



淳新科技有限公司

Chunxin Technology Co., Ltd.

NGFF_4.0H Signal Integrity Test Report

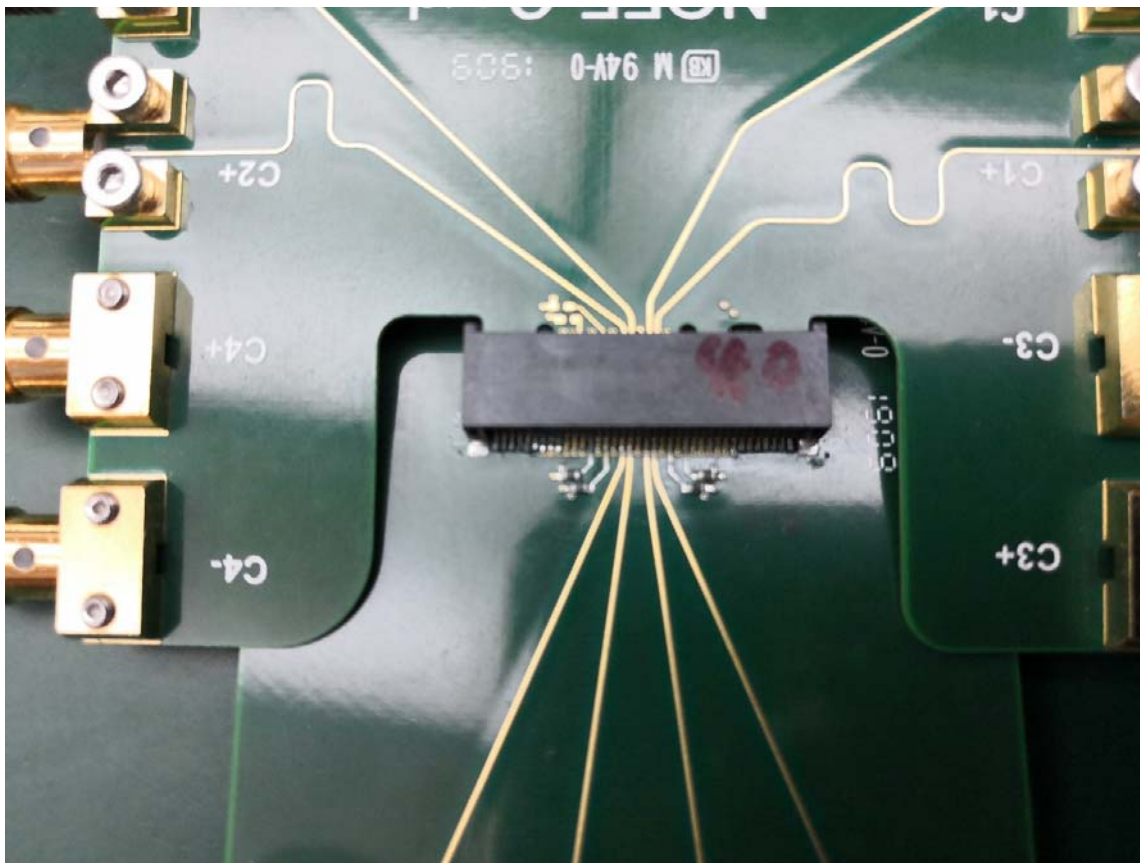
2021.12.15



TEST OBJECT : CX4-M30M4-171 (M.2 3.2H Gen 4 M Key)

Table 6-1. Signal Integrity Parameters and Test Procedures for M.2 Connectors

Parameter	Procedure	Requirements
Differential Insertion Loss (DDIL)	EIA 364-101 The EIA standard shall be used with the following considerations: - The measured differential S-parameter shall be referenced to 85 Ω differential impedance. - The test fixture shall meet the test fixture recommendations defined in Section 6.3.1. - The test fixture effect shall be removed from the measured S-parameters. See Note 1.	≥ -0.5 dB up to 4 GHz; $\geq [-0.25*f + 0.5$ dB for 4 GHz $< f < 8$ GHz] for example -1.5 dB at 8 GHz $\geq [-0.75*f + 4.5$ dB for 8 GHz $< f < 10$ GHz For example: -3.0 dB at 10 GHz
Differential Return Loss (DDRL)	EIA 364-108 The EIA standard shall be used with the following considerations: - The measured differential S-parameter shall be referenced to 85 Ω differential impedance. - The test fixture shall meet the test fixture recommendations defined in Section 6.3.1. - The test fixture effect shall be removed from the measured S-parameters. See Note 1.	≤ -15 dB up to 3.0 GHz; $\leq [5*f - 30$ dB for 3.0 $< f < 4.4$ GHz]. For example: -10 dB at 4 GHz ≤ -8.0 dB from 4.4 to 10 GHz;
Differential Near End Crosstalk (DDNEXT) and Differential Far End Crosstalk (DDFEXT)	EIA 364-90 The EIA standard must be used with the following considerations: - The crosstalk requirement is with respect to all the adjacent differential pairs including the crosstalk from opposite sides of the connector. - This is a differential crosstalk between a victim differential signal pair and all adjacent differential signal pairs. The measured differential S-parameter shall be referenced to 85 Ω differential impedance.	≤ -32 dB up to 8 GHz and -20 dB from 8 GHz to 10 GHz;



Insertion Loss _ Upper Contact

IL-M1



IL-M2

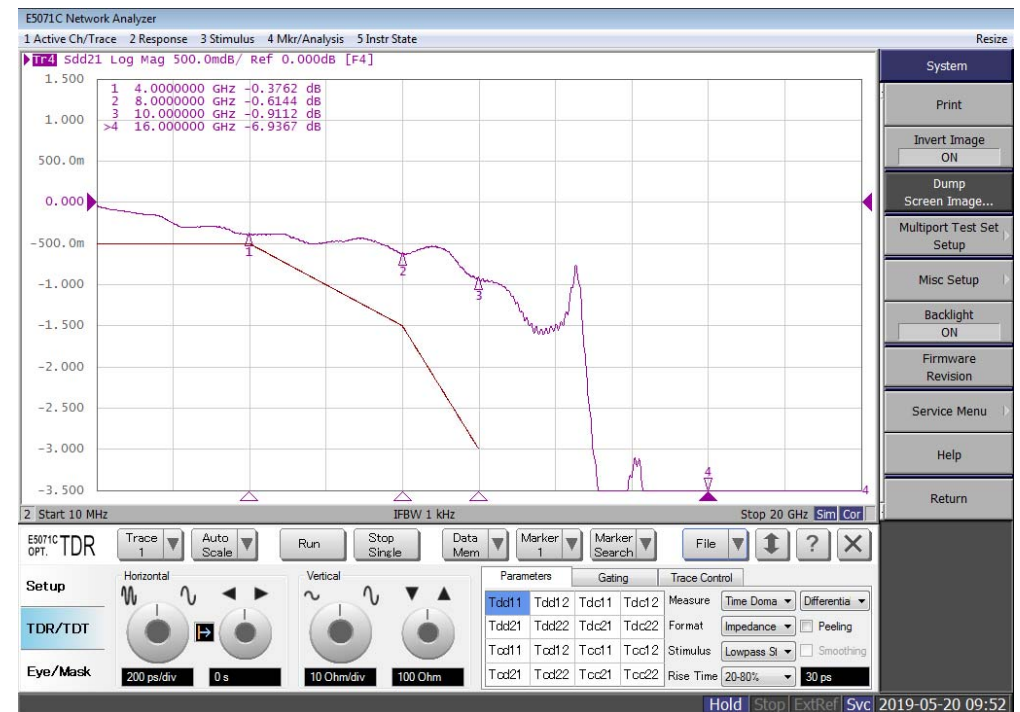


Insertion Loss _ Bottom Contact

IL-M3



IL-M4

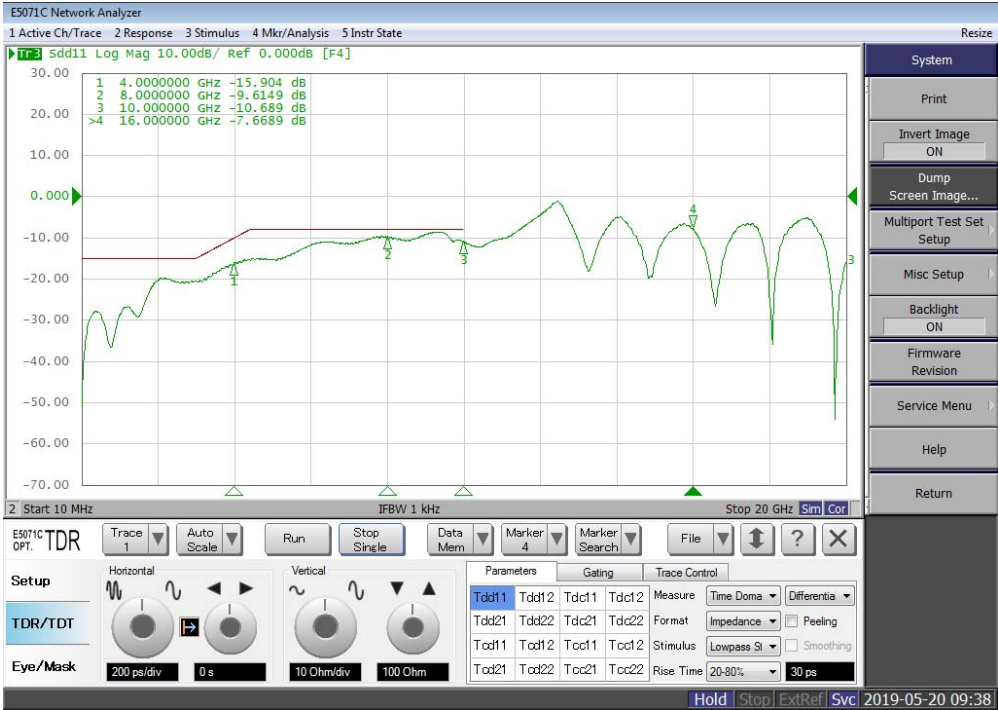


Return Loss _ Upper Contact

RL-M1



RL-M2



Return Loss _ Bottom Contact

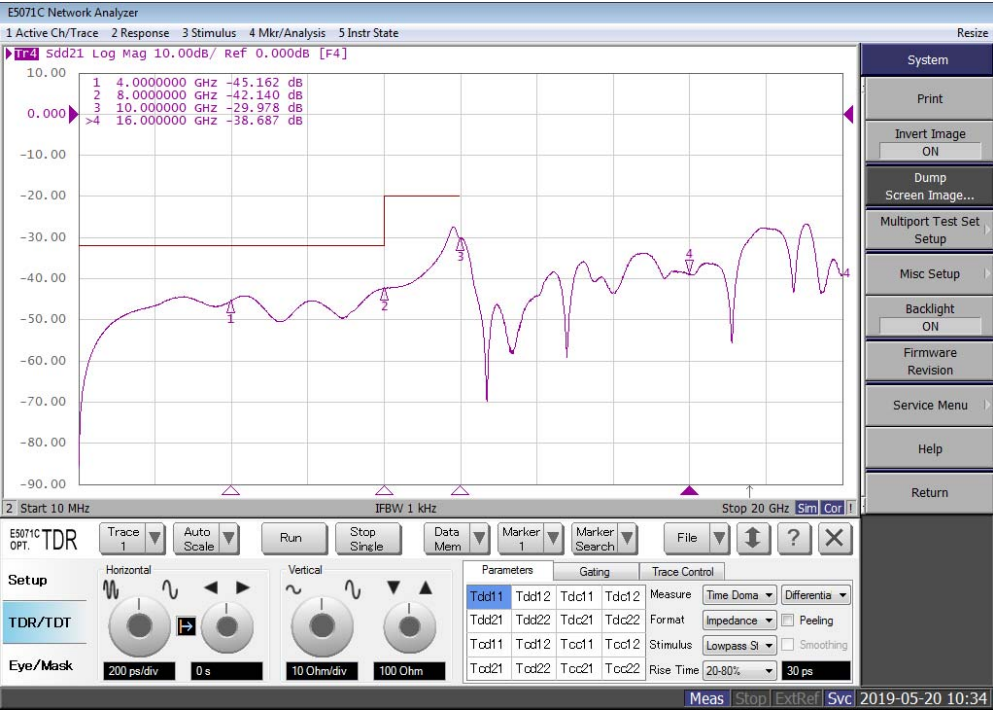
RL-M3



RL-M4



Crosstalk _ NEXT



NEXT-M1&M2

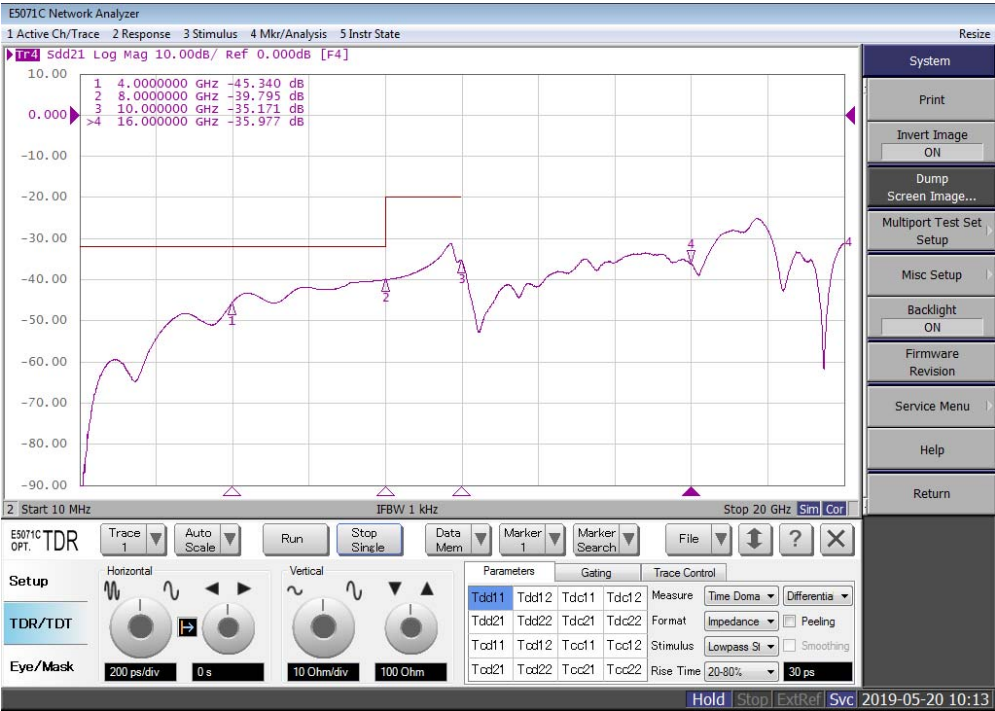


NEXT-M4&M3

Crosstalk _ FEXT



FEXT-M1&C2

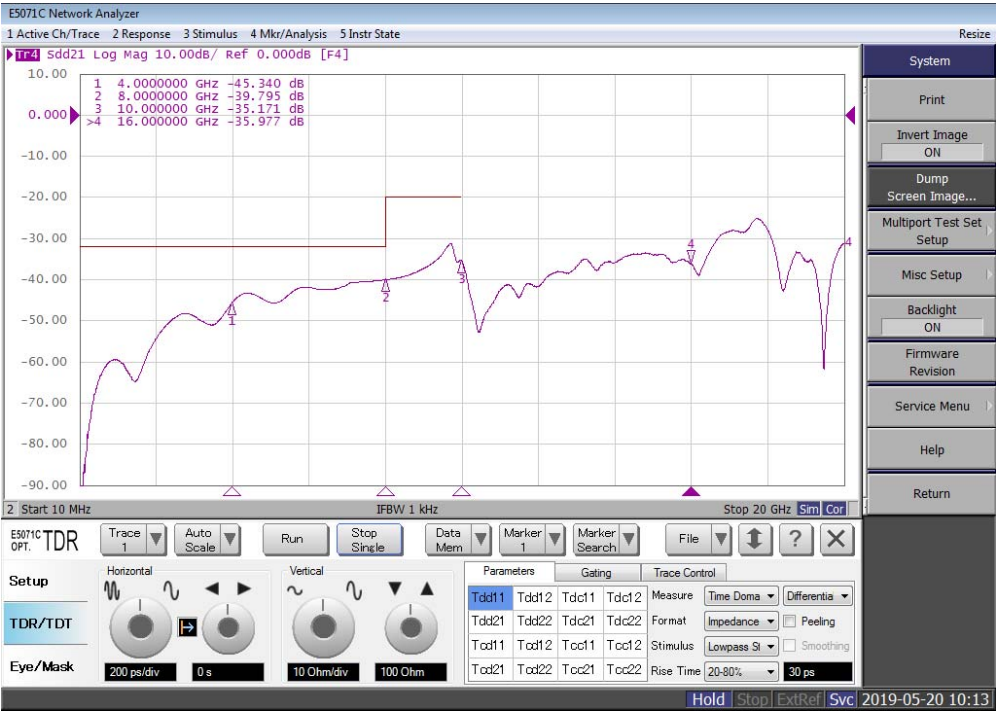


FEXT-M2&C1

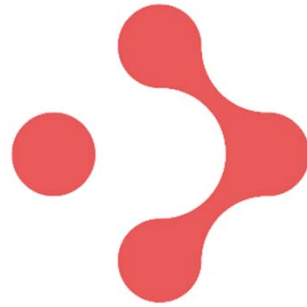
Crosstalk _ FEXT



FEXT-M1&C2



FEXT-M2&C1



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