Features
- Two channels with choke
- Supports serial daisy chain / IsoSPI
- Holds reference designs with Analog Device’s Model LTC6804-1/6811 and NXP’s MC33771/33772
- Operating temperature: -40 to +125 °C
- 1600 Vdc working voltage

SM91501AL BMS Transformer

Electrical Specifications @ 25 °C

OCL
(100 kHz, 0.1 V, (-40 °C ~ +125 °C)
........................................ 150 µH min.
450 µH max.

Leakage Inductance
(100 kHz, 0.1 V) ............ 0.5 µH max.

Transformer Side .... 0.45 ohms max.
CM Choke Side .... 0.85 ohms max.

Turns Ratio ...................... 1:1 ±2 %

Insertion Loss
4 MHz ....................... -0.25 dB max.

Return Loss (Z out = 100 ohms)
4 MHz ....................... -22 dB min.

Cross Talk (Between Each Channel)
4 MHz ....................... -50 dB min.

Common Mode Rejection Ratio
1~200 MHz ..................... -35 dB min.

Hi-Pot (1 mA, 60 sec.)
...................... 4300 VDC or 3100 VAC

Design Construction
................. Functional insulation

Working Voltage ...1600 Vdc for 15 years

Operating Temperature Range
........................................ -40 °C to +125 °C

Storage Temperature Range
........................................ -50 °C to +125 °C

Moisture Sensitivity Level ............. 1

ESD Classification (HBM) ............. N/A

Packaging Specifications
Tape & Reel ......... 400 pcs./13-inch reel

How To Order
SM91501 A L - E

Model
Automotive Grade Designator
A = AEC-Q200 Compliant
Termination
L = Cu/Ni/Sn (RoHS compliant*)

Packaging
E = Tape and Reel (400 pcs./13-inch reel)

Additional Information
Click these links for more information:
- Product
- Technical Library
- Inventory
- Samples
- Contact

Product Dimensions

Recommended Layout

BOURNS
YYWW
SM91501AL

Dimensions: MM  (INCHES)

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Reflow Condition Pb-free Assembly

<table>
<thead>
<tr>
<th>Reflow Condition</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. (T_{min})</td>
<td>150 °C</td>
</tr>
<tr>
<td>Temperature Max. (T_{max})</td>
<td>200 °C</td>
</tr>
<tr>
<td>Time (T_{min} to T_{max})</td>
<td>60 ~ 180 seconds</td>
</tr>
<tr>
<td>Liquidus Temperature (T_{L})</td>
<td>217 °C</td>
</tr>
<tr>
<td>Time above Liquidus Temperature (t_{L})</td>
<td>60 ~ 150 seconds</td>
</tr>
<tr>
<td>Peak Temperature (T_{p})</td>
<td>245 - 250 °C</td>
</tr>
<tr>
<td>Time within 5 °C of Actual Peak Temperature (T_{p})</td>
<td>20 ~ 40 seconds</td>
</tr>
<tr>
<td>Ramp-down Rate from Peak Temperature</td>
<td>6 °C / second max.</td>
</tr>
<tr>
<td>Time from 25 °C to Peak Temperature (T_{p})</td>
<td>8 minutes max.</td>
</tr>
<tr>
<td>Do not Exceed</td>
<td>260 °C</td>
</tr>
</tbody>
</table>

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SM91501AL BMS Transformer

Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.

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