**INTRODUCTION**

Wisman’s MUA Series of printed circuit board mountable, high voltage modules offer a form, fit and function replacement for presently available commercially made units, while providing additional features and benefits at competitive pricing. Utilizing proprietary power conversion technology, these SMT based high voltage modules provide improved performance/reliability and easier system integration at a lower cost when compared to the competition.

**TYPICAL APPLICATIONS**

Radiation counter, PMT, MCP, Electron Beam / Ion beam, Mass spectrometry, Electrostatic chuck, High voltage testing, Capacitance characteristics test, Electrophoresis, protein extraction, Cable insulation test, Medical Chemical, Scientific experiments, Industrial Applications.

**MUA SELECTION TABLE**

<table>
<thead>
<tr>
<th>KV</th>
<th>mA</th>
<th>PW</th>
<th>MODEL</th>
<th>RIPPLE (%p)</th>
<th>KV</th>
<th>mA</th>
<th>PW</th>
<th>MODEL</th>
<th>RIPPLE (%p)</th>
<th>KV</th>
<th>mA</th>
<th>PW</th>
<th>MODEL</th>
<th>RIPPLE (%p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>24.00</td>
<td>6</td>
<td>MUA0.25*6</td>
<td>0.008</td>
<td>6.00</td>
<td>6</td>
<td>MUA1*6</td>
<td>0.015</td>
<td>1.50</td>
<td>6</td>
<td>MUA4*6</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40.00</td>
<td>10</td>
<td>MUA0.25*10</td>
<td>0.03</td>
<td>10.00</td>
<td>10</td>
<td>MUA1*10</td>
<td>0.045</td>
<td>2.50</td>
<td>10</td>
<td>MUA4*10</td>
<td>0.045</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>80.00</td>
<td>20</td>
<td>MUA0.25*20</td>
<td>0.03</td>
<td>20.00</td>
<td>20</td>
<td>MUA1*20</td>
<td>0.045</td>
<td>5.00</td>
<td>20</td>
<td>MUA4*20</td>
<td>0.045</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>120.00</td>
<td>30</td>
<td>MUA0.25*30</td>
<td>0.04</td>
<td>30.00</td>
<td>30</td>
<td>MUA1*30</td>
<td>0.07</td>
<td>7.50</td>
<td>30</td>
<td>MUA4*30</td>
<td>0.065</td>
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<tr>
<td>0.5</td>
<td>12.00</td>
<td>6</td>
<td>MUA0.5*6</td>
<td>0.005</td>
<td>3.00</td>
<td>6</td>
<td>MUA2*6</td>
<td>0.008</td>
<td>1.00</td>
<td>6</td>
<td>MUA6*6</td>
<td>0.025</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.00</td>
<td>10</td>
<td>MUA0.5*10</td>
<td>0.008</td>
<td>5.00</td>
<td>10</td>
<td>MUA2*10</td>
<td>0.01</td>
<td>1.67</td>
<td>6</td>
<td>MUA6*10</td>
<td>0.02</td>
<td></td>
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<td></td>
<td>40.00</td>
<td>20</td>
<td>MUA0.5*20</td>
<td>0.008</td>
<td>10.00</td>
<td>20</td>
<td>MUA2*20</td>
<td>0.01</td>
<td>3.33</td>
<td>20</td>
<td>MUA6*20</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60.00</td>
<td>30</td>
<td>MUA0.5*30</td>
<td>0.01</td>
<td>15.00</td>
<td>30</td>
<td>MUA2*30</td>
<td>0.015</td>
<td>5.00</td>
<td>30</td>
<td>MUA6*30</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MUA SELECTION EXAMPLE**

```
MUA | 6  |
--- |----|
| Maximum Output Voltage (KV) |
| Power Polarity |
| Positive Polarity |
| Negative Polarity |
| Maximum Output Power (W) |
| OPTION |
| VP, Voltage Programming |
| VM, Voltage Monitor |
| VPM, Voltage Programming and Monitor |
| IP, Voltage Programming |
| IM, Voltage Monitor |
| IPM, Voltage Programming and Monitor |
| OPTION |
| 12, 12V for 6W |
| 24, 24V for 10W |
| 20W and 30W |
```
## MUA SPECIFICATIONS

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage/current</td>
<td>12V±10% for 6W(0.65A); 24V±10% Vdc for 20W (1A) and 30W (1.7A)</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>0.25KV~6KV.</td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>≤25ppm/°C.</td>
</tr>
<tr>
<td>Stability</td>
<td>&lt;0.01% per 8 hour after 0.5 hour warm up,</td>
</tr>
<tr>
<td>Accuracy</td>
<td>1%</td>
</tr>
<tr>
<td>Ripple</td>
<td>See MU selection table</td>
</tr>
<tr>
<td>Voltage/Current Monitor</td>
<td>0 to 5 volt corresponds to 0 to 100% of rated output voltage, Zout = 1k.</td>
</tr>
<tr>
<td>Voltage/Current Programming</td>
<td>0 to 5 volt corresponds to 0 to 100% of rated output voltage. Voltage:</td>
</tr>
<tr>
<td></td>
<td>V in = 100K, current: V in &gt; 47K.</td>
</tr>
<tr>
<td>Voltage/current Load Regulation</td>
<td>±0.01% (no load to full load change).</td>
</tr>
<tr>
<td>Voltage/current Load Regulation</td>
<td>±0.01% (input Voltage line change ±10%).</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to +50°C.</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +85°C.</td>
</tr>
<tr>
<td>Protection</td>
<td>Output short protection</td>
</tr>
<tr>
<td>Humidity</td>
<td>0% to 90% RH, non-condensing.</td>
</tr>
<tr>
<td>Cooling</td>
<td>30 watt units operating at full power might require additional cooling</td>
</tr>
<tr>
<td>Dimensions</td>
<td>1.12&quot; H x 1.5&quot; W x 2.96&quot; D (28.5mm x 38.1mm x 74.6mm).</td>
</tr>
<tr>
<td>Weight</td>
<td>150g</td>
</tr>
</tbody>
</table>

## PIN INFORMATION

<table>
<thead>
<tr>
<th>PIN</th>
<th>SIGNAL</th>
<th>PARAMETER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>Power Ground</td>
</tr>
<tr>
<td>2</td>
<td>+24V</td>
<td>Power Input</td>
</tr>
<tr>
<td>3</td>
<td>Current Monitor</td>
<td>0-5Vdc Output Current Monitor, Zout = 1K.</td>
</tr>
<tr>
<td>4</td>
<td>HS</td>
<td>High start</td>
</tr>
<tr>
<td>5</td>
<td>Vpgm</td>
<td>0-5Vdc Output Current Monitor, Zout = 1K.</td>
</tr>
<tr>
<td>6</td>
<td>GND</td>
<td>Signal Ground</td>
</tr>
<tr>
<td>7</td>
<td>Vpdm</td>
<td>0-5Vdc Output Current Monitor, Zout = 1K.</td>
</tr>
<tr>
<td>8</td>
<td>5V</td>
<td>5V REF</td>
</tr>
<tr>
<td>9</td>
<td>GND</td>
<td>HV GND</td>
</tr>
<tr>
<td>10</td>
<td>GND</td>
<td>HV OUT</td>
</tr>
</tbody>
</table>

## DIMENSIONS (inch [mm])

![Diagram](image)

## CONNECTION DIAGRAM

![Diagram](image)