

Sensor information for On Semiconductors CS209A Proximity Detector

Using the CS209A you can build a metal detector without having to do that much analog signal processing or beat counting. All you need is an RLC circuit to make the oscillating signal (with the inductor being the search coil), a potentiometer to control sensitivity, and a few other simple components. The system is very useful and relatively easy to tweak & work with once you have a base to start from to compare against.

Pros: Vast majority of analog components prebuilt into the microchip & VERY easy digital interface for a microcontroller.

Cons: ONLY digital outputs, sensitivity selection done by hand via potentiometer, have yet to find good mathematical way to determine suitable RLC values.

Interface: The chip has two outputs that must be pulled-up. One is active high and the other is active low. These signals are simply digital outputs for when the CS209A thinks it has found metal via the RLC search coil.

Sample code: Not needed. Just treat it as another digital pull-up input.

Where to acquire: www.onsemi.com Make sure you get the best version for you (such as surface mount, through hole, etc)

Cost: Unknown. I got a sample from the company

