

P802.3dj Reference Die/Device Model Parameter Values - Status Update

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Intro

- Reference die/device model and parameters are important elements of COM and the IEEE 802.3 specification
- Some progress was made in July 2023 (see next slides)
- Contributions from Mike Li have proposed die/device parameter values
 - No notable updates since

Progress Made in July 2023

- Adopted model, not parameter values

Motion #1

Move to adopt the 200G/L Die/Device Model changes to Annex 93A (COM) proposed in lim_3dj_01a_2307 slides 6 and 7

M: Mike Li

S: Jim Weaver

Technical ($\geq 75\%$)

802.3 voters only

Result: passed by unanimous consent. 12:17 p.m.

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Motion #2

Move to adopt the COM Die/Device model parameter values in lim_3dj_01a_2307 slide 8 for 200G/Lane KR, CR, AUI C2C and AUI C2M

M: Mike Li

S: Upen Reddy Kareti

Technical ($\geq 75\%$)

802.3 voters only

Result: Y: 14, N: 11, A: 20

motion failed 12:27 p.m.

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https://www.ieee802.org/3/dj/public/23_0720/motions_3dfdj_230720.pdf

Reference - Model

- Adopted

Proposed 200G/L Reference Die/Device Model for Annex 93A/COM

C_d	[Cd Cd1 Cd2; Cd Cd1 Cd2]	nF	[TX ; RX]
L_s	[Ls Ls1 Ls2; Ls Ls1 Ls2]	nH	[TX ; RX]
C_b	[Cb;Cb]	nF	[TX ; RX]

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Proposed “Assembly of Transmitter and Receiver Device Package Models” Per Updated Figure 93A-2 for Annex 93A/COM

$S^{(d)}$ = device capacitance S-parameter
 $S^{(s)}$ = device series inductance S-parameter
 $S^{(d2)}$ = device capacitance 2 S-parameter
 $S^{(s2)}$ = device series inductance 2 S-parameter
 $S^{(dn)}$ = n^{th} device capacitance S-parameter
 $S^{(sn)}$ = n^{th} device series inductance S-parameter
 $S^{(b)}$ = bump capacitance S-parameter
 $S^{(l)}$ = package transmission line S-parameter
 $S^{(l2)}$ = package transmission line 2 S-parameter
 $S^{(p)}$ = package capacitance S-parameter

Note: PMD calls out which blocks are included in the package model

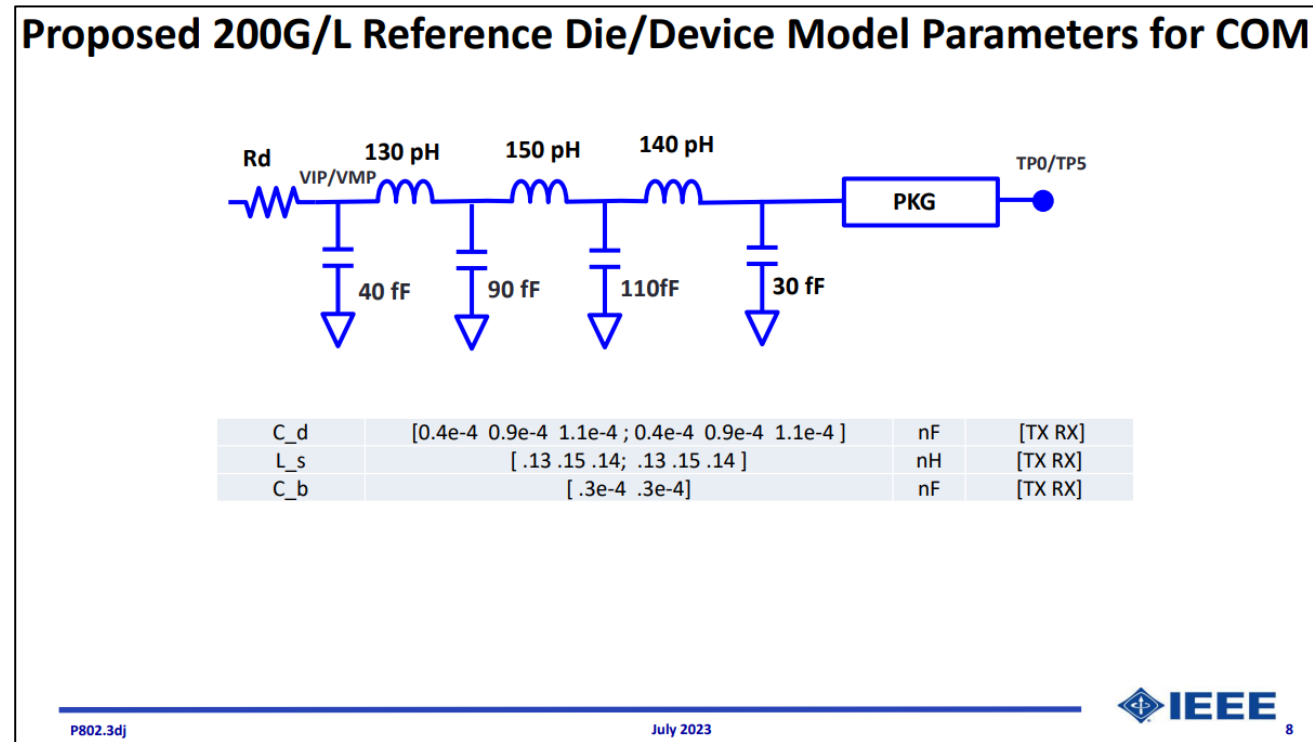
Updated Figure 93A-2-Reference package Models

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https://www.ieee802.org/3/dj/public/23_07/lim_3dj_01_2307.pdf

Reference – Parameter Values

- Not adopted



https://www.ieee802.org/3/dj/public/23_07/lim_3dj_01_2307.pdf

Summary

- Some progress was made in July 2023
- Contributions from Mike Li have proposed die/device parameter values
 - No notable updates since
- More homework and consensus building is needed to agree upon the parameter values
 - Desire to have direction by November and close by January 2024