

General Description

IRF303JU/IRF303U2, Dual band triple mode Wireless LAN module, is compliant with 802.11a/b/g standard.

IRF303JU/IRF303U2 is designed for AV transmission, and it's high performance enable 54Mbps high-bit data rate communication.

Feature

- Support QoS
- Hardware-Based MAC Access Protocol
- Low packet error rate



Specifications

- Host Interface : Mini PCI Standard 1.0
- Standard : IEEE802.11a/b/g compliant
- Radio Signal Type : Direct Sequence Spread Spectrum (DSSS)
Orthogonal Frequency Division Multiplexing
(OFDM)
- Wireless Data Rate : 802.11b=1/2/5.5/11Mbps
802.11g/a=6/9/12/18/24/36/48/54Mbps
- Frequency Band : 2400-2483.5MHz / 5150-5350MHz
- Channel Support : ch1-ch11 / ch36-ch64
- Data Modulation Techniques : BPSK (1Mbps), QPSK (2Mbps), CCK
(5.5/11Mbps)
OFDM (6/9/12/18/24/36/48/54Mbps)
- Operating Range : 660ft (Outdoor, Line of sight)
100ft (Indoor)
- Media Access Protocol : Ad-Hoc (Peer-to-Peer)
Infrastructure
- Security : WEP (Key Length 40/128/256bit) / AES /
WPA (PSK)
- Power Voltage : 3.3V (+/- 5%)
- Dimensions : 90.0 x 32.0 x 4.6mm
- Weight : Approx.12g
- Operating Temperature Range : -0C to +50C

This module is distinguished following model name by the end product.

For Mobile : IRF303JU/IRF303U2

For Portable : IRF303JU

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NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part15 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 with 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 use is encouraged to try to correct the interference by one or more of the following measures:

Reoriented 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 t which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC WARNIG

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

For customers in the United States

This product contains mercury. Disposal of this product may be regulated if sold in the United States.

For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance (<http://eia.org>).

This device complies with Part 15 of the FCC Rules.

Operation is subjected 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

*When using the unit with 802.11a (5.15-5.25GHz), use in doors.

【For mobile use】: FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth at uncontrolled equipment.

This equipment should be installed and operated with minimum distance at least 20cm between the radiator and persons body (excluding extremities: hands, wrist, feet and legs) and must not be co-located or operated with any other or transmitter.

【For portable use】: FCC Radiation Exposure Statement

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. IRF303JU has been tested and found to comply with FCC radiation exposure limits set forth for an uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. The maximum SAR levels tested for IRF303JU has been show to be 2.4GHz 1.42W/kg,5.2GHz 0.445W/kg at Body.

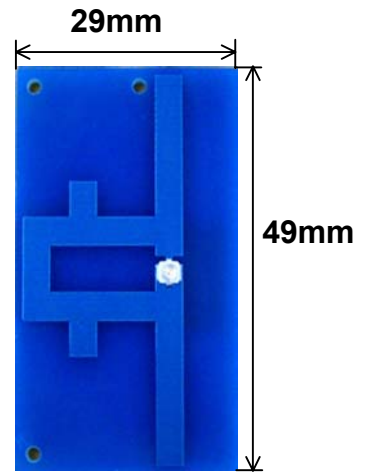
Electrical Characteristics

Vdd=3.3V, Ta=25C

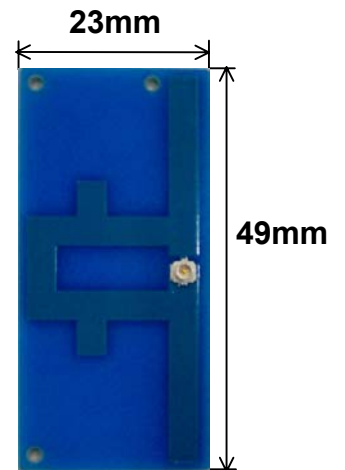
Parameter		Symbol	Min	Typ	Max	Units	
Output power	2.4GHz (54Mbps)	Pout2	-	23.9	-	dBm	
	5GHz (54Mbps)	Pout5	-	12.5	-	dBm	
Supply current	Tx	2.4GHz	Iddtx2	-	650	-	mA
		5GHz	Iddtx5	-	760	-	mA
	Rx	Iddrx	-	370	400	mA	
Center Frequency Tolerance		ftol	-10	0	+10	ppm	
Modulation Accuracy (64QAM)	2.4GHz (54Mbps)	EVM2	-	4.3	-	%	
	5GHz (54Mbps)	EVM5	-	5.0	-	%	
Sensitivity	2.4GHz (54Mbps)	Rx_Sens2	-	-71	-	dBm	
	5GHz (54Mbps)	Rx_Sens5	-	-70	-	dBm	
Packet Error Rate (-65dBm input)	2.4GHz (54Mbps)	PER2	-	0	-	%	
	5GHz (54Mbps)	PER5	-	0	-	%	

Antenna

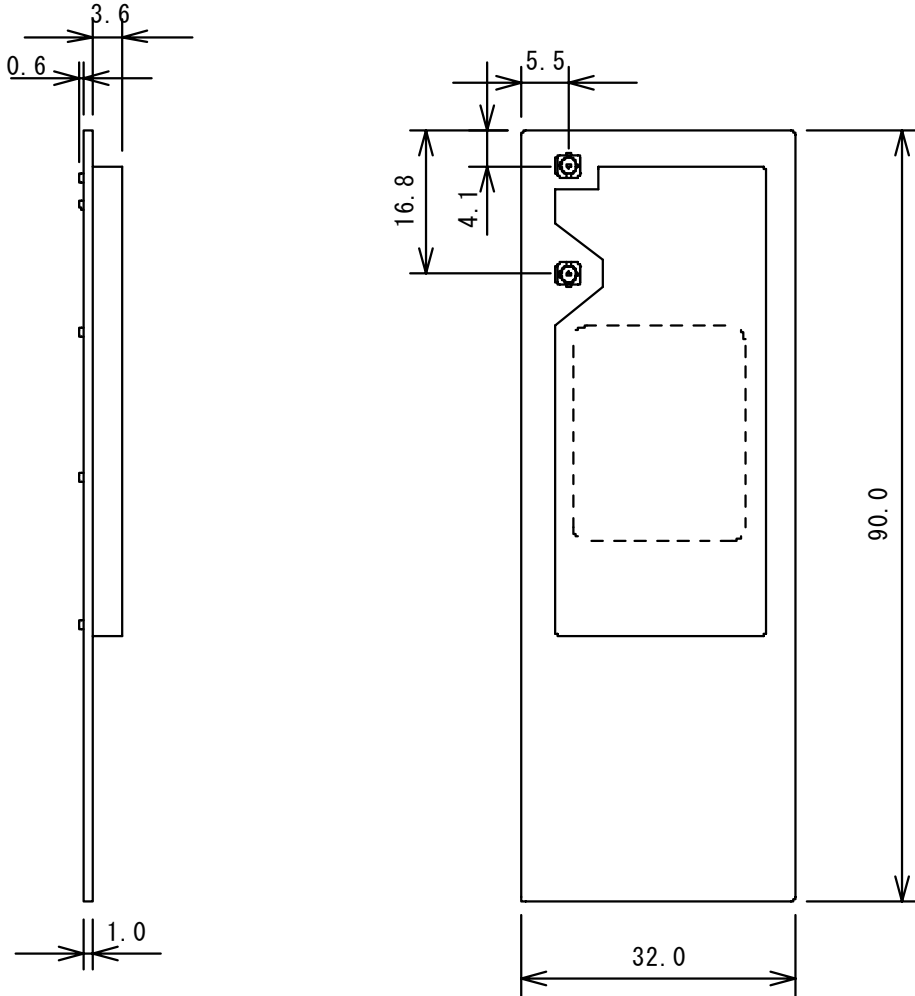
- Model Name : LFANT101
- Type : PCB Antenna
- Connector Type : U.FL



- Model Name : LFANT103
- Type : PCB Antenna
- Connector Type : U.FL



Dimension

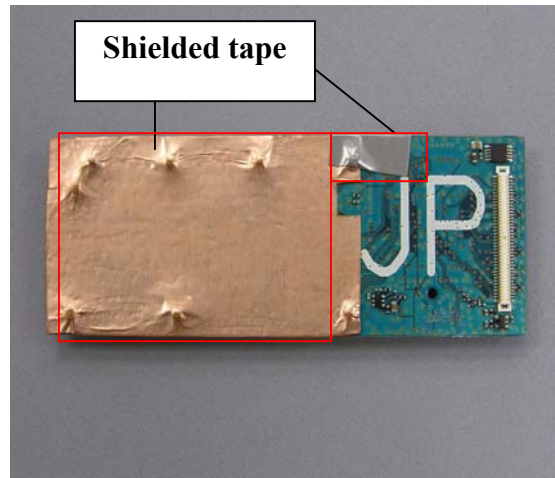
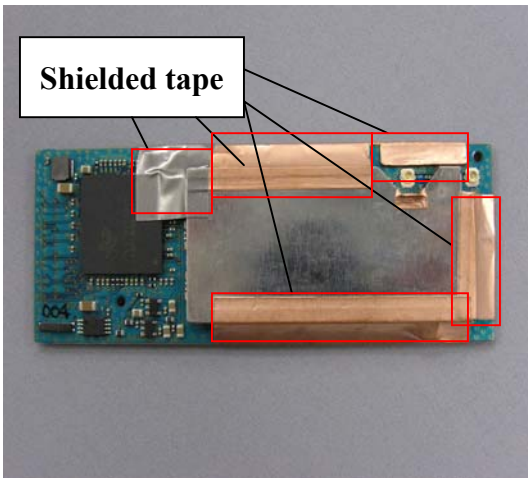


Installation Description

This module is to be installed only by the professionals.

When IRF303JU/IRF303U2 is installed in a product, we shall consider the following points;

1. Since IRF303JU/IRF303U2 owns its FCC ID Number/IC Number, we shall affix an exterior label on the outside of the product if the FCC ID/IC Number is not visible. The exterior label shall use wording such as either “Contains Transmitter Module FCC ID: AK8IRF303/IC Number: 409B-IRF303” or “Contains FCC ID: AK8IRF303/ IC Number: 409B-IRF303”.
2. IRF303JU/IRF303U2 complies with requirements of sub-sections 15.203, 15.205, 15.207, 15.247 and 15.407 in FCC Rules Part 15. We shall install IRF303JU/IRF303U2 in accordance with their requirements. IRF303JU/IRF303U2 complies with requirements of the sub-section 2.1091. When installers install IRF303JU/IRF303U2 into a product, they shall ensure that the public is not exposed to radio frequency energy levels in excess of the Commission’s guidelines in accordance with the sub-section 15.247(e)(i) and 15.407(f) in FCC Rules Part 15.
3. Special Accessory (Shielded tape) must be patched for RF interference. Please refer to the following picture.



4. IRF303JU/IRF303U2 is to be installed only by the professionals as shown in below figure.

Note 1: This modular transmitter will be equipped only for the limited product (Location Free TV, model: LF-X11), because IRF-303JU/IRF303U2 was tested for SAR on only the dedicated device: LF-X11.

Note 2: Location Free TV (Model: LF-X11) is equipped only LFANT 103.

Note 3: Antenna cable length [LFANT 103: 20cm]

