

SPI/USB Interface board Data sheet for HF RFID Reader/Writer module LXRFZZHBBA-044

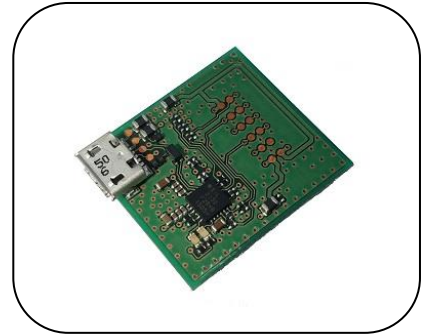


1. General Descriptions

LXRFZZHBBA-044 is an interface board for HF RFID Reader/Writer module, LXRFZZHAAA-026.

[Features]

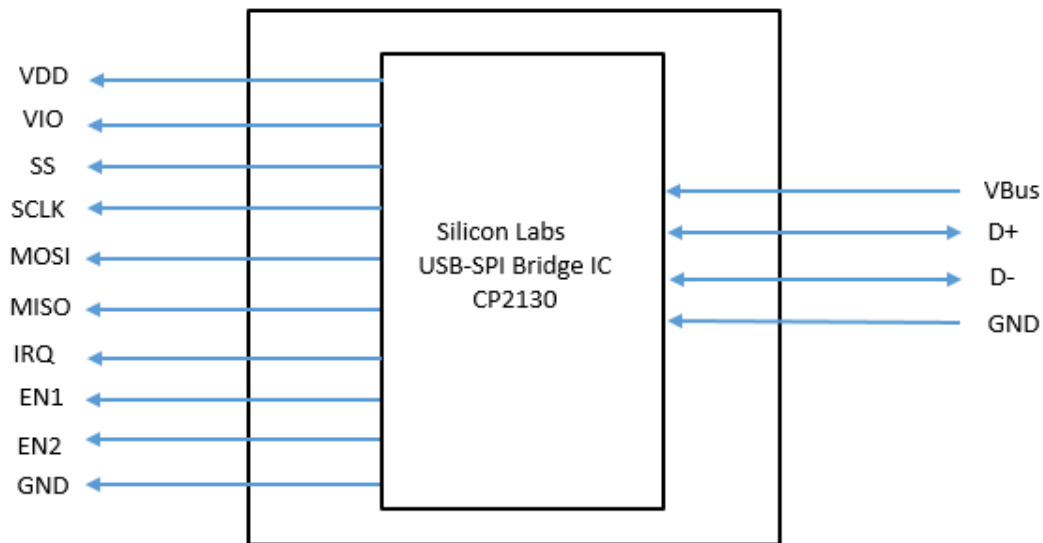
- Signal conversion : SPI – USB
- 100% green material for RoHS compliance
- Related product name



	Part number
Evaluation Kit*	LXRFZZHAAA-028-KIT
Reader writer	LXRFZZHAAA-026
Interface Board	LXRFZZHBBA-044

*A reader writer, an interface board are included in Evaluation Kit.

2. Block Diagram



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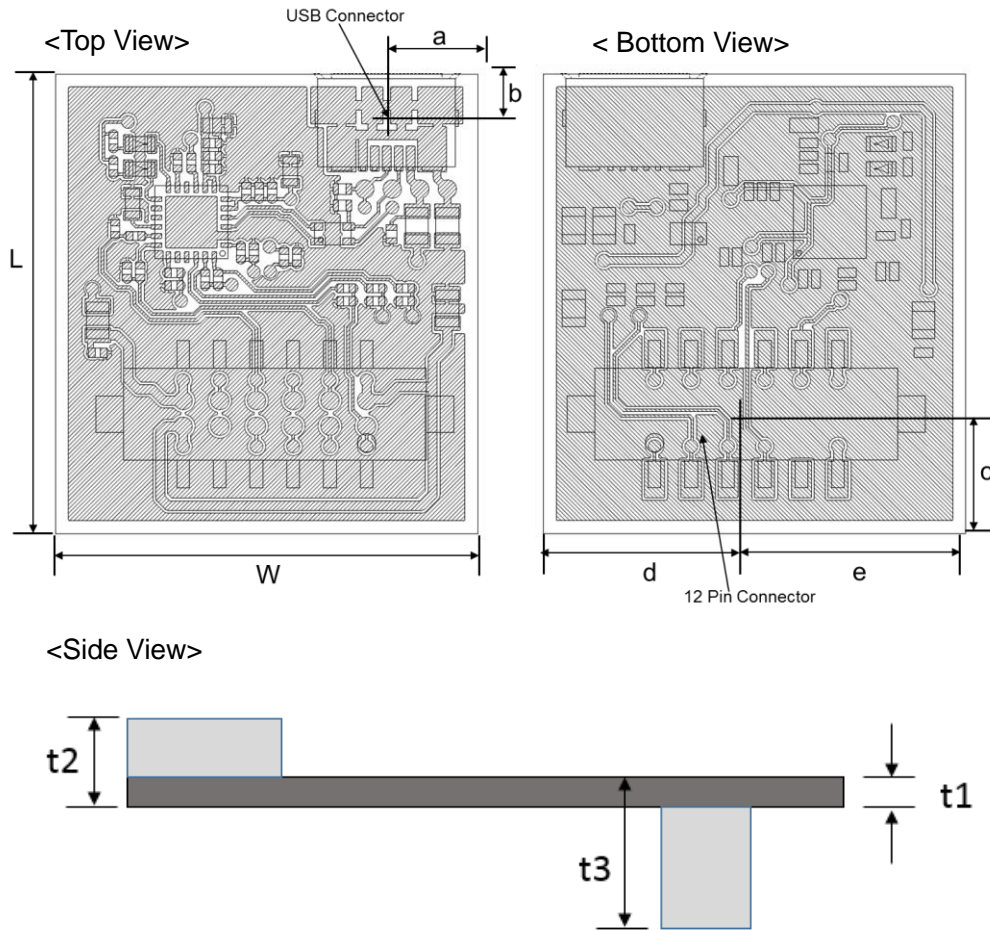
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LXRFZZHBBA-044**



3. Mechanical Information

3-1. Dimensions



Unit:mm

Mark	Size	Mark	Size	Mark	Size
L	25.0 +/- 0.3	c	6.50 +0.15 / -0.10	t1	1.00 +0.20 / -0.10
W	23.0 +/- 0.3	d	11.05 +0.15 / -0.10	t2	3.94 +0.3 / -0.2
a	4.95 +0.15 / -0.10	e	11.95 +0.15 / -0.10	t3	6.95 +0.3 / -0.2
b	2.65 +0.15 / -0.10				

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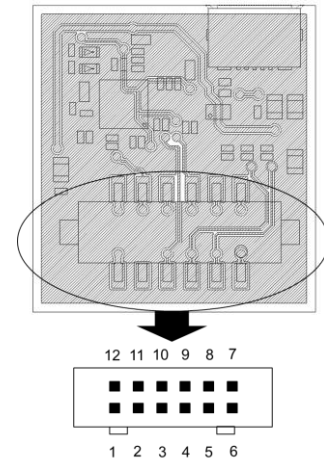
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3-2. Pin description

No	Pin Name	Type	Description
1	VSS	Supply pad	GND reference
2	CLK_OUT	Digital Output	Clock output for External MCU
3	SCLK	Digital Input	SPI clock input
4	MOSI	Digital Input	SPI data input
5	MISO	Digital Output	SPI data output
6	SS	Digital Input	SPI chip select
7	VSS	Supply pad	GND reference
8	IRQ	Digital Output	Interrupt request
9	VIO	Supply pad	I/O voltage
10	EN2	Digital input	Enable input 2
11	EN1	Digital input	Enable input 1
12	VIN	Supply pad	Input Voltage

<Top View>



※ Connector : Hirose DF11CZ012DP-2V(27).

Counterpart connector : Hirose DF11 Series Receptacle 12pin.

DF11CZ-12DS-2V, Hirose DF11-12DS-2C, etc.

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4. Characteristics

4-1. Basic configuration

LXRFZZHBBA-044 uses CP2130 (Silicon Labs).

Please refer the CP2130 data sheet for a functional description.

4-2. Ratings

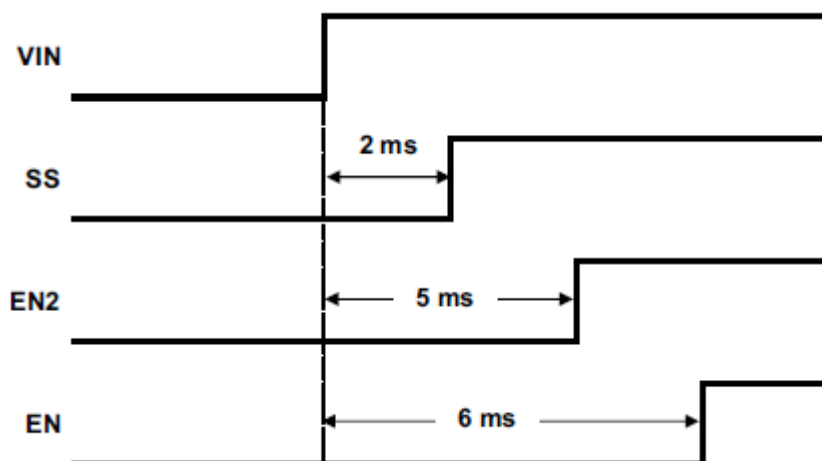
4-2-1. Limiting values

Parameter	Symbol	Limiting values		Unit
		Min	Max	
Power Supply Voltage	V_{IN}	-0.3	5.8	V
Storage temperature	T_{STG}	-25	+85	°C

4-2-2. Operation condition

Parameter	Symbol	Min	Typ	Max	Unit
Power Supply Voltage	V_{IN}	4.75	5	5.25	V
Ambient Temperature	T_{amb}	-25	25	+65	°C

4-3. Start-up sequence



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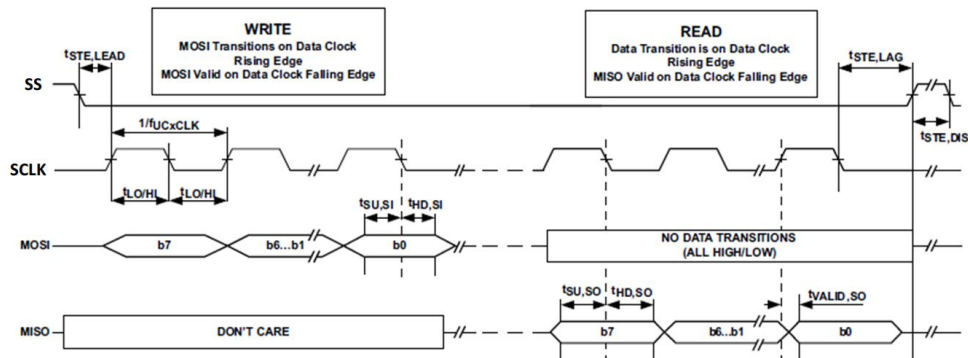
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4-4. SPI Specification

SPI Mode1 (CPOL = 0, CPHA = 1).

Recommended SCLK speed is less than 2MHz.



Parameter	Min	Typ	Max	Unit
t _{LO/HI} (SCKL 50% duty)	250	62.5	50	ns
t _{STE,LEAD} (SS low to clock)		200		ns
t _{STE,LAG} (Last clock to SS high)		200		ns
t _{STE,DIS} (SS rising edge to next SS falling edge)	300			ns
t _{SU,SI} (MOSI input data setup time)	15			ns
t _{HD,SI} (MOSI input data hold time)	15			ns
t _{SU,SO} (MISO input data setup time)	15			ns
t _{HD,SO} (MISO input data hold time)	15			ns
t _{VALID,SO} (MISO input data valid time)	30	50	75	ns

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5. Packaging

20pcs/carton

6. Contact window

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

Email: magicstrap@murata.com

For any inquiries, please feel free to contact us.

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.



Note:

Please make sure that your product has been evaluated and confirmed against your specifications when our product is applied to your product.

All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.

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