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☐	

Change Details

Part Number(s) Affected: GX3290-CBE3, GX3246-CBE3, GX3202-CBE3, GX3190-CBE3, GX3146-CBE3, GX3074-CBE3	Customer Part Number(s) Affected: ☒ N/A
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Description, Purpose and Effect of Change:

Description:

Semtech has qualified a second source for final marking of the GX3290-family of products. Final marking can now be completed at either HGM Device Dynamics or new qualified vendor MiQro Innovation Collaborative Centre (C2MI). The images to the right show the marking from the different suppliers.

Purpose:

A second source for marking was added to ensure Semtech always has a reliable source of supply for marking.

Effect of Change:

The change is transparent to the customer. All material is 100% tested after marking and prior to shipment.

HGM Device Dynamics

C2MI



Change Classification	☐ Major ☒ Minor	Impact to Form, Fit, Function	☐ Yes ☒ No
Impact to Data Sheet	☐ Yes ☒ No	New Revision or Date	☐ N/A

Impact to Performance, Characteristics or Reliability:

The change is transparent to the customer. There is no impact to performance, characteristics or reliability. All material is 100% tested and inspected after marking and prior to shipment.

Implementation Date	27 May 2019	Work Week	WW22
Last Time Ship (LTS) Of unchanged product		Affecting Lot No. / Serial No. (SN)	
Sample Availability		Qualification Report Availability	

Supporting Documents for Change Validation/Attachments:

- Marking qualification, see following pages.
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PRODUCT / PROCESS CHANGE NOTIFICATION

PCN-000550

Date: April 25, 2019

P2/2

Issuing Authority		
Semtech Business Unit:	Signal Integrity Products	
Semtech Contact Info:	Dusanka Hewlett QMS Engineer, Quality Assurance Semtech Canada Corporation 4281 Harvester Road Burlington, ON L7L 5M4 Canada 289-856-9272 dhewlett@semtech.com	
FOR FURTHER INFORMATION & WORLDWIDE SALES COVERAGE: http://www.semtech.com/contact/index.html#support		



MiQro Innovation Collaborative Centre (C2MI) Qualification for Marking GX3290-family

Post-test marking

April 16, 2019

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Background and Motivation

Background

- The GX3290 family the product goes through a 2-stage marking process, pre-test and post-test.
- Pre-Test Marking is done during assembly
- Post-Test Marking is done after Final Test and Burn-in.

Motivation for Additional Marking Supplier

- The primary motivation for change is to have 2 qualified marking sources.

Proposal

- The proposal is to add C2MI to the list of qualified marking suppliers for the GX3290-family of products. In order to make the move we must qualify both the process as well as the vendor for regular production.



Before Test Marking
GENDOC-055762



Post-Test Marking
GENDOC-055763

Qualification Plan

Vendor Qualification Plan

1. Complete “Business Environmental and Social Responsibility Survey” (SEMDOC001642)
2. Supply ISO certificate
3. Confirm documented ESD program in place

Process Qualification Plan

1. Provide process flow:
 - a) Incoming inspection
 - b) Marking process
 - c) Touch points - to assess risk of part damage due to handling including ESD, ball damage, scratches etc
 - d) Outgoing inspection (Semtech reject criteria provided to C2MI)
2. Confirm capability on bring-up sample

Qualification Results

Vendor Qualification Plan

- ✓ Complete “Business Environmental and Social Responsibility Survey” (SEMDOC001642)
- ✓ Supply ISO certificate
- ✓ Confirm documented ESD program in place

Process Qualification Plan

- ✓ Provide process flow:
 - a) Incoming inspection – inspection guide provided
 - b) Marking process
 - c) Touch points - to assess risk of part damage due to handling including ESD, ball damage, scratches etc – See Traveler
 - d) Outgoing inspection (Semtech reject criteria provided to C2MI)
- ✓ Confirm capability on bring-up sample

C2MI ISO 9001:2015 Certificate

Certificate of Registration

nqa global assurance

This is to certify that the Quality Management System of:

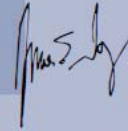
Centre de Collaboration MiQro Innovation – C2MI
45 boulevard de l'Aéroport
Bromont QC J2L 1S8
Canada

applicable to:

Manufacture of microelectronic components sold to customers who expect to receive repeatable services.

has been assessed and approved by
National Quality Assurance, U.S.A., against the provisions of:

ISO 9001:2015



For and on behalf of NQA, USA

ANAB
ACCREDITED
ISO/IEC 17021
MANAGEMENT SYSTEMS
CERTIFICATION BODY

Certificate Number: 18126
EAC Code: 19
Certified Since: March 5, 2019
Valid Until: March 4, 2022
Cycle Issued: March 5, 2019

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This approval is subject to the company maintaining its system to the required standard, which will be monitored by NQA, USA, 289 Great Road, Suite 105, Acton, MA 01720, an accredited organization under the ANSI-ASQ National Accreditation Board.

C2MI ESD Program

- ESD program:
 - All ESD apparatus (Bracelet, connecting cord, table, ionizer fan, table monitor) is checked at least once per two years
 - Managed by a maintenance schedule
 - Monthly sampling
 - Training schedule
 - Each operator is trained and a refresh is performed each two (2) year
 - Each eng staff is trained once.
 - ESD standard
 - Based on ANSI S20.20 2014
 - ESD containment measures :
 - Each employee use dissipative shoes
 - The entry door handle of the FAB shows the operator if ESD level is acceptable.
 - Use of dissipative smock
 - Ionizer fan on workstation with downstream flow
 - In the process of changing finger cots for a better dissipative coefficient (Black finger cots instead of pink)

GX3290 C2MI Marking Traveler

IDX	OPERATION
1	RECEIVE PACKAGE FROM EXTERNAL CARRIER
2	VISUAL INCOMING INSPECTION OF PACKAGING
3	PARTS UNBOXING
4	CHECK LABELING CONFORMANCE WITH PO
5	PO TO PART NUMBER CONFIRMATION
6	COLLECT AND FILE LOT DOCUMENTATION
7	MOVE PARTS TO LAS
8	STORAGE IN DRY AIR CABINET (UAAA)
9	LOT START
10	RUNCARD PRINT
11	TRANSFERT TO MARKING DRY AIR CABINET (UZZZ)
12	PART UNWRAPING
13	VISUAL INSPECTION
14	LASER SCRIBER FUNCTION ASSESSMENT
15	SCRIBE PARTS
16	STORAGE IN DRY AIR CABINET (UZZZ)
17	VISUAL INSPECTION OF LASER SCRIBE
18	COMPLETE COFC
19	VACUUM SEAL (LAS)
20	BAG LABELING
21	TRAY BOXING
22	SHIPPING

Marking Capability

Below shows a comparison of Device Dynamics (POR) and C2MI marking of the GX3290. In general the size and depth/darkness of the marking are the same. Any differences were found to be acceptable.

HGH Device Dynamics

C2MI



Differences Observed

1. "gennum" is slightly thicker in C2MI samples
2. Text font is not 100% match.
3. Text spacing is slightly tighter in C2MI sample



Conclusions

1. C2MI has met all of the system requirements for qualified, quality vendor.
2. C2MI has proven capability to perform the post-test marking for the GX3290-family of products.

C2MI is now considered an approved vendor for the GX3290-family of products for post-test marking.