High Accuracy Window Voltage Monitor

Summary

The included report shows DC and transient test results from the High Accuracy Window Monitor application TIDA–00396. The featured device for this application is the TPS3701 High Voltage Window Monitor/Dual Comparator.

Test Report

1.1 DC Accuracy

PARAMETER	CONDITIONS	TARGET	MEASURED
V_{MON} Current Consumption	VDD = 24 V, V_{PULLUP} current not included	18.5 µA	18.5 µA
Undervoltage Falling Threshold ($V_{MON(UV)}$)	VDD = VMON	21.6 V	21.70 V
Undervoltage Rising Threshold($V_{MON(UV\ HYS)}$)	VDD = VMON	21.9 V	21.98 V
Overvoltage Falling Threshold ($V_{MON(UV)}$)	VDD = VMON	26.1 V	26.05 V
Overvoltage Rising Threshold($V_{MON(UV\ HYS)}$)	VDD = VMON	26.4 V	26.41 V

1.2 Transient Performance

1.2.1 VDD = V_{MON}, V_{PULLUP} = 3.3 V
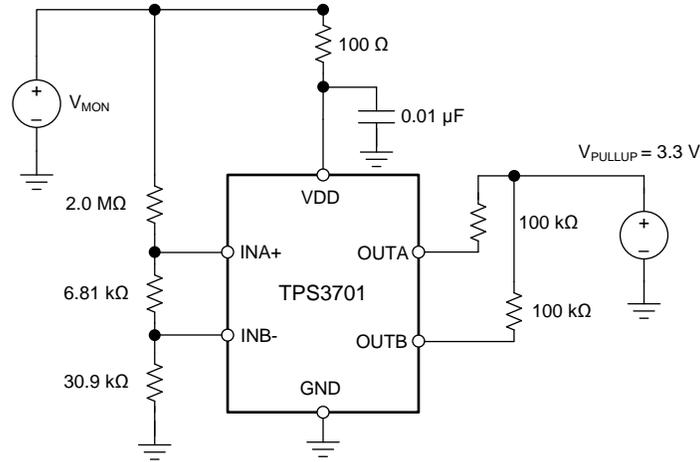
Figure 1: Application Configuration with VDD = V$_{MON}$, V$_{PULLUP}$ = 3.3 V
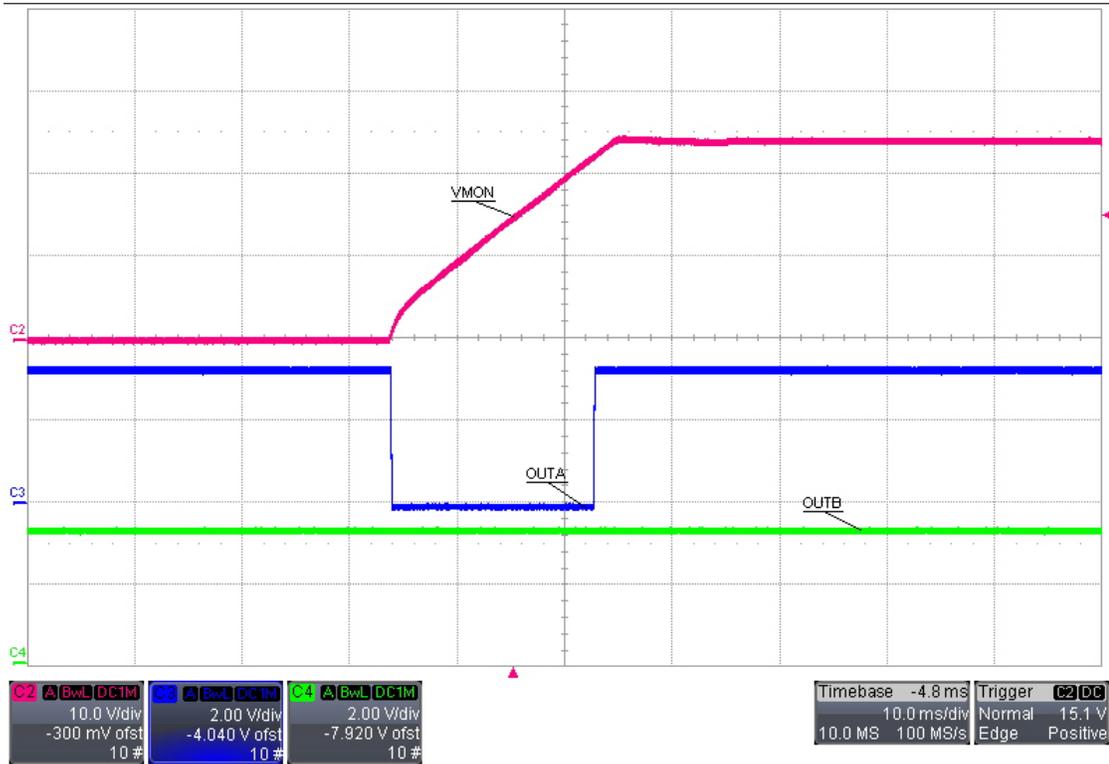
Figure 2: Startup with VDD = V$_{MON}$, V$_{PULLUP}$ = 3.3 V
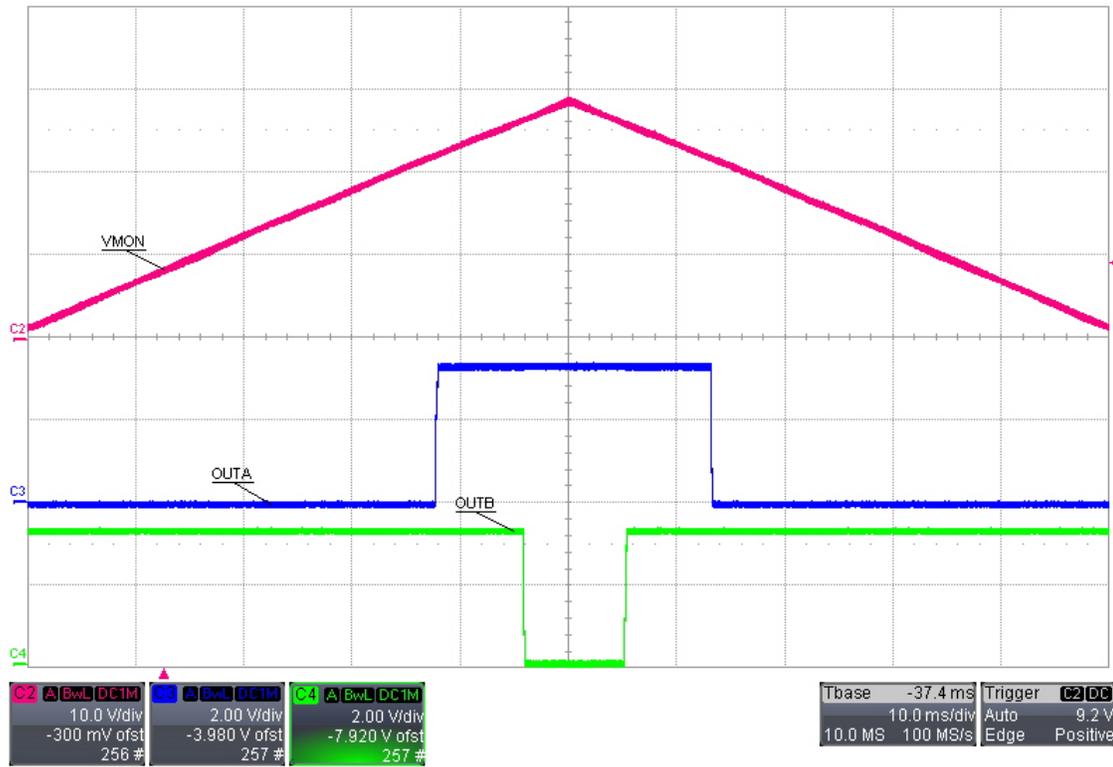
Figure 3: Ramping waveform with VDD = V$_{MON}$, V$_{PULLUP}$ = 3.3 V

1.2.2   VDD = V_{MON} = V_{PULLUP}

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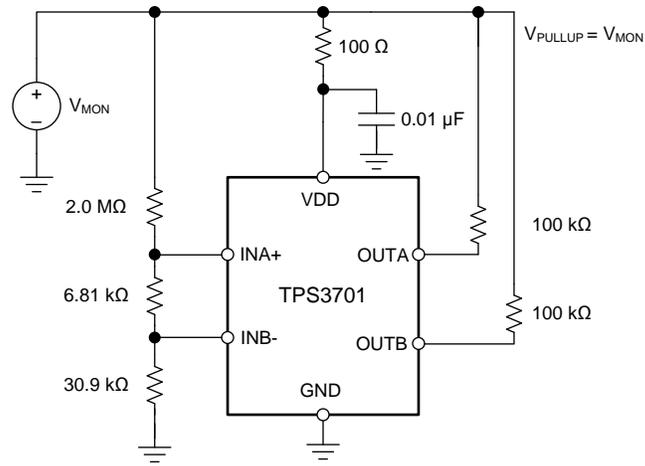
Figure 4: Application Configuration with VDD = V_{MON} = V_{PULLUP}
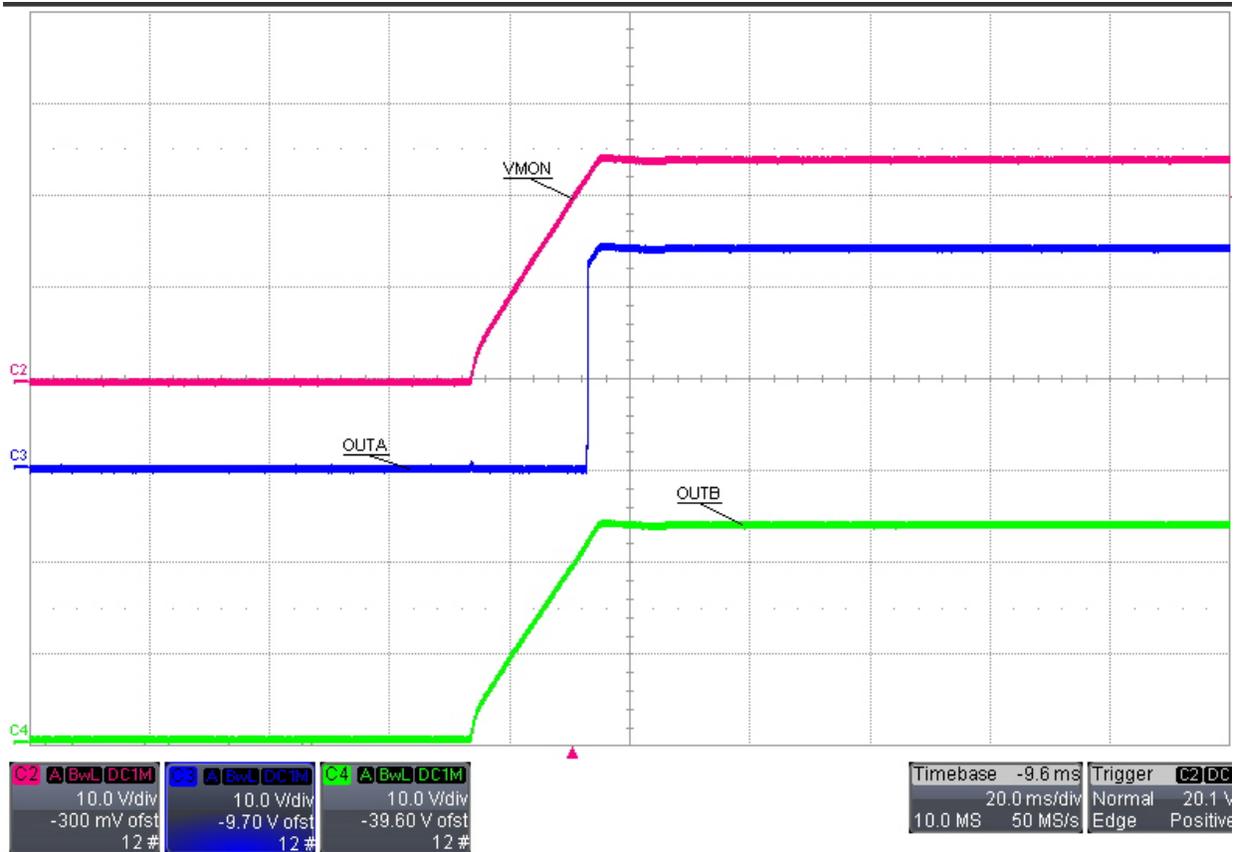
Figure 5: Startup with VDD = V_{MON} = V_{PULLUP}

1.2.3   VDD, V$_{MON}$ Independant, V$_{PULLUP}$ = 3.3 V
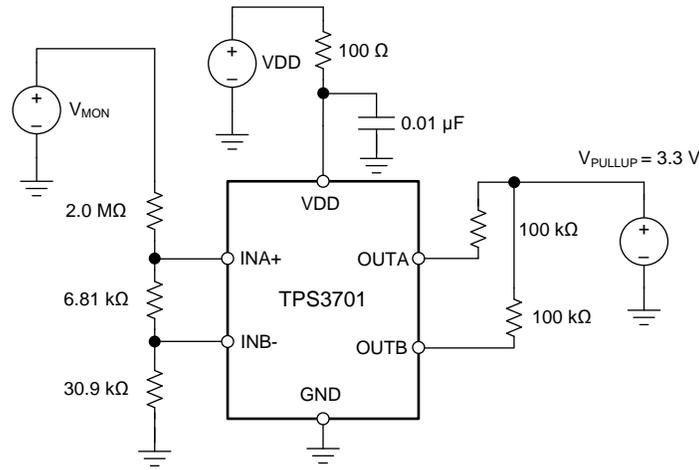
Figure 6: Application Configuration with VDD, V$_{MON}$ Independent, V$_{PULLUP}$ = 3.3

Figure 7: Startup with VDD, V$_{MON}$ Independent, V$_{PULLUP}$ = 3.3
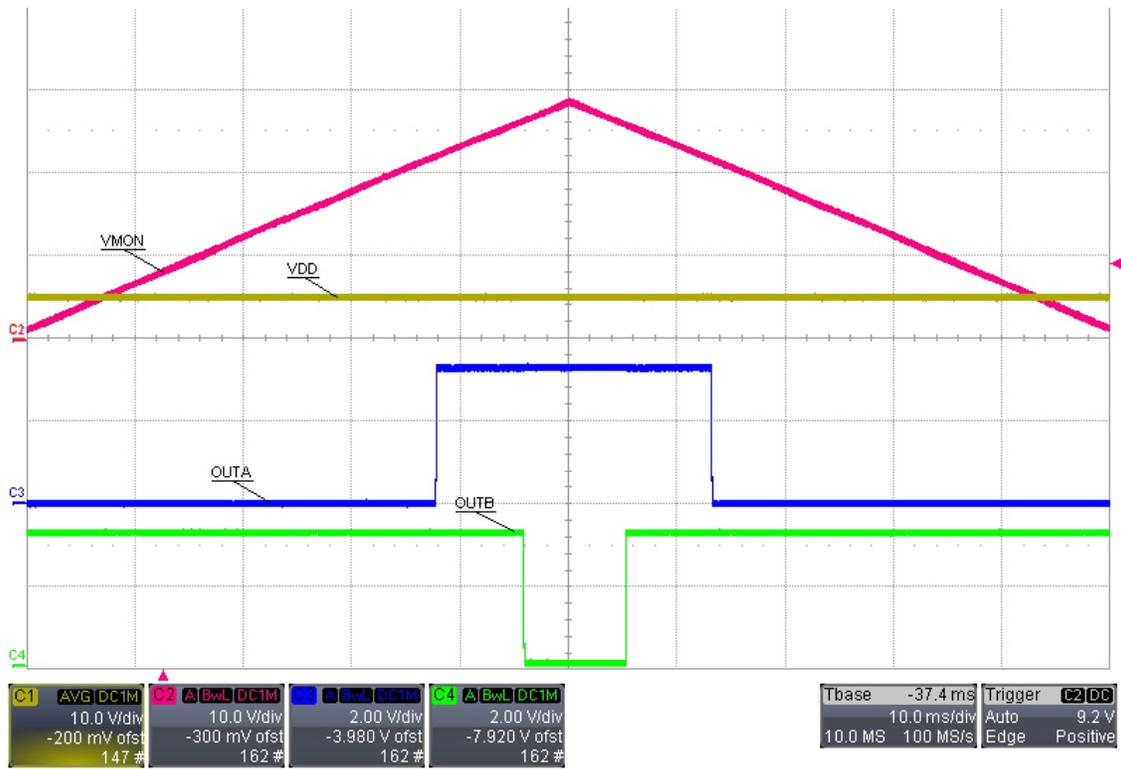
Figure 8: Ramping waveform with VDD = 5 V, V$_{MON}$ Ramping, V$_{PULLUP}$ = 3.3 V

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