



Failure Analysis Report

General Information			
Report Initiator	Hugo Avalos Marquez	Date (DD/MM/YYYY):	9/Dic/2025
Customer:	Omron	Serial:	68225-0051B_48250161_PL0001
PCBA Assembly Number:	68225-0051	Process Type:	Funtional Test

1) Problem Statement

The unit fails in the **DA1** equipment, on the **U5 pin 2** with respect to **gnd, voltage**.

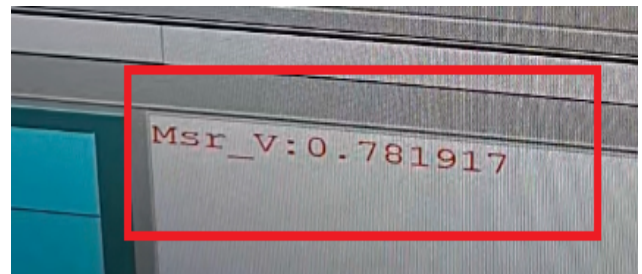
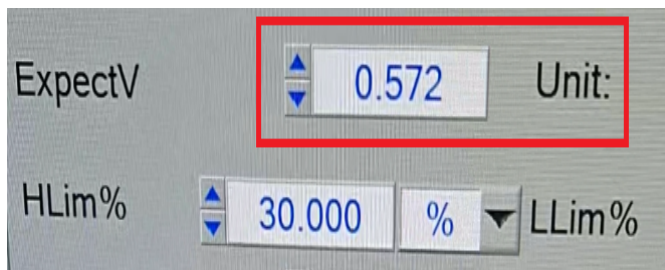
2) Technical Support

The **SN74LVC1G97** device features multiple configurable functions. The output state is determined by eight 3-bit input patterns. The user can choose from the following logic functions: MUX, AND, OR, NAND, NOR, inverter, and non-inverter. All inputs can be connected to VCC or GND.

It features **CMOS** technology.

4) Validation, Measurements, and Analysis

The team expects a measurement of **0.572**, and the faulty card measures **0.781**, which is above the expected limit.,

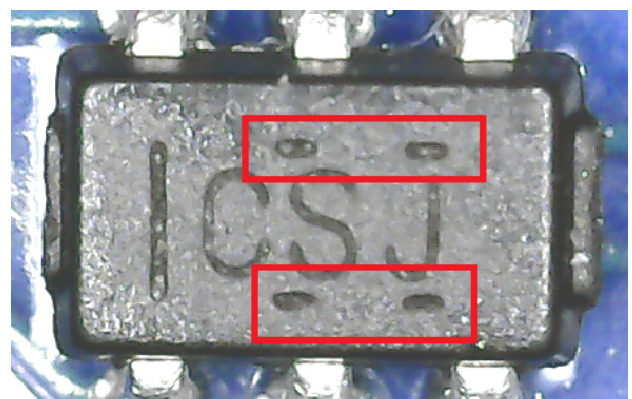
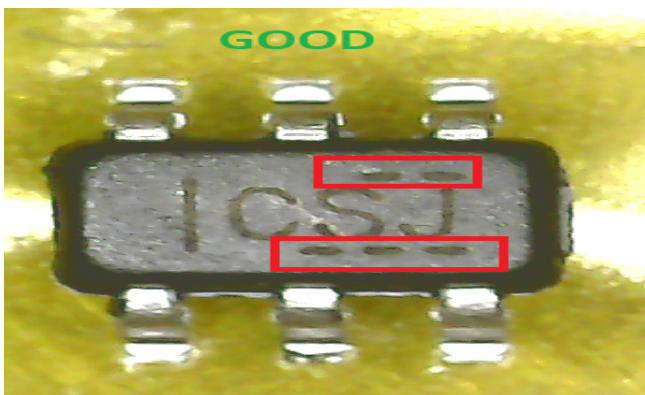




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The **A-B test** was applied to a **known good card** and a **suspected bad one**, and the fault went to the component; both were disassembled, the result table is attached.

TEST A-B U5		TEST A-B U5	
Pin 1 to 6	0,512 VDC	Pin 1 to 6	0.750 VDC



5) CONCLUSION.

The component is outside of the tolerance expected by the team.

