mEZD74800A-X Series
4.5V - 75V Input, 0.3A, DC/DC Power Supply

FEATURES
- 4.5V to 75V Wide Operating Input
- 0.3A Load Current
- Hiccup Short-Circuit Protection
- Over-/Under-Voltage Protection
- Over-Current Protection
- Over-Temperature Protection
- Open Design Files and BOM
- Meets EN55022 Class B Emissions

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Voltage (V)</th>
<th>Output Voltage (V)</th>
<th>Output Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mEZD74800A-A</td>
<td>4.5 - 75</td>
<td>3.3</td>
<td>0.3</td>
</tr>
<tr>
<td>mEZD74800A-B</td>
<td>4.5 - 75</td>
<td>5</td>
<td>0.3</td>
</tr>
</tbody>
</table>

ELECTRICAL CHARACTERISTICS

- Input Voltage Range \( V_{\text{IN\_MIN}} \) higher than \( V_{\text{OUT}} \) by 1V: 4.5 to 75V
- Output Voltage Set Accuracy: ±1.7% (Typ.)
- Output Voltage Ripple: \( V_{\text{IN}} = 48V, V_{\text{OUT}} = 3.3V, \) Full Load: 44mV
- Line Regulation: \( V_{\text{IN}} \) from MIN to MAX, \( V_{\text{OUT}} = 3.3V \): ±0.5% (Typ.)
- Load Regulation: \( I_{\text{OUT}} \) from MIN to MAX, \( V_{\text{OUT}} = 3.3V \): ±1% (Typ.)
- Switching Frequency: \( V_{\text{OUT}} = 3.3V \): 140kHz
- \( V_{\text{OUT}} = 5V \): 165kHz
- Short-Circuit Protection: Short Output to Ground: Hiccup Mode
- Operating Temperature Range: -40 to 85°C
- Over-Temperature Protection: OTP: 175°C
- Rise Time: \( V_{\text{OUT}} \) from 0% to 90%: 1.54ms (Typ.)
- Calculated MTBF: MIL-HDBK-217F: 4185x10³ hrs

NOTE: All electrical characteristics are tested under 25°C ambient temperature, \( V_{\text{IN}} = 48V \) unless otherwise noted.
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4.5V - 75V Input, 0.3A, DC/DC Power Supply

DO-IT-YOURSELF SCHEMATIC

RADIATED EMISSIONS

(EN55022 Class B)
24VIN, 5VOUT @ 0.3A

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>RefDes</th>
<th>Value</th>
<th>Description</th>
<th>Package</th>
<th>Manufacturer</th>
<th>Manufacturer P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>C1</td>
<td>4.7µF</td>
<td>Ceramic Cap., 100V, X7S</td>
<td>1210</td>
<td>muRata</td>
<td>GRM32DC72A475KE01L/C3225X7S2A475M200AB</td>
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<tr>
<td>2</td>
<td>1</td>
<td>C2</td>
<td>22µF</td>
<td>Ceramic Cap., 10V, X7T</td>
<td>0805</td>
<td>muRata</td>
<td>GRM21BD71A226ME44L/GRM21BR61A226ME51L</td>
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<tr>
<td>3</td>
<td>1</td>
<td>R1</td>
<td>698kΩ</td>
<td>Film Res., 0.5%</td>
<td>0402</td>
<td>Yageo</td>
<td>RC0402DR-07698KL</td>
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<tr>
<td>4</td>
<td>1</td>
<td>U1</td>
<td>MPM3570E</td>
<td>Synchronous Step-Down Module</td>
<td>LGA10X10</td>
<td>MPS</td>
<td>MPM3570EGLD-Z</td>
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<tr>
<td>5</td>
<td>1</td>
<td>P1</td>
<td>3-pin</td>
<td>3-pin male connector, right angle</td>
<td>Bulk</td>
<td>MYIC</td>
<td>MPS010SRRA-3</td>
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<tr>
<td>6</td>
<td>1</td>
<td>PCB</td>
<td></td>
<td>PCB</td>
<td>10x20mm</td>
<td>mEZD74800A-B</td>
<td></td>
</tr>
</tbody>
</table>

*R1=698kΩ is for 5V output only, R1=NS in 3V3 output version.

PRODUCT PACKAGE AND DIMENSIONS

Pin | Designation | Function   |
--- |-------------|------------|
1   | VIN         | Input Voltage |
2   | GND         | Power Ground |
3   | VOUT        | Output Voltage |

NOTE:
Contact factory for different sizes of the boards (Quantity>2k).

For more information, Gerber files, and PCB layout, please contact mEZsupport@monolithicpower.com