**Features**
- IEEE 802.3 Ethernet compatible
- Fully integrated for adapter, hub and motherboard applications
- Extended temperature range: -40 to +85 °C
- AEC-Q200 Qualified, automotive grade
- RoHS compliant*

**Applications**
- Automotive
- LAN
- Ethernet

**PT61018AAPEL - 10/100 Base-T Transformer**

**Electrical Specifications @ 25 °C**

- Inductance - OCL: 350 µH min. @ 100 kHz, 0.1 Vrms, 8 mA DC Bias
- Turns Ratio (± 5%): 1CT*:1CT*
- DCR: 1.2 Ω Max.
- Insertion Loss: 1-100 MHz: -1.15 dB Max.
- Return Loss: 1-100 MHz: -18 dB Min.
- 30-60 MHz: -13 dB Min.
- 60-80 MHz: -12 dB Min.
- Common Mode Rejection: 1-60 MHz: -37 dB Min.
- 60-100 MHz: -28 dB Min.
- Cross Talk: 1-60 MHz: -40 dB Min.
- 60-100 MHz: -35 dB Min.
- Hipot: @1 mA, 60 sec. 1.5 kVrms
- Operating Temperature: -40 to +85 °C
- Storage Temperature: -40 to +125 °C

*CT: Center tap

**Material**
- Termination: Cu/Ni/Sn

**Packaging Specifications**
- Tape & Reel: 600 pcs./reel

**How To Order**

PT61018A A P E L

- Model
- AEC-Q200 Qualified
- Automotive Grade
- Construction: P = Potted
- Packaging: E = Tape and Reel (600 pcs./reel)
- Termination: L = Cu/Ni/Sn (RoHS Compliant)

**Product Dimensions**

<table>
<thead>
<tr>
<th>PIN</th>
<th>Dimension</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12.80</td>
<td>±0.25</td>
</tr>
<tr>
<td>2</td>
<td>9.30</td>
<td>±0.25</td>
</tr>
<tr>
<td>3</td>
<td>6.90</td>
<td>±0.13</td>
</tr>
<tr>
<td>4</td>
<td>5.65</td>
<td>±0.15</td>
</tr>
<tr>
<td>5</td>
<td>6.30</td>
<td>±0.15</td>
</tr>
<tr>
<td>6</td>
<td>12.80</td>
<td>±0.25</td>
</tr>
<tr>
<td>7</td>
<td>9.30</td>
<td>±0.25</td>
</tr>
<tr>
<td>8</td>
<td>6.90</td>
<td>±0.13</td>
</tr>
<tr>
<td>9</td>
<td>5.65</td>
<td>±0.15</td>
</tr>
<tr>
<td>10</td>
<td>6.30</td>
<td>±0.15</td>
</tr>
<tr>
<td>11</td>
<td>12.80</td>
<td>±0.25</td>
</tr>
<tr>
<td>12</td>
<td>9.30</td>
<td>±0.25</td>
</tr>
<tr>
<td>13</td>
<td>6.90</td>
<td>±0.13</td>
</tr>
<tr>
<td>14</td>
<td>5.65</td>
<td>±0.15</td>
</tr>
<tr>
<td>15</td>
<td>6.30</td>
<td>±0.15</td>
</tr>
</tbody>
</table>

**Recommended Layout**

**Electrical Schematic**

**Asia-Pacific:**
- Tel: +886-2 2562-4117
- Email: asiacus@bourns.com

**Europe:**
- Tel: +36 88 520 390
- Email: eurocus@bourns.com

**The Americas:**
- Tel: +1-951 781-5500
- Email: americus@bourns.com

www.bourns.com

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.
**Solder Profile**

![Solder Profile Diagram]

Ramp-up rate = 3 °C/sec. max.
Ramp-down rate = 6 °C/sec. max.

- $T_L = 217 \degree C$
- $t_L = 60-150$ sec.
- $T_P = 245 \degree C \pm 5 \degree C$

Time within 5 °C of actual Peak Temp ($t_P$) = 20–40 sec.

- $T_S$ min = 150 °C
- $T_S$ max = 200 °C

$T_S$ min to $T_S$ max = 60–180 sec., 25 °C to Peak Temperature = 6 min. max.

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**Packaging Specifications**

![Packaging Specifications Diagram]

**Dimensions:**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>330.0 ± 2.0</td>
<td>(12.99 ± 0.08) DIA.</td>
</tr>
<tr>
<td>24.00</td>
<td>(0.945)</td>
</tr>
<tr>
<td>11.50</td>
<td>(0.453)</td>
</tr>
<tr>
<td>4.00</td>
<td>(0.157)</td>
</tr>
<tr>
<td>1.75</td>
<td>(0.069)</td>
</tr>
<tr>
<td>0.40</td>
<td>(0.016)</td>
</tr>
</tbody>
</table>

**Tolerances:** 0.01

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