PMP40328 Test Results

1 General

1.1 PURPOSE

The PMP40328 is a maximum 9V5A reference design solution for high frequency high density adapter applications. The solution implements Active Clamp Flyback controller UCC28780 and secondary rectifier UCC24612-2, enable high frequency and high efficiency. Integrated input UVLO, and output OVP, OCP improves the power system reliability. The design is achieved in a compact form factor (52mm X 31mm X 31mm).

TEST EQUIPMENTS

Multi-meter: Fluke Multimeter 287C, Agilent 34401A, Fluke 8845A
DC Source: TDK-Lambda, DC Load: Chroma 63103A
Ambient Temperature at 25DegC

1.2 TEST Setup Photos
2 INPUT & Output CHARACTERISTICS

2.1: Efficiency Data VS Output

Note: The efficiency is measured from input(TP1,TP2) to output capacitor C11

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<th>Vin(V)</th>
<th>Pin(W)</th>
<th>Vout(V)</th>
<th>Iout(A)</th>
<th>Pout(W)</th>
<th>Efficiency</th>
<th>Average efficiency</th>
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<th>Vout(V)</th>
<th>Iout(A)</th>
<th>Pout(W)</th>
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Input voltage and Load VS Efficiency

- 115Vin Efficiency
- 230Vin Efficiency
2.2: **Startup**

115Vin Startup with no load
230Vin Startup with Full load

2.3: Output Voltage Ripple

115Vin no load output voltage ripple
115Vin full load output voltage ripple

230Vin no load output voltage ripple
230Vin full load output voltage ripple

2.4: Dynamic Response
Test condition: 115Vin, Load step from 0A to 5A(0%-100%), 100Hz cycle, 1A/us

2.5: Output Over Current Protection and Restart

Vin=115Vac
Vin=230Vac

2.6: Thermal image

115Vac Input, output is 9V/5A load (30 minutes) without fan cooling
230Vac Input, output is 9V/5A load (30 minutes) without fan cooling
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