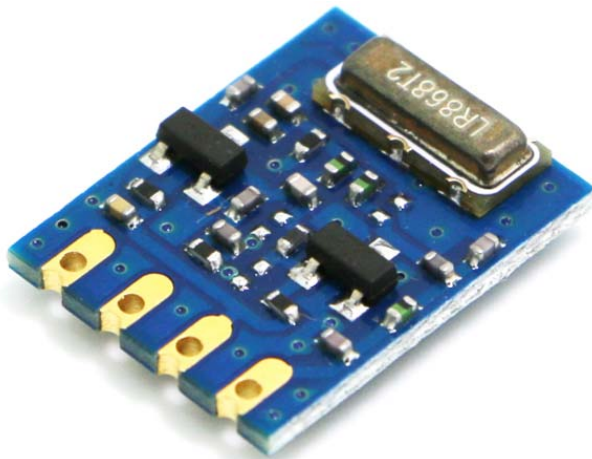


Amplitude Shift Modulation Discrete RF Transmitter Module

SPECIFICATION

Model No.: DL-TXR25

Version: V2.0



Before using this module, please read this document carefully, and pay attention to the following important matters:

This RF Transmitter Module is an electrostatic sensitive product. Please operate it on an anti-static workbench during installation and testing.

The module uses an external antenna by default. The antenna can be a wire antenna or a standard UHF antenna. You can choose a specific antenna according to the actual situation. If the terminal product uses a metal shell, be sure to install the antenna outside the metal shell. Otherwise, the RF signal will be seriously attenuated, which will affect the effective distance.

Metal objects and wires should be kept away from the antenna as much as possible.

When installing the module, nearby objects should be kept at a sufficient safety distance from the module to prevent short circuit damage.

This module should be used in a dry environment. Please do not make any liquid substance come into this module.

Please use an independent voltage regulator circuit to supply power to this module, and avoid sharing with other circuits. The tolerance of the power supply should not be less than 5%.

Limitations:

This module is intended to be embedded in the customer's terminal product application, and does not provide a casing itself. It is not recommended that the customer directly resell this module as a final product without permission.

This series of modules are in accordance with commonly used international standards. If there is any special certification needed, we can adjust certain indicators according to your needs.

This module cannot be applied to life rescue, life-support systems, or any occasion where personal injury or life threatening may cause by equipment failure. Any organization or individual carrying out the above-mentioned applications shall bear all risks at their own.

We will not be responsible for any direct or indirect damage, injury or loss of profits caused by products that use this module.

DL-TXR25 is a dual discrete RF Transmitter Module with low cost, small size, super power output, and low harmonic. It has high output power (12dBm@3V; 15dBm@3.6V) and transmission rate (Max. 50Kbps), with good harmonic suppression; the second and third harmonics of this RF module are quite low, which can be widely used in keyless entry system, wireless home security, wireless remote-control system and wireless smoke detecting related products.

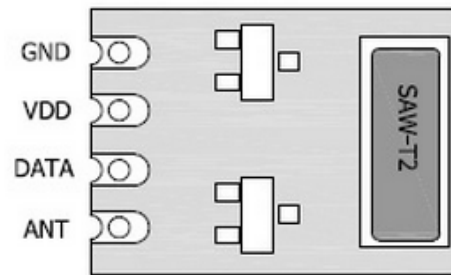
1. Features:

- Frequency: 315, 390, 433.92, 868Mhz
- Wide voltage range: 1.5-12V available (3.3V is recommended)
- Original high frequency tube, all SMT component design
- The second and third harmonics of the module are quite low
- DATA high level mode signal output;
- The interface adopts single-end serial port to communicate directly with MCU
- SAW adopts T2 package, the module is compact in size
- The resonant network design is stable and not affected by the antenna
- Can be directly SMT on the remote-control products.
- TX Power: 12dBm@3V; 15dBm@3.6V
- TX Current: 21mA

2. Applications:

- Wireless sensor terminal device, Home automation data sending, Wireless data sending, Automatic industrial control, Industrial remote control, Telemetry;
- Automatic direction control, Smart smoke alarm linkage system, Smart weather forecast and temperature monitoring of security monitoring camera;
- Security alarms for motorcycles and electric vehicles, Fishing and fishing monitoring alarms;
- Intelligent building data monitoring, Intelligent community emergency rescue alarm system, Kitchen and sanitation linkage control system, Lighting switch control system, Smart home control

3. Pins Definition:



The DL-TXR25 module has 4 pins, which are defined in the following table:

| Pin | Name | Description | Remark |
|-----|------|---|-----------|
| 1 | ANT | Antenna output | |
| 2 | DATA | Data output, communicate with decoding unit | |
| 3 | VDD | Power supply, DC 3.3V is recommended | 2.5V-3.6V |
| 4 | GND | Grounding, common ground with the MCU | |

Table 1: Pins Definition of DL-TXR25 Module

4. Product Size:

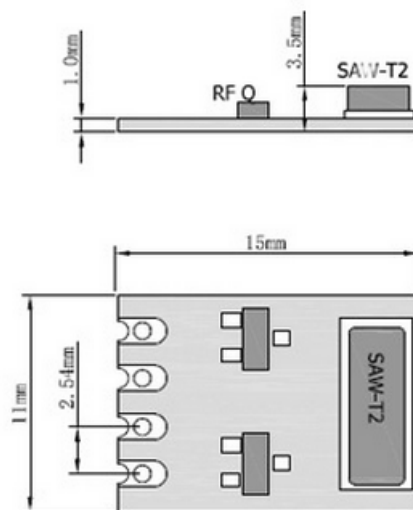


Figure 1: Module size

5. Technical Parameter

RF characteristics (Unless otherwise stated, the frequency is 315MHz, the temperature is 25 °C, and VCC is 3.3V)

| No | Characteristics | Technical Parameter | | | Unit |
|----|----------------------|---------------------|-----------------|------------|------|
| | | Min. | Typi. | Max. | |
| 1 | Frequency range | 250 | 315/390/433/868 | 1000 | MHz |
| 2 | VDD | 1.5 | 3.3 | 12 | V |
| 3 | Transmission power | 12dBm@3V | | 15dBm@3.6V | dBm |
| 4 | Transmission rate | | 2.5 | 50 | Kbps |
| 5 | Harmonic suppression | | -35 | | dBm |
| 6 | Transmission current | | 21 | | mA |

Table 2: High frequency characteristic table of the module

6. Connection between module and terminal equipment (TTL electrical level)

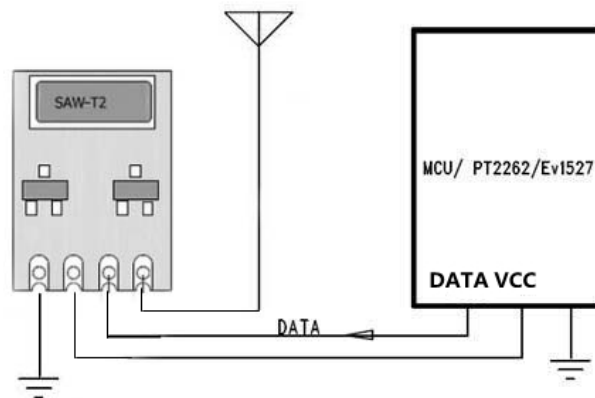


Figure 2: Wiring diagram for module application

7. Notices in module application

Considering the complexity of data transmission over the air, the radio frequency modulation method of the data, and some inherent characteristics of electromagnetic waves, the following issues should be considered during the application process.

1. The electromagnetic interference of the application environment will affect the actual distance of the remote control. Electromagnetic wave interference is divided into mainboard power supply interference, TFT screen data cable interference, Flash data

exchange interference; and airborne carrier frequency interference, noise interference, high-power signal source interference, etc.

2. Factors such as product size, internal space, and coating of the shell will cause the attenuation of the wireless signal, which will affect the remote-control distance. Usually the narrow internal space of the product is not conducive to the extension of the antenna. The outer shell should avoid metal or metal plating as much as possible.
3. To choose a proper antenna is very important. The antenna is an important part of the communication system, and its performance directly affects the indicators of the communication system. We must pay attention to its performance (antenna type, antenna electrical performance) when selecting the antenna. Please feel free to contact us for consultation or recommendation, if you need.

8. Contact us

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★ Data collection, Smart home, Internet of Things applications, Wireless remote-control technology, Remote active RFID, Antennas ★

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