

# RM6401 12V-3A 方案测试报告

AE Department

Version:1.1

测试工程师：孙元俊 日期：2011/04/18

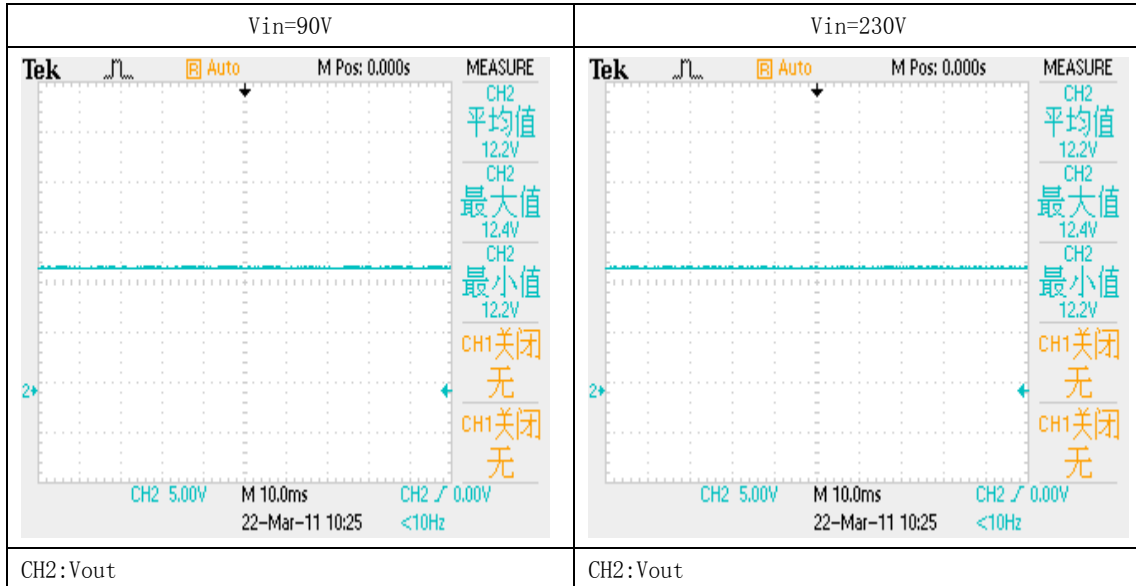
审 核：赵雄飞 日期：2011/4/19

Test Item:

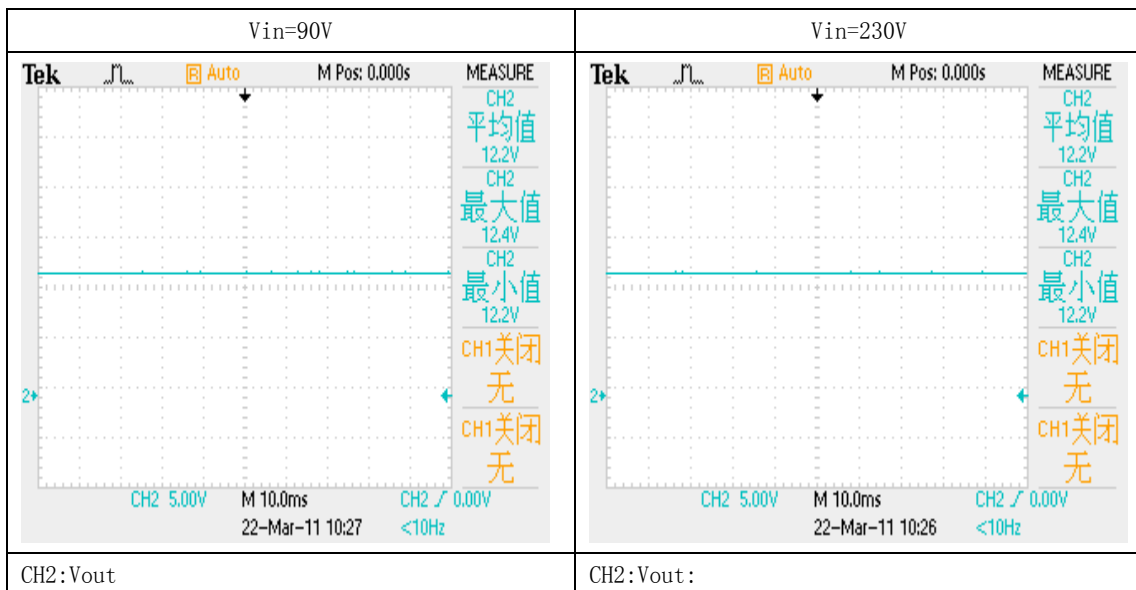
- 1:Load Regulation;
- 2:Line Regulation;
- 3:Output Ripple Voltage;
- 4:Efficiency;
- 5:Frequency;
- 6:OCP;
- 7:OSP;
- 8:Diode Drop Voltage;

1: Load Regulation;

**SPEC:** Vout (max)= 12.6V ; Vout (min)= 11.4V ; Iload= 1.5A ; Test Result: **PASS** ;



**SPEC:** Vout (max)= 12.6V ; Vout (min)= 11.4V ; Iload= 3.0A ; Test Result: **PASS** ;



$$\text{Load Regulation} = \frac{V_0 - V_1}{V_0} = \underline{1.6\%};$$

2: Line Regulation:

Test Condition: Vin=90V-265V, Iload=1.5A

Vin (V)	90	115	185	220	235	265
Vout (V)	12.28	12.28	12.27	12.27	12.27	12.27

Line regulation: 0.08% ; Test Result: **PASS** ;

Test Condition: Vin=90V-265V, Iload=3.0A(max)

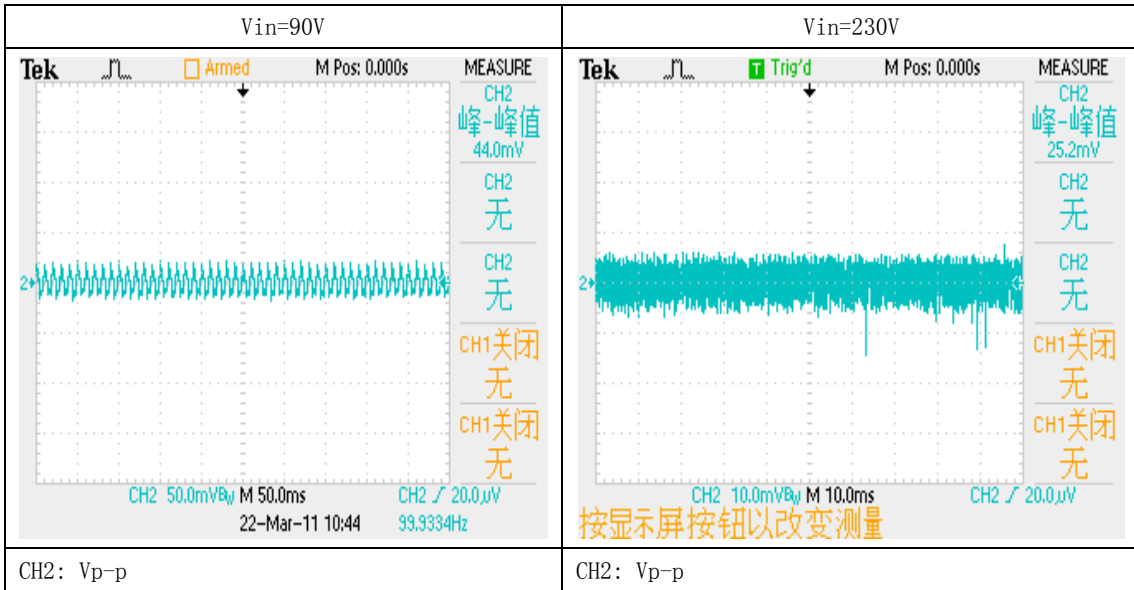
Vin(V)	90	115	185	220	235	265
Vout(V)	12.18	12.18	12.18	12.18	12.17	12.17

Line regulation: 0.8%; Test Result: PASS;

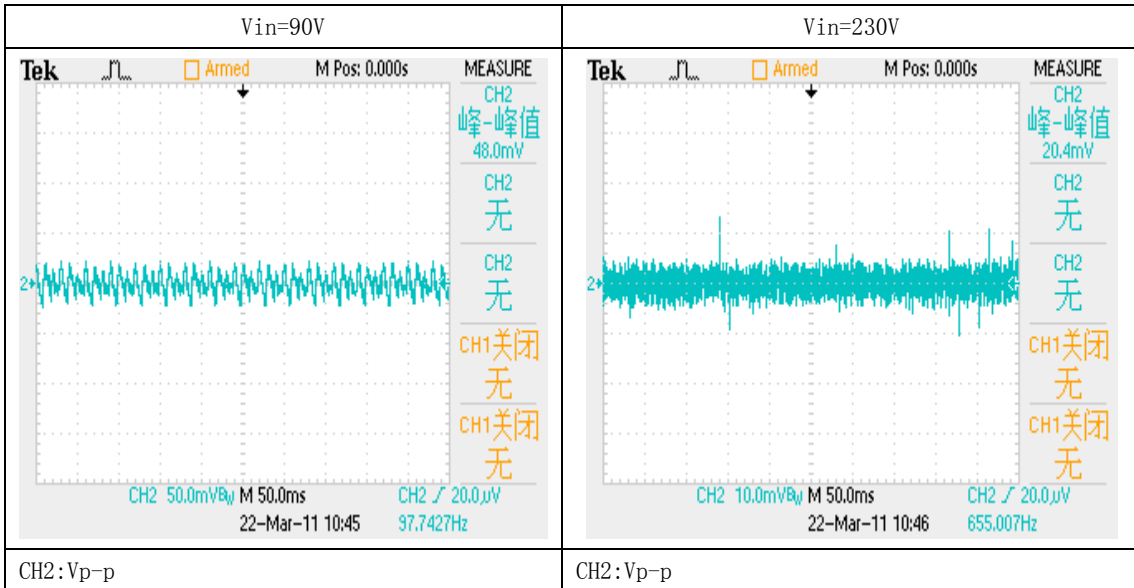
$$\text{Line Regulation} = \frac{V_{90} - V_{265}}{V_{90}} = \underline{0.8\%};$$

### 3:Output Ripple Voltage:

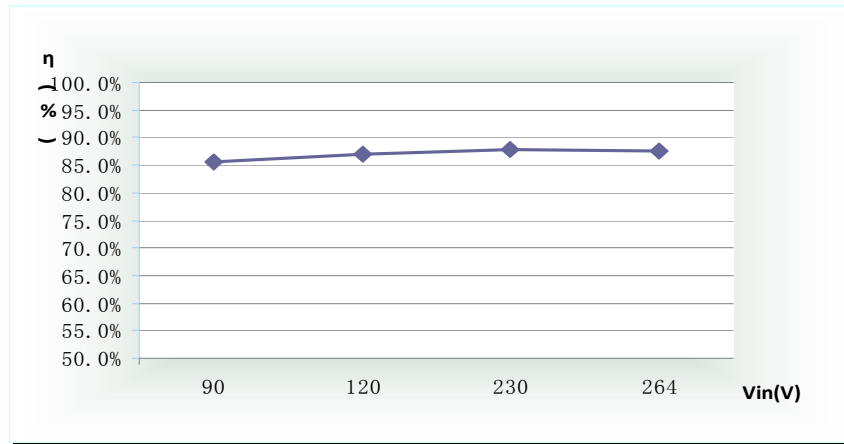
SPEC.: Vripple: 100mV; Iout= 1.5A; Test Result: PASS;



SPEC.: Vripple: 100mV; Iout= 3.0A; Test Result: PASS;



## 4:Efficiency:



## 5:Frequency;

Test Condition: Iload=1.5A

Vin(V)	90	115	185	220	235	265
F(Khz)	51.6	58.1	44.6	41.6	42.3	42.8

F (MAX) : 90KHz ; F (MIN) : 40KHz ; Result: **PASS** ;

Test Condition: Iload=3.0A

Vin(V)	90	115	185	220	235	265
F(Khz)	59.5	58.1	76.9	83.3	84.2	73.1

F (MAX) : 90KHz ; F (MIN) : 40kHz ; Result: **PASS** ;

## 6:OCP

SPEC. : Iocp(min)= 3.9A ; Iocp(max)= 5.4A ;

Vin(V)	90	115	185	220	265
OCP(A)	4.02	4.02	4.02	4.02	4.02
Result	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>

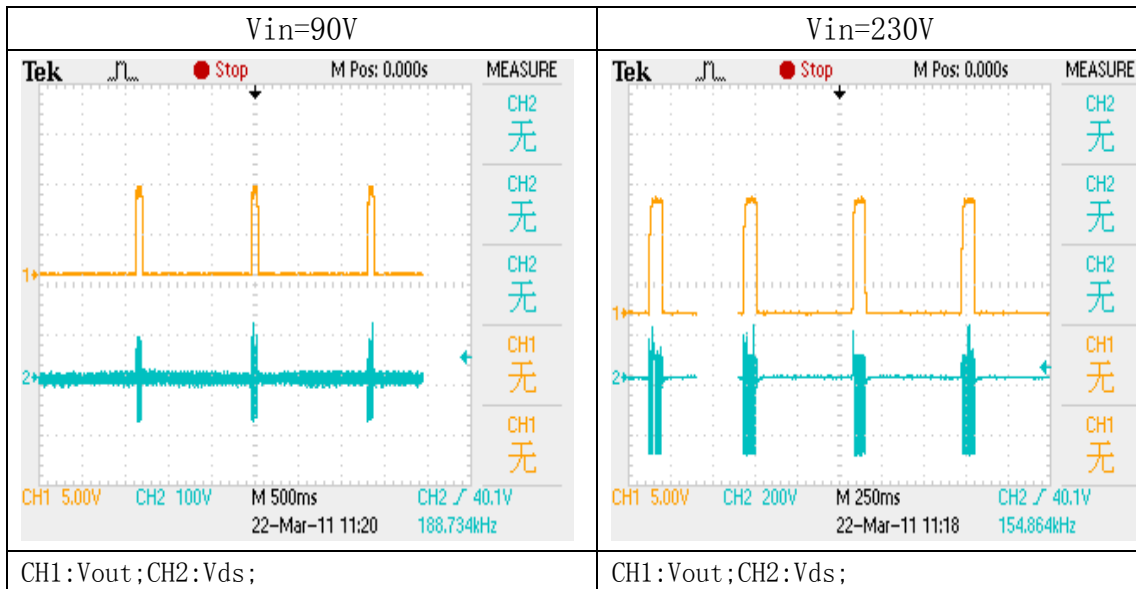
Note: Iocp=(1.3-1.8) Iout(max) ;

## 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，要求此时的短路输入功率越小越好。建议控制在 2.5W 以下；

Vin(V)	90V	115V	230V	265V
Pin(W)	42.4	42.2	41.6	41.6
Pshort(W)	0.23	0.23	1.02	1.25
Result	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>	<b>PASS</b>

Test Waveform:



8:Diode drop Voltage:

SPEC. : Vdrop(max)= 100V ; Vds(max)= 600V ; Iload= 3.0A ;

Vin (V)	90V	115V	230V	265V
Vdrop (V)	32.8	38	48.8	52.1
Vds (V)	296	344	472	512
Result	Pass	Pass	Pass	Pass

Test waveform:

