

方案调试与验证报告

AE&FAE Department

Version:1.1

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Test Item:

1:Load Regulation;

2:Line Regulation;

3:Output Ripple Voltage;

4:Efficiency;

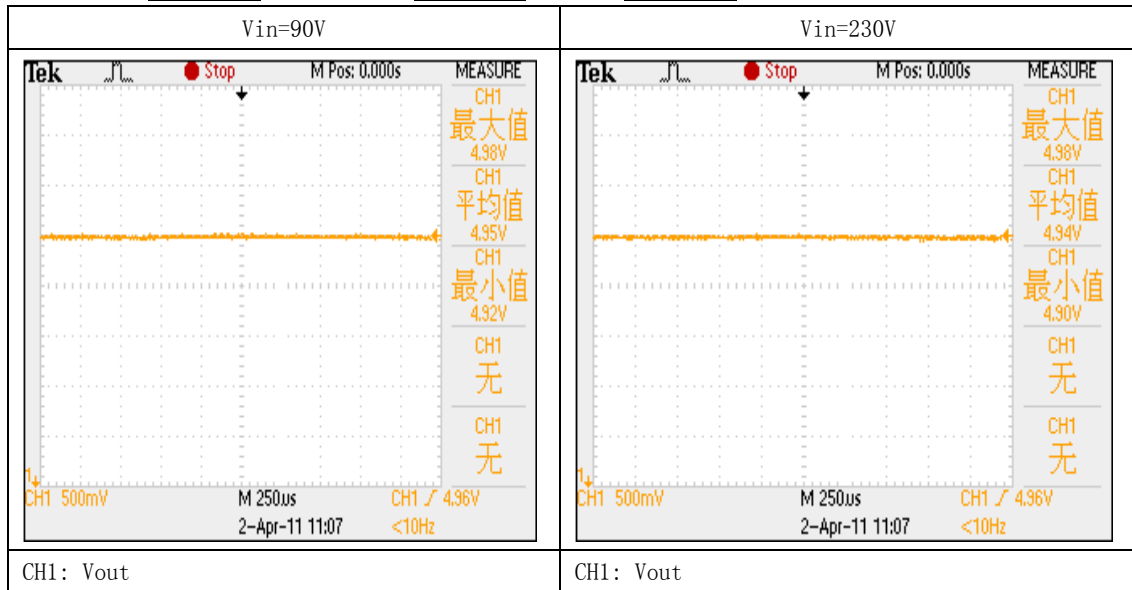
5: OCP;

6: OSP;

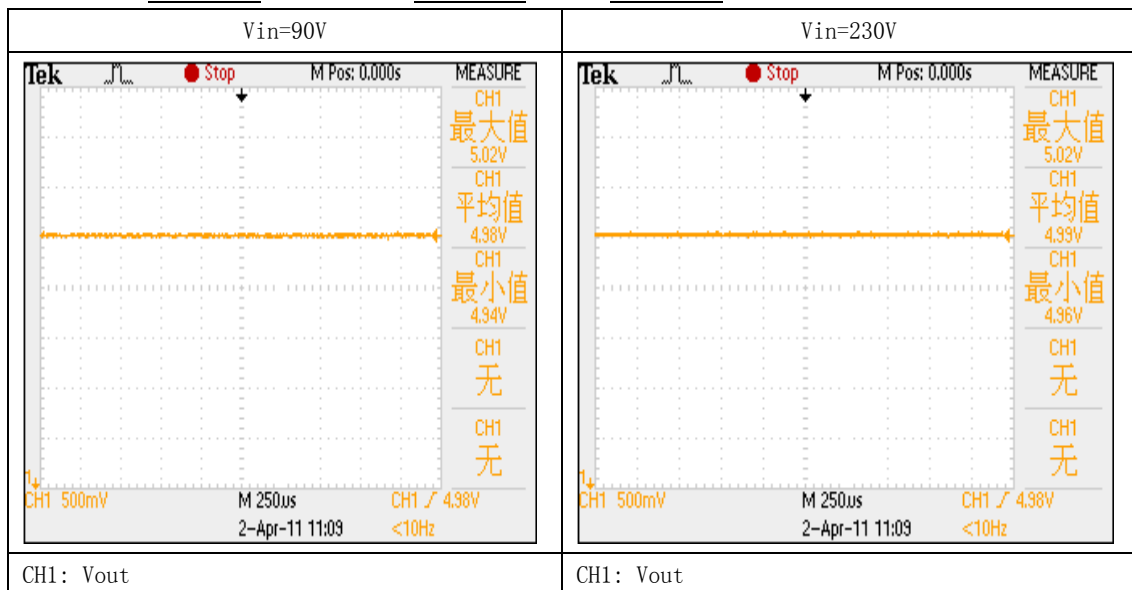
7: Diode Drop Voltage;

1: Load Regulation:

Vout (max)= 5.25V ; Vout (min)= 4.75V ; Iload= 0.00A ;



Vout (max)= 5.25V ; Vout (min)= 4.75V ; Iout= 1.00A ;



Load regulation: 0.6% ; Result: PASS ; Load regulation: 1% ; Result: PASS ;

$$Load\ Regulation = \frac{V_0 - V_1}{V_0} ;$$

2: Line Regulation:

Test Condition: Vin=90V-265V, Iload=0A

Vin(V)	90	115	185	220	235	265
Vout(V)	4.95	4.95	4.95	4.95	4.95	4.94

Line regulation: 0.2% ; Result: PASS ;

Test Condition: Vin=85V-265V, Iload=1A

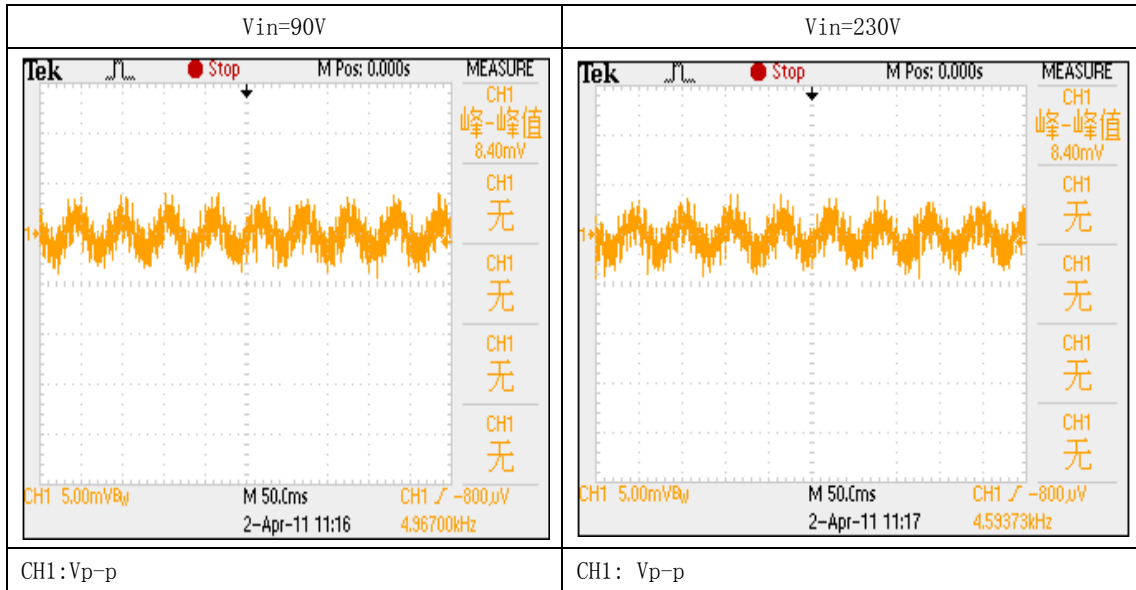
Vin(V)	90	115	185	220	235	265
Vout(V)	4.99	4.99	4.98	4.98	4.98	4.98

Line regulation: 0.2 %; Result: PASS;

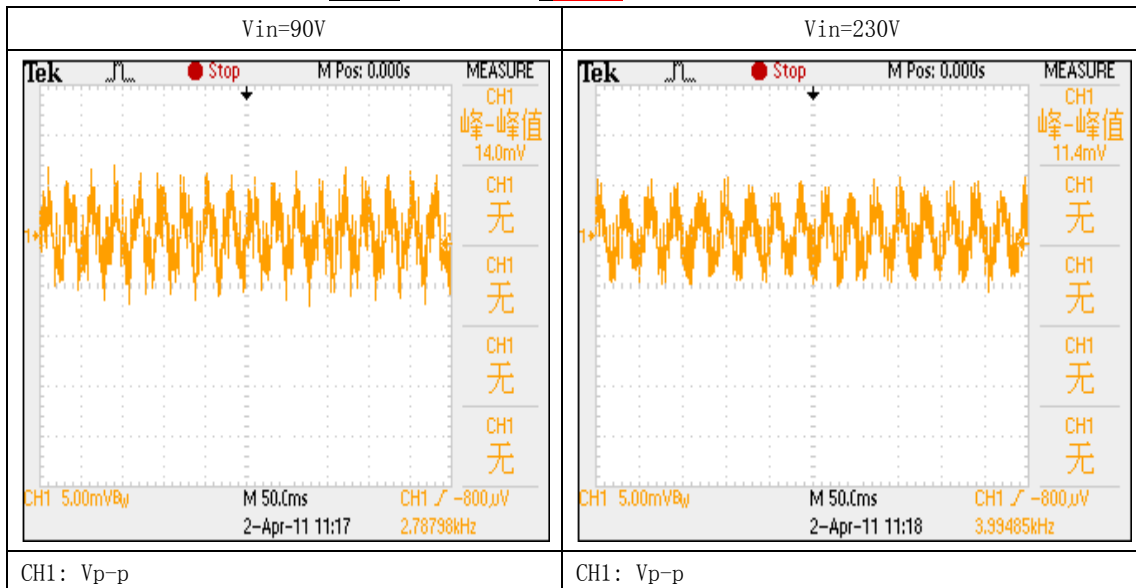
$$\text{Line Regulation} = \frac{V_{90} - V_{265}}{V_{90}};$$

3:Output Ripple Voltage:

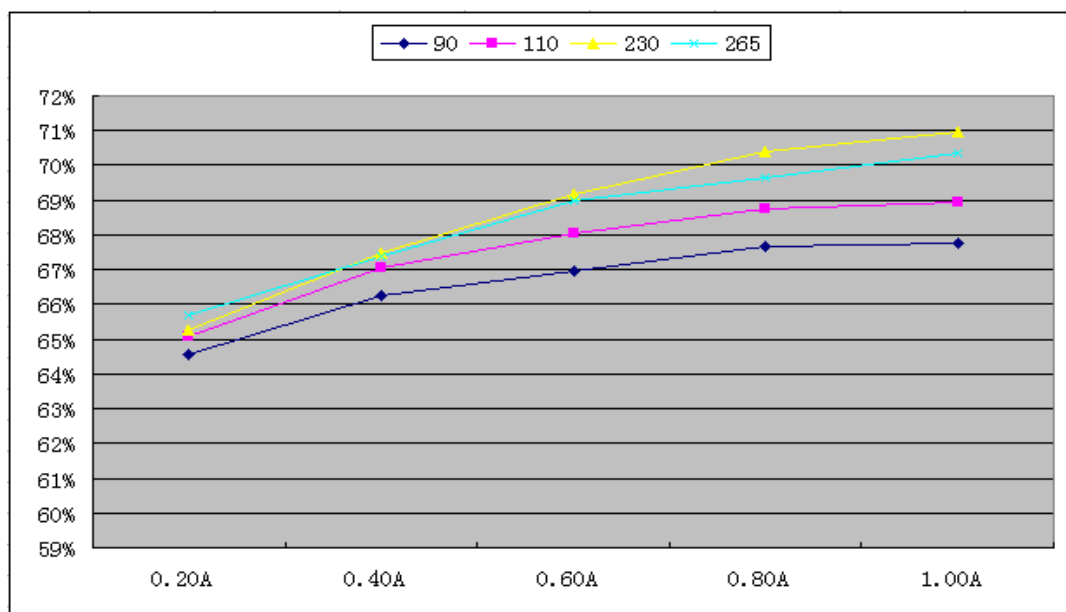
Vripple ≤ 100mV; Iout = 0.5A; Result: PASS;



Vripple ≤ 100mV; Iout = 1A; Result: PASS;



4:Efficiency:



输入电压 (V)	90	110	230	265
平均效率 (%)	66.64	67.57	68.66	68.42

5:OCP:

Vin(V)	90	115	185	220	265
OCP(A)	1.65	1.70	1.80	1.73	1.30

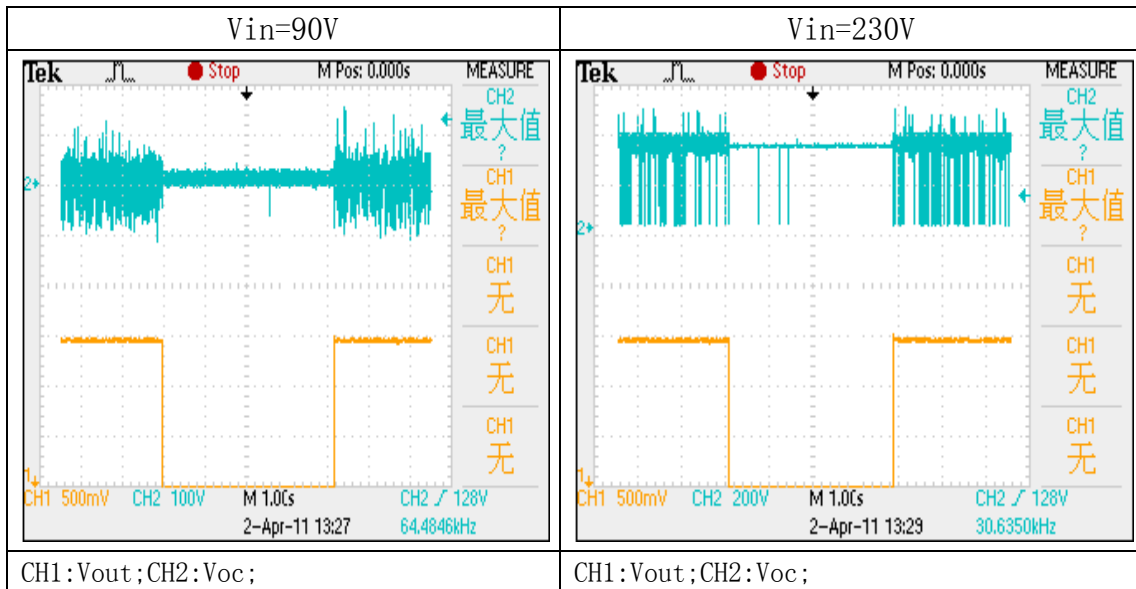
Notice: $I_{ocp} = (1.3-1.8) I_{out(max)}$;

6:OSP:

Test Way: 短路输出端开机或者先开机后短路, 检测 IC 在这种情况下是否具有自我保护功能, 当负载恢复正常后 IC 可以恢复正常工作, 输出正常; 同时检测此时的输入功率的大小, 此时功率越小越好。

Vin(V)	90V	115V	230V	265V
Pin(W)	7.66	7.38	7.03	7.08
Pshort(W)	0.00-0.39	0.09-0.76	0.39-0.81	0.46-1.17

Test Waveform:



7: Diode drop Voltage: ($I_{load}=1.00A$);

Vin (V)	90V	115V	230V	265V
Vdrop (V)	15.2	23.6	42.4	44.8
Vds (V)	280	340	496	528

Test waveform:

