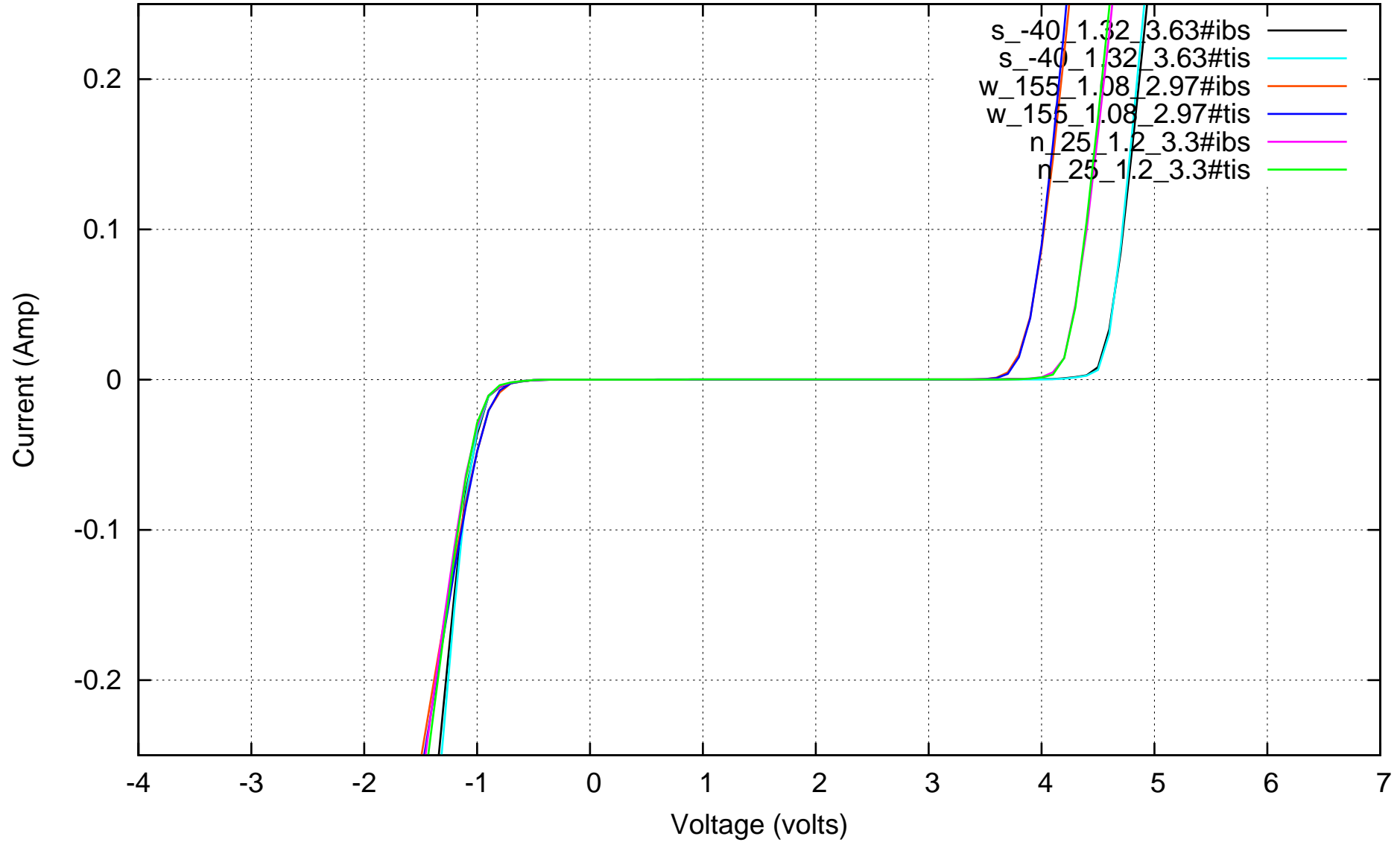
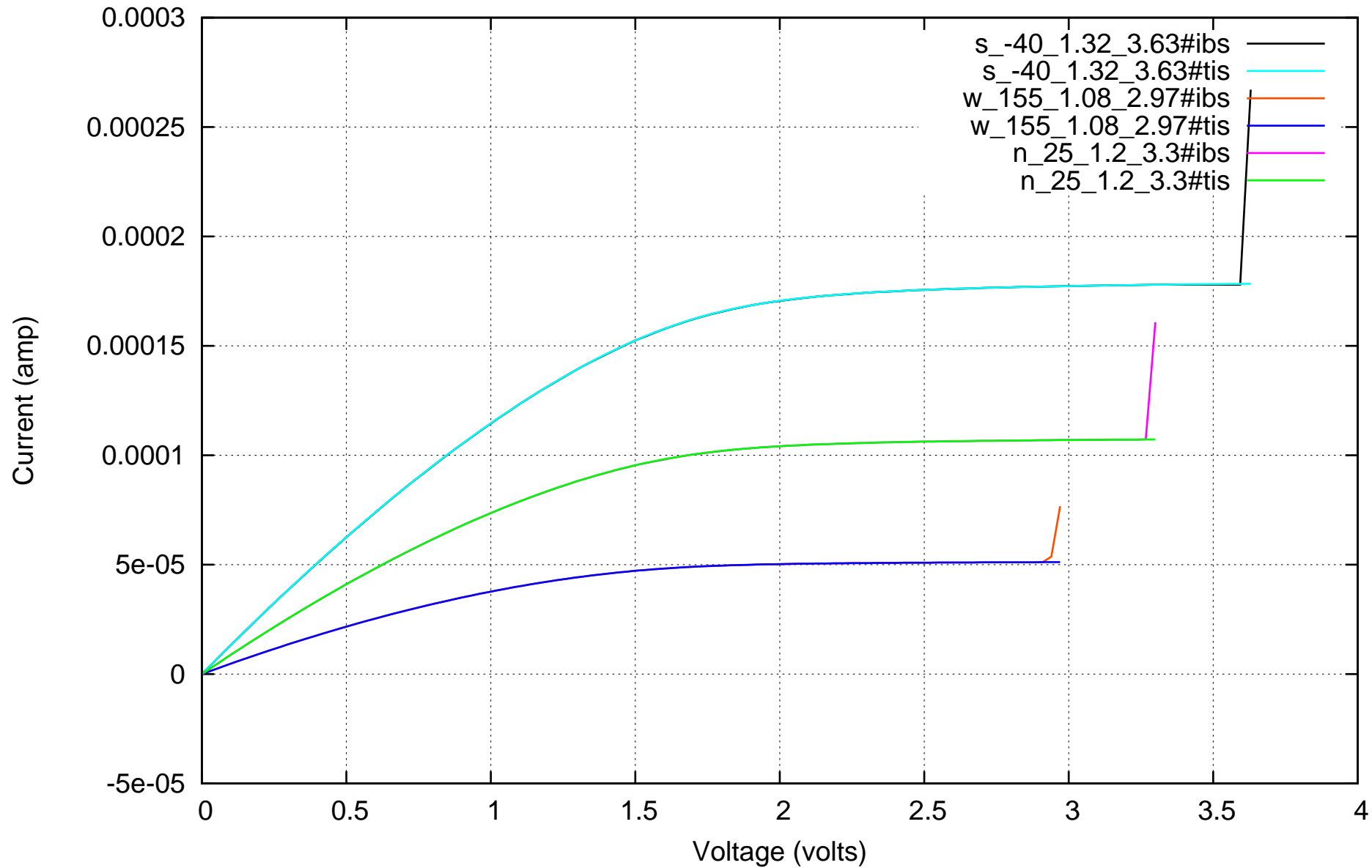


Current at PAD (captured for -250mA to 250mA) for Voltage sweep at PAD  
[IBIS model in Z state, Receiver mode] (Model WK\_PD\_ON\_3P3)  
[Testcase 3]

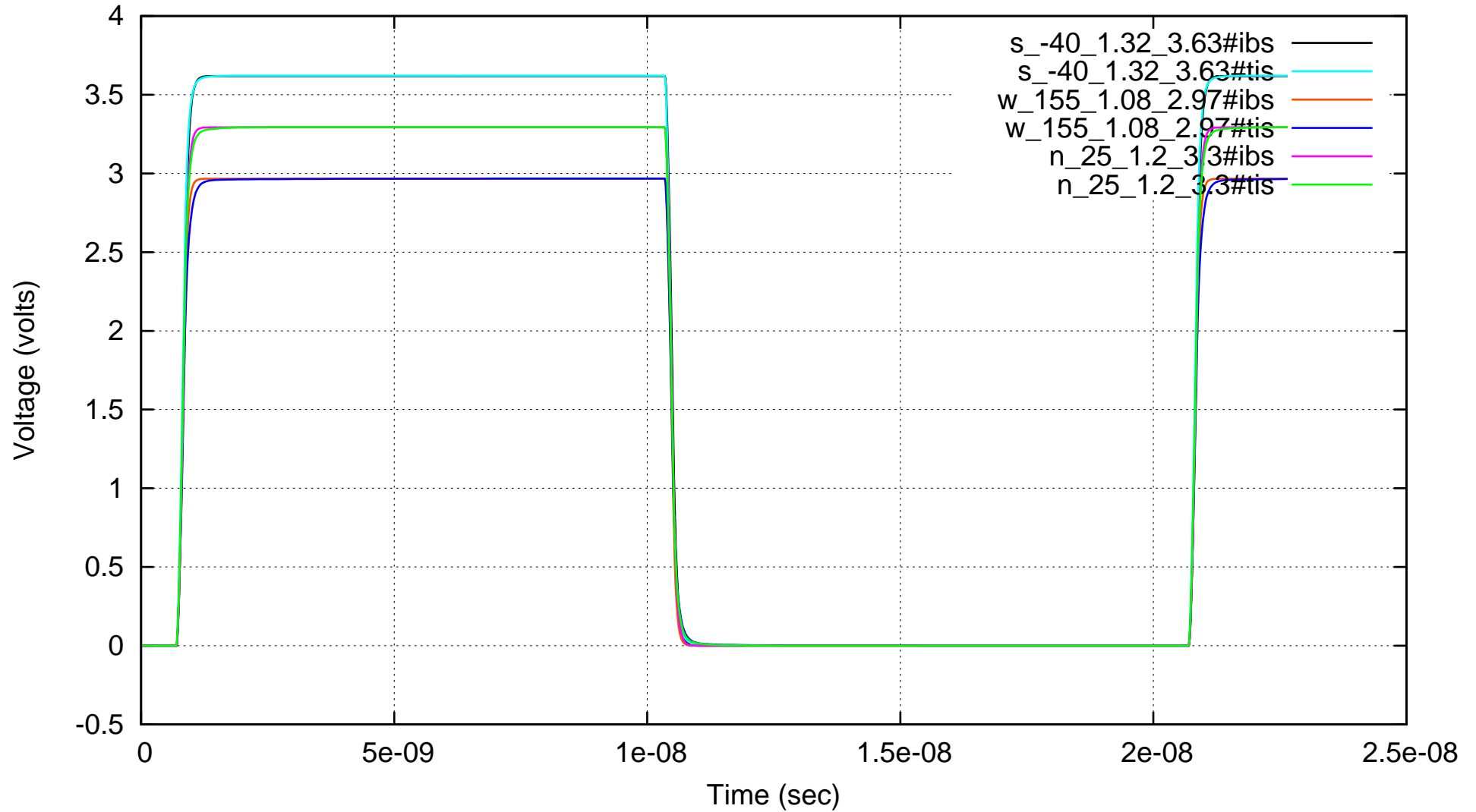


Current at PAD for voltage sweep at PAD  
model WK\_PD\_ON\_3P3 in Z state (Weak pull-down ON)

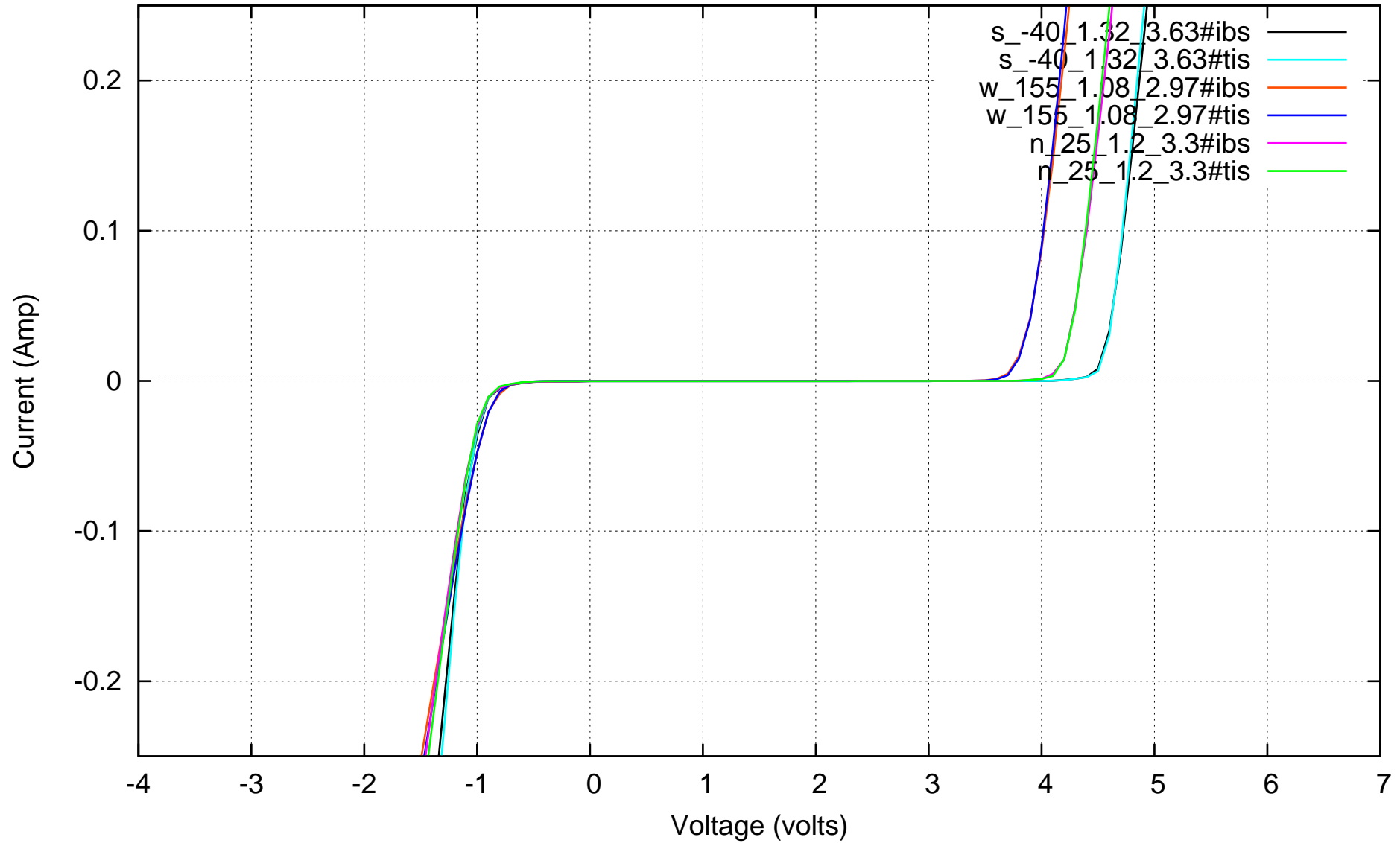


PAD waveform for model connected to transmission line and driven by voltage source with source impedance. IBIS model is in receive mode.

Rsource = ,  
Tline\_Delay = 0.35NS, Tline\_Z0 = 50 (Model WK\_PD\_ON\_3P3)  
[Testcase 8]



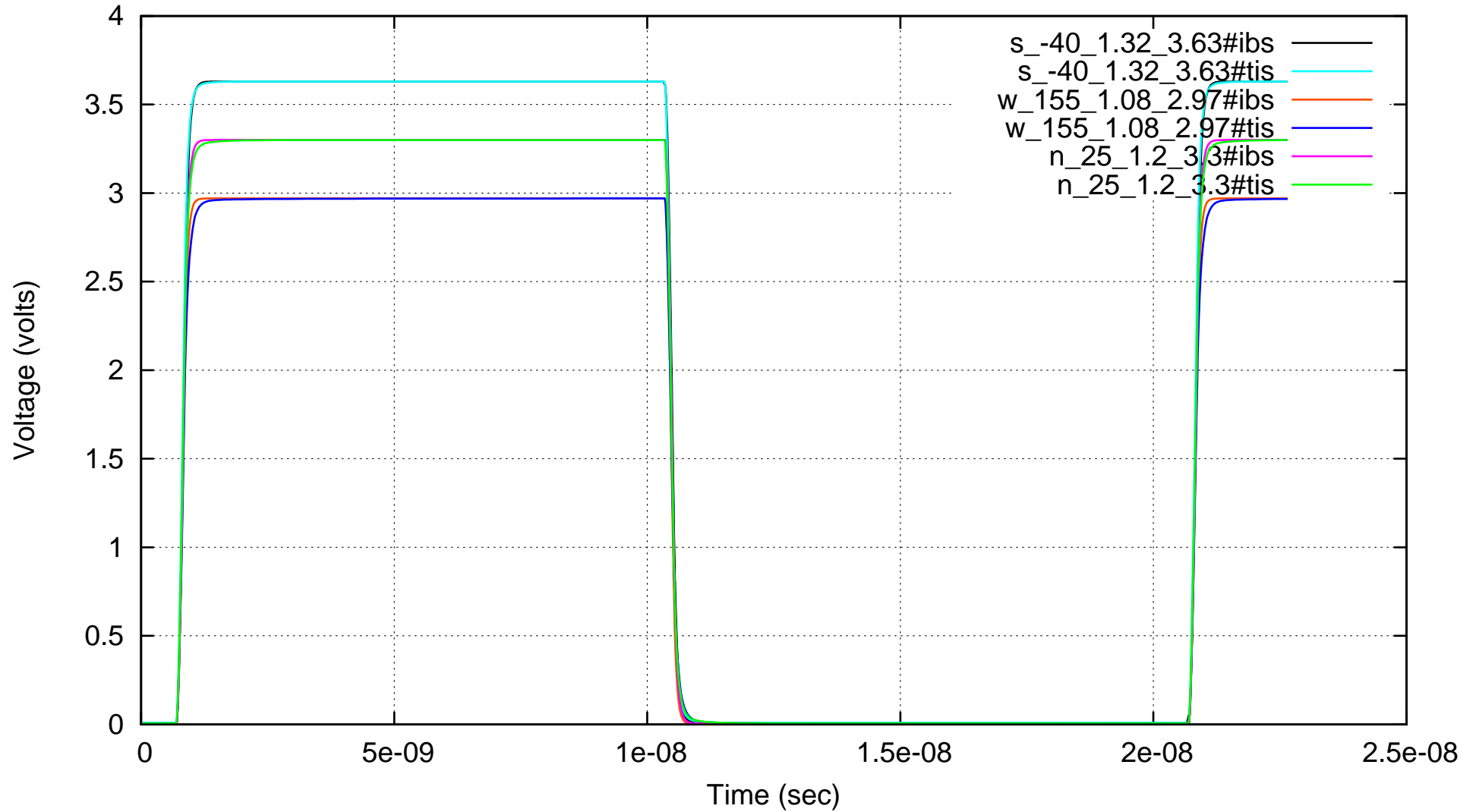
Current at PAD (captured for -250mA to 250mA) for Voltage sweep at PAD  
[IBIS model in Z state, Receiver mode] (Model WK\_PU\_ON\_3P3)  
[Testcase 3]



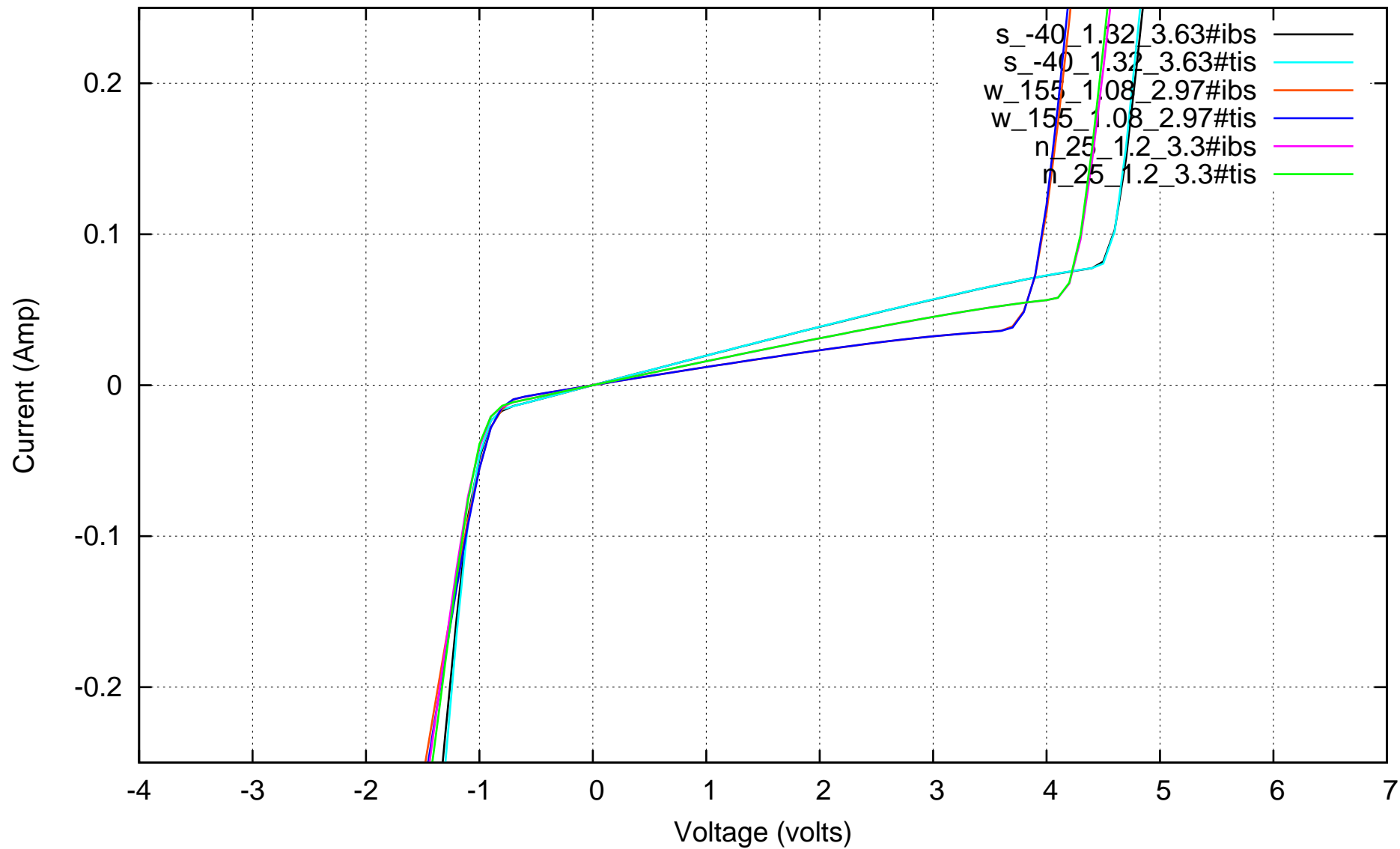


PAD waveform for model connected to transmission line and driven by voltage source with source impedance. IBIS model is in receive mode.

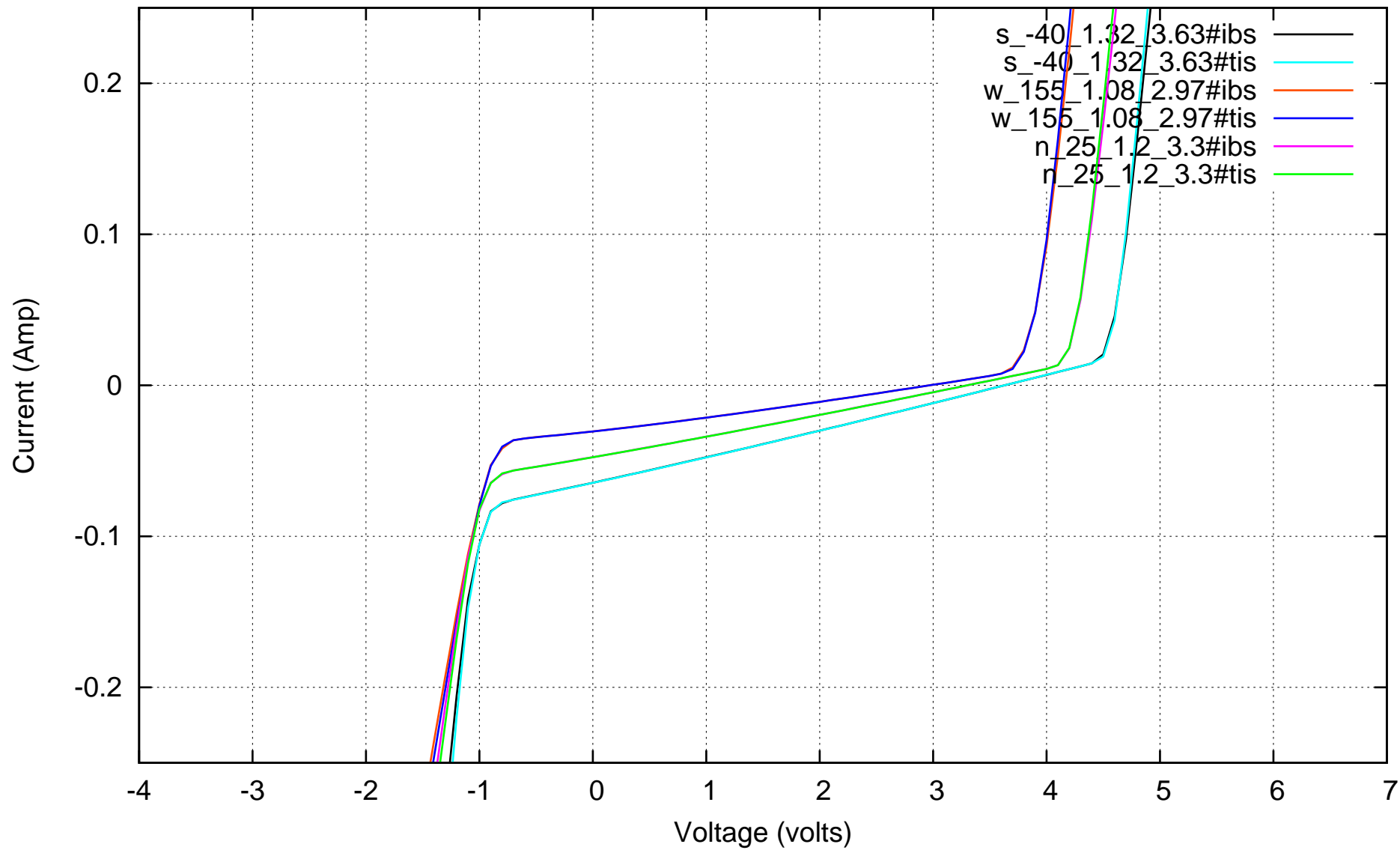
Rsource = ,  
Tline\_Delay = 0.35NS, Tline\_Z0 = 50 (Model WK\_PU\_ON\_3P3)  
[Testcase 8]



Current at PAD (captured for -250mA to 250mA) for Voltage sweep at PAD  
[IBIS model driving 0] (Model DRIVER\_MODE\_3P3)  
[Testcase 1]

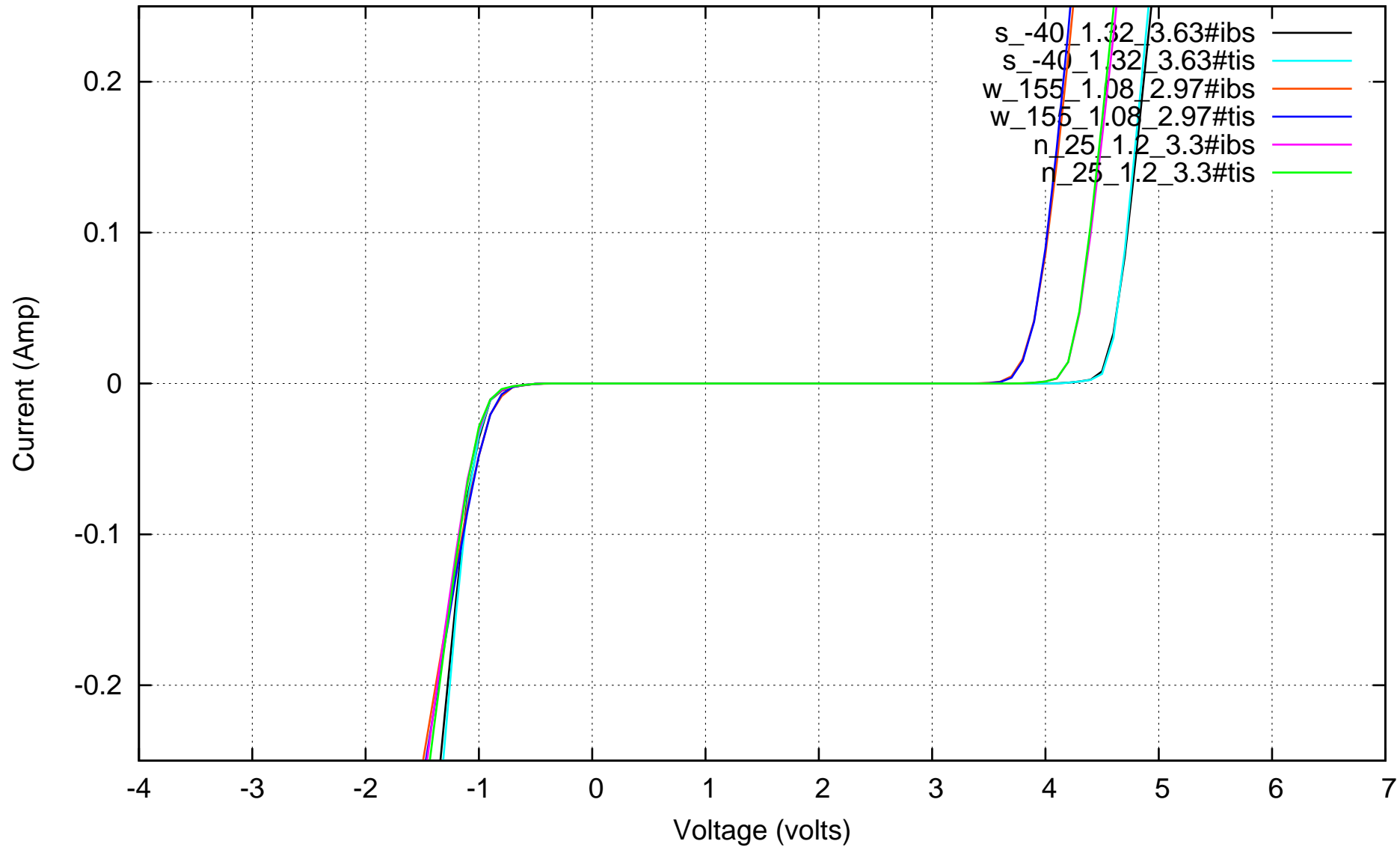


Current at PAD (captured for -250mA to 250mA) for Voltage sweep at PAD  
[IBIS model driving 1] (Model DRIVER\_MODE\_3P3)  
[Testcase 2]

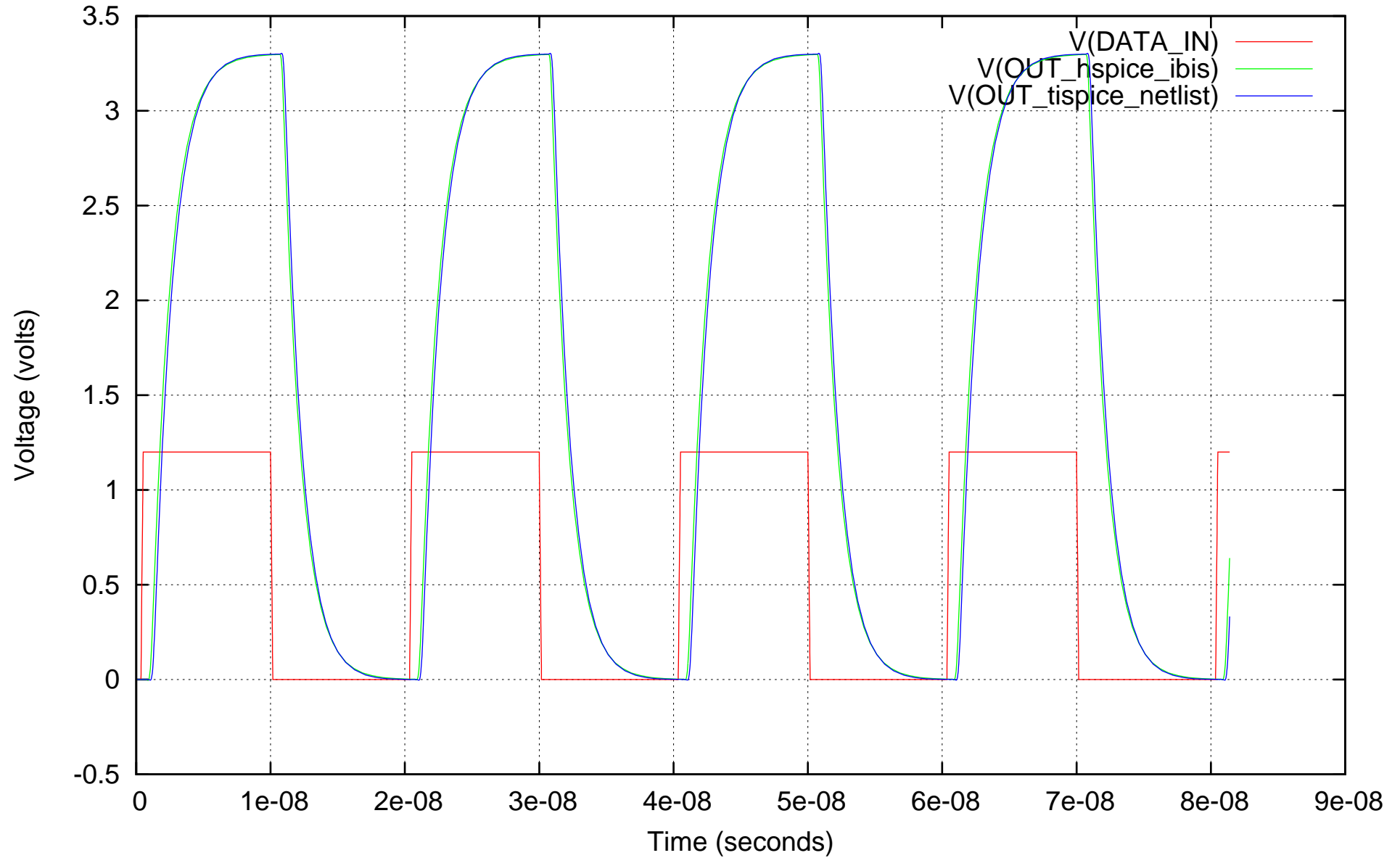




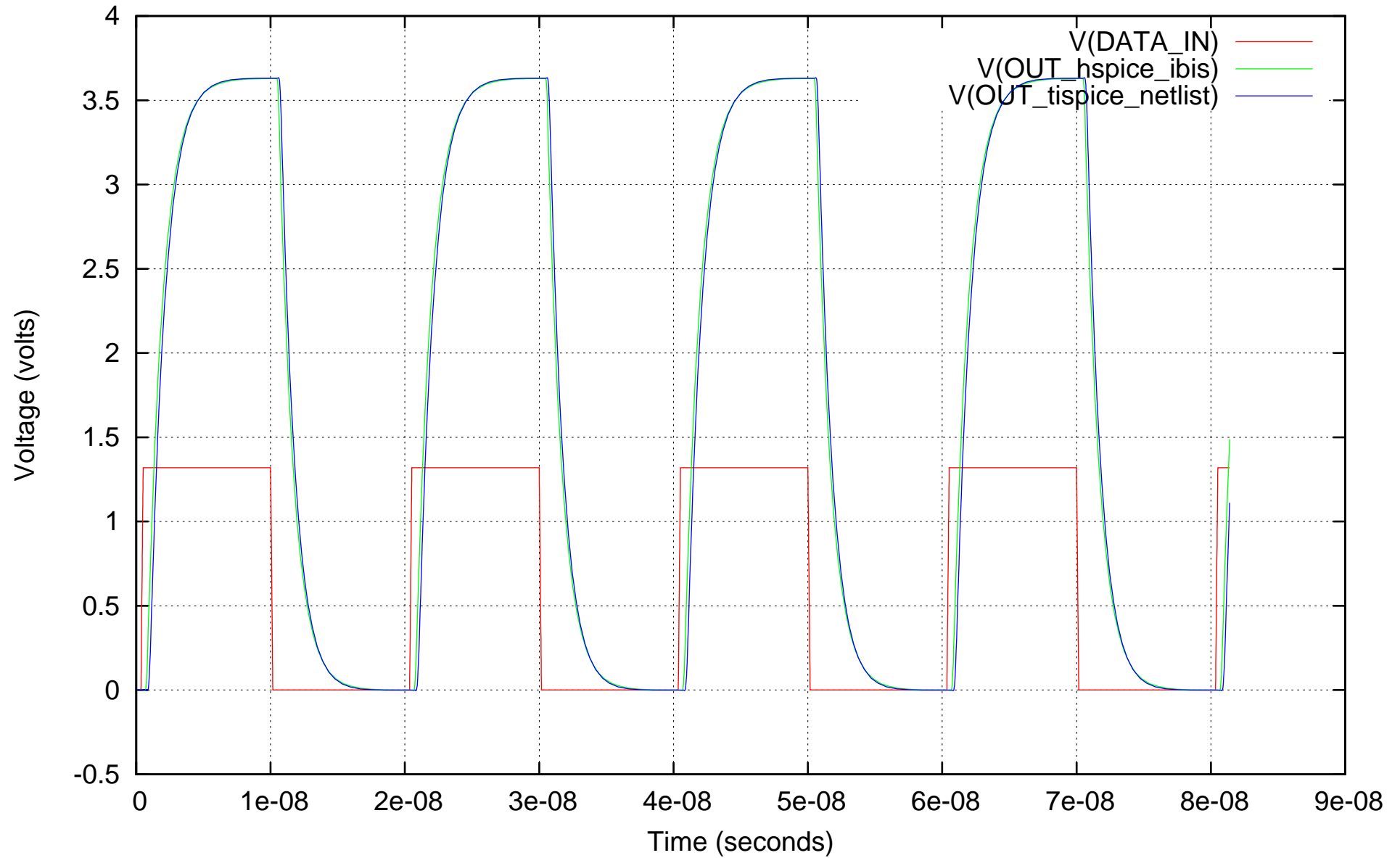
Current at PAD (captured for -250mA to 250mA) for Voltage sweep at PAD  
[IBIS model in Z state, Receiver mode] (Model DRIVER\_MODE\_3P3)  
[Testcase 3]



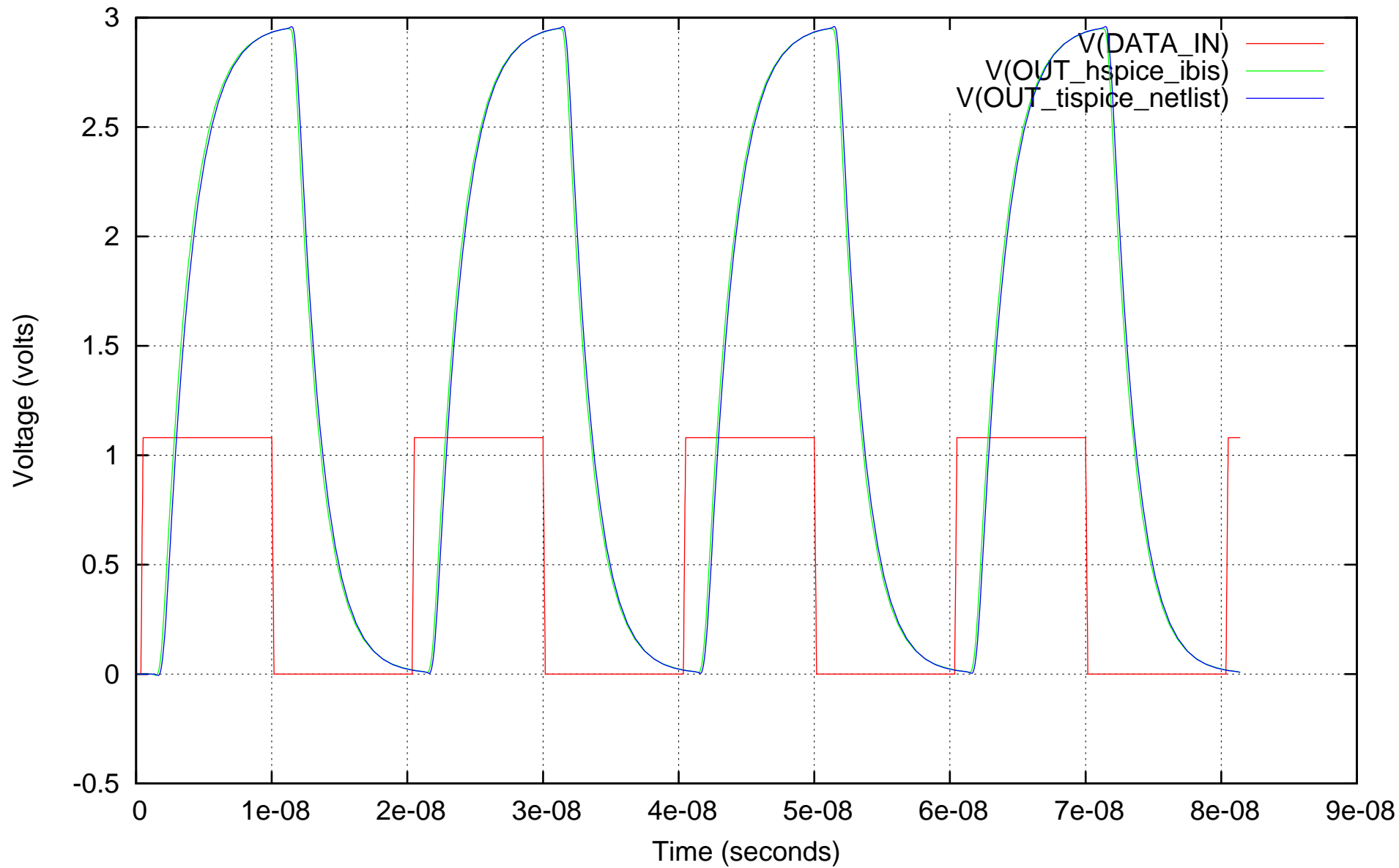
A few pulses applied to the model  
DRIVER\_MODE\_3P3, ptv = n\_25\_1.2\_3.3  
Load = 20pF



A few pulses applied to the model  
DRIVER\_MODE\_3P3, ptv = s\_-40\_1.32\_3.63  
Load = 20pF

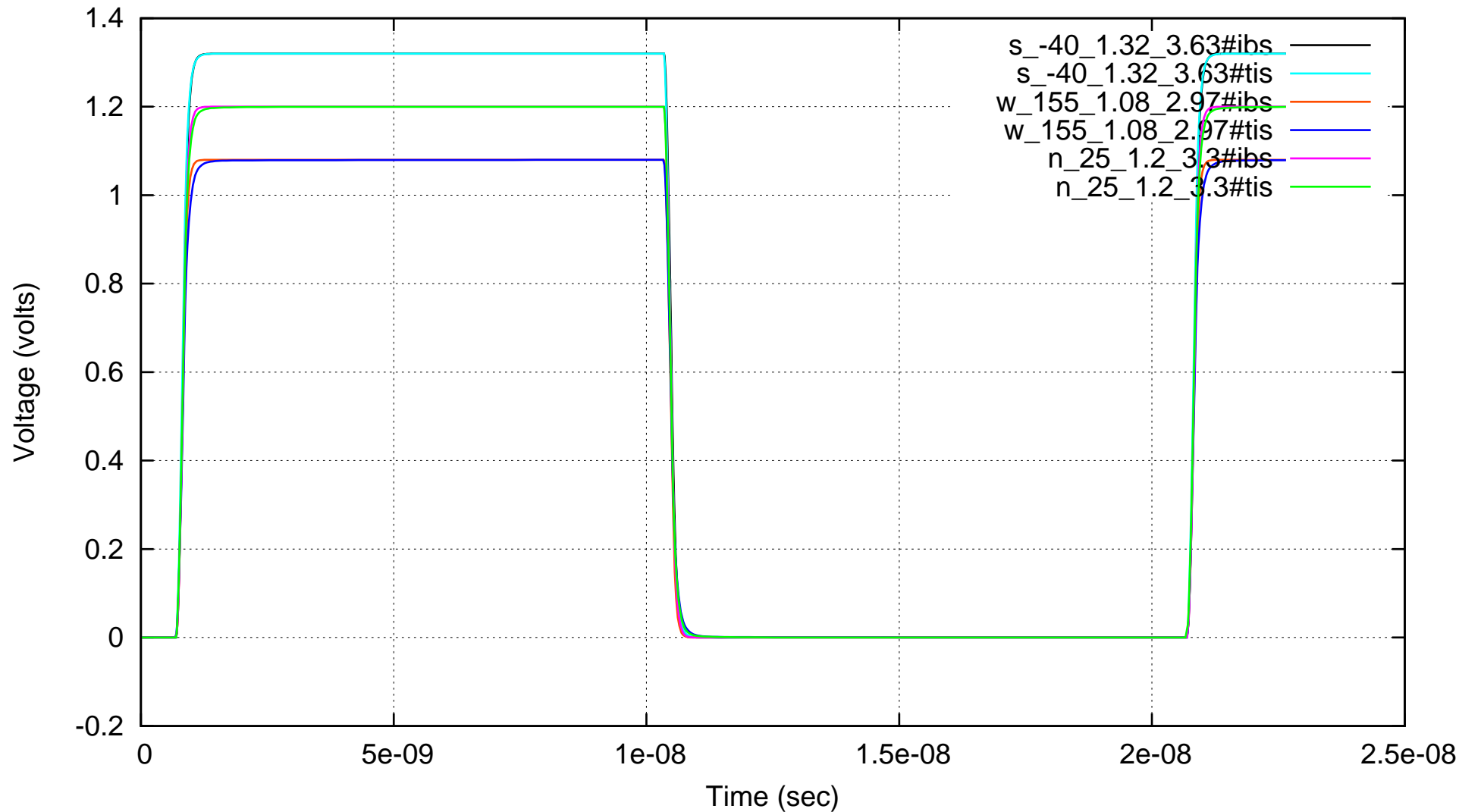


A few pulses applied to the model  
DRIVER\_MODE\_3P3, ptv = w\_155\_1.08\_2.97  
Load = 20pF

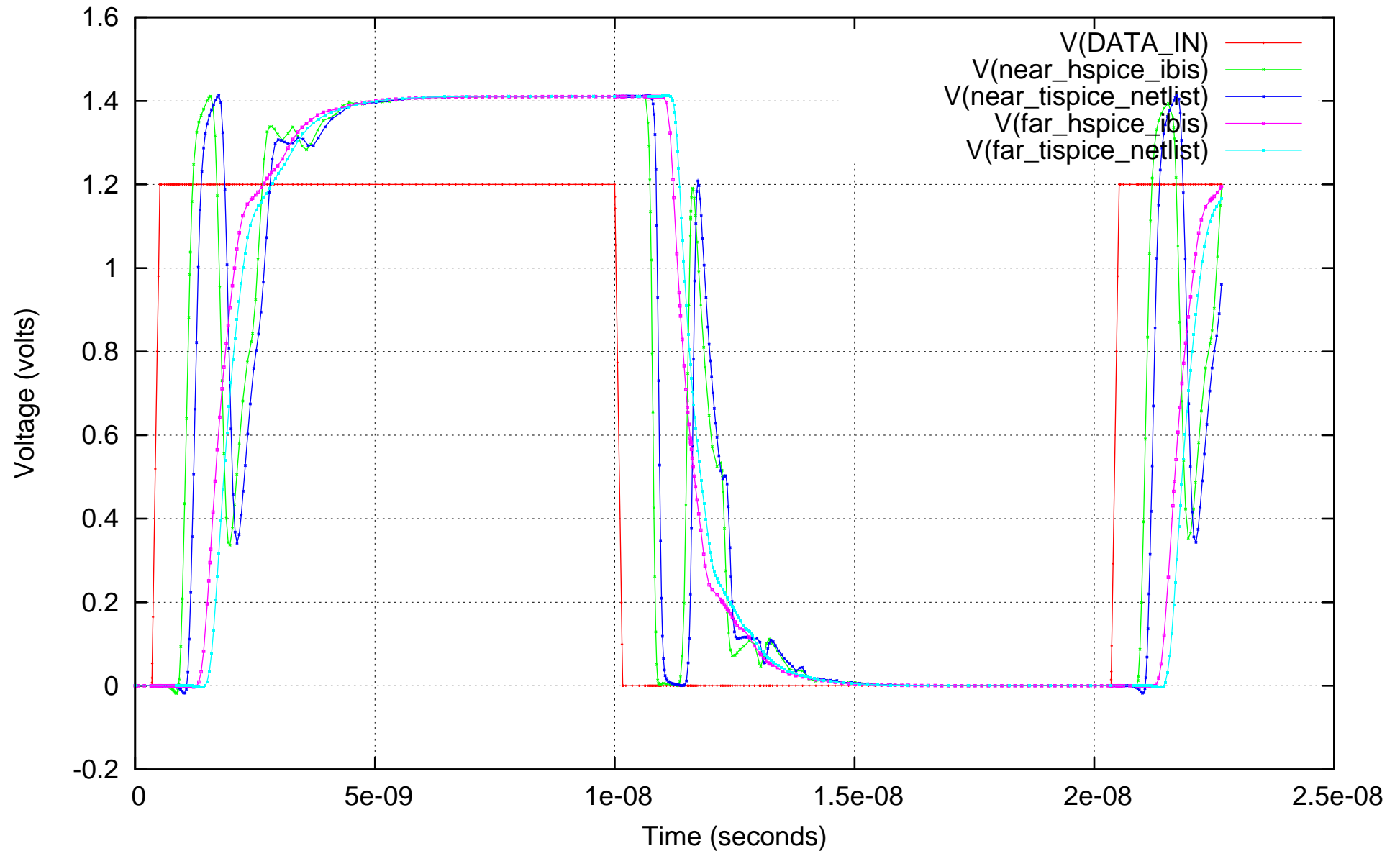


PAD waveform for model connected to transmission line and driven by voltage source with source impedance. IBIS model is in receive mode.

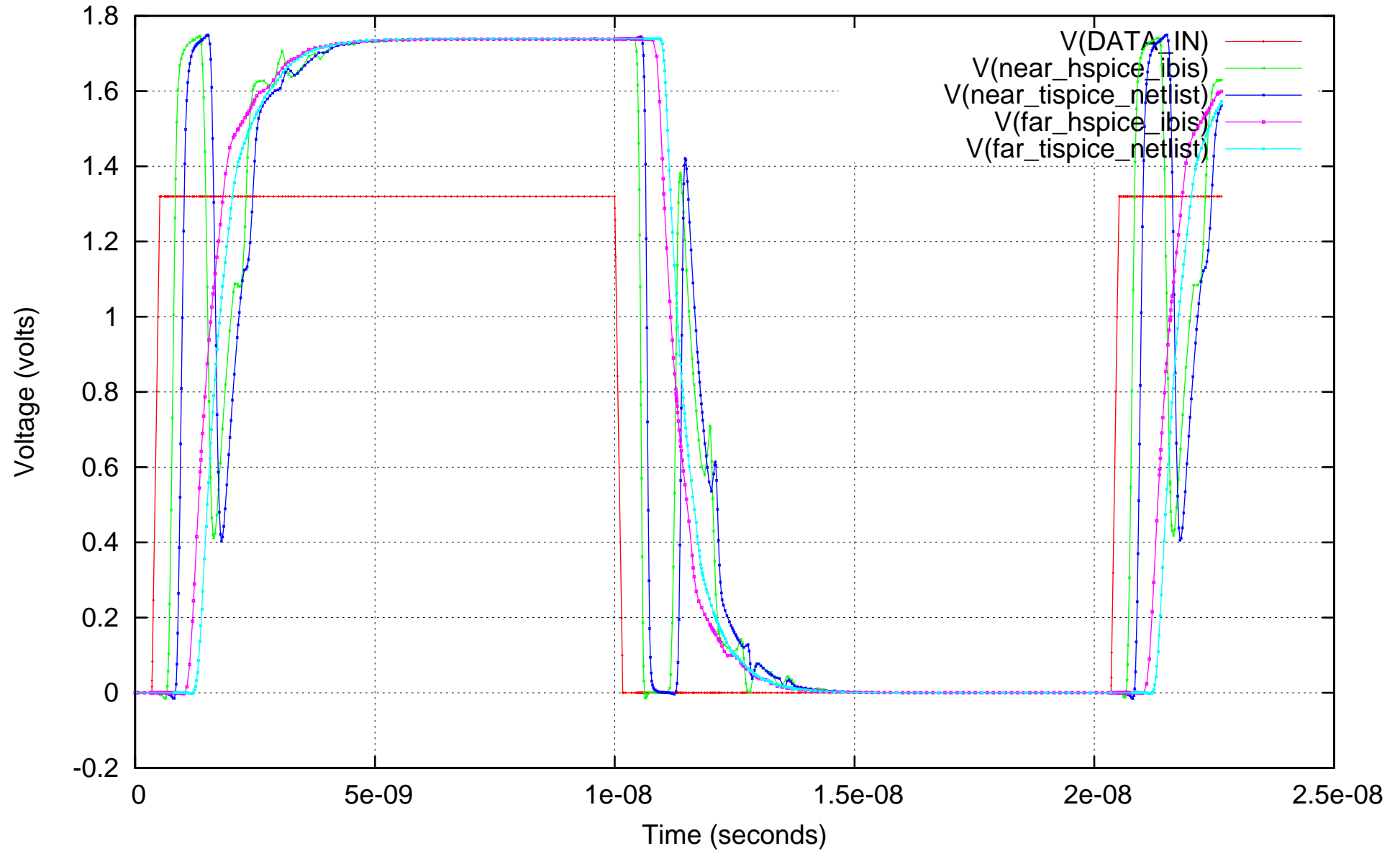
Rsource = ,  
Tline\_Delay = 0.35NS, Tline\_Z0 = 50 (Model DRIVER\_MODE\_3P3)  
[Testcase 8]



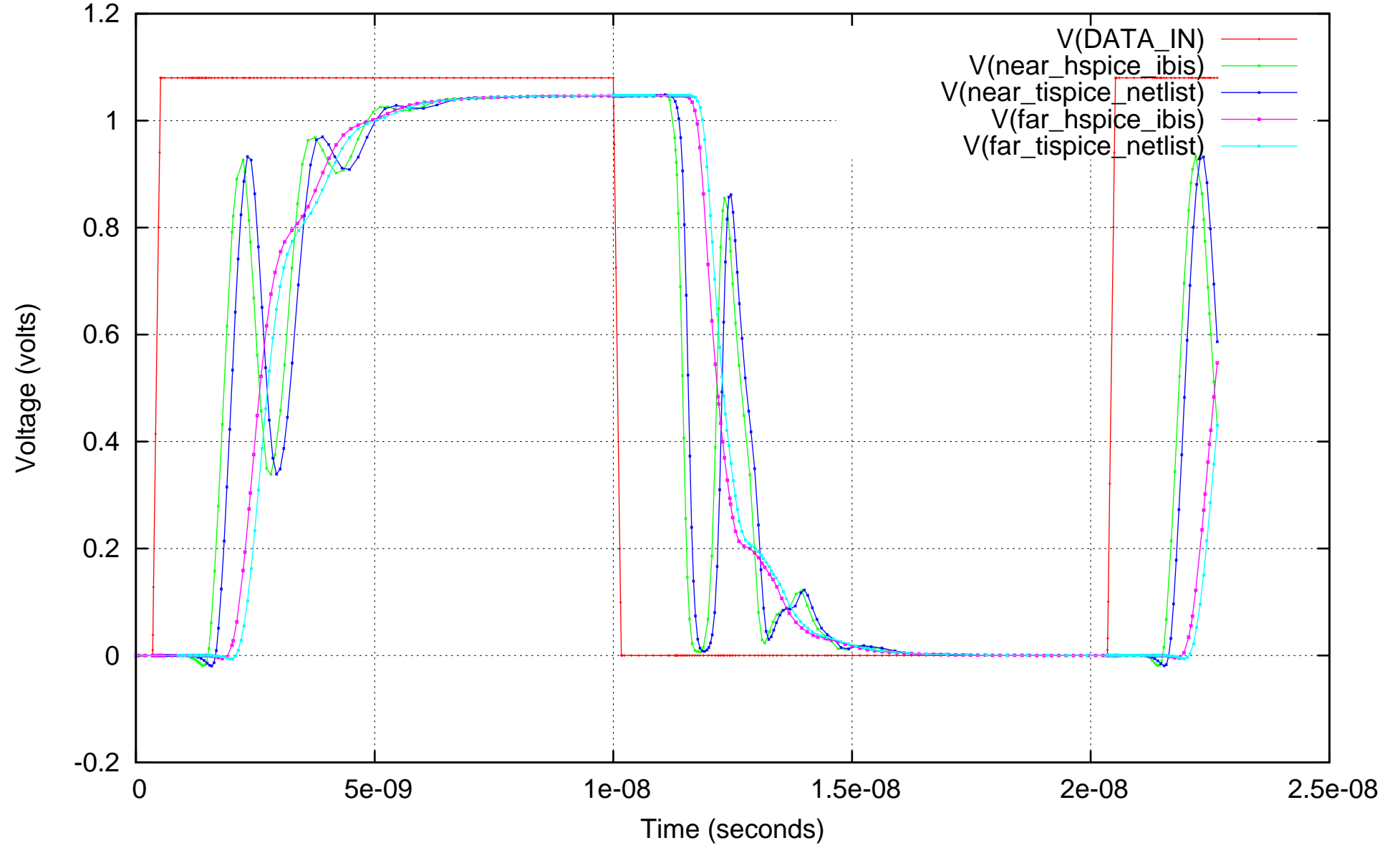
Model driving a transmission line, capacitive  
load, resistor to ground for model DRIVER\_MODE\_3P3, PTV = n\_25\_1.2\_3.3  
.Load = 20pF, Rterm = 50, Tline\_delay = 0.35NS, Tline\_Z0 = 50



Model driving a transmission line, capacitive  
load, resistor to ground for model DRIVER\_MODE\_3P3, PTV = s\_-40\_1.32\_3.63  
.Clload = 20pF, Rterm = 50, Tline\_delay = 0.35NS, Tline\_Z0 = 50

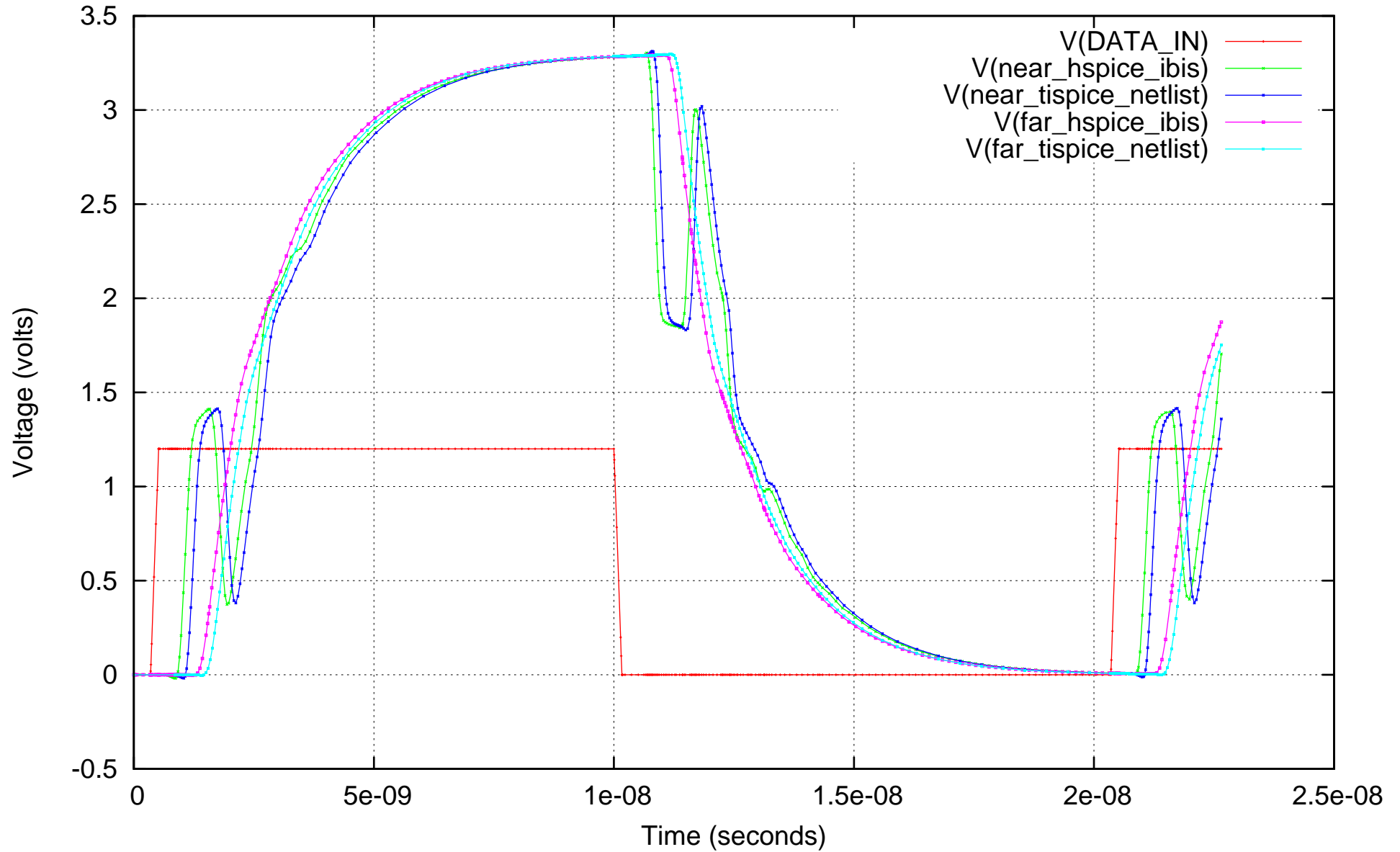


Model driving a transmission line, capacitive  
load, resistor to ground for model DRIVER\_MODE\_3P3, PTV = w\_155\_1.08\_2.97  
.Load = 20pF, Rterm = 50, Tline\_delay = 0.35NS, Tline\_Z0 = 50

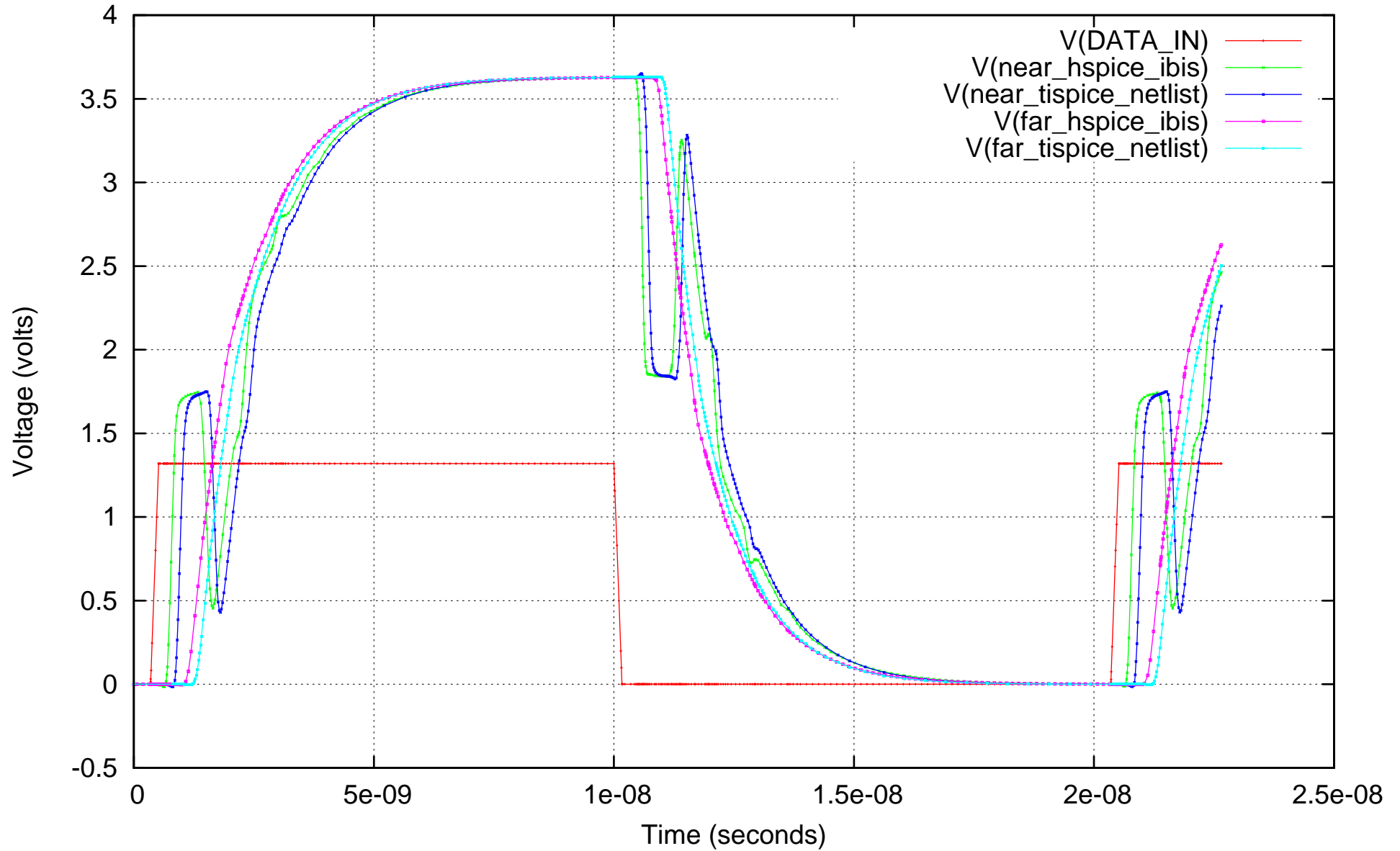




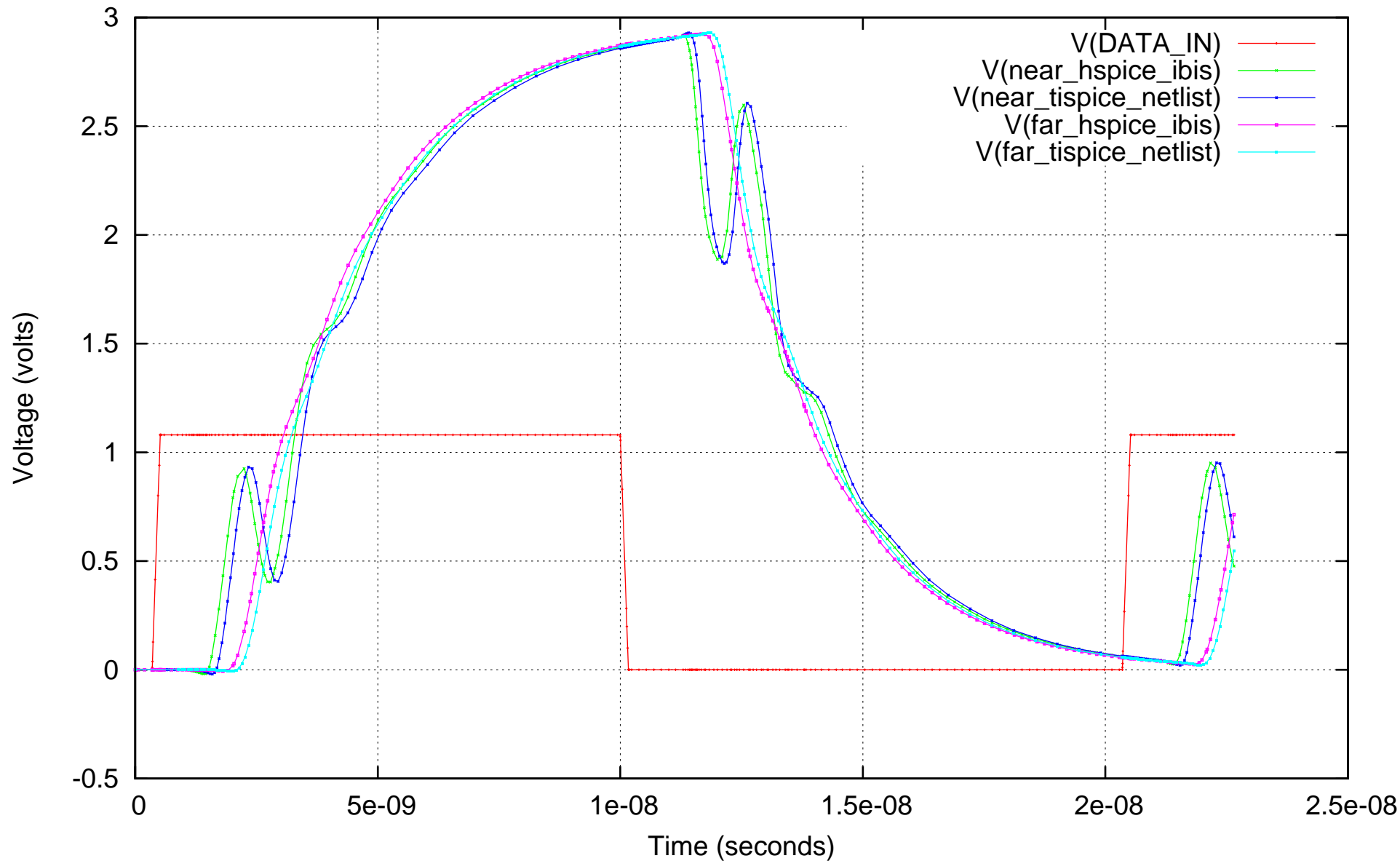
Model driving a transmission line, capacitive  
load for model DRIVER\_MODE\_3P3, PTV = n\_25\_1.2\_3.3  
.Clload = 20pF, Tline\_delay = 0.35NS, Tline\_Z0 = 50



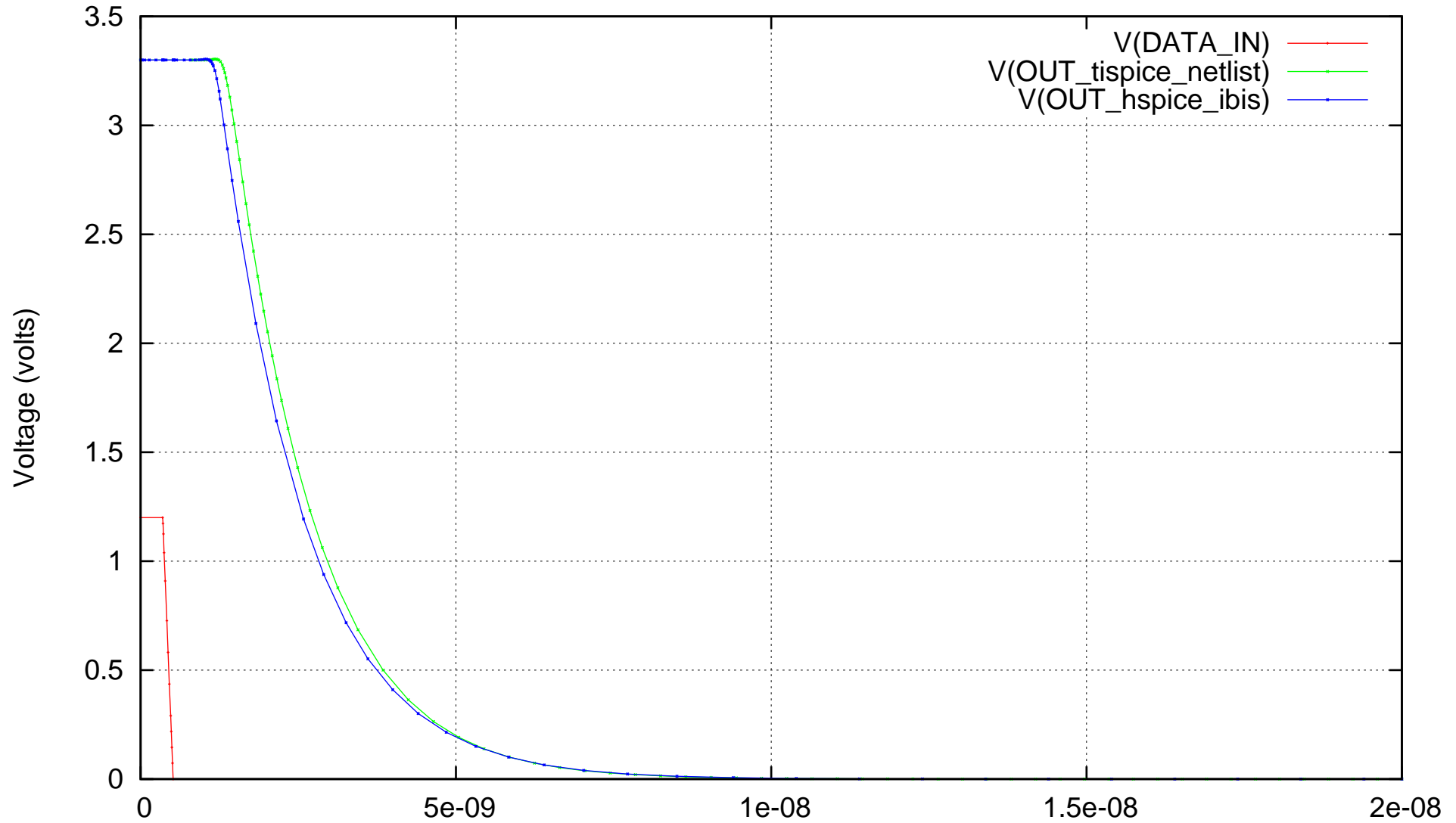
Model driving a transmission line, capacitive  
load for model DRIVER\_MODE\_3P3, PTV = s\_-40\_1.32\_3.63  
.Clload = 20pF, Tline\_delay = 0.35NS, Tline\_Z0 = 50



Model driving a transmission line, capacitive  
load for model DRIVER\_MODE\_3P3, PTV = w\_155\_1.08\_2.97  
.Clload = 20pF, Tline\_delay = 0.35NS, Tline\_Z0 = 50

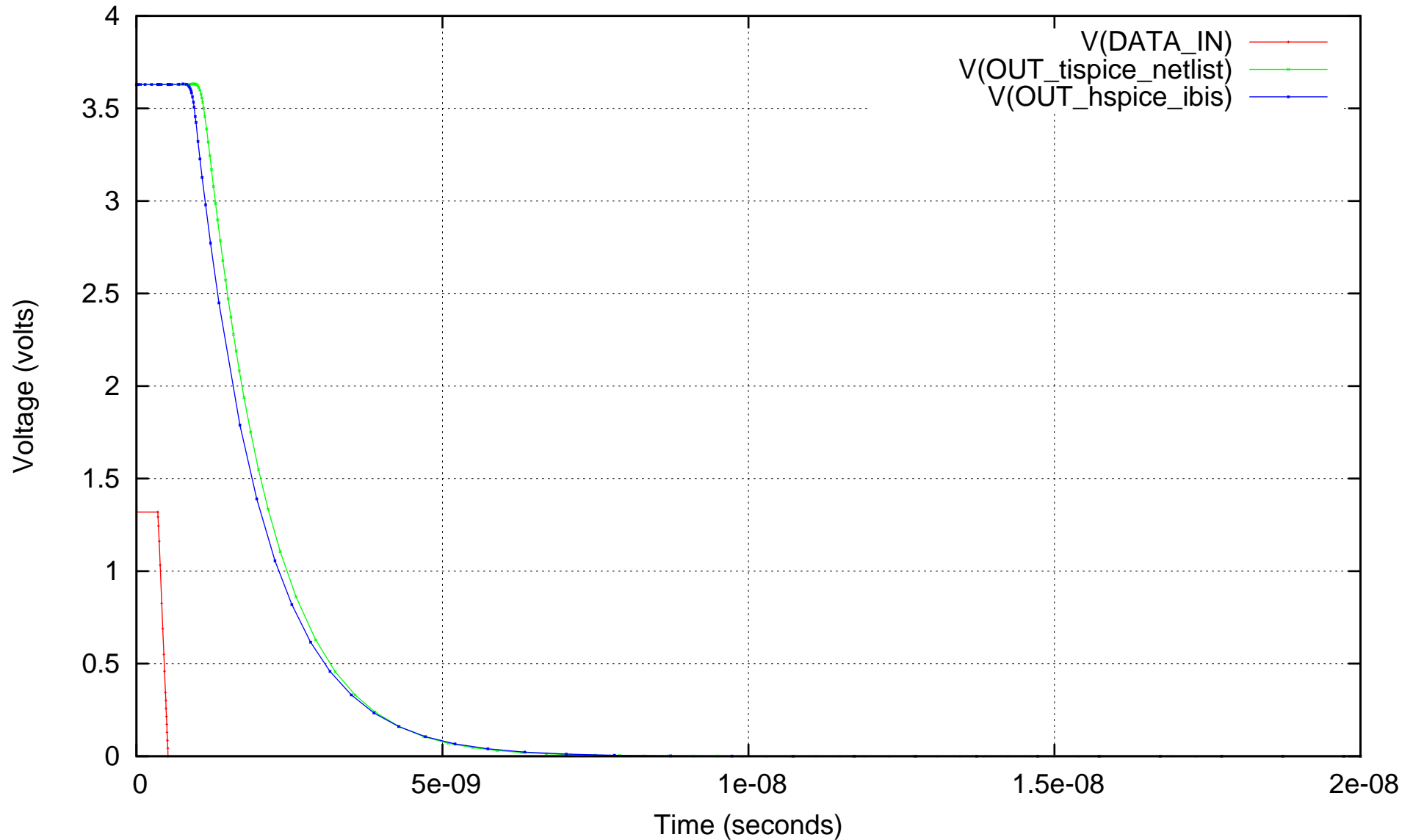


Falling waveform for model driving a lumped capacitive load  
for Model DRIVER\_MODE\_3P3, PTV = n\_25\_1.2\_3.3, Cload = 20pF [Testcase 4]



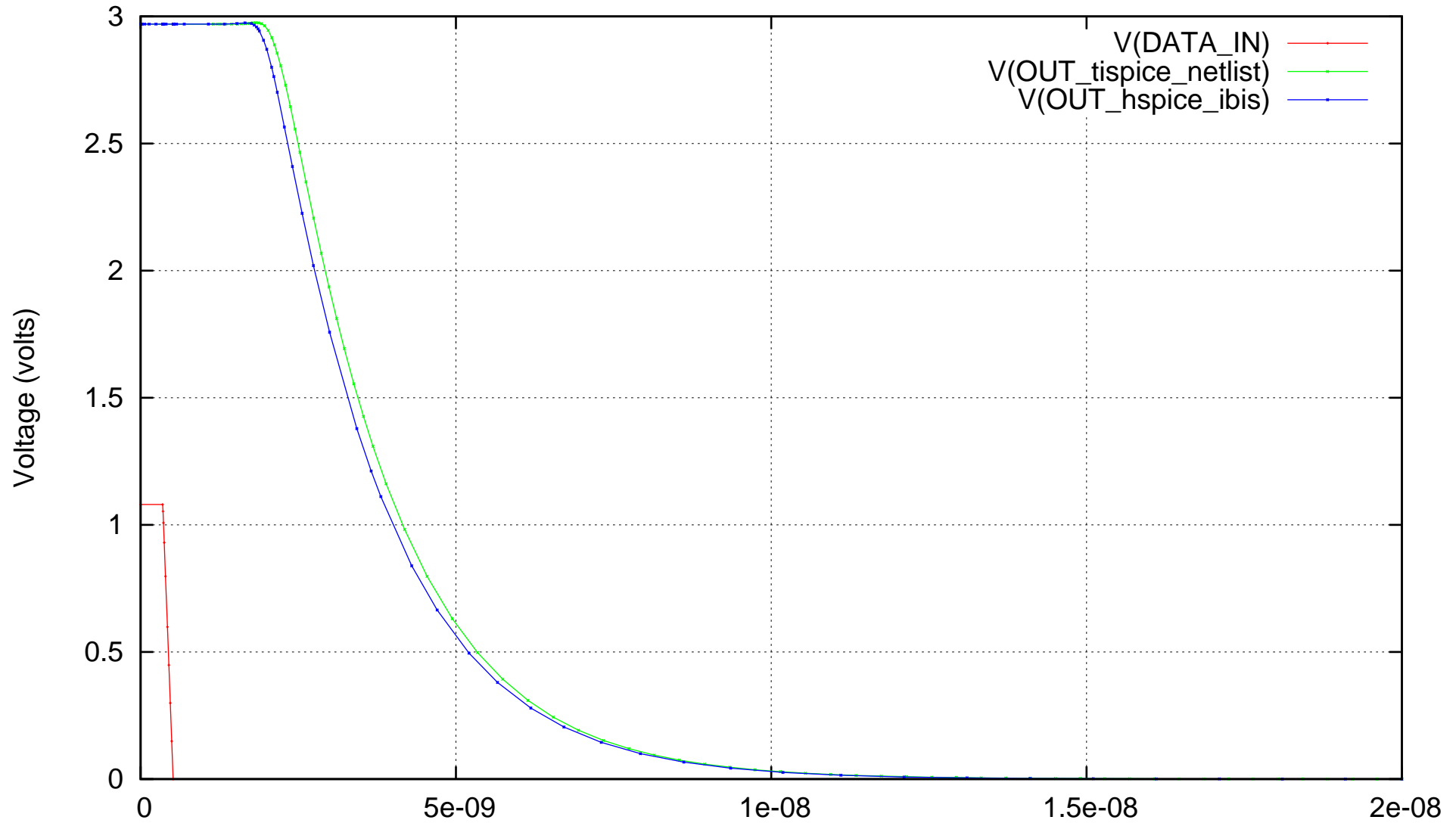
Delay (hspice ibis) = 01717PS      Fall time (hspice ibis) = 01872PS  
Delay (tispice netlist) = 01870PS      Fall time (tispice netlist) = 01829PS

Falling waveform for model driving a lumped capacitive load  
for Model DRIVER\_MODE\_3P3, PTV = s\_-40\_1.32\_3.63, Cload = 20pF [Testcase 4]



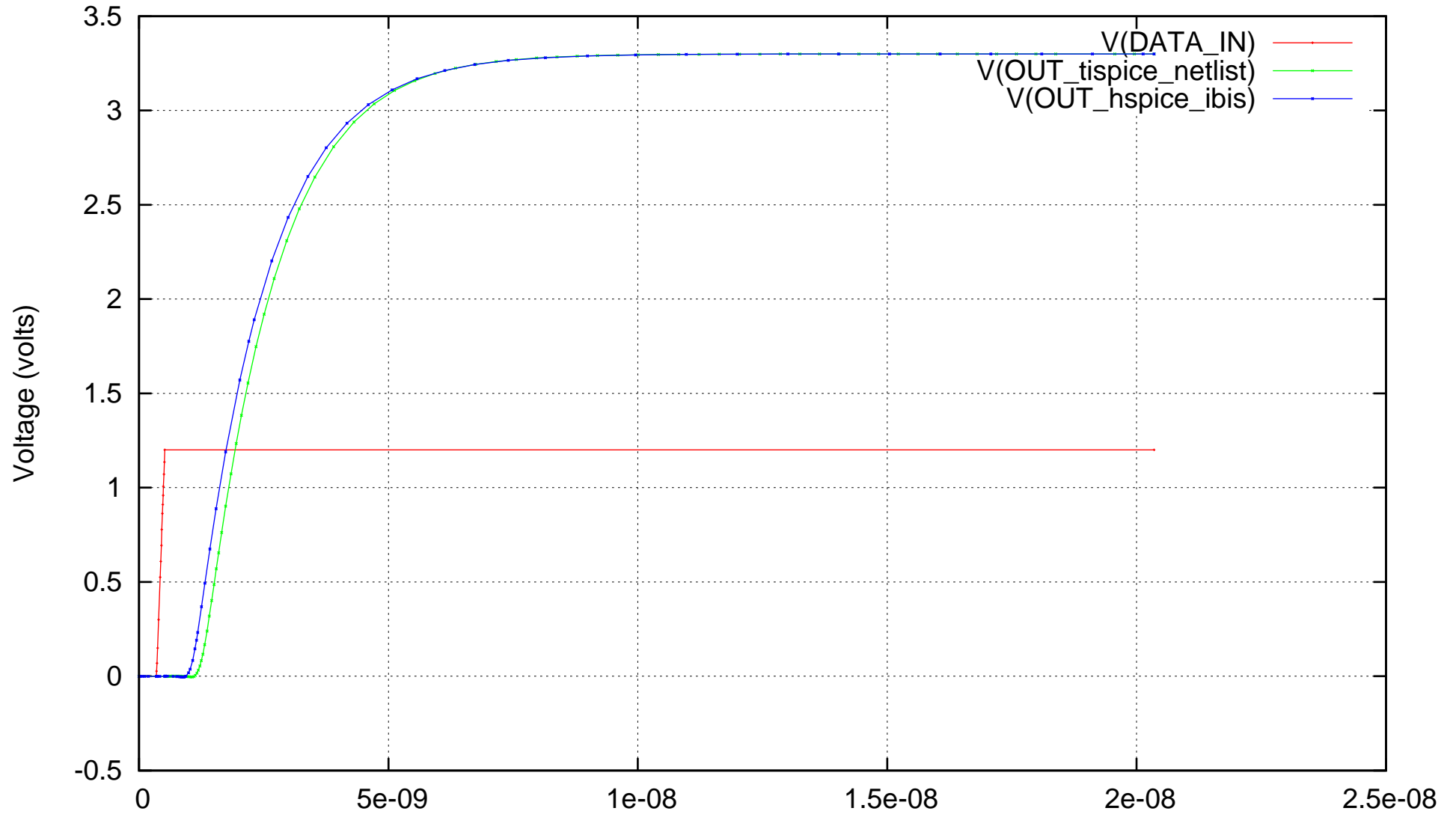
Delay (hspice ibis) = 01245PS      Fall time (hspice ibis) = 01521PS  
Delay (tispice netlist) = 01396PS      Fall time (tispice netlist) = 01469PS

Falling waveform for model driving a lumped capacitive load  
for Model DRIVER\_MODE\_3P3, PTV = w\_155\_1.08\_2.97, Cload = 20pF [Testcase 4]



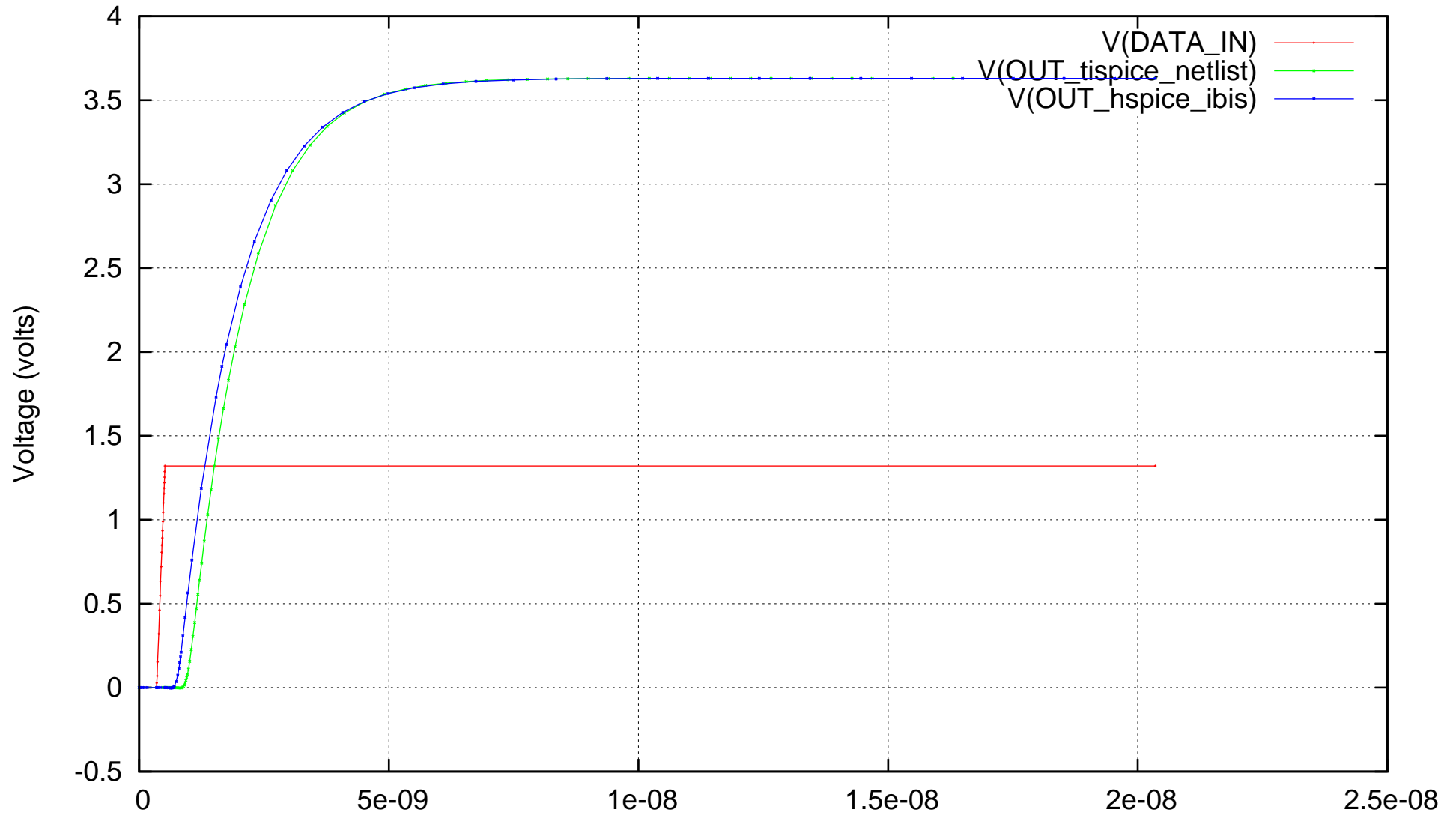
Delay (hspice ibis)= 02874PS      Fall time (hspice ibis) = 02478PS  
Delay (tispice netlist) = 03031PS      Fall time (tispice netlist) = 02453PS

Rising waveform for model driving a lumped capacitive load  
for Model DRIVER\_MODE\_3P3, PTV = n\_25\_1.2\_3.3, Cload = 20pF [Testcase 4]



Delay (hspice ibis) = 01657PS      Rise time (hspice ibis) = 01954PS  
Delay (tispice netlist) = 01831PS      Rise time (tispice netlist) = 01912PS

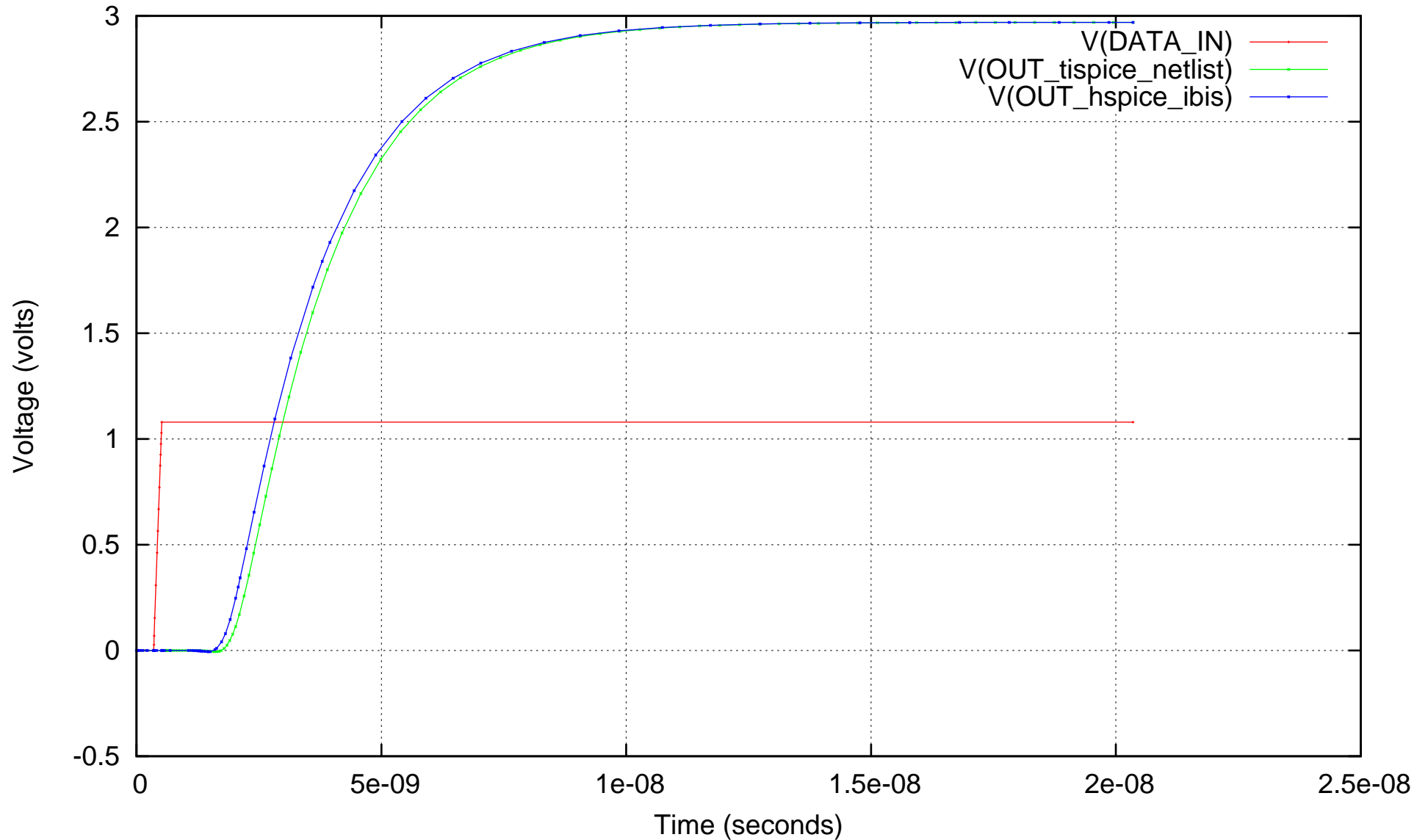
Rising waveform for model driving a lumped capacitive load  
for Model DRIVER\_MODE\_3P3, PTV = s\_-40\_1.32\_3.63, Cload = 20pF [Testcase 4]



Delay (hspice ibis) = 01159PS      Rise time (hspice ibis) = 01597PS  
Delay (tispice netlist) = 01345PS      Rise time (tispice netlist) = 01543PS



Rising waveform for model driving a lumped capacitive load  
for Model DRIVER\_MODE\_3P3, PTV = w\_155\_1.08\_2.97, Cload = 20pF [Testcase 4]



Delay (hspice ibis) = 02854PS      Rise time (hspice ibis) = 02652PS  
Delay (tispice netlist) = 03020PS      Rise time (tispice netlist) = 02639PS