Common mode filters
Automotive signal line (for power train/safety)
ACT series

ACT1210L-101 type

FEATURES
⊙ Common mode filters for automotive A²B (Audiobus) C²B (Car camera bus), compatible with an operating temperature range of –40 to +125°C.
⊙ By unique method, maintenance and L high 100µH is a product which realized high Characterization of mode conversion characteristics Scd21.
⊙ Operating temperature range: –40 to +125°C (including self-temperature rise)
⊙ Compliant with AEC-Q200

APPLICATION
⊙ A²B system
⊙ C²B system

PART NUMBER CONSTRUCTION

<table>
<thead>
<tr>
<th>ACT1210L</th>
<th>-</th>
<th>101</th>
<th>-</th>
<th>2P</th>
<th>-</th>
<th>TL</th>
<th>00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series • type name</td>
<td>Inductance(typ.) (µH)</td>
<td>Number of lines</td>
<td>Packaging style</td>
<td>Internal code</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHARACTERISTICS SPECIFICATION TABLE

<table>
<thead>
<tr>
<th>Common mode inductance [100kHz] (µH)</th>
<th>Tolerance</th>
<th>DC resistance (Ω)max.</th>
<th>Insulation resistance (MΩ)min.</th>
<th>Rated current (mA)max.</th>
<th>Rated voltage (V)max.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>+50~–30%</td>
<td>1.5</td>
<td>10</td>
<td>150</td>
<td>80</td>
<td>ACT1210L-101-2P-TL00</td>
</tr>
</tbody>
</table>

Measurement equipment

<table>
<thead>
<tr>
<th>Measurement item</th>
<th>Product No.</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common mode inductance</td>
<td>4294A</td>
<td>Keysight Technologies</td>
</tr>
<tr>
<td>DC resistance</td>
<td>4338A</td>
<td>Keysight Technologies</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>4339A</td>
<td>Keysight Technologies</td>
</tr>
</tbody>
</table>

* Equivalent measurement equipment may be used.

Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use.
Please note that the contents may change without any prior notice due to reasons such as upgrading.

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ACT1210L-101 type

### IMPEDANCE VS. FREQUENCY CHARACTERISTICS

![Impedance vs. Frequency Characteristic Graph]

- **Measurement equipment**
  - **Product No.** 4991A
  - **Manufacturer** Keysight Technologies

* Equivalent measurement equipment may be used.

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ACT1210L-101 type

**SHAPE & DIMENSIONS**

[Diagram of shape and dimensions]

**RECOMMENDED LAND PATTERN**

[Diagram of recommended land pattern]

**CIRCUIT DIAGRAM**

[Diagram of circuit diagram]

**RECOMMENDED REFLOW PROFILE**

[Diagram of recommended reflow profile]

**PACKAGING STYLE**

**REEL DIMENSIONS**

[Diagram of reel dimensions]

**TAPE DIMENSIONS**

[Diagram of tape dimensions]

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT1210L-101</td>
<td>(2.85)</td>
<td>(4.2)</td>
<td>(2.7)</td>
</tr>
</tbody>
</table>

**PACKAGE QUANTITY**

Package quantity | 6,000 pcs/reel

**TEMPERATURE RANGE, INDIVIDUAL WEIGHT**

<table>
<thead>
<tr>
<th>Operating temperature range</th>
<th>Individual weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>−40 to +125°C</td>
<td>0.075 g</td>
</tr>
</tbody>
</table>

* The storage temperature range is for after the assembly.
REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products.

⚠️ REMINDERS

- The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 5 to 40°C, humidity: 10 to 75% RH or less).
  
  If the storage period elapses, the soldering of the terminal electrodes may deteriorate.

- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).

- Before soldering, be sure to preheat components.
  
  The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.

- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
  
  If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.

- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.

- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.

- Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
  
  A malfunction may occur due to magnetic interference.

- Use a wrist band to discharge static electricity in your body through the grounding wire.

- Do not expose the products to magnets or magnetic fields.

- Do not use for a purpose outside of the contents regulated in the delivery specifications.

- The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

  The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

  If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

  1. Aerospace/aviation equipment
  2. Transportation equipment (electric trains, ships, etc.)
  3. Medical equipment
  4. Power-generation control equipment
  5. Atomic energy-related equipment
  6. Seabed equipment
  7. Transportation control equipment
  8. Public information-processing equipment
  9. Military equipment
  10. Electric heating apparatus, burning equipment
  11. Disaster prevention/crime prevention equipment
  12. Safety equipment
  13. Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.