

Rev. A Date: 2022-11-01

Init: JEL

Purpose:

The purpose of this document is to compare LA33IO and LA36IO with respect to Bluetooth antenna circuit and related housing.

References:

- Schematic diagram LA33IO (10908034-A)
- Schematic diagram LA36IO (10907875-D)

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Conclusion

There is no difference between LA33IO and LA36IO with respect to the electrical design and Bluetooth antenna properties.

LA33IO have minor differences on the mechanical parts compared to LA36IO, but in relation to the antenna (cable) it is shaped the same way as LA36IO.



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Comparison

LA33 is build the same way as LA36. The following pictures will show the two actuators being disassembled, and thereby show the similarities.

Schematic used for LA33IO is a copy of LA36 schematic with minor changes to components sizes. With respect to the Bluetooth circuit, there are absolutely no changes.

The outside Left: LA33IO

Right:LA36IO







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Cables and plugs:

Cables used are the same to both products. Also, the aluminium housing surrounding the cable where the plug enter the product are the same.

Left: LA33IO Right:LA36IO















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Left: LA33IO Right:LA36IO













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The inside

Opening the actuator opposite site of the cables. PCBA and internal parts are place in the same positions especially printed circuit board.

Left: LA33IO





Right:LA36IO







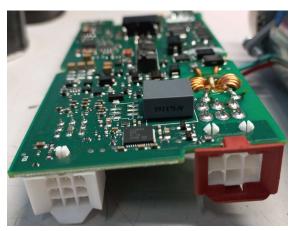
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PCB comparison

Antenna circuit is copied from LA36IO to LA33IO in the layout. On the picture below it is marked with a red circle.

Left: LA33IO



Right:LA36IO









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Motor and internal parts

Left: LA33IO Right:LA36IO









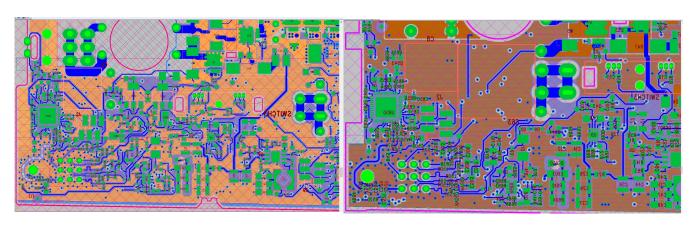
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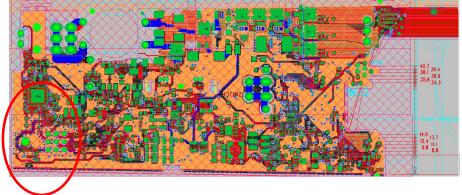
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Layout:

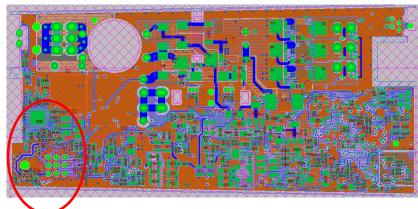
LA36IO Bluetooth part is copied directly to LA33IO

Left: LA33IO Right:LA36IO





Antenna circuit marked with circle

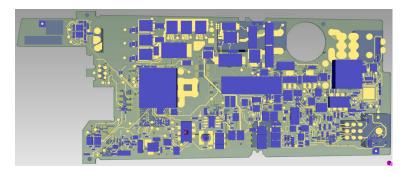


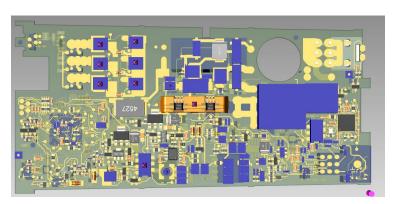


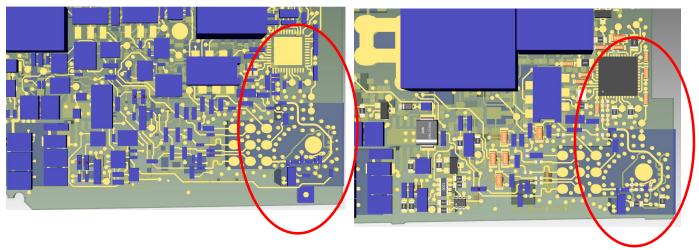
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Left: LA33IO Right:LA36IO







Antenna circuit marked with circle

EMC test on LA33IO show same behaviour as LA36IO. Bluetooth Antenna measurement on LA33IO show same Smidt-chart as LA36IO