



New Parameter Values for Micro-Reflection Limits

Contribution to IEEE 802.3cy

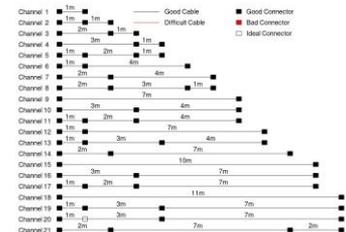
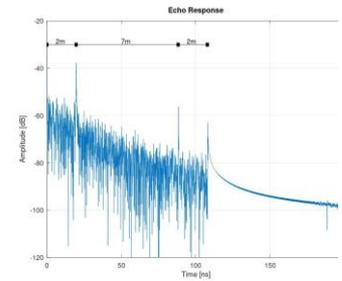
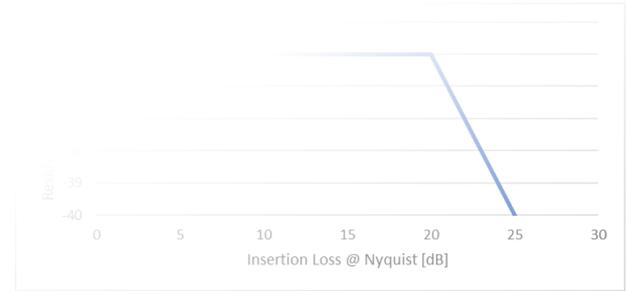
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Introduction

- In the Telephonic Interim Meeting on March 30, 2021, the micro-reflection limit text from [jonsson_3cy_01a_03_30_21](#) was adopted
- Contribution [jonsson_3cy_02_11_09_21](#) proposed specific limits to use in the text
- This contribution proposes minor change to the earlier proposal, to account for possible variations in cable production



Proposed Values

Parameter	Parameter Value	Parameter Description
Δf	2.5MHz	The sample frequency spacing for the frequency domain transfer function measurements
N	4096	Number of sampling points to use for the time domain representation of the echo impulse response
N_{seg}	4	Number of samples in each segment
$N_{discard}$	16	Number of largest segments to discard

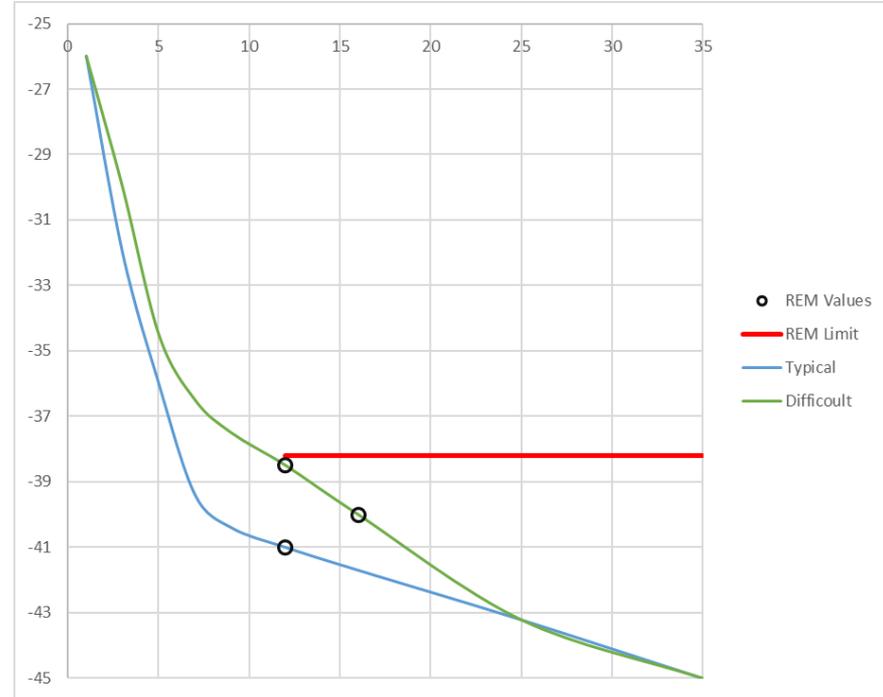
- f_c is **4GHz**,
- REM_{max} is **-30dB** and
- REM_{offset} is **20dB**

Only the $N_{discard}$ value has changed from the proposal in

[jonsson_3cy_02_11_09_21](#)

Explanation of New Value

- Previously proposed value of $N_{\text{discard}}=12$ was based on REM calculations for simulated and measured cables
- We have done a detailed review of larger set of cable measurements
- In some cases, the echo response from the connectors might spread out over more bins than what had previously been observed
- Using $N_{\text{discard}}=16$ provides extra REM margin for the more challenging cable assembly





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