

(Preliminary)

UHF RFID Reader/Writer Evaluation Kit Data sheet



Scope

This data sheet, is applied to UHF RFID reader/writer evaluation kit for Japan.

-Specific applications: To evaluate Murata's UHF RFID tag products.

-Unsuitable Application: It is not allowed to install on/in any products which are released to the market.

1. General Descriptions

UHF RFID Reader/Writer Evaluation Kit includes a reader writer device, a short range antenna, a long range antenna, an interface board, cables.

The reader writer device uses RED4 (Phychips).

This product complies with ISO18000-63(6C) / EPC Gen2.



[Features]

- Optimized antenna design for Murata tag
- Japan Radio law certified device (JP: 007-AF0012)
- Low cost
- Adjustable Tx power: 18dBm ~ 23dBm
- Host interface : UART(reader writer device), USB(Starter kit)
- 100% green material for RoHS compliance
- Included item list

Region	JAPAN
Evaluation Kit	LXRFZZUAAA-031-KIT
Reader writer	LXRFZZUAAA-030-EVAL
Short Range Antenna	LXRFZZUCCA-036-EVAL
Long Range Antenna	LXRFZZUCCA-034-EVAL
Interface Board	LXRFZZUBBA-042-EVAL
Coaxial cable	RP-SMA cable 25cm
micro B USB cable	micro B USB cable

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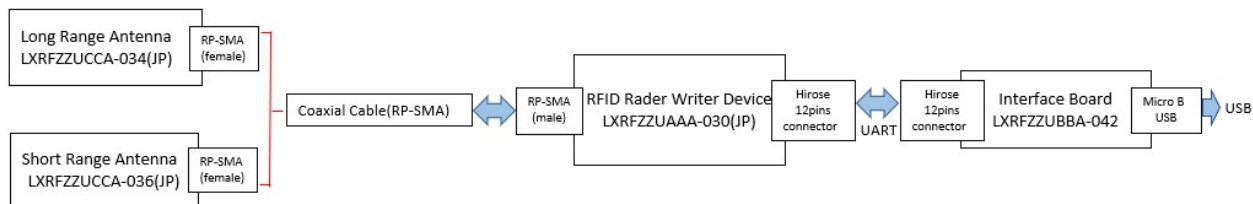
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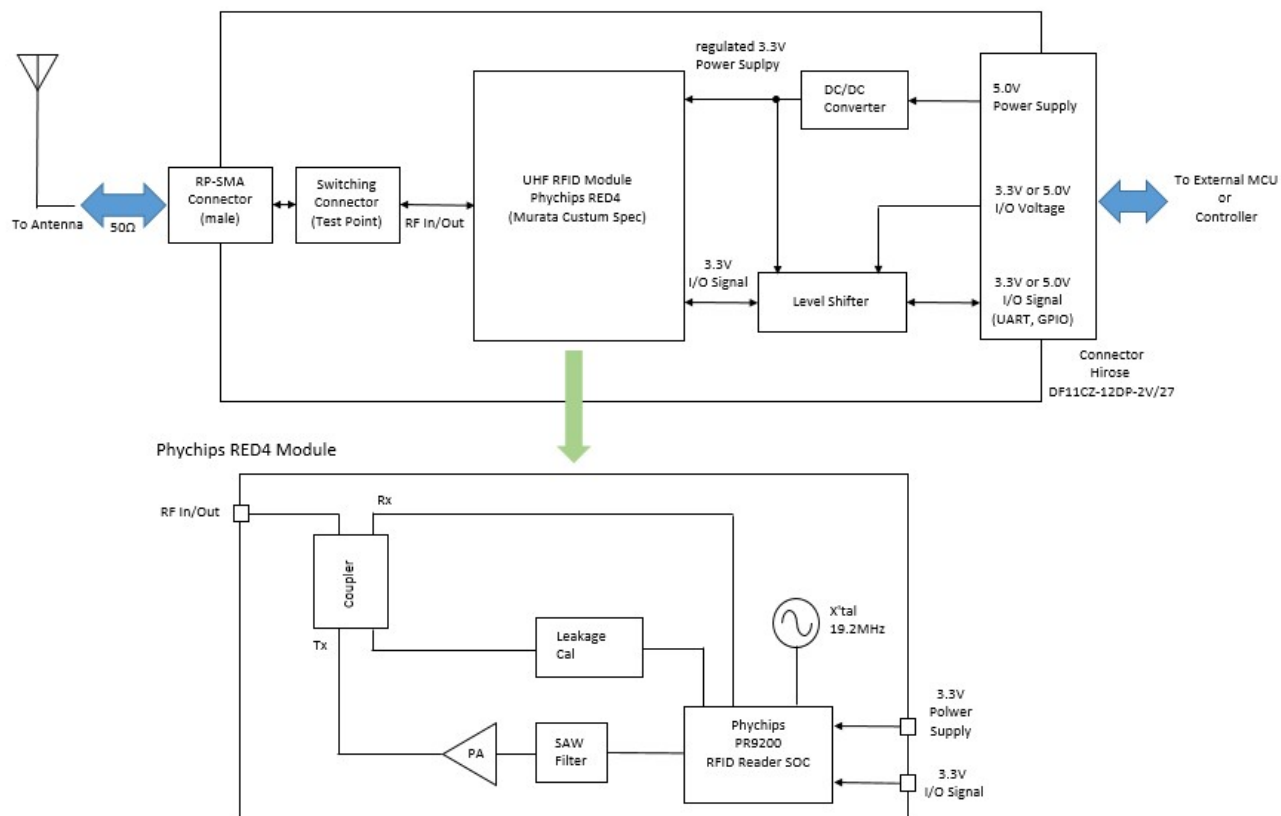


2. Block Diagram

Block Diagram (Evaluation Kit)



Block Diagram (RFID Reader Writer Device)



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3. Mechanical Information

[Dimension]

Please refer the datasheet for detail of dimensions of each item.

(The reader writer device, antennas and interface board).

	Datasheet
Reader writer	LXRFZZUAAA_030-EVAL_Datasheet_*.pdf
Short Range Antenna	LXRFZZUCCA-036_037-EVAL_Datasheet_*.pdf
Long Range Antenna	LXRFZZUCCA-034-EVAL_Datasheet_*.pdf
Interface Board	LXRFZZUBBA-042-EVAL_Datasheet_*.pdf

4. Characteristics

4-1. Basic configuration

LXRFZZUAAA-030-EVAL (JP) is the UHF RFID reader writer device utilizing RED4 (Phychips).

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4-2. Ratings

4-2-1. Limiting values

parameter	Symbol	Limiting values		Unit
		Min	Max	
Power Supply Voltage	V _{IN}	-0.3	5.5	V
Maximum current	I _{IN}		500 (TBD)	mA
Storage temperature	T _{STG}	-25	+85	°C

4-2-2. Operation condition

Parameter	Symbol	Min	Typ	Max	Unit
Power Supply Voltage	V _{IN}	4.5	5	5.5	V
Ambient Temperature	T _{amb}	-20	25	+65	°C
I/O Voltage	V _{IO}	3.0		5.5	V

4-3. Electrical Characteristics

Without notice; Ambient Temperature (T_{amb} = +25°C), Operational voltage ranges.

	Parameter	Symb ol	Conditions	Min	Typ	Max.	Unit	Remarks
1	Frequency			920.60		923.40	MHz	JP
2	Tx Power	P		18		23	dBm	Available Tx power is up to 23dBm under Japan regulation
3	Spurious	dBm		JP: ARIB STD-T107				
4	Impedance	Imp			50		ohm	
5	DC Power	Vcc		4.5	5	5.5	V	
6	Consumption Current	I _{pd}				1	mA	
		I _{idle}				20	mA	
		I _{act}	Measured at 25dBm with 50ohm load		400		mA	

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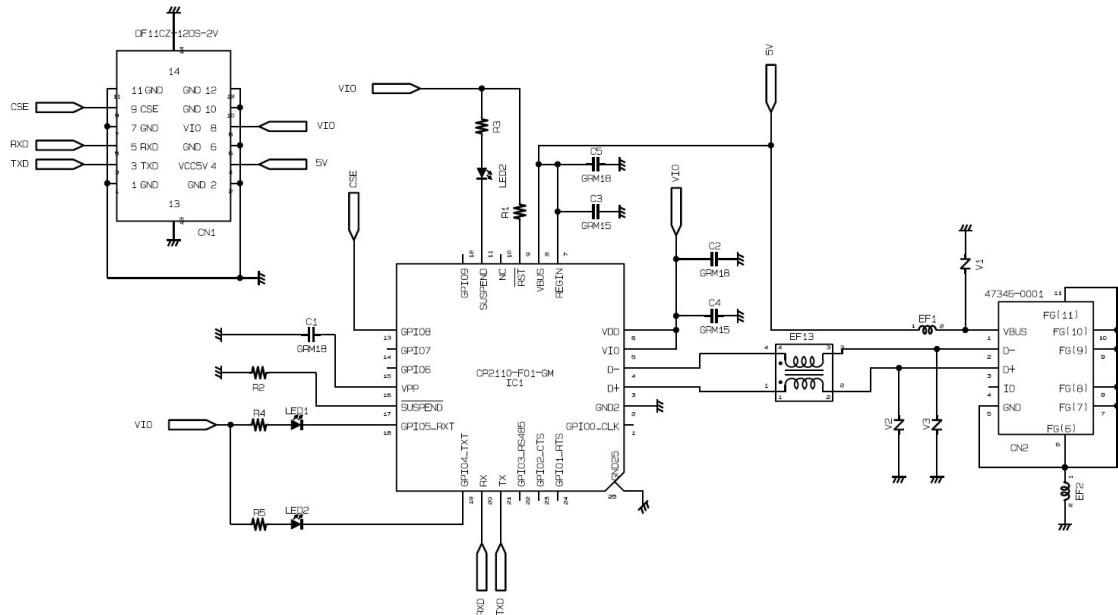
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5. Application Circuit

The circuit of interface board (USB-UART bridge) to control reader writer device is shown as an example. Using this interface board, you can control R/W device by the PC.

This circuit is available in the evaluation kit.



6. Contact window

URL: <http://www.murata.com/products/rfid>

Email: magicstrap@murata.com

For any inquiries/queries, please feel free to contact us.

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NOTICE

1. Storage Conditions:

To avoid damaging, be sure to observe the following points.

- Store products where the ambient temperature is 15 to 35 °C and humidity 45 to 75% RH.

(Packing materials, In particular, may be deformed at the temperature over 40 °C.).

- Store products in non corrosive gas (Cl₂, NH₃, SO₂, NO_x, etc.).
- Stored products should be used within 6 months of receipt.

2. Handling Conditions:

Be careful in handling or transporting products because excessive stress or mechanical shock may break products.



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