ALERT LABS ALRM001 Sub 1GHz Radio Module User Manual

Contents

ALERTLABS

ALERT LABS ALRM001 Sub 1GHz Radio Module

FCC and IC Identifiers

- Model Number: ALRM001
- FCC ID: 2AKXF-ALB080
- IC: 22365-ALB080

Module Integration

Integration of the Alert Labs ALRM001 module into an Alert Labs product will make the module inaccessible to a user. This will avoid confusion regarding the regulatory identifiers of the module. Alert Labs products made available for sale in Canada and the USA must themselves be labelled and must use the following text:
● Contains FCC ID: 2AKXF-ALB080, IC: 22365-ALB080 Further, the following regulatory warning statements must be included in a prominent location in the Alert Labs product literature. For example, in an insert in the product package or in the product user manual:
FCC COMPLIANCE NOTICE
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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. Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment.

IC COMPLIANCE NOTICE

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

   This Class B digital apparatus complies with Canadian ICES-003.

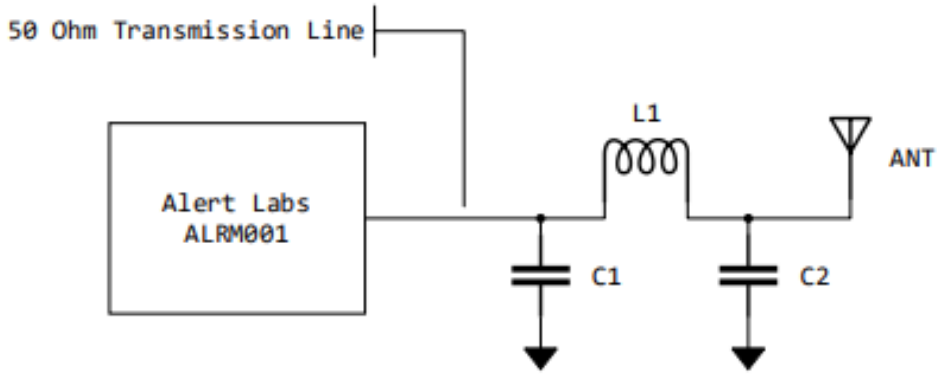
Antenna

The Alert Labs ALRM001 can use an antenna described in the Murata CMWX1ZZABZ and a PCB-printed helical antenna. The PCB-printed helical antenna has the dimensions specified in Texas Instruments Design Note DN038 (doc # SWRA416), page 3. The performance of this antenna in the 902 to 928MHz band is specified on page 18 of the design note. Notably:

- Peak Gain: 0.01dBi

RF Circuit

The RF connection from the ALRM001 to the antenna is shown in Figure 2. The helical antenna is not a 50 Ohm antenna so a matching network is required. Components L1, C1, and C2 will be populated, as required, with values that optimize the match to 50 Ohms. The matching will be done on an Alert Labs product basis and will remain the same for all instances of a product.



Documents / Resources

	ALERT LABS ALRM001 Sub 1GHz Radio Module [pdf] User Manual ALB080, 2AKXF-ALB080, 2AKXFALB080, ALRM001 Sub 1GHz Radio Module, ALRM001, Sub 1GHz Radio Module

References

- Water Leak Detection & AC Monitoring Systems | Alert Labs
- Water Leak Detection & AC Monitoring Systems | Alert Labs