

Product/Process Change Notice

No.	02954	PCN Date	November 03, 2016	Effective Date	November 03, 2016
Title	16Mb MRAM in 48-BGA Package Moisture Sensitivity Level				

Approval Notice

Everspin is notifying customers and distributors that the moisture sensitivity level of the 16Mb MRAM in the 48-BGA package is upgraded to MSL-5 from MSL-6.

Description and Purpose – Affected Products

The moisture sensitivity level for these products was previously stated as MSL-6 as of March 22, 2016 in PCN 02941. This PCN is to notify customers that the moisture sensitivity level is upgraded to MSL-5. This improvement is the result of package materials and process optimization in conjunction with Everspin assembly subcontractor UTAC Dongguan.

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

Material Differences

The following optimizations were implemented to improve to MSL-5

Shield roughness increased to improve adhesion to mold compound, Shield supplier changed to Vacco. Die thickness reduced from 6 mil to 4 mil to reduce stress and warpage Qualification report is available on request.

Package Marking of Products Affected

No change in package marking per our standard marking procedure. The moisture sensitivity level is indicated on the inner bags.

Trace code format: MWLYYWWz

M = Assembly location (G for UTAC Dongguan), WL = Wafer Lot Number, YY = Year, WW = Work Week, z = Assembly lot split (may not be present)

Trace code for product that meets MSL-5 : GWL1635 , WL varies by lot number

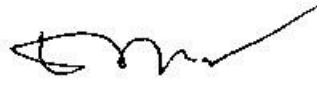
Contact Information

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Originator

<u>Date</u>	<u>Title</u>	<u>Name</u>
November 03, 2016	VP Marketing	Scott Sewell

Approval and Release

<u>Date</u> November 03, 2016	<u>Title</u> Director of Quality	<u>Name</u>  Mehar Mahal
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1

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<u>Date</u> November 03, 2016	<u>Title</u> VP of Operations & Business Development	<u>Name</u>  Angelo Ugge
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