

PMP11668 Test Results

1 General

1.1 Purpose

This test report is to provide the detailed data for evaluating and verifying the PMP11668 which employs one Buck Controller ---- LMR23630 and a USB Charging Port Controller ---- TPS254900-Q1.

1.2 Reference Documentation

Schematic: PMP11668_Schematic.pdf

Layout: PMP11668_Layout.zip

BOM: PMP11668_Bom.pdf

1.3 Test Equipment

Multi-meter (current): Fluke 287C

Multi-meter (voltage): Fluke 287C

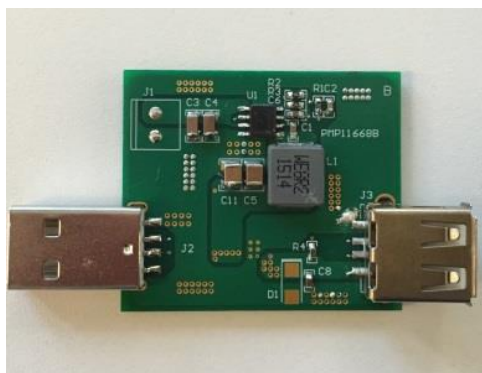
DC Source: Chroma 62012P-600-8

E-Load: Chroma 63103A module

Oscilloscope: Tektronix DPO3054

Electrical Thermography: Fluke Ti9

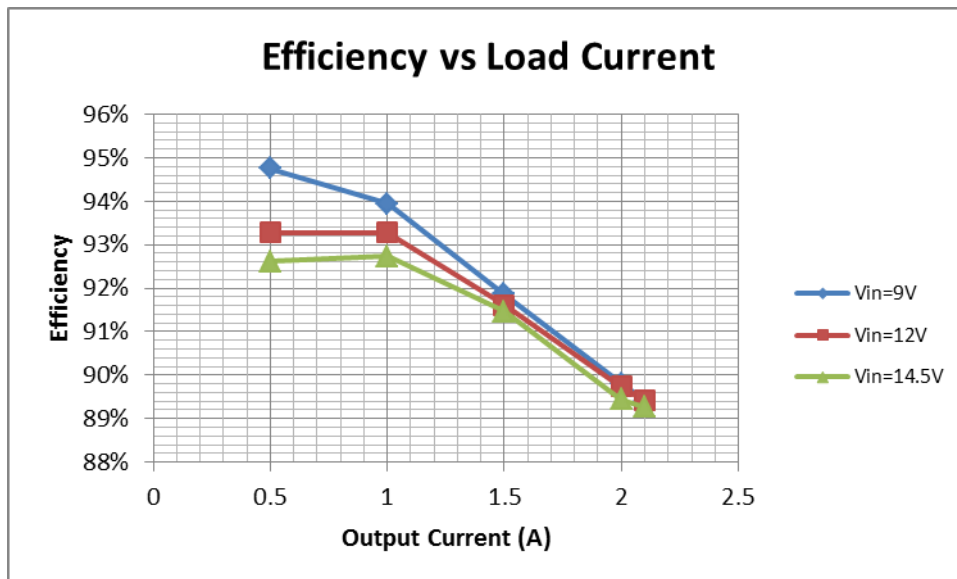
1.4 Photos



2 Performance Data and Waveform

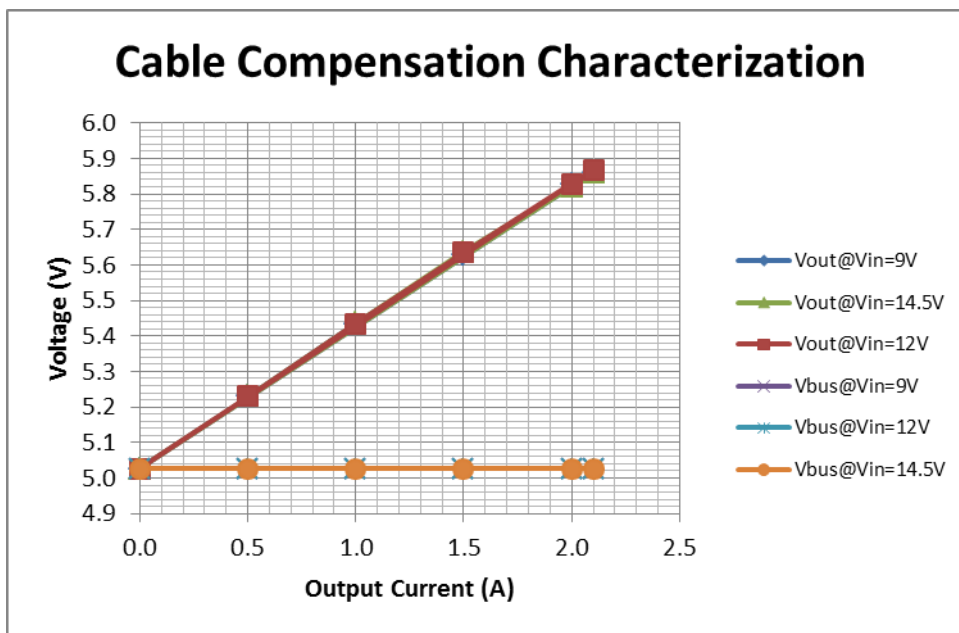
2.1 Efficiency

Vin (V)	Iin (A)	Vout (V)	Iout (A)	Efficiency
9.010	0.013	5.030	0.010	41.76%
8.960	0.308	5.230	0.500	94.76%
8.900	0.650	5.435	1.000	93.95%
8.814	1.046	5.630	1.500	91.86%
8.730	1.490	5.827	2.000	89.81%
8.710	1.586	5.860	2.100	89.39%
12.010	0.013	5.029	0.010	31.32%
11.980	0.234	5.230	0.500	93.28%
11.940	0.488	5.435	1.000	93.28%
11.890	0.776	5.635	1.500	91.61%
11.840	1.097	5.828	2.000	89.74%
11.830	1.170	5.868	2.100	89.41%
14.500	0.012	5.029	0.010	26.57%
14.480	0.195	5.230	0.500	92.61%
14.450	0.406	5.436	1.000	92.73%
14.400	0.642	5.637	1.500	91.46%
14.370	0.906	5.820	2.000	89.45%
14.360	0.960	5.860	2.100	89.27%



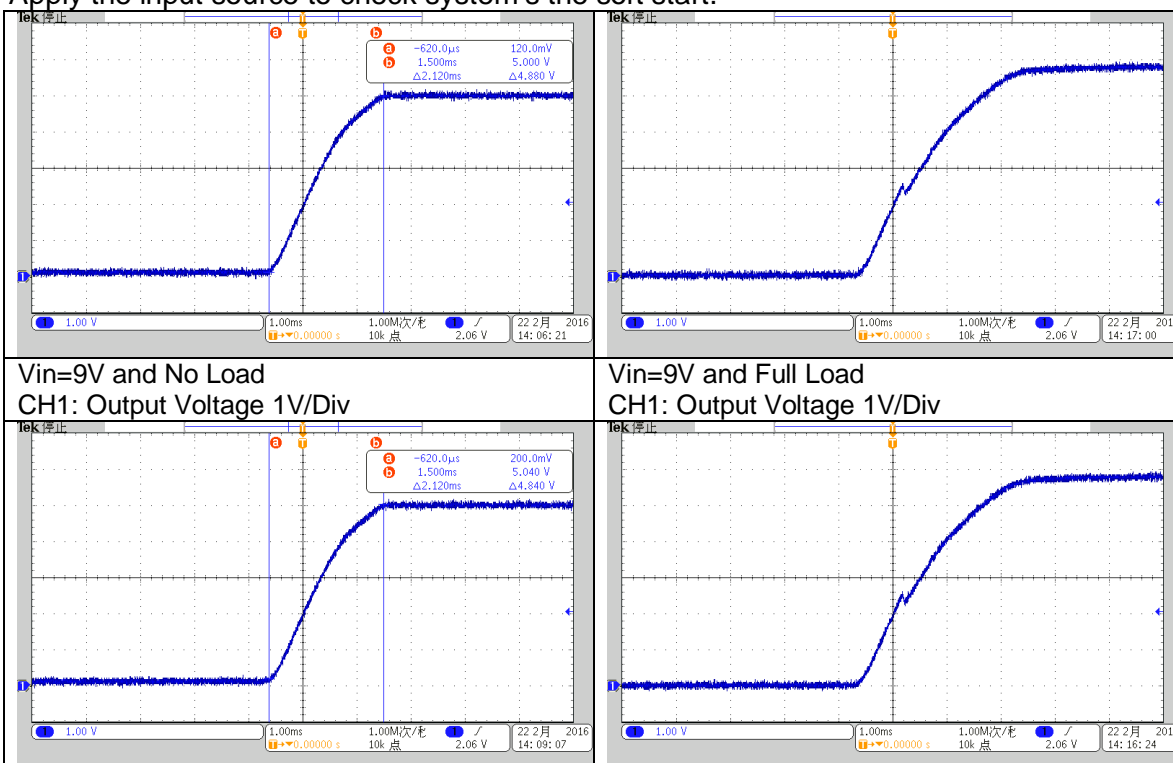
2.2 Cable Compensation

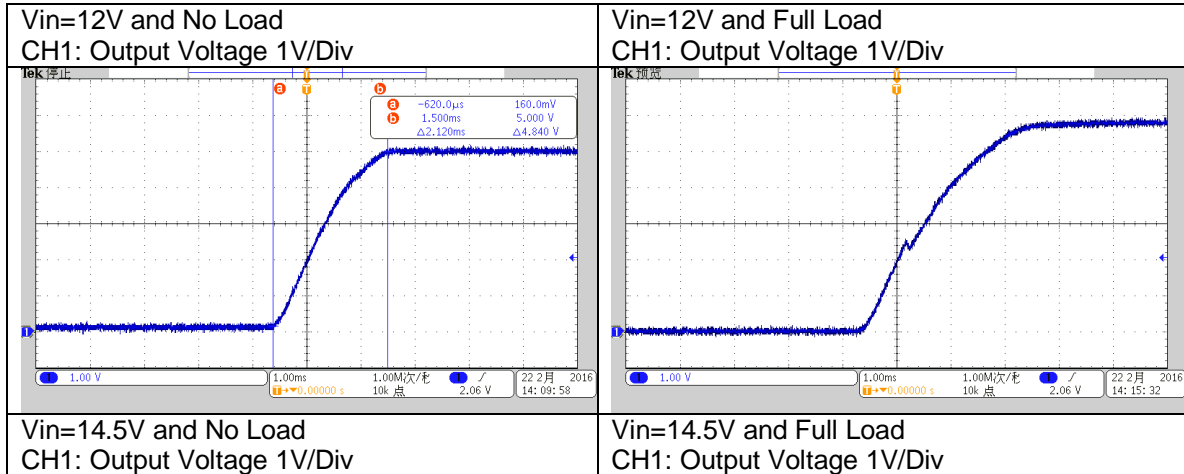
Test the output voltage of DCDC converter with the increase of load current.



2.3 Start Up

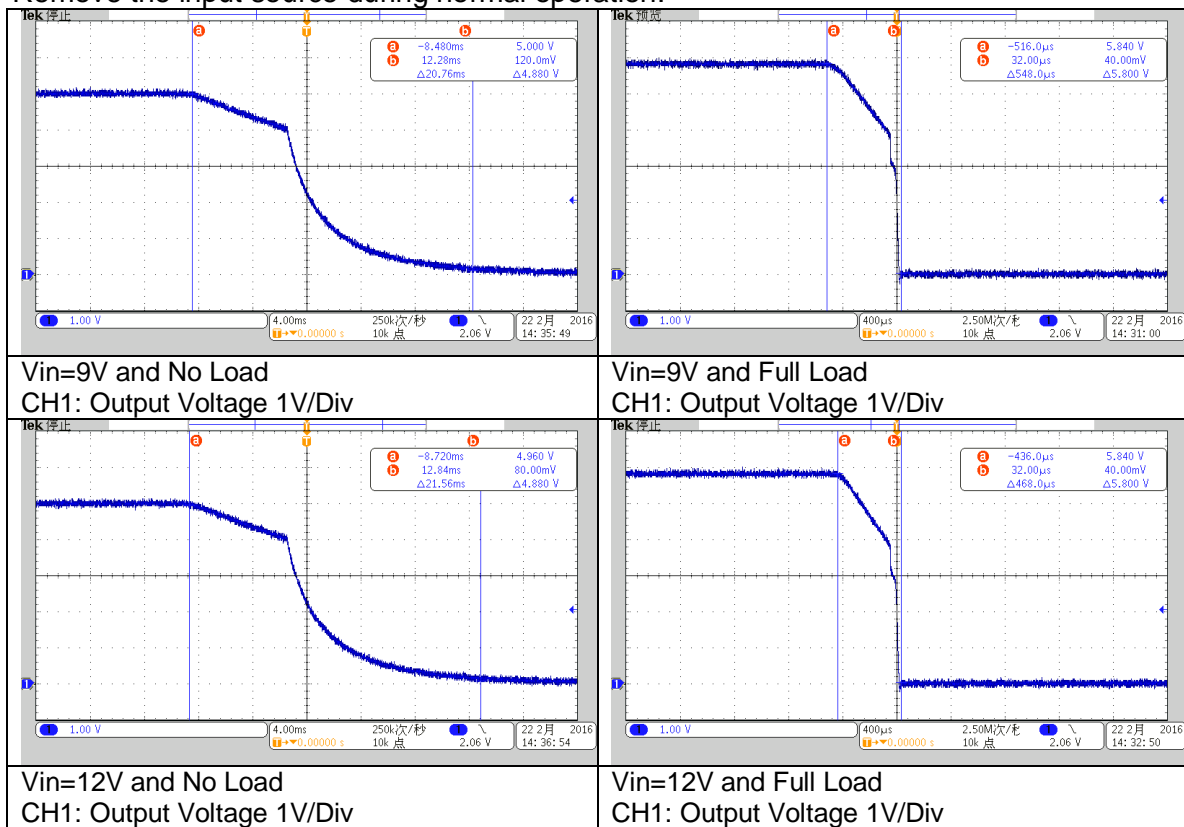
Apply the input source to check system's the soft start.

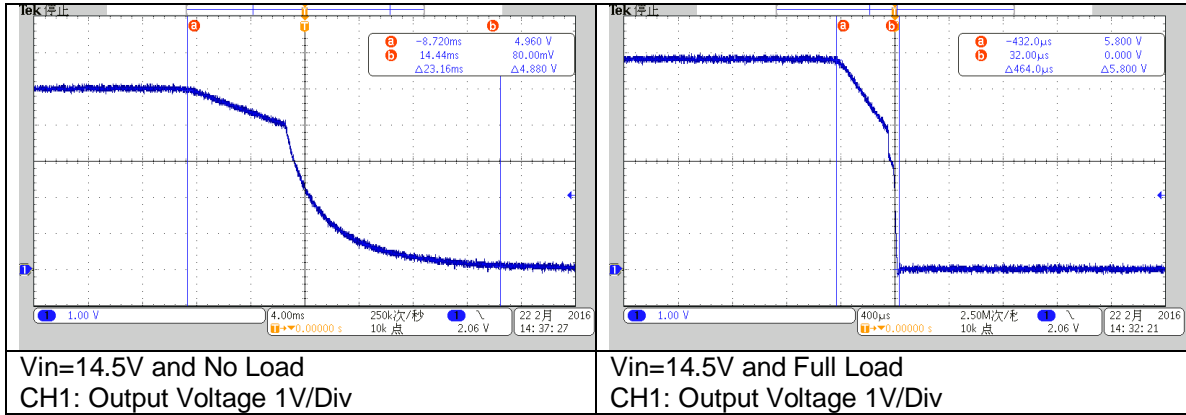




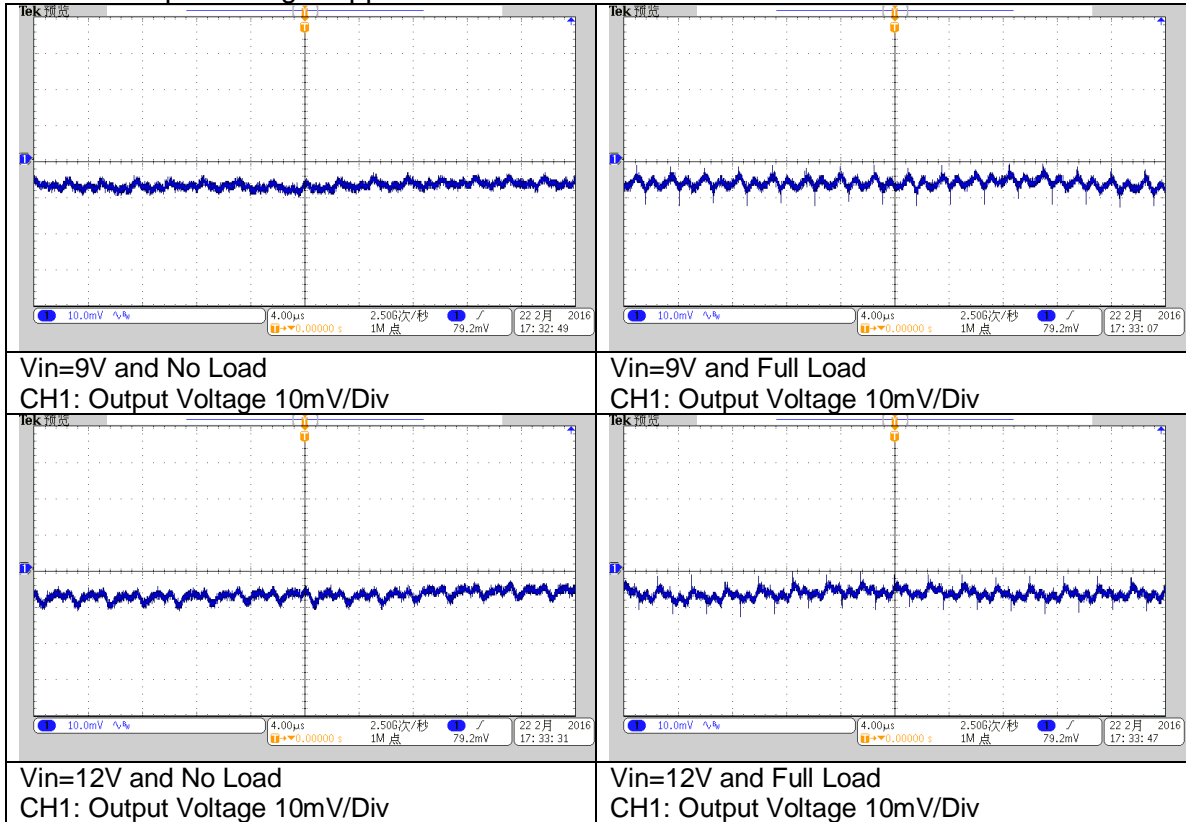
2.4 Shut Down

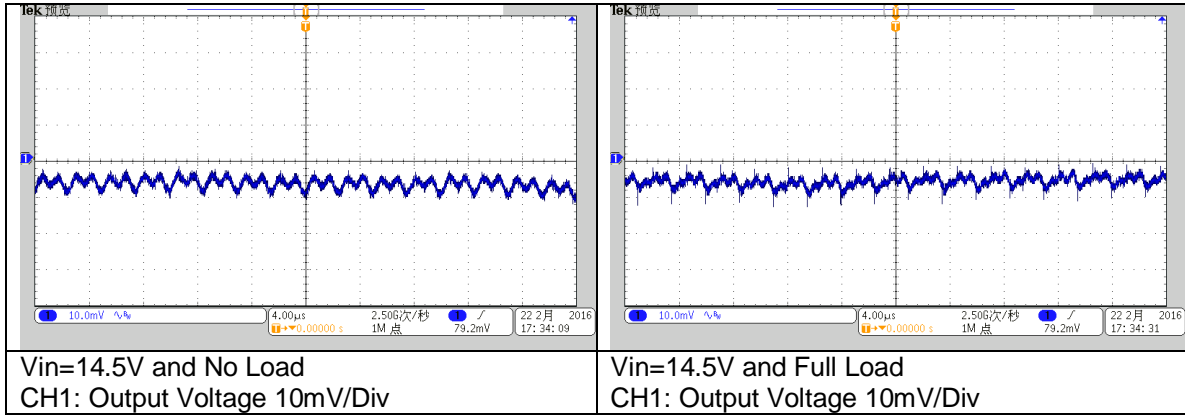
Remove the input source during normal operation.



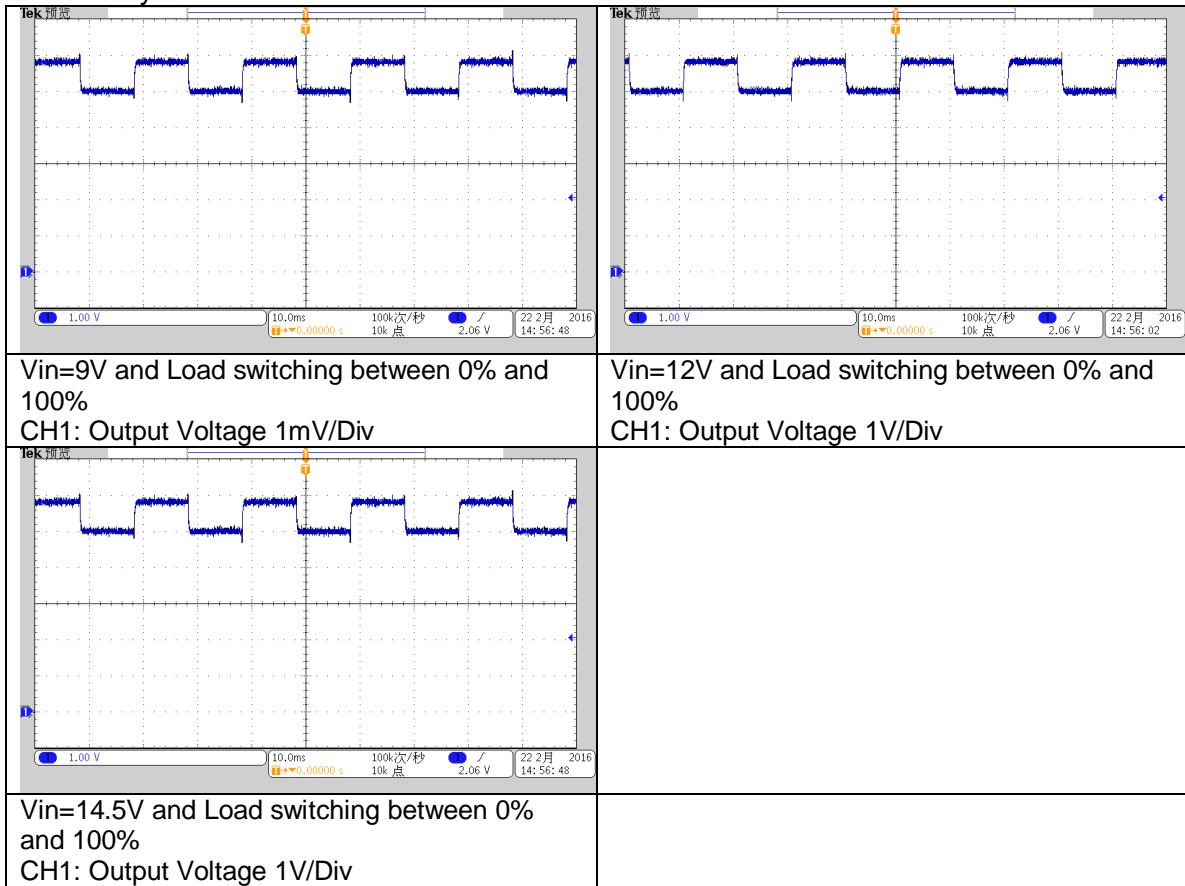


2.5 Output Voltage Ripple



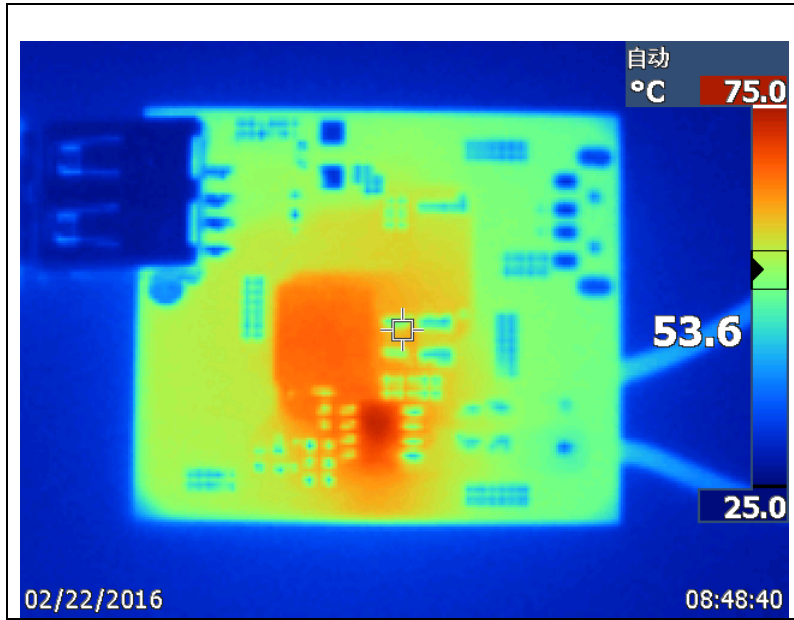


2.6 Dynamic Performance



2.7 Thermal Performance

The board is applied a 12V DC voltage and runs about 10min for warming up.



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