Power-over-Ethernet (PoE)/PD Configurable Transformer

Description
- Versatile design allows multiple output variations
- Flyback topology, 250kHz switching frequency
- Input range from 29.5-60V
- 1500Vac isolation between primary and secondary
- Three power levels: 4, 7 and 13 watts
- Low leakage inductance
- 11.0 Volt @ 0.10 amp feedback winding
- Ferrite core material

Applications
- For IEEE 802.3af-compliant Power-over-Ethernet applications
- UPS, VoIP Phone, wireless LAN access point, Bluetooth access point, network camera, building access systems
- Retail point-of-information systems
- Vending/gaming machines

Environmental Data
- Storage temperature range: -40°C to +125°C
- Operating ambient temperature range: -40°C to +85°C (range is application specific)
- Solder reflow temperature: +260°C max. for 10 seconds max.

Packaging
- Packaging Information: 4 and 7 Watts - 200 parts per 13" reel, 13 Watts - 140 parts per 13" diameter reel

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Watts</th>
<th>Inductance (µH)</th>
<th>Output</th>
<th>DCR/Prf (Ω)</th>
<th>DCR/Sec (Ω)</th>
<th>Leakage Inductance (µH) typ.</th>
<th>Pri Current (Adc)</th>
<th>Turn Ratio</th>
<th>Schematic</th>
<th>Dimen-</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE4W3x3-R</td>
<td>4</td>
<td>0.500</td>
<td>0.07</td>
<td>2.75</td>
<td>0.65</td>
<td>1 : 0.52 : 0.16 : 0.16 ±1%</td>
<td>1 Size 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PoE4W3x5-R</td>
<td>4</td>
<td>0.500</td>
<td>0.27</td>
<td>2.50</td>
<td>0.65</td>
<td>1 : 0.52 : 0.26 : 0.26 ±1%</td>
<td>1 Size 1</td>
<td></td>
<td></td>
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<tr>
<td>PoE4W2x12-R</td>
<td>4</td>
<td>0.500</td>
<td>0.740</td>
<td>1.40</td>
<td>0.65</td>
<td>1 : 0.52 : 0.60 : 0.60 ±1%</td>
<td>1 Size 1</td>
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<tr>
<td>PoE7W3x3-R</td>
<td>7</td>
<td>0.275</td>
<td>0.03</td>
<td>1.00</td>
<td>1.00</td>
<td>1 : 0.52 : 0.176 : 0.176 ±1%</td>
<td>1 Size 1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PoE7W3x5-R</td>
<td>7</td>
<td>0.275</td>
<td>0.095</td>
<td>1.00</td>
<td>1.00</td>
<td>1 : 0.52 : 0.265 : 0.265 ±1%</td>
<td>1 Size 1</td>
<td></td>
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<tr>
<td>PoE7W2x12-R</td>
<td>7</td>
<td>0.250</td>
<td>0.250</td>
<td>1.00</td>
<td>1.00</td>
<td>1 : 0.52 : 0.588 : 0.588 ±1%</td>
<td>1 Size 1</td>
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<tr>
<td>PoE13W3x3-R</td>
<td>13</td>
<td>0.250</td>
<td>0.032</td>
<td>1.50</td>
<td>1.60</td>
<td>1 : 0.52 : 0.176 : 0.176 ±3%</td>
<td>1 Size 1</td>
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</tr>
<tr>
<td>PoE13W3x5-R</td>
<td>13</td>
<td>0.250</td>
<td>0.075</td>
<td>1.20</td>
<td>1.60</td>
<td>1 : 0.52 : 0.265 : 0.265 ±3%</td>
<td>1 Size 1</td>
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<tr>
<td>PoE13W2x12-R</td>
<td>13</td>
<td>0.250</td>
<td>0.280</td>
<td>1.70</td>
<td>1.70</td>
<td>1 : 0.52 : 0.647 : 0.647 ±3%</td>
<td>1 Size 1</td>
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</tr>
</tbody>
</table>

1) Test Parameters: 100kHz, 0.010Vrms, 0.001Adc
2) DCR limits maximum @ 20°C
3) Leakage Inductance 200kHz, 0.010Vrms, 0.001Adc
4) Feedback DCR 1.0Ω maximum @ 20°C
Dimensions (mm)

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</tr>
</thead>
<tbody>
<tr>
<td>Size 1</td>
<td>17.1</td>
<td>16.0</td>
<td>22.3</td>
<td>0.7</td>
<td>8.4</td>
<td>3.0</td>
<td>0.1</td>
<td>0.4</td>
<td>14.49</td>
<td>1.79</td>
<td>3.43</td>
<td>16.88</td>
<td>23.74</td>
<td>2.54</td>
<td>0.75</td>
</tr>
<tr>
<td>Size 2</td>
<td>18.0</td>
<td>18.0</td>
<td>24.6</td>
<td>0.7</td>
<td>10.0</td>
<td>3.3</td>
<td>0.1</td>
<td>0.4</td>
<td>14.25</td>
<td>1.75</td>
<td>3.43</td>
<td>19.14</td>
<td>26.0</td>
<td>2.5</td>
<td>0.75</td>
</tr>
</tbody>
</table>

1) Tolerances A - H are ± 0.25mm unless specified otherwise.
2) Tolerances I - O are ± 0.10mm unless specified otherwise.
3) All soldering surfaces are coplaner to within ± 0.102mm.
Packaging Information

PoE 4 and 7 Watt

PoE 13 Watt

Packaging Information

PoE 4 and 7 Watt

PoE 13 Watt

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