

### 1. Test Name: USB Converter

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Battery provides different level of voltages when it's at different battery level, a USB converter is used to convert various input voltages to 5V with current output of 500mA.

### 2. Required Equipment

	Equipment Description	Quantity	Settings
1	Power supply	1	5V – 7V varied input voltages
2	Multimeter	2	Measure voltage and current at the output pin of the USB converter
3	USB Converter	1	
4	Decade Box	1	10 ohm

Table 1: Required equipment and its settings.

### 3. Test Procedure

Step 1: Connect the power supply to the input pins of the USB converter, and the multimeter and decade box in series with the output pins of the USB converter.

Step 2: Set the decade box 10 ohms.

Step 3: Slowly increase the power supply voltage from 5V to 7V

Step 4: Measure the output voltage and current of the USB converter.

### 4. Test Results

Step #	Description	Spec	Measurement
1	Measure the output voltage and current of the USB converter with an input of 5V	$V_{out}=5V \pm 5\%$ $I_{out}=.5A \pm 5\%$	$V_{out} = 4.84V$ $I_{out} = 0.48A$
2	Measure the output voltage and current of the USB converter with an input of 6V	$V_{out}=5V \pm 5\%$ $I_{out}=.5A \pm 5\%$	$V_{out} = 4.88V$ $I_{out} = 0.48A$
3	Measure the output voltage and current of the USB converter with an input of 7V	$V_{out}=5V \pm 5\%$ $I_{out}=.5A \pm 5\%$	$V_{out} = 4.85V$ $I_{out} = 0.48A$

Table 2: The results of the test procedure.

### 5. Pass/Fail

Did the unit pass or fail the test? Defend your decision.

<b>PASS</b>	<b>FAIL</b>
Pass	

Table 3: PASS/FAIL