Texas Instruments

PMP4362 Test Procedure

China Power Reference Design

REV A

21/03/2013

1 GENERAL

1.1 PURPOSE

To provide detailed data for evaluating and verifying the PMP4362.

1.2 REFERENCE DOCUMENTATION

Schematic: PMP4362_SCH_RevA
Assembly: PMP4362_PCB_RevA
BOM

1.3 TEST EQUIPMENTS

Power-meter: YOKOGAWA WT210
Multi-meter(current): Fluke 3345A
Multi-meter(voltage): Fluke 187
AC Source: Chroma 61530
LED load: Chroma 63110A module

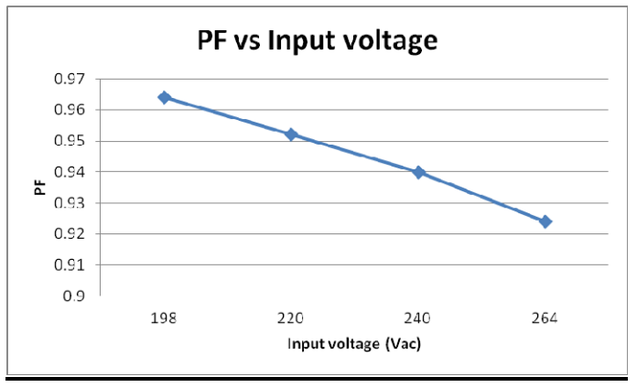
2 INPUT CHARACTERISTICS

Otherwise Specified, the test is under the condition With LED electric Load (Chroma 63310A, 120V, 0.23A).

2.1 POWER FACTOR

Pass/Fail criteria: 0.9 minimum at 100% load.

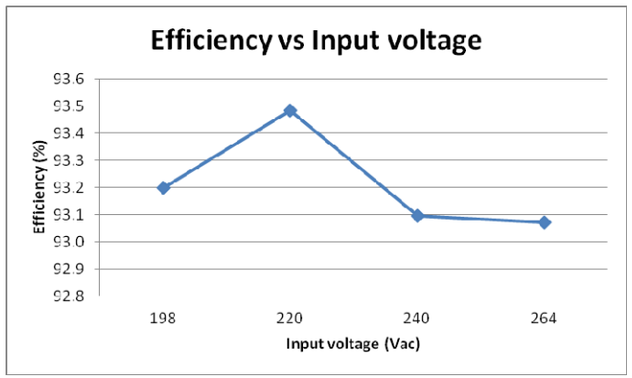
Vin(Vac)	Freq(Hz)	PF	Pass/Fail
198	50	**0.964**	**Pass**
220	50	**0.952**	**Pass**
240	50	**0.940**	**Pass**
264	50	**0.924**	**Pass**



2.2 EFFICIENCY

Pass/Fail criteria: 90% minimum at 100% load.

Vin(Vac)	Freq(Hz)	Pin(W)	Vo(V)	Io(A)	Eff(%)	Pass/Fail
198	50	**28.77**	**119.7**	**0.224**	**93.2**	**Pass**
220	50	**28.81**	**119.7**	**0.225**	**93.5**	**Pass**
240	50	**28.93**	**119.7**	**0.225**	**93.1**	**Pass**
264	50	**29.09**	**119.8**	**0.226**	**93.1**	**Pass**



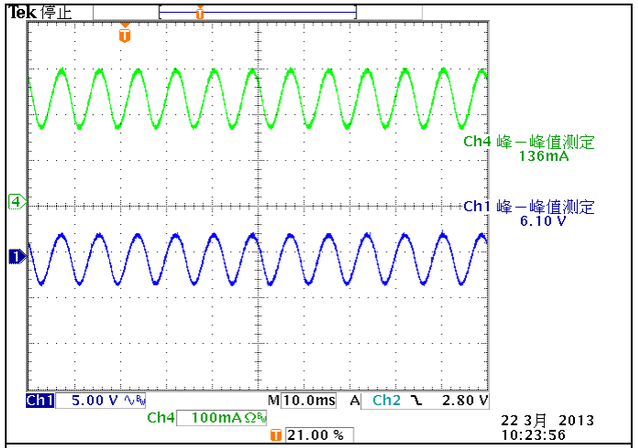
2.3 INPUT CURRENT

Vin(Vac)	Freq(Hz)	Iin(A)	Pass/Fail
220	50	**0.137**	
240	50	**0.128**	

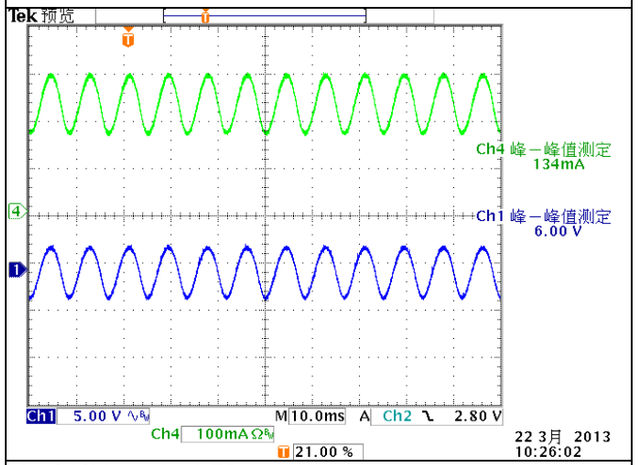
3 OUTPUT CHARACTERISTICS

3.1 RIPPLE CURRENT

CONDITIONS		Ripple current (A)	Pass/Fail
Vin (Vac)	Load		
220	Full load	0.136	
240	Full load	0.134	



Vin:220Vac Io: LED Lamp load
Ch1: LED ripple voltage 5V/div
Ch4: LED current 100mA/div

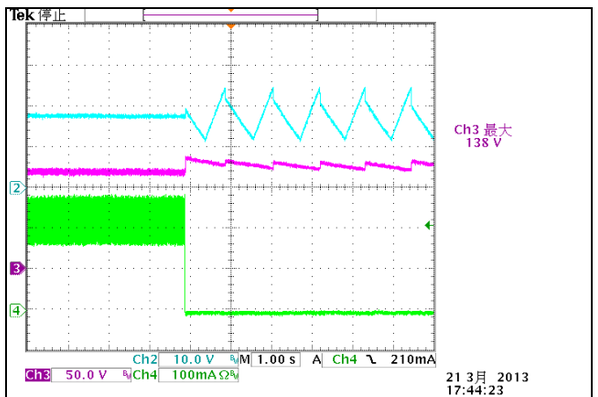


Vin:240Vac Io: LED Lamp load
Ch1: LED ripple voltage 5V/div

Ch4: LED current 100mA/div

3.2 OUTPUT OVER VOLTAGE AND NO LOAD PROTECTION

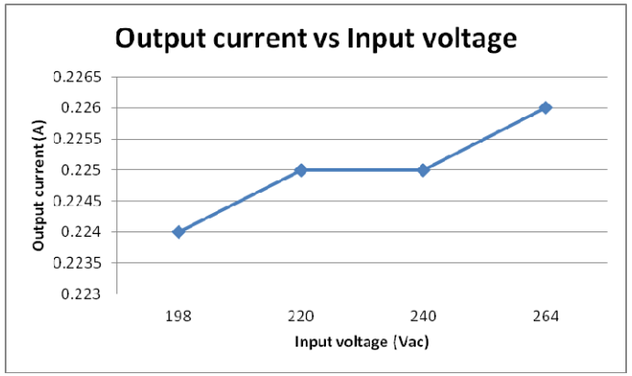
CONDITIONS	Protection voltage (V)	Pass/Fail
Vin (Vac)		
230	138	



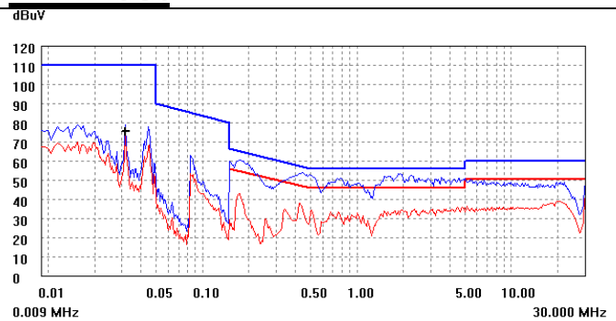
Vin:230Vac From full load to no load
Ch2: VCC, 10V/div
Ch3: LED voltage, 50V/div
Ch4: LED current, 100mA/div

3.3 LINE REGULATION CURVE

Vin(Vac)	Freq(Hz)	Io(A)	Pass/Fail
198	50	**0.224**	
220	50	**0.225**	
240	50	**0.225**	
264	50	**0.226**	



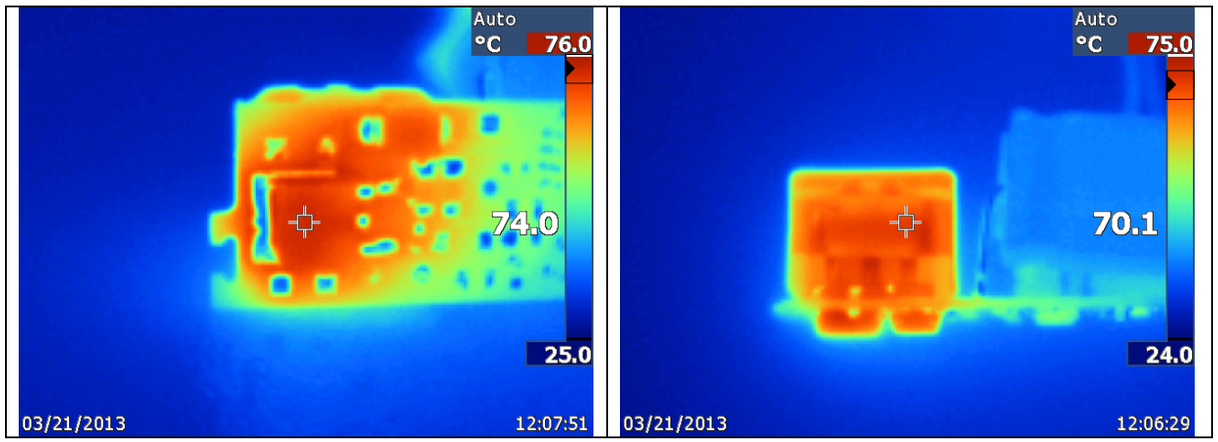
4 EMI Test



Vin: 220Vac Io: LED lamp load

5 Thermal Test

Test condition: Room Temperature


Auto
°C
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74.0
25.0
03/21/2013
12:07:51
Auto
°C
75.0
70.1
24.0
03/21/2013
12:06:29

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