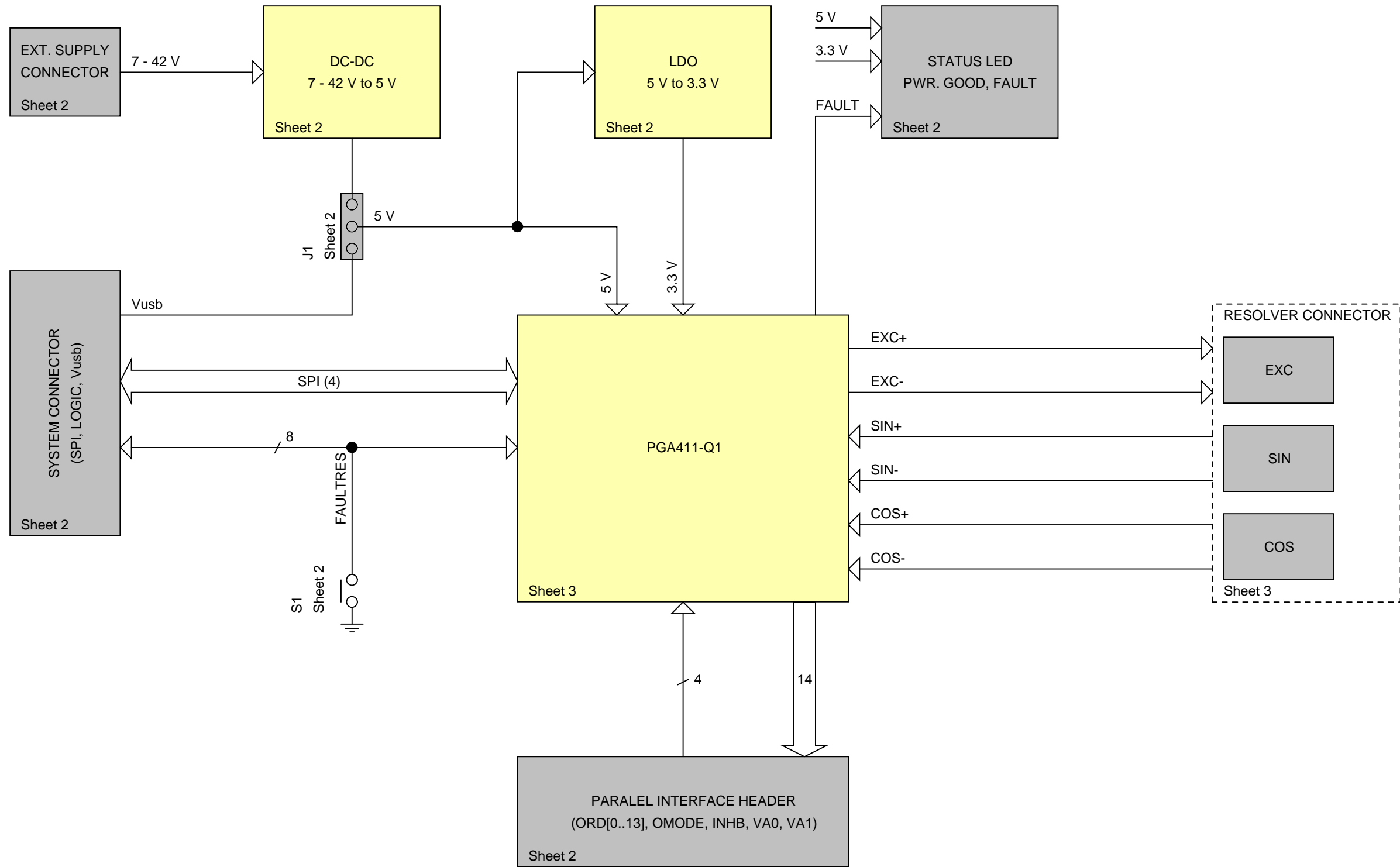


TIDA-00796 Automotive Resolver Frontend Block Diagram

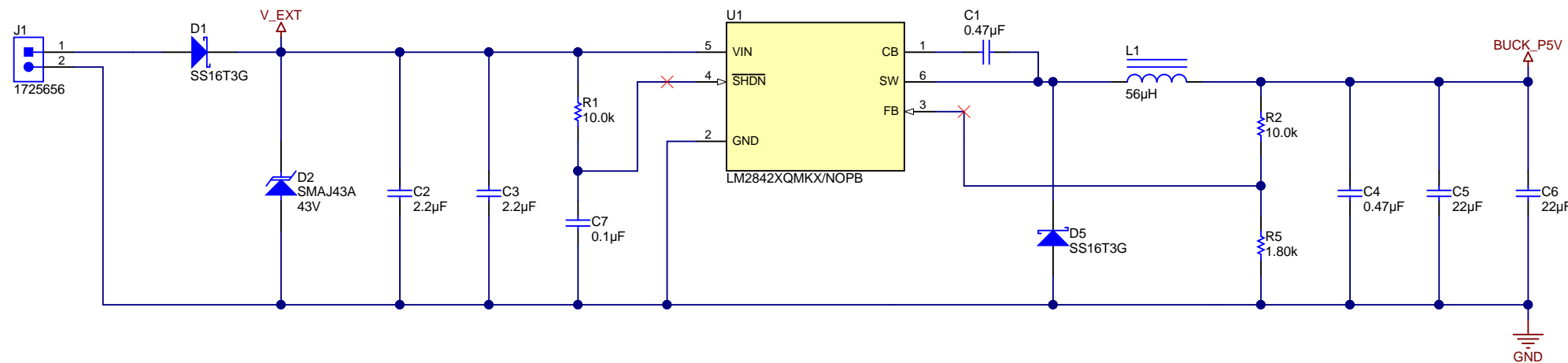
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



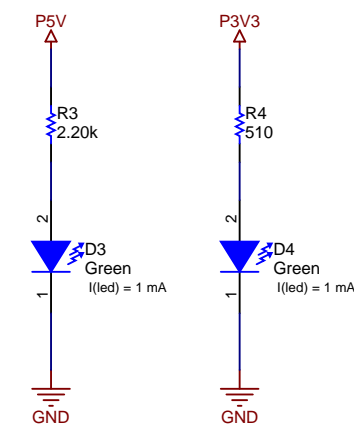
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TID #: TIDA-00796	Project Title: Automotive single-chip RTD		
Number: TIDA-00796	Rev: E2	Sheet Title: Block diagram	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 3	
Drawn By: Jiri Panacek	File: TIDA-00796_CoverSheet_SchDoc	Size: B	
Engineer: Jiri Panacek	Contact: http://www.ti.com/support		

7 - 42 V to 5 V DC-DC BUCK CONVERTER (fsw = 550 kHz)

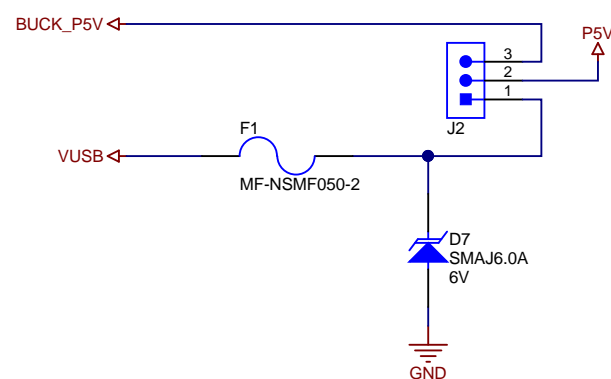


POWER GOOD SIGNALIZATION

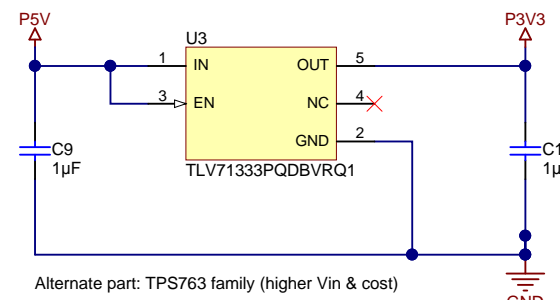


Used LEDs (Würth) are very bright even at 1 mA !

EXTERNAL POWER / USB (CONTROLSTICK)

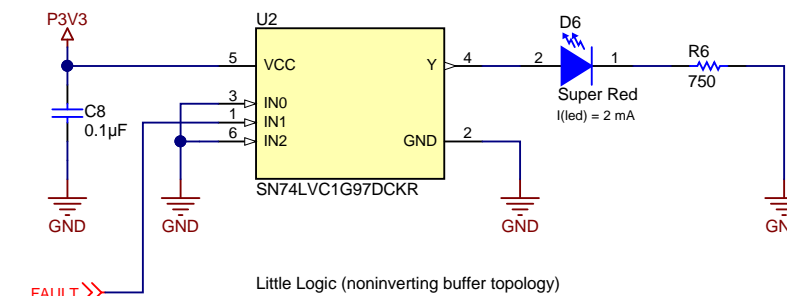


3.3 V LOGIC POWER SUPPLY



Alternate part: TPS763 family (higher Vin & cost)

FAULT = LED ON SIGNALIZATION



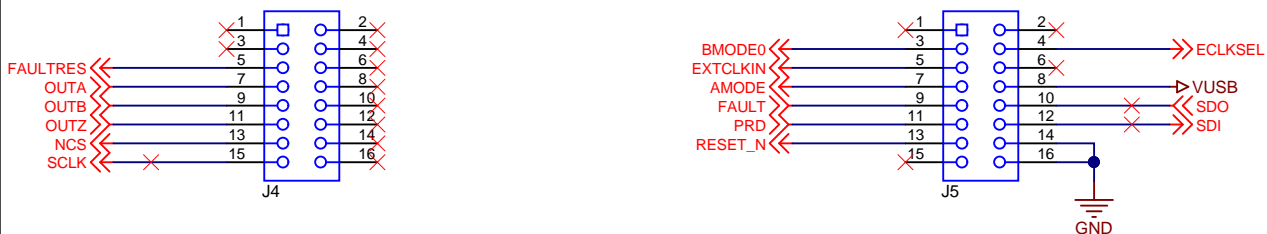
Little Logic (noninverting buffer topology)

SYSTEM CONNECTOR

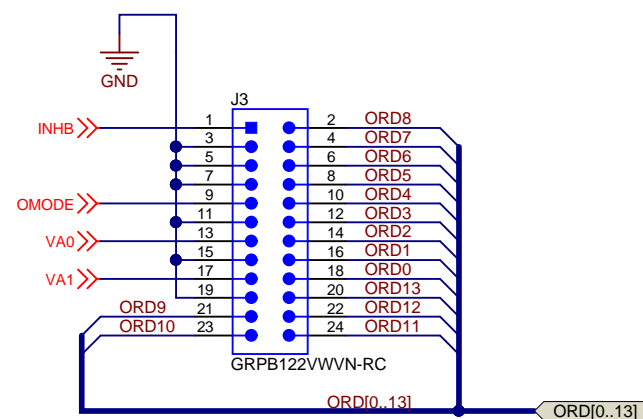
Piccolo F28069 controlSTICK pinout
(TOP view, USB connector on left)

	A	B	C	D
1	ADC-A6 / COMP3 (+VE)	ADC-A2 / COMP1 (+VE)	ADC-A0	3V3
2	ADC-A4 / COMP2 (+VE)	ADC-B1	EPWM-4B / GPIO-07	TZ1 / GPIO-12
3	SCL-A / GPIO-33	ADC-B6 / COMP3 (-VE)	EPWM-4A / GPIO-06	ADC-A1
4	SDA-A / GPIO-32	ADC-B0	EPWM-3B / GPIO-05	5V0 (Disabled by Default)
5	EPWM-1A / GPIO-00	ADC-B4 / COMP2 (-VE)	EPWM-3A / GPIO-04	SPISOMI-A / GPIO-17
6	EPWM-1B / GPIO-01	ADC-A5	EPWM-2B / GPIO-03	SPISIMO-A / GPIO-16
7	SPISTE-A / GPIO-19	ADC-B2 / COMP1 (-VE)	EPWM-2A / GPIO-02	GND
8	SPICLK-A / GPIO-18	GPIO-34 / (LED)	PWM1A-DAC (Filtered)	GND

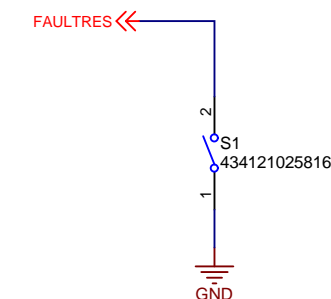
Mirroring needed for PIN to PIN compatibility with control stick



PARALEL INTERFACE

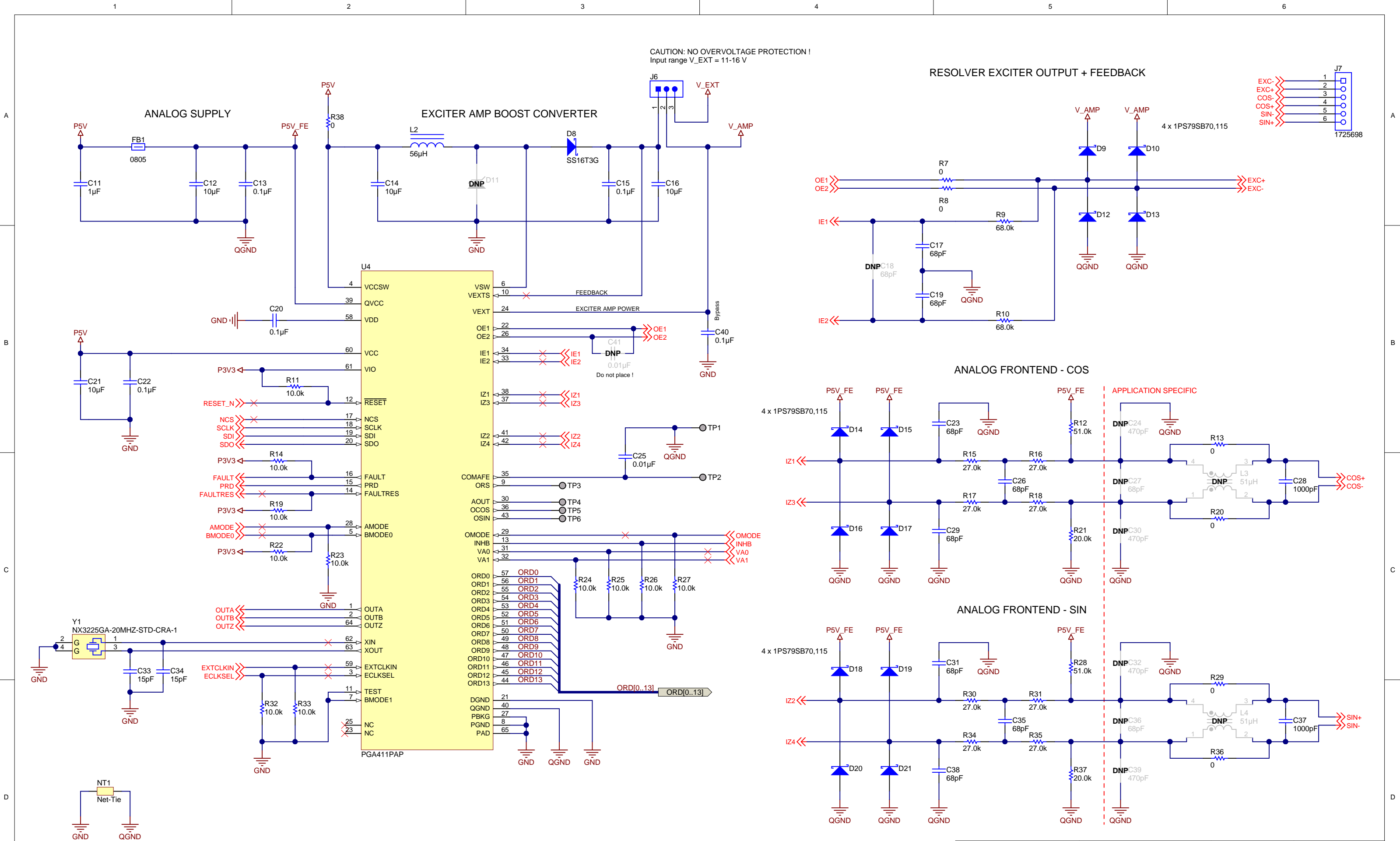


FAULTRES HANDLING

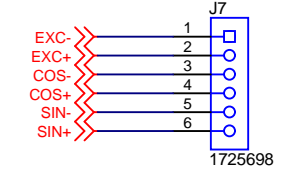


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TID #: TIDA-00796	Project Title: Automotive single-chip RTD	Sheet: 2 of 3	
Number: TIDA-00796	Rev: E2	File: TIDA-00796_Supply_SchDoc	http://www.ti.com
SVN Rev: Version control disabled	Assembly Variant: 001	Contact: http://www.ti.com/support	
Drawn By:	Engineer: Jiri Panacek	Size: B	© Texas Instruments 2015



CAUTION: NO OVERVOLTAGE PROTECTION !
Input range V_EXT = 11-16 V



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Number: TIDA-00796	Rev: E2	Sheet Title: PGA411
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 2 of 3
Drawn By:	File: TIDA-00796_PGA411.SchDoc	Size: B
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PCB Number: TIDA-00796
PCB Rev: E2

PCB LOGO
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PCB LOGO
Pb-Free Symbol

PCB LOGO
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ZZ1
Label Assembly Note
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ZZ2
Assembly Note
This Assembly Note will show in the PcbDoc and associated outputs

ZZ3
Assembly Note
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ZZ4
Assembly Note
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Number: TIDA-00796	Rev: E2	Sheet Title: Hardware	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 3 of 3	
Drawn By: Jiri Panacek	File: TIDA-00796_Hardware.SchDoc	Size: B	
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