

CEI-28G-SR Preliminary Channel Analysis

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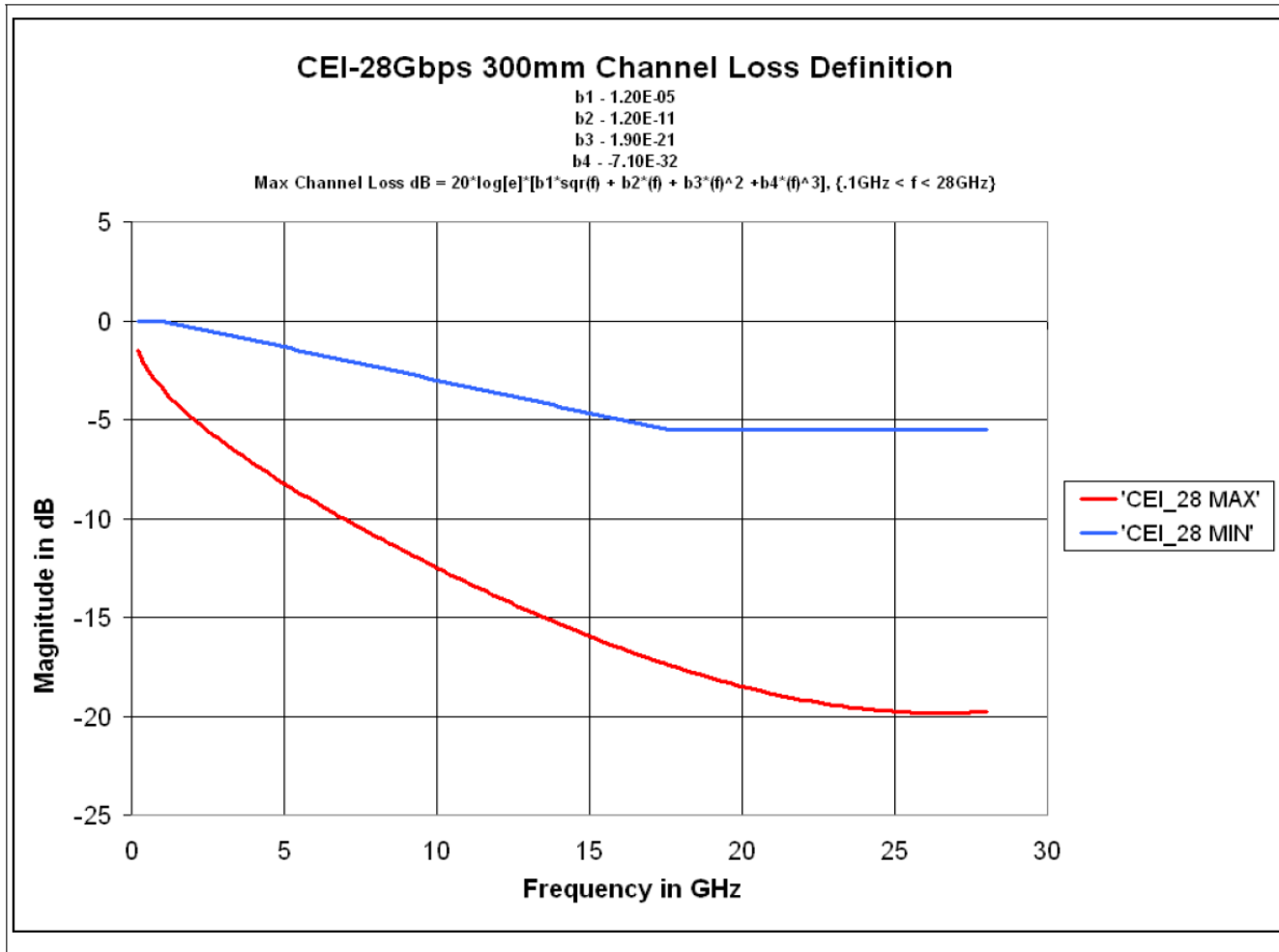
11/12/09

■ Introduction

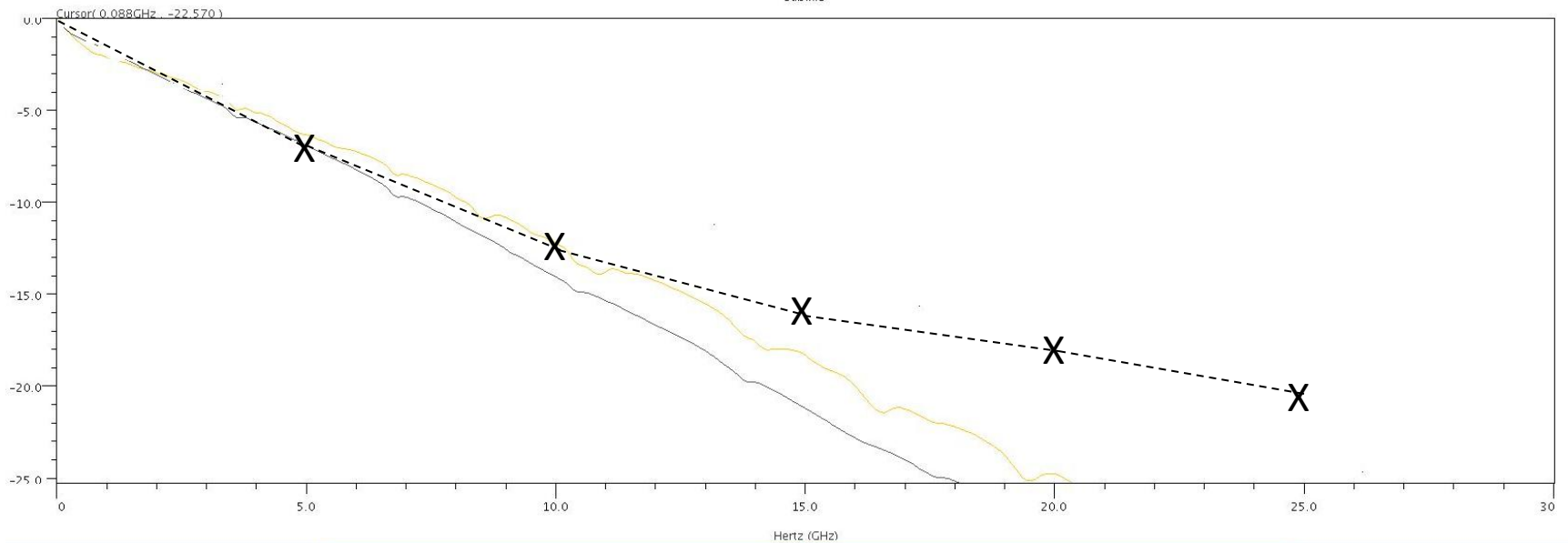
- CEI-28G-SR being discussed as possible standard for Line Card Module interface for 100GE-LR4
- Preliminary analysis performed in order to assess CEI-28G-SR channel compliance of channels of 8" or greater in length using standard FR4 and NELCO400-13SI

CEI-28G-SR Normative Channel insertion loss

Figure 10-2. CEI-28G-SR Normative Channel Insertion Loss

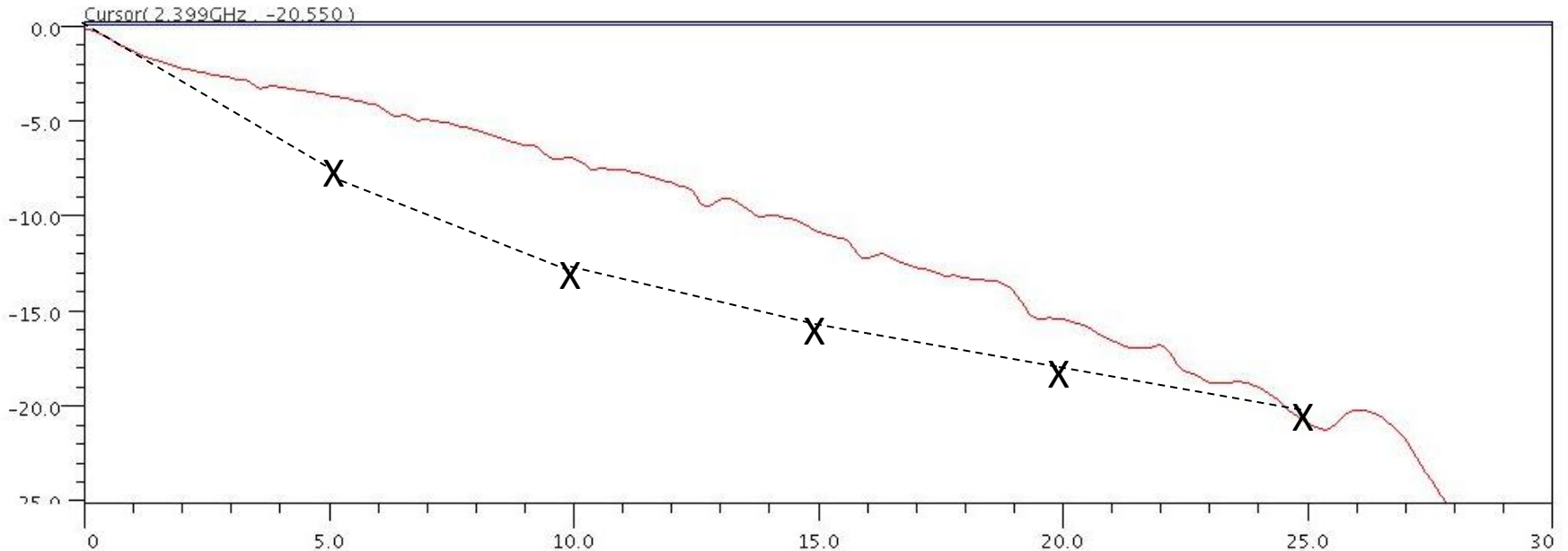


8" FR4 Channels Fail Mask



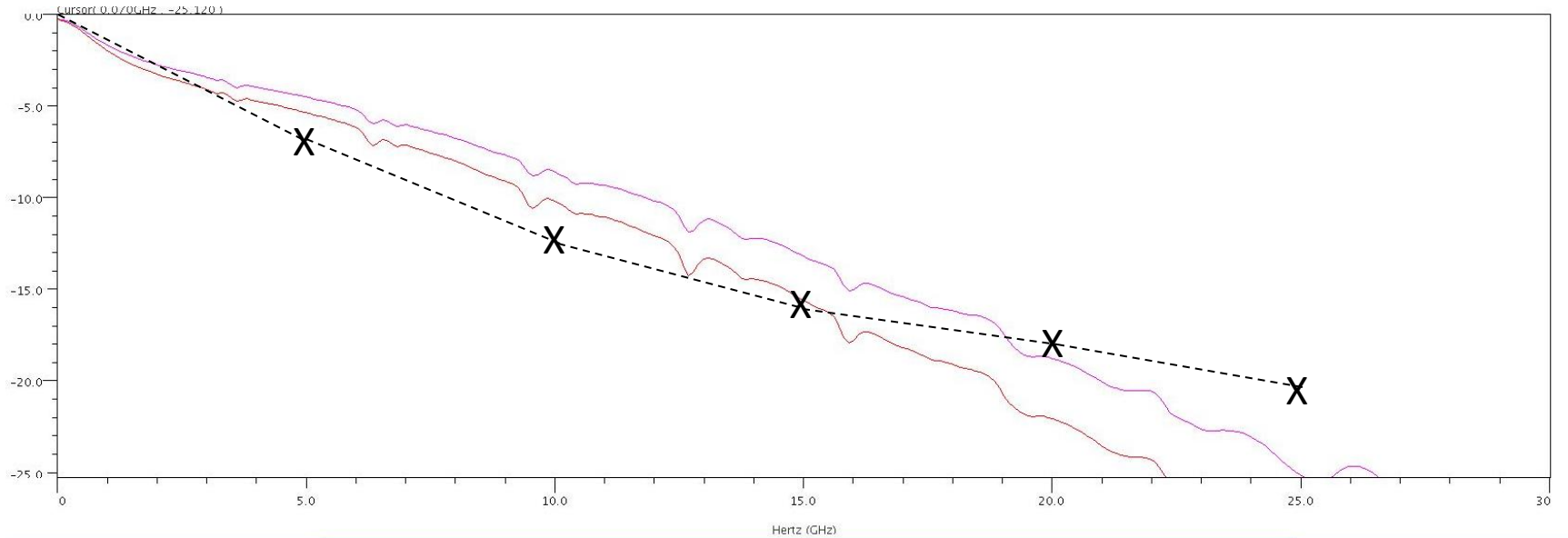
- Subjectively it looks like the CEI-28G-SR mask cannot be met with FR4 for 8" (micro strip as well as strip line)

8" NELCO4000-13SI Just meets mask



- Subjectively it looks like NELCO-4000-13SI is required for a 8" channel to (just) meet the CEI-28G-SR mask

10" and 12" NELCO4000-13SI Channels



- Subjectively it looks like the Nelco-4000-13SI 12" channel fails mask, and 10" is marginal at best

Summary

- Preliminary analysis indicate that
 - Channel of 8” or longer using standard FR4 material will not meet CEI-28G-SR channel requirements
 - Channel of 8” using NELCO4000-13SI material might meet requirements
 - Channels of 10” or longer will require material with improved properties as compared to NELCO4000-13SI