



**Reliability Report  
(Q2015-010)**

**IX9907/IX9908 Product Qualification  
High Voltage, Dimmable LED Driver with PFC  
Control**

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**IXYS Integrated Circuits Division**  
78 Cherry Hill Drive, Beverly, MA 01915  
[www.ixysic.com](http://www.ixysic.com)

### Summary

The IX9907 and IX9908 products have successfully passed IXYS ICD's requirements for product qualification.

**Table 1: Device Information**

|                |                                |
|----------------|--------------------------------|
| Product Number | IX9907, IX9908                 |
| Package Type   | 8L SOIC                        |
| Assembly Site  | Greatek, Taiwan                |
| Test Site      | IXYS ICD BEV, Beverly, MA, USA |

**Table 2: Reliability Test Result**

| Stress Test       | Stress Conditions                            | Applicable Specs                     | Product/Package  | Sample Size (SS) | # of Failures |
|-------------------|--|--------------------------------------|------------------|------------------|---------------|
| HTRB              | 125°C,<br>80% WVDC,<br>1000 hrs              | Mil-Std-883<br>M1005<br>JESD22-A-108 | IX9907<br>GE0055 | 105              | 0             |
|                   |  |                                      | IX9908<br>GE0057 | 110              | 0             |
| Thermal Shock     | 0 to 100°C,<br>10/10 dwells,<br>15 cycles    | Mil-Std-883,<br>M1011                | IX9907<br>GE0055 | 55               | 0             |
|                   |  |                                      | IX9908<br>GE0057 | 55               | 0             |
| Temperature Cycle | -55 to 125°C,<br>10/10 dwells,<br>300 cycles | Mil-Std-883,<br>M1010, "B"           | IX9907<br>GE0055 | 55               | 0             |
|                   |  |                                      | IX9908<br>GE0057 | 55               | 0             |
| Hot Storage       | 125C,<br>1000 hrs                            | JESD22-A103-C                        | IX9907<br>GE0055 | 50               | 0             |
|                   |  |                                      | IX9908<br>GE0057 | 50               | 0             |
| MSL               | IR Reflow,<br>Level 1                        | J-STD-020D.1                         | IX9907<br>GE0055 | 25               | 0             |
|                   |  |                                      | IX9908<br>GE0057 | 25               | 0             |

**Table 3: ESD Results – 8-Pin SOIC**

| Stress Test | Stress Conditions            | Applicable Specs  | Product/Package  | Highest Passed | Class |
|-------------|------------------------------|-------------------|------------------|----------------|-------|
| HBM         | All Pins,<br>1.5kΩ,<br>100pF | JESD22-<br>A114-E | IX9907<br>GE0055 | +/-2000V       | 2     |
|             |                              |                   | IX9908<br>GE0057 | +/-3000V       | 2     |

**Table 4: FIT Rate Summary**

| Qual Lot # | Stress Test | # of Devices | # of Fail | Hours Tested | Equivalent Dev. Hours | FIT Rate @ 60% CL |
|------------|-------------|--------------|-----------|--------------|-----------------------|-------------------|
| 1          | HTRB        | 215          | 0         | 1000         | 54,912,283            | 16.75             |

\* HTRB FIT Rate was calculated based on the Acceleration Factor (AF) and equivalent device hours at 0.7eV of activation energy at 125°C test temperature and 40°C use temperature.

### Approvals

Prepared by: Martha W. Brandt\* 12/21/15  
 Martha W. Brandt Date  
 Quality Engineer

Approved by: George Belezos\* 12/21/15  
 George Belezos Date  
 Quality Manager

Approved by: James Archibald\* 12/21/15  
 James Archibald Date  
 Director of Engineering

\*Signature on File