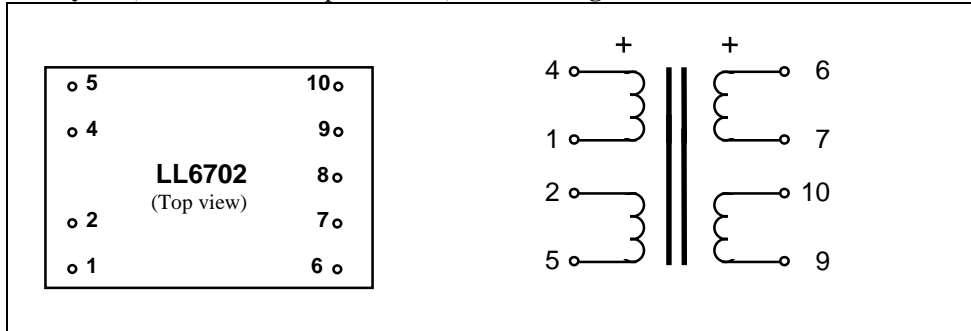


## Hybrid Transformer LL6702

LL6702 is a hybrid transformer for telephone applications. It is built using a C-core, and meets requirements for high isolation between windings.

The LL6702 has an extremely low leakage inductance and thus a flat frequency response curve. This makes it easy to design the balancing network for good transhybrid loss in the entire frequency range.

**Turns ratio:** 1.5 , 1.5 : 1 + 1  
**Dims (Length x Width x Height above PCB (mm)):** 47 x 31 x 15  
**Pin layout (viewed from component side) and winding schematics:**



<b>Spacing between pins:</b>	5.08 mm (0.2")
<b>Spacing between rows of pins:</b>	30.48 mm (1.2")
<b>Weight:</b>	70 g
<b>Rec. PCB hole diameter:</b>	1.5 mm
<b>Static resistance of primary (pins 1 - 4 ):</b>	50Ω
<b>Static resistance of balance (pins 2 - 5 ):</b>	45Ω
<b>Static resistance of each secondary (pins 6 - 7, 9 - 10 ):</b>	36Ω
<b>Max. DC current:</b>	60 mA
<b>Transhybrid loss (laboratory conditions):</b>	50 dB, 10 Hz - 10 kHz
<b>Isolation between primary and balance windings/ between primary and secondary windings:</b>	2 kV / 4 kV

**Typical application: Telephone hybrid using two LL6702:**

**Balancing network ZB:** Select ZB for minimum crosstalk which occurs when ZB equals actual line impedance.

In applications, this is often accomplished with a combination of a potentiometer and a series of capacitors

**Line termination:** If  $RI = RO$ , the termination impedance,  $ZT$ , as seen from the two-wire side is:

$ZT (AC) = 170 \Omega + RI + RD$ . Thus,  $ZT$  is independent of ZB.

$ZT (DC) = 100 \Omega + RD$ . RD is an optional resistor used to reduce the line DC current

