

Example of capacitor placement U2B24FCC BGA373

r01an5855ej0110-rh850u2b

Decoupling capacitors

- Capacitor placement and number of capacitors: Please refer page 3 to 4.
 - Capacitors has been kept as close as feasible to the related supply pin.

- Types of capacitors:
 - 0.1uF, 0.22uF, 10uF or higher*1 ceramic capacitor (Low ESR/ESL is required)
 - *1: This is expected value. Please follow the Power IC specification.
 - 10uF 3-terminal ceramic capacitor (Very low ESR/ESL is required)

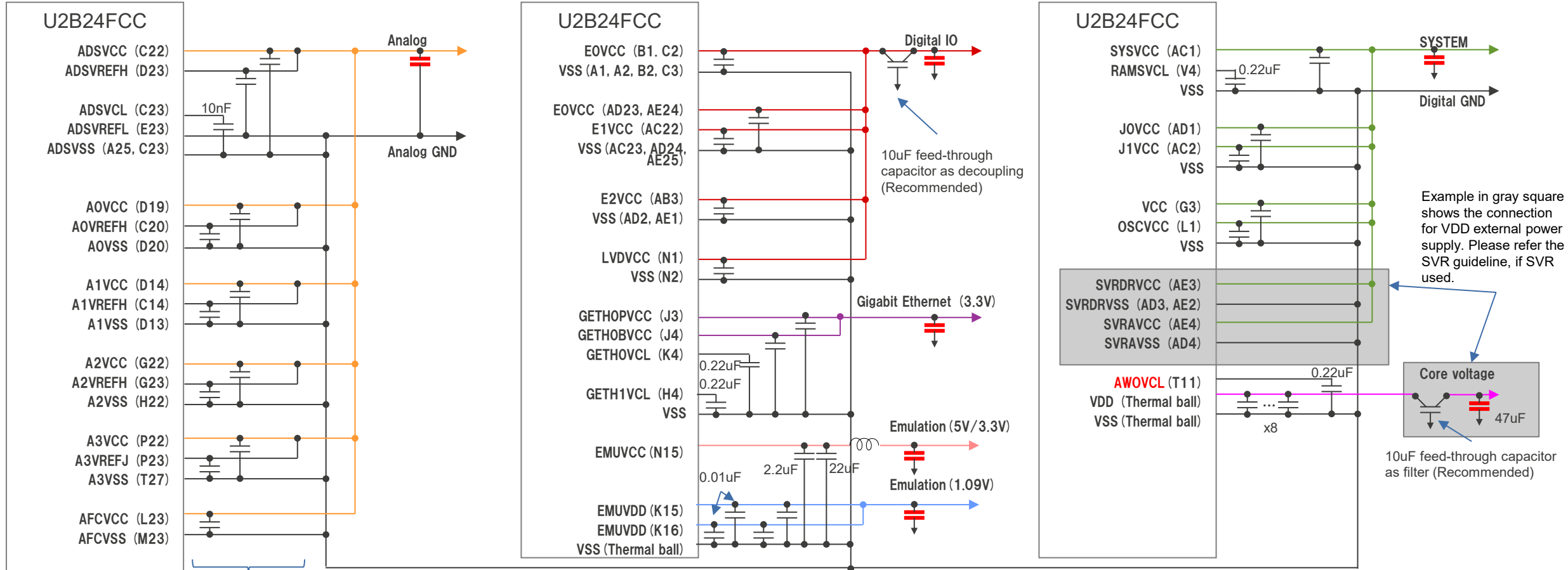
- 3-terminal capacitor
 - 3-terminal capacitor is recommended for reduction of radiation noise.

Example of capacitor placement

U2B24FCC BGA373 **SBMD=1**

DeepSTOP, AWOVDD Built-in REG Power Supply

Example capacitor connection for BGA373 package.



It is recommended that the capacitor for AnVREF is closer to related pin than the capacitor for AnVCC.

Legend

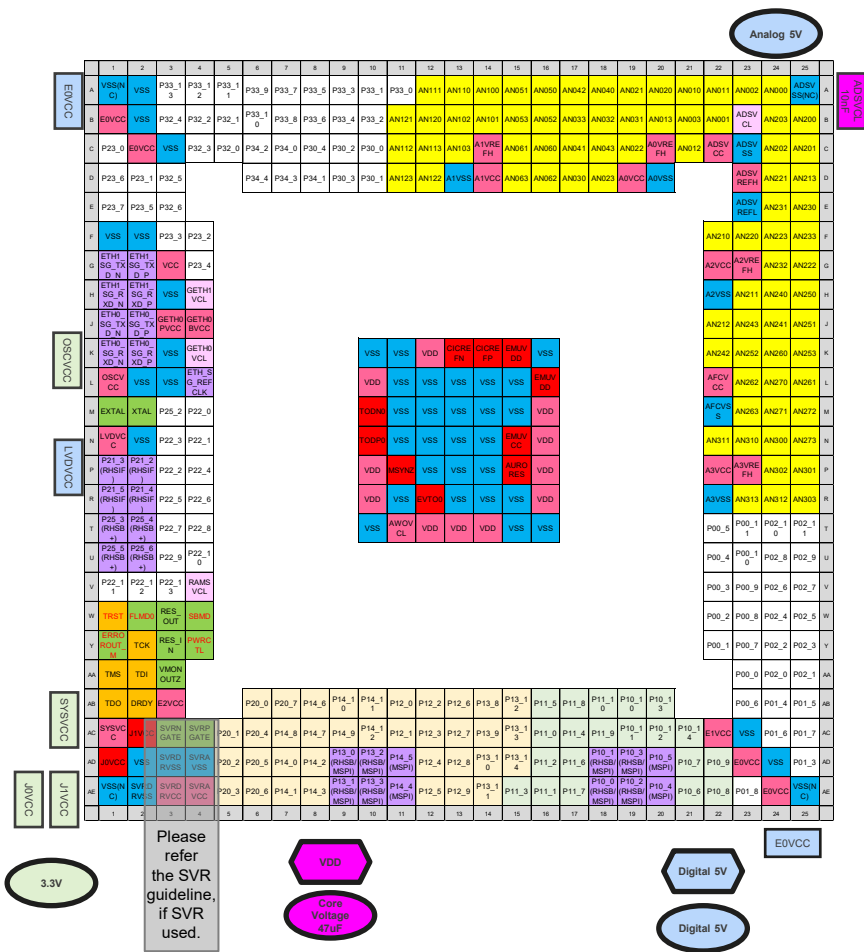
- Capacitor symbol: capacitor (If not specified; - expected value is 0.1uF. - please connect GND terminal of capacitors to a nearby VSS or AnVSS ball)
- Capacitor with red lines: capacitor (Expected value is 10uF or higher. Please follow the Power IC specification.)
- 3-terminal capacitor symbol: 3-terminal capacitor
- Inductor symbol: inductor (TDK: MMZ1005Y471C or equivalent.)

PCB layout guidelines -Top layer / Bottom layer-

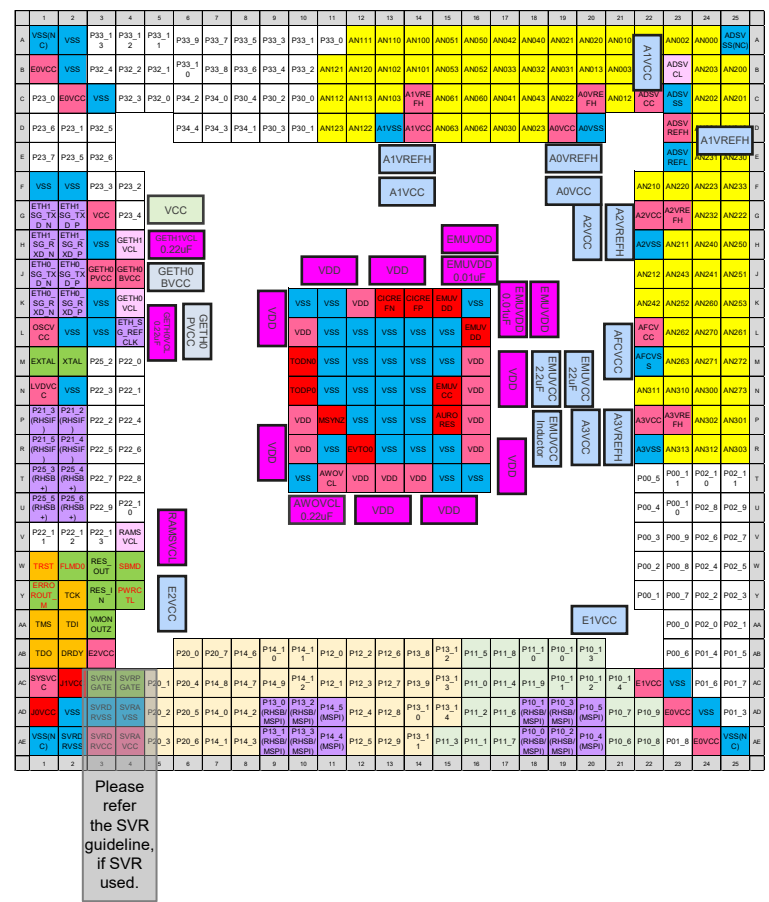
U2B24FCC BGA373 SBMD=1

DeepSTOP, AWOVDD Built-in REG Power Supply

Example capacitor placement for BGA373 package



Top Layer



Bottom Layer

Legend

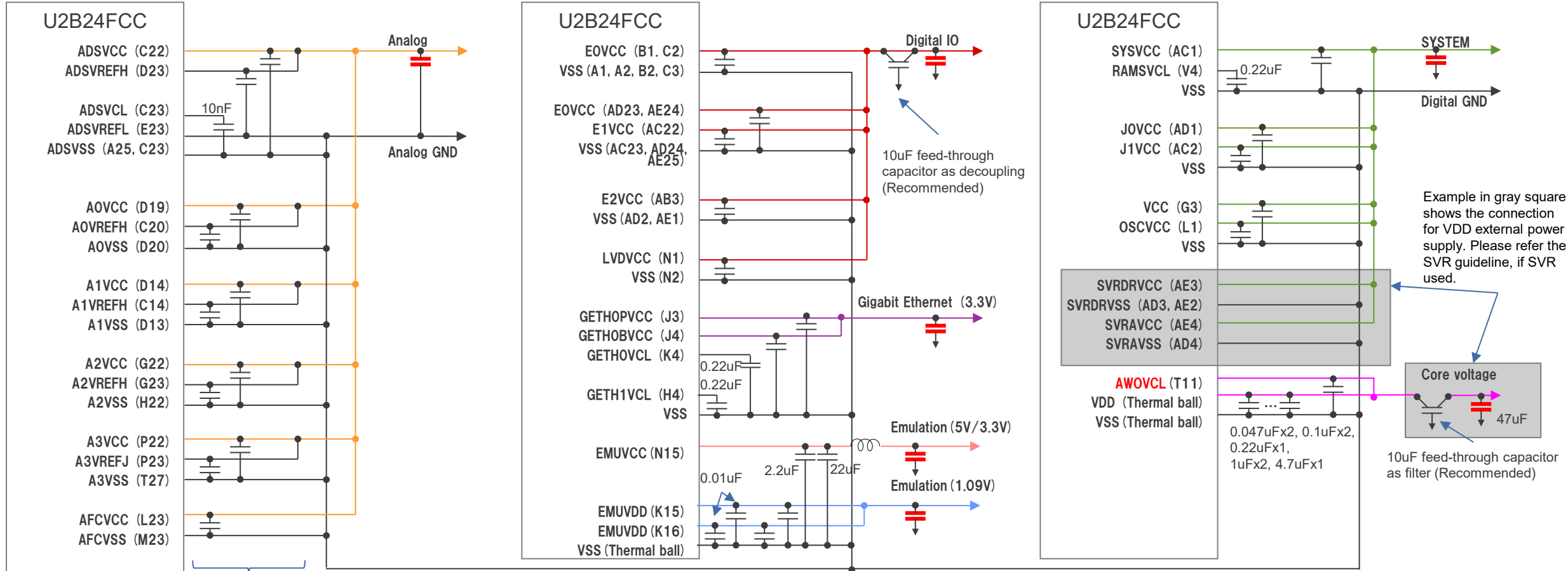
- capacitor (analog, Digital IO) (The capacitance is 0.1uF if not specified.)
- capacitor (system) (The capacitance is 0.1uF if not specified.)
- capacitor (Core voltage) (The capacitance is 0.1uF if not specified.)
- capacitor (analog, Digital IO) (Expected value is 10uF or higher. Please follow the Power IC specification.)
- capacitor (system) (Expected value is 10uF or higher. Please follow the Power IC specification.)
- capacitor (Core voltage) (Expected value is 10uF or higher. Please follow the Power IC specification.)
- 3-terminal capacitor (analog, Digital IO)
- 3-terminal capacitor (Core voltage)

Example of capacitor placement

U2B24FCC BGA373 **SBMD=0**

Power off stby, AWOVDD External Power Supply

Example capacitor connection for BGA373 package.



It is recommended that the capacitor for AnVREF is closer to related pin than the capacitor for AnVCC.

Legend

- Capacitor symbol: capacitor (If not specified; - expected value is 0.1uF. - please connect GND terminal of capacitors to a nearby VSS or AnVSS ball)
- Large capacitor symbol: capacitor (Expected value is 10uF or higher. Please follow the Power IC specification.)
- 3-terminal capacitor symbol: 3-terminal capacitor
- Inductor symbol: inductor (TDK: MMZ1005Y471C or equivalent.)

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