1 Startup

Input voltage = 25.5VDC
Output power = 0W
Input voltage = 150VDC
Output power = 0W

Input voltage = 150VDC
Output power = 20W
Input voltage = 520VDC
Output power = 0W

Input voltage = 520VDC
Output power = 20W
2  **Shutdown**

Input voltage  = 25VDC  
Output power = 10W

Input voltage  = 150VDC  
Output power = 20W
Input voltage = 520VDC
Output power = 20W
3 Efficiency

![Efficiency Graph]

4 Load regulation

![Load Regulation Graph]
5 Switch Node

Input voltage = 25VDC
Output power = 10W

Input voltage = 150VDC
Output power = 20W
Input voltage = 520VDC
Output power = 20W
6  Switch Node secondary side

Input voltage  = 520VDC
Output power  = 20W
7 Output ripple voltage

Input voltage  = 25VDC
Output power  = 10W

Input voltage  = 150VDC
Output power  = 20W
Input voltage = 520VDC
Output power = 20W
8 Load Transients

Input voltage = 25VDC  
Load current = 0.17A to 0.35A

Input voltage = 150VDC  
Load current = 0.35A to 0.7A
Input voltage = 520VDC
Load current = 0.35A to 0.7A
9 Thermal Analysis

The images below show the infrared images taken from the FlexCam after 15min at 20W output power.

Top View
Input voltage = 520VDC
Output power = 20W
Ambient temperature = 25°C
No heatsink, no airflow

![Top View Image]

<table>
<thead>
<tr>
<th>Name</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mosfet Q4</td>
<td>66.8°C</td>
</tr>
<tr>
<td>Diode D3</td>
<td>77.9°C</td>
</tr>
<tr>
<td>Transformer T1</td>
<td>47.7°C</td>
</tr>
<tr>
<td>Diode D1</td>
<td>57.3°C</td>
</tr>
</tbody>
</table>

Vin=520VDC Pout=20W Top

Bottom View
Input voltage = 520VDC
Output power = 20W
Ambient temperature = 25°C
No heatsink, no airflow

![Bottom View Image]

<table>
<thead>
<tr>
<th>Name</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Startup Resistors R2-R7</td>
<td>33.5°C</td>
</tr>
</tbody>
</table>

Vin=520VDC Pout=20W Bottom
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