

FCC CLASS II PERMISSIVE CHANGE REQUEST LETTER

Reason for Amendment (current / obsolete)	Revision History		Approved Date
	From	To	
Initial Release (current)	1.0	1.0	Feb-20-2012



HID Global
10385 Westmoor Drive, Ste. 300
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FCC Class II Permissive Change Request Letter

Date: 11/5/2014

To FCC:

RE: FCC Permissive II Change Request for Company: OMNIKEY GmbH FCC ID: SIYOK5121

We are submitting an application for a class II permissive change to the FCC approval of the Company name: OMNIKEY GmbH, product description: USB Tag Reader (FCC: **SIYOK5121**, Original Grant Date: 11/03/2008). The transmitter module itself has not changed. Here are the changes:

Minor Circuitry Depopulation:

Please reference the schematic for the change in populated components:

- 1) J2, which is an RS232 socket, was removed along with the associated components (J2, FB7, R13, D3 and D2)
- 2) J3, Fargo interface socket, was removed along with the associated components (J3, FB8, C27, C28, C29, C30, R21, R3, T1 R24, R25 and T2)
- 3) R12, which was a 0 ohm resistor of U3 was removed. No longer needed.
- 4) C32, C26 and L6 was removed from VDD, found not to be necessary.
- 5) C18 and C15, Filtering network in Tx circuit was removed, found not necessary.

Additional Information:

C15 & C16 are in parallel and like wise C17 & C18 are also in parallel. The paralleling affect of capacitors causes the overall capacitance to increase in value. C16 & C17 remain within the circuit and their values are 1000pF. C15 & 18, which are no longer stuffed on the PCB, values are 270pF.

- The main impedance matching network is contained within C34, C35, C36 & C37. This along with L4 and L5 set the point at which the VSWR is matched and is positioned on the Real Axis of the Smith Chart.
- Very minor adjustments to the VSWR can be made by C15, C16, C17 & C18.
- It was determined that C15 & C18 had no affect on the VSWR because the match is dominated by C34, C35, C36 & C37, L4, L5 and the fine adjustments to impedance is dominated by C16 & C17.
- Therefore to save cost and increase reliability, the C15 & C18 are no longer stuffed onto the PCB at the CM, as they have no affect on the filtering and VSWR match



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The output power was not affected by removing C15 & C18, as their capacitance values were deemed insignificant and dominated by the paralleling capacitor. These types of provisions are made regularly, to have the ability to make minor changes the filtering circuit without re-spinning the circuit board. Removing a component that has no affect on the Filtering, makes sense from an engineering standpoint and also add some cost savings to the bottom line for this Reader.

The depopulation was performed to reduce cost of components no longer necessary in the design. The radio parameters were not affected in any way due to these components being removed from the PCB.

Sincerely,

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