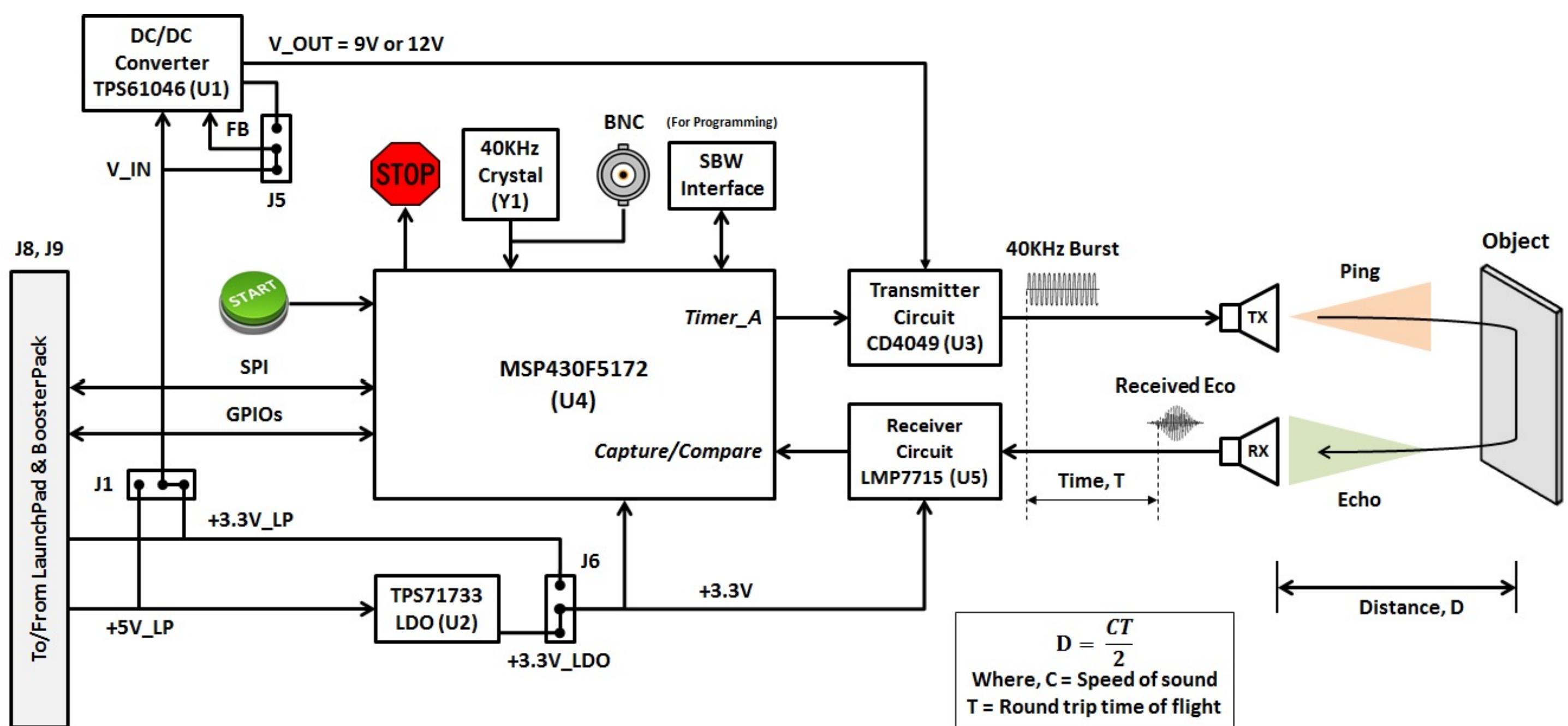


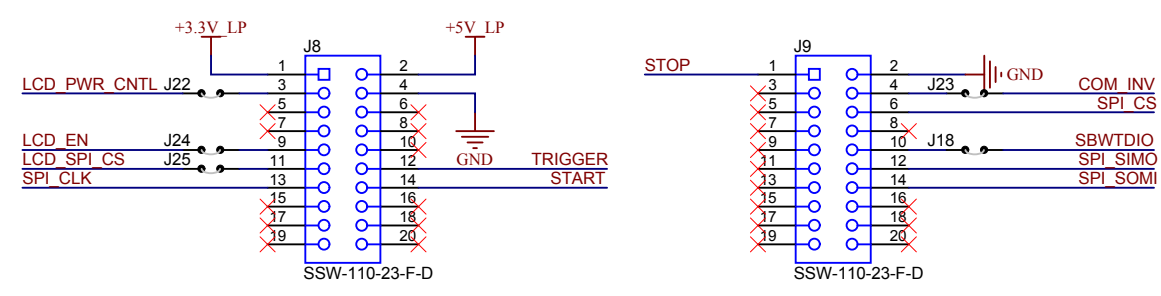
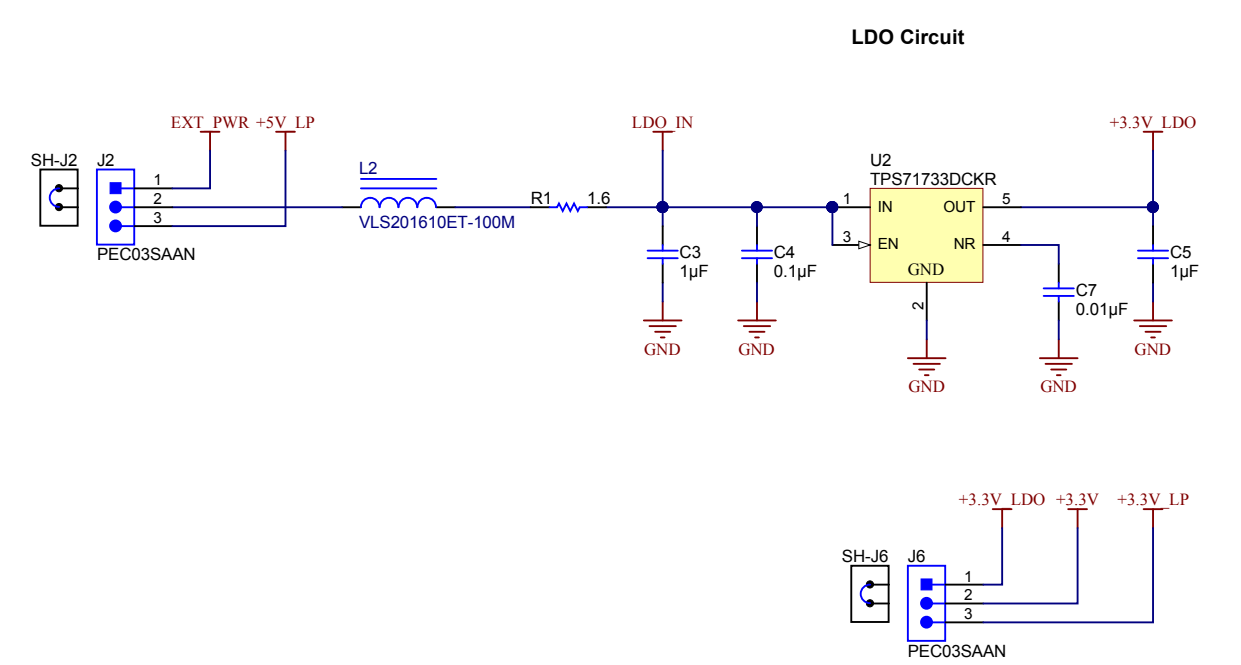
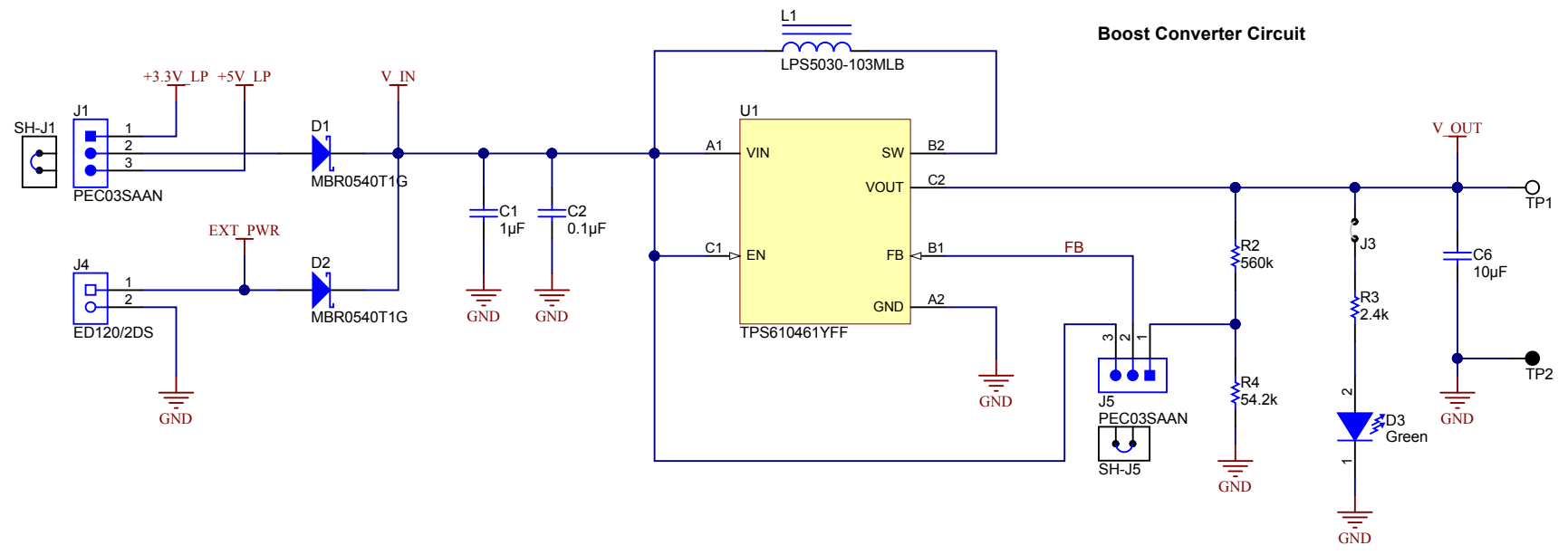
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



$$D = \frac{CT}{2}$$

Where, C = Speed of sound  
T = Round trip time of flight

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**J8 TO BP PIN MAPPING**

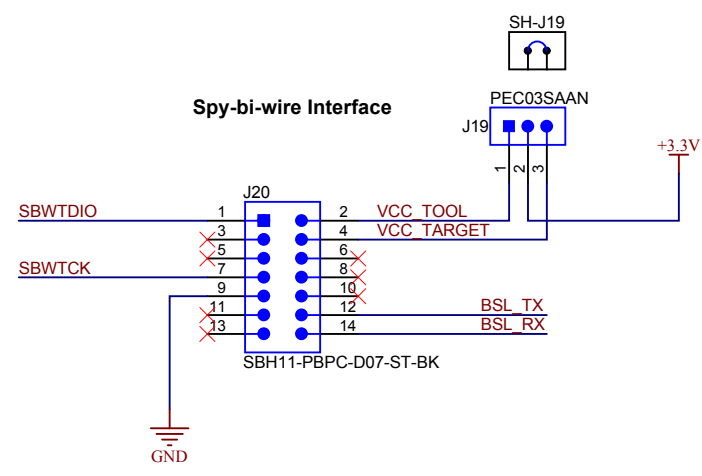
BP-1 <-- J8-1	J8-2 --> BP-21
BP-2 <-- J8-3	J8-4 --> BP-22
BP-3 <-- J8-5	J8-6 --> BP-23
BP-4 <-- J8-7	J8-8 --> BP-24
BP-5 <-- J8-9	J8-10 --> BP-25
BP-6 <-- J8-11	J8-12 --> BP-26
BP-7 <-- J8-13	J8-14 --> BP-27
BP-8 <-- J8-15	J8-16 --> BP-28
BP-9 <-- J8-17	J8-18 --> BP-29
BP-10 <-- J8-19	J8-20 --> BP-30

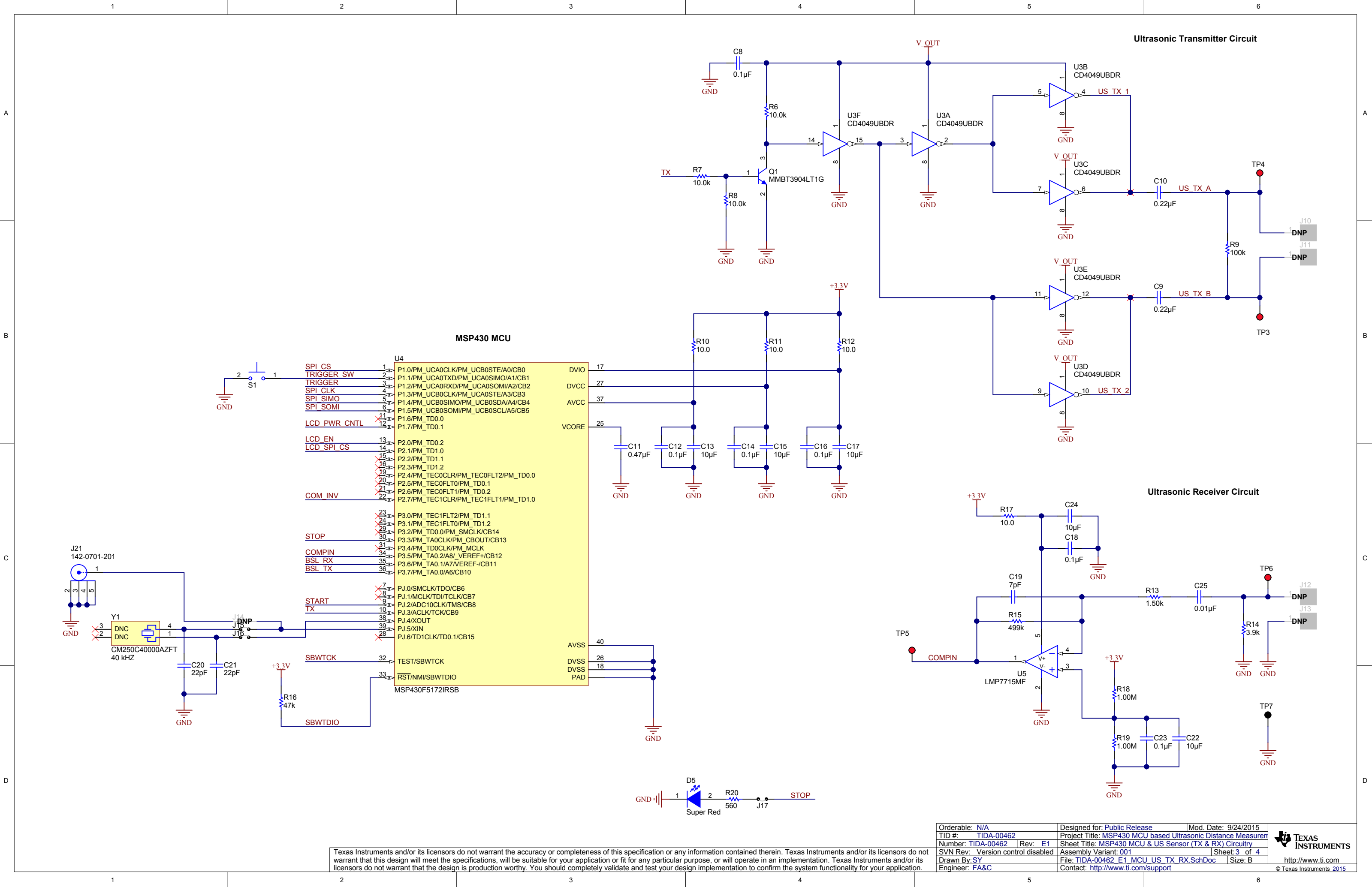
**J7 TO BP PIN MAPPING**

BP-40 <-- J7-1	J7-2 --> BP-20
BP-39 <-- J7-3	J7-4 --> BP-19
BP-38 <-- J7-5	J7-6 --> BP-18
BP-37 <-- J7-7	J7-8 --> BP-17
BP-36 <-- J7-9	J7-10 --> BP-16
BP-35 <-- J7-11	J7-12 --> BP-15
BP-34 <-- J7-13	J7-14 --> BP-14
BP-33 <-- J7-15	J7-16 --> BP-13
BP-32 <-- J7-17	J7-18 --> BP-12
BP-31 <-- J7-19	J7-20 --> BP-11

Note for user:

1. Ultrasonic measurement is issued either manually (TRIGGER\_SW) or via Launchpad (TRIGGER signal).
2. BoosterPack execute the state machine which triggers the TX signal to the ultrasound transducers.
3. When the ultrasound wave is received it is amplified and fed to the COMPIN.
4. If the echo signal is valid signal STOP LED lights up and same STOP signal is also fed to LaunchPad.





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Orderable: N/A	Designed for: Public Release	Mod. Date: 9/24/2015	 TEXAS INSTRUMENTS <a href="http://www.ti.com">http://www.ti.com</a> © Texas Instruments 2015
TID #: TIDA-00462	Project Title: MSP430 MCU based Ultrasonic Distance Measurement		
Number: TIDA-00462	Rev: E1	Sheet Title: MSP430 MCU & US Sensor (TX & RX) Circuitry	
SVN Rev: Version control disabled	Assembly Variant: 001		
Drawn By: SY	File: TIDA-00462_E1_MCU_US_TX_RX.SchDoc	Sheet: 3 of 4	
Engineer: FA&C	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	Size: B	



PCB Number: TIDA-00462  
PCB Rev: E1

PCB LOGO  
Texas Instruments

PCB LOGO  
ESD Susceptible


Label Table	
Variant	Label Text
001	TIDA-00462 REV: E1

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: N/A	Designed for: Public Release	Mod. Date: 9/1/2015	 http://www.ti.com © Texas Instruments 2015
TID #: TIDA-00462	Project Title: MSP430 MCU based Ultrasonic Distance Measurement		
Number: TIDA-00462	Rev: E1	Sheet Title: Hardware	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 4 of 4	
Drawn By: SY	File: TIDA-00462_E1_TID_Hardware.SchDoc		Size: B
Engineer: FA&C	Contact: http://www.ti.com/support		

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