



User Guide

EVB-ATEK950P6-02

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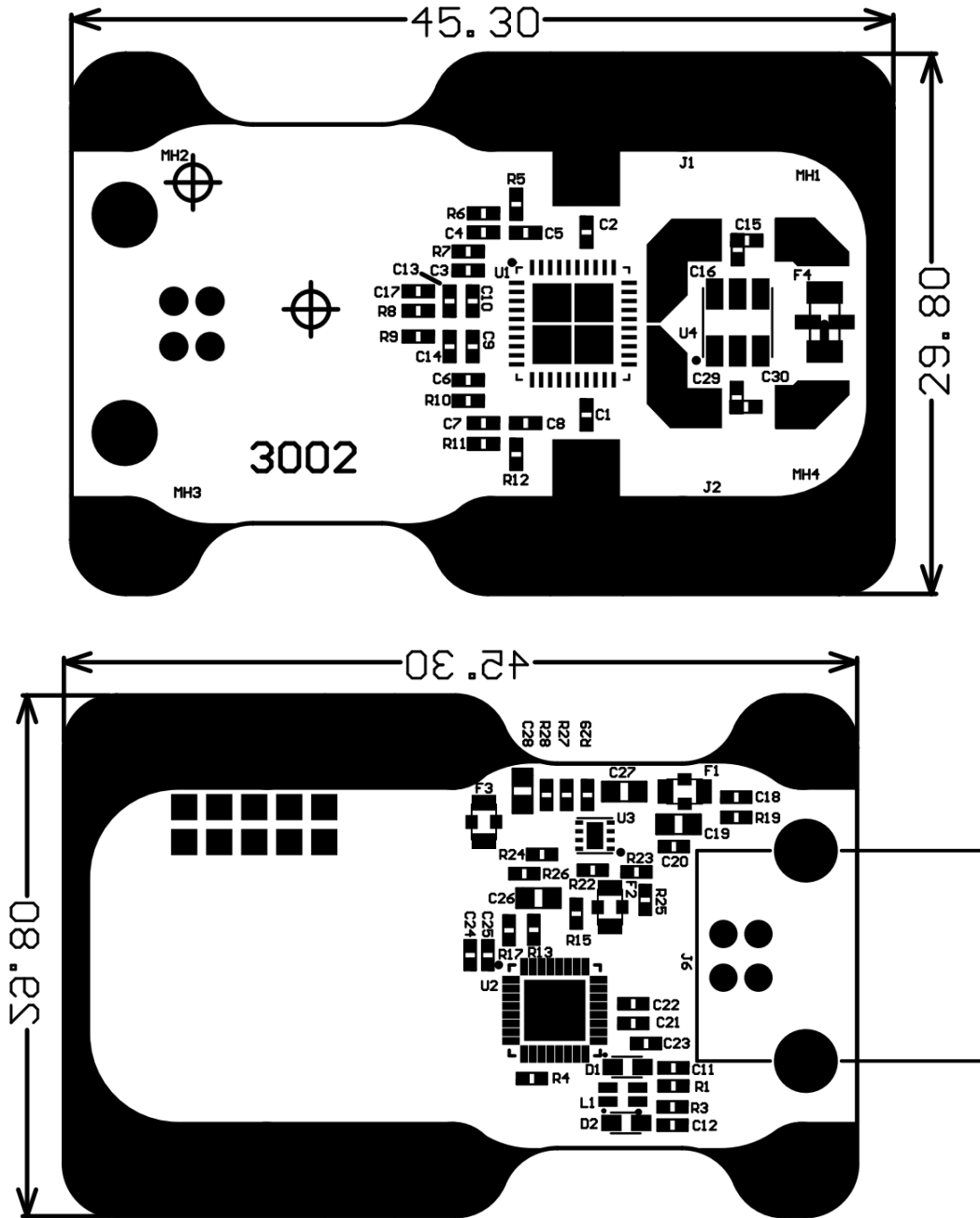
Revisions

| Revision No | Revision Date | Revision Reason | Section / Page No |
|-------------|---------------|-----------------------------------|-------------------|
| 1.0 | 23.03.2022 | Initial Revision | |
| 1.1 | 12.12.2022 | Content and Format Fixed | |
| 2.0 | 28.12.2022 | Software Installation Guide Added | |

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1 GENERAL INFORMATION



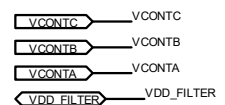
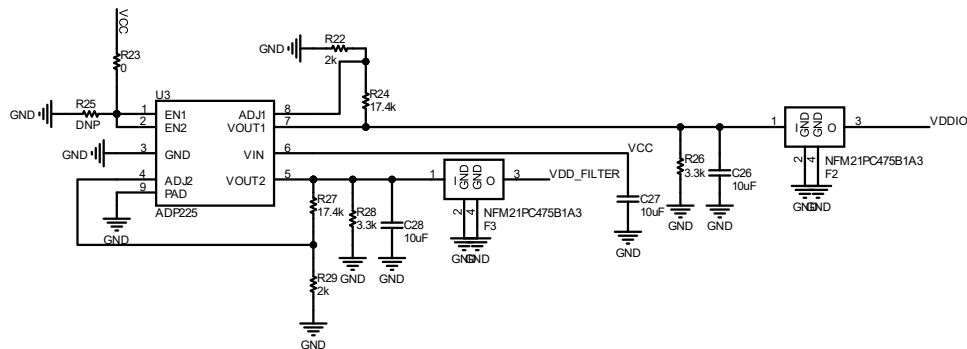
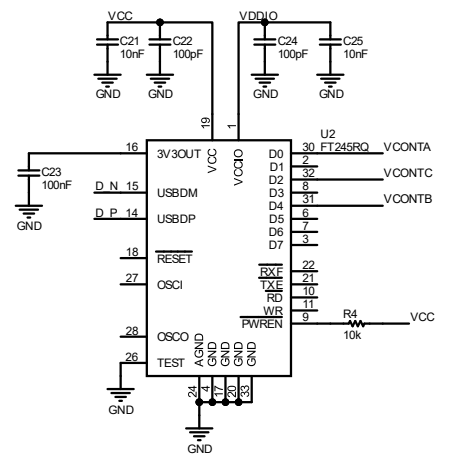
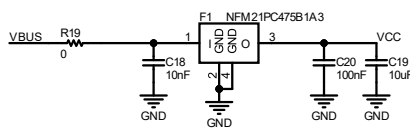
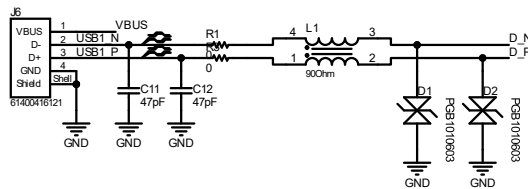
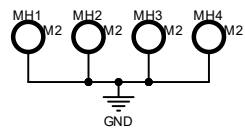
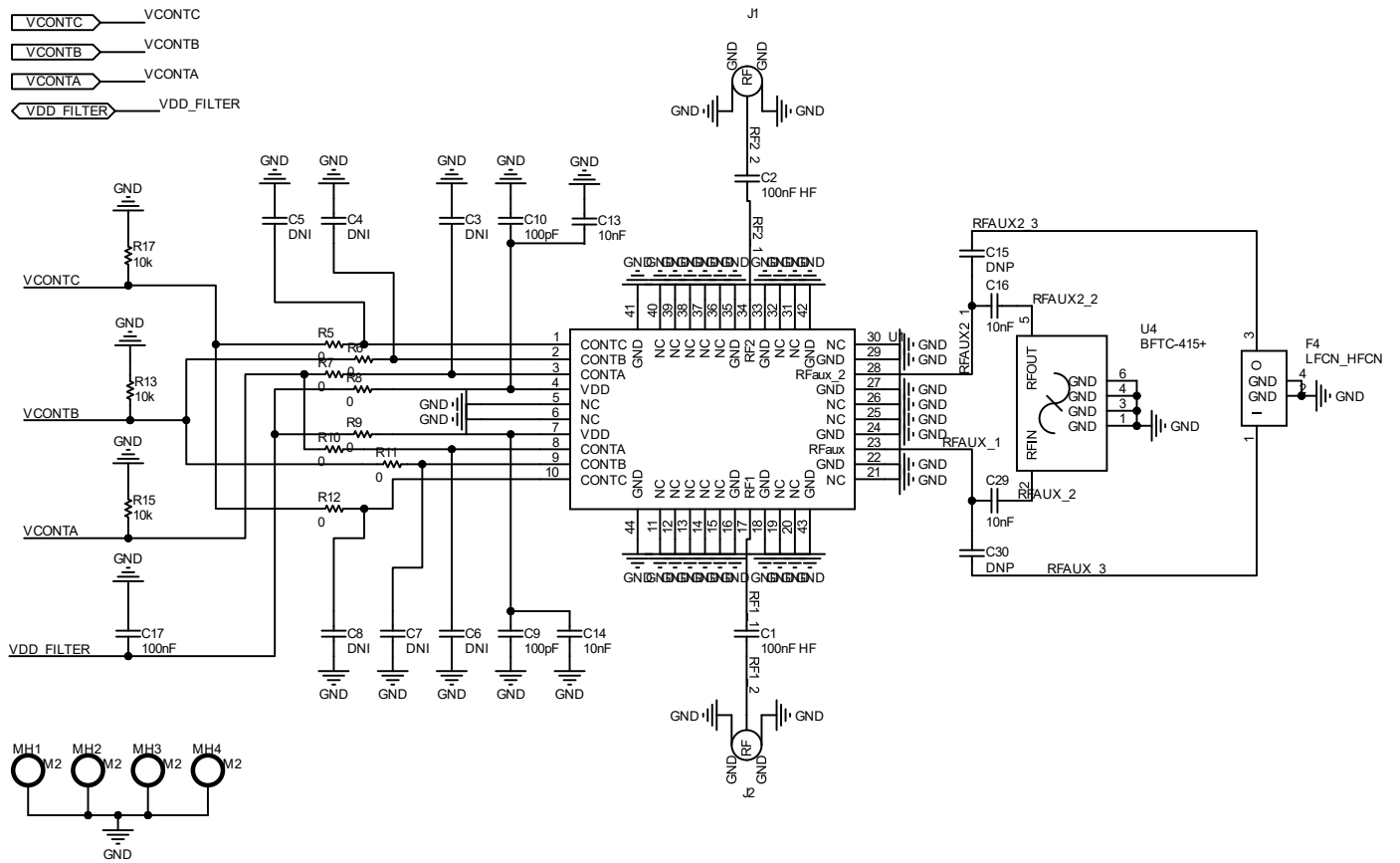
| PIN Name | Definition | Comment |
|----------|---------------------------------|----------------------|
| J1 (CO1) | RF IN | SMA Connector |
| J2 (CO2) | RF OUT | SMA Connector |
| J6 | USB Type B – Power & Control IO | USB Type B Connector |

Notes:

1. VDD Voltage is detailed in Datasheet.
2. Control Voltage is detailed in Datasheet.
3. The definition of up, down, right, and left is valid for this view of PCB.

2 DESIGN INFORMATION

2.1 SCHEMATIC



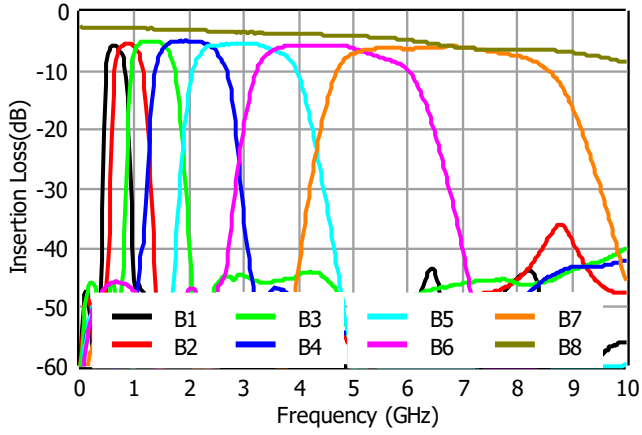
2.2 BOM

| Designator | Footprint | Qty | Comment | PN |
|---|---------------|-----|---------------------|-----------|
| C1, C2 | 0402 | 2 | 100nF | |
| C3, C4, C5, C6, C7, C8, C15, C30 | 0402 | 8 | DNP | |
| C9, C10, C22, C24 | 0402 | 4 | 100pF | |
| C11, C12 | 0402 | 2 | 47pF | |
| C13, C14, C16, C18, C21, C25, C29 | 0402 | 7 | 10nF | |
| C17, C20, C23 | 0402 | 3 | 100nF | |
| C19, C26, C27, C28 | 0603 | 4 | 10uF | |
| D1, D2 | 0603 | 2 | TVS Diode | |
| F1, F2, F3 | 0805-3 | 3 | Feed Thru Capacitor | |
| F4 | FV1206 | 1 | Low Pass Filter | DNP |
| U4 | FR933-1 | 1 | Band Pass Filter | DNP |
| J1, J2 | SMA Connector | 2 | SMA Connector | |
| J6 | USB Connector | 1 | USB Type B | |
| L1 | WE-CNSW | 1 | Filter | |
| MH1, MH2, MH3, MH4 | M2 | 4 | DNP | |
| R1, R3, R5, R6, R7, R8, R9, R10, R11, R12, R19, R23 | 0402 | 12 | 0R | |
| R4, R13, R15, R17 | 0402 | 4 | 10k | |
| R22, R29 | 0402 | 2 | 2k | |
| R24, R27 | 0402 | 2 | 17.4k | |
| R25 | 0402 | 1 | DNP | |
| R26, R28 | 0402 | 2 | 3.3k | |
| U1 | ATEKQ6640 | 1 | Filterbank | ATEK950P6 |
| U2 | QFN-32 | 1 | USB to Paralel IC | |
| U3 | 8-UFDN | 1 | Linear Regulator IC | |

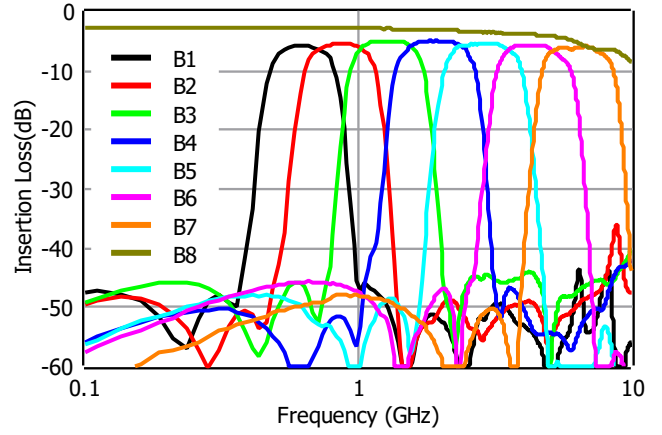
3 TYPICAL PERFORMANCE PLOTS

Conditions unless otherwise specified: T = 25 C, CW. For details, please refer to the datasheet.

S21, Vdd=5 V



S21, Vdd=5 V, Log Scale



4 SOFTWARE INSTALLATION GUIDE

Evaluation GUI software file is given on the link below,

https://www.atekmidas.com/sw/atek1001_v1.2.1.zip

ATEK software requires FTDI driver for USB interface. When the ATEK software is run, required driver is downloaded and installed through windows interface.

If the computer is not connected to the internet, then the drivers should be installed manually.

Instructions for manual installation:

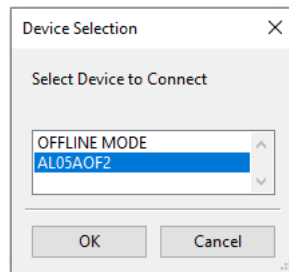
Download the driver from FTDI’s website. The suggested link is below.

https://ftdichip.com/wp-content/uploads/2021/08/CDM212364_Setup.zip

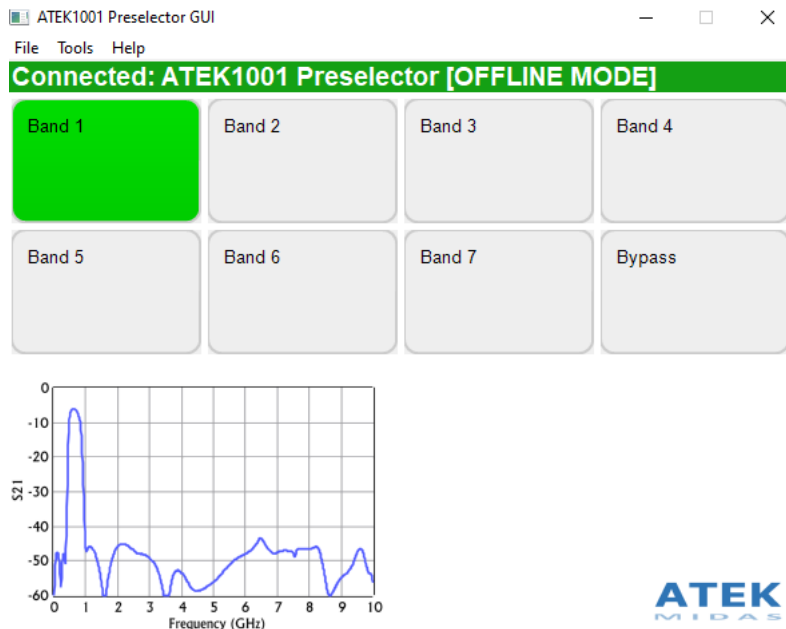
After the driver download, unzip the downloaded file, and install it.

When ATEK1001 software is downloaded, unzip the downloaded file. Click and run the software.

Choose the device in pop-up menu.



Bias and control requirements for band selection are provided through the USB interface. Easy-to-use GUI is provided for the operator as shown below.



Band selection is done simply by mouse clicking the button of target filter band.