陕西亚成微电子有限责任公司

RM3261 9V-0.5A 方案测试报告

AE Department

Version:1.1

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审　　核：赵雄飞　日期：2011/4/19

Test Item:

1:Load Regulation;

2:Line Regulation;

3:Output Ripple Voltage;

4:Efficiency;

5:Frequency;

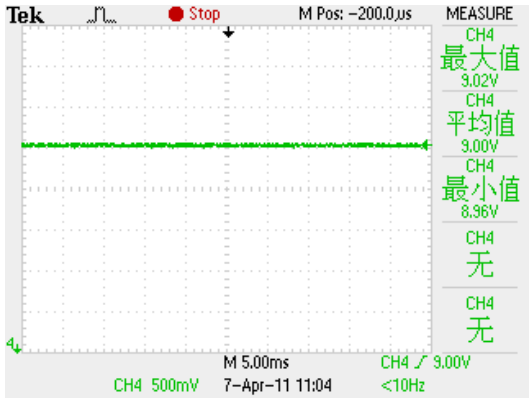
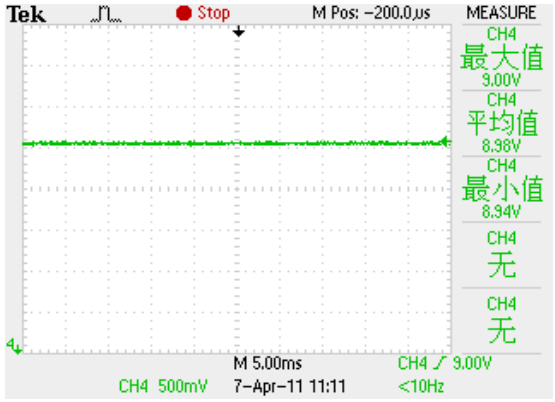
6:OCP;

7:OSP;

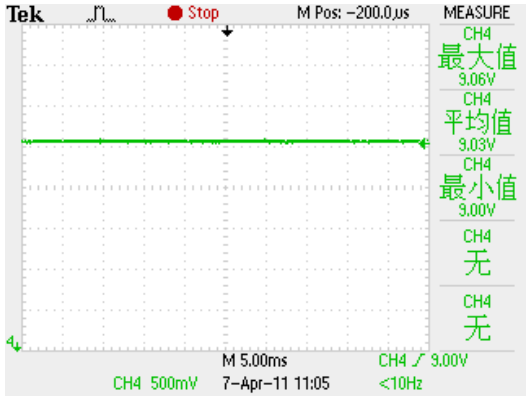
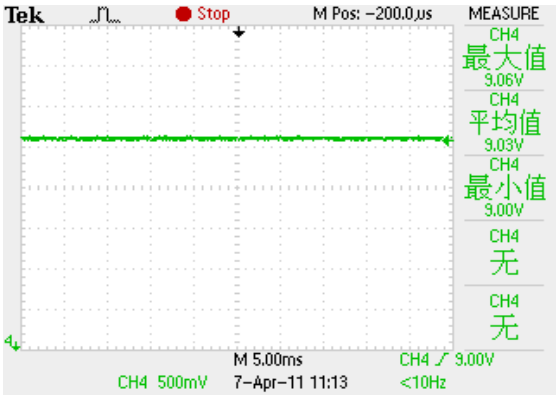
8:Diode Drop Voltage;

1:Load Regulation;

SPEC:Vout(max)= 9.45V ; Vout(min)= 8.55V ; Iload= 0A ; Test Result: PASS ;

Vin=90V	Vin=230V
	
CH4:Vout	CH4: Vout

SPEC:Vout(max)= 9.45V ; Vout(min)= 8.55V ; Iload= 0.5A(max); Test Result: PASS ;

Vin=90V	Vin=230V
	
CH4: Vout	CH4: Vout

$$Load\ \text{Re}gulation = \frac{V_0 - V_1}{V_0} = 0.33\%$$

$$Load\ \text{Re}gulation = \frac{V_0 - V_1}{V_0} = 0.56\%$$

2:Line Regulation:

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

Vin(V)	90	115	185	220	235	265
Vout(V)	9.04	9.04	9.03	9.03	9.03	9.03

Line regualtion: 0.11% ; Test Result: PASS ;

Test Condition: Vin=90V-265V, Iload=0.5A(max)

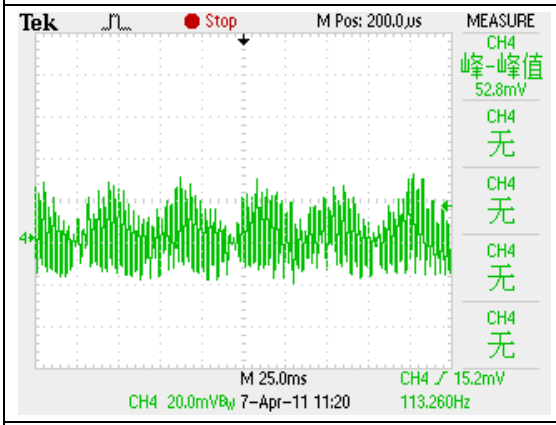
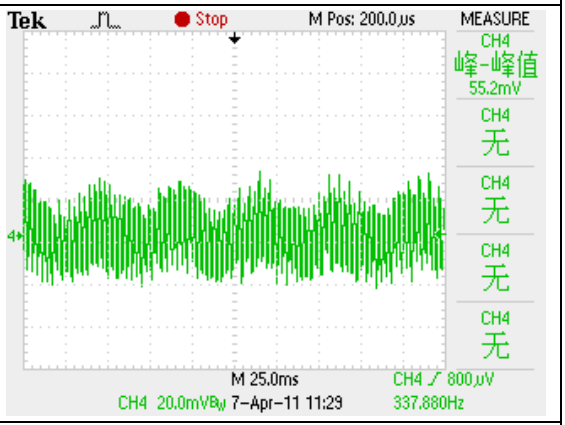
Vin(V)	90	115	185	220	235	265
Vout(V)	9.02	9.02	9.03	9.03	9.03	9.03

Line regualtion: 0.11% ; Test Result: PASS ;

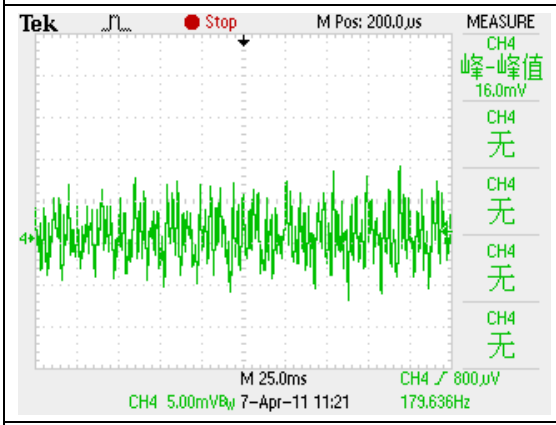
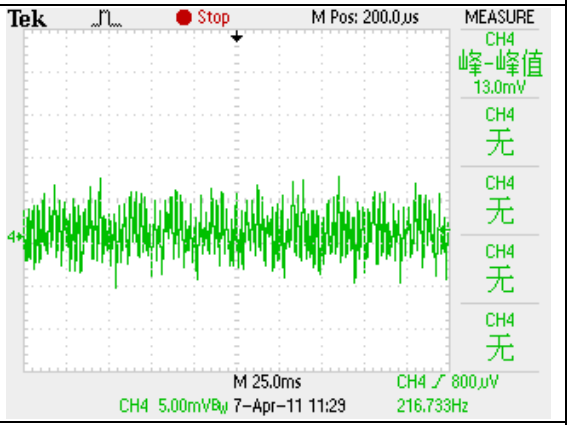
$$Line\ \mathrm{Re}gulation = \frac{V_{90} - V_{265}}{V_{90}} = \underline{\ 0.11\%\ }\ ;$$

3:Output Ripple Voltage:

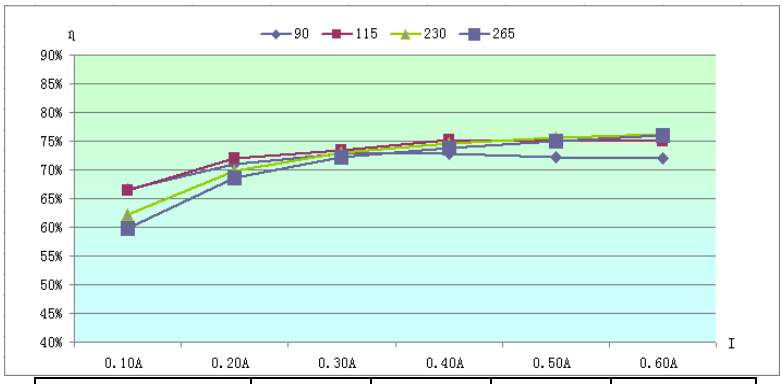
SPEC.:Vripple: 100mV ; Iout= 0.25A ; Test Result: PASS ;

Vin=90V	Vin=230V
	
CH4: Vp-p	CH4: Vp-p

SPEC.:Vripple: 100mV ; Iout= 0.5A ; Test Result: PASS ;

Vin=90V	Vin=230V
	
CH4: Vp-p	CH4: Vp-p

4:Efficiency:



输入电压（V）	90	110	230	265
平均效率（%）	71.2	72.8	72.0	70.9

5:Frequency;

Test Condition: Iload=0.25A

Vin(V)	90	115	185	220	235	265
F(Khz)	20.00	21.74	17.86	16.67	16.67	18.18

Test Condition: Iload=0.5A

Vin(V)	90	115	185	220	235	265
F(Khz)	40.32	39.69	38.46	38.46	38.46	37.88

6:OCP

SPEC.:Iocp(min)= 0.65A ; Iocp(max)= 0.9A ;

Vin(V)	90	115	185	220	265
OCP(A)	0.853	0.834	0.869	0.870	0.780
Result	PASS	PASS	PASS	PASS	PASS

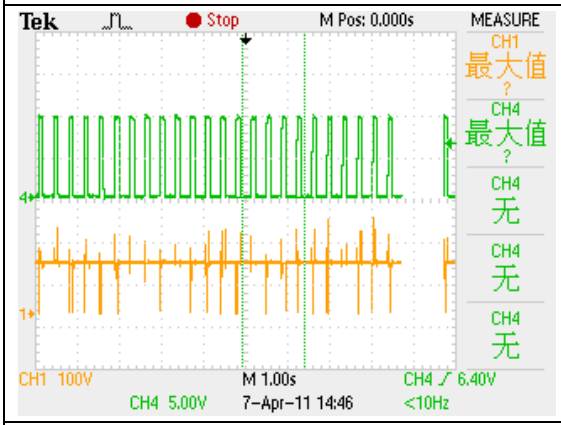
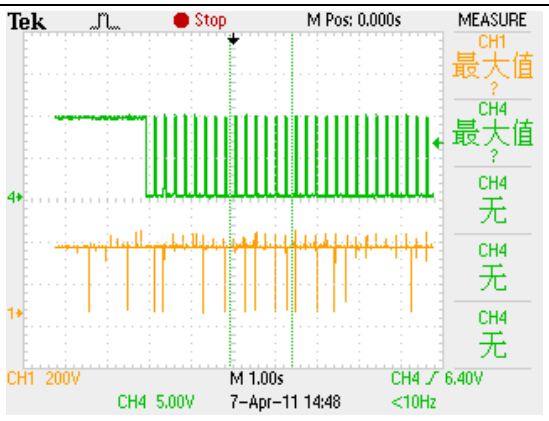
Notice:Iocp=(1.3-1.8)Iout(max);

7: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)	6.25	6.04	5.97	6.02
Pshort(W)	0.25	0.66	0.83	1.32
Result	PASS	PASS	PASS	PASS

Test Waveform:

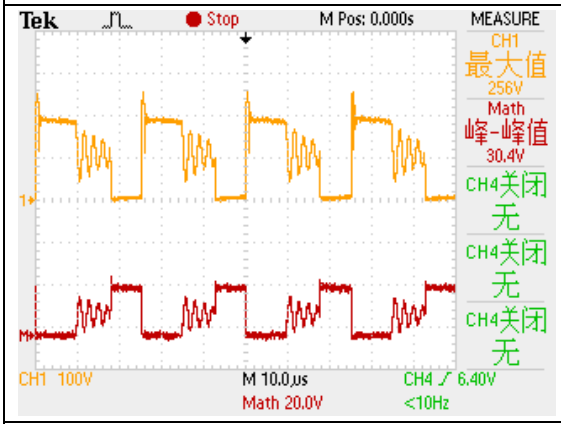
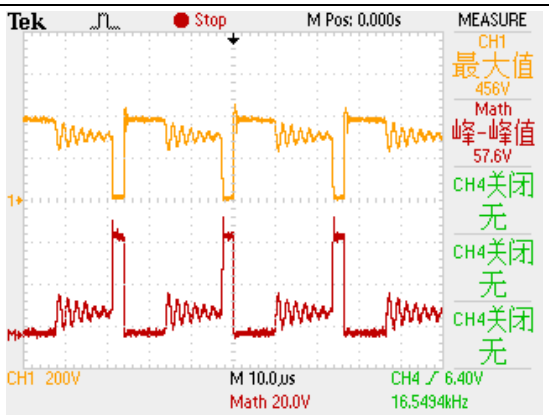
Vin=90V	Vin=230V
	
CH1:Vds;CH4:Vout;	CH1:Vds;CH4:Vout;

8:Dioe drop Voltage:

SPEC.:Vdrop(max) 100V ;Vds(max) 600V ; Iload= 0.5A ;

Vin(V)	90V	115V	230V	265V
Vdrop(V)	30.4	36.8	57.6	65.0
Vds(V)	256	292	456	488
Result	PASS	PASS	PASS	PASS

Test waveform:

Vin=90V	Vin=230V
	
CH1:Vds;Math:Vdrop;	CH1:Vds;Math:Vdrop;