



## PRODUCT DISCONTINUANCE NOTIFICATION

EOL-000268

Date: 14<sup>th</sup> Feb 2020

P1/3

|  |
|--|
| <input type="checkbox"/> Semtech Corporation, 200 Flynn Road, Camarillo CA 93012   |
| <input checked="" 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                                       |
| <input type="checkbox"/>   |

### Product Discontinuance Details

#### Purpose, Description and Effect of Change:

This notification is to inform your company that Semtech is discontinuing the manufacture of the product listed below. In accordance with Semtech's product discontinuation policy, we are hereby giving notice of these product changes in order for your company to make any final lifetime purchases of the discontinued product that are still in supply.

**GN7055-CHIP is superseded by GN7055B-CHIP.**

|   |  |
|---|--|
| <b>Part Number(s) Affected:</b><br>GN7055-CHIP, GN7055AP-CHIP | <b>Customer Part Number(s) Affected:</b> <input checked="" type="checkbox"/> N/A |
|---|--|

|  |  |
|--|--|
| <b>Replacement or Alternate Part Number(s)</b> | GN7055B-CHIP <input type="checkbox"/> N/A or Not Offered |
|--|--|

|   |                              |   |   |
|---|------------------------------|---|---|
| <b>Last Time Buy (LTB) Date</b>         | 14 <sup>th</sup> March 2020  | <b>Must Accept Final Delivery by</b>                  | 14 <sup>th</sup> April 2020                   |
| <b>Sample Availability of Alt. Part</b> | Yes <input type="checkbox"/> | <b>Qualification Report Availability of Alt. Part</b> | PRODDOC018898<br><input type="checkbox"/> N/A |

|   |
|---|
| <b>Supporting Documents for Alternate or Replacement parts/Attachments:</b> |
| <ul style="list-style-type: none"> <li>N/A</li> </ul>                       |

### Last Time Buy Conditions

We request you carefully review this information and notify your purchasing offices and buyers to place your company's final purchases for available discontinued products as soon as possible according to the following last time buy terms and conditions.

1. **Availability:** The *Last Time Buy Date* and *Date to Accept Final Delivery* are noted above. All orders must have a *requested ship date before the Date to Accept Final Delivery* or the order will be rejected. *The Last Time Buy Date automatically expires when the final available inventory quantity has been scheduled and sold.*



## PRODUCT DISCONTINUANCE NOTIFICATION

EOL-000268

Date: 14<sup>th</sup> Feb 2020

P2/3

2. **Pricing:** The product unit price will be subject to Semtech's individual price quotation of your company's last time buy requirements.
  
3. **Order Acceptance/Change Conditions:**
  - A. Semtech will accept last time orders from your company for the discontinued products as "Firm and Final". As such, these orders will not be subject to any reschedule, cancellation, or termination by your company without Semtech's prior written authorization and payment of full termination charges.
  - B. Semtech reserves its right to make changes in the scheduled delivery dates, or to terminate remaining undelivered quantities of your company's last time buy order, due to changes in Semtech's last time manufacturing capabilities, or for commercially impracticable circumstances which makes delivery not feasible.
  
4. **Quantities:** The following applies to final buy quantities for the available discontinued product:
  - A. **First:** The quantities in any existing unfilled orders and contracts acknowledged by Semtech will be honored, then
  - B. **Next:** The unfilled quantities in any volume agreement(s) or quantities in unexpired standalone quote(s) will be accepted, and
  - C. **Finally:** Any additional reasonable quantity of product that Semtech quotes based upon your company's identified requirements will be taken.

IN THE EVENT OF CONFLICT FOR THE LIMITED AVAILABILITY PRODUCT, QUANTITIES FOR CUSTOMER'S OR DISTRIBUTOR'S ORDERS WILL BE DETERMINED ON A FIRST-COME FIRST-SERVE BASIS; AND WILL BE SUBJECT TO SEMTECH'S AVAILABLE INVENTORY AND REMAINING MANUFACTURING CAPACITY FOR THE PRODUCT.

### Limited Warranty



## PRODUCT DISCONTINUANCE NOTIFICATION

EOL-000268

Date: 14<sup>th</sup> Feb 2020

P3/3

All discontinued product orders subject to this notice shall carry Semtech's standard limited warranty; or, if applicable, the warranty set forth in a duly executed formal contract between Semtech and your company will apply; except that:

1. Semtech will accept all valid warranty claims for credit only, unless a replacement order is otherwise agreed upon by Semtech and the replacement parts can be manufactured or delivered from remaining inventory.
2. The applicable warranty period for making any return claims for discontinued products will be no later than ninety (90) days following delivery of the discontinued products.
3. Any return claims must be made under Semtech's current Return Material Authorization "RMA" procedures.

### Additional Provisions

SEMTECH ACCEPTS NO LIABILITY FOR EXCESS REPROCUREMENT COSTS OR FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHATSOEVER ASSOCIATED WITH THIS NOTICE, WITH ITS PRODUCTS, OR WITH THE FINAL MANUFACTURE AND PERFORMANCE AGAINST ANY LAST TIME BUY ORDERS RELATED TO THE DISCONTINUED PRODUCTS COVERED BY THIS NOTICE.

We regret the inconvenience and impact this notice may cause your company. Semtech's sales, marketing, and distribution personnel stand ready to assist you in placing your company's final orders, or in providing the product information you require.

For product inquiries or purchase order information, please contact your local Semtech sales representative.

### Issuing Authority

Semtech Business Unit: Signal Integrity Products

Semtech Contact Info:

Dusanka Hewlett  
QMS Engineer, Quality Assurance  
Semtech Canada Corporation  
289-856-9272  
dhewlett@semtech.com

FOR FURTHER INFORMATION & WORLDWIDE SALES COVERAGE: <http://www.semtech.com/contact/index.html#support>



# GN7055B Reliability Qualification Report

## Revision History

| Version | ECO        | Date     | Modifications |
|---------|------------|----------|---------------|
| 0       | ECO-045605 | Feb 2019 | New release   |

## Contents

|     |   |   |
|-----|---|---|
| 1   | Device Specifics.....                           | 3 |
| 1.1 | Product Information.....                        | 3 |
| 1.2 | Qualification Approach.....                     | 3 |
| 2   | Reliability Qualification Stresses.....         | 4 |
| 2.1 | Environmental Tests.....                        | 4 |
| 2.2 | Electrostatic Discharge and Latch Up Tests..... | 5 |
| 3   | Conclusion.....                                 | 6 |

# 1 Device Specifics

## 1.1 Product Information

Table 1.:

|                               |   |
|-------------------------------|---|
| <b>Product Name</b>           | <b>GN7055B</b>                            |
| <b>Silicon Fab Technology</b> | <b>Jazz SBH18H3DZ,</b>                    |
| <b>Dies Size</b>              | <b>1.mm x 0.91mum (250um thick wafer)</b> |
| <b>Die Paddle Size</b>        | <b>114 x 114 mil</b>                      |
| <b>Qualification Plan</b>     | <b>PRODDOC016408</b>                      |
| <b>Standard</b>               | <b>JESD47I</b>                            |
| <b>Lot #</b>                  | <b>M33439:w#06</b>                        |
| <b>Date Code</b>              | <b>1741</b>                               |

The GN7055B is a burst mode Trans impedance amplifier (TIA) designed specifically to meet the sensitivity and response time requirements of both 10G EPON and XGSPON/XG-PON1 OLT applications. The GN7055 is a multi-rate device, supporting 1.25 GB/s, 2.5 GB/s and 10.3125 GB/s data rates. Using an external RESET signal to indicate the start of burst, the GN7055 settles within 25ns of the falling edge to meet convergence time and burst dynamic range requirements of XGSPON and XG-PON1.

## 1.2 Qualification Approach

GN7055B is bare die product. It is fabricated using a qualified Semtech process which is Jazz SBH18H3 family. This process is well-qualified on multiple lots (> 20 lots). The FIT report for this process can be found in PRODDOC009372. Because GN7055B is a bare die, it will be qualified according to the JEDEC-47I using device level stresses. Namely, HTOL, ESD, LU, and HTS. In order to gain more confidence in the product, some package level stresses will be conducted such as HAST and TC.

The HTOL was run on GN7055A0. GN7055B shares the same design with GN7055A0. All the minor design changes were checked against reliability risks such as electromigration, TDDDB, and HCI and the assessment was that the GN7055A0 HTOL can be bridged to GN7055B

## 2 Reliability Qualification Stresses

### 2.1 Environmental Tests

Table 2.: Environmental Tests

| Stress                          | Conditions   | Duration                        | Vehicle  | Sample Size | Results |
|---------------------------------|--|---------------------------------|----------|-------------|---------|
| High Temperature Operating Life | JESD22-A108<br>$T_j \geq 125\text{ }^\circ\text{C}$ ,<br>$V1 = 3.47\text{V}$ , $V3 = 1.68\text{V}$ | 1000hrs,<br>$T_j > 125\text{C}$ | GN7055A0 | 77          | Pass    |
| HAST                            | JESD22-A110  | 96 Hrs<br>130C, 85% RH          | GN7055A0 | 25          | Pass    |
| TC                              | JESD22-A104D<br>Condition G  | 850 cycles<br>-40 to 125C       | GN7055A0 | 25          | Pass    |
| HTS                             | JESD22-A103C   | 150C, 1000hrs                   | GN7055A0 | 25          | Pass    |

## 2.2 Electrostatic Discharge and Latch Up Tests

Table 3.: Electrostatic Discharge and Latch Up Tests

| Stress                                 | Conditions | Qualification Vehicle | Stress Levels                     | Sample Size/Level         | Results |
|--|------------|-----------------------|-----------------------------------|---------------------------|---------|
| HBM                                    | JS-001     | GN7055B               | 1kV, 1.5kV, 2kV                   | 3 dies/level              | Pass    |
| HBM on TZIN pin                        | JS-001     | GN7055B               | 100V, 200V, 400V                  | 3 dies/level              | Pass    |
| I-test (RT and 85C)<br>OV (RT and 85C) | JS-001     | GN7055B               | ±100mA<br>1.5*Vmax<br>Tcase = 85C | 3 at RT<br>3 at 85C Tcase | Pass    |
| CDM                                    | JS-002     | GN7055A0              | 500V                              | 3                         | Pass    |





### **3 Conclusion**

GN7055B passed all reliability tests and therefore considered reliable and meeting industry standards