Inductive Sensing

TIDA-00563

Block Diagram

LP5951
3.3V Out LDO

+3.3V_LP

3.3V_LDO

+LDO_IN

+5V_LP

VUSB

MSP430F5528

Provides:
- USB interface
- 12MHz clock to LDC1101
- SPI connection to LDC1101
- SPI connection to talk to LaunchPad
- MSP430 runs at 2.5V for 24MHz operation

24MHz

XTAL

UART

GPIO

SPI

To/From LaunchPad

INB

IN

IN

CLKIN

LDC1101

INA

3.3V

Metal

Target

LC Tank

Circuit

NASA

http://www.ti.com/support

Inductive Proximity Switch BoosterPack

Project Title:

Designed for: Public Release

Assembly Variant: 001

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Revision History

<table>
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<th>Rev</th>
<th>ECN #</th>
<th>Approved Date</th>
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TID #: TIDA-00563

Orderable: N/A

Revision History

Rev Notes Approved by ECN # Approved Date
N/A N/A N/A N/A N/A
USB Interface

MSP430F5528 MCU

LDO Circuitry

BoosterPack Interface Connector

Inductance-to-Digital Converter

Spy-bi-wire Interface & ESD Protection

TIDA-00460 Powered By

+3.3V from Launch Pad
Don't Care
Short 2-3
Short 1-2
Open

MSP430 FET Tool
Don't Care
All Open
Short 2-3
Open

VBUS
Short 1-2
Short 1-2
Open

VBUS & MSP430's Built-in LDO
Don't Care
All Open
Short 1-2
Short 1-2

Engineer:

FA&C

Contact:

File:

TID #:

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Fabricant:

Printed on:

For more information:

http://www.ti.com

Engineer:

Contact:

File:

TID #:

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### Label Table

<table>
<thead>
<tr>
<th>Variant</th>
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<tr>
<td>001</td>
<td>TIDA-00563 REV: E1</td>
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**Assembly Note**

- ZZ1: This Assembly Note will show in the PcbDoc and associated outputs.
- ZZ2: This Assembly Note will show in the PcbDoc and associated outputs.
- ZZ3: This Assembly Note will show in the PcbDoc and associated outputs.
- ZZ4: This Assembly Note will show in the PcbDoc and associated outputs.

**PCB Number:** TIDA-00563

**PCB Rev:** E1

**Texas Instruments**

**ESD Susceptible**

**CO!PCB1**

**COFID1 COFID2 COFID3**

**COLogo1 COLogo2**

**Version control disabled**

**SVN Rev:** TIDA-00563

**Number:** Rev: E1

**TID #:** TIDA-00563

**Orderable:** N/A

**http://www.ti.com**

**Contact:**

**http://www.ti.com/support**

**Inductive Proximity Switch BoosterPack**

**Project Title:**

**Designed for:** Public Release

**Assembly Variant:**

**Engineer:**

**Drawn By:**

**MOD.:**

**Date:** 10/19/2015

**File:** TIDA-00563_E1_Hardware.SchDoc

**Sheet Title:**

**Sheet:**
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