

**Texas Instruments**

**PMP4289 Test Procedure**

**REV A**

**12/18/09**

## 1 General

### 1.1 PURPOSE

To provide detailed data for evaluating and verifying the PMP4289.

### 1.2 REFERENCE DOCUMENTATION

Schematic PMP4289\_SCH.PDF

Assembly PMP4289\_PCB.PDF

BOM

### 1.3 TEST EQUIPMENTS

Multi-meter: Fluke 289

Power Analyser: PM100

AC Source: Agilent 6813B

## 2: INPUT CHARACTERISTICS

**Otherwise Specified, the test is under the condition With LED lamp Load (36 LEDs in series).**

### 2.1: Power Factor

**Pass/Fail criteria:** 0.90 typical at 100% load.

Vin(Vac)	Freq(Hz)	PF	Io(Arms)	THD(%)	Pass/Fail
85	60	<b>0.990</b>	0.326	13.918	
230	50	<b>0.978</b>	0.349	13.670	<b>PASS</b>
<b>265</b>	50	<b>0.968</b>	0.349	14.928	

### 2.2: Efficiency

**Pass/Fail criteria:** 85% minimum with 230V AC input at 100% load.

Vin(Vac)	Freq(Hz)	Pin	Vo(Vrms)	Io(Arms)	Eff(%)	Pass/Fail
85	60	<b>37.91</b>	<b>104.63</b>	<b>0.326</b>	<b>89.97</b>	<b>PASS</b>
230	50	<b>40.3</b>	<b>104.8</b>	<b>0.349</b>	<b>90.5</b>	<b>PASS</b>
<b>265</b>	50	<b>40.67</b>	<b>104.8</b>	<b>0.349</b>	<b>89.92</b>	<b>PASS</b>

### 2.3: Maximum input current

**Pass/Fail criteria:** XX Amps RMS maximum at low line, full load.

Vin(Vac)	Freq(Hz)	Iin(Arms)	Pass/Fail
85	60	<b>0.451</b>	<b>PASS</b>

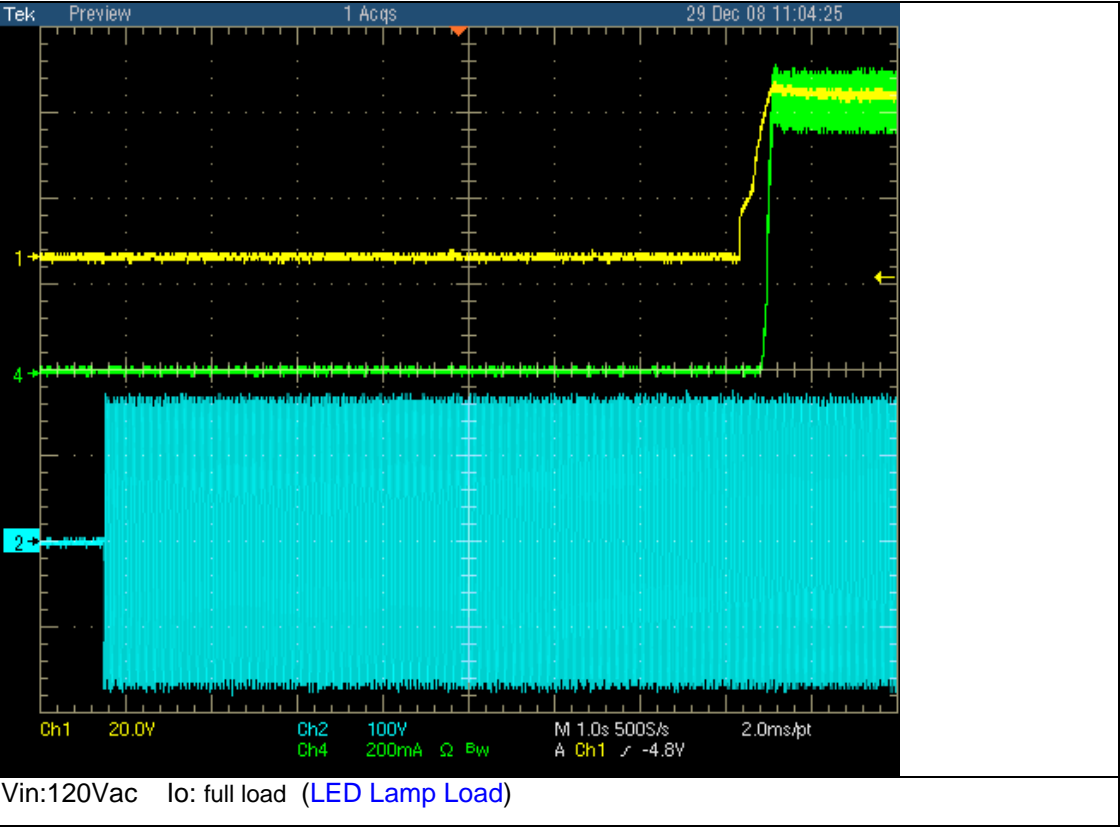
3: OUTPUT CHARACTERISTICS

3.1; Output Voltage Range and Set Point:

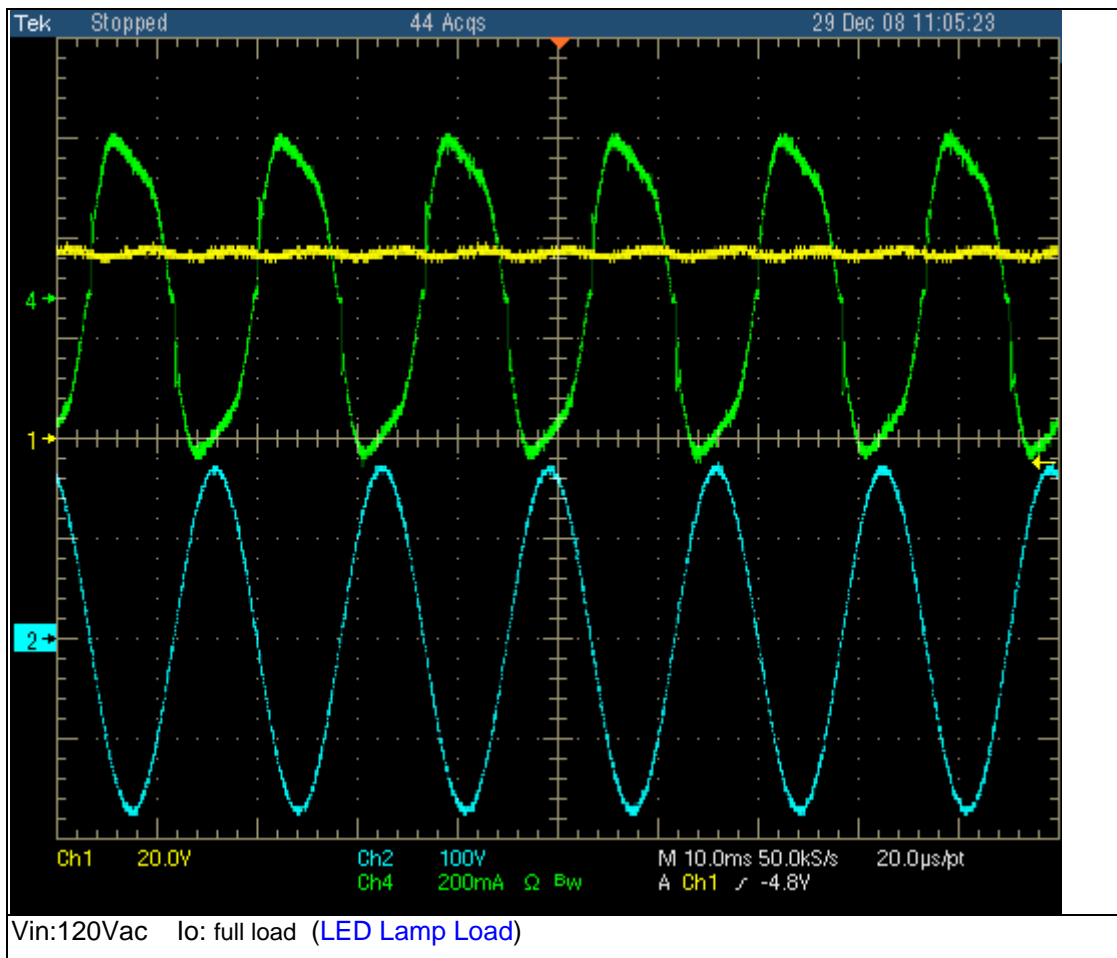
ITEM		Programming voltage (V)			Pass/Fail
				0.349	
Vin=230V	Vout Spec				TBD
	Vout (V)			104.8	

2.5; Turn on Delay and Overshoot:

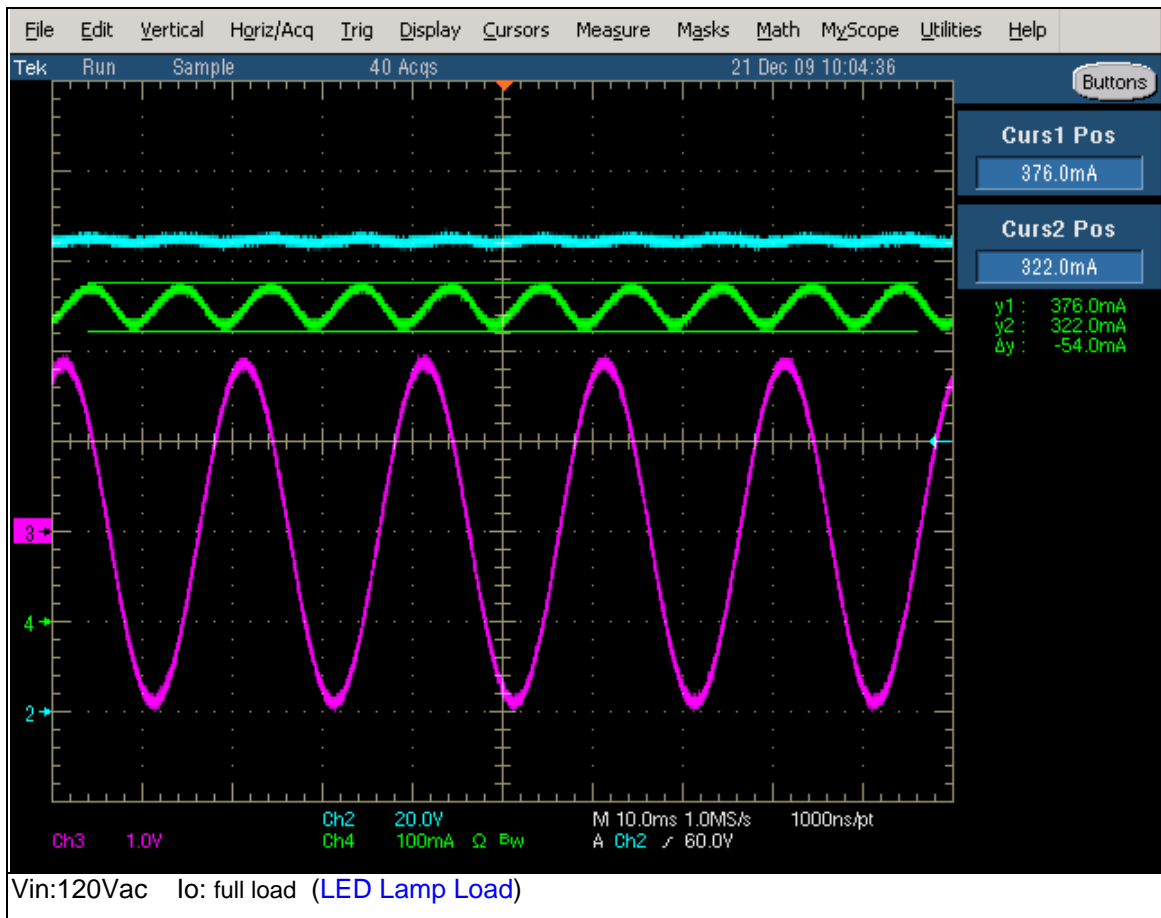
CONDITIONS		Peak excursion (V)	Delay time (s)	Pass/Fail
Vin (Vac)	Load			
230	full load		1.68	PASS



Ch1: output voltage 20V/div  
Ch4: output current 200mA/div  
Ch2: input voltage 100V/div



Ch1: output voltage 20V/div  
Ch4: input current 200mA/div  
Ch2: input voltage 100V/div



Ch2: output voltage 20V/div  
Ch4: output current 100mA/div  
Ch3: input voltage 100V/div

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RFID	<a href="http://www.ti-rfid.com">www.ti-rfid.com</a>	Space, Avionics & Defense	<a href="http://www.ti.com/space-avionics-defense">www.ti.com/space-avionics-defense</a>
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