



**Reliability Report  
(Q2017-001)**

**CPC1511Y Product Qualification  
1-Form-A Type Optically Isolated SSR with an  
Integrated Circuit Limit and TSD Protection  
Circuit**

**January 24, 2017**

**IXYS Integrated Circuits Division**  
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**Summary**

The CPC1511Y product has successfully passed IXYS ICD's requirements for product qualification.

**Table 1: Device Information**

Product Number	CPC1511Y
Package Type	4 Pin Power SIP
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	CPC1511Y TE3602	105	0
Thermal Shock	0 to 100°C, 10/10 dwells, 15 cycles	Mil-Std-883, M1011	CPC1511Y TE3578	55	0
			CPC1511Y TE3602	55	0
			CPC1511Y TE3603	55	0
Temperature Cycle	-55 to 125°C, 10/10 dwells, 300 cycles	Mil-Std-883, M1010, "B"	CPC1511Y TE3578	55	0
			CPC1511Y TE3602	55	0
			CPC1511Y TE3603	55	0
Hot Storage	125C, 1000 hrs	JESD22-A103-C	CPC1511Y TE3578	50	0
			CPC1511Y TE3602	50	0
			CPC1511Y TE3603	50	0
MSL	IR Reflow, Level 1	J-STD-020D.1	CPC1511Y TE3602	25	0
			CPC1511Y TE3603	25	0

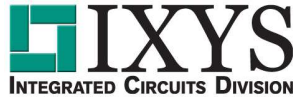
**Table 3: ESD Results**

Stress Test	Stress Conditions	Applicable Specs	Product/Package	Highest Passed	Class
HBM	All Pins, 1.5kΩ, 100pF	JESD22- A114-E	CPC1511Y TE3578	+/-5000V	3A

**Table 4: FIT Rate Summary**

Qual Lot #	Stress Test	# of Devices	# of Fail	Hours Tested	Equivalent Dev. Hours	FIT Rate @ 60% CL
1	HTRB	105	0	1000	26,817,626	34.31*

\* 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.



**CPC1511Y**  
**1-Form-A Type Optically Isolated SSR**  
**with an Integrated Circuit Limit and TSD Protection Circuit**

**Approvals**

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