

NOAO

ENGINEERING CHANGE ORDER

BOARD NAME <u>TORRENT CCD Analog Front End (AFE)</u>	ECO# TRNT-025	DATE <u>14OCT2011</u>
BRD SERL# <u>030</u> REV <u> </u>	ART# <u> </u>	
PN# <u> </u> REV <u> </u>		REV <u> </u>
ASBLY# <u>TRNT-EL-04-0004</u> REV <u>B</u>	PCB# <u>TRNT-EL-04-1004</u>	REV <u>B</u>
BOM# <u>TRNT-EL-04-4004</u> REV <u>B</u>	SCH# <u>TRNT-EL-04-2004</u>	REV <u>B</u>
COGNIZANT ENGR <u>Peter Moore / Ron George</u>	APPROVD <u>Peter Moore</u>	

REASON FOR MODIFICATION:

Optimization of AFE to bring performance within requirement boundaries.
Reference acrobat file AFE_RB_Review_pcm_r2.pdf for notes

DRAWINGS AFFECTED:	NEW REV
TRNT-EL-04-0004	C
TRNT-EL-04-1004	C
TRNT-EL-04-2004	C
TRNT-EL-04-3004	C
TRNT-EL-04-4004	C

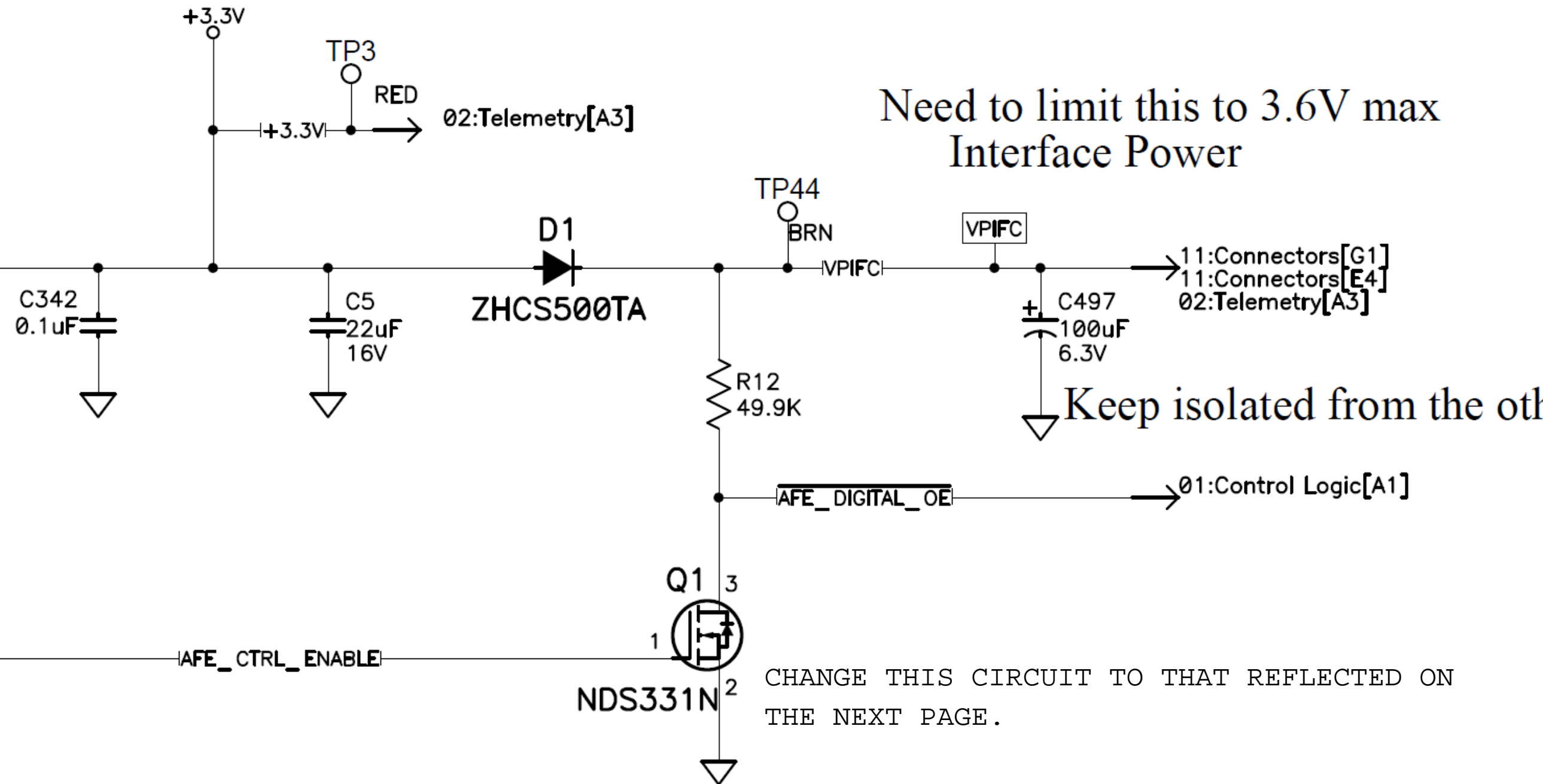
DESCRIPTION OF MODIFICATION:

1. fix connection between U107 and U117 to be in the correct order.
2. pg1 R63, R68, R178, R152 was 75 ohm is 20 ohm
3. Pg1 U107 and bypass remove from +3.3V put on VPIFC U107-20, Cap C211 & C203
4. remove U117-1, U117-28, U102-1, U102-28 from ~AFE_DIGITAL_OE SIGNAL, put all pins to GND
5. Resistor location RA6:D to become a signal discrete resistor of 3.32K, R102 was 3.32K, is 2.0K
6. Add mosfet and resistor to VPIFC circuit on Pg 3 see detailed mark up
7. pg3 change text near TP48 to +31.6V / +2.74V
8. pg3 change text near TP53 to -3.3V / -32.2V
9. pg 3 R72 was 301K, is 274K
10. pg 3 R73 was 2.87M, is 3.16M
11. pg 3 R87 was 49.9K, is 51.1K
12. Pg 8 & 9 all video channels add 51.1K resistor to ground on same node as each of the channel test points TP39, TP26, TP17, TP8
13. Pg 8 & 9 all video channels change resistor in integrator stage, from 2.0K to 1.18K. R246, R250, R221, R225, R199, R203, R175, R180
14. Pg 8 & 9 all video channels change cap in integrator stage, from 330pF to 1000pF PPS type film capacitor C108, C141, C171, C195
15. Pg 8 & 9 all video channels change cap in Diff Drvr stage, from open to 82pF C314, C284, C248, C225
16. Pg 8 & 9 all video channels add 2700pF Cap across the input pins 3 & 4 of each ADC U76, U85, U94, U106
17. Add 2.0K 0603 resistor from Q1 pin 3 (D) to GND, not installed, unless Q1 does not act as active pull down as expected.
18. Change value of R88, R105, R123, R141 from 301K to 10K ohms
19. Add 0.1uF Cerc cap from U128:4 to gndV

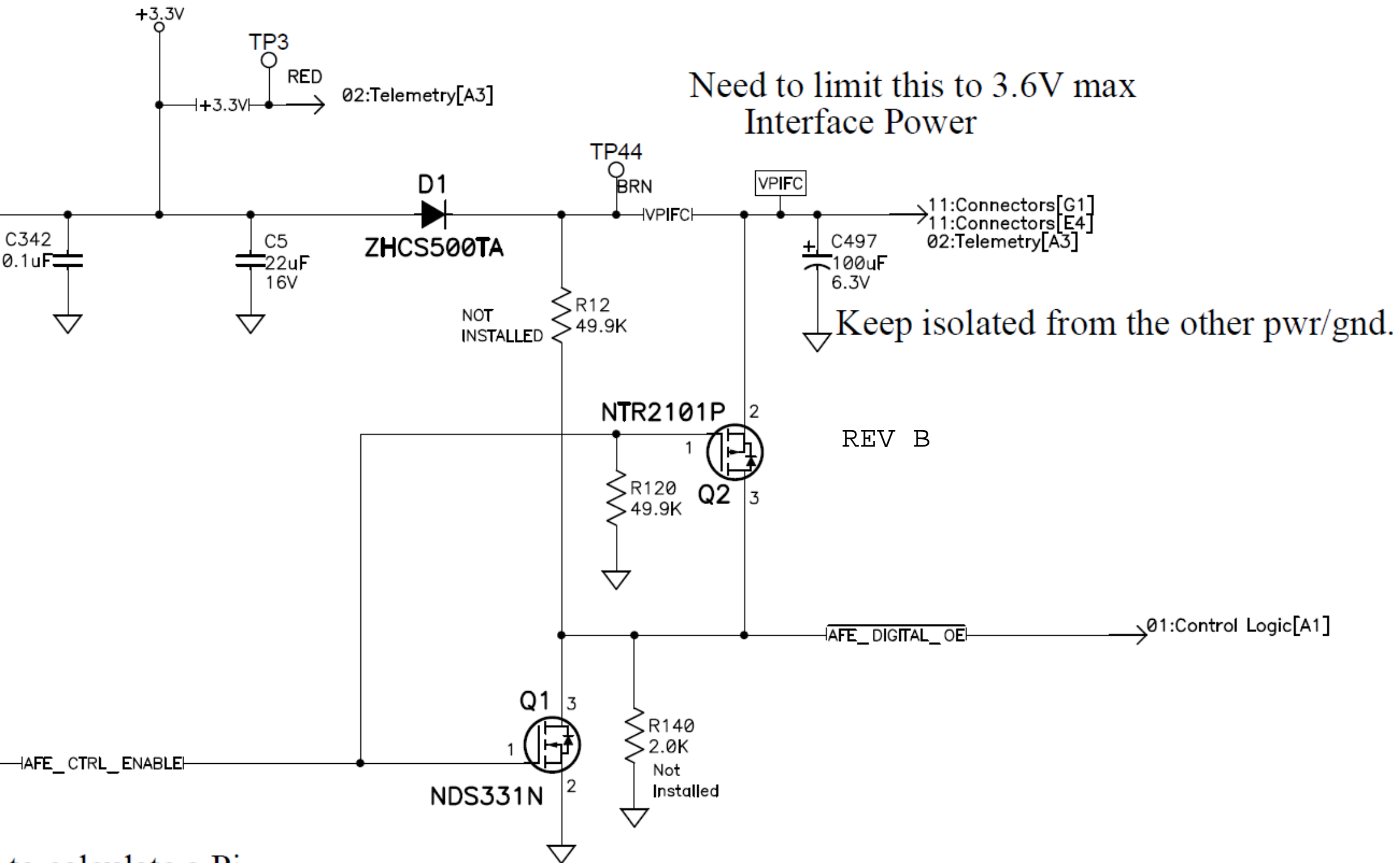
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This section to be completed by reviewing authority			
Review Date:		Reviewer(s):	
Disposition:	<input type="checkbox"/> Approved	<input type="checkbox"/> Denied	<input type="checkbox"/> Request Additional Information

Main Power



Main Power



to calculate a Pi