Test Report
For PMP10723
03/01/2016

Texas Instruments
1. Design Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vin Min.</td>
<td>9VDC</td>
</tr>
<tr>
<td>Vin Max.</td>
<td>16VDC</td>
</tr>
<tr>
<td>Vout</td>
<td>53VDC</td>
</tr>
<tr>
<td>Iout</td>
<td>400mA max</td>
</tr>
<tr>
<td>Target Switching Frequency</td>
<td>230kHz</td>
</tr>
</tbody>
</table>

2. Circuit Description

PMP10723 is an isolated flyback solution which accepts an input voltage of 9 to 16V\textsubscript{IN} and provides an output of 53V output capable of supplying continuous 400mA of current to the load. With secondary control, it can achieve great load regulation performance. This LM3481 flyback reference design can be used for supplying the transmitter in the local side in home gateway application, as well as other isolated high voltage industrial application by changing the transformer parameters. The home gateway user side’s power tree is as below.

3. Board Photos
**4. Thermal Data**

IR thermal image taken at steady state at 400mA load and VIN = 9.0V for two minutes with no airflow (4 Layer board, 1 Oz copper layer)
IR thermal image taken at steady state at 400mA load and VIN = 16V for two minutes with no airflow (4 Layer board, 1 Oz copper layer)

5. Efficiency and Regulation
5.1 Efficiency Chart
5.2 Regulation Chart

PMP10723 Load Regulation

6. Waveform

6.1 Startup

VIN=9V, Io=10mA

VIN=9V, Io=400mA
6.2 Shutdown

VIN=16V, Io=10mA

VIN=16V, Io=400mA

VIN=9V, Io=10mA

VIN=9V, Io=400mA

VIN=16V, Io=10mA

VIN=16V, Io=400mA
6.3 Ripple

VIN=9V, Io=10mA

VIN=9V, Io=400mA

VIN=16V, Io=10mA

VIN=16V, Io=400mA

6.4 Switching

VIN=9V, Io=10mA

VIN=9V, Io=400mA
VIN=16V, Io=10mA

VIN=16V, Io=400mA

6.4 Diode Voltage

VIN=9V, Io=10mA

VIN=9V, Io=400mA

VIN=16V, Io=10mA

VIN=16V, Io=400mA
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