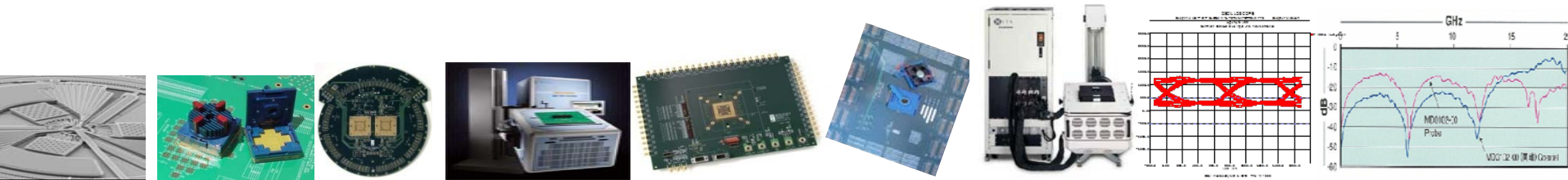


Presenters
Logo

Silicon Valley
Test Workshop



Concurrent Test Method for Test Time Reduction in Production of Mobile Devices

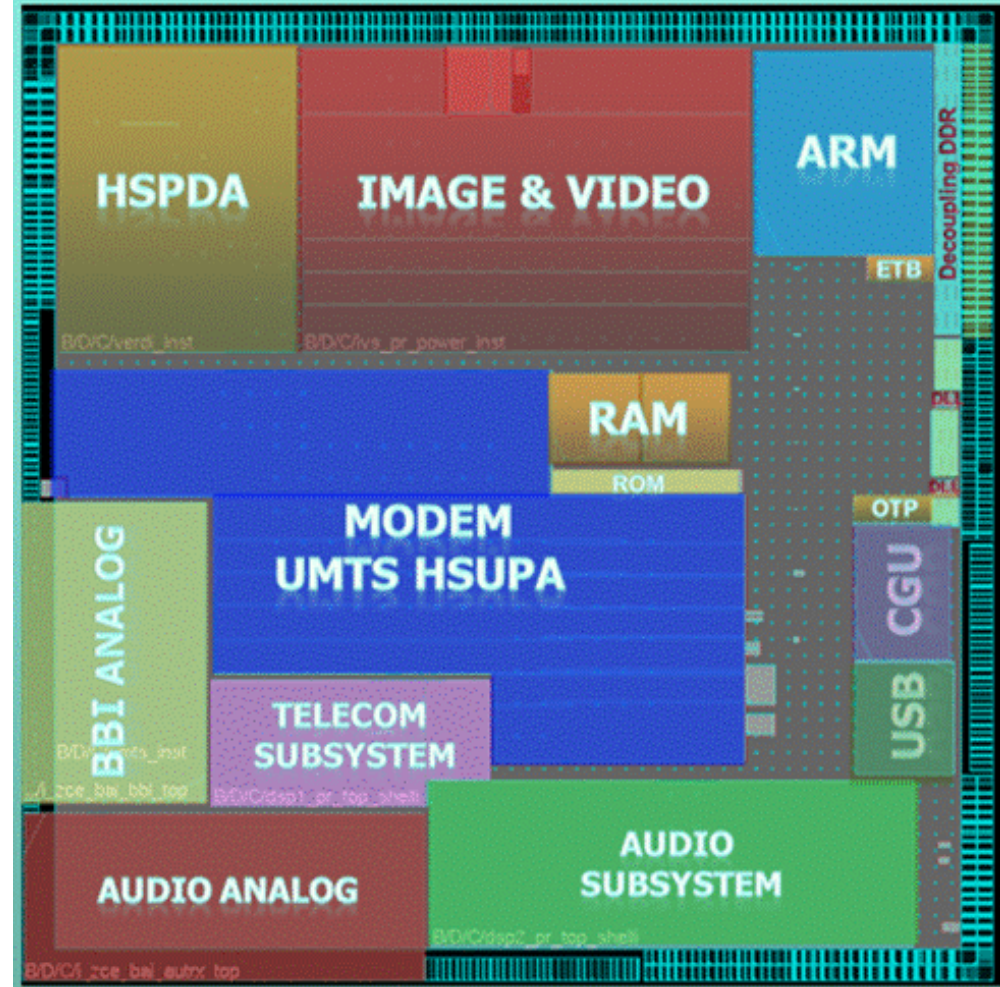
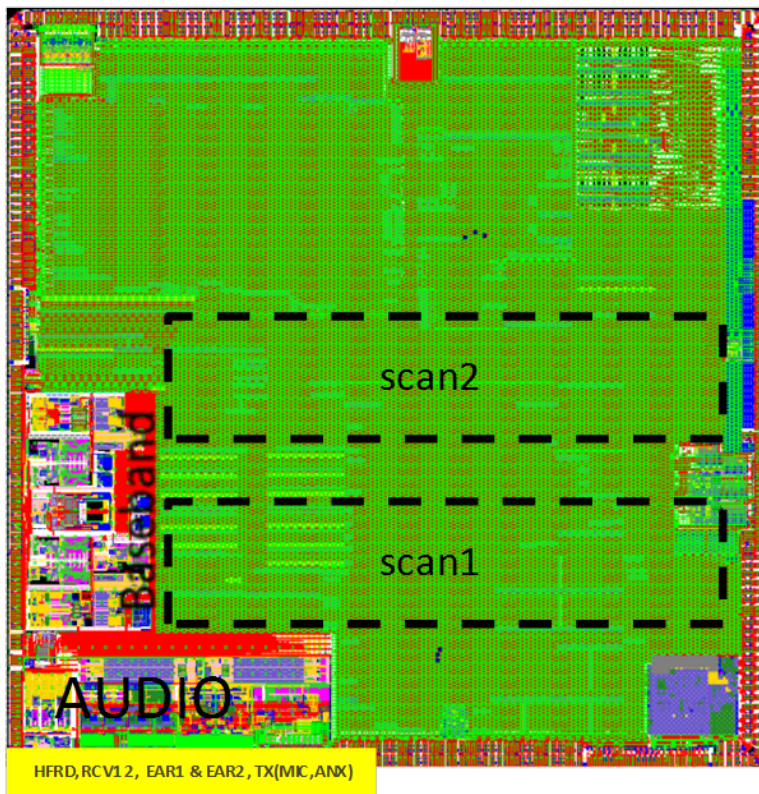
Author : A. Owzar, E. Baykal, P. Felicio, R. Teng, G.
Valchera, F. Perez, R. Stephan, R. Becker,
STERICSSON

amir.owzar@stericsson.com

Table of Contents

- **Block Diagram of Device**
- **Block Description**
- **Test System**
- **Test Results**
- **Summary**

Block Diagram 3G



Block description(Audio)

RX Path

- 2 separate stereo audio paths
- Stereo output amplifiers for headset
- 0.65 WRMS mono class-D amplifiers for loudspeakers
- 16 or 24-bit audio data path
- Sampling frequencies: 8 kHz to 48 kHz

TX Path

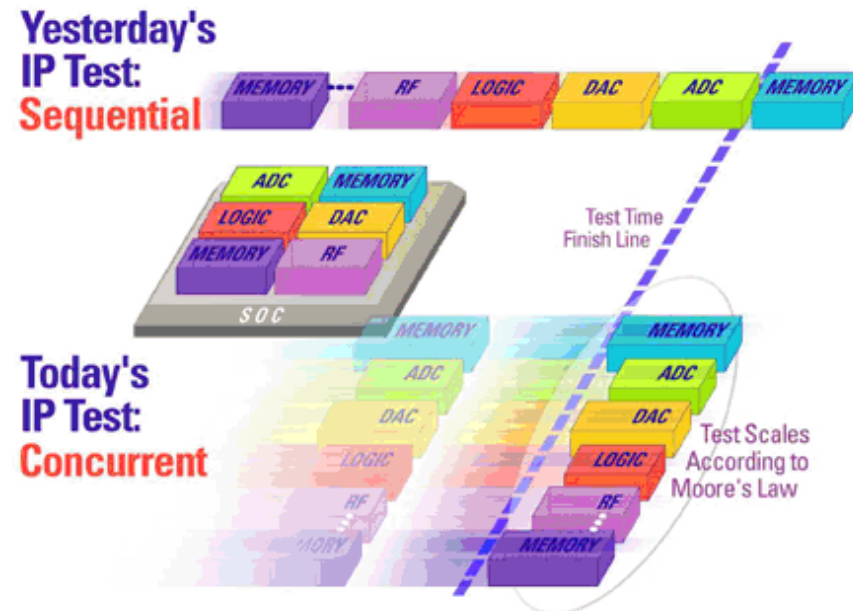
- 2 separated stereo audio paths
- For the analog path:
- 4 differential microphone inputs
- 1 stereo single ended input
- Sampling frequencies: 8 kHz to 48 kHz

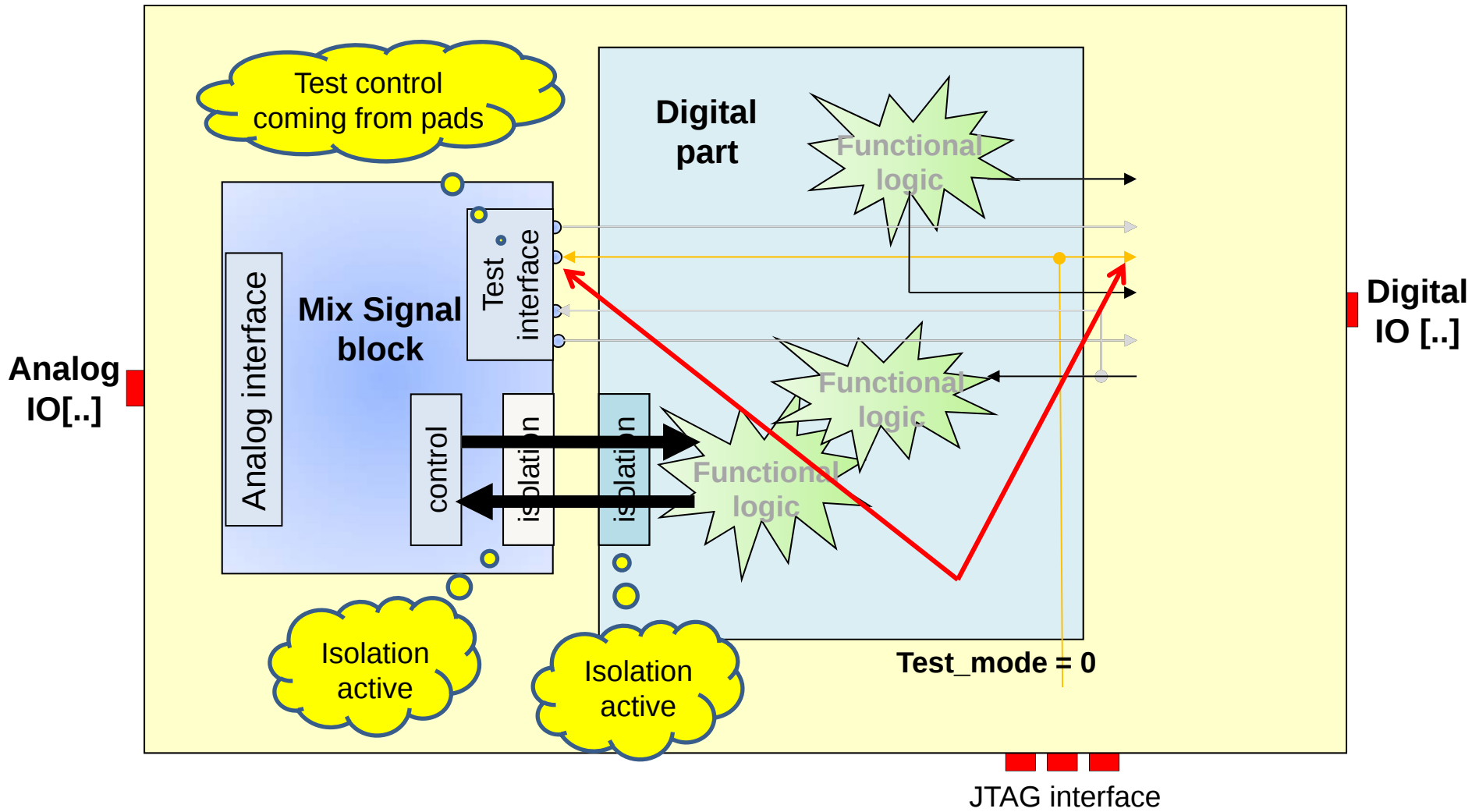
Audio interfaces

- 2 IIS slave input bus
- 1 IIS master output bus
- IOM-2 interface

Test System

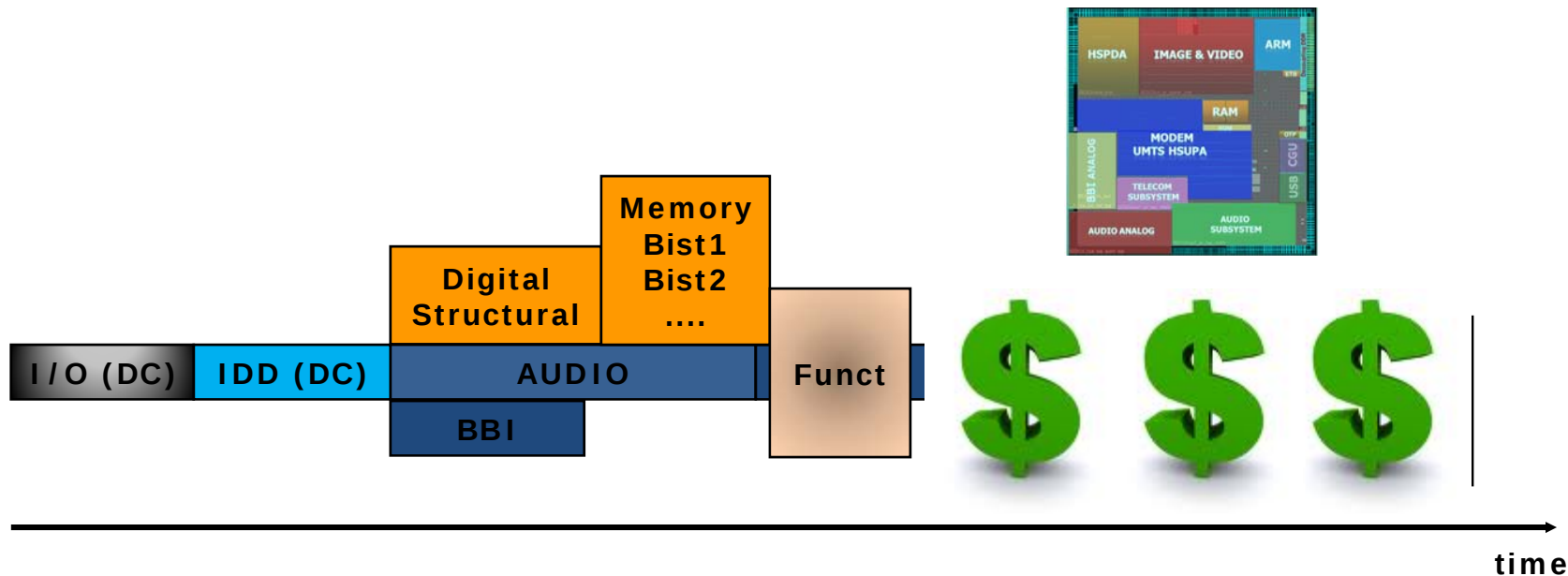
- Verigy 93000
- Test of RX & TX in Parallel for TTR
- 100 Nominal samples tested
- Investigated Parameters : THD, SNR, CSEP, PSR





Concurrent Test Mode instruction

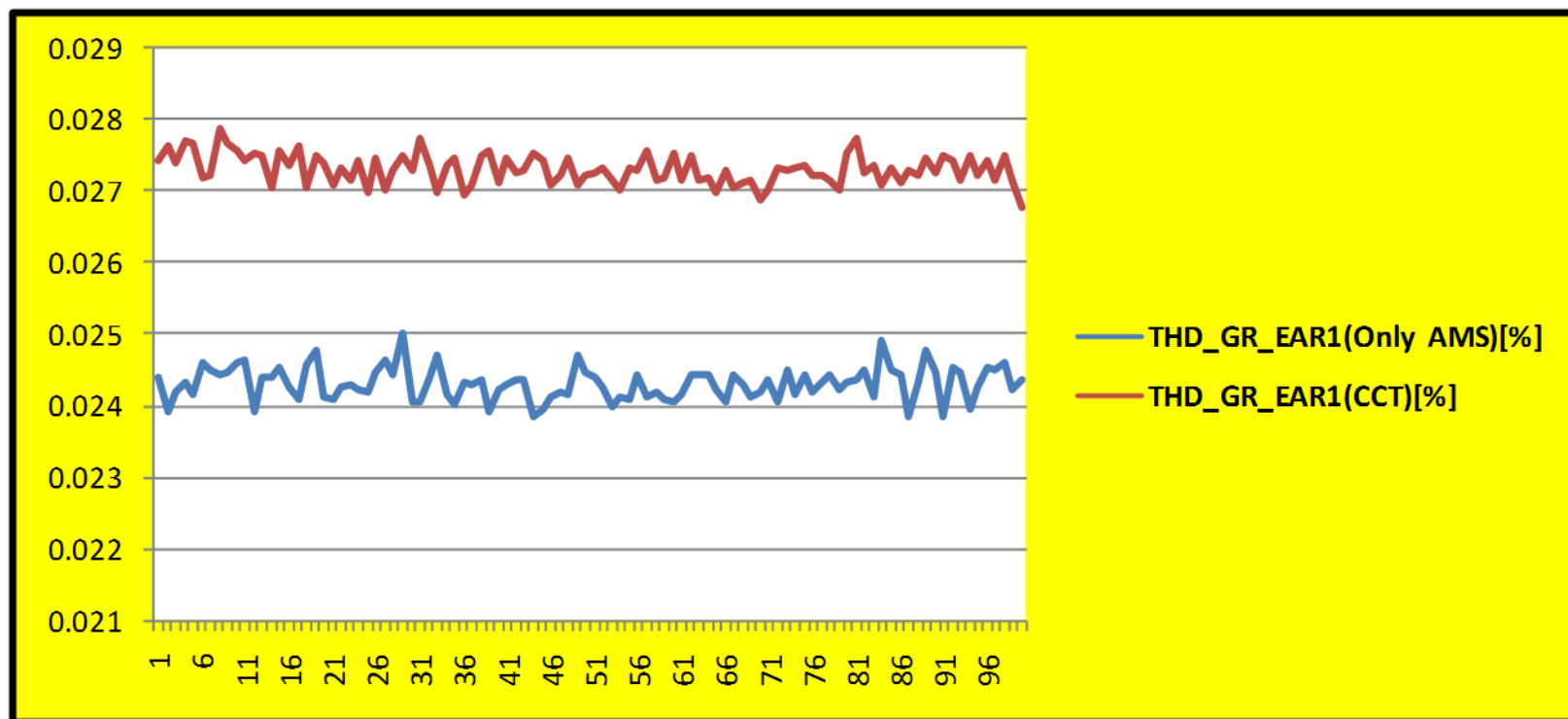
CCT SETUP



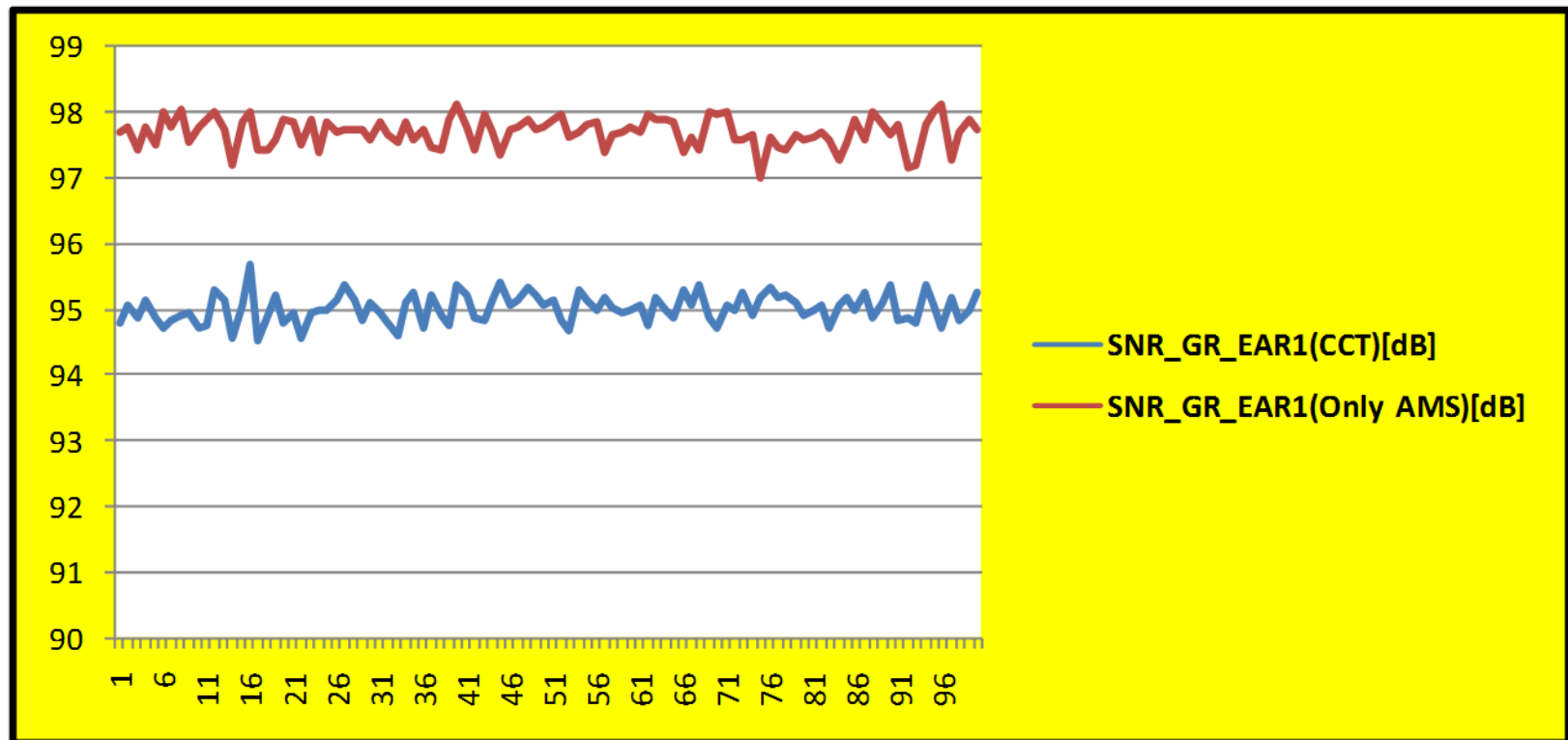
Traditional Setup: Sequential Test



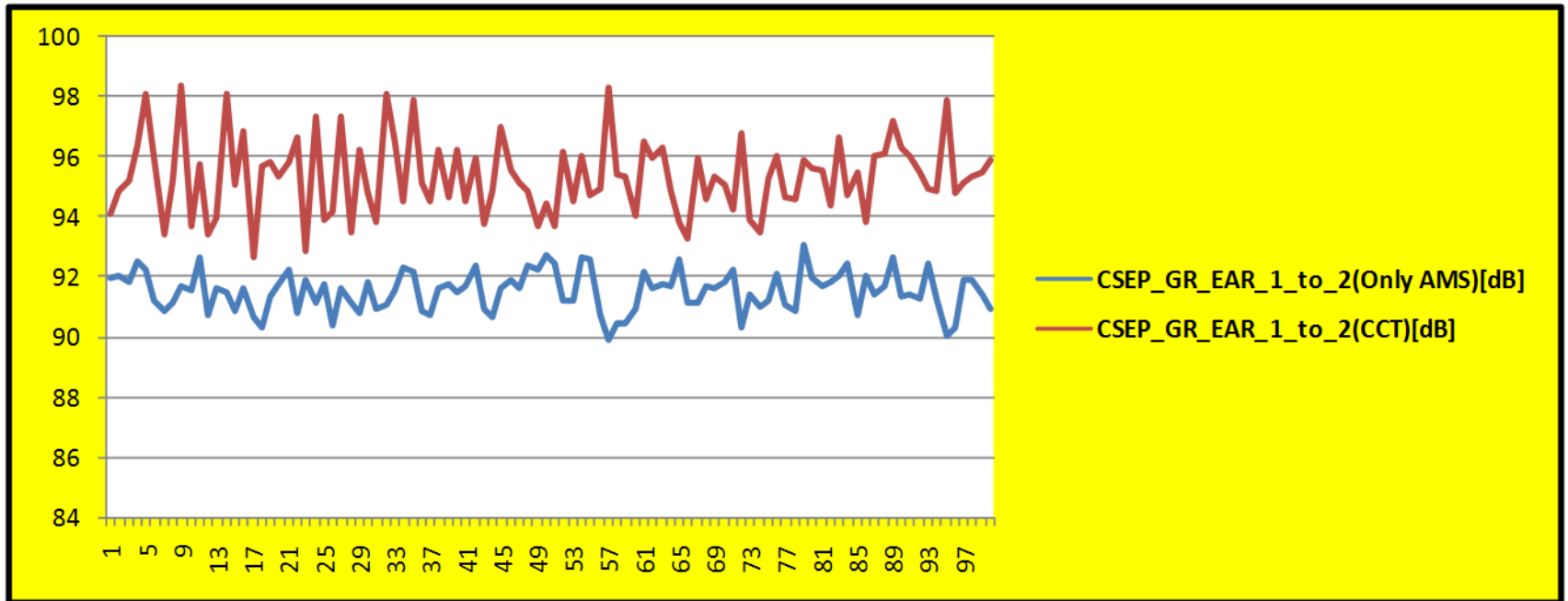
THD_EAR



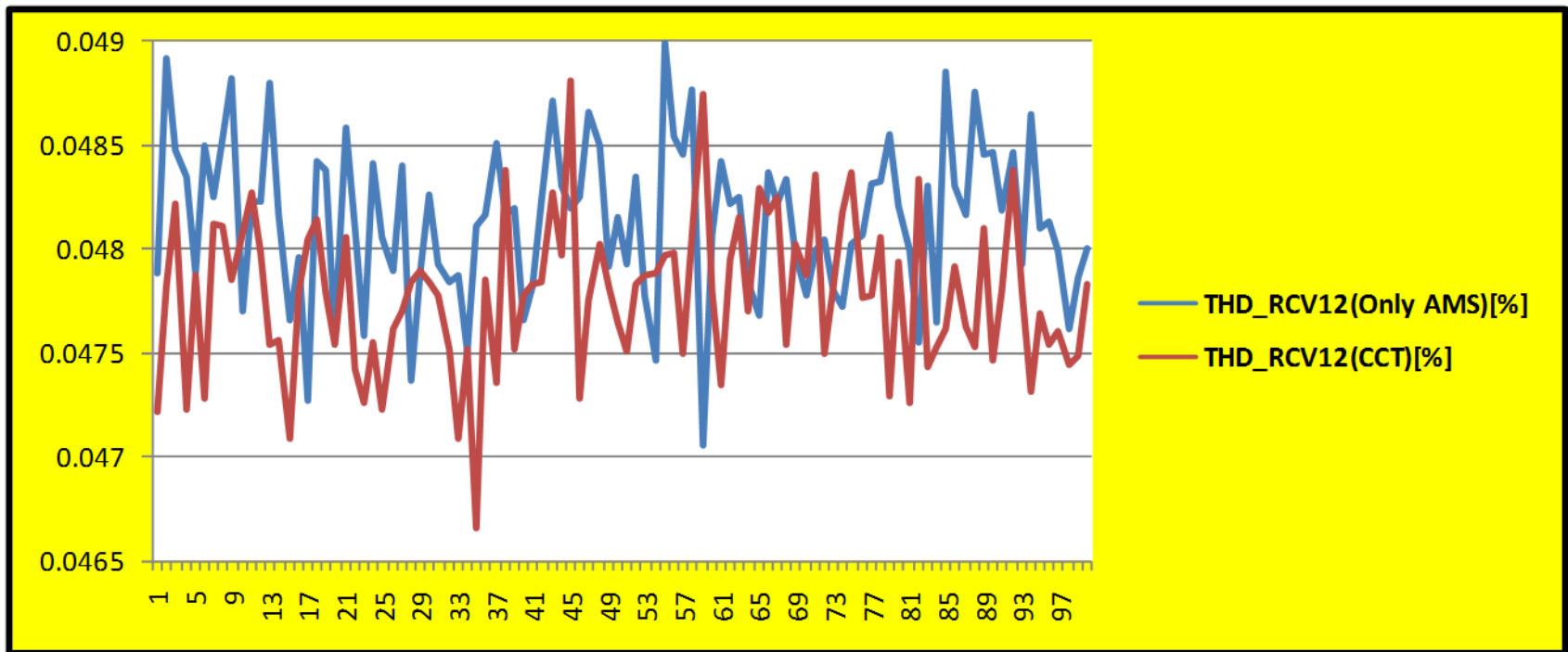
SNR_EAR



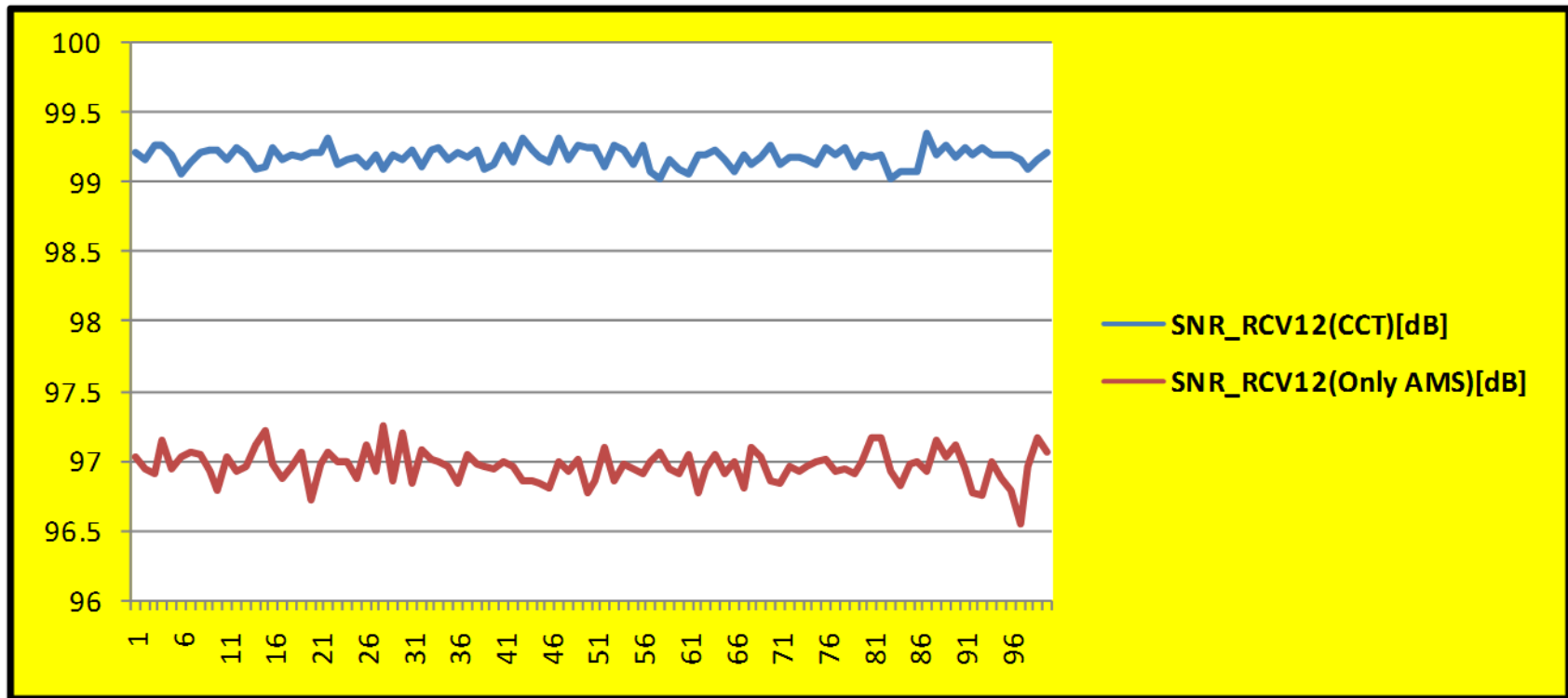
CSEP EAR1/2 to EAR2/1



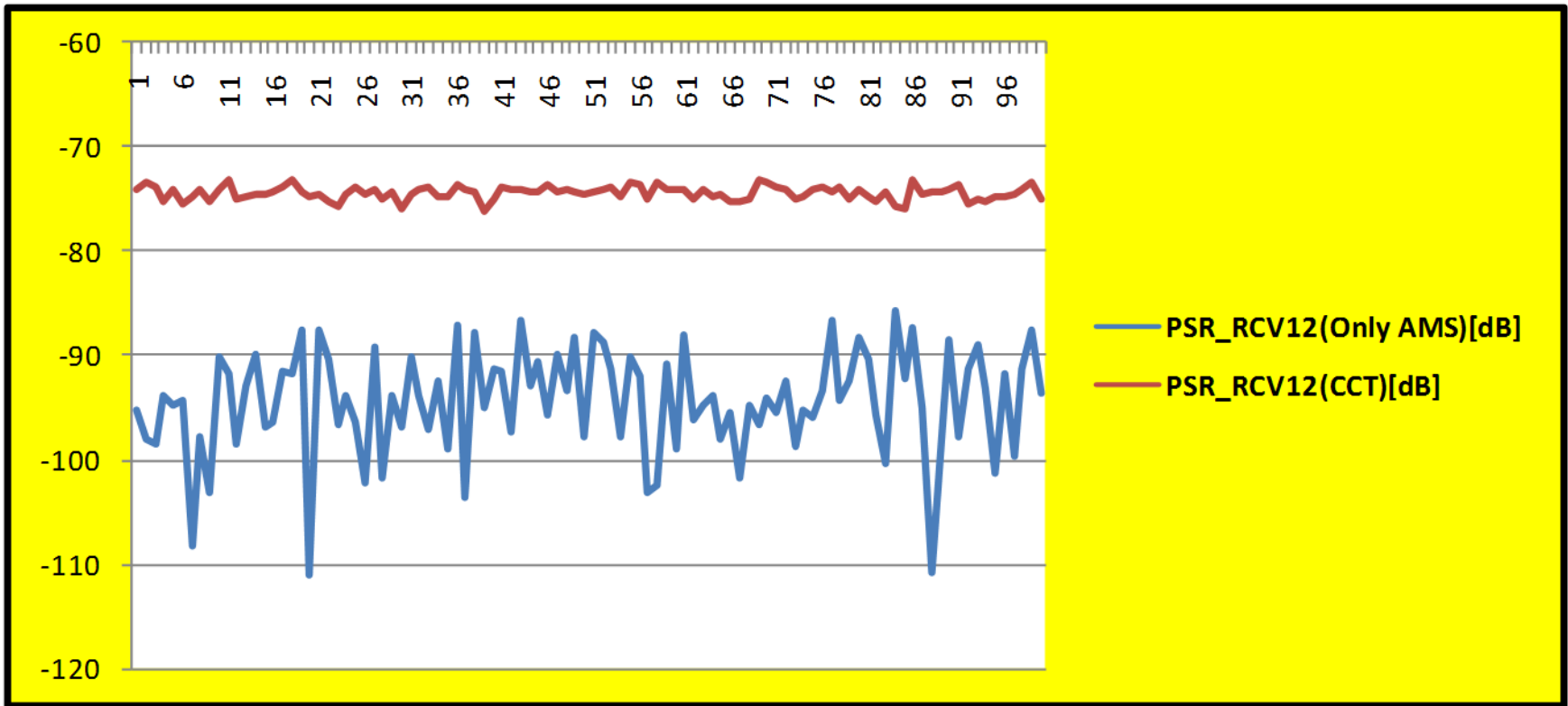
THD_RCV12



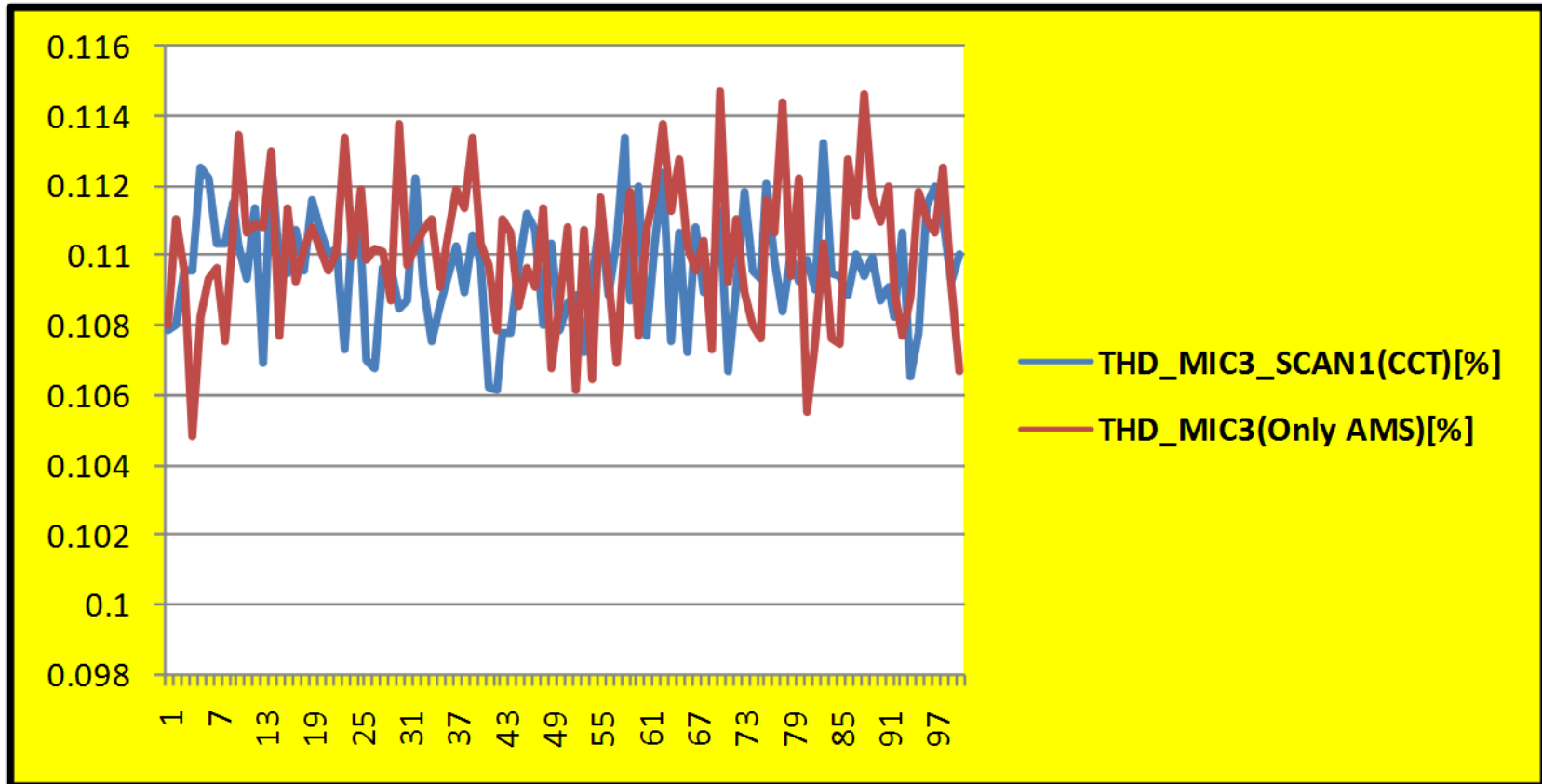
SNR_RCV12



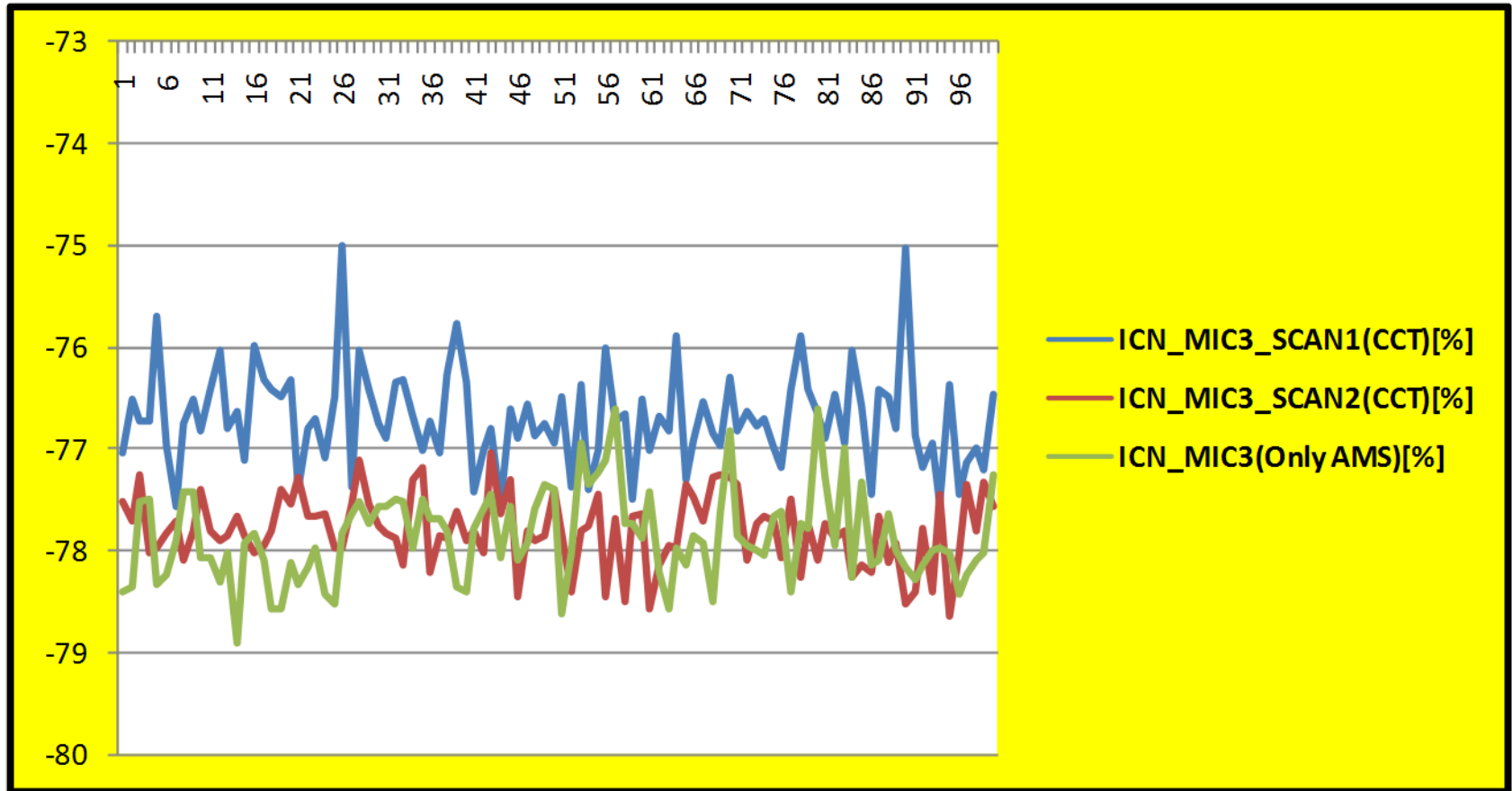
PSR_RCV12



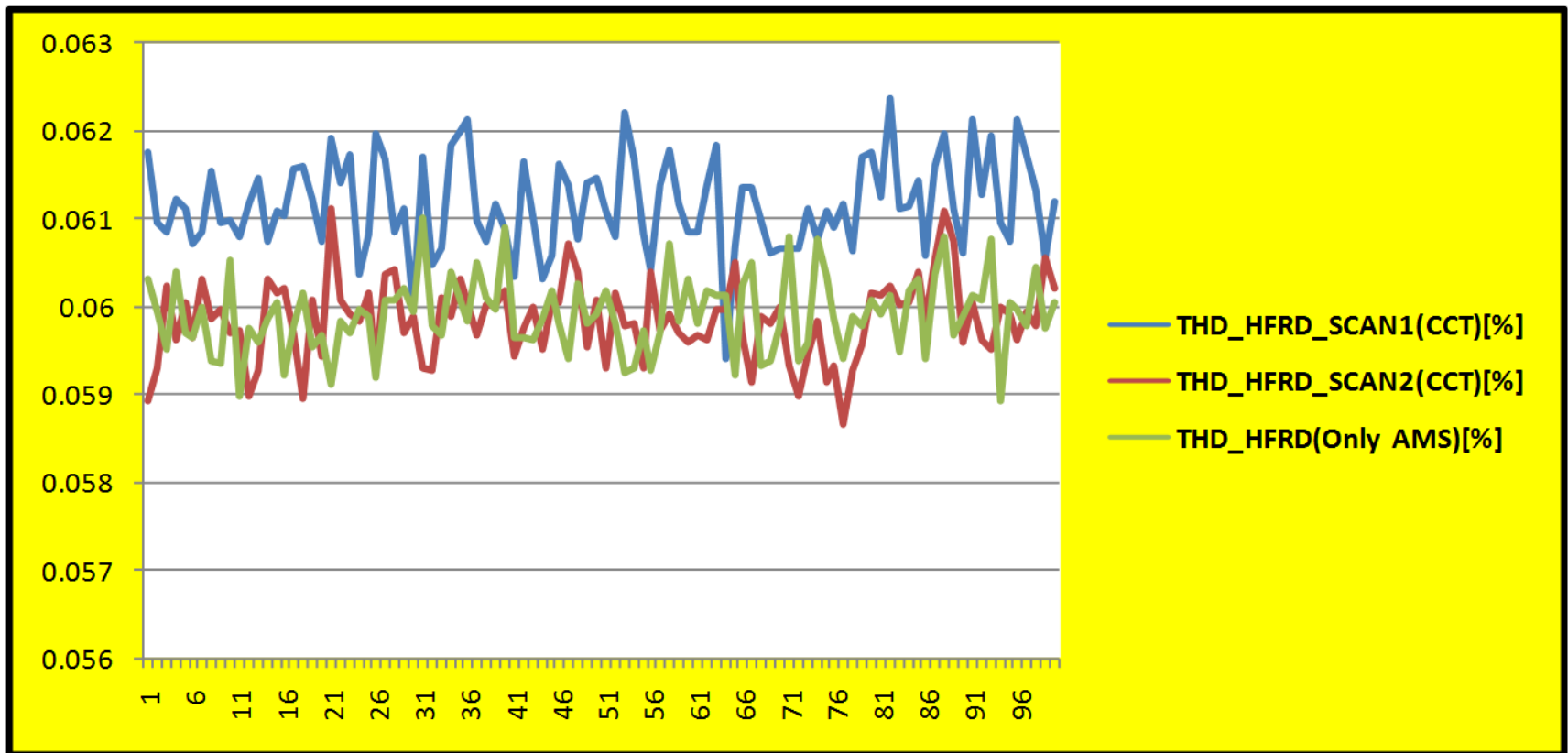
THD_TX(MIC)



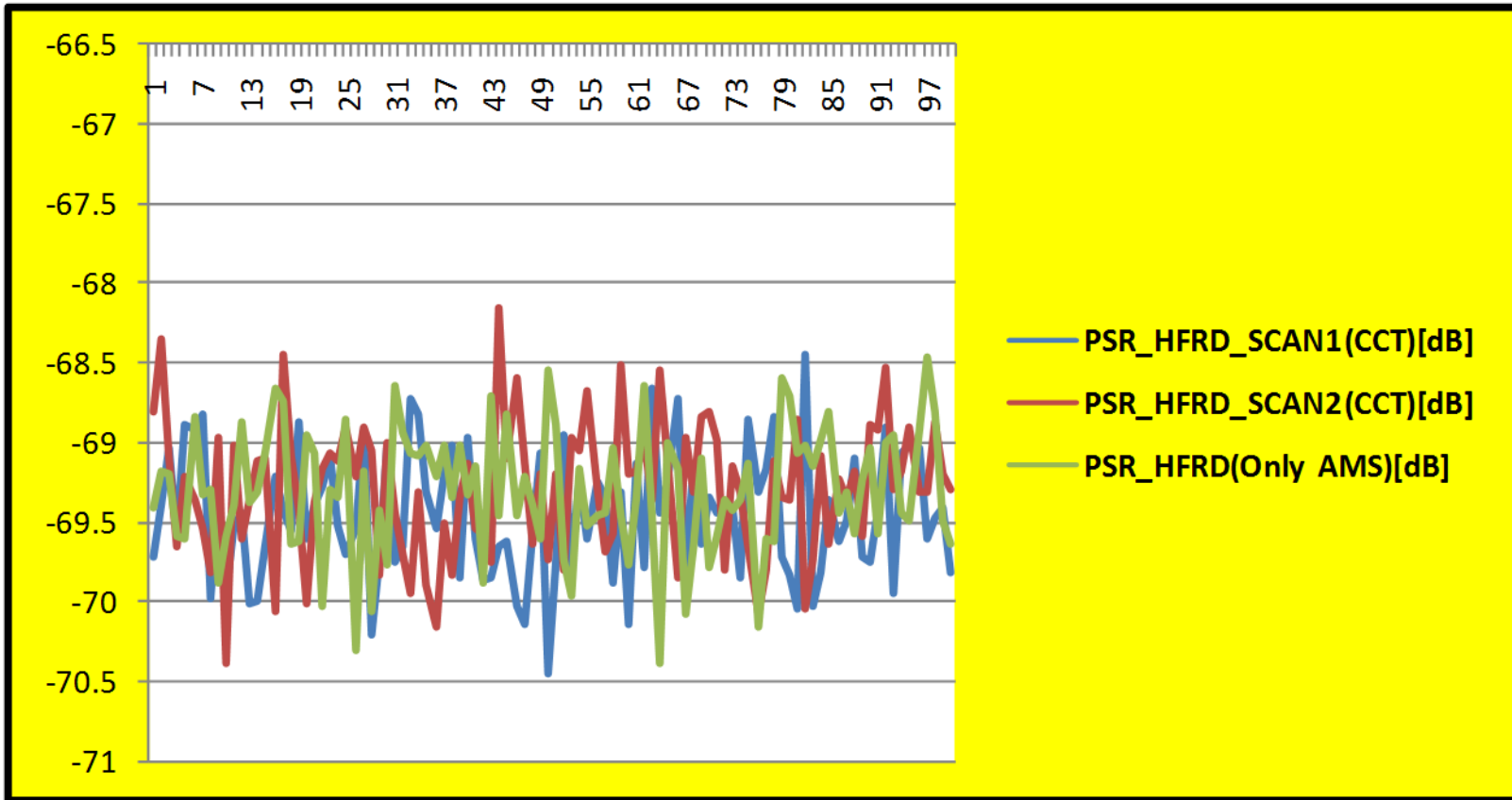
ICN_TX(MIC)



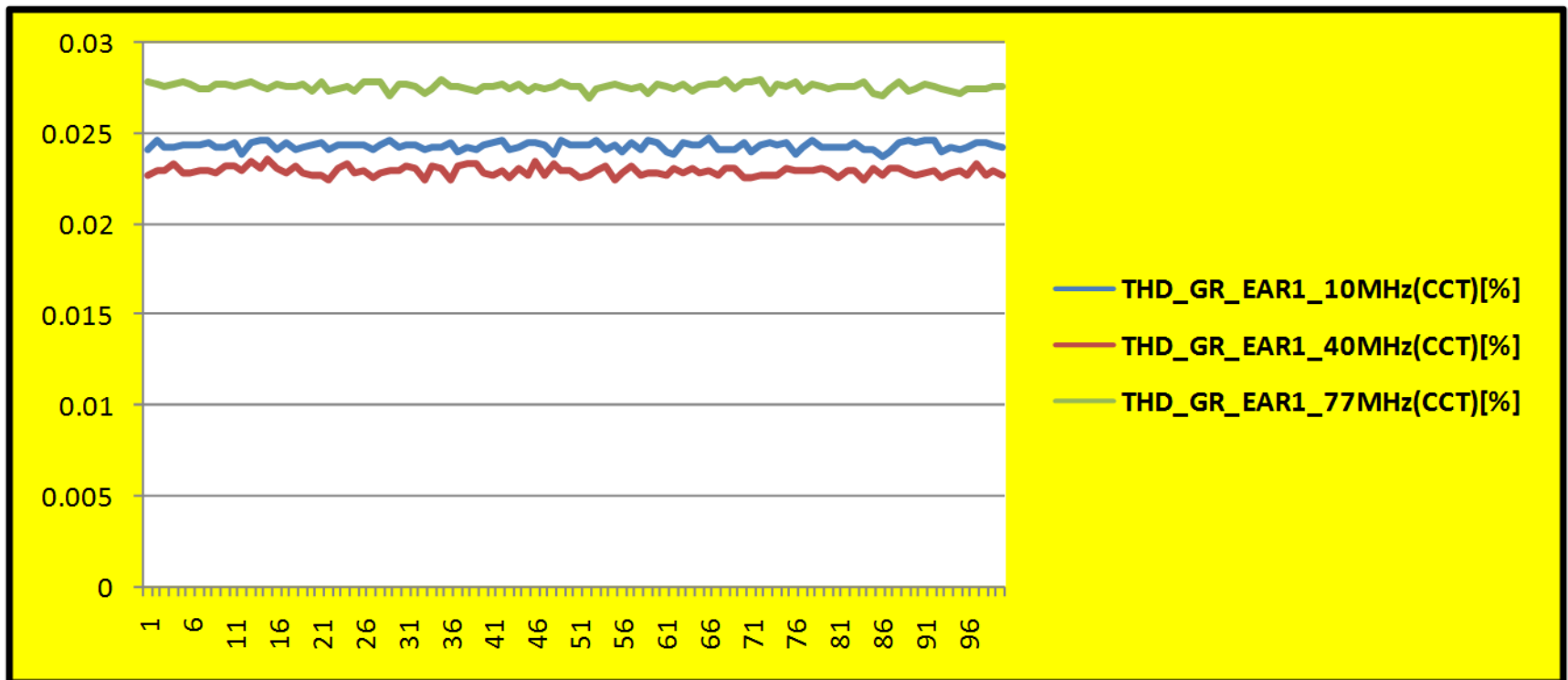
THD_HFRD



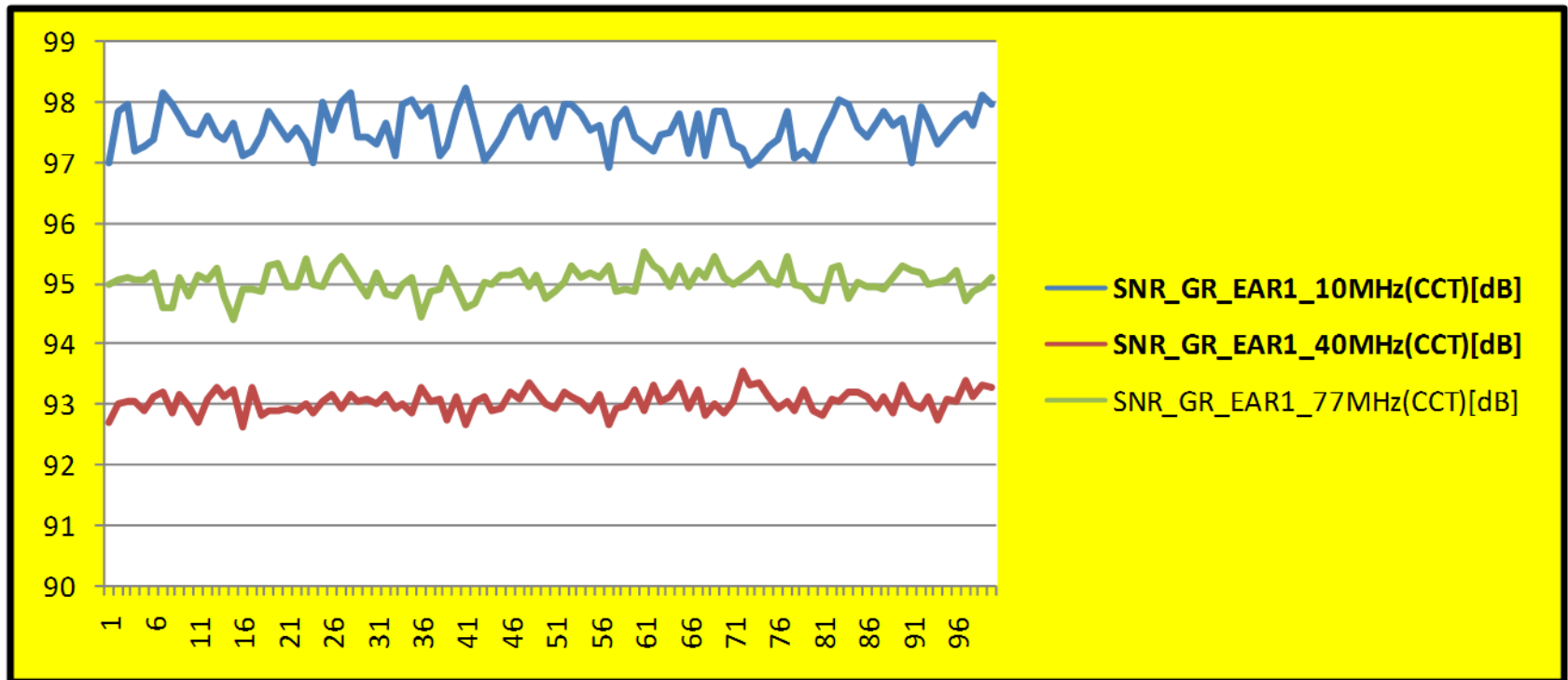
PSR_HFRD



THD_EAR



SNR_EAR



Summary

- **Impact of CCT mode on THD Downlink (Single Ended)**
- **THD dependency on Scan chain adjacent to Audio**
- **No Impact of CCT mode on THD Downlink in Diff. mode**
- **SNR Parameter in Downlink in both mode single/Diff. affected**
- **No Impact of Scan chain 2 on Downlink parameter**
- **ICN in uplink affected in CCT mode**
- **Reducing the pattern frequency reduces the impact of CCT mode**