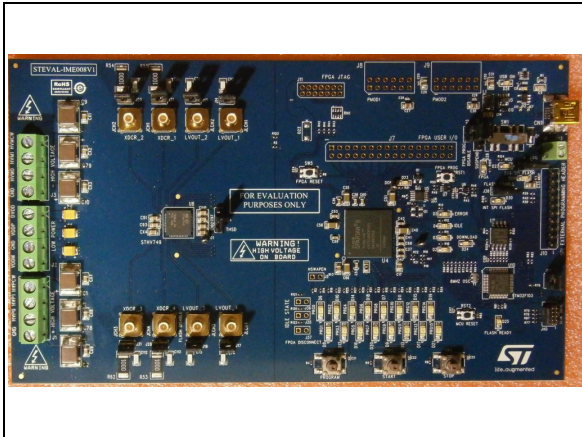


Evaluation board based on the STHV749 high voltage pulser

Data brief



Description

The STEVAL-IME008V1 is a product evaluation board designed around the STHV749 4-channel 7-level high voltage pulser, a state-of-the-art device designed for ultrasound imaging applications.

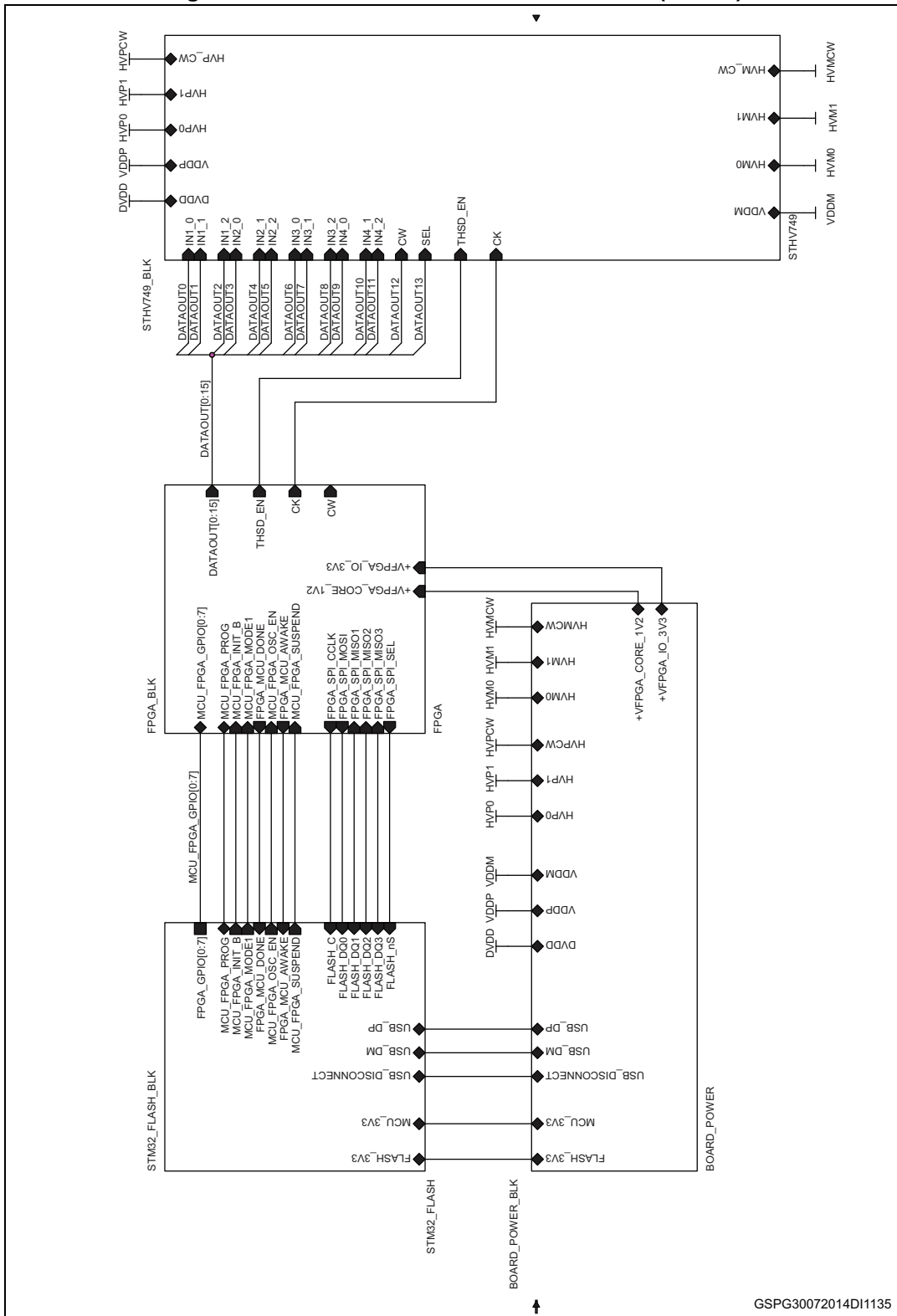
The output waveforms can be displayed directly on an oscilloscope by connecting the scope probe to the relative BNCs. 16 preset waveforms are available to test the HV pulser under varying conditions.

Features

- 4-channel outputs: high voltage and low voltage BNC connectors
- Load simulator using signal equivalent circuits
- Possibility to set up own load simulator
- 16 preset waveforms
- USB connector to connect STM32 with PC and supply power to it
- 4 MB serial Flash memory to host FPGA code and waveforms
- Memory expansion connector to add external serial Flash
- Connectors to supply high voltage and low voltage to the STHV749 output stage
- LEDs to monitor the power management stage
- Human machine interface to select, start and stop the generation of the preset waveforms
- 25 LEDs to monitor board behavior
- RoHS compliant

1 Schematic diagrams

Figure 1. STEVAL-IME008V1 circuit schematic (1 of 16)



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Figure 2. STEVAL-IME008V1 circuit schematic (2 of 16)

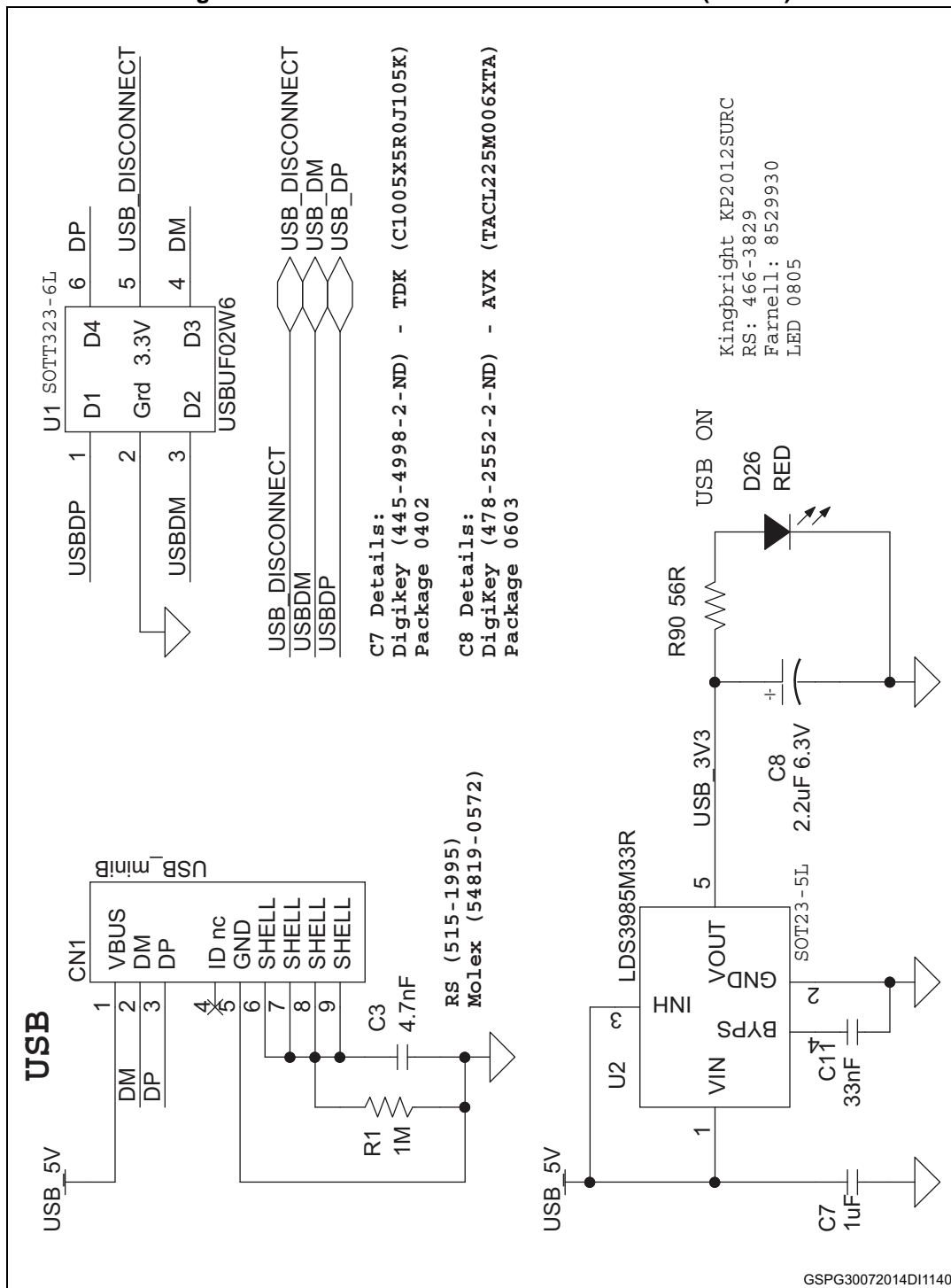


Figure 3. STEVAL-IME008V1 circuit schematic (3 of 16)

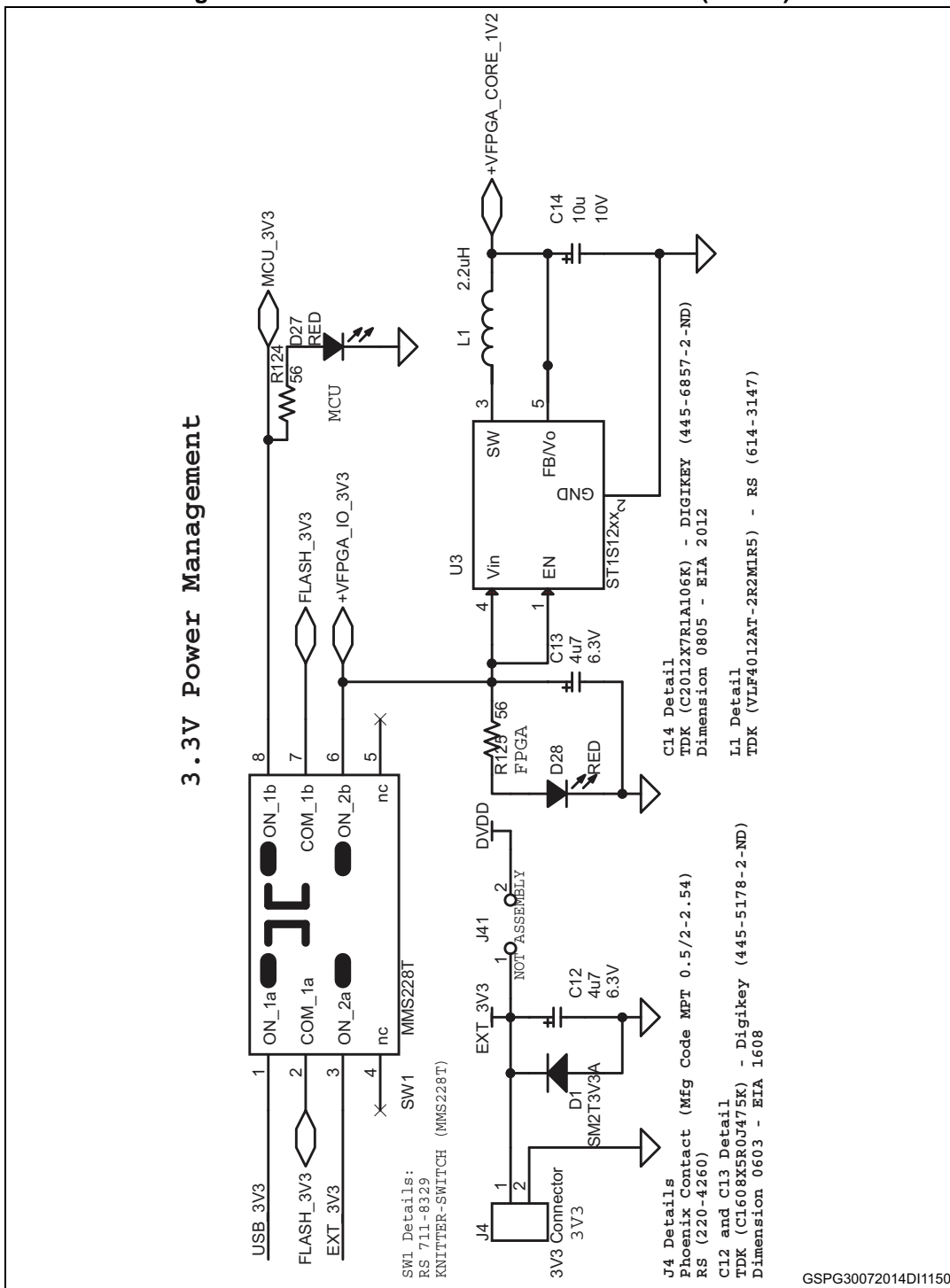


Figure 4. STEVAL-IME008V1 circuit schematic (4 of 16)

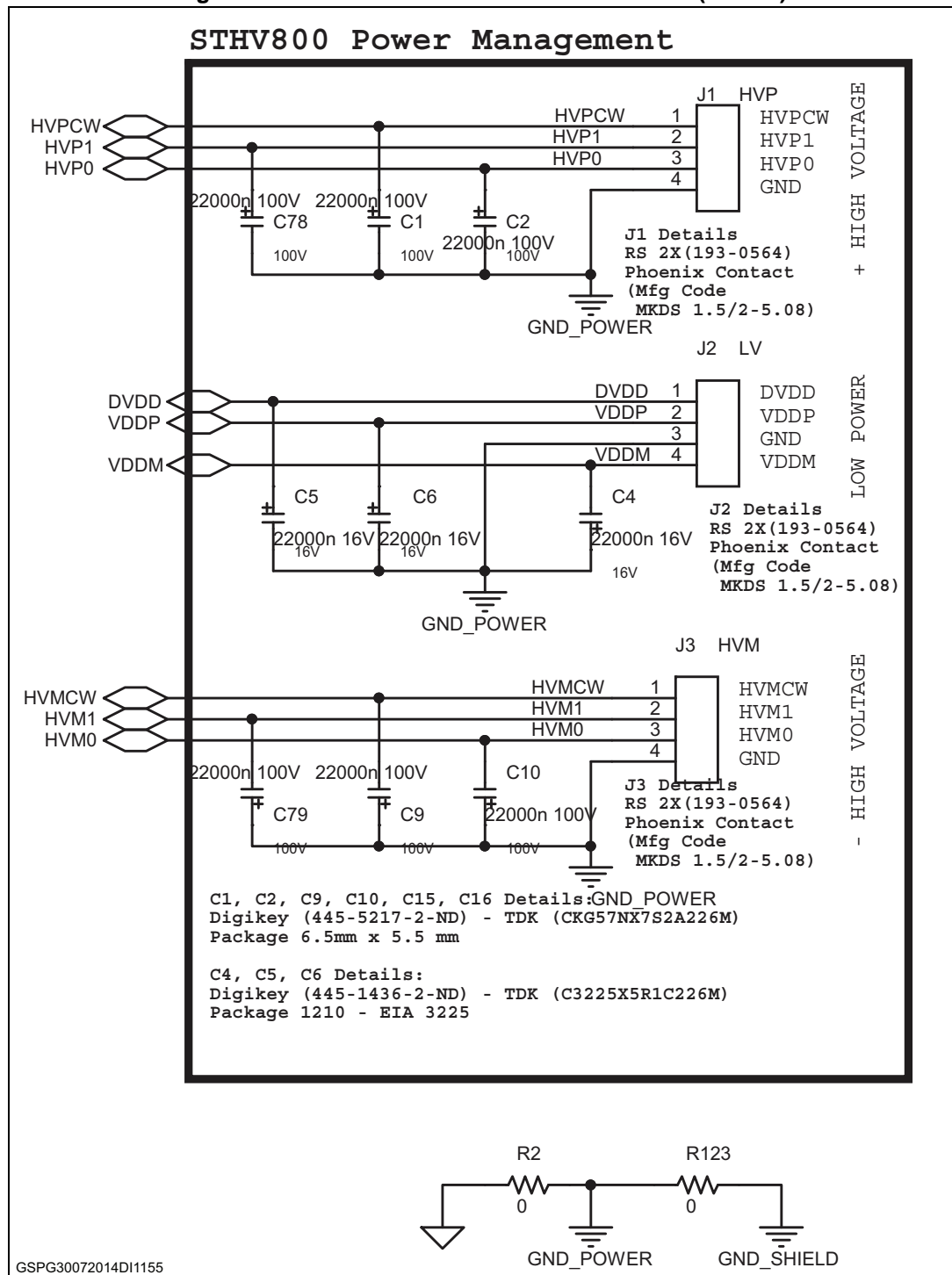


Figure 5. STEVAL-IME008V1 circuit schematic (5 of 16)

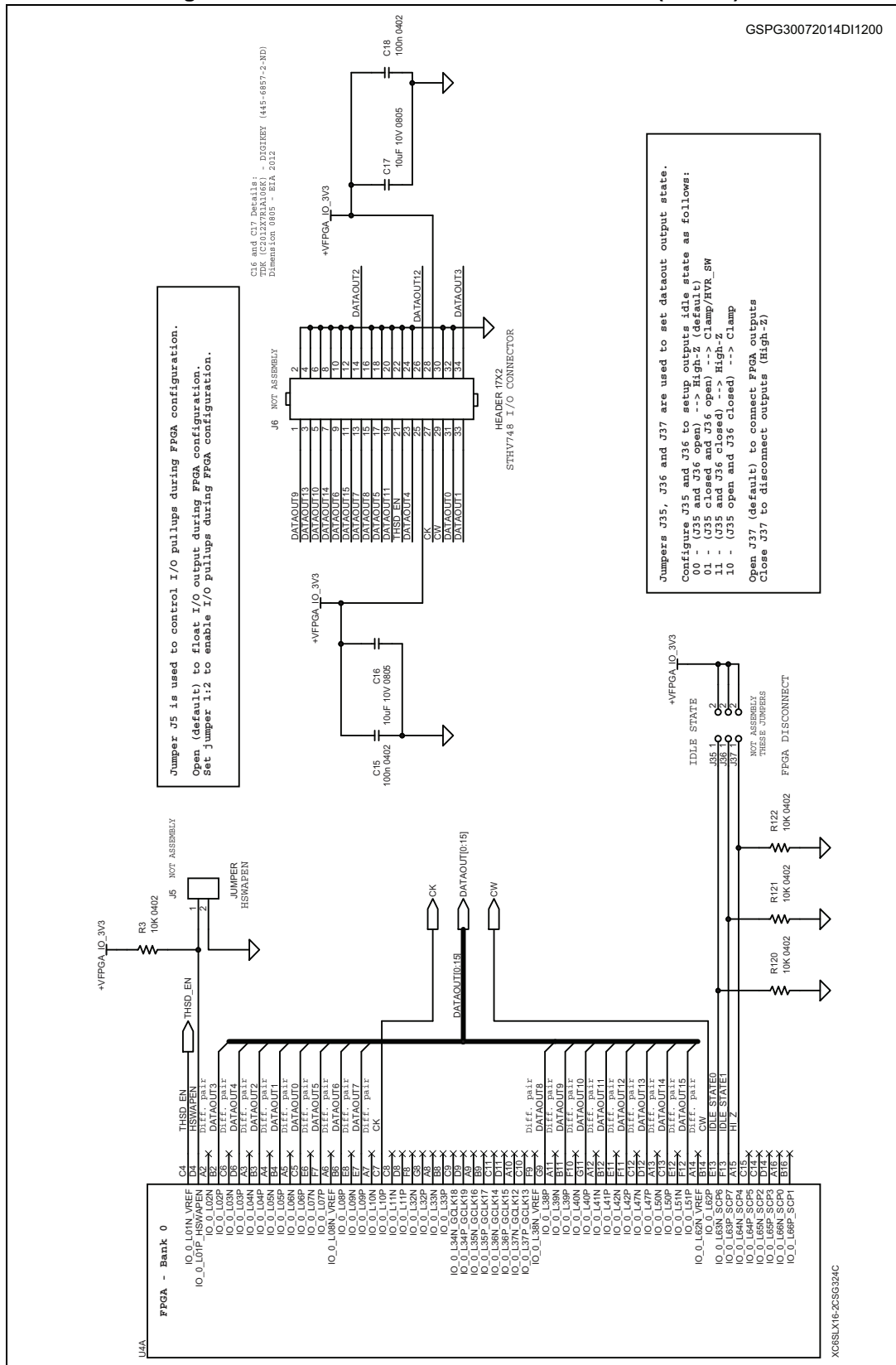


Figure 6. STEVAL-IME008V1 circuit schematic (6 of 16)

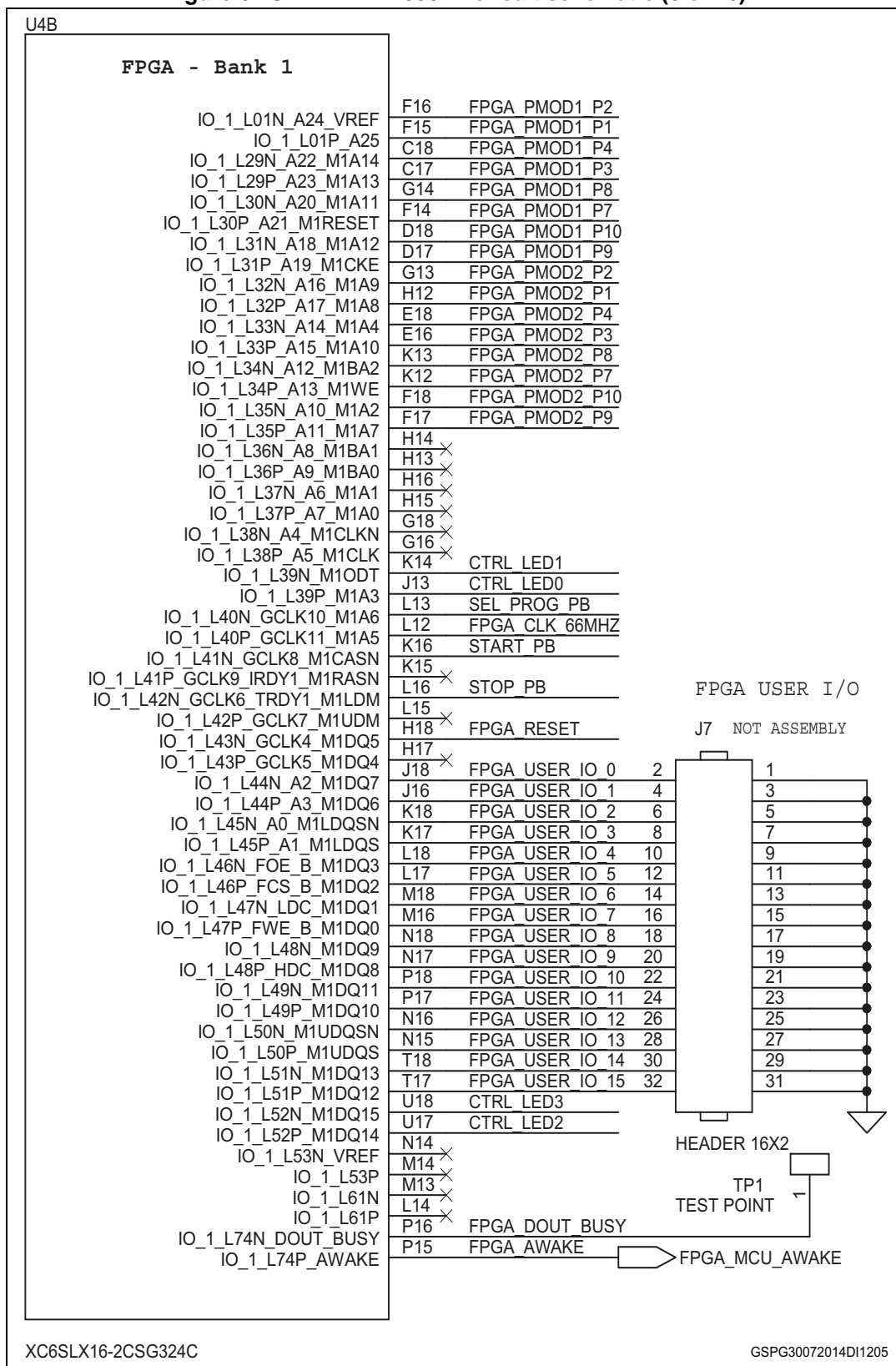
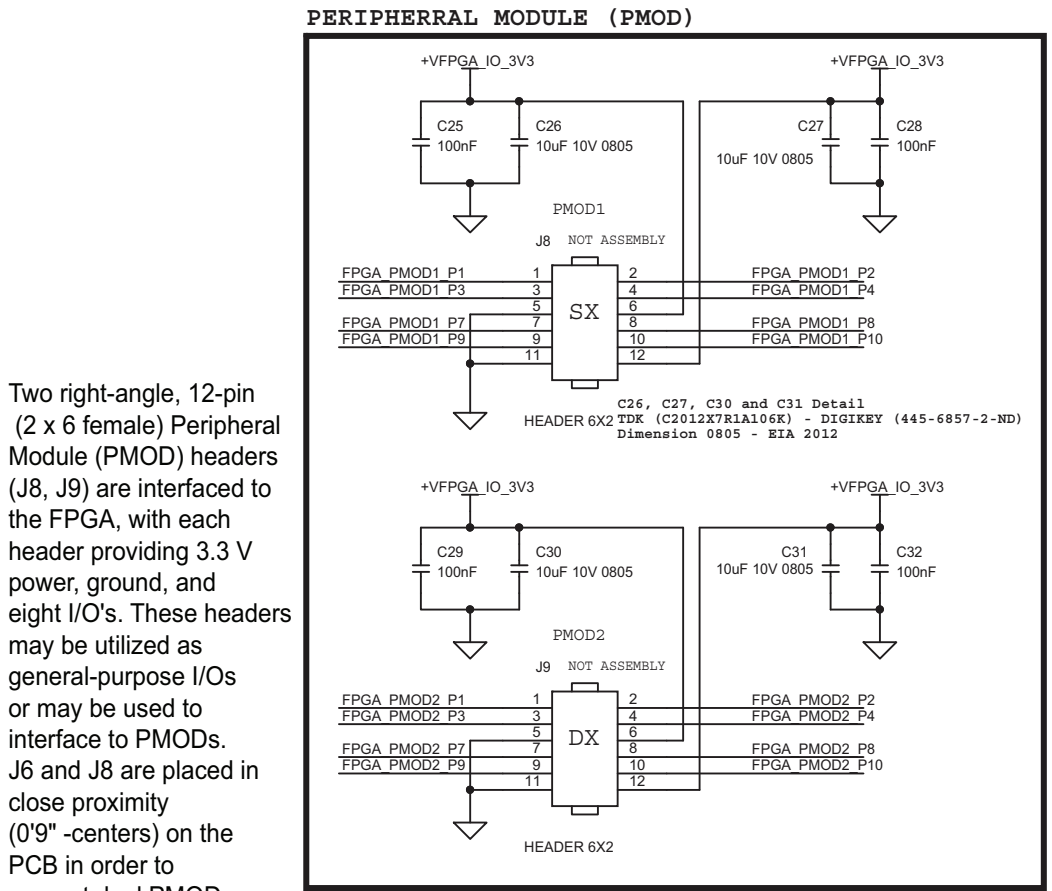
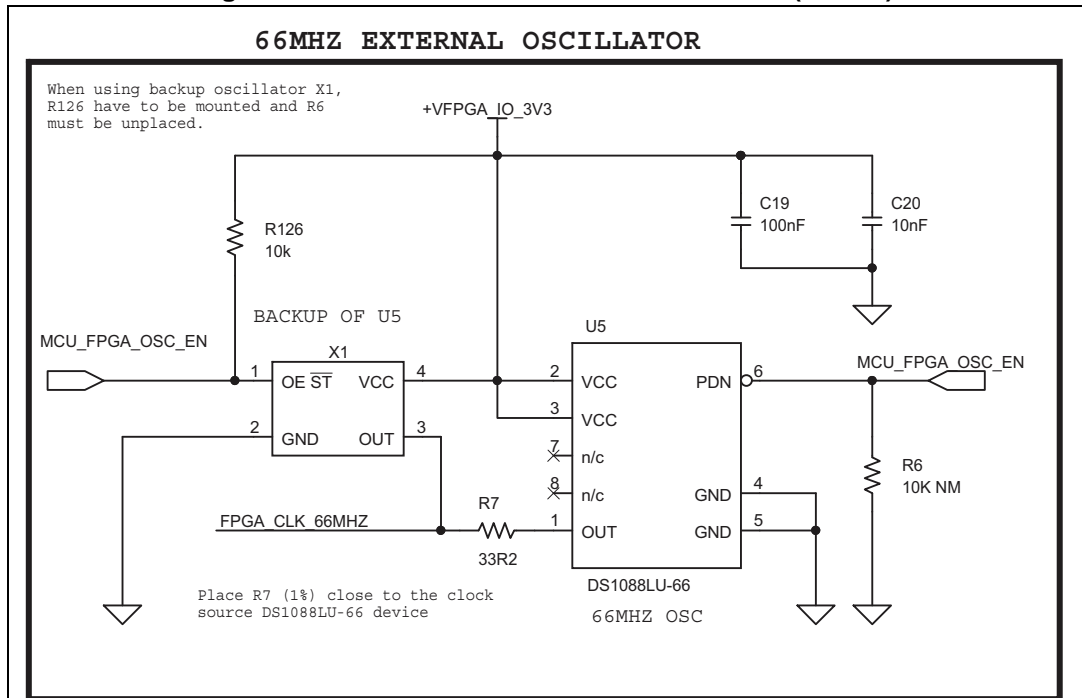


Figure 7. STEVAL-IME008V1 circuit schematic (7 of 16)



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Figure 8. STEVAL-IME008V1 circuit schematic (8 of 16)

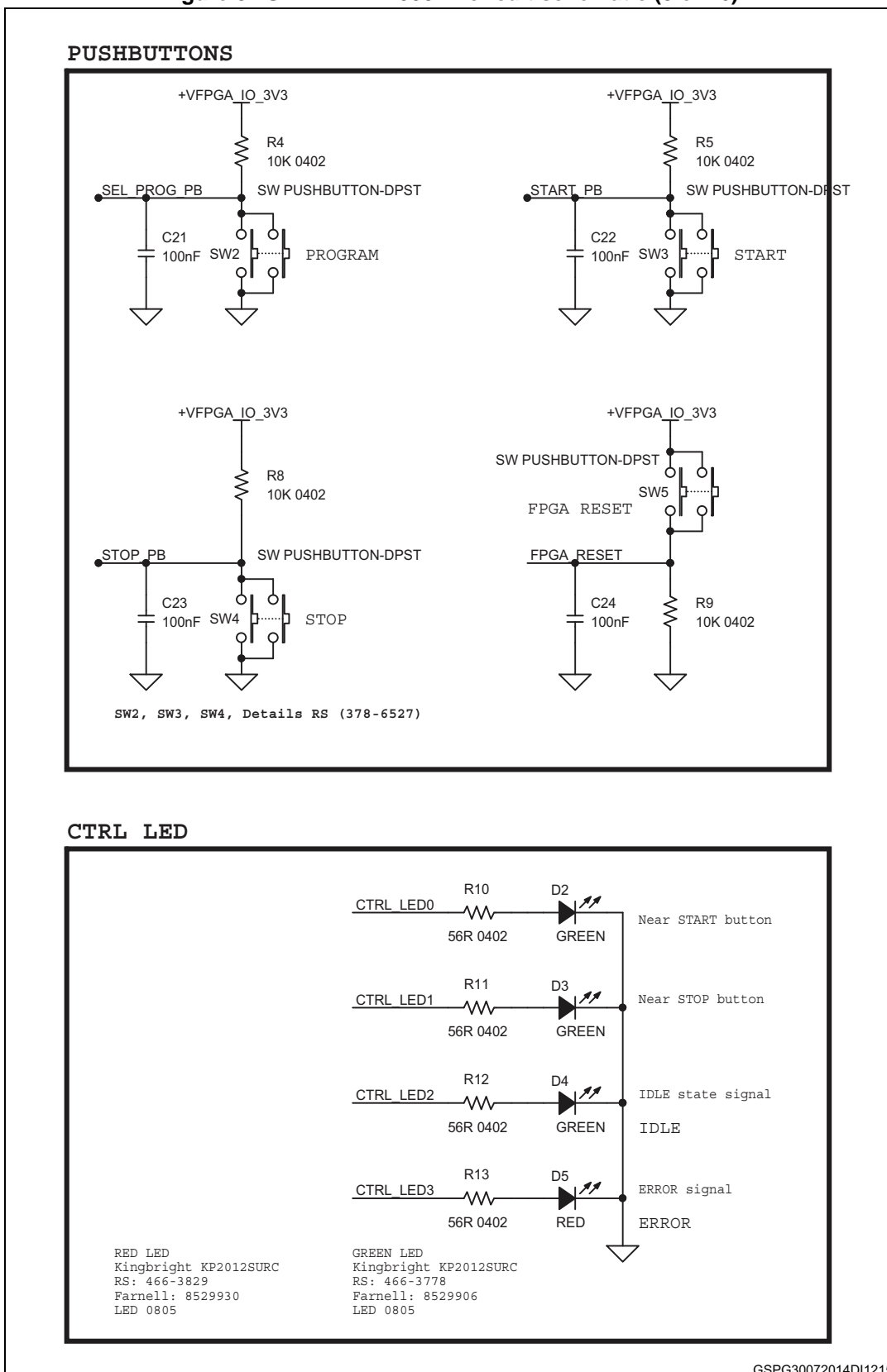


Figure 9. STEVAL-IME008V1 circuit schematic (9 of 16)

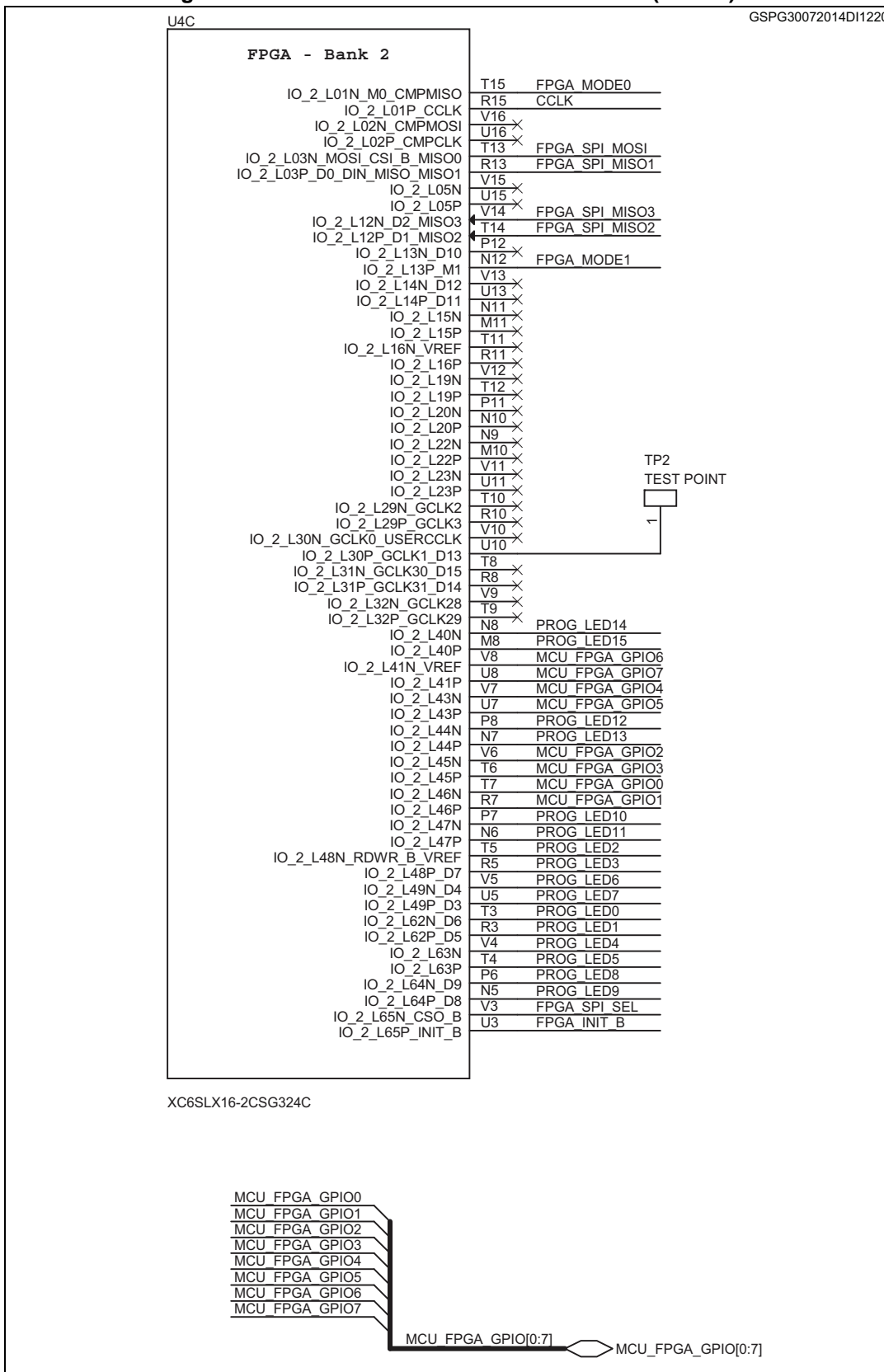


Figure 10. STEVAL-IME008V1 circuit schematic (10 of 16)

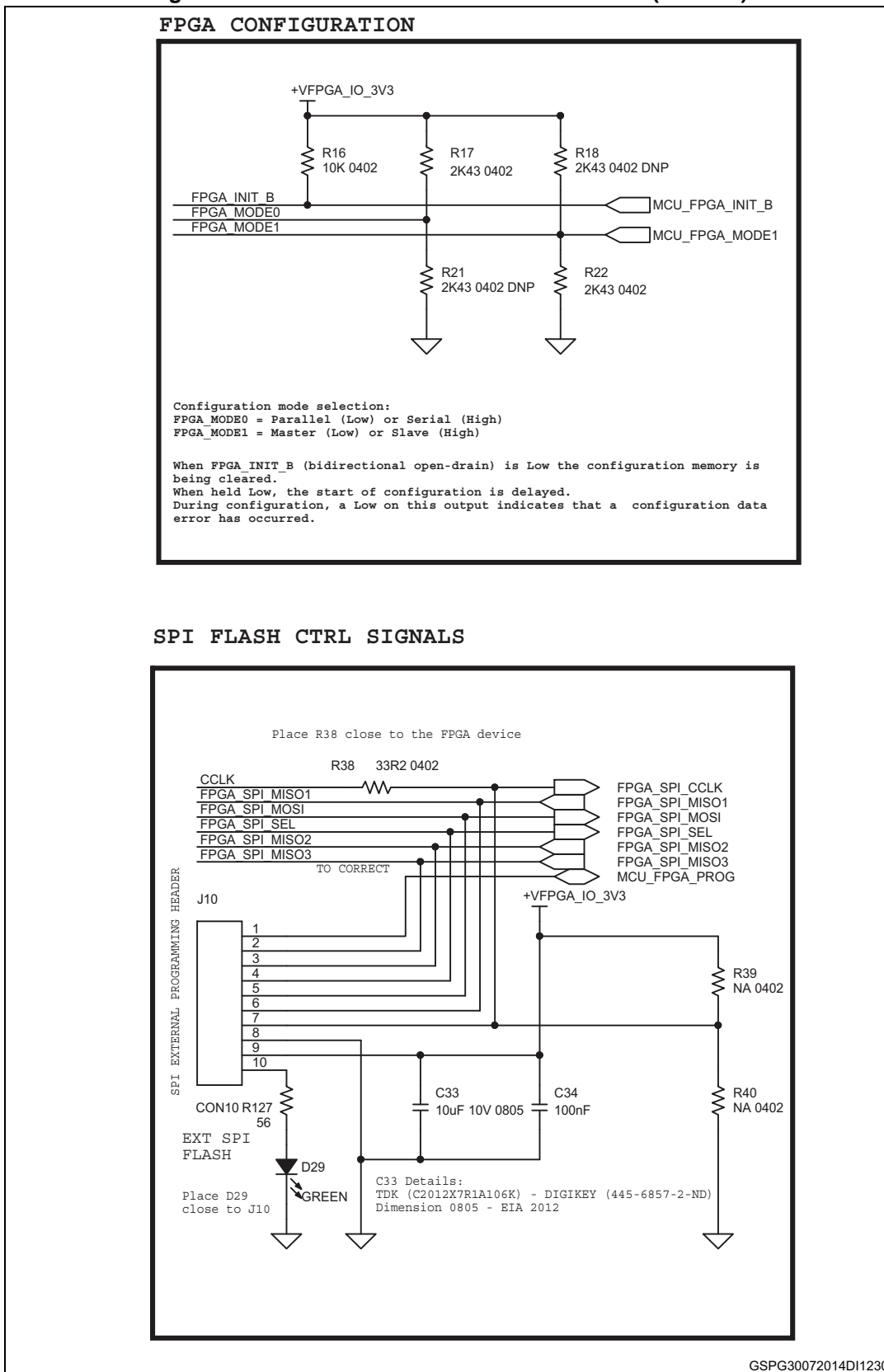


Figure 11. STEVAL-IME008V1 circuit schematic (11 of 16)

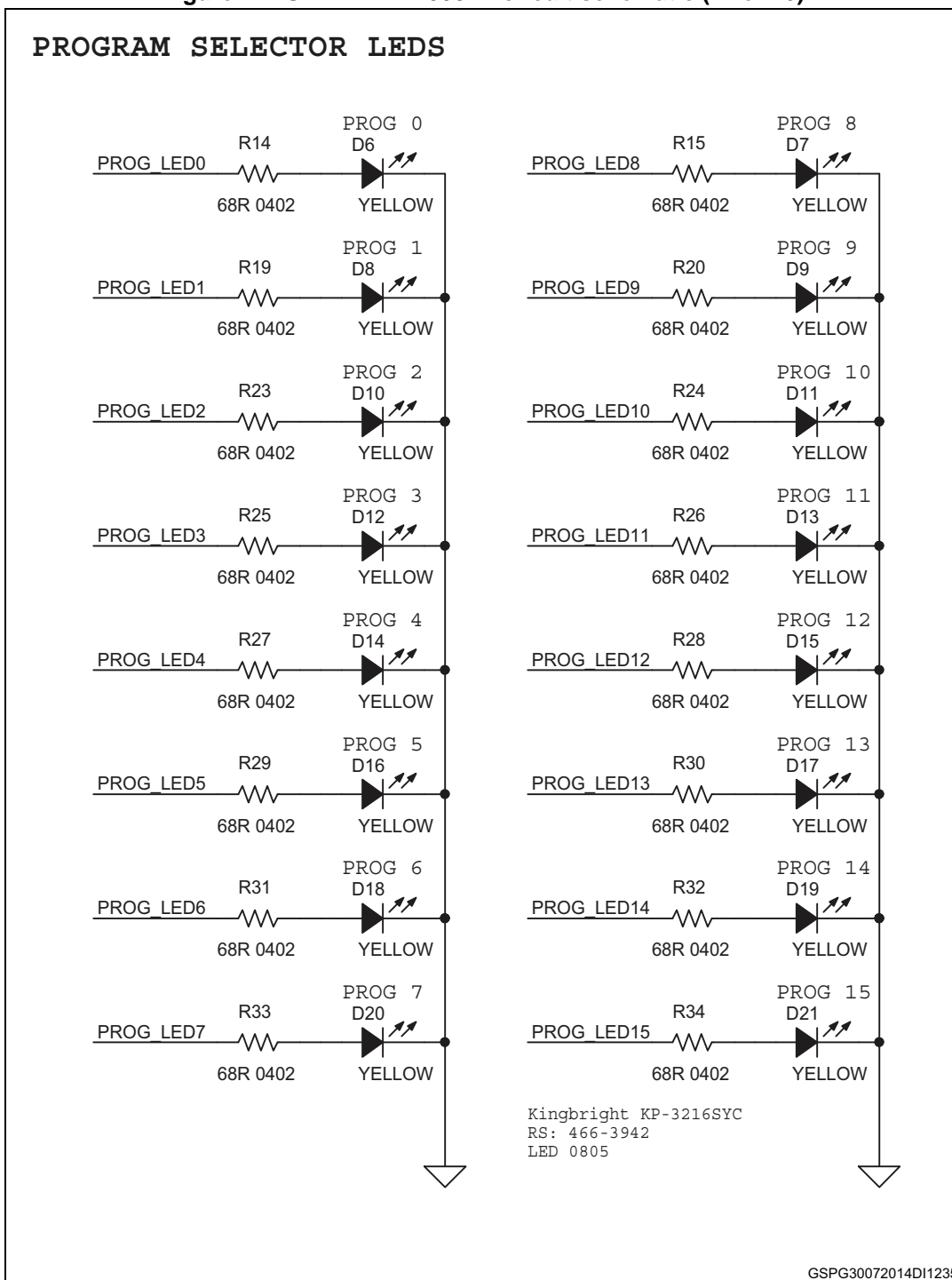
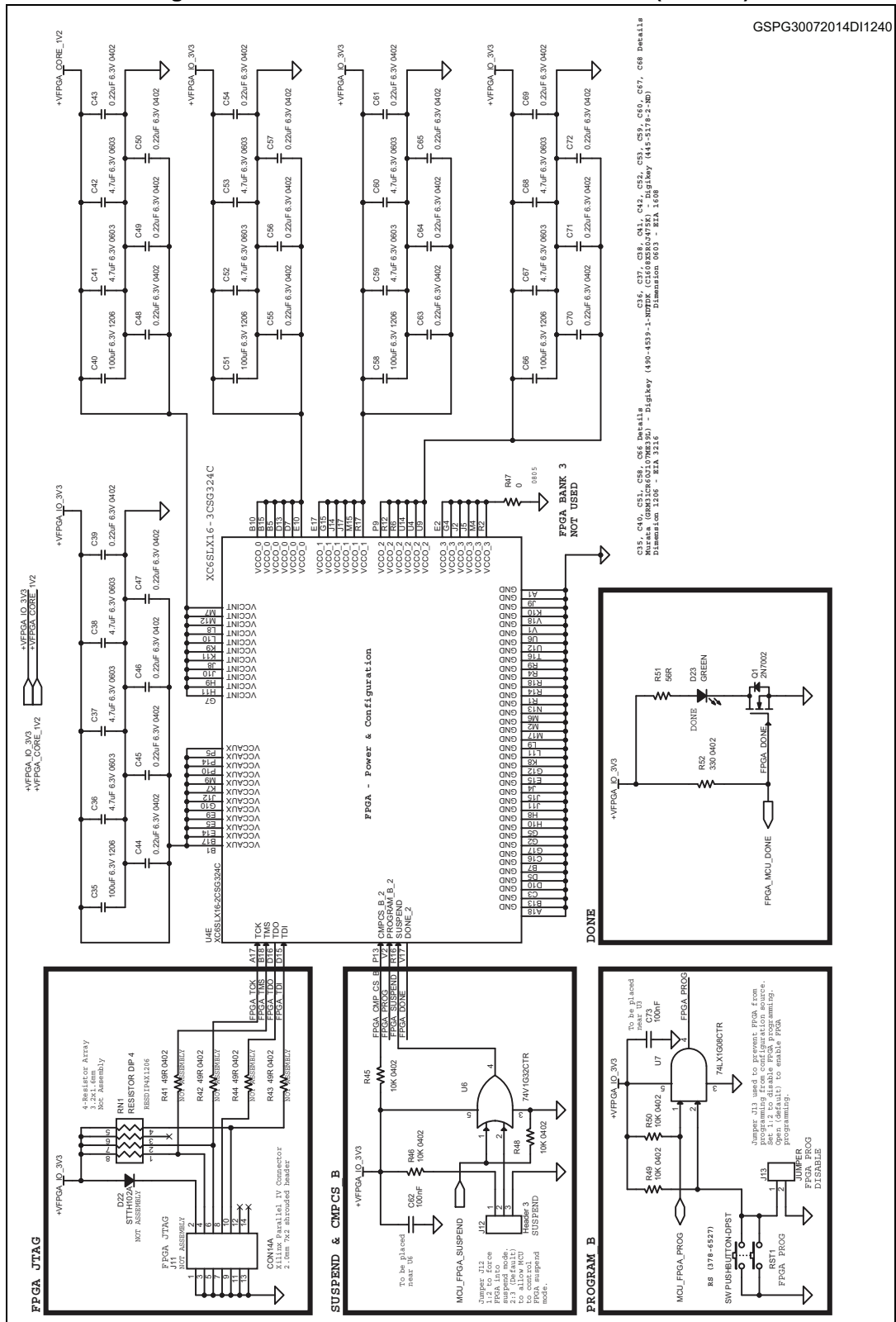


Figure 12. STEVAL-IME008V1 circuit schematic (12 of 16)



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U5: C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70
 U6: R45, R46, R47, R48, R49, R50, R51, R52
 U7: D22
 U8: O1
 Dimension 1206 - R1A 3216

Figure 13. STEVAL-IME008V1 circuit schematic (13 of 16)

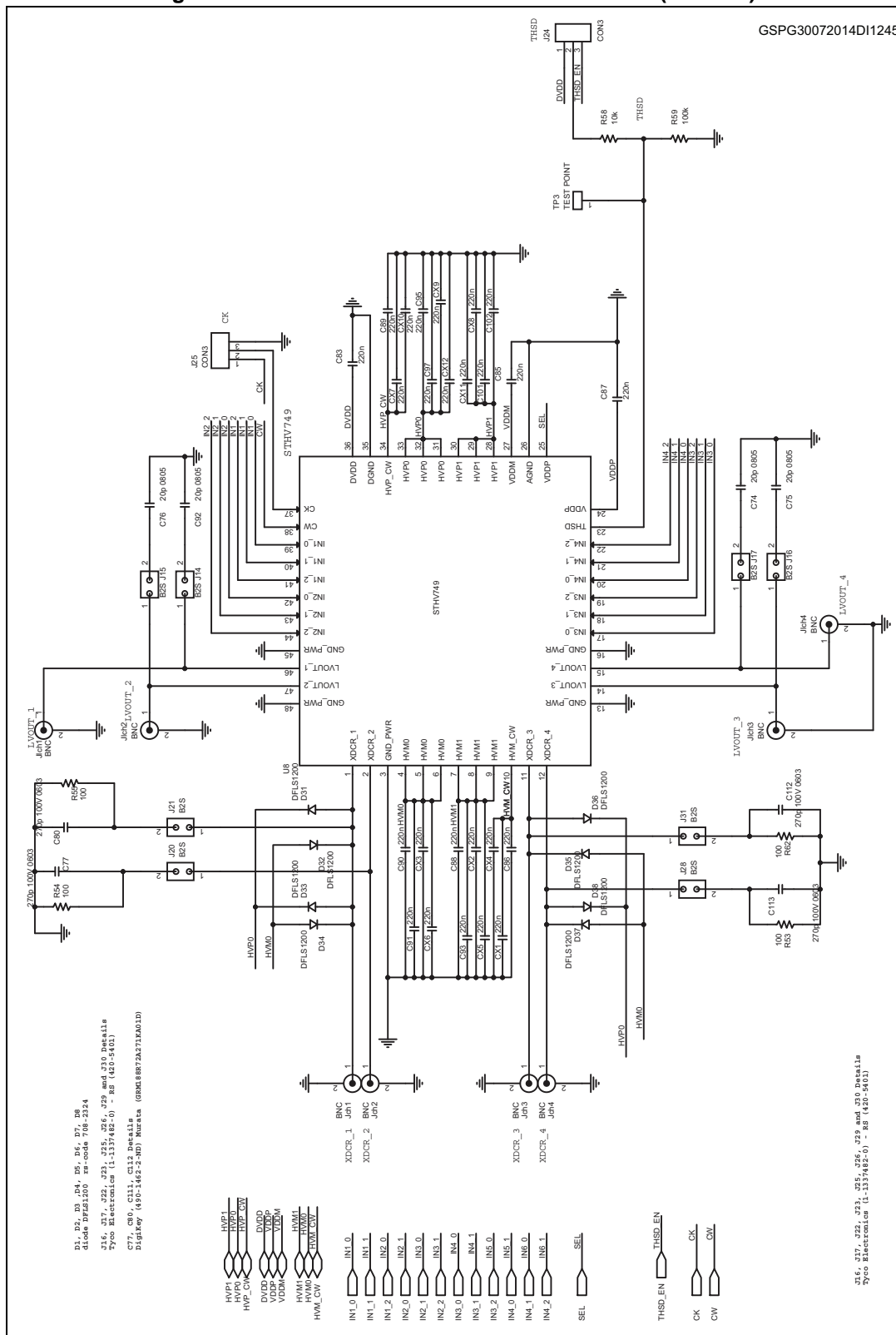


Figure 14. STEVAL-IME008V1 circuit schematic (14 of 16)

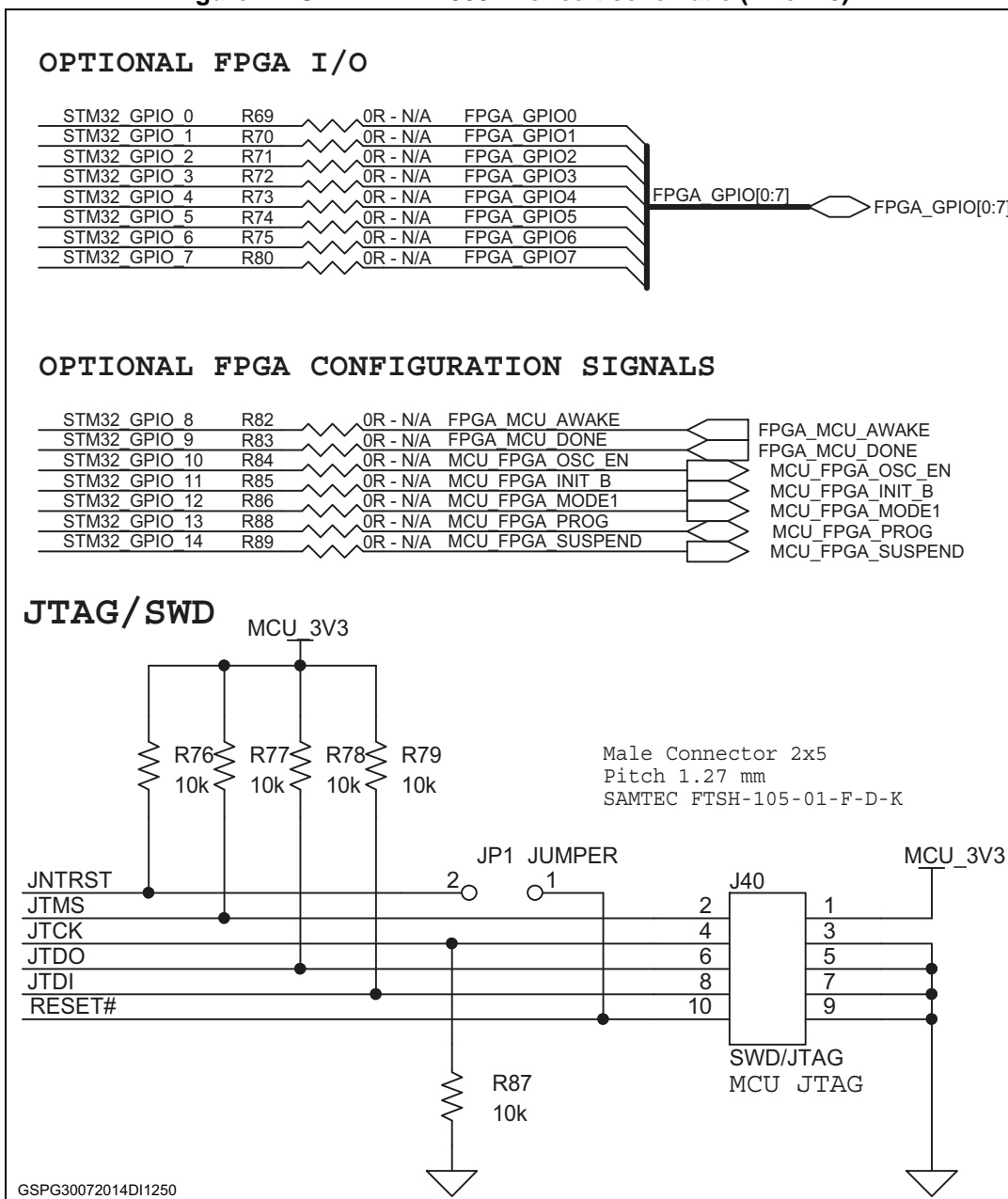
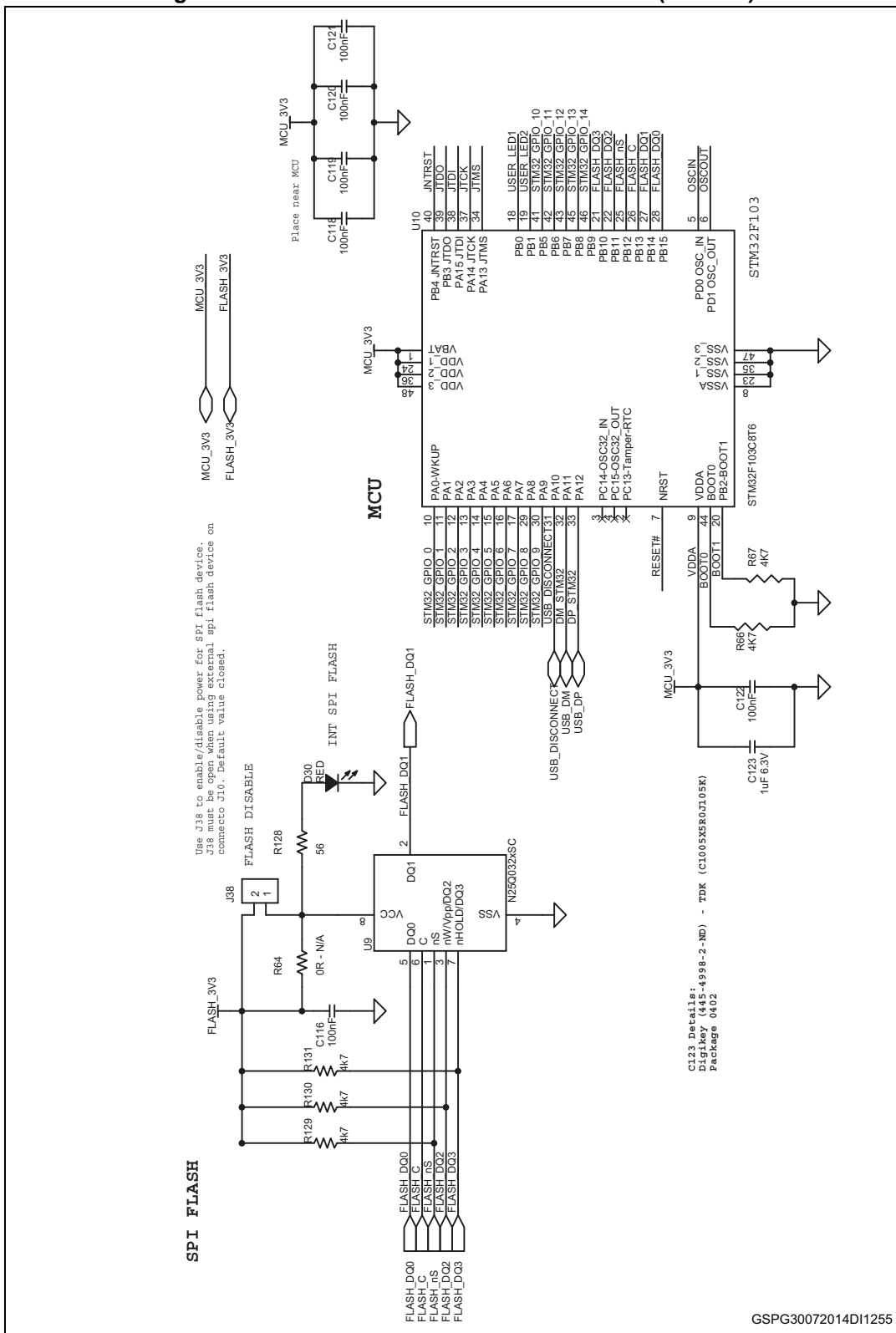


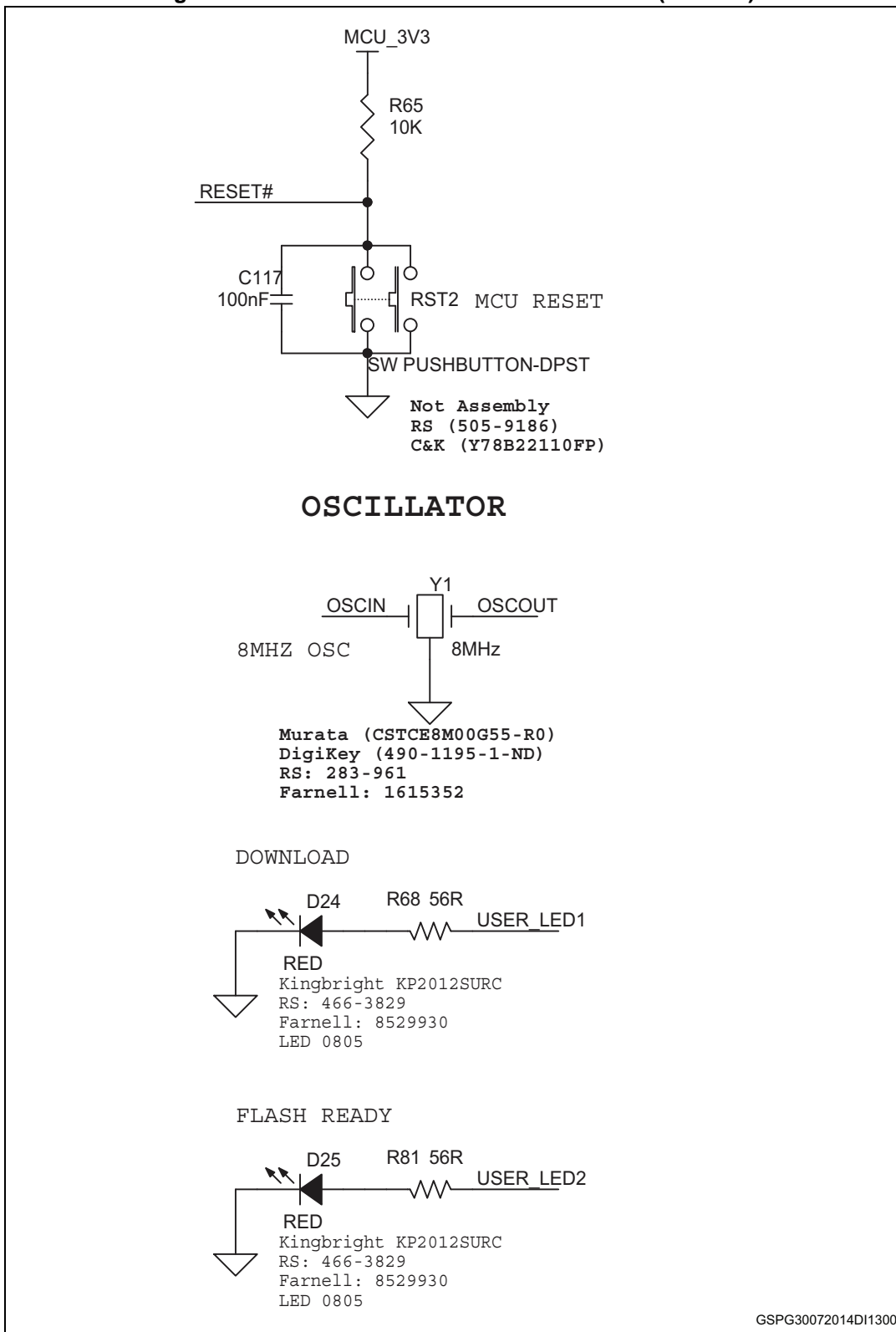
Figure 15. STEVAL-IME008V1 circuit schematic (15 of 16)



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Figure 16. STEVAL-IME008V1 circuit schematic (16 of 16)



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
06-Aug-2014	1	Initial release.

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