



**Reliability Report
(Q2016-015)**

**CPC1510G Product Qualification
Single Pole, Normally Open with Integrated
Current Limit Relay**

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Summary

The CPC1510G product has successfully passed IXYS ICD's requirements for product qualification.

Table 1: Device Information

Product Number	CPC1510G
Package Type	6 Pin Through Hole
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	CPC1510G T57623	129	0
			CPC1510G T66683	100	0
Thermal Shock	0 to 100°C, 10/10 dwells, 15 cycles	Mil-Std-883, M1011	CPC1510G T57623	55	0
			CPC1510G T66683	55	0
Temperature Cycle	-55 to 125°C, 10/10 dwells, 300 cycles	Mil-Std-883, M1010, "B"	CPC1510G T57623	55	0
			CPC1510G T66683	55	0
Hot Storage	125C, 1000 hrs	JESD22-A103-C	CPC1510G T57623	45	1
			CPC1510G T66683	45	0
MSL	IR Reflow, Level 1	J-STD-020D.1	CPC1510G T57623	25	0
			CPC1510G T66683	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	CPC1510G T57623 T66683	+/-2000V	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	229	0	1000	58,487,966	15.73*

* 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

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