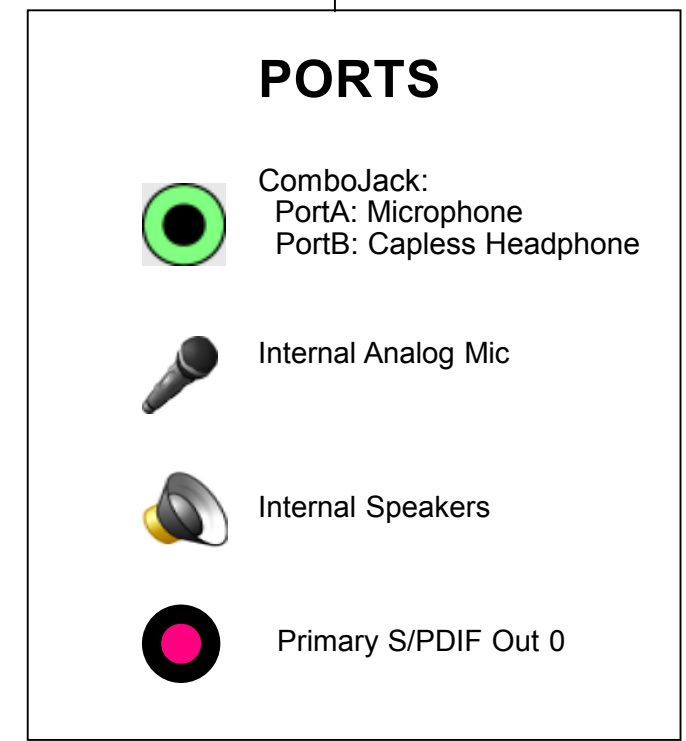
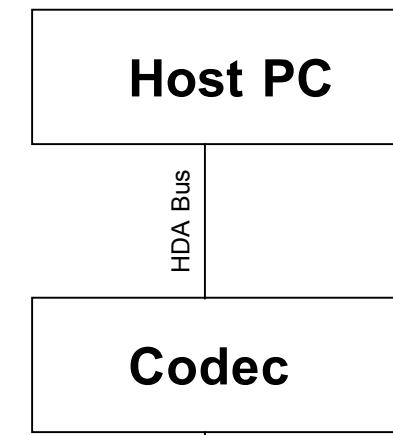
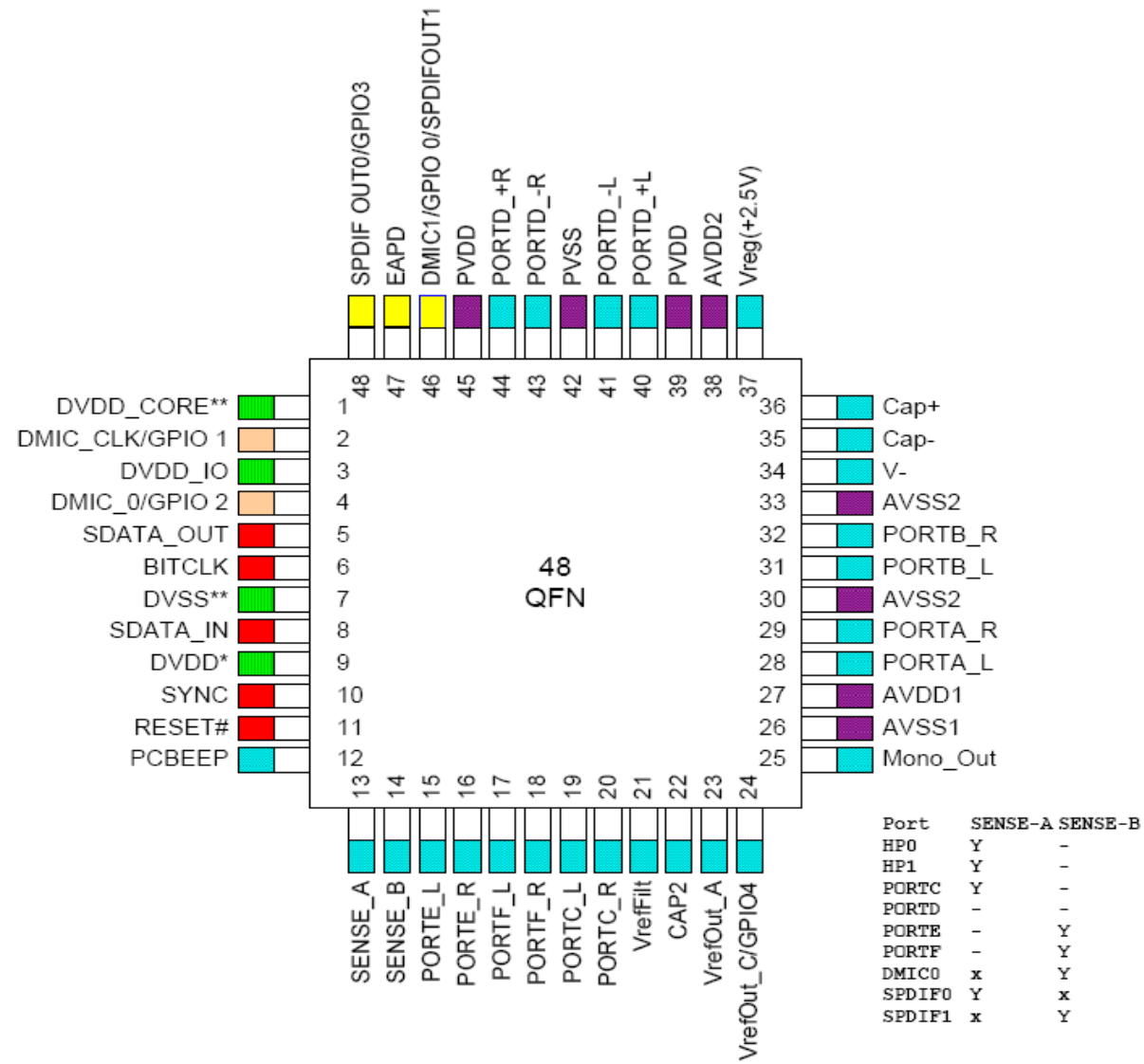


Tempo 92HD91Bx REFERENCE SCHEMATICS

The Tempo 92HD91Bx is family of 4-channel High Definition Audio (HDA) codecs. These codecs provide high-quality 2 channel audio with simultaneous RTC (VoIP), capless headphone output, 2W per channel stereo speaker amplifier(ClassD), up to four digital microphones, and dual SPDIF output ports (to support on-board HDMI). For more information on these codecs, and a specific breakdown of features supported by each codec, please contact your Tempo support representative.

This schematic is a basic mobile reference design with a combo jack(stereo capless headphone output and microphone), stereo speakers, internal analog microphone, external microphone/line input jack, and optional docking line output/line input jacks, optional digital microphones, SPDIF out, and HDMI output jacks. Check with your Tempo support representative for examples and requirements of other applications. This schematic meets the most current WLP performance requirements. System component layout must also be implemented per Tempo recommendations to meet WLP performance requirements. See your Tempo representative for technical support.



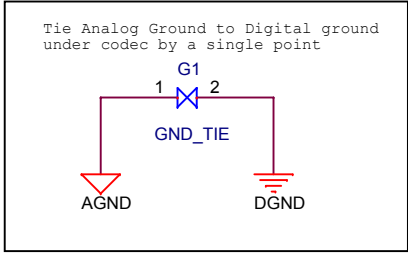
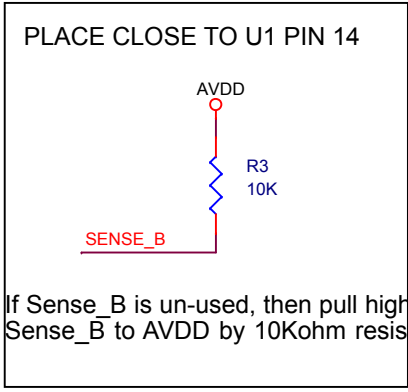
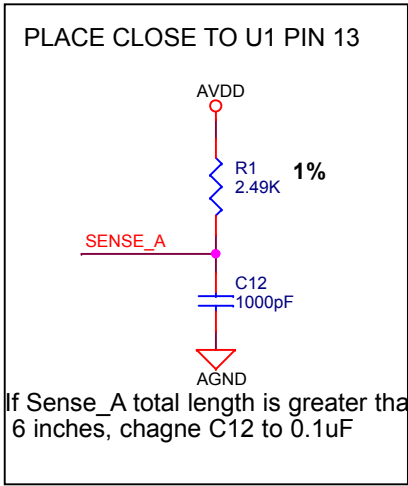
REV	DATE	DESCRIPTION	CHANGED BY
X	17Dec13	Initial Release	KAL

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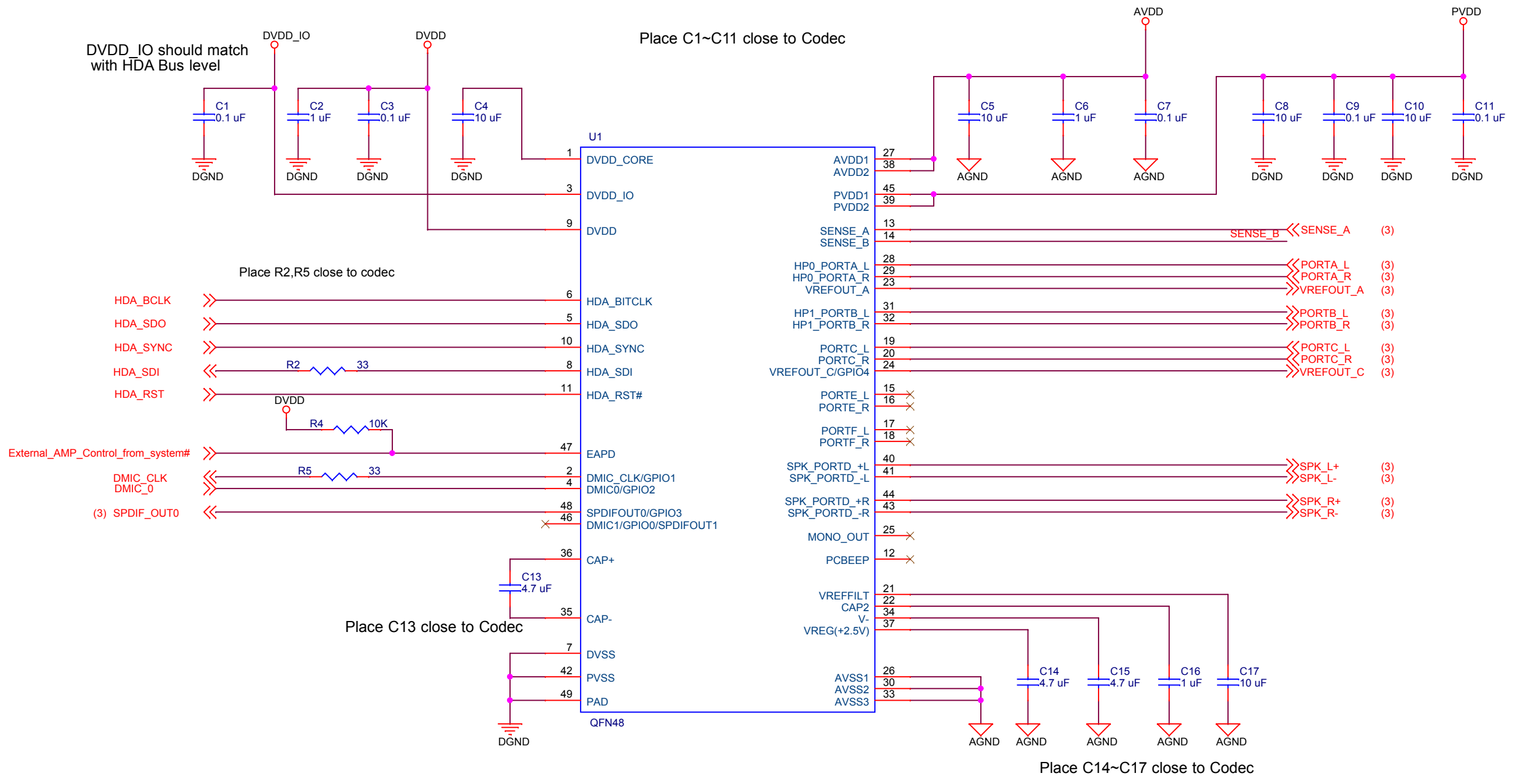
Title
Overview

Size	Rev	Document Number	HDA PC Audio
Custom	X	92HD91Bx Reference Schematic	

Date: Thursday, September 25, 2014



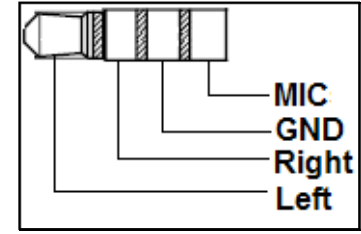
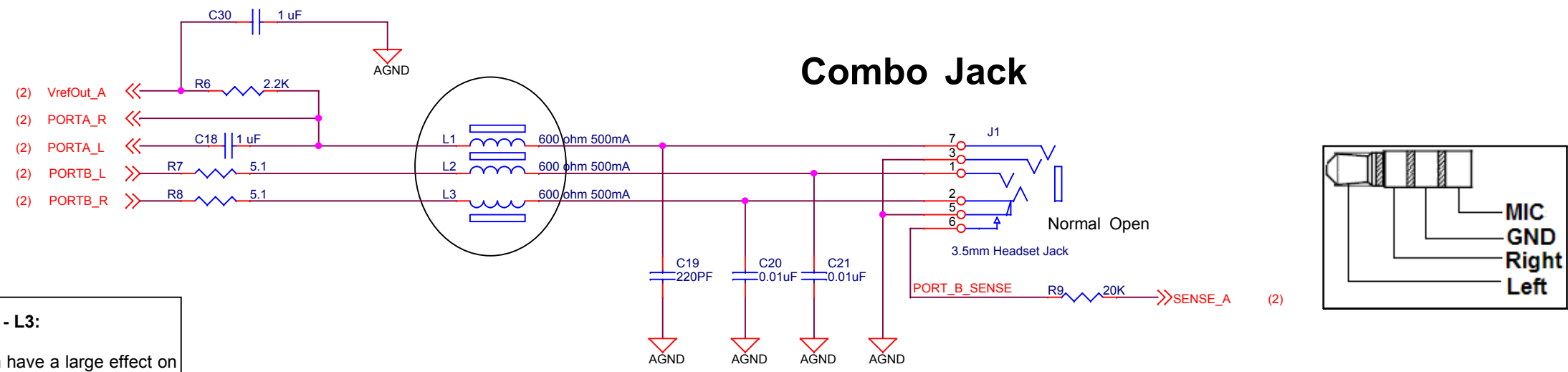
Notes:
 Keep PVDD supply and speaker traces routed on the DGND plane.
 Keep away from AGND and other analog signals



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Title QFN48 Codec		
Size Custom X	Rev X	Document Number 92HD91Bx Reference Schematic
Date: Friday, March 06, 2015		Sheet 2 of 3



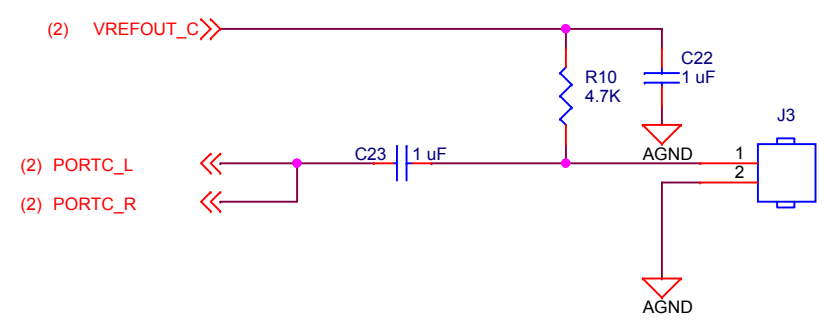
Combo Jack

COMPONENT CHOICES ON L1 - L3:

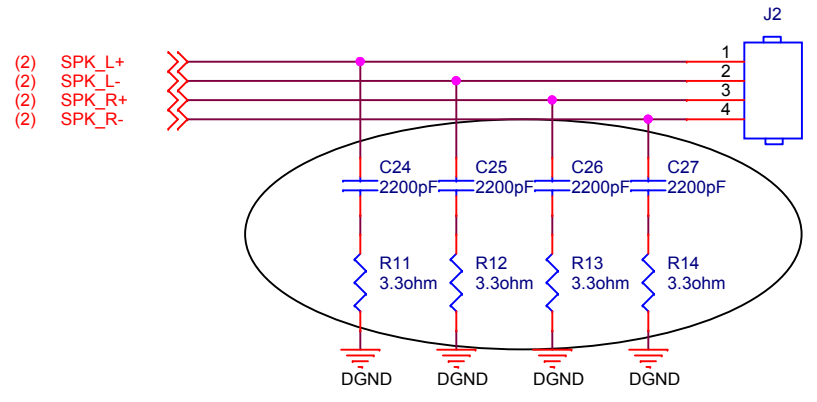
The selection of ferrite beads can have a large effect on THD+N, causing failures versus the WLP requirements. At this time, Tempo has verified three ferrite beads that will meet the WLP performance requirements:

- Murata: BLM18BD601SN1
- TDK: MMZ1608Y601BTA
- Taiyo Yuden: LF BK 1608HM601-T

Internal Microphone Header

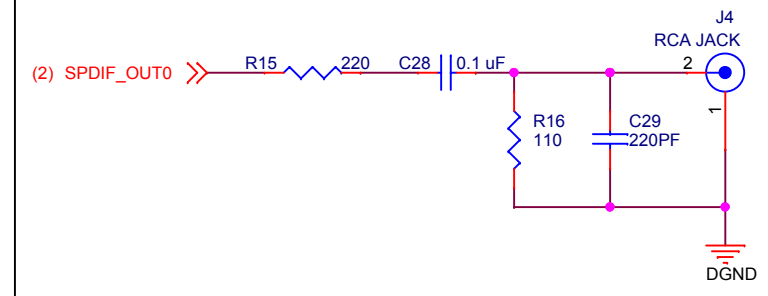


Internal Speakers Header



The C24~C27 and R11~R14 MUST be populated and CLOSE to CODEC
Tempo will review circuit to ensure operability with chosen parts value

S/PDIF_OUT0



PRIMARY S/PDIF OUT



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Title Ports			
Size Custom X	Rev X	Document Number 92HD91Bx Reference Schematic	HDA PC Audio
Date: Thursday, September 25, 2014			Sheet 3 of 3