

Microsemi Corporation: PCN19003

January 23, 2019

Product/Process Change Notification No: PCN19003

Change Classification: Major

Subject

Change of Mold Compound and Physical Appearance of MX Devices in VQ80 and VQG80 Packages

Description of Change

Devices listed in this PCN will change their mold compound from Sumitomo G700L to Sumitomo G700Y.

Additionally, these devices will use the pin gate molding process instead of the current Old Matrix Leadframe (OMLF) process. The mold gate mark will appear on the top side of the package.

There is no change in the critical dimension of the package outline drawing. There is no change in the device fit, electrical, or thermal performance.

Reason for Change

Microsemi's assembly subcontract facility, Amkor ATP1, was using the Old Matrix Leadframe (OMLF) format for the devices affected. The mold machine that supported the leadframe format broke down and the mold machine vendor discontinued the repair support for the machine.

To continue support for these products, the device assembly process will use the current standard leadframe format (more units in a leadframe strip). The mold equipment for this leadframe format uses the pin gate molding process where the mold material enters from the top side and has an identifiable mark (pin gate). The OMLF used a corner gate mold where the mold entered at the corner of the package. [Figure 1 \(see page 2\)](#) shows the differences.

The pin gate molding process is a qualified process and has been used for years for many Microsemi devices in QFP packages. The qualification report is available upon request.

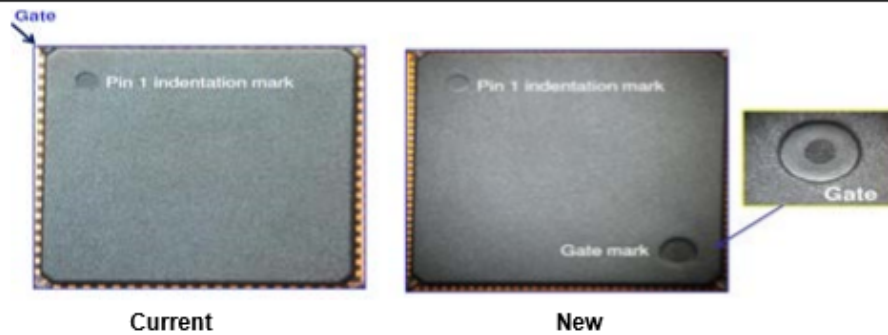
Application Impact

There is no expected impact to customer applications. The mold mark does not affect the critical dimension of the package outline drawing. This change also does not impact the device specification as stated in the product datasheet.

Method of Identifying Changed Product

The device lot utilizing the pin gate molding process can be distinguished by the mold gate mark on the top side of the package. The following figure shows the differences in location of the mold gate mark.

Figure 1 • Mold Gate Mark Differences



Products Affected by this Change

A40MX02-1VQ80*	A40MX02-1VQG80
A40MX02-1VQ80I*	A40MX02-1VQG80I
A40MX02-1VQ80M*	A40MX02-1VQG80M
A40MX02-2VQ80*	A40MX02-2VQG80
A40MX02-2VQ80I*	A40MX02-2VQG80I
A40MX02-3VQ80*	A40MX02-3VQG80
A40MX02-3VQ80I*	A40MX02-3VQG80I
A40MX02-FVQ80*	A40MX02-FVQG80
A40MX02-VQ80*	A40MX02-VQG80
A40MX02-VQ80A*	A40MX02-VQG80A
A40MX02-VQ80I*	A40MX02-VQG80I
A40MX02-VQ80M*	A40MX02-VQG80M
A40MX04-1VQ80*	A40MX04-1VQG80
A40MX04-1VQ80I*	A40MX04-1VQG80I
A40MX04-1VQ80M*	A40MX04-1VQG80M
A40MX04-2VQ80*	A40MX04-2VQG80
A40MX04-2VQ80I*	A40MX04-2VQG80I
A40MX04-3VQ80*	A40MX04-3VQG80
A40MX04-3VQ80I*	A40MX04-3VQG80I
A40MX04-FVQ80*	A40MX04-FVQG80
A40MX04-VQ80*	A40MX04-VQG80
A40MX04-VQ80A*	A40MX04-VQG80A
A40MX04-VQ80I*	A40MX04-VQG80I
A40MX04-VQ80M*	A40MX04-VQG80M

*These products are on last time buy status per PDN18005.

Production Shipment Schedule

The new leadframe tool change is complete. Microsemi will validate manufacturability and will start production using the current leadframe.

Products using the new leadframe will begin shipping on 4/23/2019 (90 days from the published date of this PCN).

Contact your local sales support representative for products shipment sooner than 4/23/19.

Qualification Data

The qualification report is available upon request.

Contact Information

If you have any questions, please contact Microsemi's SoC Technical Support at soc_tech@microsemi.com.

Regards,

Microsemi Corporation

Any projected dates in this PCN are based on the most current product information at the time this PCN is being issued, but they may change due to unforeseen circumstances. For the latest schedule and any other information, please contact your local Microsemi Sales Office, the factory contact shown above, or your local distributor.

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