

Measured Crosstalk Result of Mated HCB-MCB

September 21, 2009

Ali Ghiasi
Broadcom Corporation
aghiasi@broadcom.com

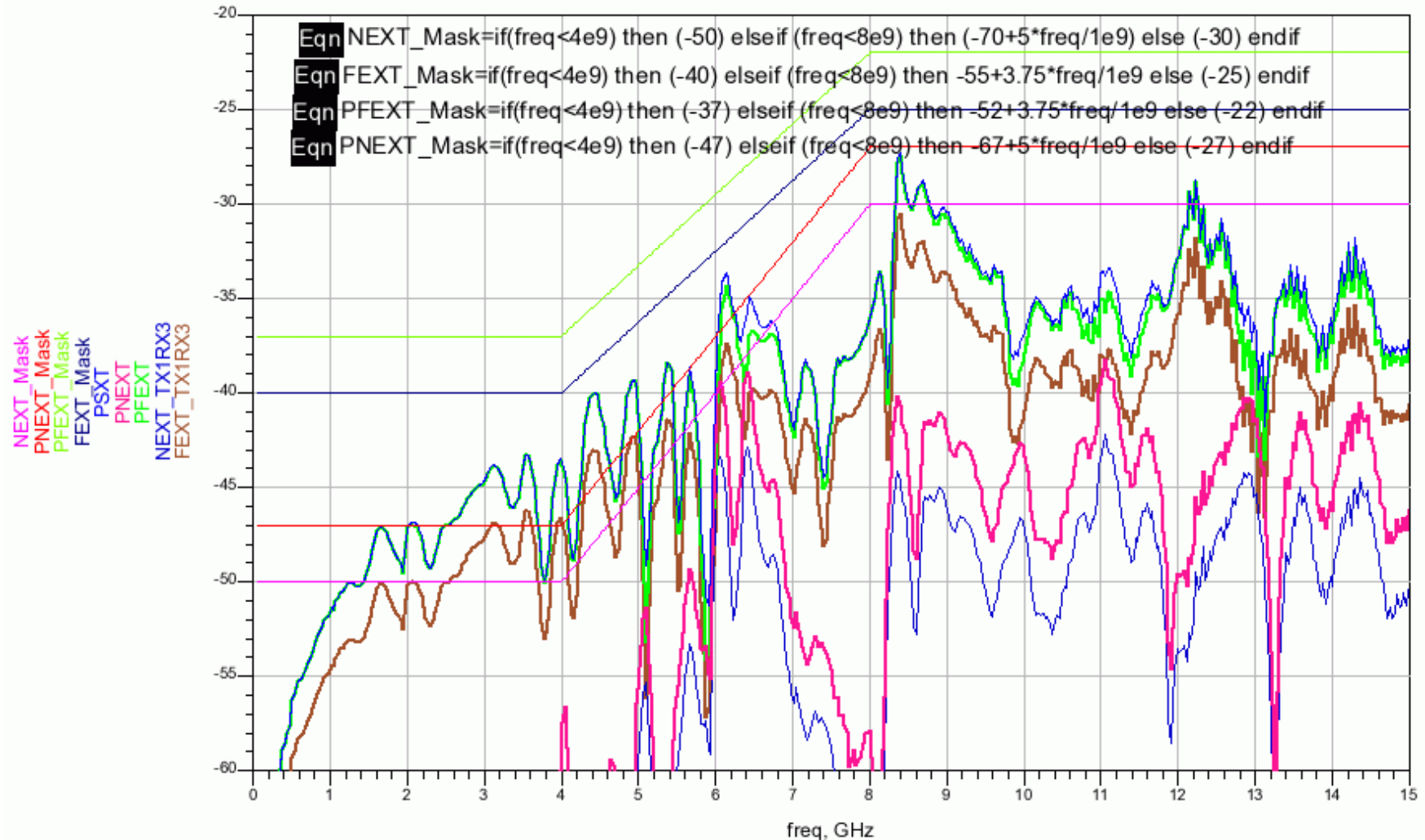
Overview

- **QSFP MCB-HCB was the bases for the crosstalk analysis**
- **Two case were considered**
 - **Worst case aggressor is used for PFEXT and PNEXT calculation**
 - **Worst case aggressor in addition to other aggressor being at -6dB used for PFEXT and PNEXT calculation**
- **Current crosstalk specification too sloppy**
- **There is room to tighten the limits.**

Mated HCB-MCB Crosstalk Current Limits

- Using worst case NEXT and FEXT aggressor pair with -6 dB for others

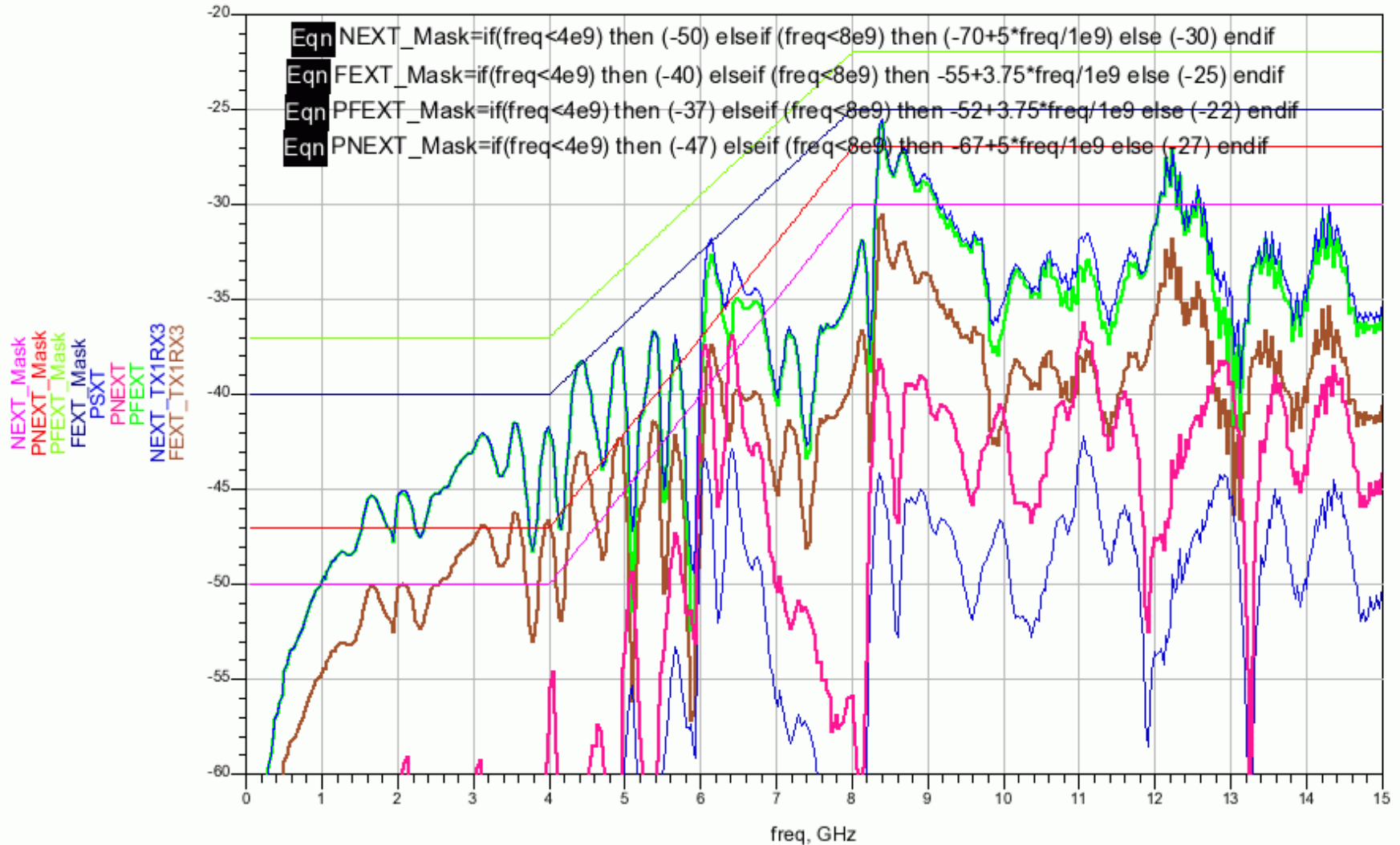
QSFP Using Wroast aggressors others -6 dB



Mated HCB-MCB Crosstalk Current Limits

- Using worst case NEXT and FEXT aggressor for PFEXT and PNEXT

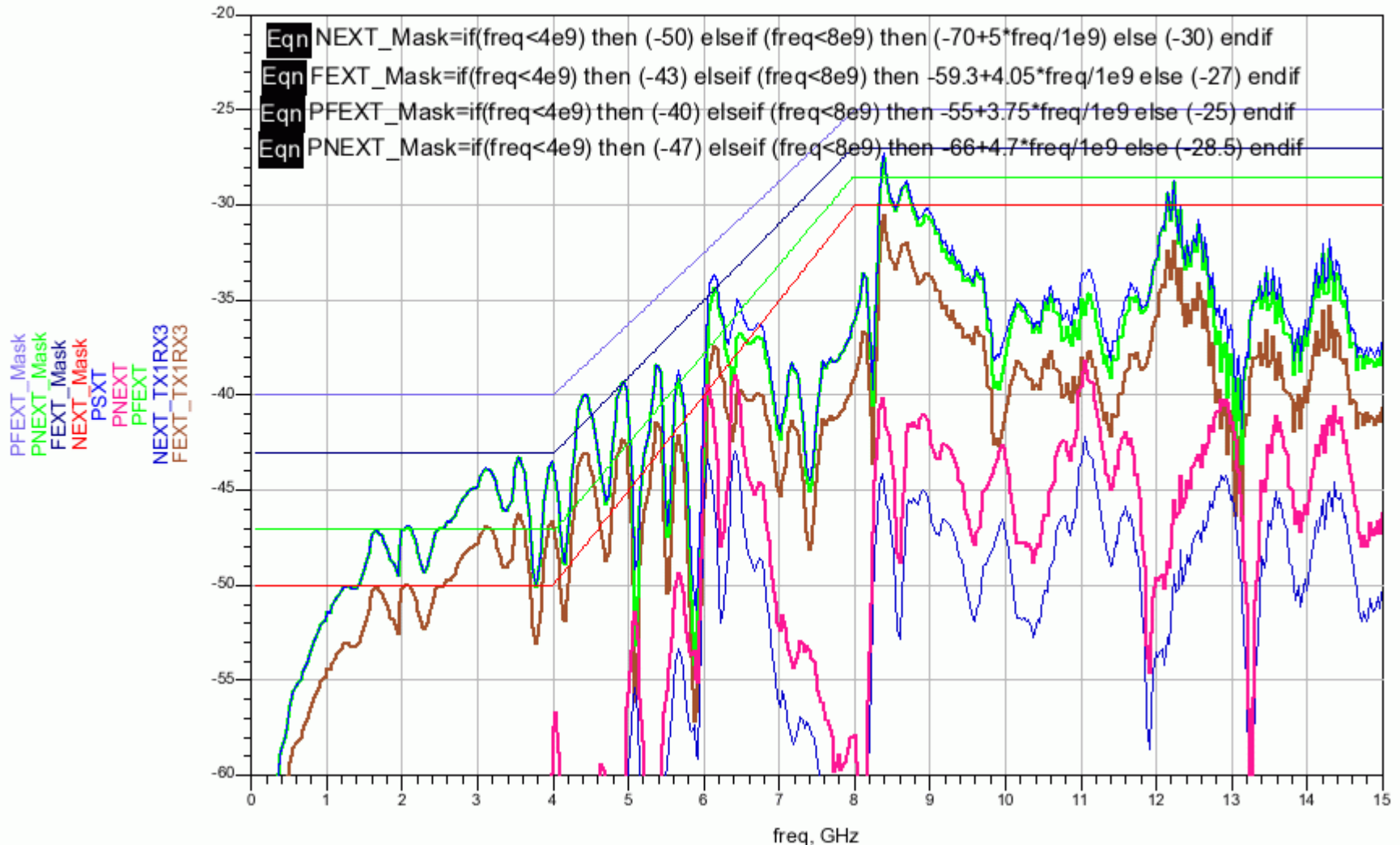
© 2009 Using Worst aggressors



Proposed Improved Masks

- Using worst case NEXT and FEXT aggressor pair with -6 dB for others

QSFP Using Worst others -6 dB



Summary

- **NEXT unchanged**
- **FEXT $-43 < 4$ GHz, $59.3 + 4.05 * f$ from 4 to 8 GHz, $-27 > 8$ GHz**
- **Since FEXT is overly dominated, propose to replace PSNEXT and PSFEXT with PSXT the sum of PSNEXT and PSFEXT**
 - **Defining single limit line allow for tighter limit**
- **Propose PSXT $-40 < 4$ GHz, $-55 + 3.75 * f$ from 4 to 8 GHz, $-25 > 8$ GHz**