Features
- Designed to meet IEEE 802.3u (100 Base-T)
- Expanded temperature range: -40 to +125 °C
- RoHS compliant* and halogen free**
- AEC-Q200 compliant

This model is currently available but not recommended for new designs. The Model SM91072AL is the recommended replacement.

** RoHS and AEC-Q200 compliant
** Bourns considers a product to be “halogen free” if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

SM91073AL - 10/100 Base-T Transformer

Electrical Specifications @ 25 °C
- OCL (100 kHz, 0.1 V, 8 mA DC Bias) ≤ 350 µH Min.
- Leakage Inductance (100 kHz, 0.1 V) ≤ 0.5 µH Max.
- Turns Ratio TD : TX ≤ 1 : 1 (±2 %)
- RD : RX ≤ 1 : 1 (±2 %)
- DCR ≤ 1.4 ohm Max.
- Insertion Loss (TD to TX & RD to RX) 1-100 MHz ≤ -1.1 dB Max.
- Return Loss (TD to TX & RD to RX with 100 ohm load) 1-40 MHz ≤ -16 dB Min.
- Common Mode Rejection Ratio (TD to TX & RD to RX) ≤ 37 dB Min.
- Differential to Common Mode Rejection Ratio (TD to TX & RD to RX) 30 MHz ≤ -35 dB Min.
- Hi-Pot (TD to TX & RD to RX) ≤ 1500 Vrms & 2250 Vdc
- Storage Temperature...-40 to +125 °C
- Operating Temperature...-40 to +125 °C
- Moisture Sensitivity Level...1
- ESD Classification (HBM)...N/A

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

How To Order
- Model SM91073 A L - E
- AEC-Q200 Compliant
- Termination...L = Cu/Ni/Sn (RoHS Compliant)
- Packaging...E = Tape and Reel (600 pcs. per reel)

Electrical Schematic

Recommended Layout

Product Dimensions

Recommended Layout

Dimensions: MM (INCHES)
Solder Profile

<table>
<thead>
<tr>
<th>Profile Features</th>
<th>Pb Free Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Ramp-up Rate</td>
<td>3 °C/second max.</td>
</tr>
<tr>
<td>Preheat</td>
<td></td>
</tr>
<tr>
<td>Temperature min. (Tₜₘₐₓ)</td>
<td>150 °C</td>
</tr>
<tr>
<td>Temperature max. (Tₜₘₐₓ)</td>
<td>200 °C</td>
</tr>
<tr>
<td>Time (tₜₘᵢₐₓ to tₜₘₐₓ)</td>
<td>60 ~ 180 s</td>
</tr>
<tr>
<td>Liquidus Temperature: Tₖ</td>
<td>217 °C</td>
</tr>
<tr>
<td>Time above Liquidus Temperature: tₖ</td>
<td>60 ~ 150 s</td>
</tr>
<tr>
<td>Peak Temperature: Tₚ</td>
<td>245-250 °C</td>
</tr>
<tr>
<td>Time within 5 °C of Actual Peak Temperature: tₚ</td>
<td>20 ~ 40 s</td>
</tr>
<tr>
<td>Ramp-down Rate from Peak Temperature</td>
<td>6 °C/s max.</td>
</tr>
<tr>
<td>Time 25 °C to Peak: t₁₀,PEAK</td>
<td>8 minutes max.</td>
</tr>
</tbody>
</table>

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.

![Diagram of packaging specifications]

END

MM

DIA.

30.4
(1.197)

MAX.

MIN. DIA.

20.2
(.795)

100.0 ± 2.0
(3.937 ± .079)

DIA.

24.4 ± 2.0 ± 0
(.961 ± .079/0)

330.0 ± 2.0
(12.992 ± .079)

DIA.

1.5
(.059)

MIN.

13.2 ± 0.2
(0.5 ± .008)

DIA.

DIMENSIONS:

3.00
(0.118)

MIN.

4.00
(0.157)

END

START

24.00
(0.945)

TRAILER
NO COMPONENT
160
(6.339)

MIN.

LEADER
NO COMPONENT
400
(15.748)

MIN.

USER DIRECTION OF FEED

600 PCS. PER REEL

REV. 08/23

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