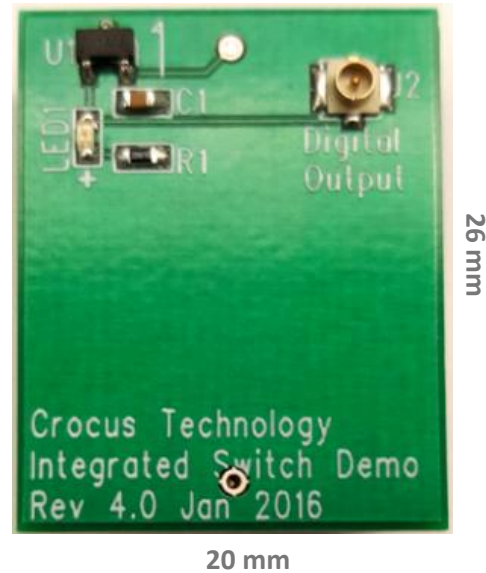


Relevant Products:

- CT512 Integrated Digital Switch

Relevant Documents:

- CT512 Datasheet
- AN109: Smart Lock
- AN112: Reed Switch Replacement



Introduction

This document provides general information about the design and functionality of the Crocus demonstration board for detection of a magnetic field. The small arrow illustrated next to the CT512 device denotes the north pole polarity convention. Enclosed with the CTD501 demo board is a magnet for switching the CT512 and status LED.

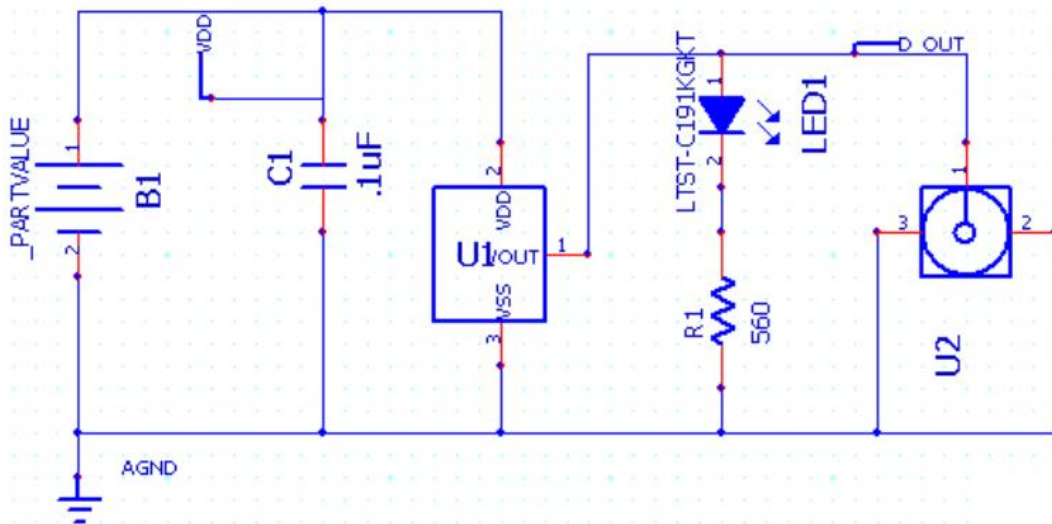
Functionality

The CTD501 is battery operated and remains continuously powered. In the presence of a low or no magnetic field or north pole polarity, the CT512 output remains HIGH and the LED remains turned off. When the CT512 detects a south pole magnetic field greater than the operating switch point, Bop, the output switches LOW and the LED is turns on.

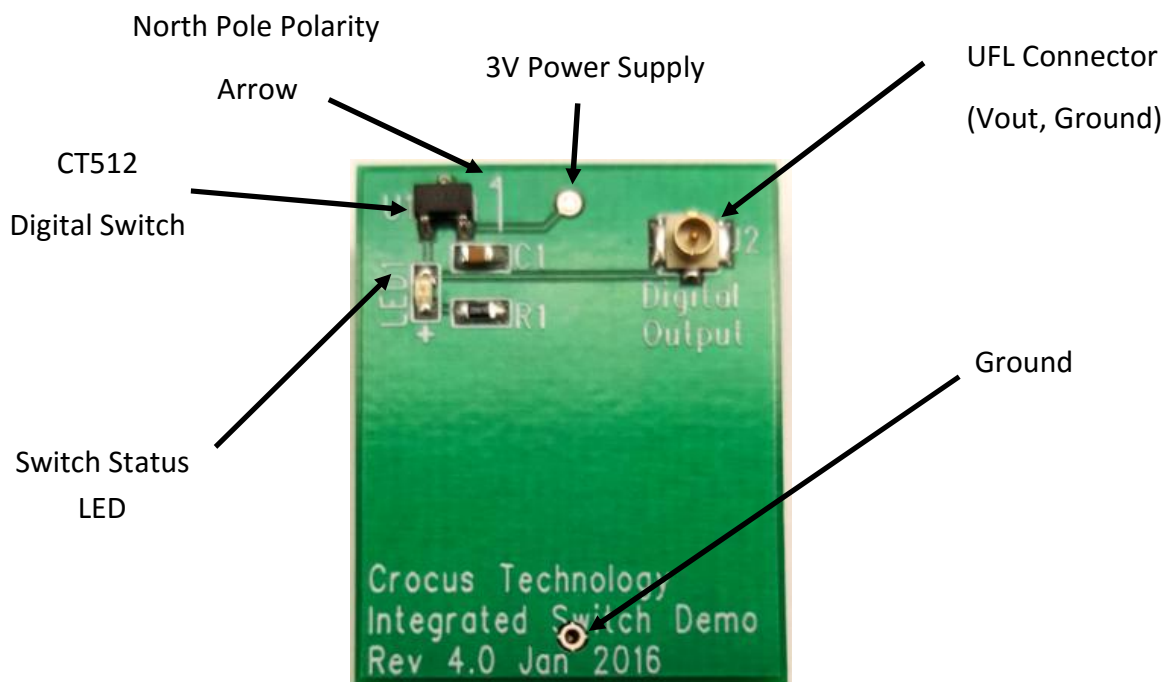
Output Behavior versus Magnetic Field:

Characteristic	Conditions	CT512 Output	LED
South Pole	$B > B_{op}$	Low	ON
Null or weak magnetic field	$B < B_{rp}$	High	OFF
North Pole	$B > B_{op}$	High	OFF

Electrical Schematic:



Board Layout Overview:



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