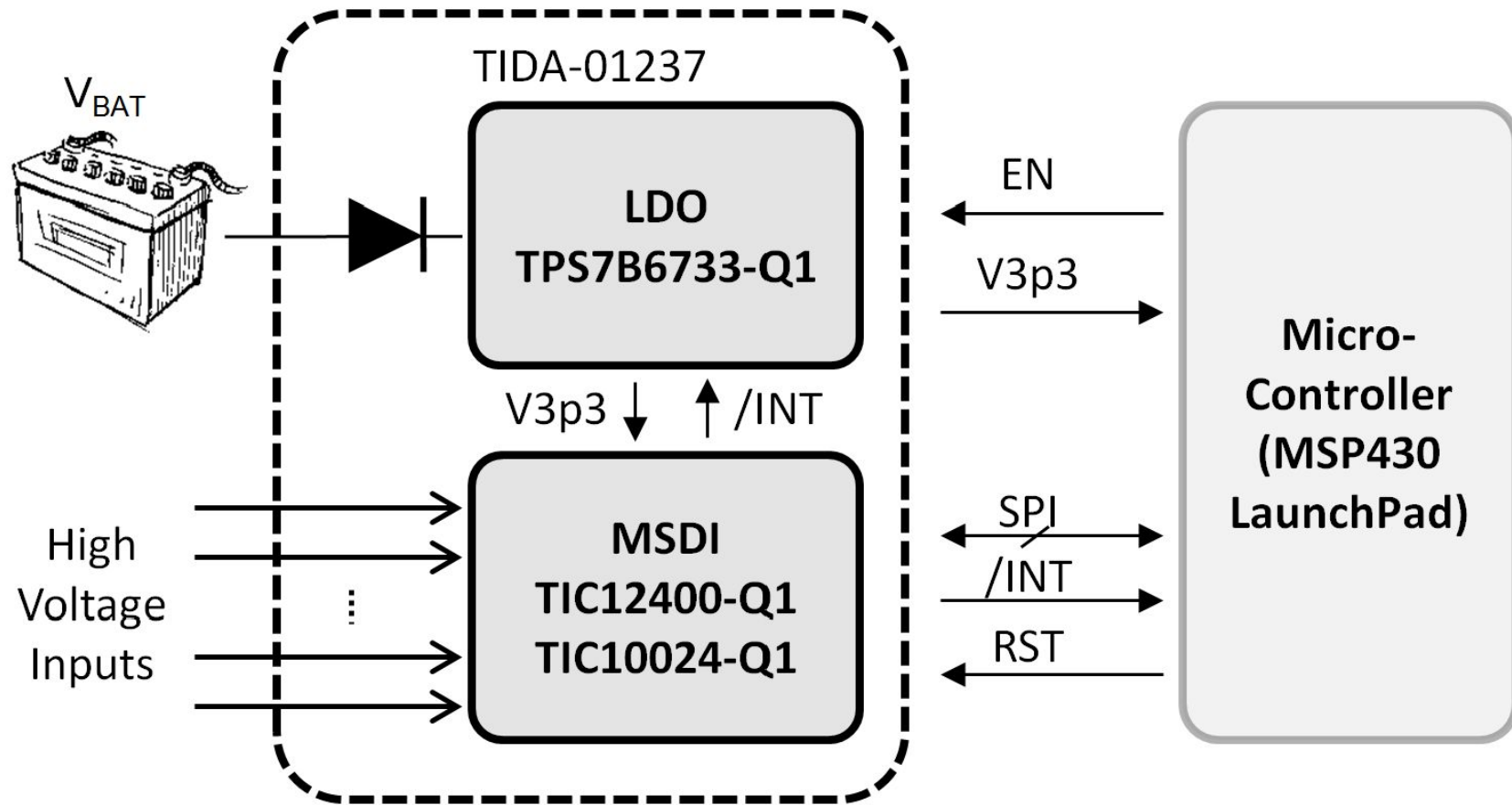
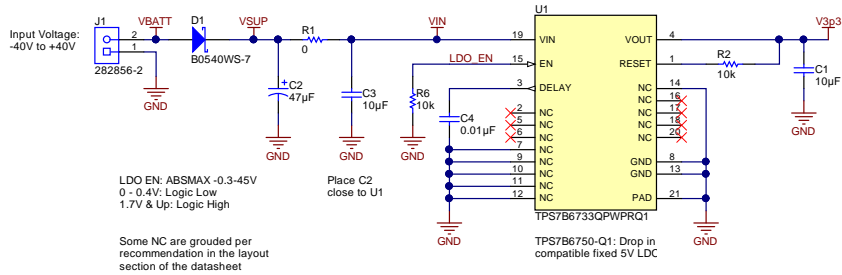


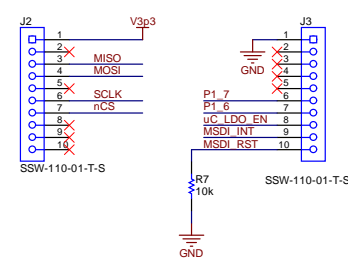
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



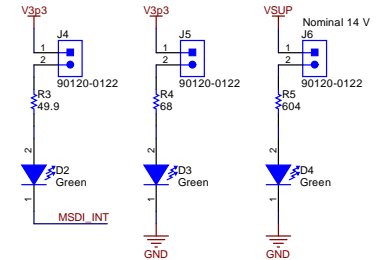
Supply Protection and Regulation



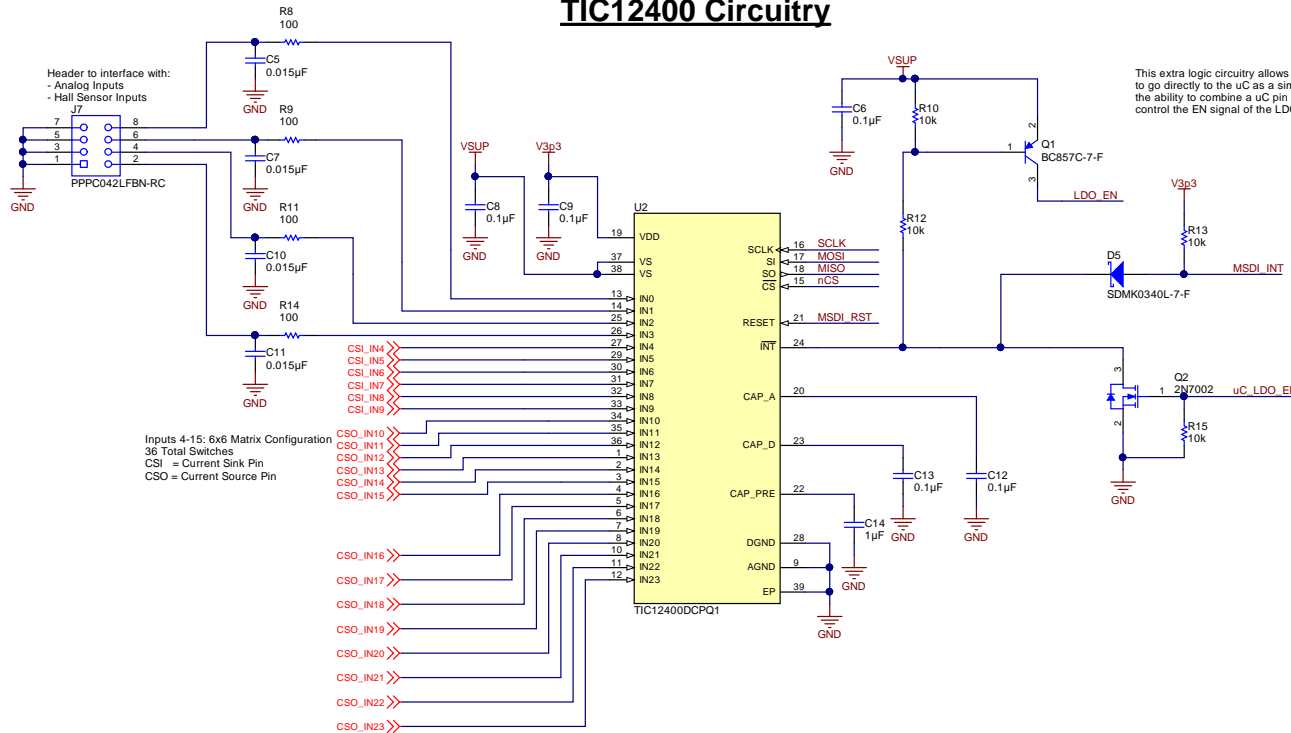
LaunchPad Connectors



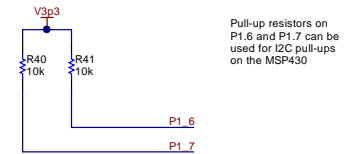
Indicator LEDs



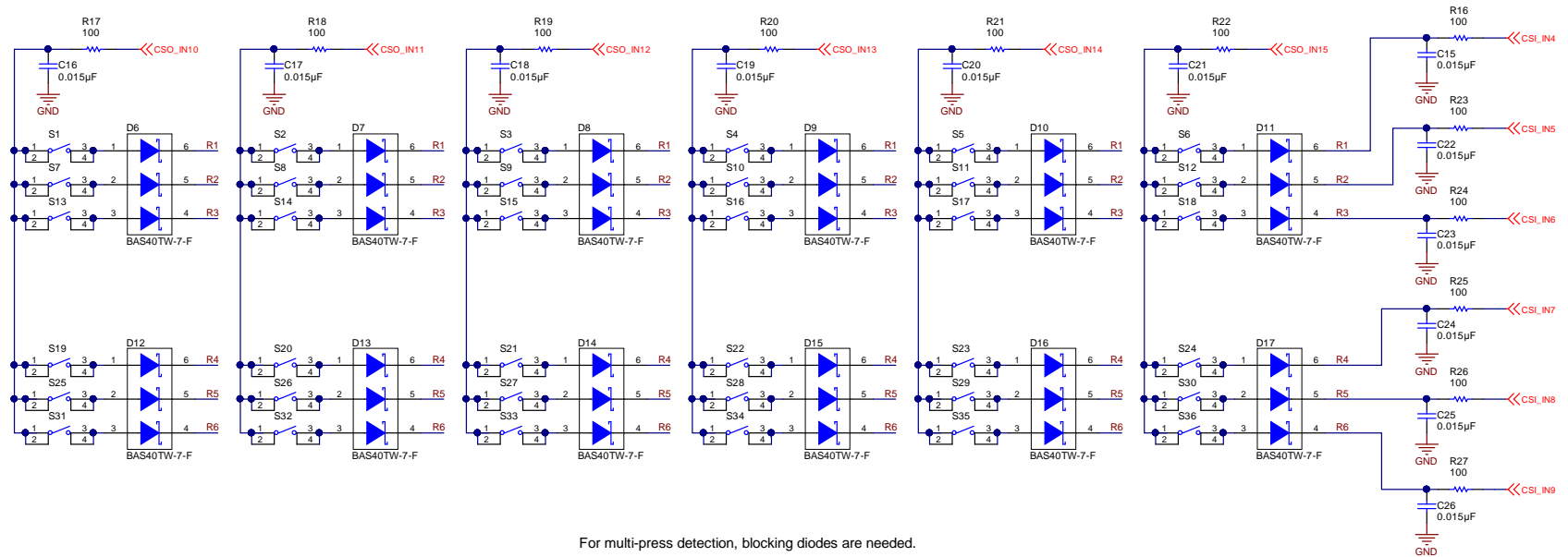
TIC12400 Circuitry



P1.6 and P1.7



Matrix Configuration Switch Inputs



For multi-press detection, blocking diodes are needed.

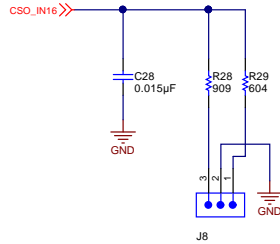
If multi-press detection is not required, the diodes can be removed.



TIC12400 Inputs

A 2 thresholds input can handle mom-off-mom rocker switch:

- 1) Switch pressed left
- 2) No switch pressed
- 3) Switch pressed right



Example: Door Lock Switch with

- Momentary Lock Position
- Nothing Pressed Position
- Momentary Unlock Position

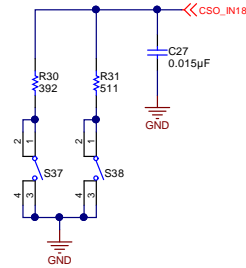
Other Examples:

- Volume Up / Down
- Seek Up / Down

Header to connect to external 3 pin panel-mount rocker switch.

A 3 thresholds input can handle two multi-press switches:

- 1) Neither switched pressed
- 2) Only switch 37 pressed
- 3) Only switch 38 pressed
- 4) Both switches 37 & 38 pressed



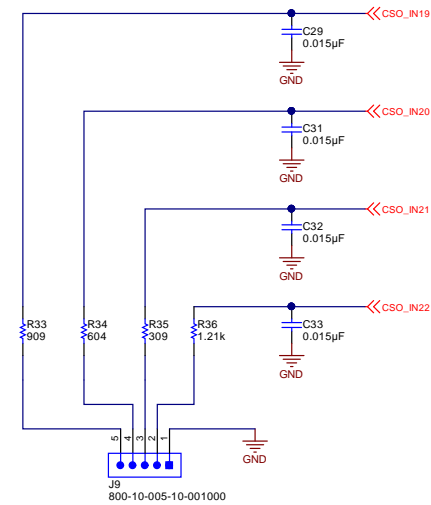
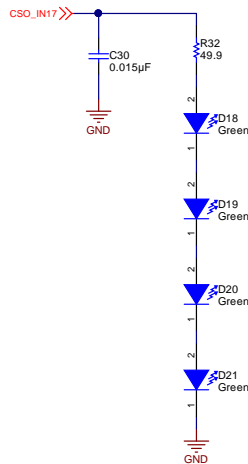
Example: Two Independent Buttons

- Trunk Release Button
- Gas Cap Release Button

Other Independent SPST Switch Examples:

- Door Ajar Hall Sensors
- Hood Ajar Hall Sensor
- Trunk Ajar Hall Sensor

Example: Using Wetting Current for LED Button Backlighting

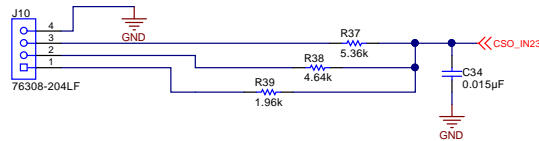


Example: Connected to External Light Control Arm (Has 7 total states)

- 1) Lights Off Position
- 2) AUTO Light Position
- 3) Lights On Position
- 4) Lights and Fog Lights Position
- 5) Momentary Twist Up Position
- 6) Momentary Twist Down Position
- 7) Momentary Button (End of Arm)

Connected to External Wiper Control Arm with 6 states: (Need 5 Thresholds to detect all States)

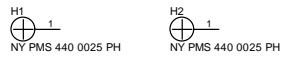
- 1) Wiper Off Position
- 2) Wiper Off Position with Button Pressed
- 3) Wiper On Position
- 4) Wiper On Position with Button Pressed
- 5) Momentary Wiper and Wash Position
- 6) Momentary Wiper and Wash Position with Button Pressed



Orderable: EVM, orderable	Designed for: Public Release	Mod. Date: 12/12/2016
TID #: TIDA-01237	Project Title: MSDI Switch Inputs TI Design	
Number: TIDA-01237 Rev: E2	Sheet Title:	
Standard Rev: Version control disabled	Assembly Variant: [No Variations]	Sheet: 4 of 5
Drawn By:	File: TIDA-01237 MSDI Resistor_Coded_Inputs_Si6DecB	http://www.ti.com
Engineer: John Griffith	Contact: http://www.ti.com/support	



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PCB Number: TIDA-01237
PCB Rev: E2

PCB LOGO
Texas Instruments

PCB LOGO
Pb-Free Symbol

PCB LOGO
FCC disclaimer

Variant/Label Table	
Variant	Label Text
001	Standard Version

LBL1
PCB Label
Size: 0.65" x 0.20"

ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Orderable: EVM, orderable	Designed for: Public Release	Mod. Date: 12/12/2016
TID #: TIDA-01237	Project Title: MSDI Switch Inputs TI Design	
Number: TIDA-01237 Rev: E2	Sheet Title:	Sheet: 5 of 5
Drawn By: John Griffith	Assembled Variant: [No Variations]	Contact: http://www.ti.com/support

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