



**Reliability Report
(Q2018-004)**

**CPC1590
Optically Isolated Gate Driver
Reliability Monitor**

May 2, 2018

**IXYS Integrated Circuits Division
78 Cherry Hill Drive, Beverly, MA 01915
www.ixysic.com**

Summary

The CPC1590 product has successfully passed IXYS ICD's requirements for reliability monitor testing.

Table 1: Device Information

Product Number	CPC1590
Package Type	8 Pin Flatpack
Assembly Site	Atec, Laguna, Philippines
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, 80% WVDC, 1000 hrs	Mil-Std-883 M1005 JESD22-A-108	CPC1590 T45687M	117	0
Construction Analysis	Die Coat, Bond Quality, Die Attach, Bondline	N/A	CPC1590 T45687M	5	0
Thermal Shock	0 to 100°C, 10/10 dwells, 15 cycles	Mil-Std-883, M1011	CPC1590 T45687M	55	0
Temperature Cycle	-55 to 125°C, 10/10 dwells, 300 cycles	Mil-Std-883, M1010, "B"	CPC1590 T45687M	55	0
Hot Storage	125C, 1000 hrs	JESD22-A103-C	CPC1590 T45687M	50	0
MSL	IR Reflow, Level 3	J-STD-020D.1	CPC1590 T45687M	25	0

Table 3: FIT Rate Summary

Qual Lot #	Stress Test	# of Devices	# of Fail	Hours Tested	Equivalent Dev. Hours	FIT Rate @ 60% CL
1	HTRB	117	0	1000	29,882,498	30.79*

* 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* 5/2/18
 Martha W. Brandt Date
 Senior Quality Engineer

Approved by: George Belezos* 5/2/18
 George Belezos Date
 Quality Manager

Approved by: James Archibald* 5/2/18
 James Archibald Date
 VP Research and Development

*Signature on File