

方案调试与验证报告

AE&FAE Department

Version:1.1

Reactor-micro

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审 核：赵雄飞 日期：2011年1月5日

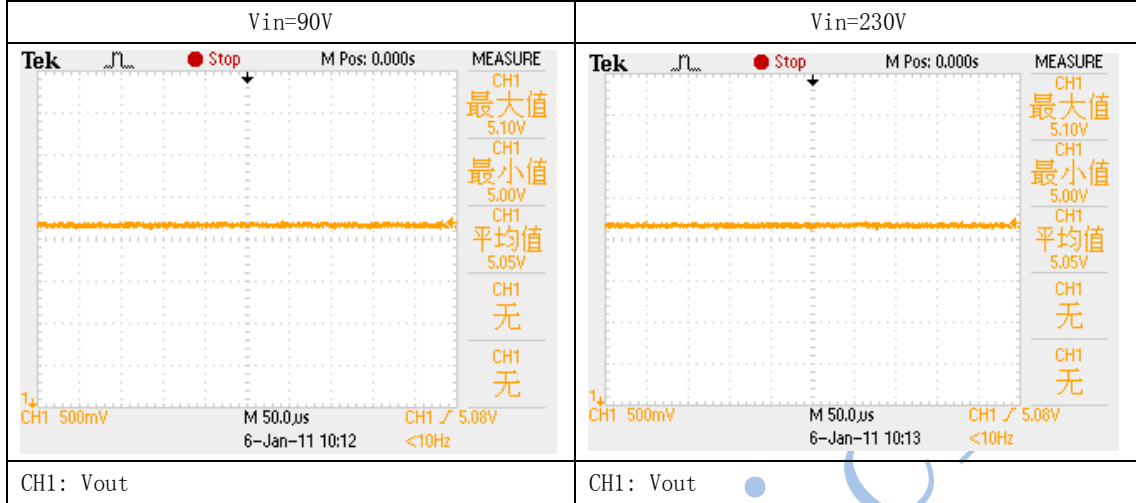
Test Item:

- 1: Load Regulation;
- 2: Line Regulation;
- 3: Output Ripple Voltage;
- 4: Efficiency;
- 5: OCP;
- 6: OSP;
- 7: Diode Drop Voltage;

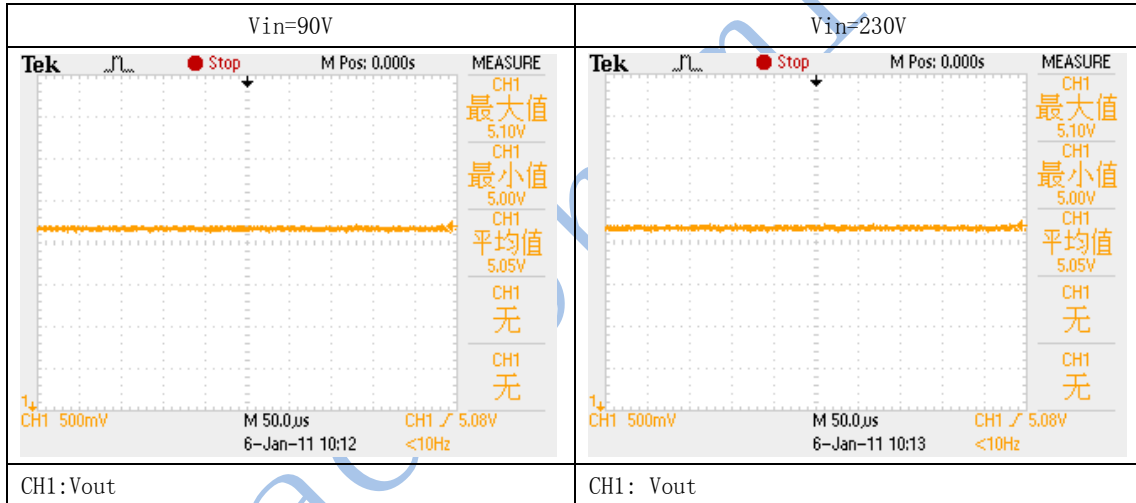
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1: Load Regulation;

Vout (max)= 5.25V ; Vout (min)= 4.75V ; Vout (avg)= 5V ; Iload= 0A ;



Vout (max)= 5.25V ; Vout (min)= 4.75V ; Vout (avg)= 5V ; Iout= Iout (max) ;



$$\text{Load Regulation} = \frac{V_0 - V_1}{V_0} = \underline{0.2\%} ;$$

2: Line Regulation:

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

Vin(V)	90	115	185	220	235	265
Vout(V)	5.05	5.05	5.05	5.05	5.05	5.05

Line regulation: <=0.5% ; LG (MAX): 2% ; Result: PASS ;

Test Condition: Vin=85V-265V, Iload=Iout(max)

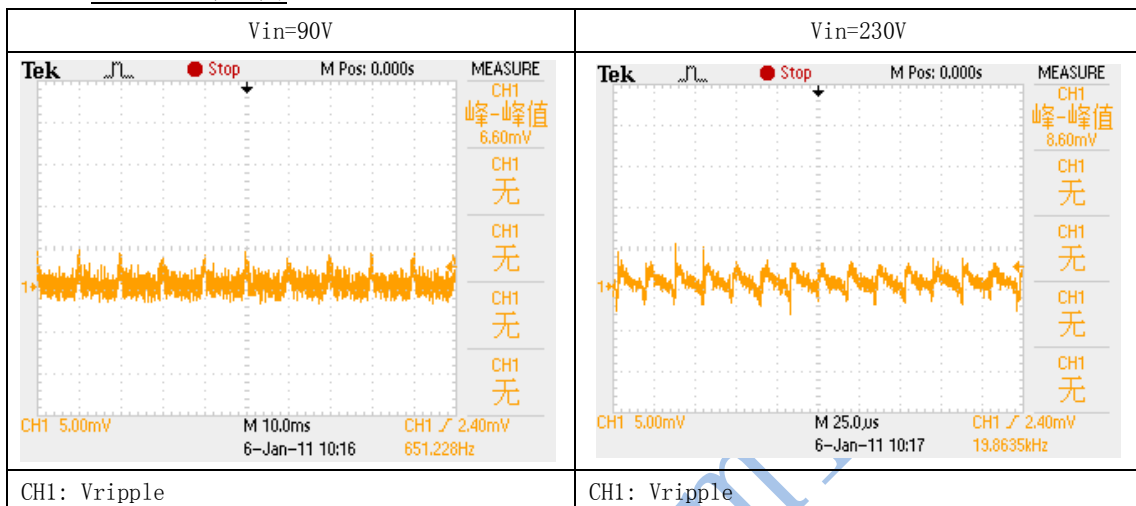
Vin(V)	90	115	185	220	235	265
Vout(V)	5.05	5.05	5.05	5.05	5.05	5.05

Line regulation: <=0.5% ; LG (MAX): 2% ; Result: PASS ;

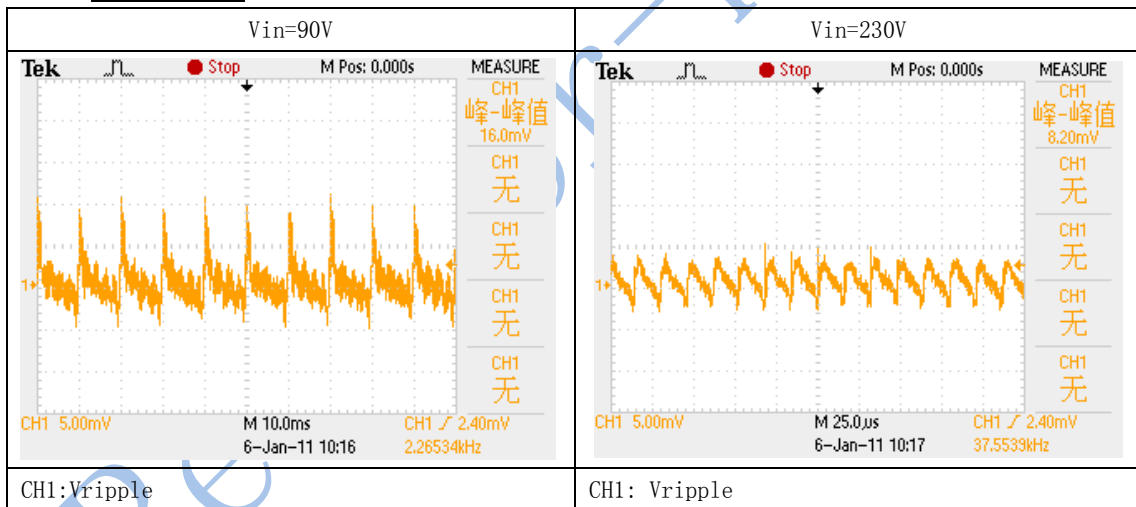
$$\text{Load Regulation} = \frac{V_{90} - V_{265}}{V_{90}} = \underline{\leq 0.5\%};$$

3: Output Ripple Voltage:

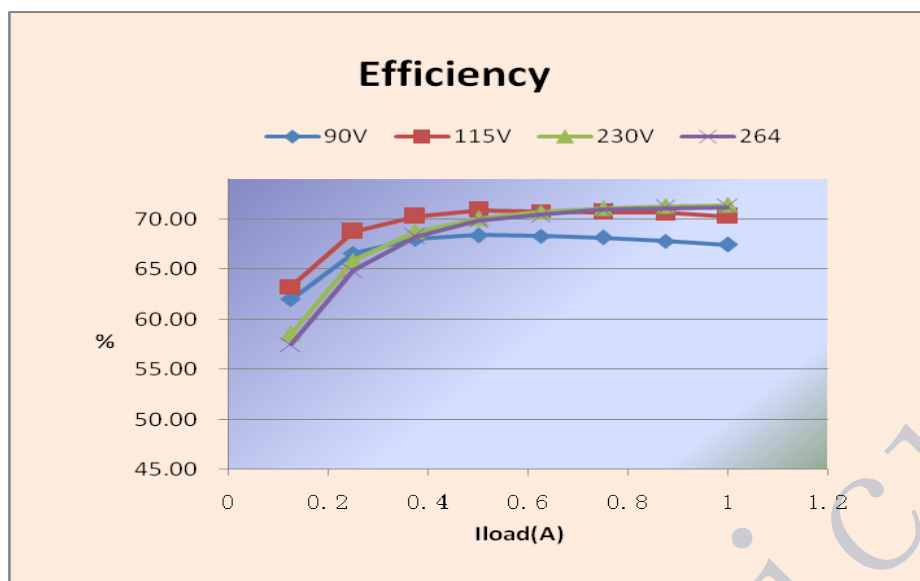
$I_{out} = \frac{1}{2} I_{out(max)}$;



$I_{out} = I_{out(max)}$;



4:Efficiency:



5: OCP

Vin(V)	90	115	185	220	265
OCP(A)	1.5	1.7	1.8	1.8	1.8
Result	PASS	PASS	PASS	PASS	PASS

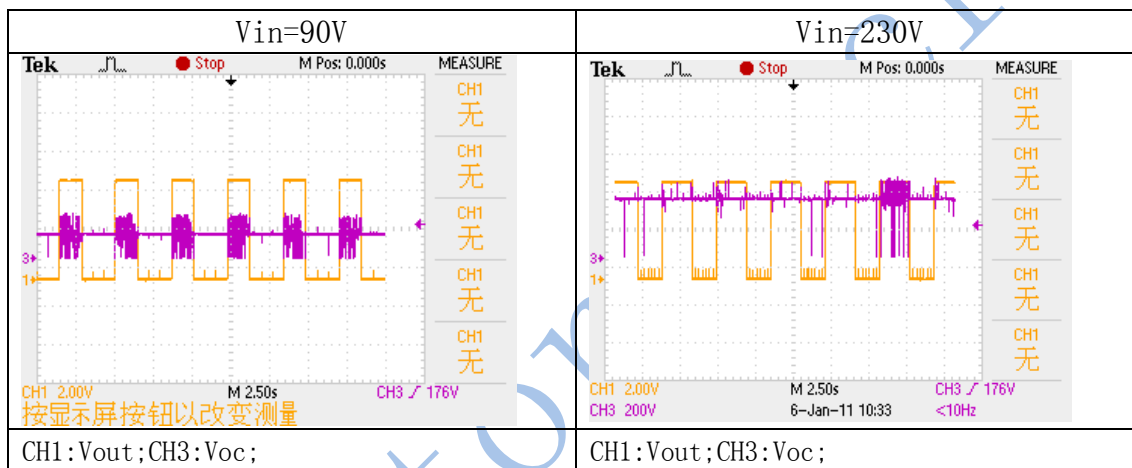
Notice: $I_{ocp} = (1.3-1.8) I_{out(max)}$;

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)	7.50	7.20	7.09	7.11
Pshort(W)	0-0.12	0-0.13	0.24-0.56	0.40-1.23
Result	PASS	PASS	PASS	PASS

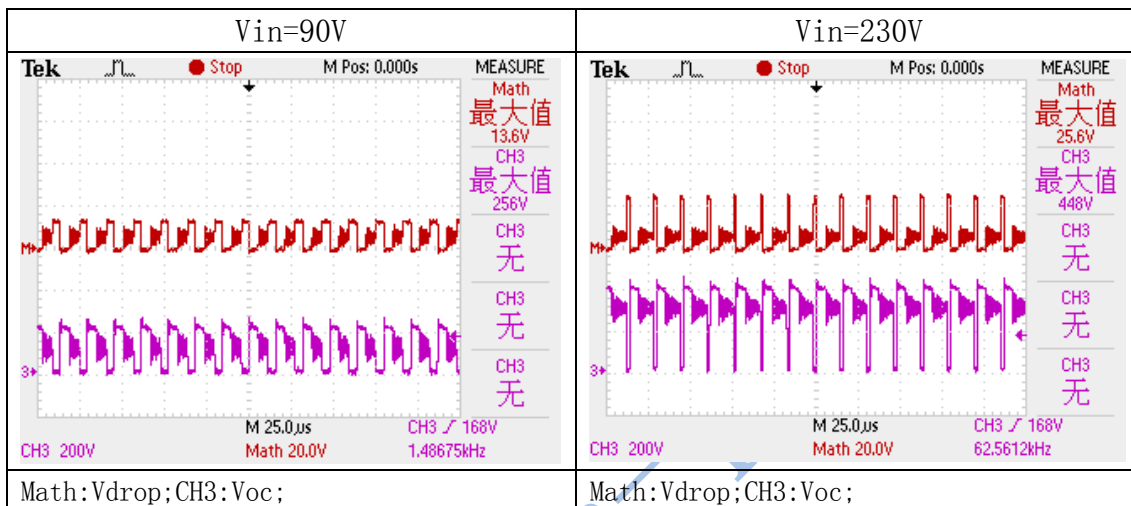
Test Waveform:



7: Diode drop Voltage: (Iload=Iout(max));

Vin(V)	90V	115V	230V	265V
Vdrop(V)	13.6	16.0	25.6	28.8
Voc(V)	256	288	448	488
Result	PASS	PASS	PASS	PASS

Test waveform:



REACTOR