

## 1. Test Environment



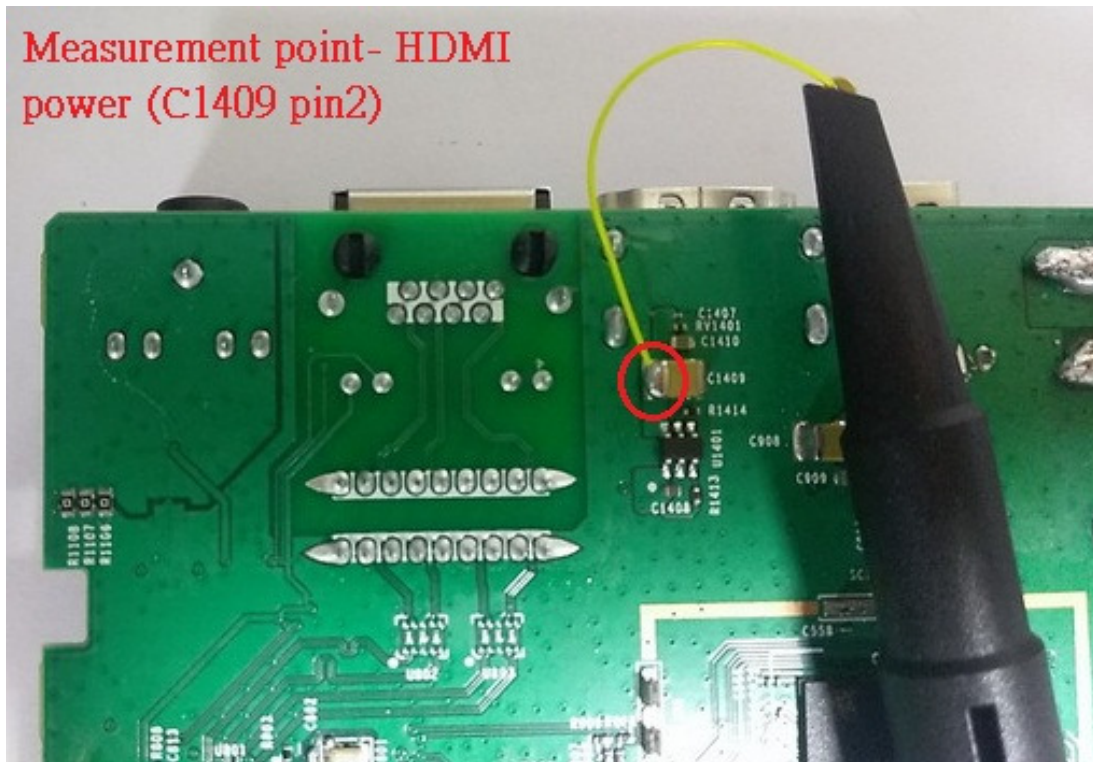


Figure 3: Measurement point of HDMI Power on T99X171T00

## 2. Schematic of TPS25200 EVM and measurement point on the T99X171T00

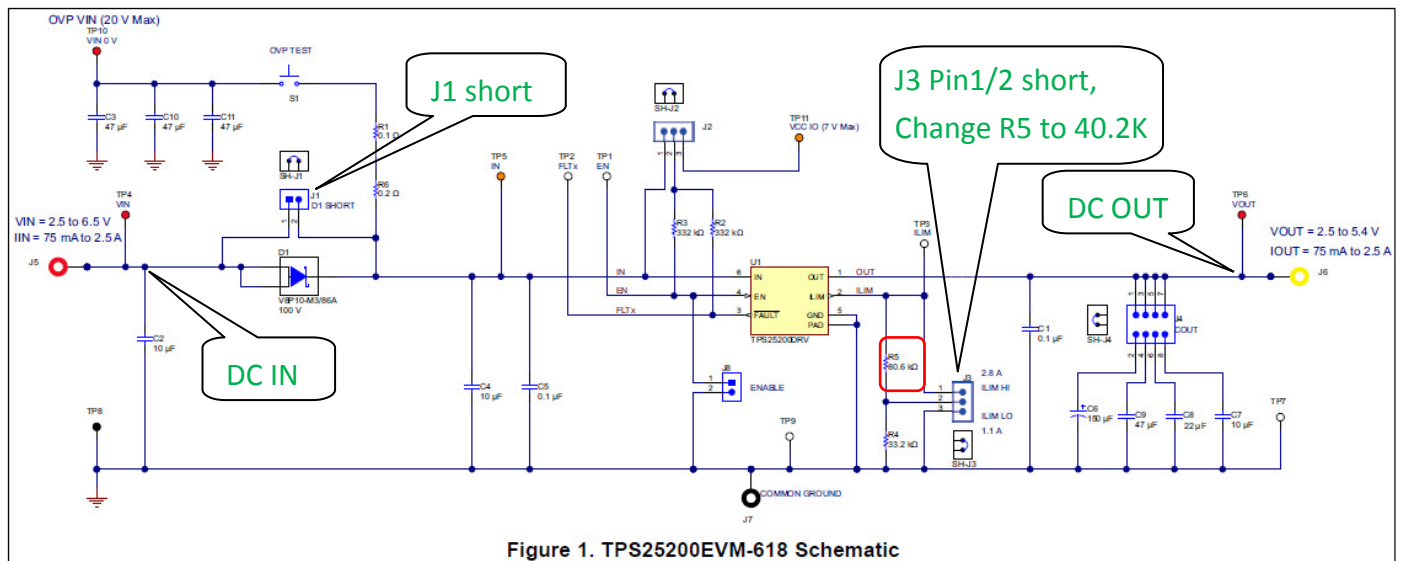


Figure 4: Schematic of TPS25200 EVM

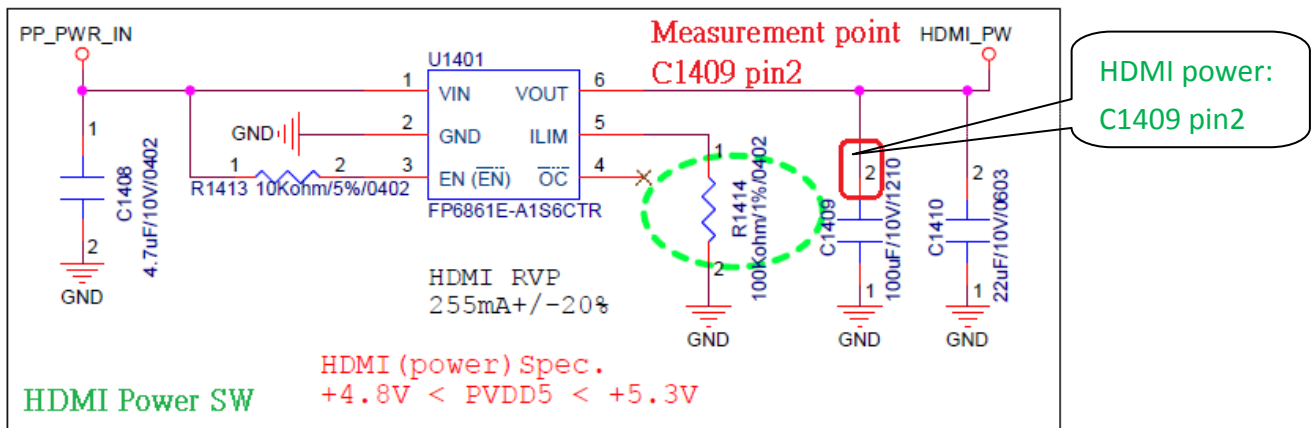
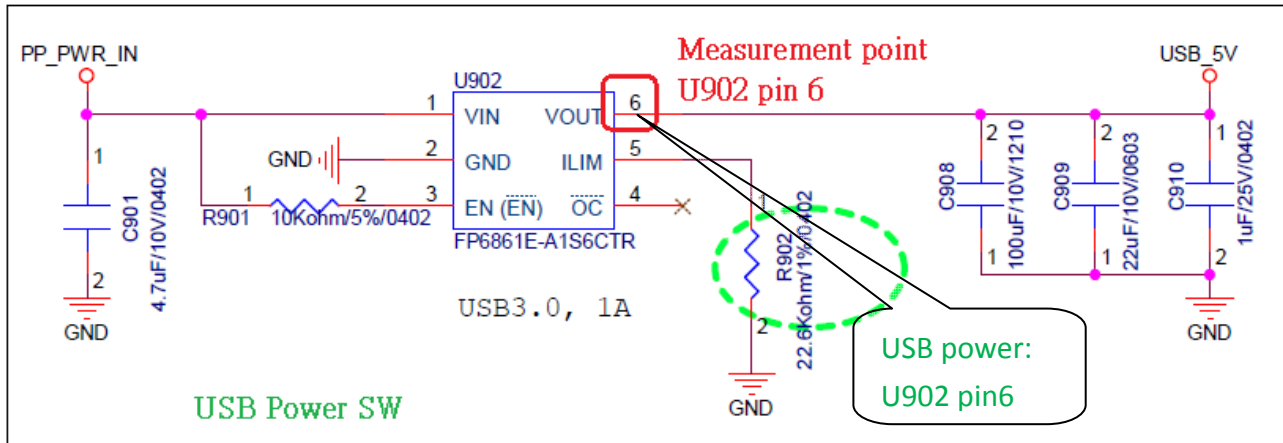


Figure 5: Schematic of measurement point of T99X171T00

### 3. Test equipment

| Equipment          | Equipment Part number       |
|--------------------|-----------------------------|
| 5V / 2A adapter    | DVE DSA-12PFA-05 FUS 050200 |
| 12V / 3.5A adapter | KTEC KST-42A-120350M2       |
| DC power supply    | GW GPC-3030DQ               |
| OSCILLOSCOPE       | Tektronix TDS3032           |
| Electronic Load    | Chroma 6312/63102           |

Table I: Equipment list

### 4. Test condition

#### DC Plug-in:

Adapter's AC plug connect to AC socket well then DC plug connect to TPS25200 EVM.

#### AC Plug-in:

Adapter's DC plug connect to TPS25200 EVM well then AC plug connect to AC socket.

#### DC5V step to DC11.5V/10.9V/11.2V:

DC supply output 5V to TPS25200 EVM.

When T99X171T00 boot completed, turn the voltage knob on the DC power supply.

#### OCP test:

The input of TPS25200 EVM connect to DC power supply, the output connect to electronic load.

## 5. Test Result and picture

| Test Item                                        | High (V) | Max. Value (V) | Result | Picture   |
|--------------------------------------------------|----------|----------------|--------|-----------|
| DC5V_DC Plug-in: DC IN vs DC OUT                 | 5.2      | 5.5            | Pass   | Figure 6  |
| DC5V_AC Plug-in: DC IN vs DC OUT                 | 5.2      | 5.5            | Pass   | Figure 7  |
| DC12V_DC Plug-in: DC IN vs DC OUT                | 0        | 0.4            | Pass   | Figure 8  |
| DC12V_AC Plug-in: DC IN vs DC OUT                | 0        | 0.4            | Pass   | Figure 9  |
| DC12V_AC Plug-in: DC OUT vs X171 USB CONN. power | 0        | 0.4            | Pass   | Figure 10 |
| DC12V_AC Plug-in: DC OUT vs X171 HDMI Power      | 0.1      | 0.5            | Pass   | Figure 11 |

Table II: OVP Test Result

| Test Item | Max. Value (A) | Result |
|-----------|----------------|--------|
| OCP       | 2.44           | Pass   |

Table III: OCP Test Result

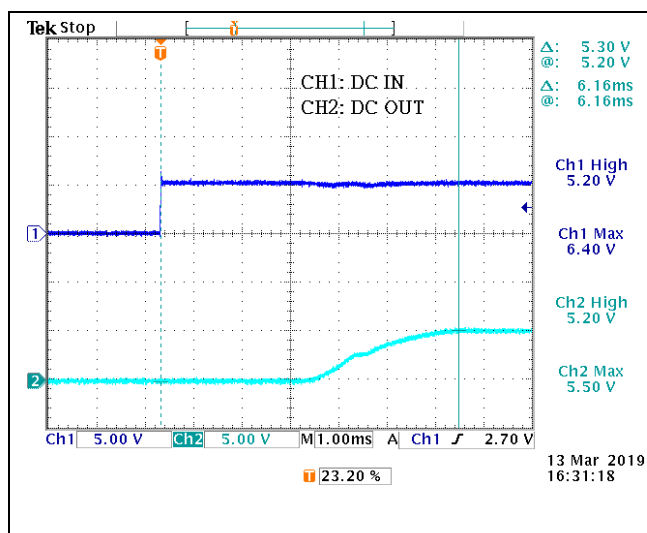


Figure 6: DC5V\_DC Plug-in: DC IN vs DC OUT

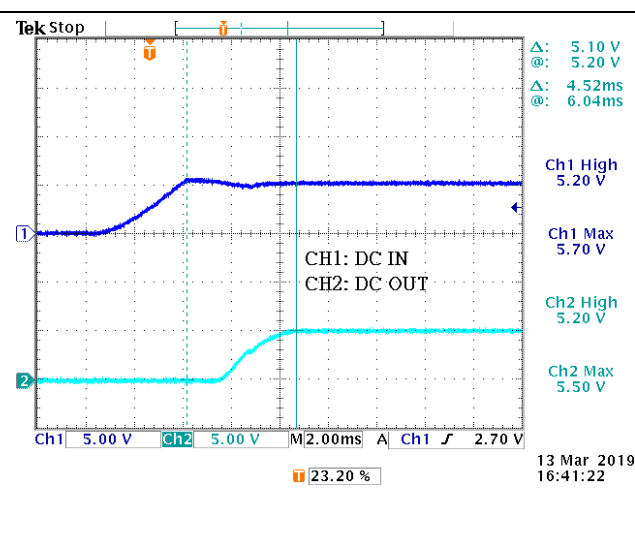


Figure 7: DC5V\_AC Plug-in: DC IN vs DC OUT

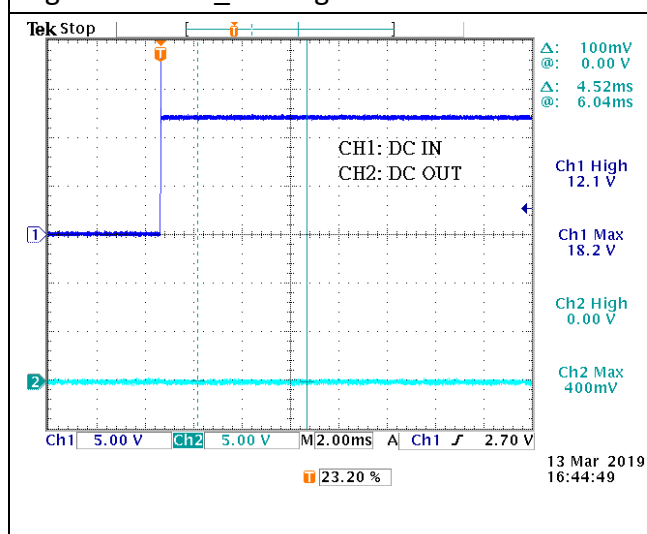


Figure 8: DC12V\_DC Plug-in: DC IN vs DC OUT

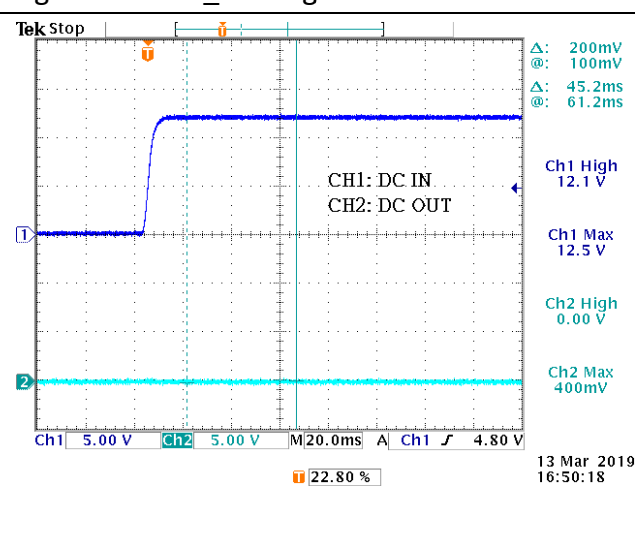


Figure 9: DC12V\_AC Plug-in: DC IN vs DC OUT

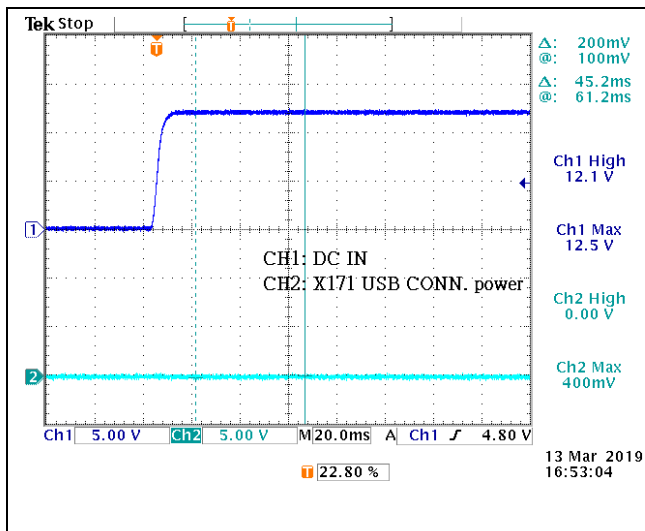


Figure 10: DC12V\_AC Plug-in: DC in vs X171 USB CONN. power

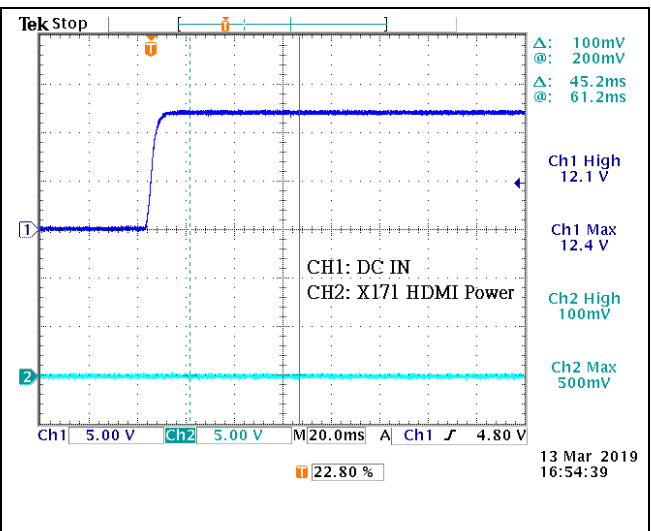


Figure 11: DC12V\_AC Plug-in: DC IN vs X171 HDMI Power

## 6. Conclusion

- When connected to 12V adapter at DC plug-in and AC plug-in condition, TPS25200 output 0 voltage. TPS25200 can protect T99X171T00 avoid damage.