



Texas Instruments

PMP4471 Test Procedure

China Power Reference Design

7/10/2015

1 GENERAL

1.1 PURPOSE

To provide detailed data for evaluating and verifying the PMP4471, which uses TI Buck controller TPS54340-Q1 and TPS2549-Q1.

1.2 REFERENCE DOCUMENTATION

Schematic PMP4471_SCH.PDF

Assembly PMP4471_PCB.PDF

BOM

1.3 TEST EQUIPMENTS

Multi-meter (current): Fluke 287C*2

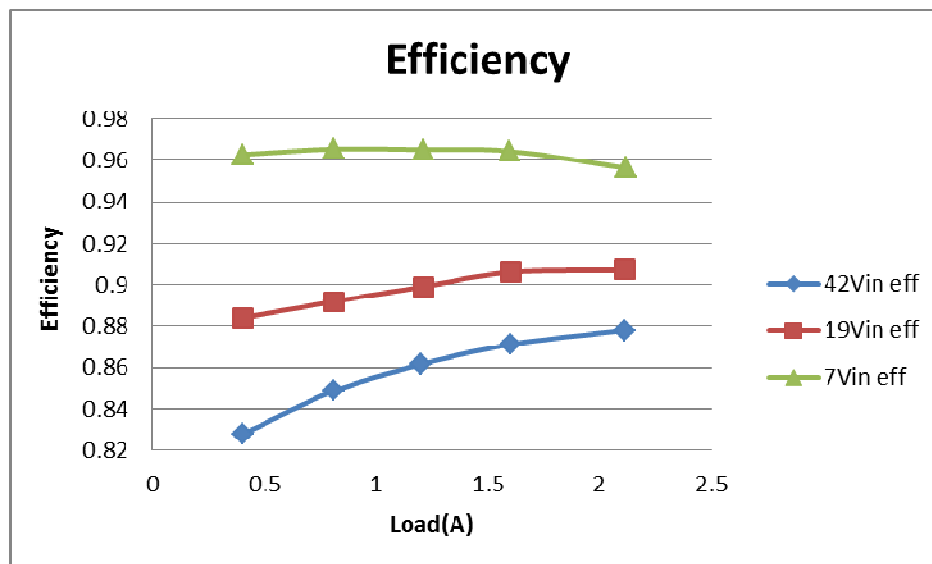
Multi-meter (voltage): Agilent 34401A

DC Source: GPS 3303C

E-Load: Chroma 63101 module

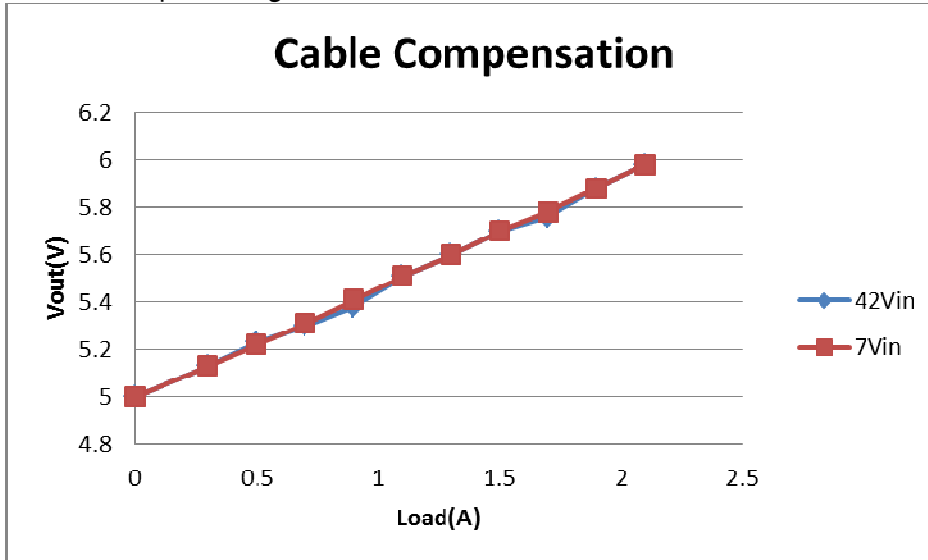
2 Performance data and waveform

2.1 EFFICIENCY



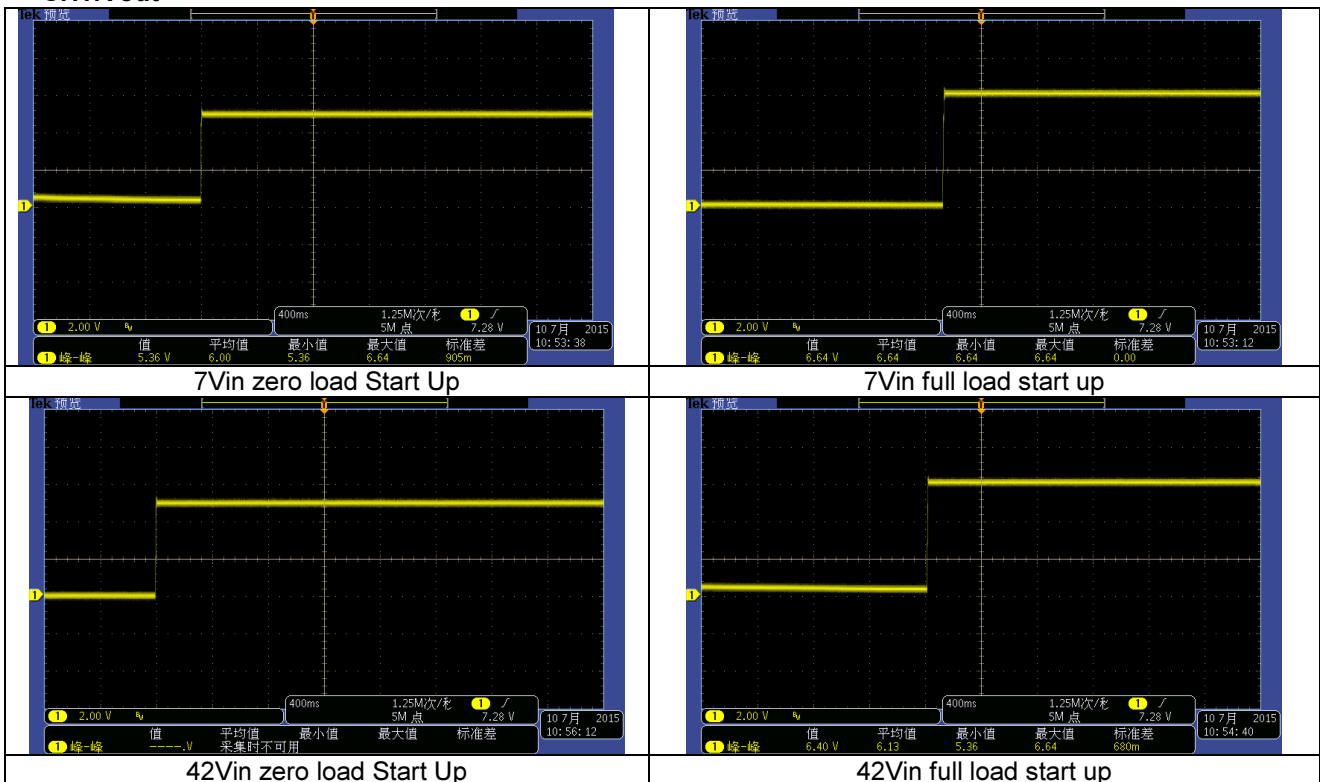
2.2 Cable compensation over output current

The output voltage is tested at USB terminal.



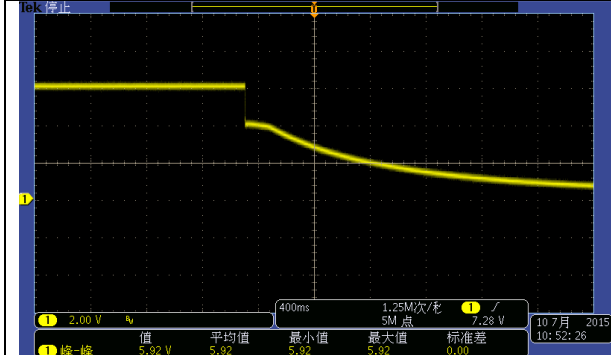
2.3 Start Up

CH1:Vout

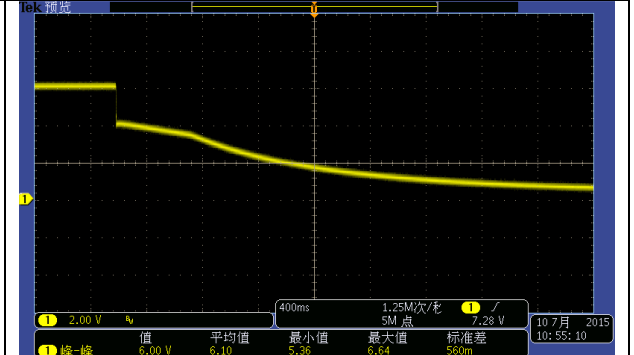


2.4 Shut down

CH1:Vout



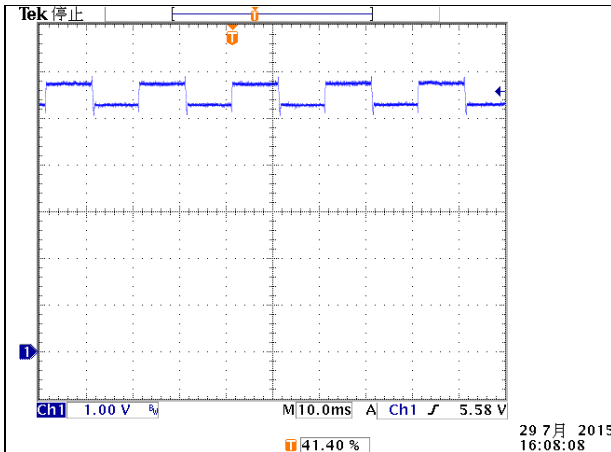
7Vin full load shut down



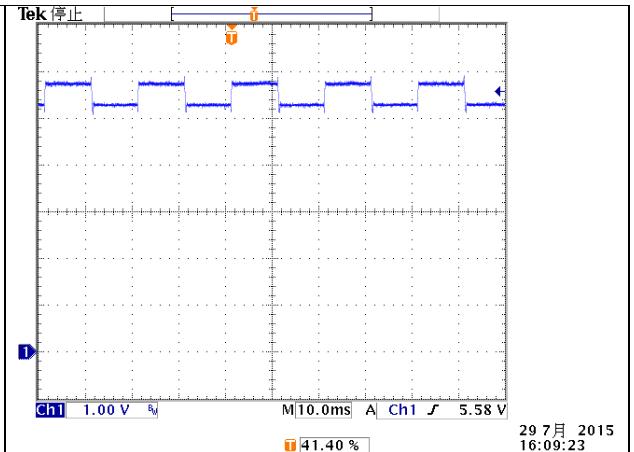
42Vin full load shut down

2.5 Dynamic Performance

CH1:Vout



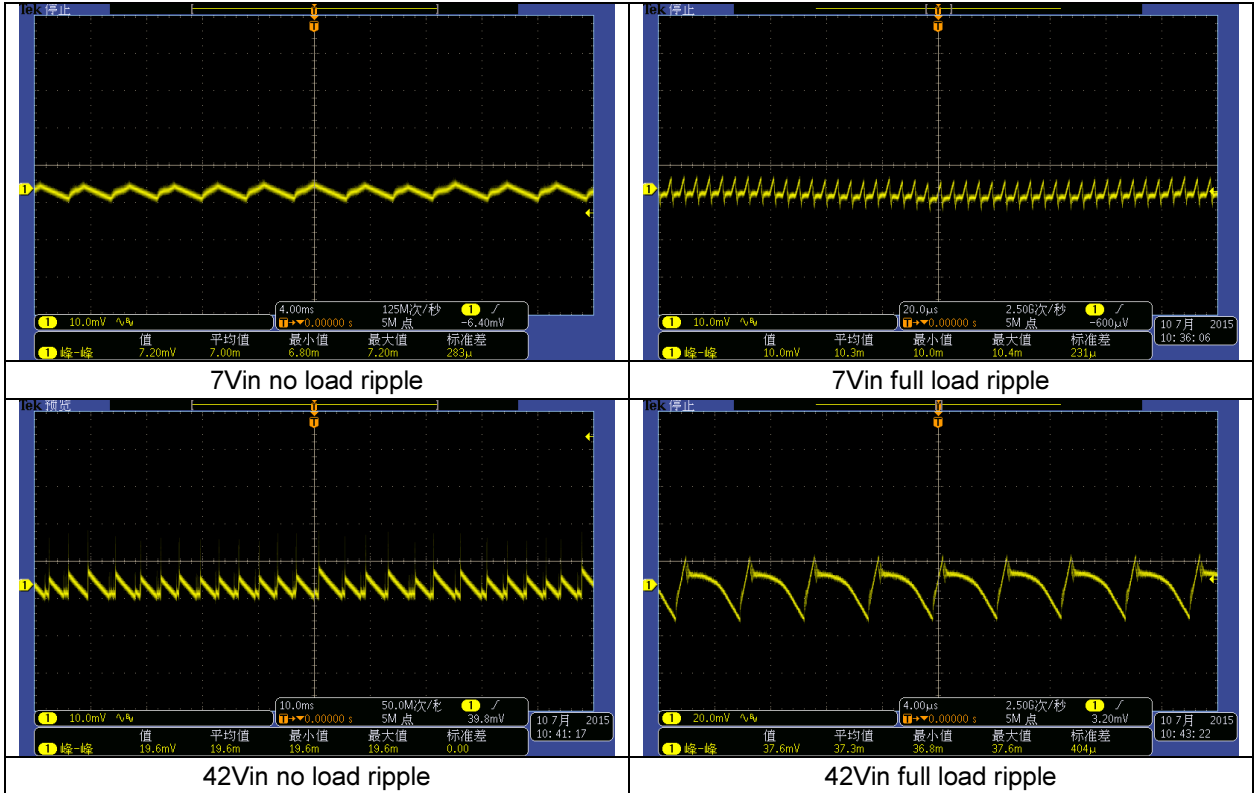
7Vin 25%~75% load



42Vin 25%~75% load

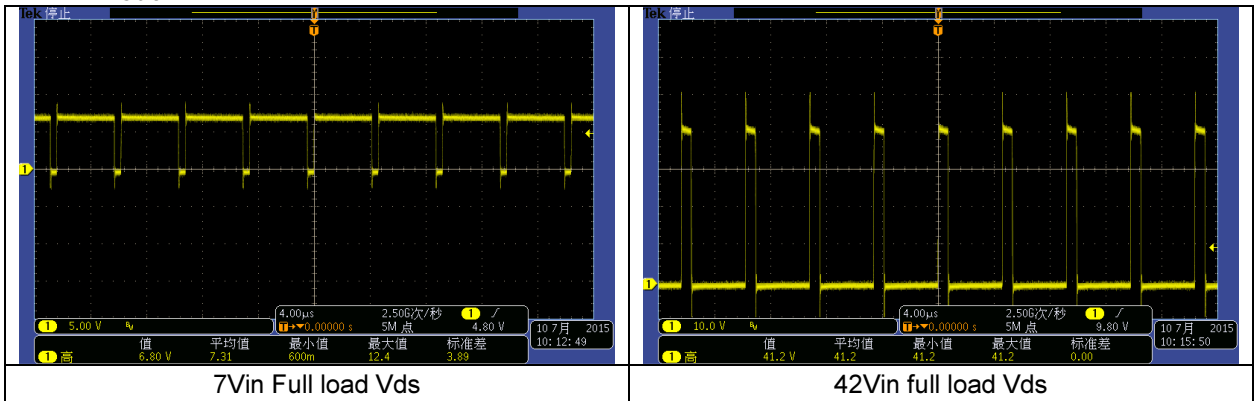
2.6 OUTPUT Voltage Ripple

CH1:Vout



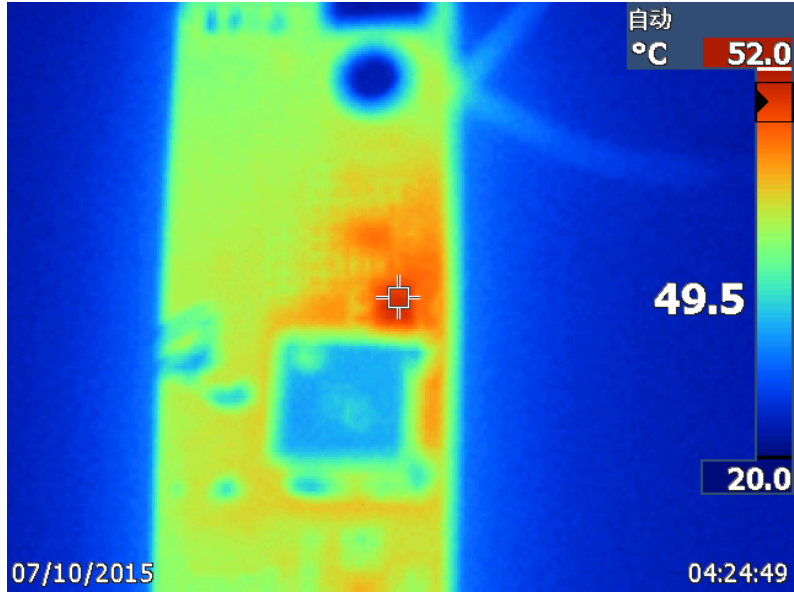
2.7 Mosfet Vds

CH1:Vout



2.8 Thermal Performance

The thermal is tested under 24Vin with full load output 1 hour.



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