

**MSL Classification Data Sheet Changes  
PCN1046  
February 3, 2016**

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To Our Valued Customers:

The following is to inform IXYS Integrated Circuits Division customers of a change to some of our products. These changes are part of our effort and commitment to continuous improvement of our processes and products. IXYS Integrated Circuits Division's quality system requires customer notification under the circumstances outlined below.

IXYS Integrated Circuits Division's notification policy states:

*IXYS Integrated Circuits Division is mindful that changes to process or product could have an adverse impact on our customers.*

*Therefore we verify, through our qualification methodology, that a change does not negatively affect product quality or reliability. We also verify that it does not impact form, fit, or function.*

*Changes to function are notified to the customer if the change could adversely affect the customer but not if the change is to enhance product performance beyond the current specification, for example, higher isolation voltage capability for Solid State Relays.*

*In cases where a planned change would impact form, fit, or would adversely affect function, quality or reliability, we notify the customer 90 days in advance.*

*We also notify our customers of planned product obsolescence.*

The following definitions apply:

*Form: the visual appearance including color, marking, and surface finish*

*Fit: the external dimensions and associated tolerances*

*Function: the electrical, mechanical, thermal, quality and reliability performance characteristics*

IXYS Integrated Circuits Division notifies customers of the changes using a Product Change Notification (PCN). Attached are the details of the pending product change.

Sincerely,

Steven Andrezyk  
Director of Marketing  
IXYS Integrated Circuits Division  
78 Cherry Hill Dr.  
Beverly MA, 01915  
Phone: 978-524-6700

## Product Change Notification (PCN)

**PCN1046 MSL Classification Data Sheet Changes**

**February 3, 2016**

### Detailed Description of Change

IXYS Integrated Circuits Division has made specification changes to the data sheet's Moisture Sensitivity and Soldering Profile sections of the devices listed in the "Products Affected" section of this PCN.

The moisture sensitivity level (MSL) classification for the "P" and "PTR" suffix package (8-Pin Flatpack) has been changed from MSL 1 to MSL 3. In addition to the MSL classification change, the Classification Temperature (maximum body temperature) of these packages has been reduced from 260°C to 240°C.

These changes are effective immediately and are documented in the recent revision of the product's data sheets which are available online at [www.ixysic.com](http://www.ixysic.com).

The PCN number assigned to this action is **PCN1046** and should be referenced in any correspondence related to the change.

### Reason for Change

We have discovered a small percentage of the affected devices developed package cracking issues during lead-free soldering reflow processes. To assure these devices maintain IXYS Integrated Circuits Division quality standards it is necessary to reduce the MSL classification and limit the maximum (peak) body temperature.

Additional factory preparation as a result of the MSL 3 classification change (bake, dry pack and seal) of these devices will protect the package from moisture ingress while in transit and during storage. This pre-shipping treatment in conjunction with the lower maximum allowed body temperature during the lead-free soldering reflow process will reduce package stress during reflow.

Not only will this ensure the reliability of the devices through the PCB assembly process, it will maintain the reliability of the product over its expected lifetime.

### Products Affected

- LOC110P
- LOC110PTR
- LOC111P
- LOC111PTR
- LOC112P
- LOC112PTR
- LOC117P
- LOC117PTR

## **Products NOT Affected**

Note that the MSL 1 classification and the Classification Temperature of the non-suffix (DIP) package, as well as the "S" and "STR" (Surface Mount) package versions of these products will remain unchanged.

- LOC110
- LOC110S
- LOC110STR
- LOC111
- LOC111S
- LOC111STR
- LOC112
- LOC112S
- LOC112STR
- LOC117
- LOC117S
- LOC117STR

## **Anticipated Impact on Quality and Reliability**

This change will improve the quality and reliability of the product received by the customer and throughout their PCB assembly manufacturing process.

## **Contact Information**

For any questions related to the PCN notice, please contact IXYS Integrated Circuits Division's Quality Assurance Department as indicated below:

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