

Extending S-Parameters Mask Range

(Comments 363, 364, 367, 348)

Ali Ghiasi - Ghiasi Quantum/Marvell

IEEE 802.3dj Plenary Meeting
Madrid Spain

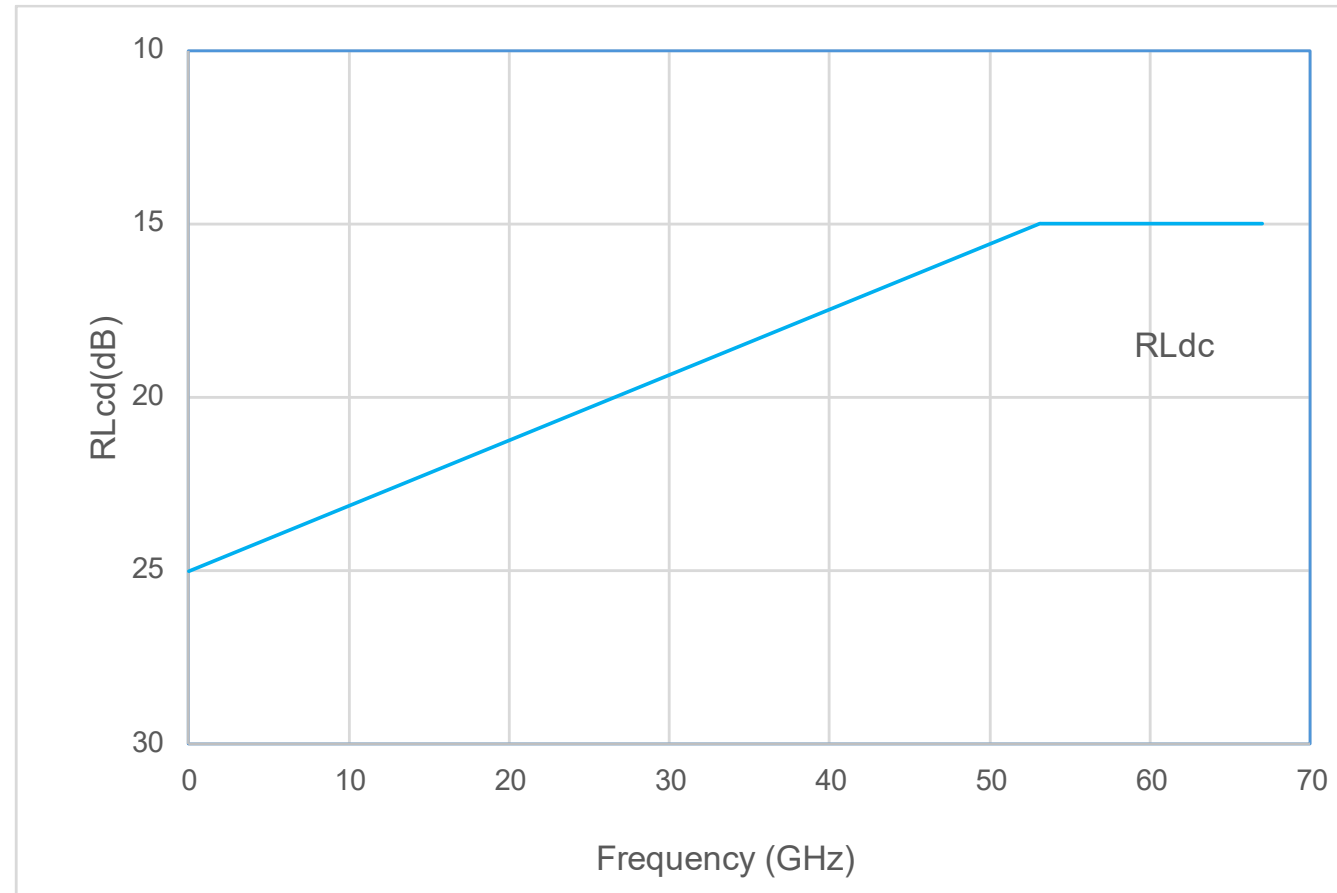
July 28, 2025

S-Parameters Range Comments

- ❑ **S-Parameters masks RLcd and RLcc of 802.3ck mask are used for bases for 802.3dj RLcd and RLcc masks**
 - 802.3dj doubles the Baudrate but S-Parameters frequency range were only increased from 50 GHz to 60 GHz
 - It has been shown that even 67 GHz may result in significant errors no to mention 60 GHz
 - https://www.ieee802.org/3/dj/public/25_05/mellitz_3dj_01a_2505.pdf
 - Comment 348, 363, 364, 366, and 367 (comment is duplicate of 364 and was withdrawn) recommend to extend the RLcd and RLcc frequency range from 60 GHz to 67 GHz
 - Comments were specifically written to extend clause 178, 179, and 176C RLcd and RLcc limits
 - Annex 176D references clause 179 (CR) RLcd and RLcc, and any extension of S-Parameters range all applies to Annex 176D
 - Clause 179 and Annex 176D both use Annex A179B compliance boards, if comments are accepted then Annex 179B RLcd and RLcc limits also would need to be extended to 67 GHz
 - Recommendation is to extend MTF RLcd -10 dB at 60 GHz to 67 GHz
 - Recommendation is to extend MTF RLcc -3 dB at 60 GHz to 67 GHz
 - Limit may need some further adjustment after $Z_0=92.5\ \Omega$ consideration.

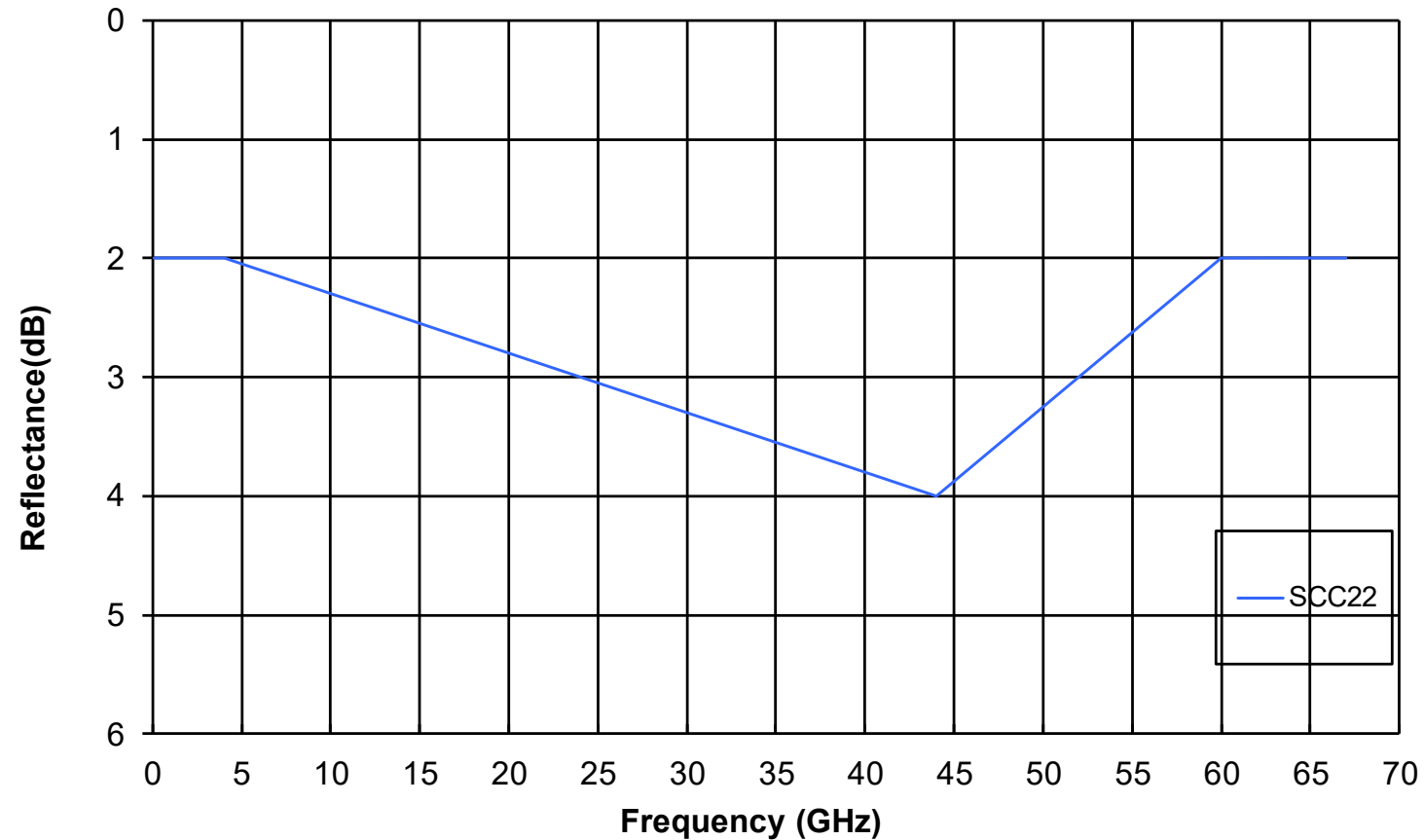
Comment 348 and 366

- Extend RLcd clause 178 and RLcd Annex 176C range from 60 GHz to 67 GHz as shown below.



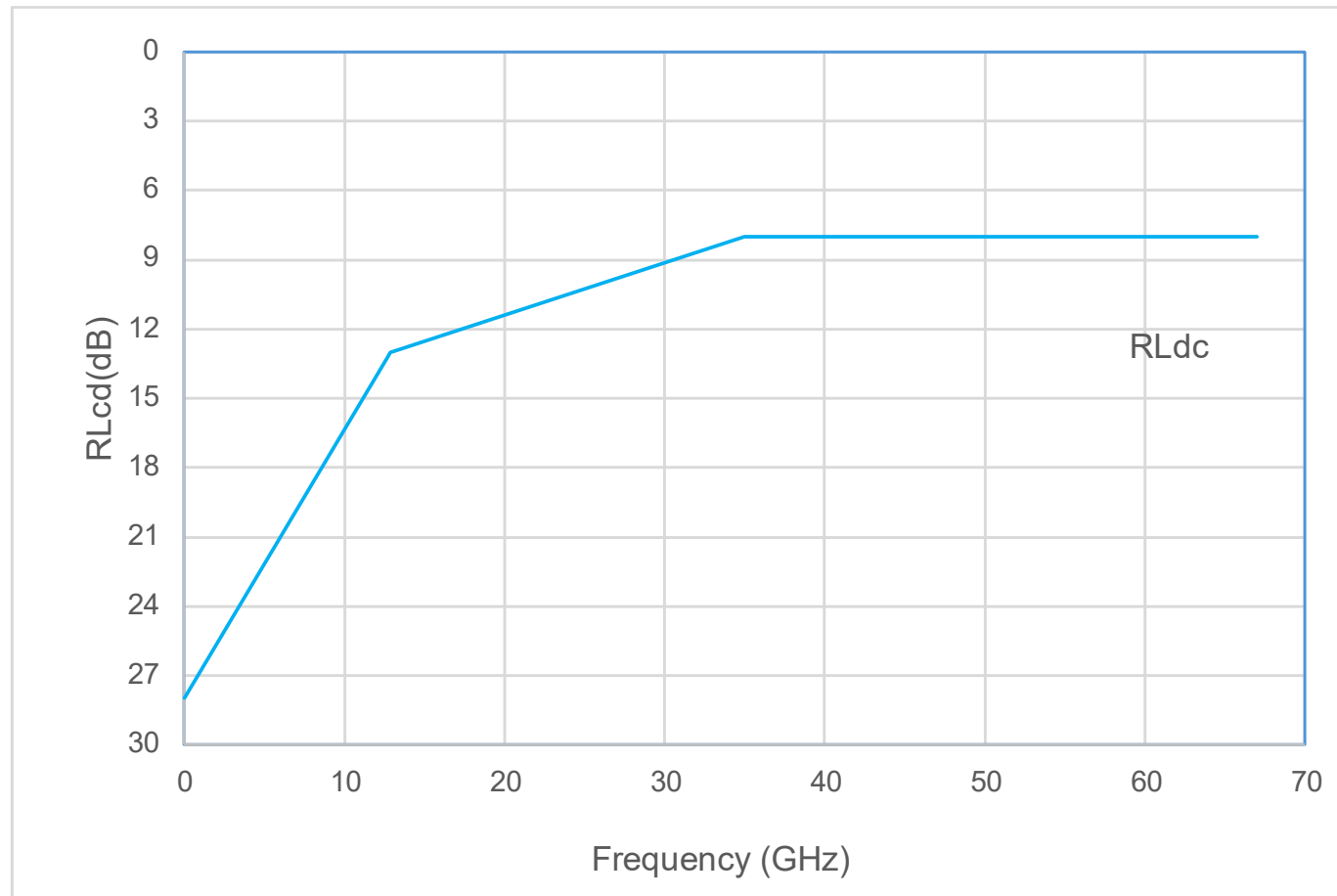
Comment 363 and 367

- ❑ Extend RLcc (clause 179) and RLcc (clause 178) range from 60 GHz to 67 GHz as shown below.



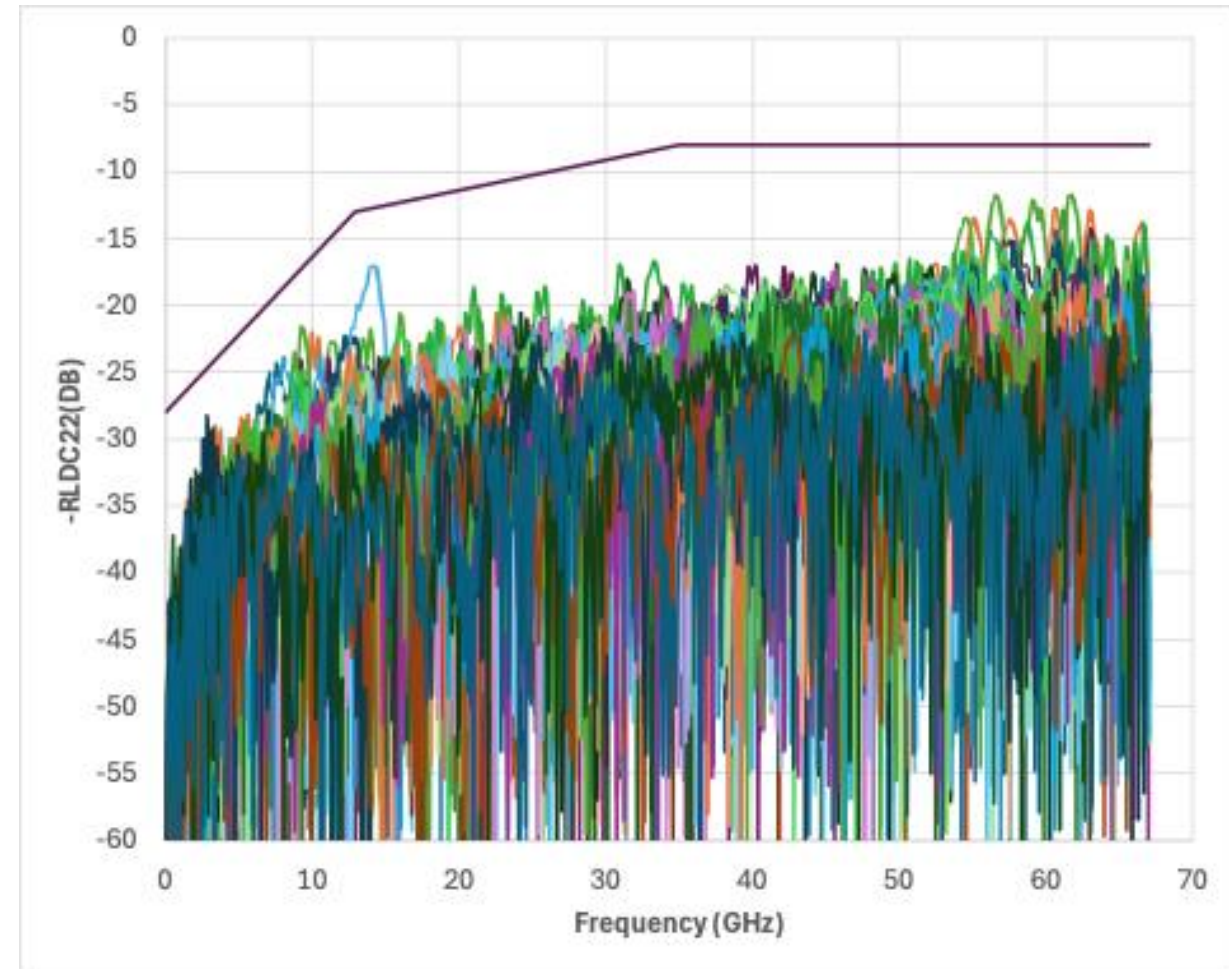
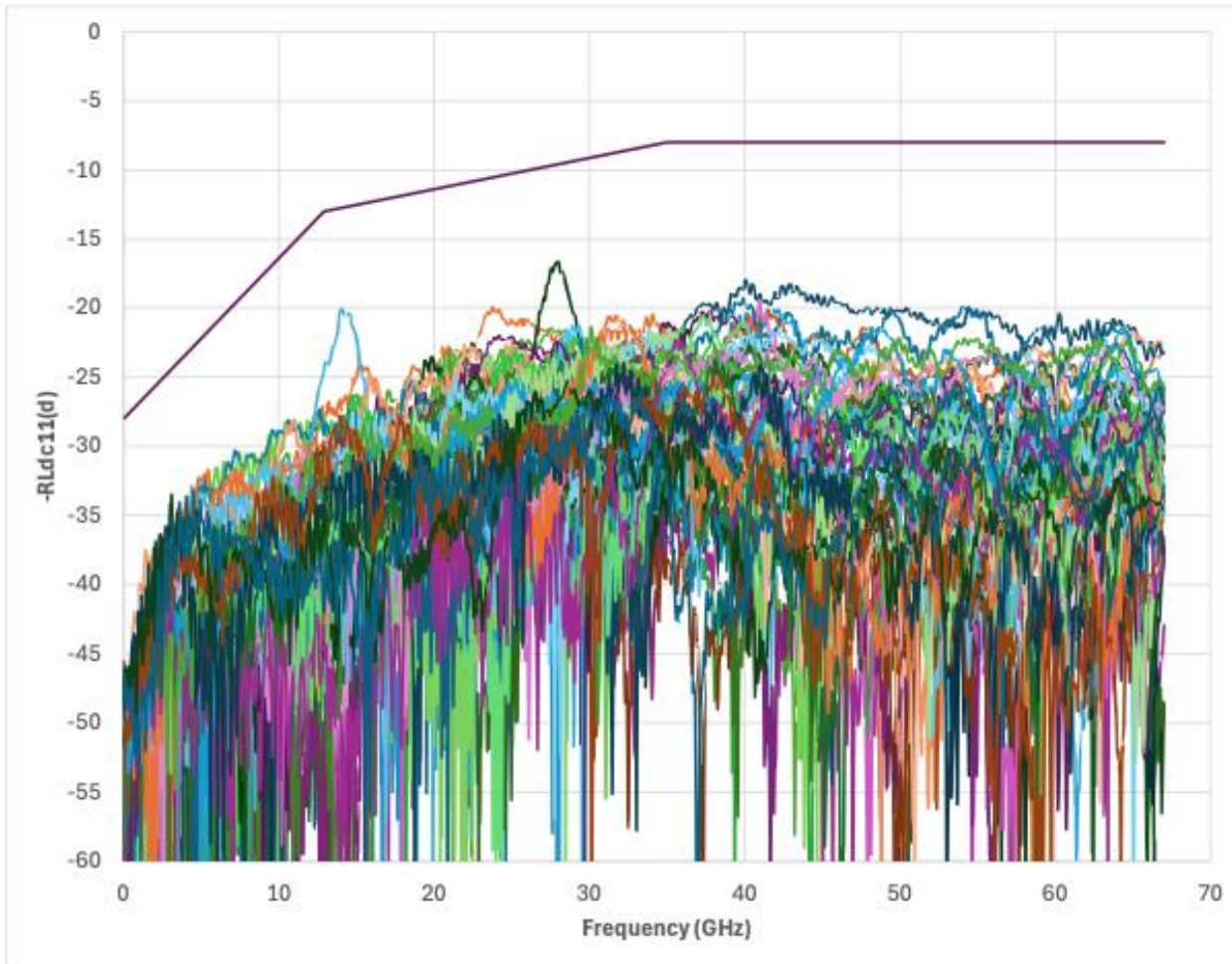
Comment 364

- Extend RLcd (clause 179) range from 60 GHz to 67 GHz as shown below.



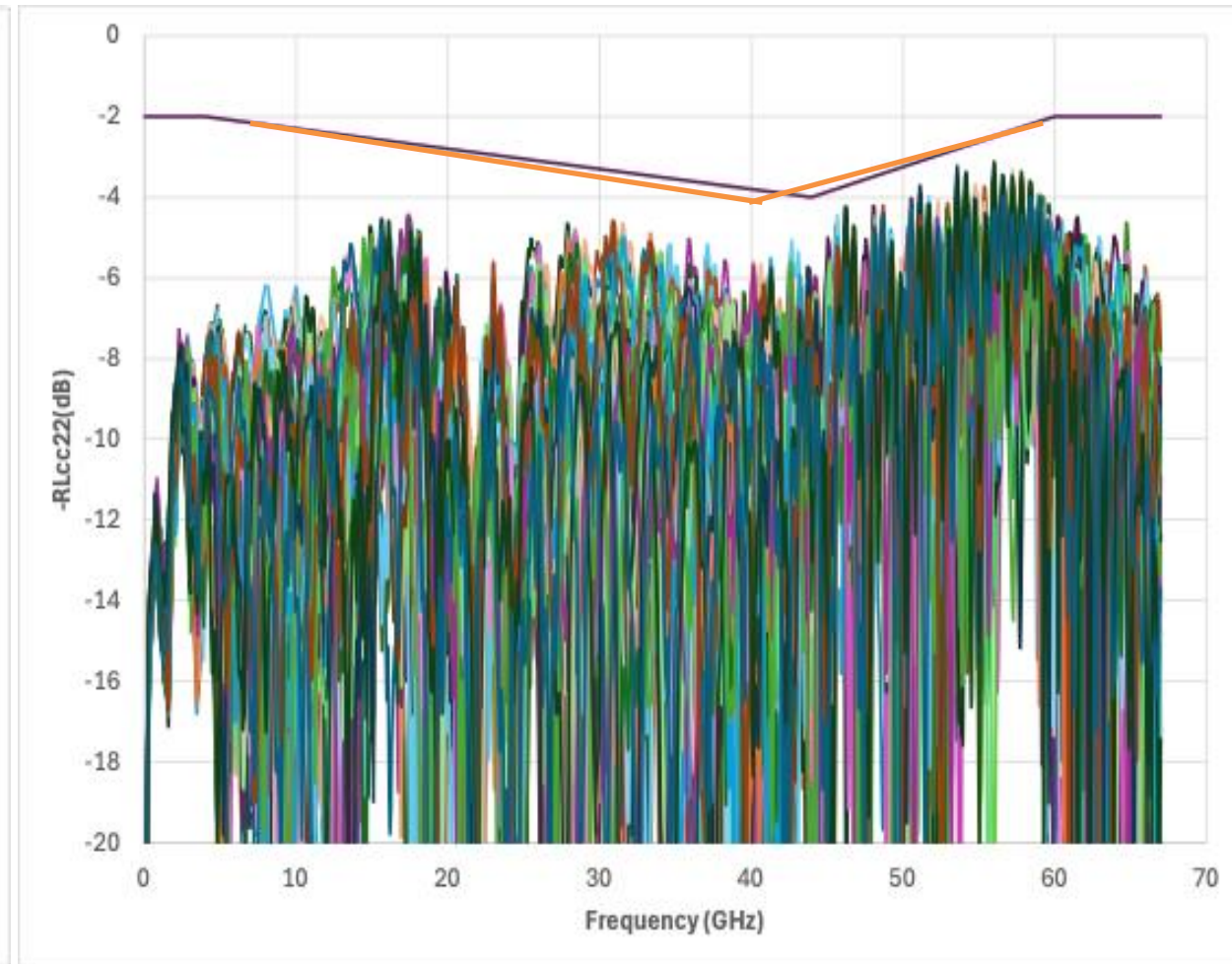
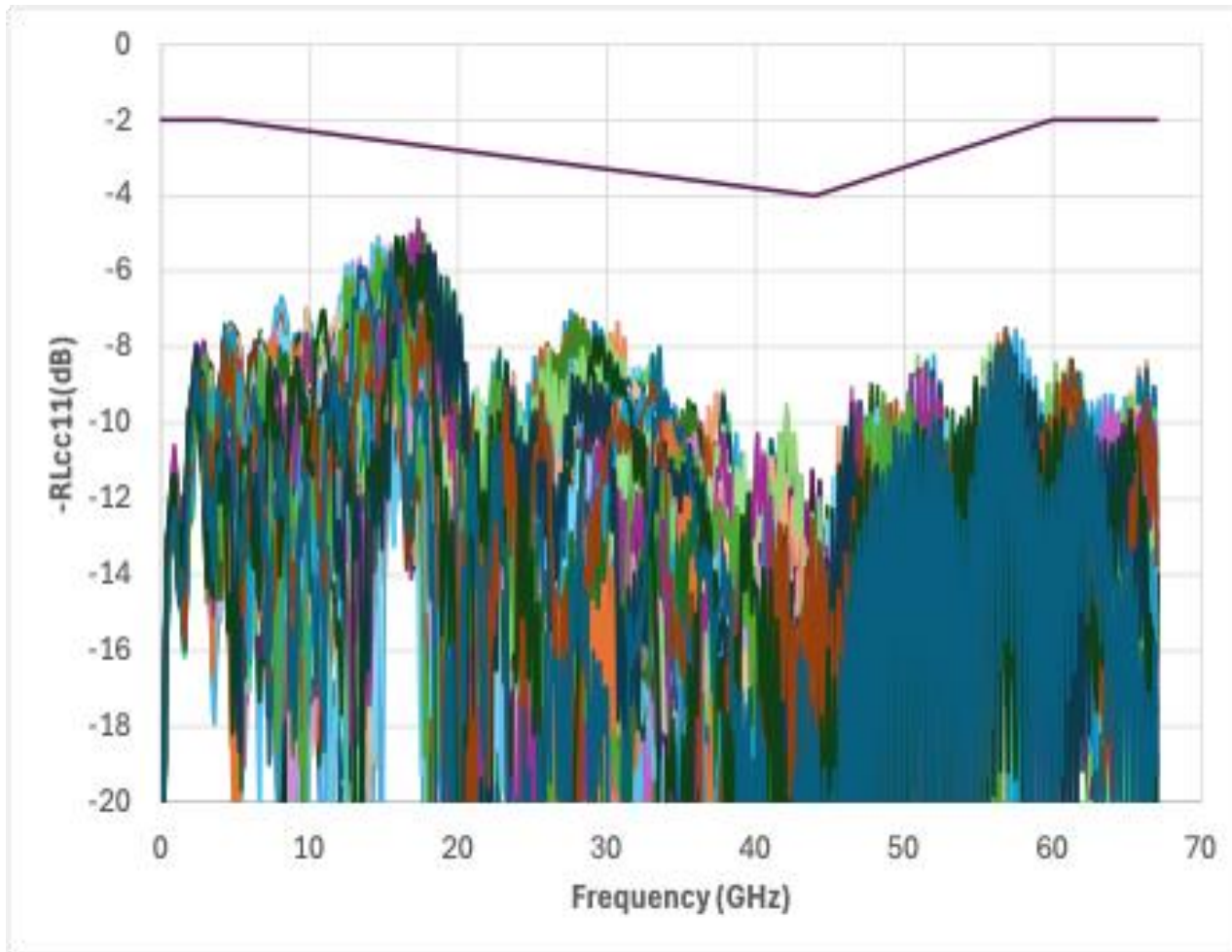
MTF RLdc11 and RLdc22

❑ Wilder MTF see https://www.ieee802.org/3/dj/public/tools/MTF/sekel_3dj_02_2503.zip



MTF RLcc11 and RLcc22

❑ Wilder MTF see https://www.ieee802.org/3/dj/public/tools/MTF/sekel_3dj_02_2503.zip



Thank You!