P802.3ck C2M AUI Channel Grading Proposal

May 2019 Interim

Kent Lusted, Intel Corporation

Channel Information

Recommendation	ID	Channel Description	IL (dB)	ERL11 (dB)	ERL22 (dB)	ICN (mV)	FOM_ILD	RX Required for TP1a		RX Required for Modules		
								A, B	C, D	A, B	C	FFE12Post
Pass	1	mellitz_3ck_01_0518_C2M\9dB	8.95	16.35	12.82	2.28	0.10	Pass	Pass	Pass	Marginal	Pass
Fail	2	mellitz_3ck_01_0518_C2M\10dB	9.96	7.79	10.41	4.53	0.48	Fail	Fail	Fail	Fail	Fail
Pass	3	mellitz_3ck_01_0518_C2M\11dB	11.16	18.28	14.13	1.93	0.09	Pass	Pass	Pass	Marginal	Pass
Fail	4	mellitz_3ck_01_0518_C2M\12dB	12.18	8.39	11.29	3.99	0.46	Fail	Fail	Fail	Fail	Fail
Pass	5	mellitz_3ck_01_0518_C2M\13dB	13.12	20.09	14.85	1.68	0.09	Pass	Pass	Pass	Marginal	Pass
Fail	6	mellitz_3ck_01_0518_C2M\14dB	13.87	8.73	12.52	3.19	0.47	Fail	Fail	Fail	Fail	Fail
TBD	7	tracy_100GEL_02_0118\long_barrel_via\TX5	16.48	14.98	11.58	0.91	0.28	Pass	Fail	Pass	Fail	Marginal
TBD	8	tracy_100GEL_02_0118\long_barrel_via\TX6	16.08	14.35	12.61	0.90	0.37	Marginal	Fail	Fail	Fail	Fail
Pass	9	tracy_100GEL_06_0118\Microvia\RX6	14.59	15.71	12.50	0.83	0.21	Pass	Pass	Pass	Marginal	Pass
TBD	10	tracy_100GEL_06_0118\Microvia\RX5	14.57	16.20	13.45	0.93	0.23	Marginal	Fail	Pass	Marginal	Marginal
Pass	11	lim_3ck_01_0319_QDD_new_pad\ch1	14.40	15.83	20.69	0.78	0.20	Pass	Pass	Marginal	Fail	Fail
Pass	12	lim_3ck_01_0319_QDD_new_pad\ch2	14.60	14.51	20.20	0.82	0.19	Pass	Marginal	Marginal	Fail	Fail
Pass	13	lim_3ck_01_0319_QDD_legacy_pad\ch3	14.69	16.04	15.98	0.77	0.20	Pass	Marginal	Pass	Marginal	Pass
Pass	14	llim_3ck_01_0319_QDD_legacy_pad\ch4	14.84	14.77	15.72	0.86	0.18	Pass	Fail	Pass	Marginal	Pass
TBD	15	llim_3ck_01_0319_QDD_new_pad\ch5	14.77	14.70	20.57	1.42	0.16	Pass	Fail	Marginal	Fail	Fail
Pass	16	llim_3ck_01_0319_QDD_legacy_pad\ch6	15.02	15.01	15.90	1.55	0.17	Pass	Fail	Pass	Fail	Pass
Pass	17	ito_3ck_01\QSFP \bottom normal\	15.10	12.79	10.75	1.20	0.18	Pass	Pass	Pass	Marginal	Pass
TBD	18	ito_3ck_01\QSFP \bottom worst\	15.58	12.49	10.35	1.14	0.32	Marginal	Marginal	Marginal	Fail	Pass
Pass	19	ito_3ck_01\QSFP \top normal\	14.53	12.76	10.85	1.25	0.18	Pass	Pass	Pass	Pass	Pass
TBD	20	ito_3ck_01\QSFP \top worst\	14.49	12.43	10.37	1.21	0.31	Pass	Pass	Pass	Fail	Pass

- Parameters highlighted in red are worse than 10.5dB ERL, 2.5mV ICN, or 0.35dB ILD.
- ERL is reported with the settings for reference receiver with 15mm package and 4-tap DFE at TP1a. ERL11 is for channel only. ERL22 is at TP1a including TX package.
- Channel names in red are tough channels for most of the receivers.
- For receiver pass/fail results, 15mm and 30mm host package traces are considered. Marginal means fail but close to the thresholds (violate by less than 0.5 dB).

IEEE P802.3ck Task Force

5

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2