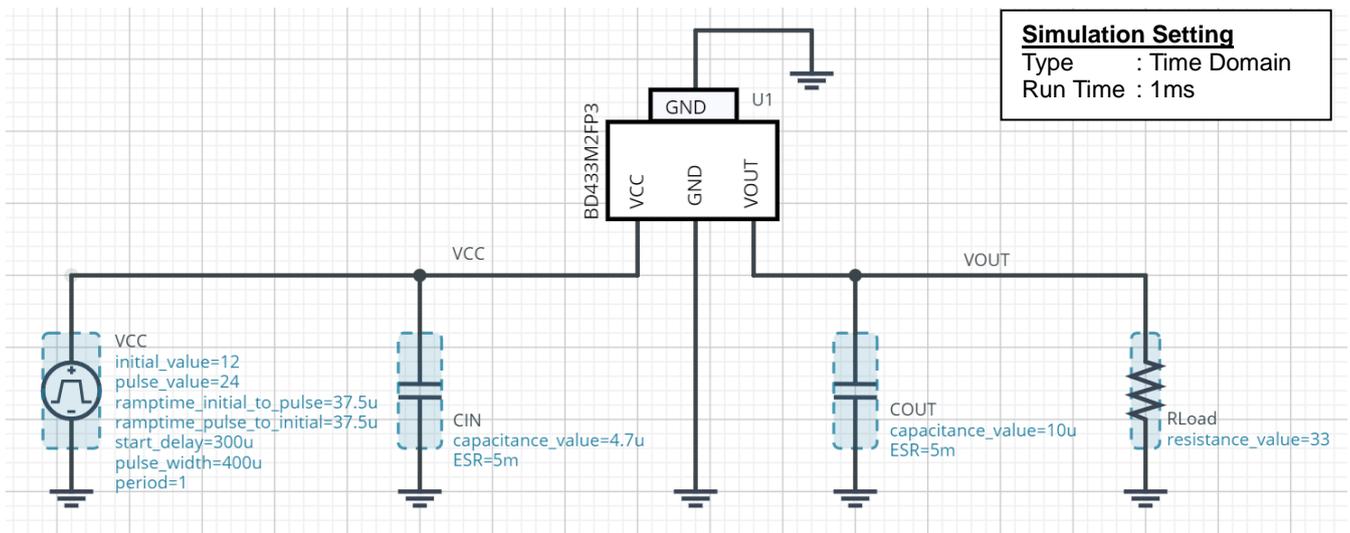


## 200mA 3.3V Output LDO Regulators BD433M2FP3 / Line Response

This Circuit simulates the Line Response.  
You can check the fluctuation of the output voltage when the input voltage is abruptly changed.

### Simulation Schematic



### Peripheral Components

| Instance Name | Type      | Parameter         | Default Value | Variable Range |                                   | Unit |
|---------------|-----------|-------------------|---------------|----------------|-----------------------------------|------|
|               |           |                   |               | Min            | Max                               |      |
| CIN           | Capacitor | capacitance_value | 4.7           | 0.1            | no constraint <sup>(Note 1)</sup> | μF   |
|               |           | ESR               | 5             | 1              | 10000                             | mΩ   |
| COUT          | Capacitor | capacitance_value | 10            | 10             | no constraint <sup>(Note 1)</sup> | μF   |
|               |           | ESR               | 5             | 1              | 10000                             | mΩ   |

### Simulation Conditions

| Instance Name | Type           | Parameter                 | Default Value | Variable Range                    |      | Unit |
|---------------|----------------|---------------------------|---------------|-----------------------------------|------|------|
|               |                |                           |               | Min                               | Max  |      |
| VCC           | Voltage Source | initial_value             | 12            | 3.9                               | 42   | V    |
|               |                | pulse_value               | 24            | 3.9                               | 42   | V    |
|               |                | ramptime_initial_to_pulse | 37.5          | no constraint <sup>(Note 1)</sup> |      | μs   |
|               |                | ramptime_pulse_to_initial | 37.5          | no constraint <sup>(Note 1)</sup> |      | μs   |
|               |                | start_delay               | 300           | no constraint <sup>(Note 1)</sup> |      | μs   |
|               |                | pulse_width               | 400           | no constraint <sup>(Note 1)</sup> |      | μs   |
|               |                | period                    | 1             | no constraint <sup>(Note 1)</sup> |      | s    |
| Rload         | Resistor       | resistance_value          | 33            | 16.5                              | 100M | Ω    |

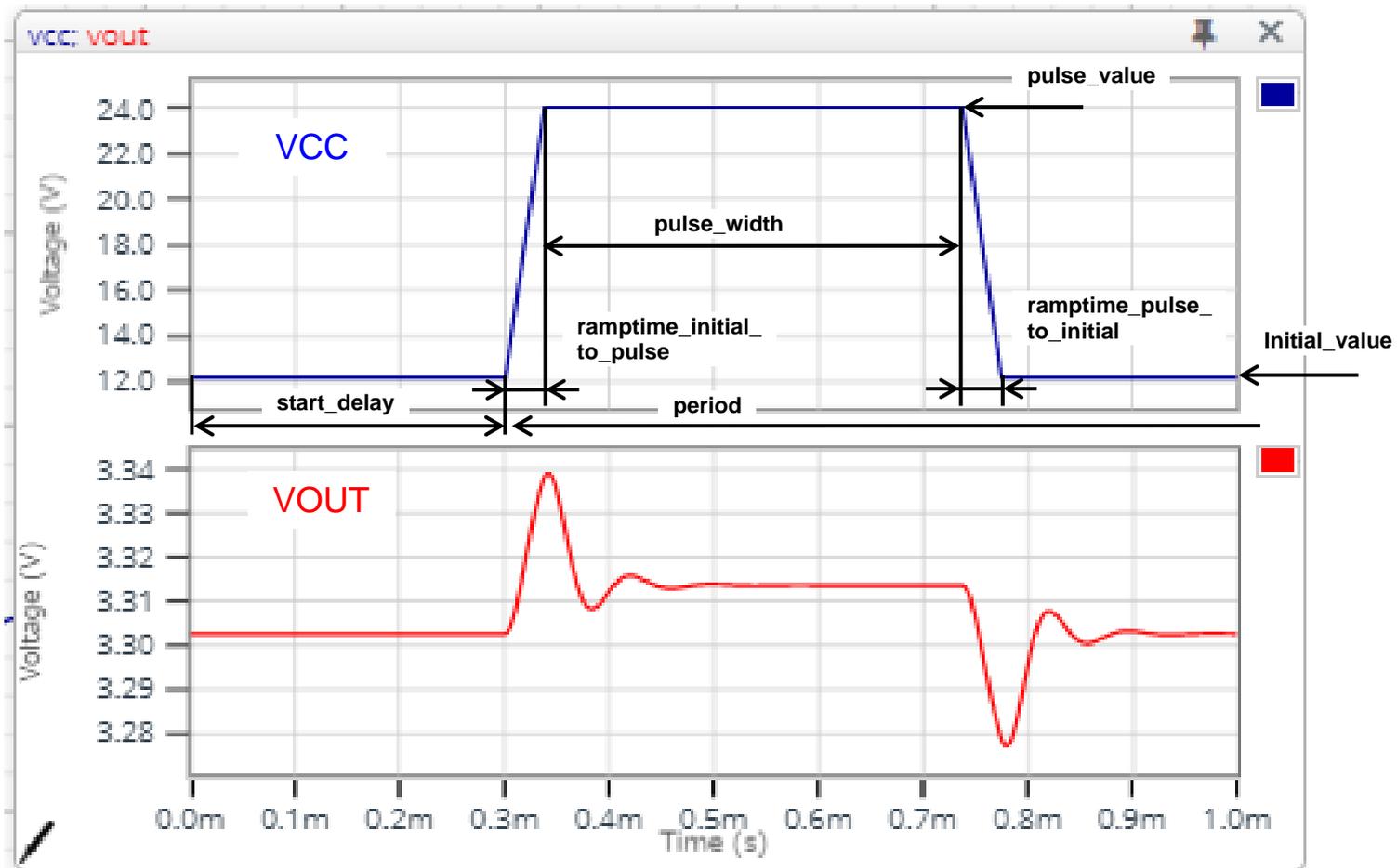
(Note 1) This is a constraint of the simulation settings and does not guarantee the operation of the IC.

**Caution 1:** The values from the simulation results are not guaranteed. Please use these results as a guide for your design.

**Caution 2:** These model characteristics are specifically at Ta=25°C. Thus, the simulation result with temperature variances may significantly differ from the result with the one done at actual application board (actual measurement).

**Caution 3:** Please refer to the datasheet for details of the technical information

### Simulation Result



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