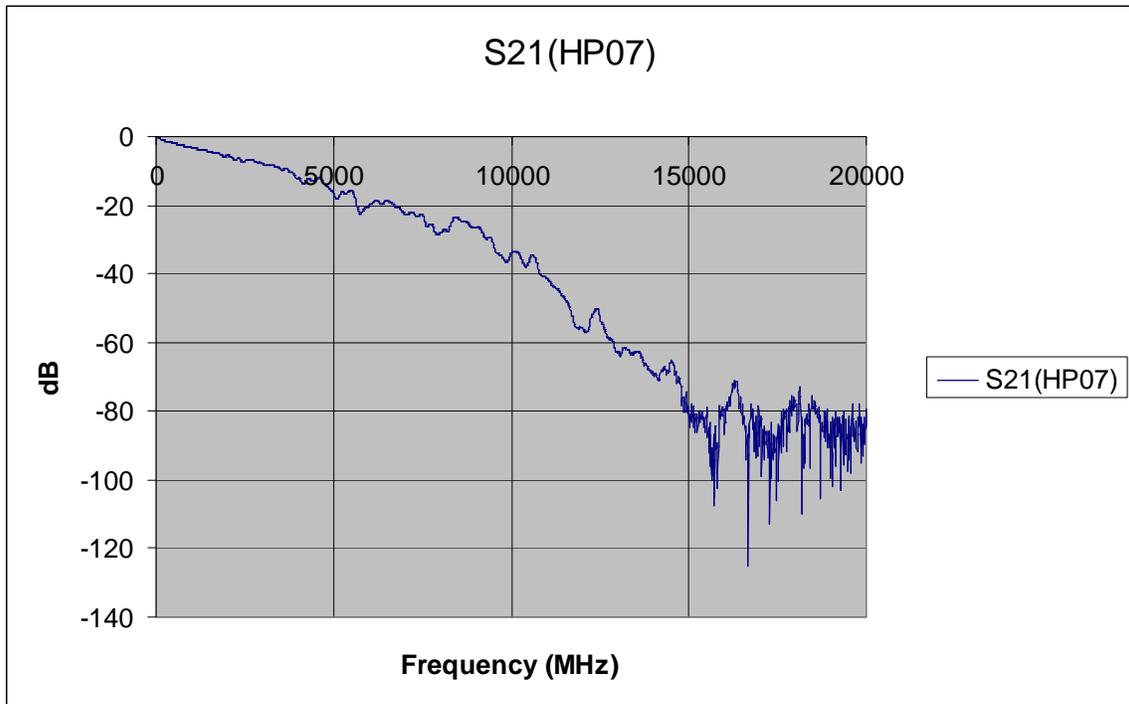
HP05\_BtoB\_3Connector:



HP06\_BtoB\_3Connector:



HP07\_BtoB\_3Connector:



HP08\_BtoB\_3Connector:

