

Product and Process Change Notice

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|----------------|---|-----------------|-----------|-----------------------|------------|
| PCN No. | PCN03012 | PCN Date | 8/21/2019 | Effective Date | 11/20/2019 |
| Title | ChipMOS as additional assembly site for the 16Mb MRAM BGA package | | | | |

Type: Major Change

Everspin is adding ChipMOS as a qualified assembly site for the 16Mb MRAM BGA package.

Reason For Change

In order to increase capacity and improve supply flexibility, Everspin is adding ChipMOS as a qualified assembly site for the 16Mb MRAM BGA package.

Affected Products

| Part Number | Description | Part Number | Description |
|--------------|------------------|---------------|-----------------------|
| MR4A16BMA35 | Commercial Temp. | MR4A16BMA35R | Commercial Temp., T&R |
| MR4A16BCMA35 | Industrial Temp. | MR4A16BCMA35R | Industrial Temp., T&R |
| MR4A08BMA35 | Commercial Temp. | MR4A08BMA35R | Commercial Temp., T&R |
| MR4A08BCMA35 | Industrial Temp. | MR4A08BCMA35R | Industrial Temp., T&R |

Impact on Form, Fit, Function, Quality or Reliability

No impact

Proposed First Ship Date for Change:

Nov 20, 2019

Key Material Differences

| Site | ChipMOS | UDG |
|-----------------|--------------------|-------------------------|
| Mold Compound | Sumitomo EME-G760 | Nitto GE-100AT |
| BLT1 Die Attach | Henkel 2025D | Henkel QMI536NB |
| BLT2 Die Attach | Nitto EM-710 (DAF) | Hitachi FH-9011-25(DAF) |
| BLT3 Die Attach | Henkel QMI550 | Henkel QMI536NB |

Product Identifier

Assembly site code = H for ChipMOS Taiwan

Supplier Qual Plan Schedule and Results

Qualification is complete and all Everspin requirements met; a qualification report is available on request.

Date Qualification Samples Are Available:






Samples are generally available now but please request your specific part number to your Everspin Sales contact.

Acceptance of Change

Everspin will consider this change accepted unless specific conditions for acceptance are provided in writing within 30 days of receipt of this notice.

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| Contact Information | Sample Information <input checked="" type="checkbox"/> Samples Available Now | |
|--|--|--|
| Product Marketing Everspin Technologies (480) 347-1111 | Contact Everspin sales: http://www.everspin.com/contact-us-everspin-technologies If using the on-line sample request please refer to this PCN # to receive samples. | |
| Originator | | |
| <u>Date</u> 8/21/2019 | <u>Title</u> Senior Quality Engineer | <u>Name</u> Paul Drobny  |
| Approval and Release | | |
| <u>Date</u> 8/21/2019 | <u>Title</u> Director of Quality | <u>Name</u> Khaloun Barakat  |
| <u>Date</u> 8/21/2019 | <u>Title</u> VP of Marketing | <u>Name</u> Rizwan Ahmed  |
| <u>Date</u> 8/21/2019 | <u>Title</u> VP of Operations | <u>Name</u> Norm Armour  |
| <u>Date</u> 8/21/2019 | <u>Title</u> VP of Sales | <u>Name</u> Troy Winslow  |