

Sharanya Ganesh

Mr. Wood

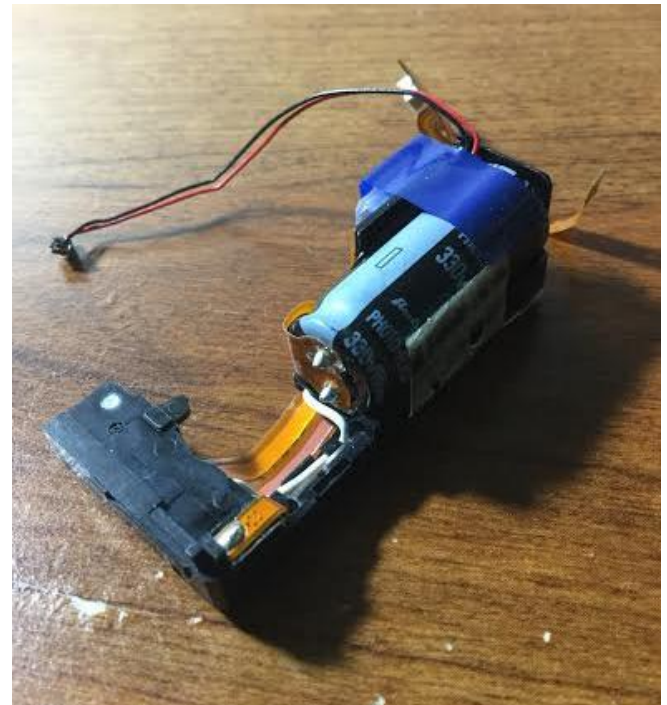
Digital Electronics Honors

17 October 2015

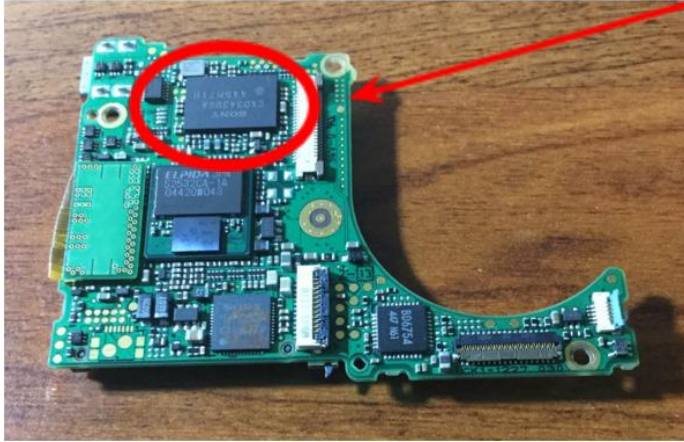


The electronic device I chose to disassemble was a digital camera. This was chosen as the screen had not been functional for a year or so and I thought it would be interesting to find why that was the case, and in the process be able to examine the circuitry within.

After completely taking apart the camera, the first component with a fairly obvious purpose was the large capacitor. Being attached to the light along with black and red wires, and being labelled with "330v100uF" and PHOTO FLASH, it's clear that this capacitor would have served the purpose of working the camera's flash. A capacitor would be necessary for such a task as it is able to release a burst of energy in a split second (with only a second or two of time necessary to charge up), enabling a digital camera light to flash on quickly and brightly.



The circuit boards were full of DIPs, SOICs, and PLCCs, though none of which were manufactured by Texas Instruments, as found from scouring through data sheets for the visible packages, ICs, and chip carriers. One component labelled CXD3439GA turned out to be a CCD used as a timing generator and signal processor for frame readout CCD center. The purpose of



this component is to ensure that the pixel and frame readout rate is rapid and consistent, ensuring best video quality. The small rectangular-prism-shaped components that surround PLCCs and other components with multiple

connection points were resistors and capacitors, colored black and brown. The reason the resistors do not look like the ceramic ones with four distinct colored bands expressing their resistance is because the board is smaller and all components are far smaller in order to reduce mounting area.

The important conclusion that we arrive at when looking at any circuit board is that though components are progressively shrinking over the years, every single transistor, resistor, and chip plays a significant role in the grand scheme of the device, regardless of its size.

