Simulation conditions:

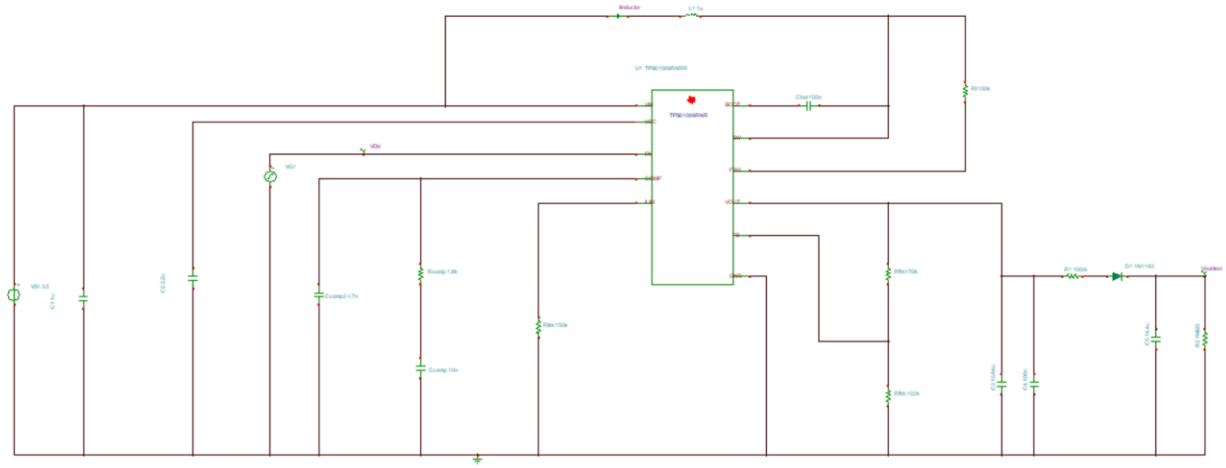
Vin= Vbat (set to 3.5V) Vout=6.8V. Schematic parameters are similar with customer. The load is very light (use 1Mohm resistor as load) .

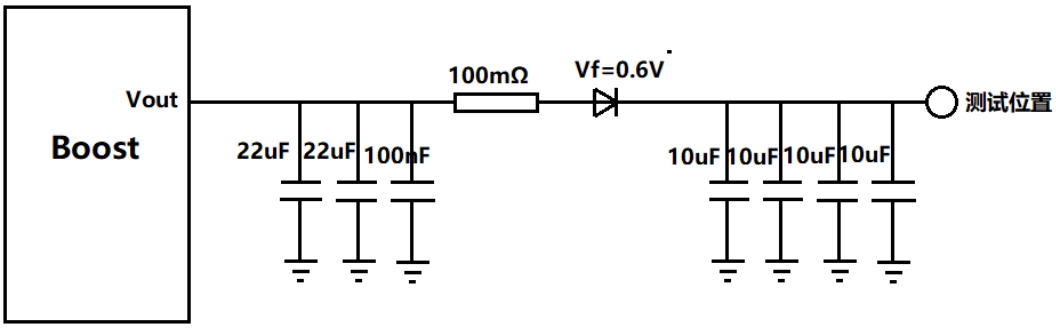
Cout:

22uf (GRM21BR61E226ME44L), check the datasheet on Murata website and effective capacitance @ 6.8V is only ~30%* 22uf=6.6uf

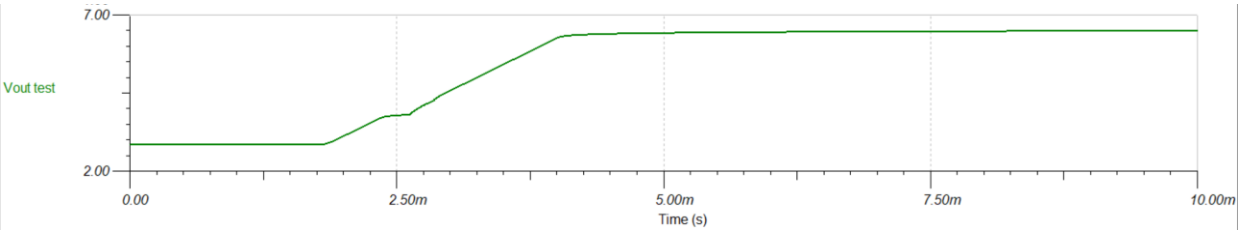
10uf (GRM188R61E106MA73D) check the datasheet on Murata website and effective capacitance @ 6.8V is only ~30%* 22uf=6.6uf

So use these effective capacitances to do simulation. Model as below, Vout test point is same as request shown in email.

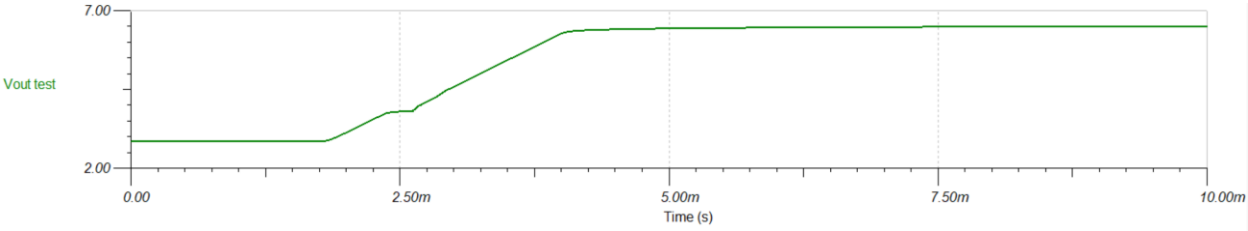




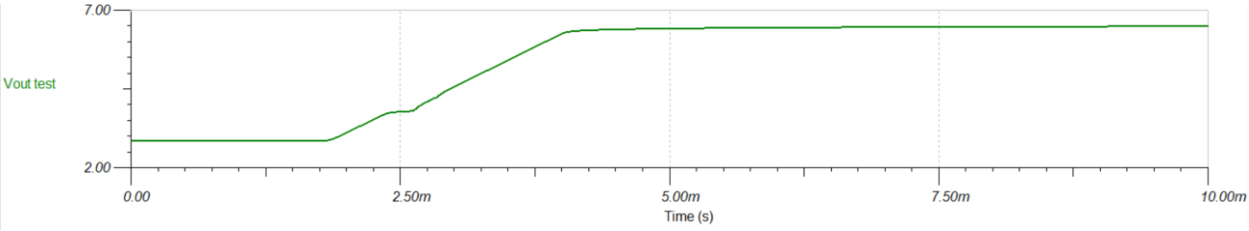
Typical capacitance



-20% decrease on capacitance



+20% increase on capacitance



Summary:

There is no overshoot on Vout_test point based on simulation.