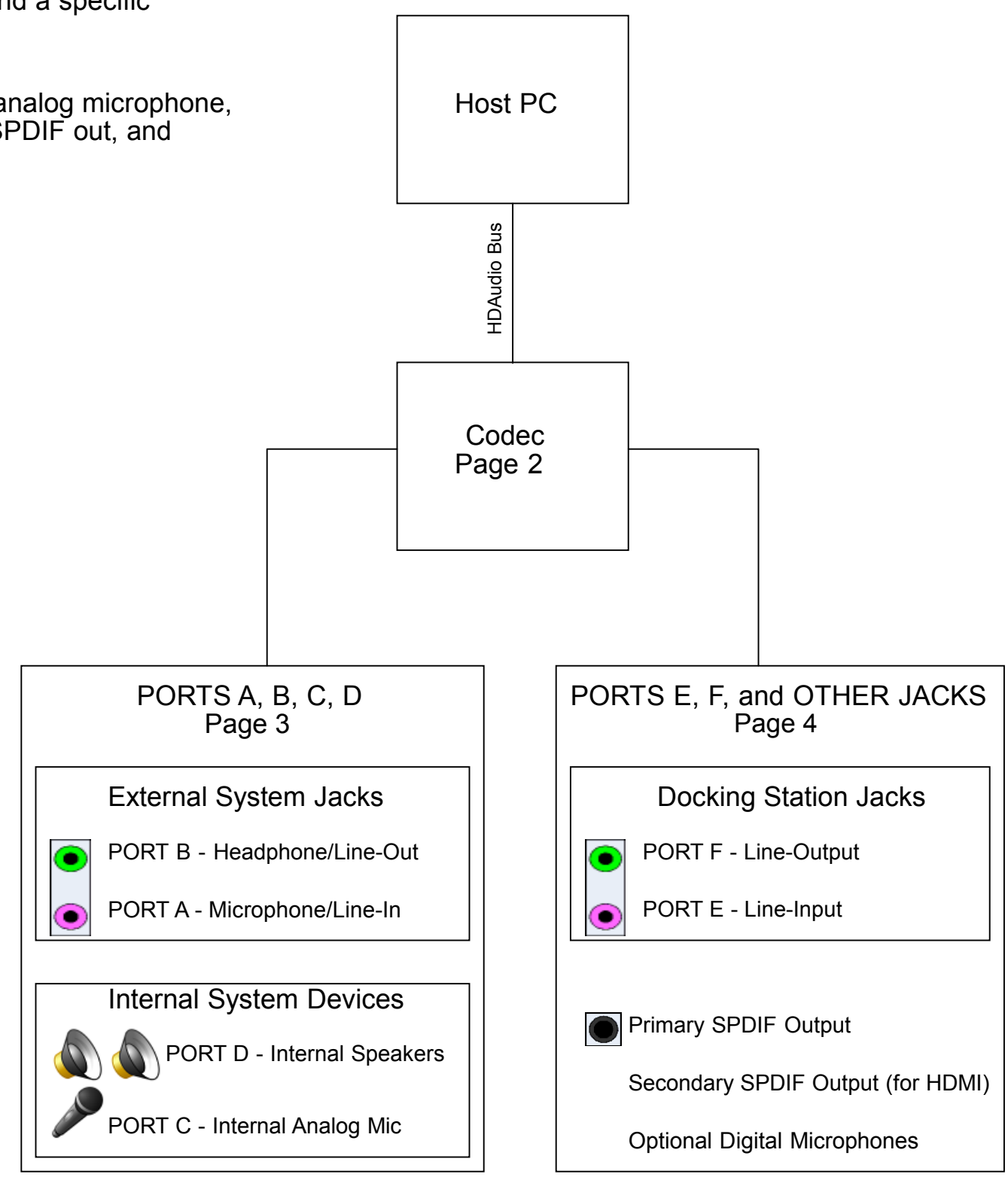
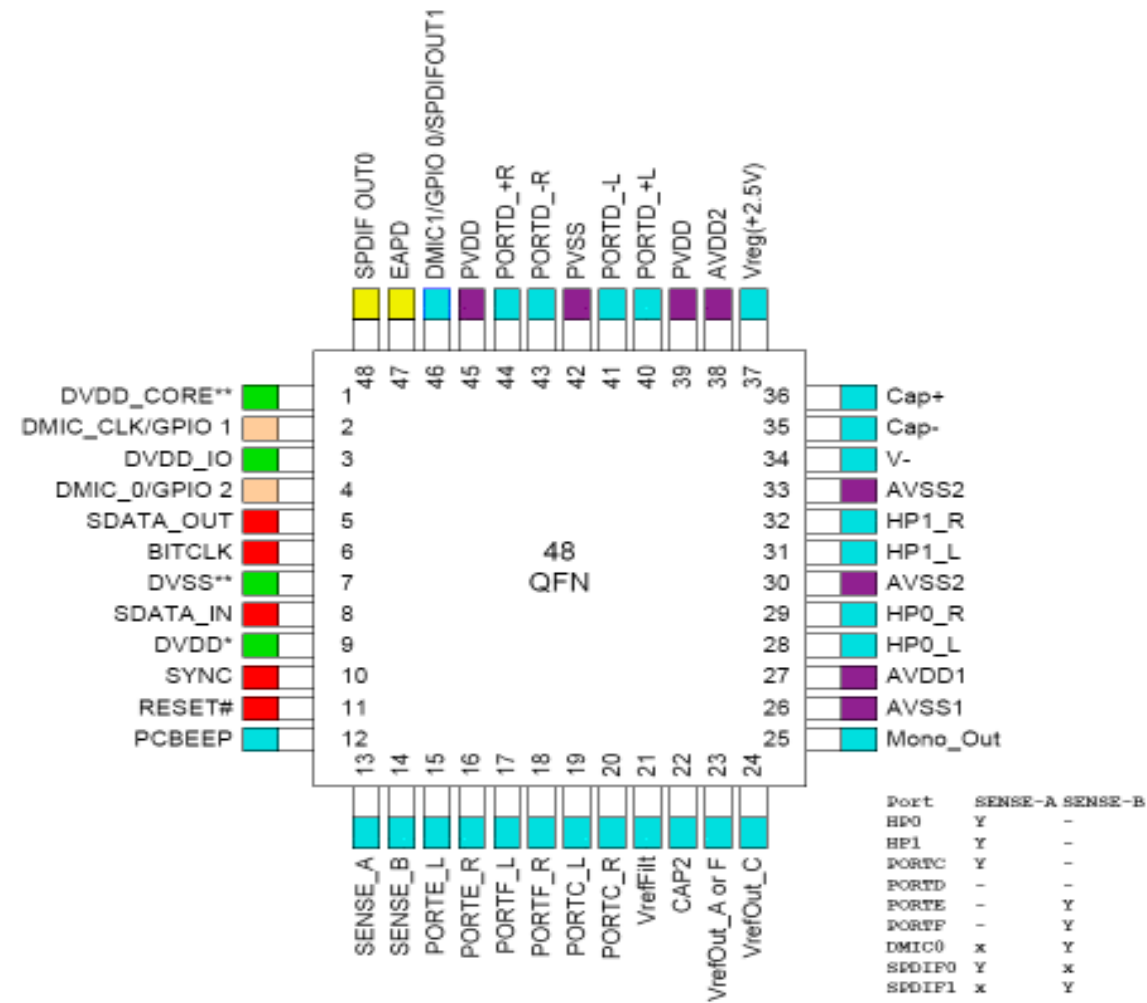


# TEMPO 92HD81Bx REFERENCE SCHEMATICS

The Tempo 92HD81Bx 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, 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 representative.

This schematic is a basic mobile reference design with a stereo headphone output jack, 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 representative for examples and requirements of other applications.



REV	DATE	DESCRIPTION	CHANGED BY
A	13May15	Release	KAL

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Title  
**Tempo 92HD81Bx Reference Schematics**

Size	Rev	Document Number	HDA PC Audio
Custom A	A	Cover	

Date: Wednesday, May 13, 2015

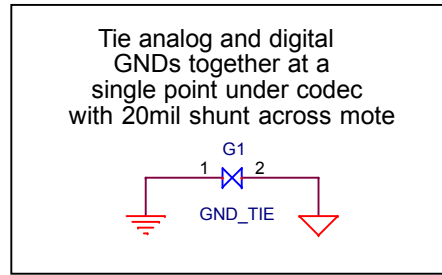
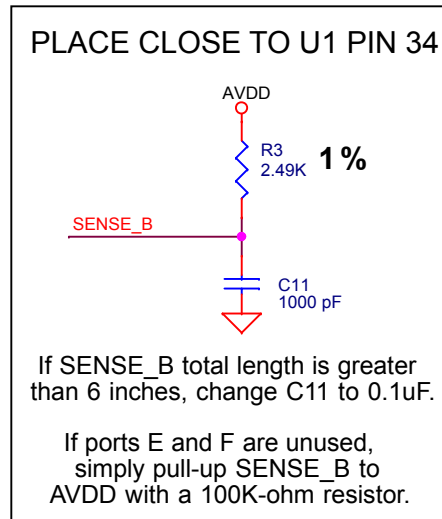
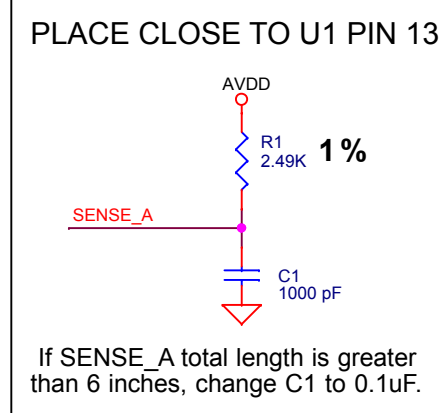
DVDD\_IO should match the voltage of the HDA Bus

Place C2 close to codec

Place C3, C4, C5 close to codec

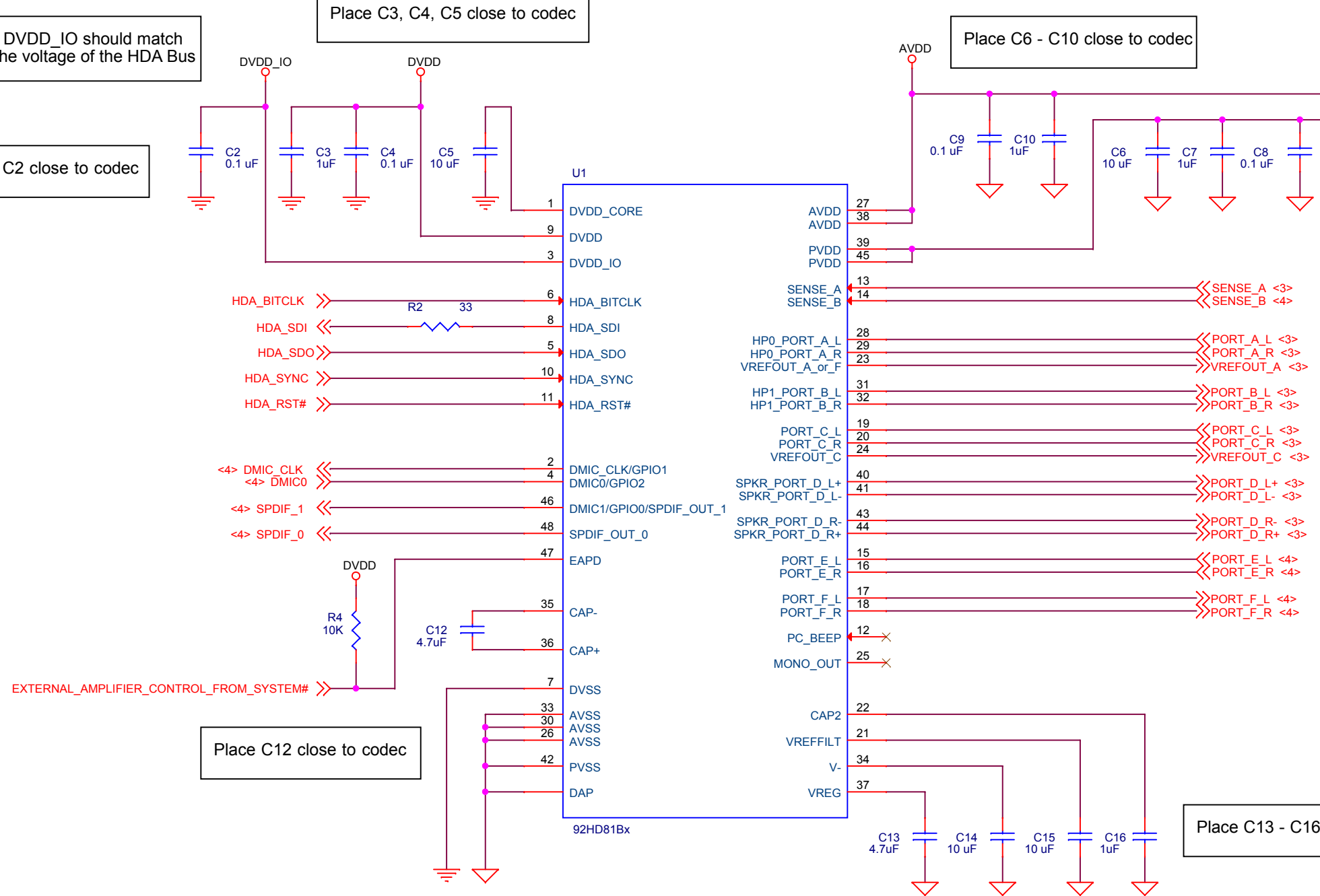
Place C6 - C10 close to codec

L1 and L2 are optional. They may provide improved audio performance.



Place C12 close to codec

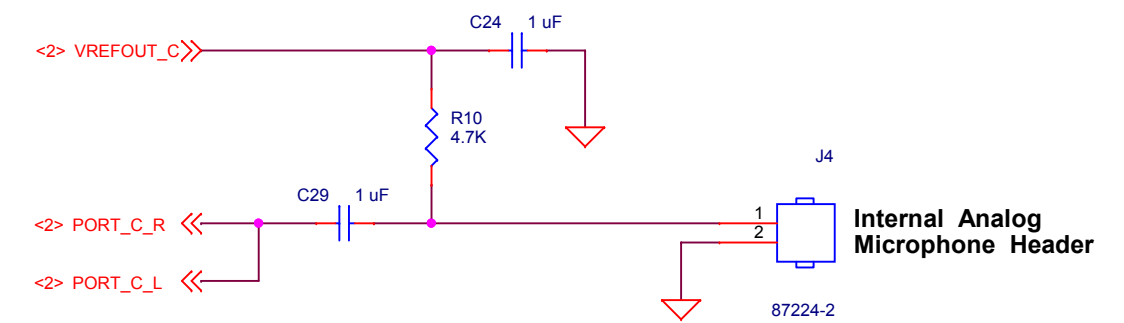
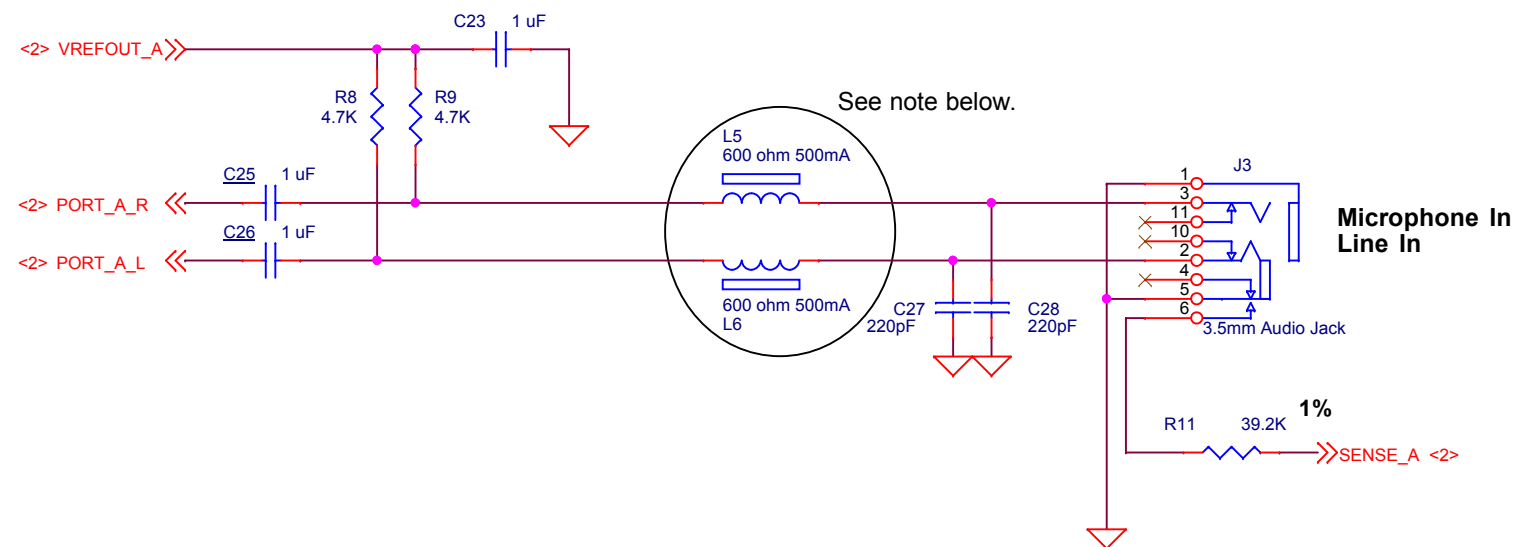
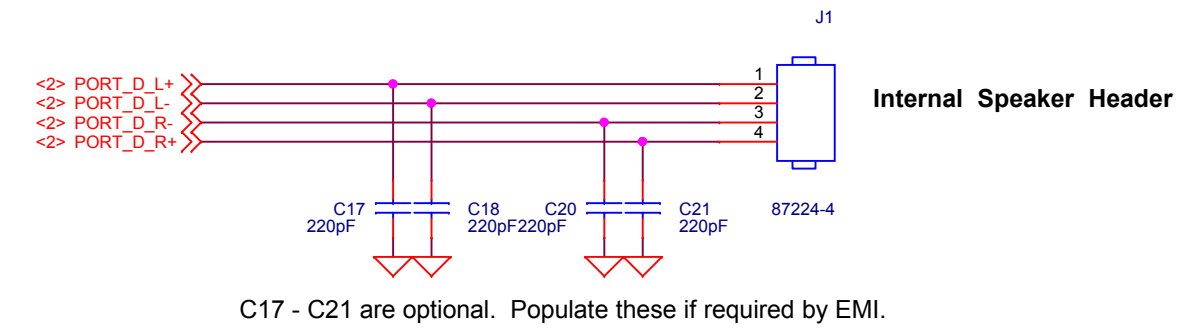
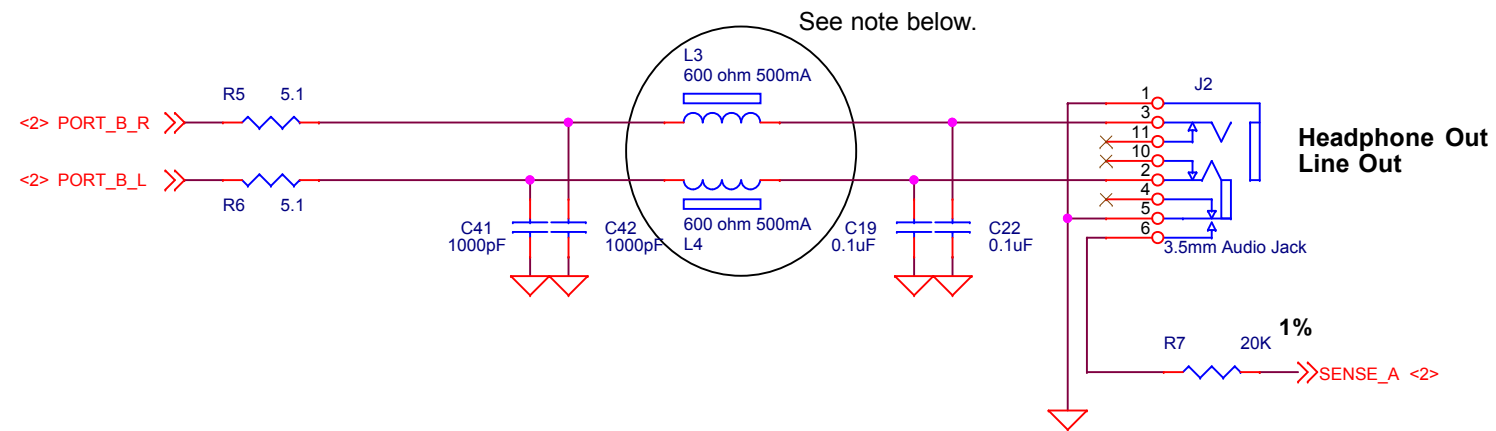
Place C13 - C16 close to codec



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Title <b>Tempo 92HD81Bx Reference Schematics</b>			HDA PC Audio
Size Custom A	Rev A	Document Number Codec	
Date: Wednesday, May 13, 2015			Sheet 2 of 4



**COMPONENT CHOICES ON L3-L6:**

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

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



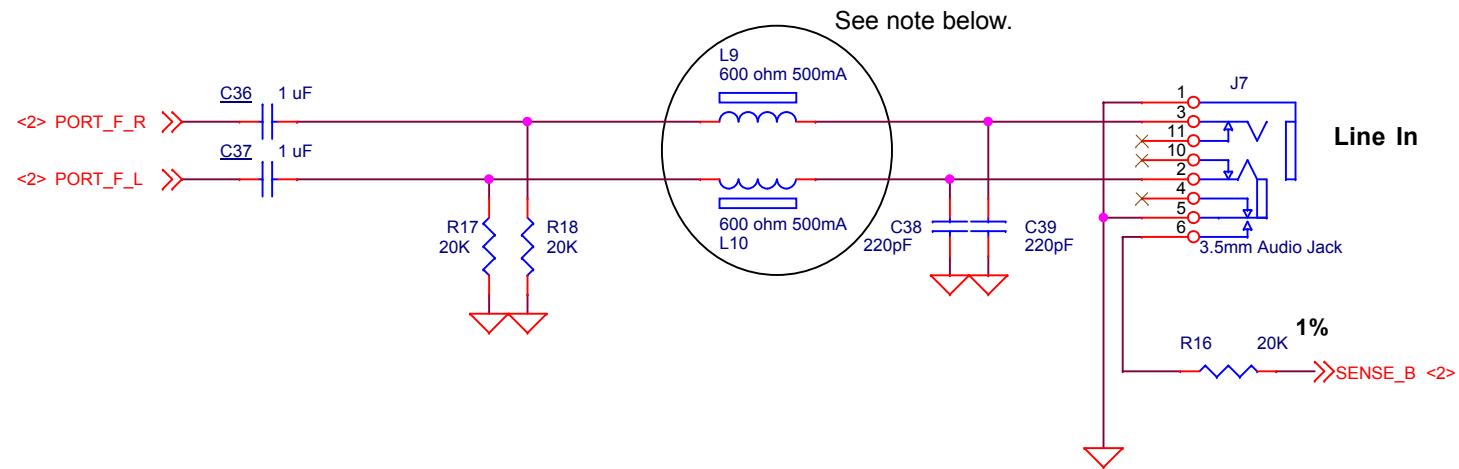
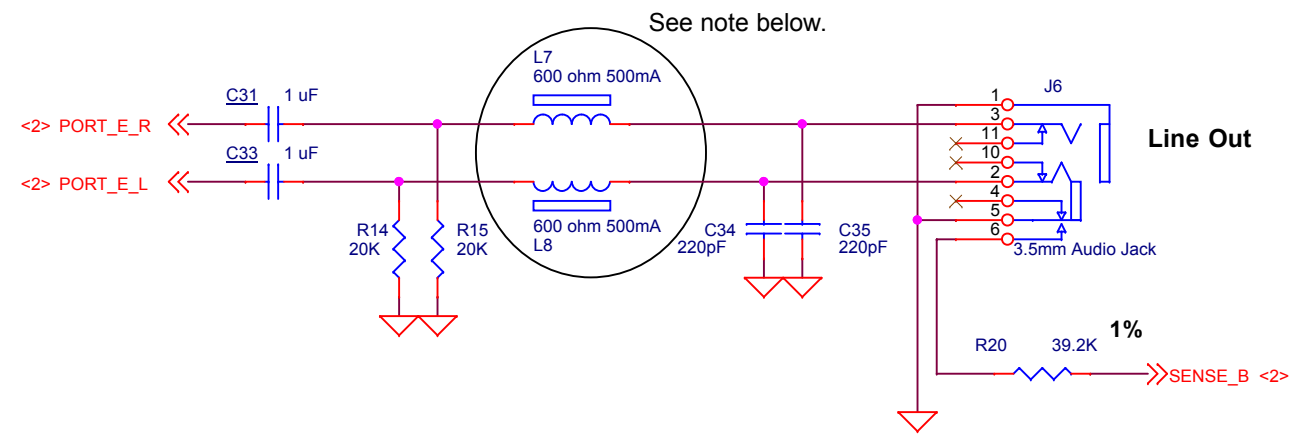
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Title <b>Tempo 92HD81Bx Reference Schematics</b>			HDA PC Audio
Size Custom A	Rev A	Document Number Port A Jacks	
Date: Wednesday, May 13, 2015			Sheet 3 of 4

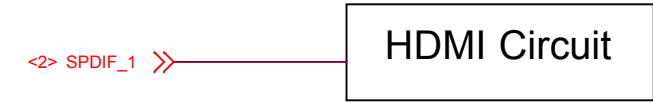
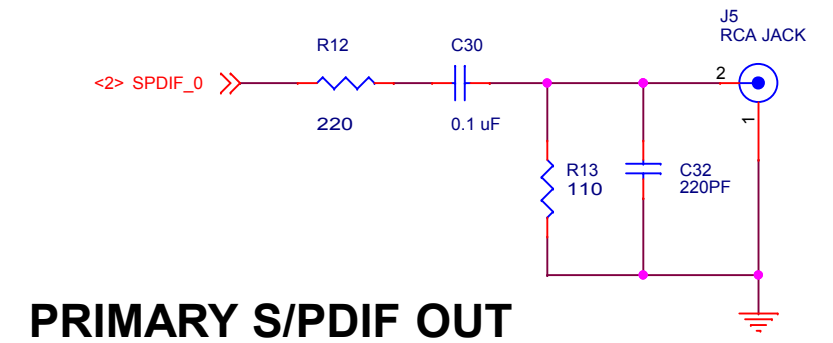
# NOTEBOOK: OPTIONAL DOCKING SYSTEM JACKS



## COMPONENT CHOICES ON L7-L10:

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

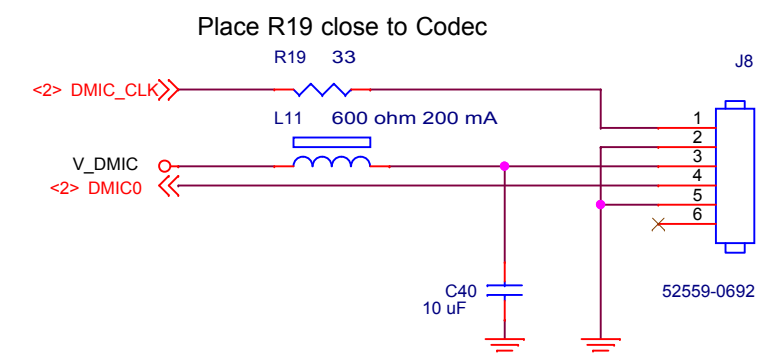
- Murata BLM18BD601SN1
- TDK MMZ1608Y601BTA
- Taiyo Yuden LF BK 1608HM601-T



Please refer to your HDMI solution's reference schematics for proper implementation

## SECONDARY S/PDIF OUT (for HDMI)

## OPTIONAL DIGITAL MICROPHONE



V\_DMIC IS DEPENDENT ON MIC SELECTION (1.8V - 3.3V TYP)  
IDT will review circuit to ensure operability with chosen mic vendor.



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Title <b>Tempo 92HD81Bx Reference Schematics</b>			HDA PC Audio
Size Custom A	Rev A	Document Number Port B and Other Jacks	
Date: Wednesday, May 13, 2015			Sheet 4 of 4