

## **NVC-MDCS45 Bluetooth Module OEM General User and Installation Guide**

### **I. OEM Usage Instructions**

#### **Installation**

The NVC-MDCS45 is a surface mount Bluetooth module supplied are 2 and 16 pin, 4-layer PCB. The final assembly recommended reflow profiles are:

For RoHS/Pb-free applications, Sn96.5/Ag3.0/Cu0.5 solder is recommended.

- Maximum peak temperature of 230° - 240°C (below 250 °C).
- Maximum rise and fall slope after liquidous of < 2°C/second.
- Maximum rise and fall slope after liquidous of < 3°C/second.
- Maximum time at liquidous of 40 – 80 seconds.

#### **Layout**

The area around the NVC-MDCS45 module should be free of any ground planes, trace routings, or metal for at least 6mm from the antenna in all directions. Traces should not be routed underneath the module.

#### **Crystal Tuning and Power Calibration**

These steps are performed by the manufacturer, and must NOT be modified from the settings applied during manufacturing. Any changes to these settings may void the user's authority to operate this equipment.

#### **Operating Conditions**

The permitted operating and storage temperatures, power supply requirements, and I/O tolerances are specified in the *NVC-MDCS45 Datasheet*.

#### **RF Exposure Warning**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device's external antenna must be installed in accordance with provided instructions and it must be operated with a minimum of 20 cm spacing between antennas and all persons' bodies (excluding extremities of hands, wrists and feet) during wireless mode of operation. Further, this transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

### **II. Notice of FCC Regulatory Compliance**

This module has been tested and found to comply with the FCC Part15 Rules. These limits are designed to provide reasonable protection against harmful interference in approved installations. This equipment generates, uses, and can

radiate radio frequency energy and, if not installed and used in accordance the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Modifications or changes to this equipment not expressly approved by NovaComm Technologies Inc. may void the user's authority to operate this equipment.

### **III. Modular Approval**

FCC ID: OC3BM1845

In accordance with FCC Part 15, the NVC-MDCS45 is listed above as a Modular Transmitter device.

In support of the Modular Transmitter Approval, the following is stated:

- 1) The module does have buffered modulation / data inputs.
- 2) The module does regulate its own power supply.
- 3) The module does have a permanently attached antenna.
- 4) The module can be tested as a stand-alone device.
- 5) The module is labeled with the proper FCC ID, and labeling instructions are provided to OEM end users for external product labels.
- 6) The module does have instruction for proper use.
- 7) The module does meet the FCC RF regulations.

### **IV. FCC Label Instructions**

The outside of final products that contain a NVC-MDCS45 device must display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID:OC3BM1845." Any similar wording that expresses the same meaning may be used. An example of this label is figure 1 below:

**Model: NVC-MDCS45A**

Input 3.3VDC 35MA  
Made in China

**NovaComm Technologies Inc**



Contain Transmitter Module  
FCC ID: OC3BM1845

This device complies with part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, And (2) this device must accept any interference received, including interference That may cause undesired operation.

Figure 1: External Device FCC Label Sample