

SHENZHEN DREAMLNK TECHNOLOGY CO.,LTD

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Low Power High Performance 2.4 GHz GFSK Transceiver

DL-24N 24L01P is a GFSK transceiver operating in the world wide ISM frequency band at 2400-2483.5 MHz. Burst mode transmission and upto 2Mbps air data rate make them suitable for applications requiring ultra low power consumption. The embedded packet processing engines enable their full operation with a very simple MCU as a radio system. Auto re-transmission and auto acknowledge give reliable link without any MCU interference.

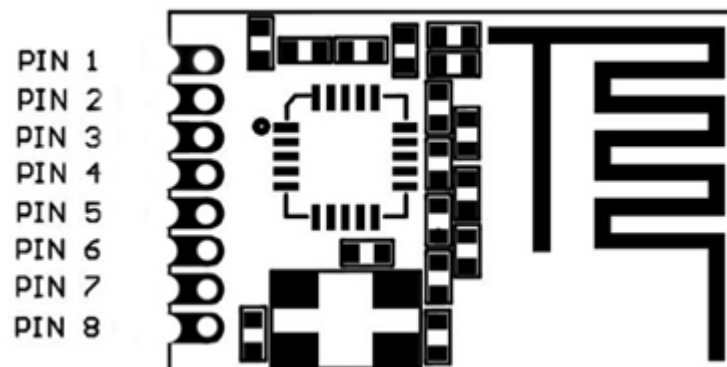


Features:

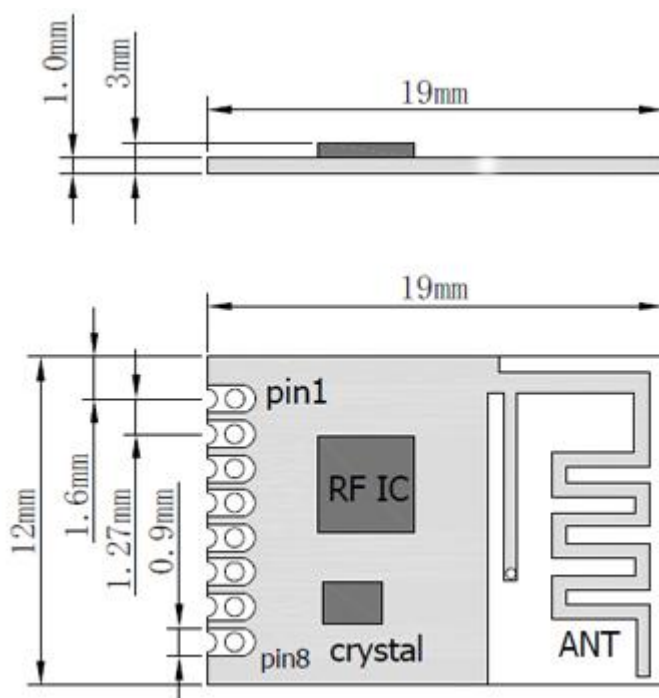
- * 2400-2483.5 MHz ISM band operation
- * Support 250Kbps, 1Mbps and 2 Mbps air data rate
- * Programmable output power
- * Tolerate +/- 60ppm 16 MHz crystal
- * Variable payload length from 1 to 32bytes
- * Automatic packet processing
- * 6 data pipes for 1:6 star networks
- * 1.9V to 3.6V power supply
- * 4-pin SPI interface

Applications:

- * Wireless PC peripherals
- * Wireless gamepads
- * Wireless audio
- * Remote controls
- * Home automation
- * Toys

Pin Information:

	PIN FUNCTION	DESCRIPTION
1	VDD	Power supply, 1.9-3.6V
2	CE	Chip Enable Activates, RX or TX mode
3	CSN	SPI Chip select, Active low
4	SCLK	SPI Clock
5	MOSI	SPI Slave Data Input
6	MISO	SPI Slave Data Output with tri-state option
7	IRQ	Maskable interrupt pin, Active low
8	GND	Ground

Package Information:


Electrical Specifications

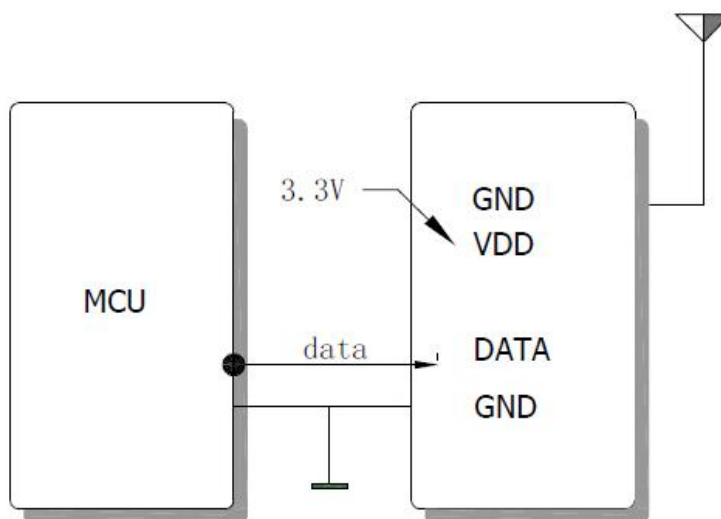
Parameter	Min	Max	Unit
VCC	1.9	3.6	V
Current	11.3mA@0dbm	13.5mA@2Mbps	mA
Standby current	26uA@Standby Mode	0.9uA@Powerdown	uA
Temperature	-40	85	°C
IO Voltage	Vss-0.3	Vdd+0.3	V
Rate	0.5	50	Kbps

RF Specifications (25°C, VCC 3.3)

	Parameter	parameter range			Unit
		Min	Typical	Max	
1	Operating frequency	2400		2483.5	MHz
2	Frequency interval		100K		Hz
3	TX Power (Four Gears)	-18	-12	-6	0dBm
4	RX sensitivity		-82		dBm
5	Modulation mode		GFSK		
6	Air Data rate	1.2		2000	Kbps
7	Harmonic power	-48	—	-45	dBm
8	Communication distance	80		120	M
9	Sensitivity at 2.4K		-95		dBm
10	Standby current			0.9	uA

11	Crystal frequency *3225/16MHz		10		PPM
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Typical Application Schematic



★For more details, please refer Nordic nRF24L01+ datasheet.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

15.105 Information to the user.

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: 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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The module should not be installed and operated simultaneously with other radios except additional RF exposure was evaluated for simultaneously transmission.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination.

The firmware setting is not accessible by the end user.

The final end product must be labelled in a visible area with the following:

“Contains Transmitter Module **2ASHLDL-24N**”