Microphone Transformer
LL1587

The LL1587 is a small size microphone input transformer, with a high permeability mu-metal core and two two-section coils with internal Faraday shields. The transformer is housed in a mu-metal can.

**Turns ratio:** $1 + 1 : 4$

**Pin layout (viewed from component side) and winding schematics:**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Spacing between pins</th>
<th>Spacing between rows of pins</th>
<th>Recommended PCB hole diameter</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Length x Width x Height above PCB (mm)</td>
<td>3.81 mm (0.15&quot;)</td>
<td>20.32 mm (0.8&quot;)</td>
<td>1.5 mm</td>
<td>18 g</td>
</tr>
</tbody>
</table>

**LL1587**

- **Turns ratio:** $1 + 1 : 4$
- **Static resistance of each primary:** $56 \Omega$
- **Static resistance of secondary:** $600 \Omega$
- **Primary level at 0.2% THD, 50 Hz signal**
  - Primaries connected in parallel, source impedance $150\Omega$
  - $-9 \text{ dBu}$ (typically)
  - $+2 \text{ dBu}$
- **Primary level at 1% THD, 50 Hz signal**
  - Primaries connected in parallel, source impedance $150\Omega$
  - $0 \text{ dBu}$
  - $+11 \text{ dBu}$
- **Frequency response +/- 1.0 dB**
  - Primary signal level $-5 \text{ dBu}$, source $200 \Omega$
  - Primaries in parallel, secondary termination 10k
  - $15 \text{ Hz} – 150 \text{ kHz}$
  - $+/- 1 \text{ dB}$
- **Optimum termination for best square-wave response**
  - (Connection 1:4, source imp. $200 \Omega$
  - following stage input impedance $< 10 \text{ k}\Omega$)
  - no additional termination required
- **Optimum termination for best square-wave response**
  - (Connection 1:4, source imp. $200 \Omega$
  - following stage input impedance $> 10 \text{ k}\Omega$)
  - $10 \text{ k}\Omega$ in series with $200 \text{ pF}$
- **Isolation between windings / between windings and shield**
  - $3 \text{ kV} / 1.5 \text{ kV}$

**Connection alternatives**

- $1 : 2$
- $1 : 4$