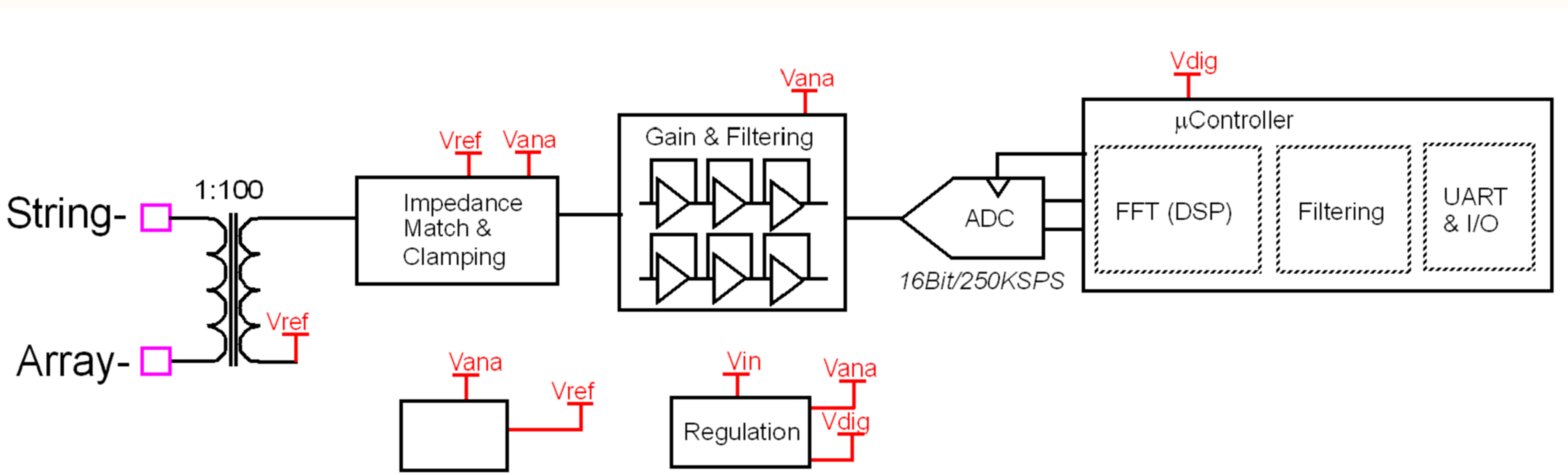
Revision History	
Revision	Notes



Designed for: National Semiconductor	Mod. Date: 4/19/2012	
Project: SM73201 - ARCTest		
Sheet Title: Arcturus Block Diagram Sheet		Sheet: 1 of 7
Size: B	Schematic: 870600620	Rev: 005
Assembly Variant: [No Variations]		
File: SM73201-ARC QFN-56 Block Diag.SchDoc		
Contact: http://www.national.com/support		

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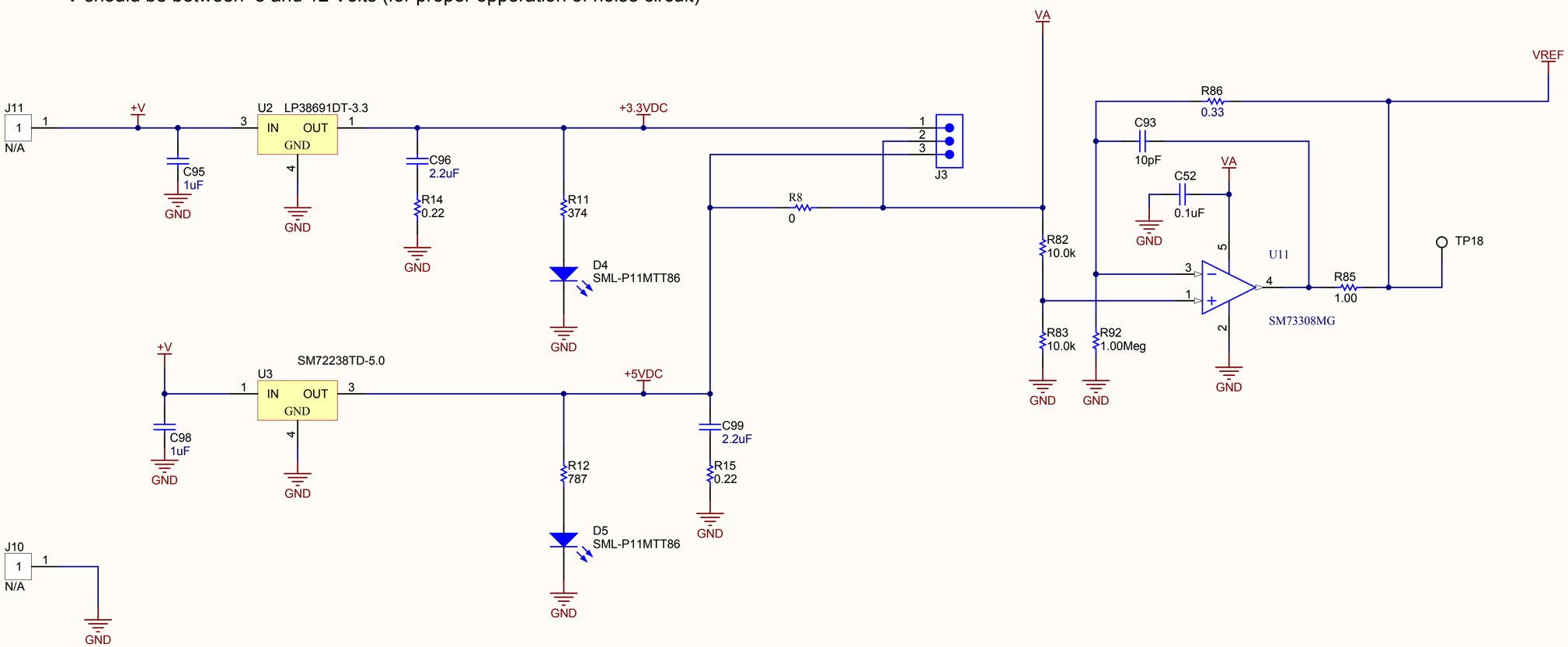
http://www.national.com

+V should be between 8 and 12 Volts (for proper opperation of noise circuit)



Designed for: National Semiconductor	Mod. Date: 6/18/2012	
Project: SM73201 - ARCTest		
Sheet Title: Arcturus Power Management		Sheet: 2 of 7
Size: B	Schematic: 870600620	Rev: 005
Assembly Variant: [No Variations]		
File: SM73201-ARC QFN-56 Power Mgmt.SchDoc		
Contact: http://www.national.com/support		

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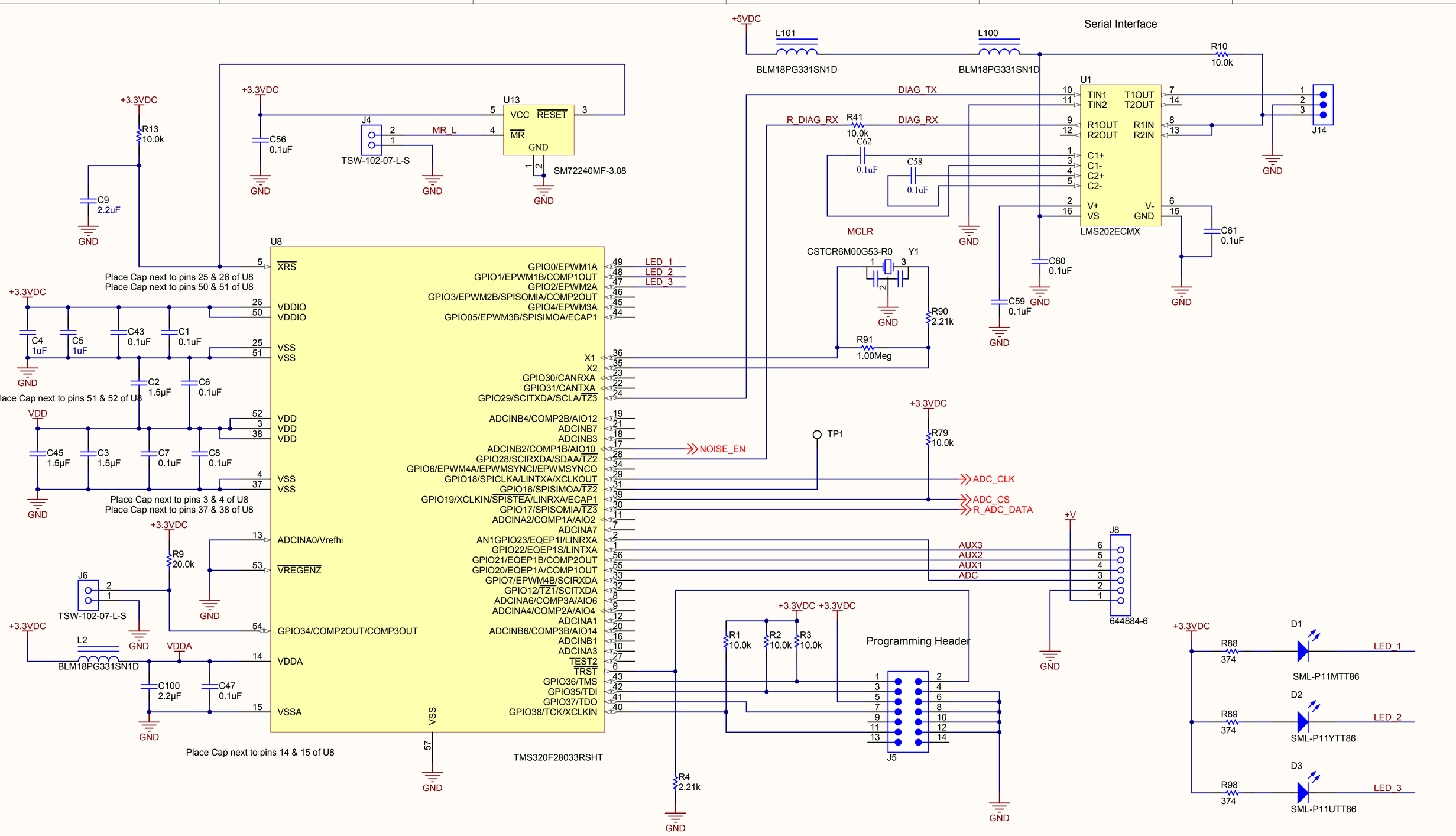

Plug holes in thermal pad under U8 to prevent solder problems

Designed for: National Semiconductor	Mod. Date: 6/18/2012	
Project: SM73201 - ARCTest		
Sheet Title: Arcturus DSP		Sheet: 3 of 7
Size: B	Schematic: 870600620	Rev: 005
Assembly Variant: [No Variations]		
File: SM73201-ARC QFN-56 MCU.SchDoc		
Contact: http://www.national.com/support		

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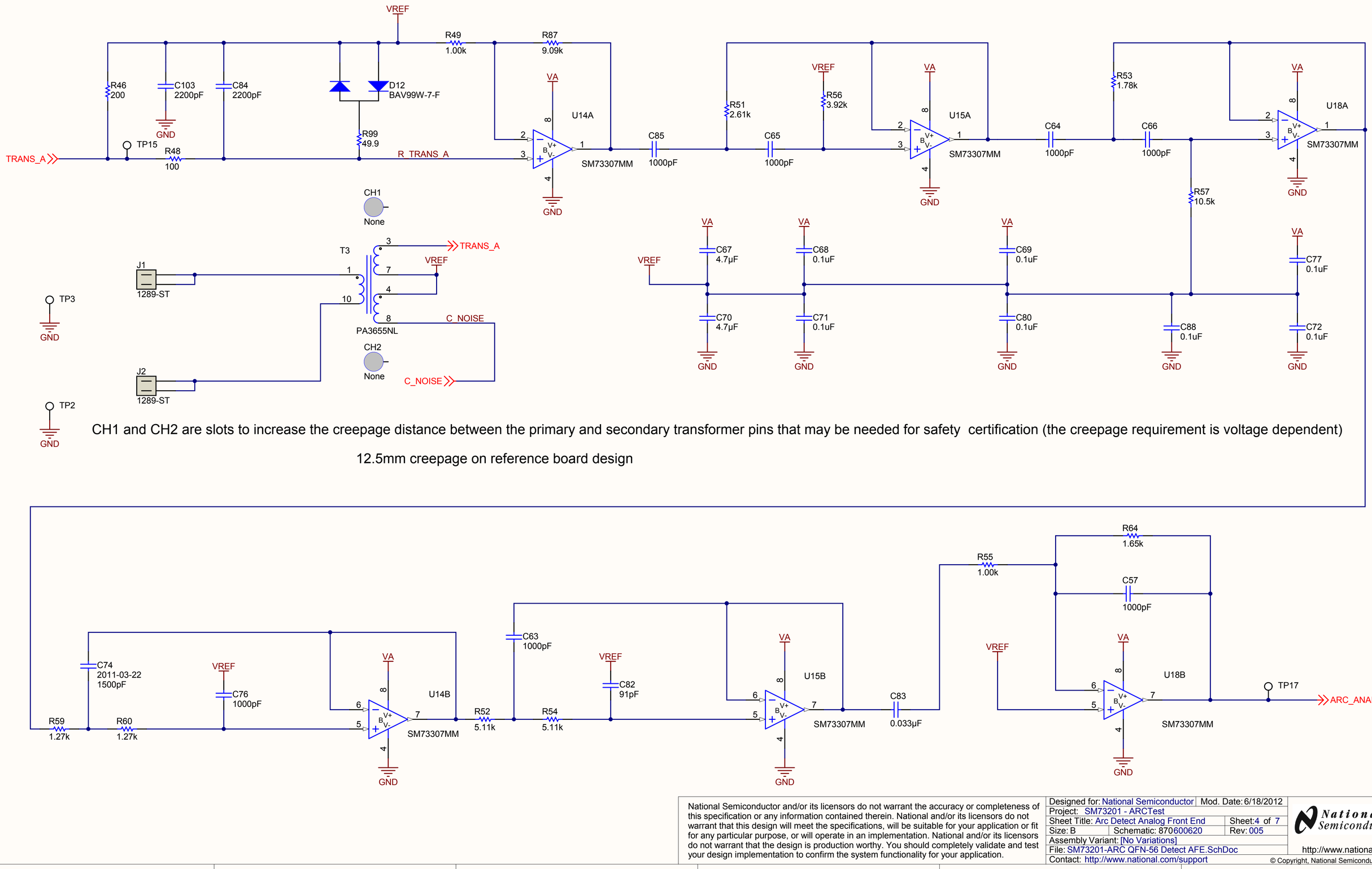

CH1 and CH2 are slots to increase the creepage distance between the primary and secondary transformer pins that may be needed for safety certification (the creepage requirement is voltage dependent)

12.5mm creepage on reference board design

Designed for: National Semiconductor	Mod. Date: 6/18/2012	
Project: SM73201 - ARCTest		
Sheet Title: Arc Detect Analog Front End		Sheet: 4 of 7
Size: B	Schematic: 870600620	Rev: 005
Assembly Variant: [No Variations]		
File: SM73201-ARC QFN-56 Detect AFE.SchDoc		
Contact: http://www.national.com/support		

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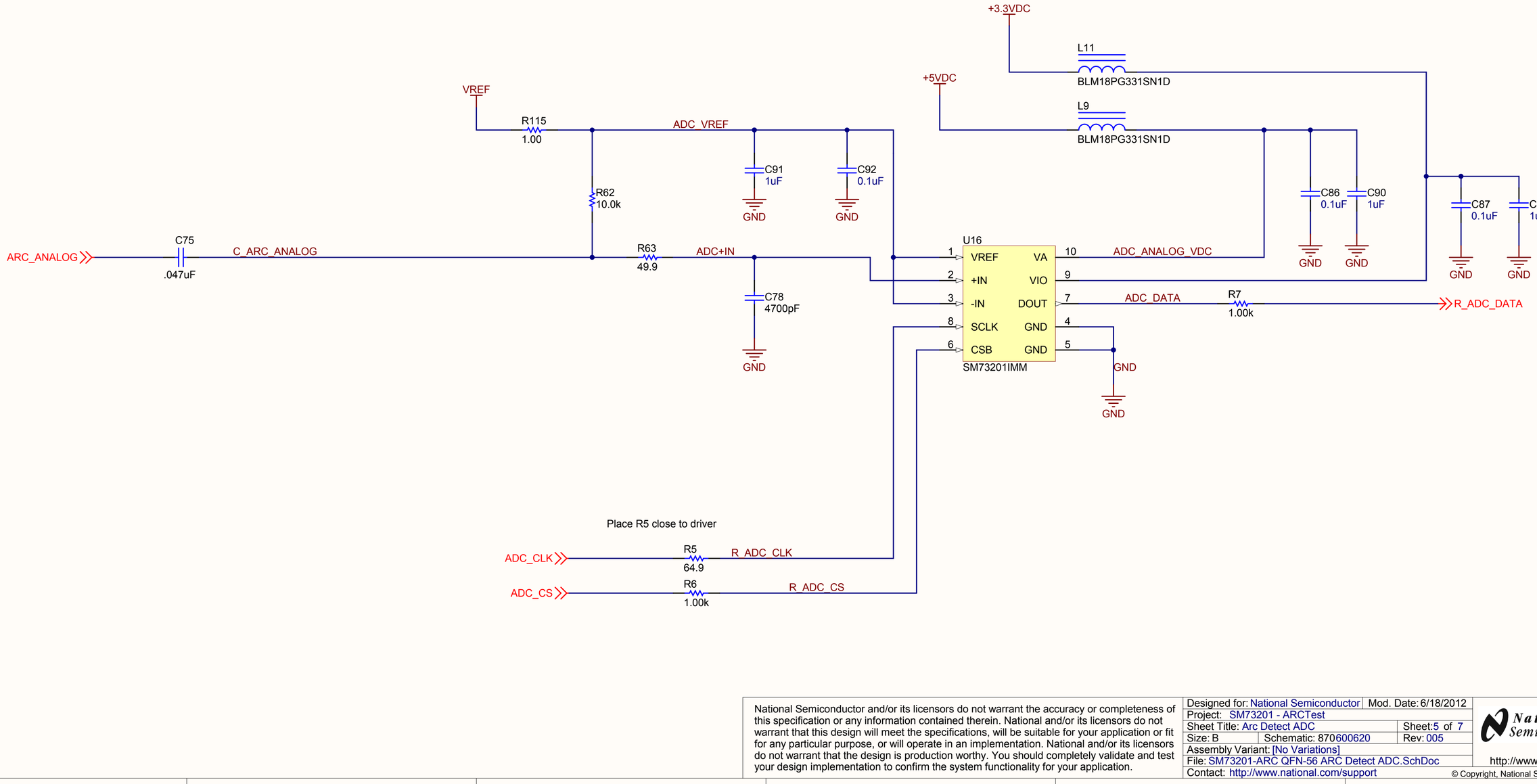

Designed for: National Semiconductor		Mod. Date: 6/18/2012
Project: SM73201 - ARCTest		
Sheet Title: Arc Detect ADC		Sheet: 5 of 7
Size: B	Schematic: 870600620	Rev: 005
Assembly Variant: [No Variations]		
File: SM73201-ARC QFN-56 ARC Detect ADC.SchDoc		
Contact: http://www.national.com/support		

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PCB Part Number: 551600620-005 REV A

Board Mounting Hardware

H1 4N37PF@S

H2 4N37PF@S

H3 29311

H4 29311

FID1 FID2 FID3 FID4 FID5 FID6

T2

Board outline template

Designed for: National Semiconductor	Mod. Date: 4/16/2012	
Project: SM73201 - ARCTest		
Sheet Title: Arcturus Hardware		Sheet: 6 of 7
Size: B	Schematic: 870600620	Rev: 005
Assembly Variant: [No Variations]		
File: SM73201-ARC QFN-56 Hardware.SchDoc		
Contact: http://www.national.com/support		

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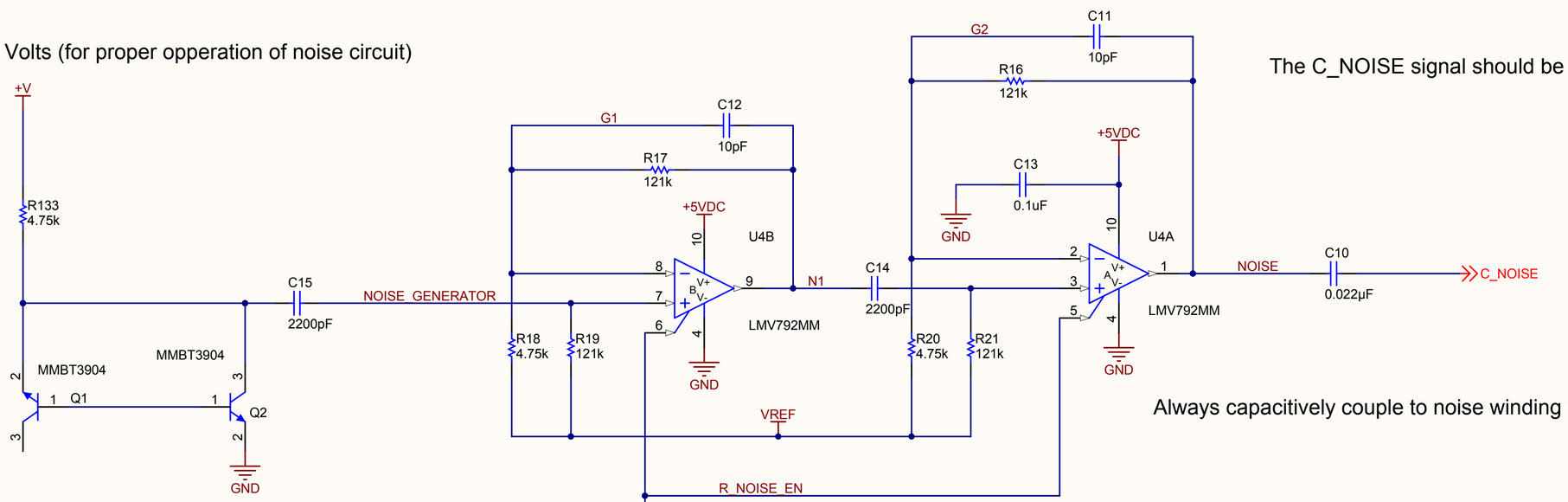
When using the PA3655NL transformer the NOISE signal should be at least 300 mV p-p for reliable opperation

+V should be between 8 and 12 Volts (for proper opperation of noise circuit)

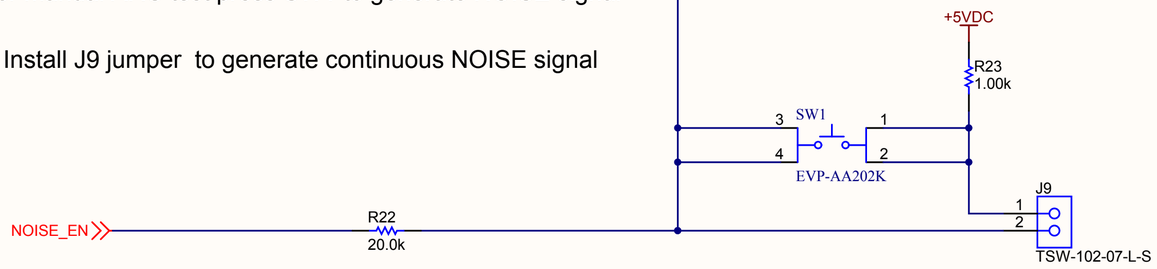
The C_NOISE signal should be about 100 mV p-p



Always capacitively couple to noise winding on transformer

For manual ARC test press SW1 to generate NOISE signal

Install J9 jumper to generate continuous NOISE signal



For CPU ARC test J9 must not be installed then drive NOISE_EN signal (GPIO6) high to generate NOISE signal

Designed for: National Semiconductor	Mod. Date: 6/18/2012	
Project: SM73201 - ARCTest		
Sheet Title: Arc Detect Filter		Sheet: 7 of 7
Size: B	Schematic: 870600620	Rev: 005
Assembly Variant: [No Variations]		
File: SM73201 - ARC QFN-56 Test.SchDoc		
Contact: http://www.national.com/support		

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