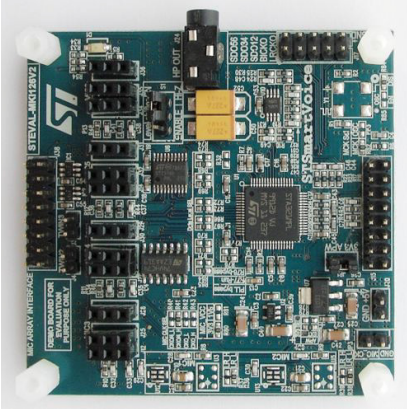
STEVAL-MKI126V2

MEMS microphone system evaluation board based on the STA321MPL and MP34DB01

Data brief



Features

- 2 MP34DB01 MEMS microphones
- Capable of driving up to 6 digital MEMS microphones
- 3 independent I^2S outputs
- Up to 10 independent 32-bit user programmable biquads per channel
- Fully configurable with:
  - STEVAL-MKI29V1/V2/V3
  - STEVAL-MKI131V1/V2/V3
  - STEVAL-MKI116V1
  - STEVAL-MKI117V1/V2
  - STEVAL-CCA035V1
- Controllable via APWorkbench software suite
- RoHS compliant

Description

The STEVAL-MKI126V2 system evaluation board can connect up to six microphones using the sockets provided or through a dedicated six-microphone array.

The digital interface of the device allows interfacing the MIC output to the most widely used audio receivers and digital amplifiers or simple evaluation of the MIC using generic audio measurement equipment. The filtered PWM signals allow the connection of a headset to listen to the audio received through the microphones.

The fully digital path ensures a high level of processing with sound preconditioning, filtering and voice enhancement.

The main purpose of the STEVAL-MKI126V2 is to convert the PDM signals provided by the microphones into the more common I^2S and PWM signals. The I^2S signal is routed both on general and interface connectors, while the suitably-filtered PWM signals provide an analog interface.

Mounted on the STEVAL-MKI126V2 are two MP34DB01 microphones and an STA321MPL processor.

1 Schematic diagrams

Figure 1. Circuit schematic (1 of 5)

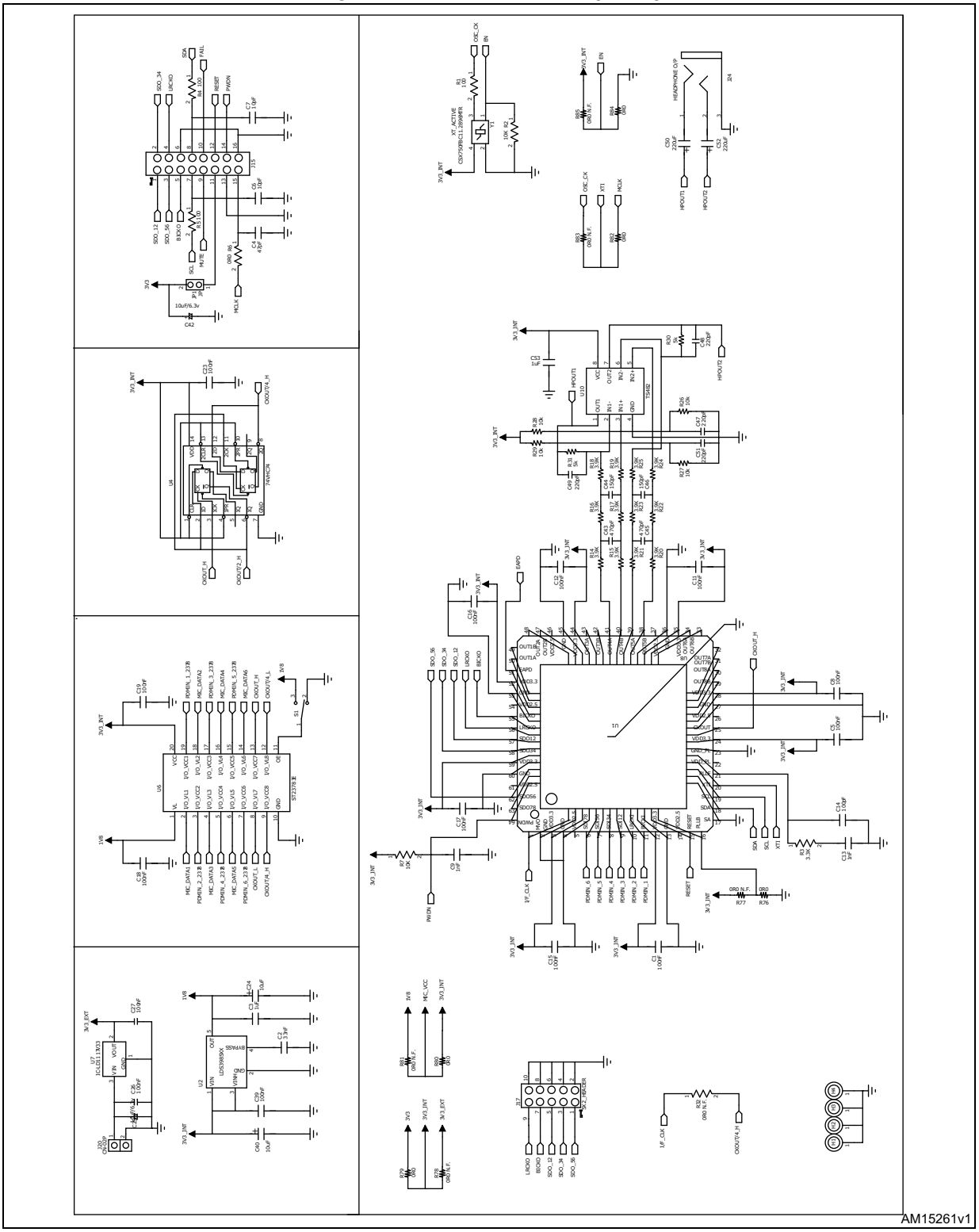


Figure 2. Circuit schematic (2 of 5)

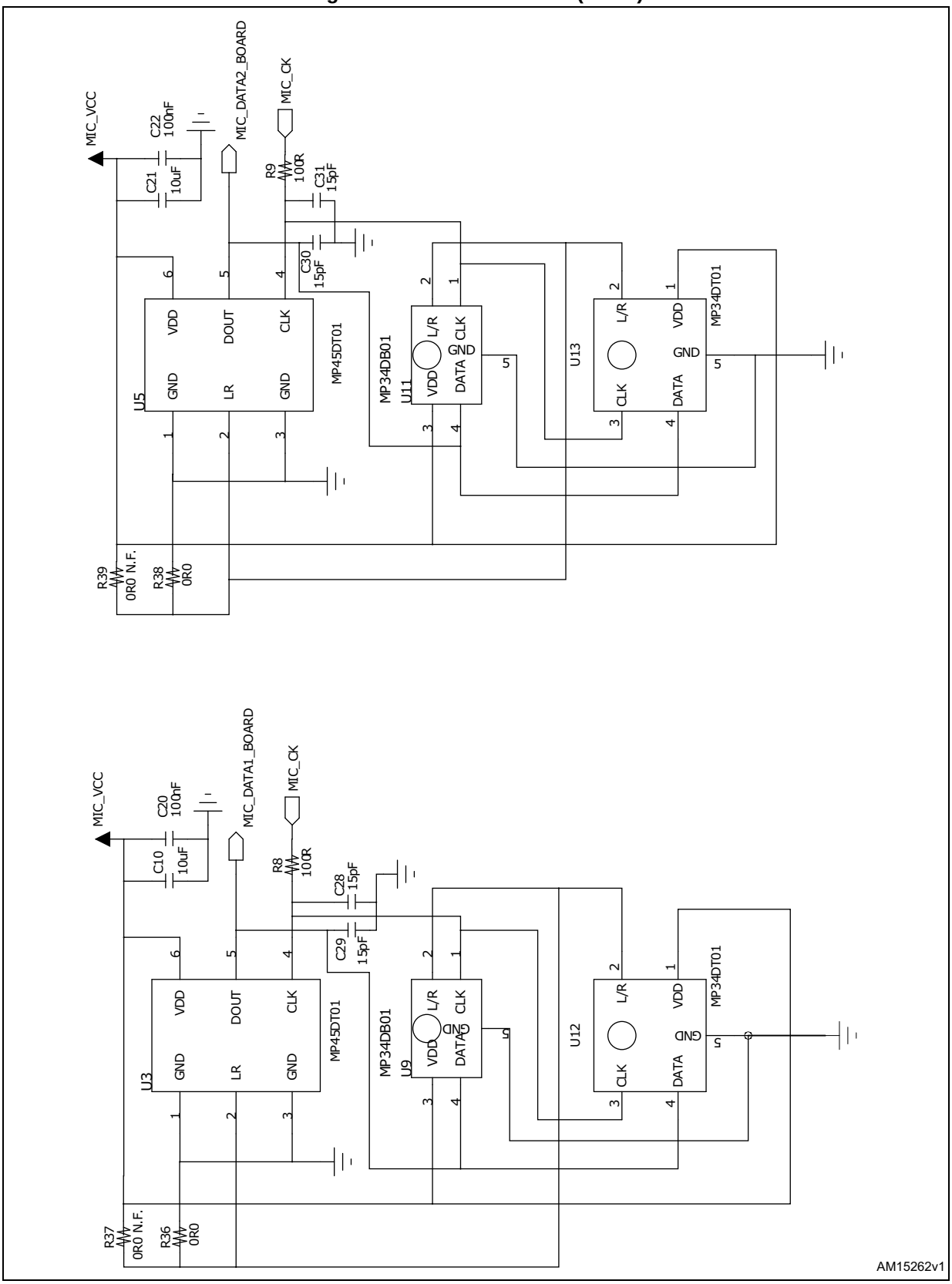


Figure 3. Circuit schematic (3 of 5)

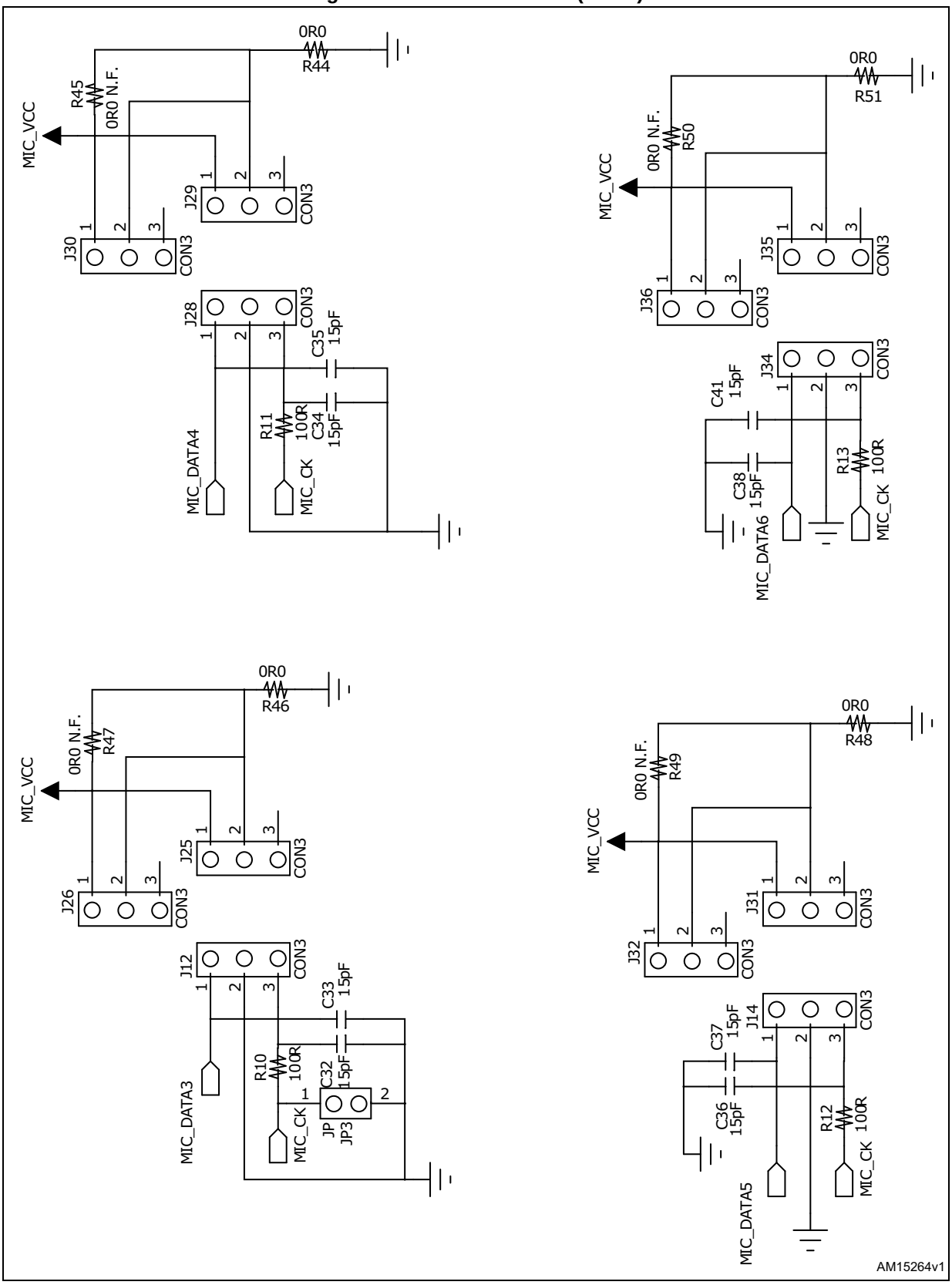


Figure 4. Circuit schematic (4 of 5)

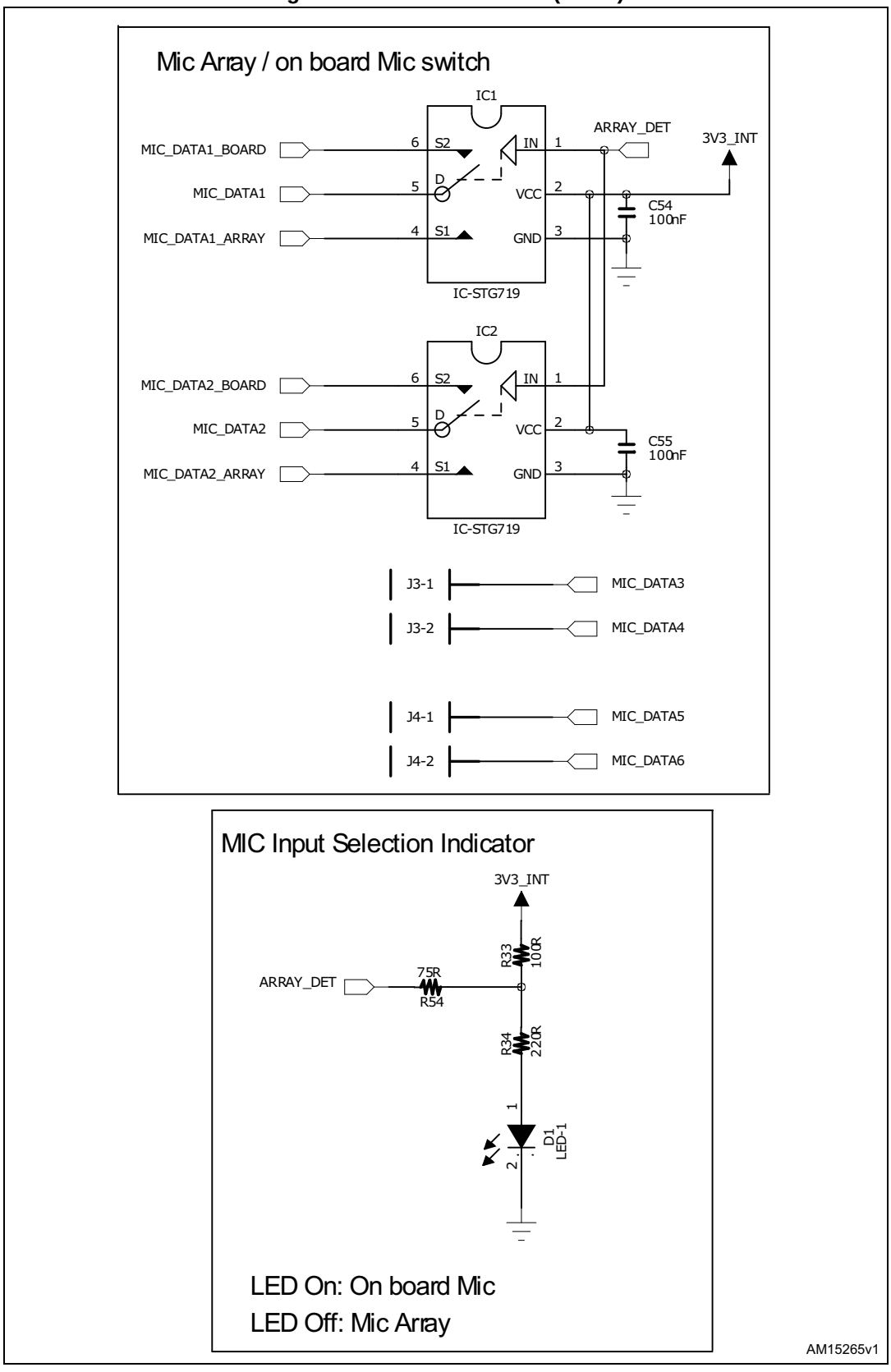
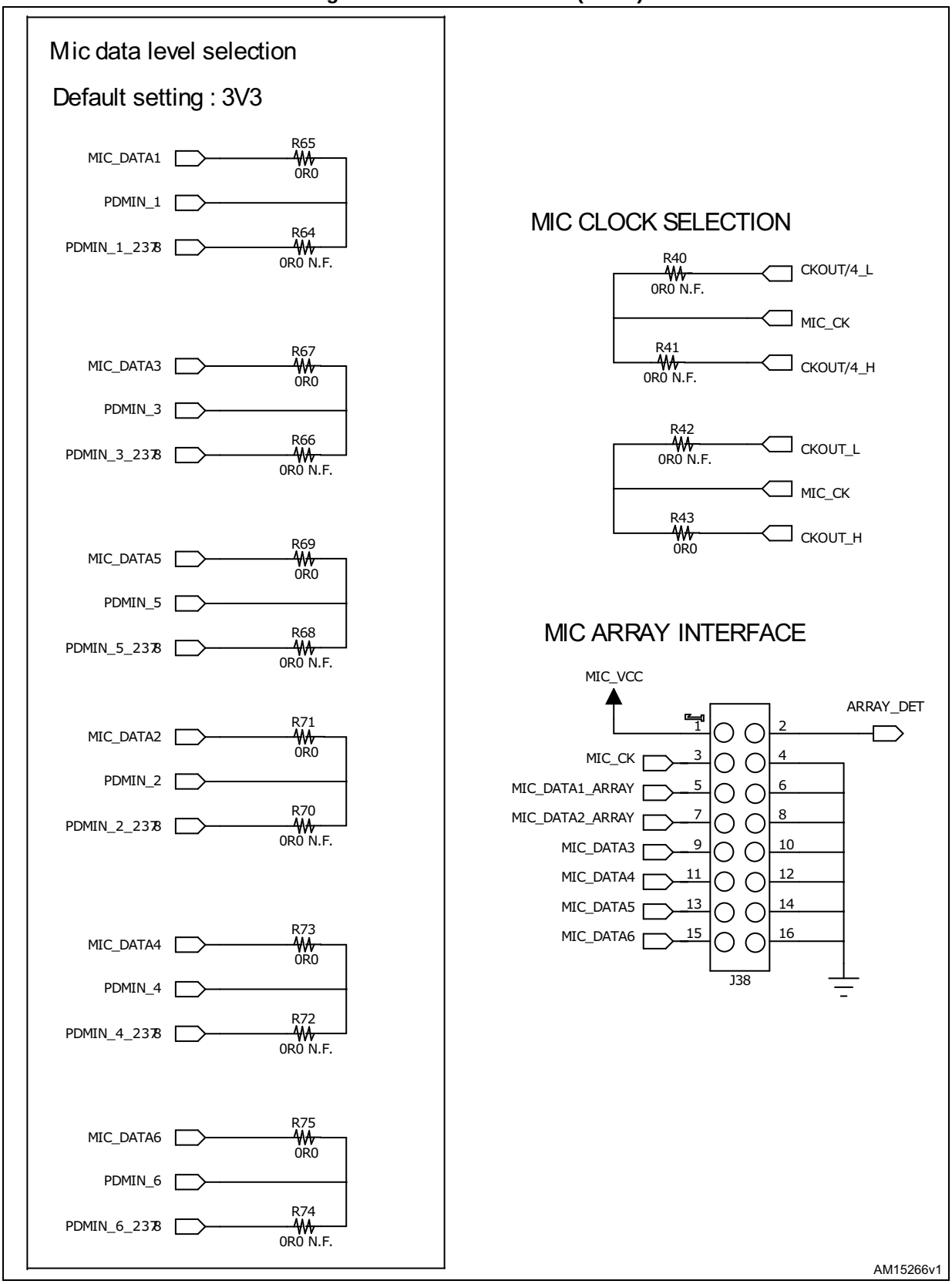


Figure 5. Circuit schematic (5 of 5)



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
11-Nov-2013	1	Initial release.

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