

Integrated 1.8V/1.8V/5.0V SMPS Circuit Validation Checklist

The following table can be used as a checklist to validate operation of the 1.8V/1.8V/5.0V SMPS circuit using the MAX77642 device while connected to a biosensing circuit load.

Step	Action	Procedure	Measurement	Need help?
1	Check input DC power supply LP401230 LiPo Batt	Measure voltage across Battery	Reading range: 3.0V – 4.2V	Troubleshooting Instructions
2	Check input DC power supply LP401230 LiPo Batt	Measure voltage across C _{IN}	Reading range: 3.0V – 4.2V	
3	Check Vout DC level	Measure SBB1 output DC voltage with reference to gnd	Analog 1.8V Reading range: 1.71V – 1.89V	
4		Measure SBB0 output DC voltage with reference to gnd	Digital 1.8V Reading range: 1.71V – 1.89V	
5		Measure SBB2 output DC voltage with reference to gnd	Analog 5V Reading range: 4.75V – 5.25V	
6	Check Analog 1.8V Output Noise Level	*Use differential oscilloscope probe method across C ₅	Ripple Noise level should be < 20mVpp	
			Switch spikes should be < 30mVp	
7	Check Digital 1.8V Output Noise Level	*Use differential oscilloscope probe method across C ₄	Ripple Noise level should be < 20mVpp	
			Switch spikes should be < 30mVp	
8	Check Analog 5.0V Output Noise Level	*Use differential oscilloscope probe method across C ₆	Ripple Noise level should be < 20mVpp	
			Switch spikes should be < 30mVp	