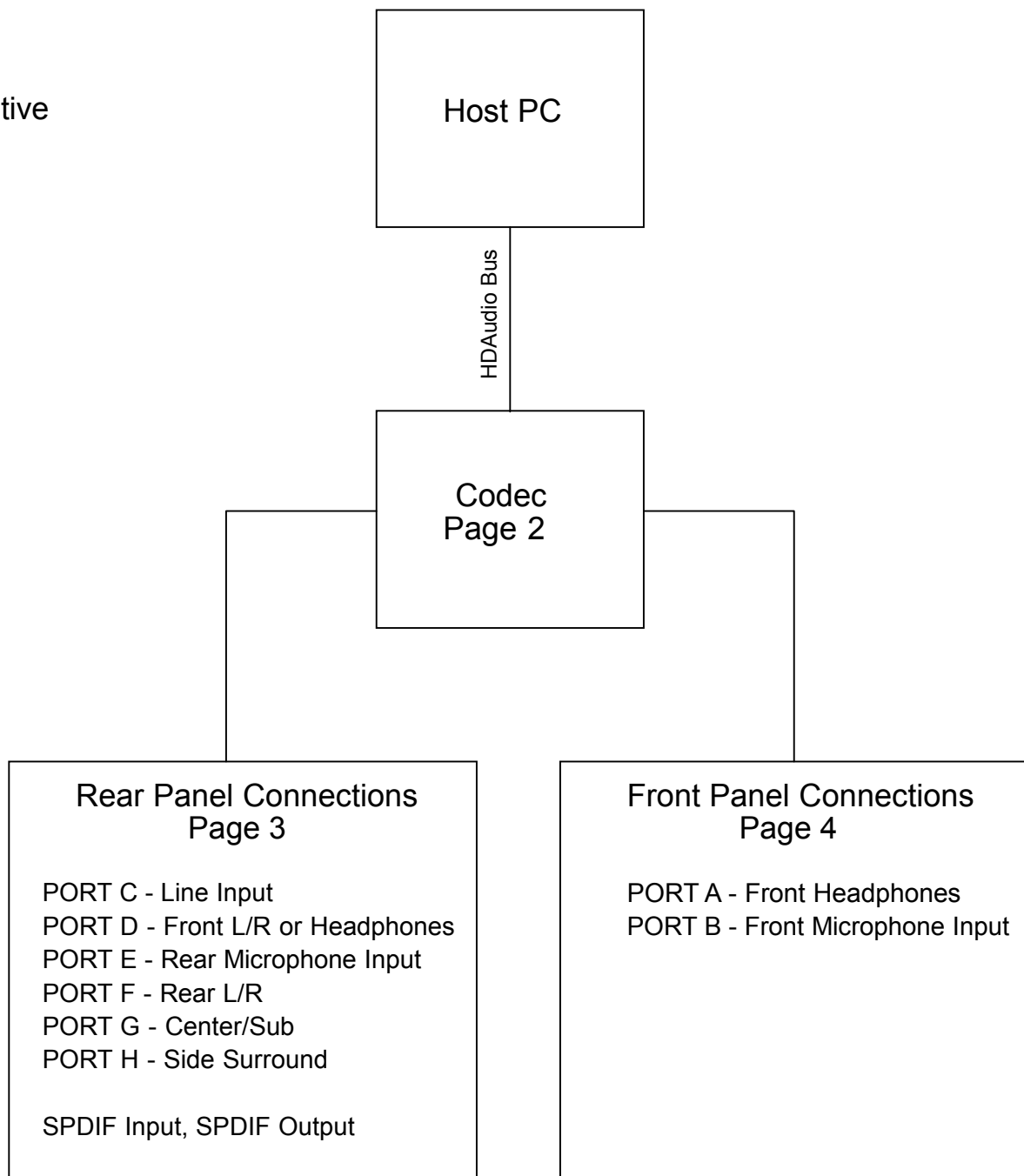
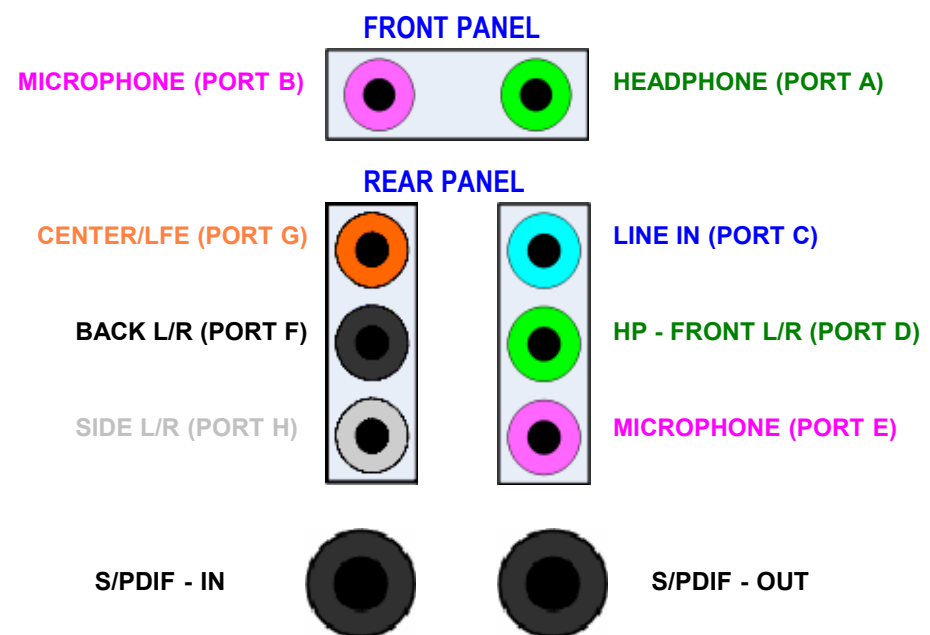



TEMPO 92HD68Fx/92HD68Ex/92HD68Dx BASIC REFERENCE DESIGN

The TEMPO 92HD68Fx (10-channel with content protection), 92HD68Ex (10-channel), and 92HD68Dx (8-channel) are a family of High Definition Audio (HDA) codecs.

This schematic shows a basic reference design for a system supporting multi-streaming with 7.1 surround sound. The front panel connector supports a headphone output and MIC input for real-time communications, and the rear panel jacks have 7.1 surround sound output, two additional inputs, and S/PDIF In and Out. Check with your TEMPO support representative for examples and requirements of other applications.



REV	DATE	DESCRIPTION	CHANGED BY
A	09Jun15	Release	KAL



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Title Overview			
Size Custom A	Rev A	Document Number Tempo 92HD68x Basic Reference Design	HDA PC Audio
Date: Tuesday, June 09, 2015			Sheet 1 of 4

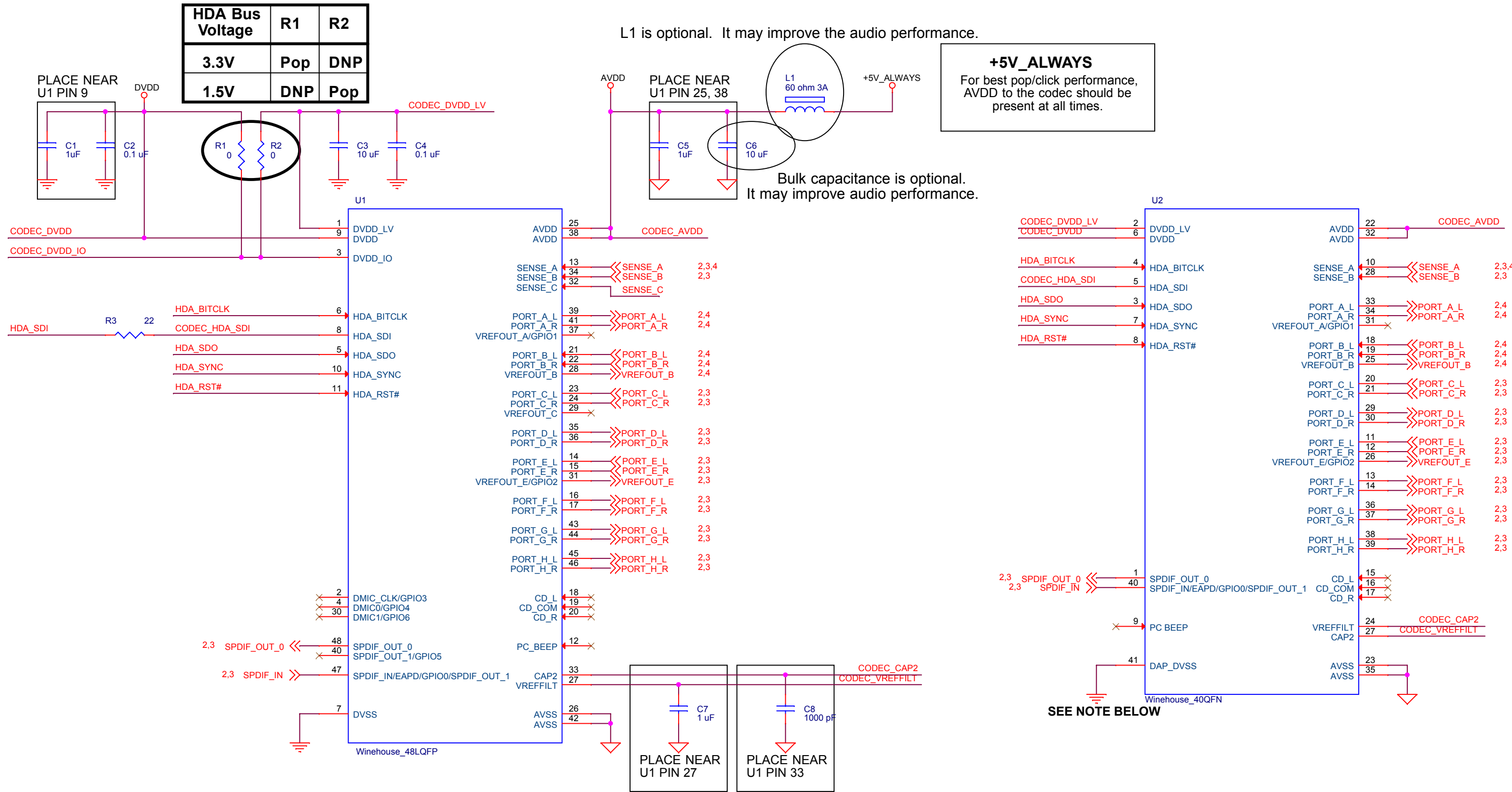
HDA Bus Voltage	R1	R2
3.3V	Pop	DNP
1.5V	DNP	Pop

L1 is optional. It may improve the audio performance.

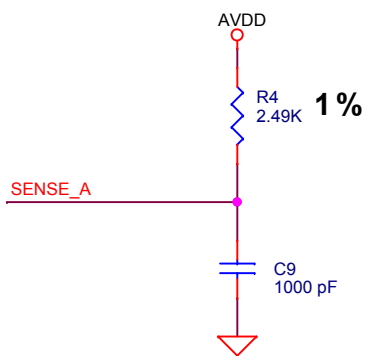
+5V_ALWAYS

For best pop/click performance, AVDD to the codec should be present at all times.

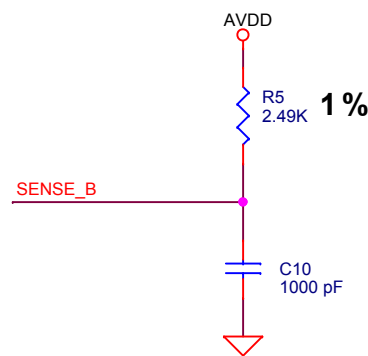
Bulk capacitance is optional. It may improve audio performance.



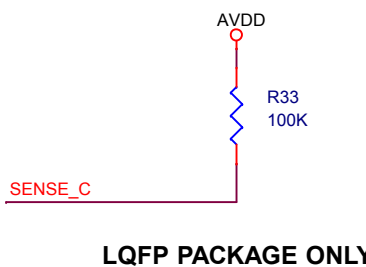
PLACE CLOSE TO U1



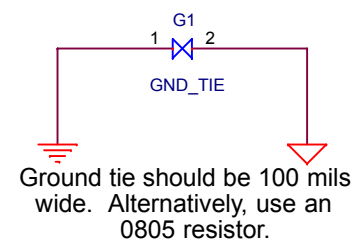
PLACE CLOSE TO U1



PLACE CLOSE TO U1



**PLACE UNDER U1
LQFP PACKAGE ONLY**

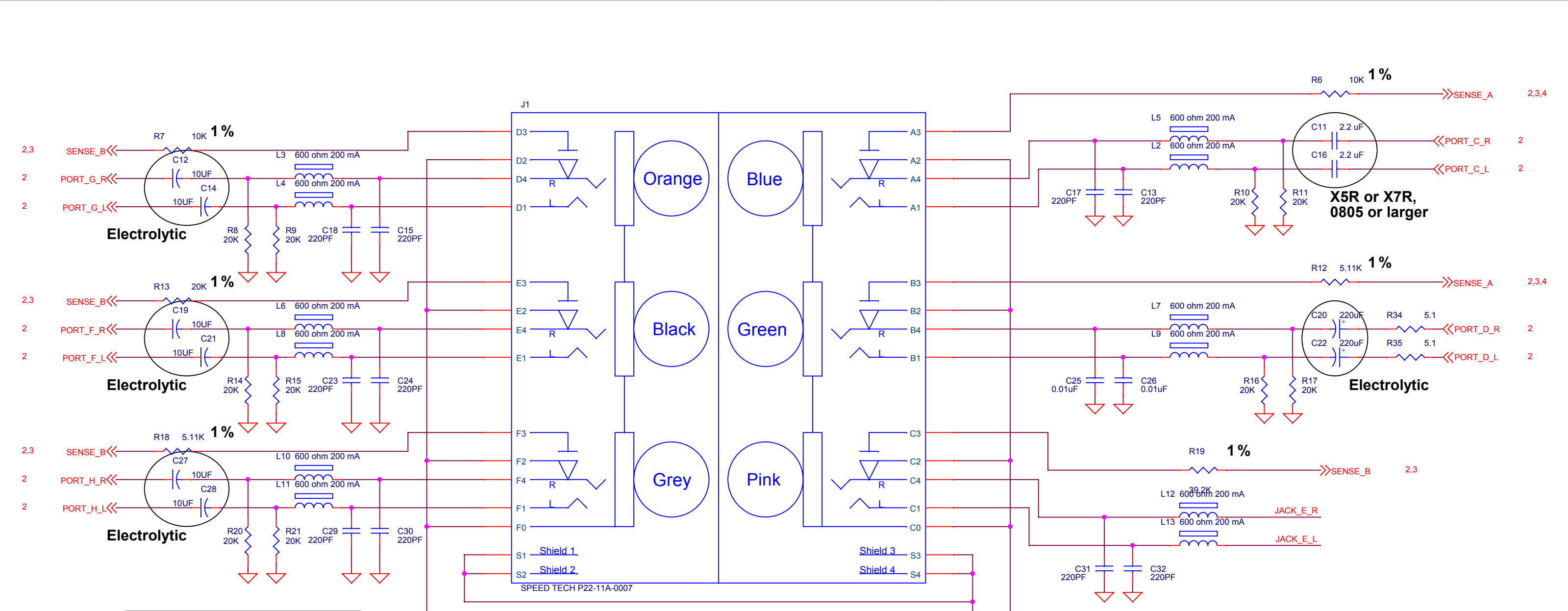


QFN package should use the DAP pad (Pin 41) to short DGND and AGND together using multiple vias to both connections.

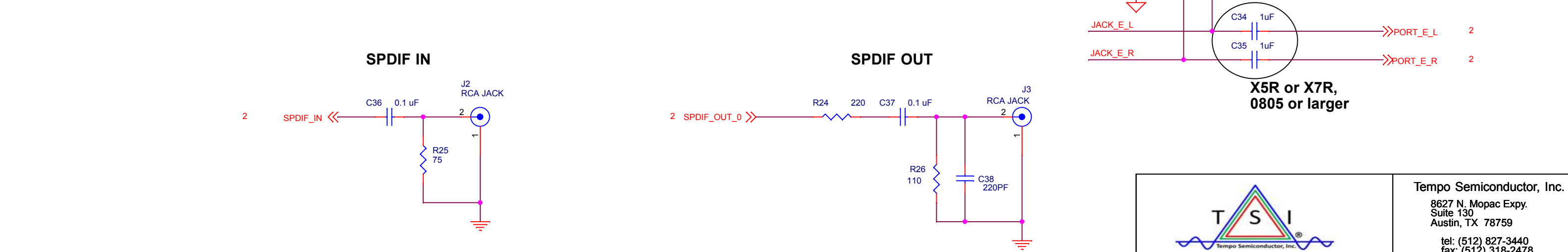



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L2 thru L13 are TDK, MMZ1608Y601B, 600 ohm, 500mA, 25%. Substitutes are: Murata BLM18BD601SN1 TAIYO YUDEN LF BK 1608HM601-T

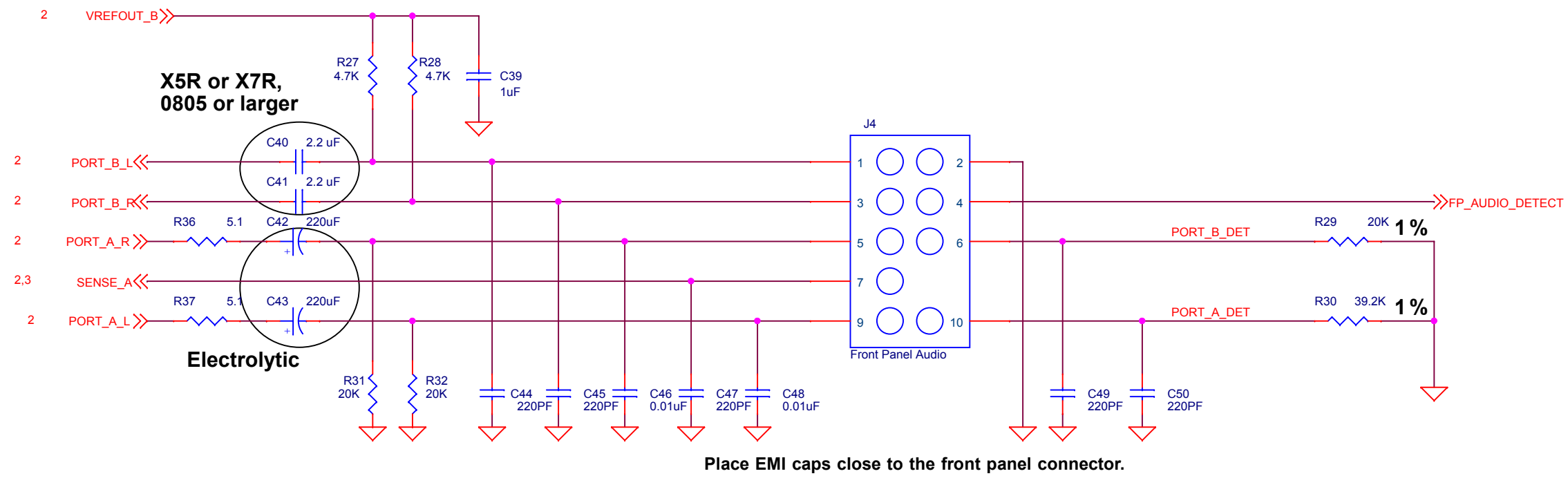




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Title Rear Jacks			Date: Tuesday, June 09, 2015		
Size Custom A	Rev A	Document Number Tempo 92HD68x Basic Reference Design	HDA PC Audio		
Sheet 3 of 4					



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Title Front Jacks			
Size Custom A	Rev A	Document Number Tempo 92HD68x Basic Reference Design	HDA PC Audio
Date: Tuesday, June 09, 2015			Sheet 4 of 4