




# PRODUCT CHANGE NOTIFICATION

PCN-000523.r1

Date: 5APR2020

P1/1

| <input checked="" type="checkbox"/> Semtech Corporation, 200 Flynn Road, Camarillo CA 93012   |   |
|---|---|
| <input type="checkbox"/> Semtech Canada Corporation, 4281 Harvester Road, Burlington, Ontario L7L 5M4 Canada  |   |
| <input type="checkbox"/> Semtech Irvine, 5141 California Ave., Suite 100, Irvine CA 92617   |   |
| <input type="checkbox"/> Semtech Neuchatel Sarl, Route des Gouttes d'Or 40, CH-2000 Neuchatel Switzerland   |   |
| <input type="checkbox"/> Semtech Bristol - EMEA Limited, Block B, St James Court, Great Park Road, Bristol BS32 4QJ, UK   |   |
| <input type="checkbox"/> Semtech Corpus Christi SA de CV, Carretera Matamorros Edificio 7, Reynosa, Tamaulipas, Mexico 88780  |   |
| <input type="checkbox"/> Semtech Plano, 1101 Resource Drive, Suite 121, Plano TX 75074  |   |
| Change Details  |   |
| <b>Part Number(s) Affected:</b><br>RClamp0521ZATFT  | <b>Customer Part Number(s) Affected:</b> <input checked="" type="checkbox"/> N/A  |
| <b>Description, Purpose and Effect of Change:</b><br>For the benefit of our customers, Semtech has qualified additional manufacturing capacity for Protection Products. An additional wafer fabrication plant and assembly plant has been brought on line that duplicates our manufacturing processes for this product. <ul style="list-style-type: none"> <li>a. Additional wafer fabrication is MagnaChip, 8" Fab, Cheongju South Korea</li> <li>b. Additional Assembly/Test capacity is Huatian [Kunshan], China</li> </ul> For reference the current POR: Wafer Fab = ASMC China /Assembly = SCI, USA/Test=DSH, China |   |
| <b>Change Classification</b>  | <input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor  |
| <b>Impact to Form, Fit, Function</b>  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
| <b>Impact to Data Sheet</b>   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
| <b>New Revision or Date</b>   | <input checked="" type="checkbox"/> N/A   |
| <b>Impact to Performance, Characteristics or Reliability:</b> <ul style="list-style-type: none"> <li>• NO impact to data sheet content or package dimensions</li> <li>• NO impact to performance, characteristics; or reliability</li> <li>• NO change to material content.</li> </ul>  |   |
| <b>Implementation Date</b>  | 5JUL2020  |
| <b>Work Week</b>  | To Be Advised   |
| <b>Last Time Ship (LTS)<br/>Of unchanged product</b>  | N/A   |
| <b>Affecting Lot No. / Serial No. (SN)</b>  | N/A   |
| <b>Sample Availability</b>  | Immediate   |
| <b>Qualification Report Availability</b>  | Attached as supporting doc.   |
| <b>Supporting Documents for Change Validation/Attachments:</b> <ul style="list-style-type: none"> <li>• Product Qualification Report</li> </ul>   |   |
| Issuing Authority   |   |
| <b>Semtech Business Unit:</b>   | Protection  |
| <b>Semtech Contact Info:</b>  | Les Fang Yuen<br>Semtech Corporation<br>Sr. Engineering Manager, QA<br>200 Flynn Road<br>Camarillo, CA 93012<br>lfangyuen@semtech.com<br>Office: (949) 269-4443 |
|    |   |
| <b>FOR FURTHER INFORMATION &amp; WORLDWIDE SALES COVERAGE:</b> <a href="http://www.semtech.com/contact/index.html#support">http://www.semtech.com/contact/index.html#support</a>  |   |

**RCLAMP0521ZA PROCESS QUALIFICATION**

|                            |  |
|----------------------------|--|
| <b>Semtech Job#</b>        | 6591   |
| <b>Accepted Date</b>       | 02-21-2018   |
| <b>Part Number</b>         | RClamp0521ZA   |
| <b>Job Type</b>            | New Product on un-qualified process with qualified package |
| <b>Business Unit</b>       | Protection   |
| <b>Package Type</b>        | SLP0603P2X3F   |
| <b>Package Lead</b>        | 2  |
| <b>Assembly Designator</b> | HTKS   |
| <b>Master Process</b>      | PAM_M  |
| <b>Fab Designator</b>      | MagnaChip  |
| <b>Rel Job Status</b>      | Rel Testing Complete Passes All Requirements               |

## Completed Tasks

| Sub Lot # | Part                      | Lot         | Assembly Lot         | Date Code |                |
|-----------|---------------------------|-------------|----------------------|-----------|----------------|
| 1         | RCLAMP0521ZA              | AER4646     | AER4646              | 1806      |                |
| Task#     | Task Code                 | Sample Size | Criteria             | Failures  | Task On Actual |
| 1         | Data-Prep                 | None        | None                 | 0         | 02-23-2018     |
| 2         | HTRB_Pre_Elect_150°C_RT24 | 210         | Pass on Zero Fails   | 0         | 02-28-2018     |
| 3         | HTRB_150°C_Real Time_0024 | 210         | Pass on Zero Fails   | 0         | 02-28-2018     |
| 4         | HTRB_Pre_Elect            | 105         | Pass on Zero Fails   | 0         | 02-23-2018     |
| 5         | BI_BD_Valid               | NA          | Meet HTOL Schematics | 0         | 02-23-2018     |
| 6         | HTRB_150°C_0072           | 105         | Pass on Zero Fails   | 0         | 02-23-2018     |
| 7         | HTRB_150°C_0408           | 105         | Pass on Zero Fails   | 0         | 02-26-2018     |
| 8         | HTS_Pre_Elect             | 77          | Pass on Zero Fails   | 0         | 02-23-2018     |
| 9         | HTS_0168                  | 77          | Pass on Zero Fails   | 0         | 02-23-2018     |
| 10        | HTS_0500                  | 77          | Pass on Zero Fails   | 0         | 03-02-2018     |
| 11        | HTS_1000                  | 77          | Pass on Zero Fails   | 0         | 03-16-2018     |
| 12        | 85°C/85%RH_N/Pre_Pre Elec | 20          | Pass with 0 fail     | 0         | 02-28-2018     |
| 13        | 85°C/85%RH_BD_Valid       | 20          | Pass on Zero Fails   | 0         | 02-28-2018     |
| 14        | 85/85_120hr_On/Off        | 20          | Pass on Zero Fails   | 0         | 02-28-2018     |
| 15        | Pre_Elect_Precond         | 154         | Pass on Zero Fails   | 0         | 02-27-2018     |
| 16        | Precond_Temp_Cyc_5cyc     | 154         | Pass on Zero Fails   | 0         | 02-27-2018     |
| 17        | Precond_HTS_24hr          | 154         | Pass on Zero Fails   | 0         | 02-27-2018     |
| 18        | Precond_85/85_NoElec168hr | 154         | Pass on Zero Fails   | 0         | 02-28-2018     |
| 19        | Precond_IR_Refl_Char      | 154         | Pass on Zero Fails   | 0         | 03-07-2018     |
| 20        | T/C_Pre_Elect             | 77          | Pass on Zero Fails   | 0         | 03-07-2018     |
| 21        | T/C_wPre_0250             | 77          | Pass on Zero Fails   | 0         | 03-07-2018     |
| 22        | T/C_wPre_0500             | 77          | Pass on Zero Fails   | 0         | 03-13-2018     |

| Task# | Task Code                 | Sample Size                       | Criteria  | Failures | Task On Actual |
|-------|---------------------------|-----------------------------------|---|----------|----------------|
| 23    | T/C_wPre_1000             | 77                                | Pass on Zero Fails                                  | 0        | 03-19-2018     |
| 24    | 85°C/85%RH_W/Pre_Pre Elec | 77                                | Pass on Zero Fails                                  | 0        | 03-07-2018     |
| 25    | 85°C/85%RH_BD_Valid       | 77                                | Pass on Zero Fails                                  | 0        | 03-08-2018     |
| 26    | 85°C/85%RH_Biased_168hrs  | 77                                | Pass on Zero Fails                                  | 0        | 03-08-2018     |
| 27    | 85°C/85%RH_Biased_500hrs  | 77                                | Pass on Zero Fails                                  | 0        | 03-16-2018     |
| 28    | 85°C/85%RH_Biased_1000hrs | 77                                | Pass on Zero Fails                                  | 0        | 03-29-2018     |
| 29    | Rider_Card_Wash/Bake      | 154                               | Pass on Zero Fails                                  | 0        | 02-23-2018     |
| 30    | Construct_Fab             | Minimum: 1 wafer from a qual lot. | Pass on no major Findings. Q&RA to review findings. | 0        | 02-26-2019     |
| 31    | Pack_Clos                 | 0                                 | 0   | 0        | 08-27-2018     |

| Sub Lot # | Part         | Lot              | Assembly Lot     | Date Code |
|-----------|--------------|------------------|------------------|-----------|
| 2         | RCLAMP0521ZA | AER4846 Wafer 01 | AER4846 Wafer 01 | 1808      |

| Task# | Task Code                 | Sample Size | Criteria             | Failures | Task On Actual |
|-------|---------------------------|-------------|----------------------|----------|----------------|
| 1     | Data-Prep                 | None        | None                 | 0        | 02-28-2019     |
| 2     | HTRB_Pre_Elect_150°C_RT24 | 210         | Pass on Zero Fails   | 0        | 03-20-2018     |
| 3     | HTRB_150°C_Real Time_0024 | 210         | Pass on Zero Fails   | 0        | 03-21-2018     |
| 4     | HTRB_Pre_Elect            | 105         | Pass on Zero Fails   | 0        | 02-28-2018     |
| 5     | BI_BD_Valid               | NA          | Meet HTOL Schematics | 0        | 02-28-2018     |
| 6     | HTRB_150°C_0072           | 105         | Pass on Zero Fails   | 0        | 03-02-2018     |
| 7     | HTRB_150°C_0408           | 105         | Pass on Zero Fails   | 0        | 03-05-2018     |
| 8     | HTS_Pre_Elect             | 77          | Pass on Zero Fails   | 0        | 02-28-2018     |
| 9     | HTS_0168                  | 77          | Pass on Zero Fails   | 0        | 02-28-2018     |
| 10    | HTS_0500                  | 77          | Pass on Zero Fails   | 0        | 03-12-2018     |
| 11    | HTS_1000                  | 77          | Pass on Zero Fails   | 0        | 03-21-2018     |
| 12    | 85°C/85%RH_N/Pre_Pre Elec | 20          | Pass with 0 fail     | 0        | 03-06-2018     |

| Task# | Task Code                 | Sample Size | Criteria           | Failures | Task On Actual |
|-------|---------------------------|-------------|--------------------|----------|----------------|
| 13    | 85°C/85%RH_BD_Valid       | 20          | Pass on Zero Fails | 0        | 03-06-2018     |
| 14    | 85/85_120hr_On/Off        | 20          | Pass on Zero Fails | 0        | 03-06-2018     |
| 15    | Pre_Elect_Precond         | 154         | Pass on Zero Fails | 0        | 03-01-2018     |
| 16    | Precond_Temp_Cyc_5cyc     | 154         | Pass on Zero Fails | 0        | 03-01-2018     |
| 17    | Precond HTS_24hr          | 154         | Pass on Zero Fails | 0        | 03-01-2018     |
| 18    | Precond_85/85_NoElec168hr | 154         | Pass on Zero Fails | 0        | 03-02-2018     |
| 19    | Precond_IR_Refl_Char      | 154         | Pass on Zero Fails | 0        | 03-09-2018     |
| 20    | T/C_Pre_Elect             | 77          | Pass on Zero Fails | 0        | 03-09-2018     |
| 21    | T/C_wPre_0250             | 77          | Pass on Zero Fails | 0        | 03-09-2018     |
| 22    | T/C_wPre_0500             | 77          | Pass on Zero Fails | 0        | 03-16-2018     |
| 23    | T/C_wPre_1000             | 77          | Pass on Zero Fails | 0        | 03-20-2018     |
| 24    | 85°C/85%RH_W/Pre_Pre Elec | 77          | Pass on Zero Fails | 0        | 03-09-2018     |
| 25    | 85°C/85%RH_BD_Valid       | 77          | Pass on Zero Fails | 0        | 03-12-2018     |
| 26    | 85°C/85%RH_Biased_168hrs  | 77          | Pass on Zero Fails | 0        | 03-12-2018     |
| 27    | 85°C/85%RH_Biased_500hrs  | 77          | Pass on Zero Fails | 0        | 03-19-2018     |
| 28    | 85°C/85%RH_Biased_1000hrs | 77          | Pass on Zero Fails | 0        | 04-03-2018     |
| 29    | Rider_Card_Wash/Bake      | 154         | Pass on Zero Fails | 0        | 02-28-2018     |
| 30    | Pack_Clos                 | 0           | 0                  | 0        | 04-23-2019     |

| Sub Lot # | Part         | Lot                      | Assembly Lot             | Date Code |
|-----------|--------------|--------------------------|--------------------------|-----------|
| 3         | RCLAMP0521ZA | AER4846 Wafer 01 SHD1326 | AER4846 Wafer 01 SHD1326 | 1808      |

| Task# | Task Code                 | Sample Size | Criteria             | Failures | Task On Actual |
|-------|---------------------------|-------------|----------------------|----------|----------------|
| 1     | Data-Prep                 | None        | None                 | 0        | 02-28-2019     |
| 2     | HTRB_Pre_Elect_150°C_RT24 | 210         | Pass on Zero Fails   | 0        | 03-20-2018     |
| 3     | HTRB_150°C_Real Time_0024 | 210         | Pass on Zero Fails   | 0        | 03-21-2018     |
| 4     | HTRB_Pre_Elect            | 105         | Pass on Zero Fails   | 0        | 02-28-2018     |
| 5     | BI_BD_Valid               | NA          | Meet HTOL Schematics | 0        | 02-28-2018     |

| Task# | Task Code                 | Sample Size | Criteria           | Failures | Task On Actual |
|-------|---------------------------|-------------|--------------------|----------|----------------|
| 6     | HTRB_150°C_0072           | 105         | Pass on Zero Fails | 0        | 03-02-2018     |
| 7     | HTRB_150°C_0408           | 105         | Pass on Zero Fails | 0        | 03-05-2018     |
| 8     | HTS_Pre_Elect             | 77          | Pass on Zero Fails | 0        | 02-28-2018     |
| 9     | HTS_0168                  | 77          | Pass on Zero Fails | 0        | 02-28-2018     |
| 10    | HTS_0500                  | 77          | Pass on Zero Fails | 0        | 03-12-2018     |
| 11    | HTS_1000                  | 77          | Pass on Zero Fails | 0        | 03-21-2018     |
| 12    | 85°C/85%RH_N/Pre_Pre Elec | 20          | Pass with 0 fail   | 0        | 03-06-2018     |
| 13    | 85°C/85%RH_BD_Valid       | 20          | Pass on Zero Fails | 0        | 03-06-2018     |
| 14    | 85/85_120hr_On/Off        | 20          | Pass on Zero Fails | 0        | 03-06-2018     |
| 15    | Pre_Elect_Precond         | 154         | Pass on Zero Fails | 0        | 03-01-2018     |
| 16    | Precond_Temp_Cyc_5cyc     | 154         | Pass on Zero Fails | 0        | 03-01-2018     |
| 17    | Precond_HTS_24hr          | 154         | Pass on Zero Fails | 0        | 03-01-2018     |
| 18    | Precond_85/85_NoElec168hr | 154         | Pass on Zero Fails | 0        | 03-02-2018     |
| 19    | Precond_IR_Refl_Char      | 154         | Pass on Zero Fails | 0        | 03-09-2018     |
| 20    | T/C_Pre_Elect             | 77          | Pass on Zero Fails | 0        | 03-09-2018     |
| 21    | T/C_wPre_0250             | 77          | Pass on Zero Fails | 0        | 03-09-2018     |
| 22    | T/C_wPre_0500             | 77          | Pass on Zero Fails | 0        | 03-16-2018     |
| 23    | T/C_wPre_1000             | 77          | Pass on Zero Fails | 0        | 03-22-2018     |
| 24    | 85°C/85%RH_W/Pre_Pre Elec | 77          | Pass on Zero Fails | 0        | 03-09-2018     |
| 25    | 85°C/85%RH_BD_Valid       | 77          | Pass on Zero Fails | 0        | 03-12-2018     |
| 26    | 85°C/85%RH_Biased_168hrs  | 77          | Pass on Zero Fails | 0        | 03-12-2018     |
| 27    | 85°C/85%RH_Biased_500hrs  | 77          | Pass on Zero Fails | 0        | 03-19-2018     |
| 28    | 85°C/85%RH_Biased_1000hrs | 77          | Pass on Zero Fails | 0        | 04-03-2018     |
| 29    | Rider_Card_Wash/Bake      | 154         | Pass on Zero Fails | 0        | 02-28-2018     |
| 30    | Pack_Clos                 | 0           | 0                  | 0        | 04-23-2019     |