DOCUMENT CHANGE REQUEST

DCR number 1672	Changes required for: General	Originator: Steve Thacker
Date: 2024/07/23	Date sent: 2024/06/27	Organisation: ESCC Executive Secretariat
Status: IMPLEMENTED		

Title:	Integrated Circuits, Silicon Monolithic, Single Port Gigabit Ethernet Copper PHY with		
Number:	9405/020	Issue:	2

Other documents affected:

9512/006-4, 9512/007-2, 9521/003-2, 9521/004-1

Page:

Various; see below & attached for details

Paragraph:

Various; see below & attached for details

Original wording:

As per currently published specs; see above

Proposed wording:

Amend the following 5 ESCC Detail specifications with regard to the specified radiation requirements plus several other revisions requested by supporting Manufacturer Microchip, as follows:
See attached draft spec mark-ups for all change details:
.....
9405/020:
1) Para 1.4.2 Add new note 3 to detail the radiation test for letter F [=50krad(Si)] at a level up to 100krad(Si).

2) Para 1.7: figure is replaced

3) New Para 2.1.1.1(a): add a new deviation for internal visual inspection on internal wire separation requirements.

4) Para 2.1.1.2 (now 2.1.1.3): amend title to remove reference to ‘Lot Validation Testing’ (editorial correction)

5) Para. 2.4: remove various characteristics from the table.
i.e.:
Static Current Consumption: 3 tests: IDDIOS, IDDMACS, IDDMDIOS
Static Power
Clock Out: all tests

6) Delete Appendix A: deviation on radiation testing

.....
9512/006:
1) Title page: delete "Radiation Hardened" from title. (editorial correction)

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2) Para 1.4.1 amend component number details (for consistency)

3) Para 1.4.2 amend note 3 to clarify the rad test details for both available rad dose levels (rad letters D & R)

4) Para 1.7: figure is replaced

.....
9512/007:
1) Title page: delete "Radiation Hardened" from title. (editorial correction)

2) Para 1.4.2 Add new note 3 to detail the radiation test details for letter E [=20krad(Si)] at a level up to 30krad(Si).

3) Para 1.7: figure is replaced

4) Appendix A: deviation on radiation testing is deleted.

5) Appendix A: New deviation on Chart F4A Seal test after Operating Life is added.

.....
9521/003:
1) Para 1.4.2 amend note 3 to detail the radiation test for letter E [=20krad(Si)] at a level up to 30krad(Si).

2) Delete Appendix A: deviation on radiation testing

.....
9521/004:
1) Para 1.4.2 amend note 3 to detail the radiation test for letter E [=20krad(Si)] at a level up to 30krad(Si).

2) Delete Appendix A: deviation on radiation testing

Justification:

Note: This DCR is raised on behalf of Manufacturer Microchip.

.....
Microchip provided the following specific details:

All specs:
Para 1.4.2 & Microchip Appendix radiation requirements: to clarify the actual maximum total dose test level applied to validate the specified Total Dose Radiation Level Letter (the ESCC radiation hardness assurance Level) (Note: this change is related to the current x1.5 over-test requirement of ESCC22900 issue 5)

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9405/020 item 3): Requirement cannot be met at 100% due to the die pad small pitch, so Microchip cannot commit on this.

.....
9405/020 item 5): This is a correction. Drift on buffer parameters is out of our rules. Drift on timings/frequencies is out of our rules.

.....
9512/007 item 5): This product has been qualified in compliance with Microchip's internal '-SV' quality grade. By default, the '-SV' level does not include seal test after life test.
Initially, we did not plan to submit this product to a QPL approval, so we did not add seal test after life test.
This is a product deviation, not valid for all Microchip products.

Attachments:

escc9512007iss_2_draft_a_in_review.docx, escc9405020iss_2_draft_a_in_review.docx, escc9521004iss2_draft_a_in_review.docx, escc9512006iss_4_draft_a_in_review.docx, escc9521003iss2_draft_a_in_review.docx

Modifications:

N/A

Approval signature:

Date signed:

2024-07-23