

# Evaluation board circuit diagram and implementation <MN63Y1208>

Ver 1.2

2013/3/1

Semiconductor Business Group  
Industrial Devices Company  
Panasonic Corporation

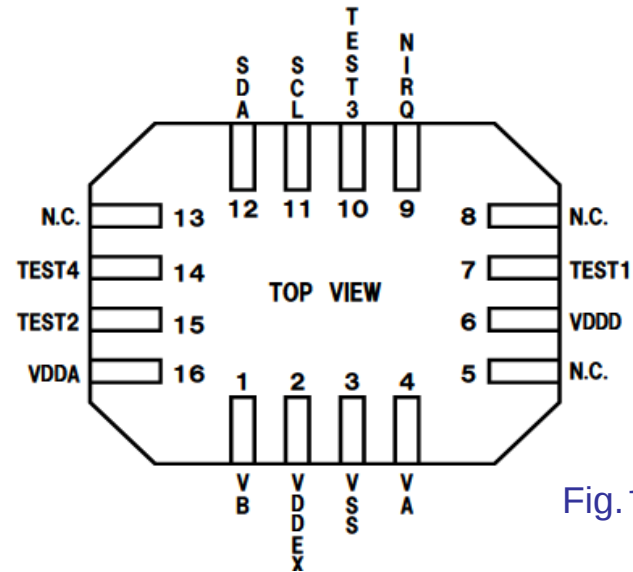
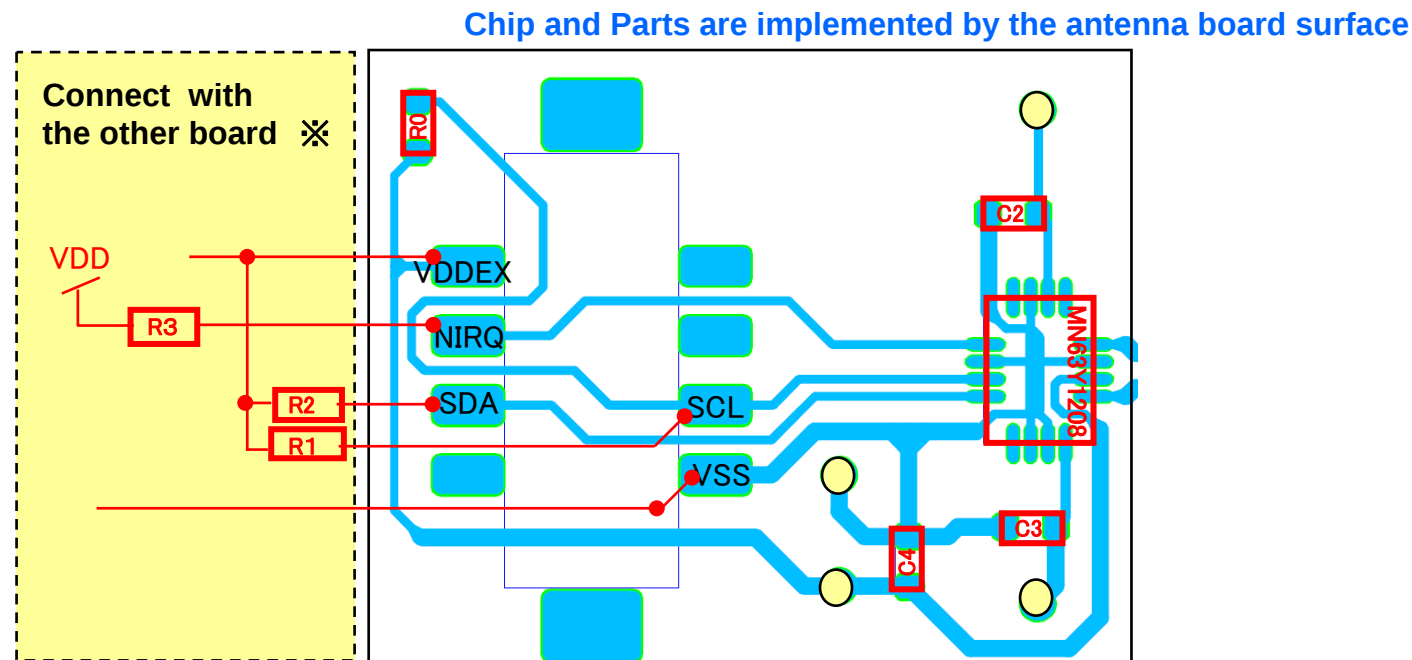


Fig.1 List of pin placement

Tab.1 Pins of the NFC tag

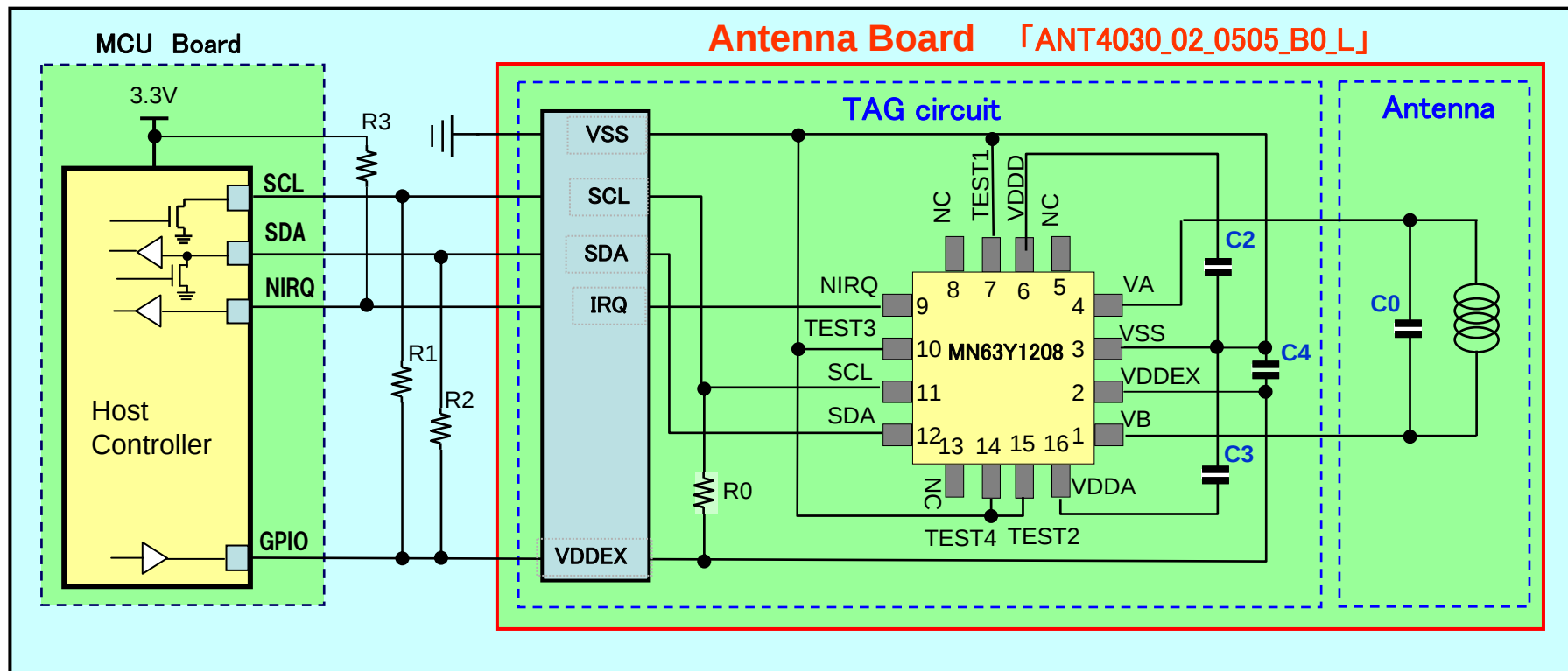
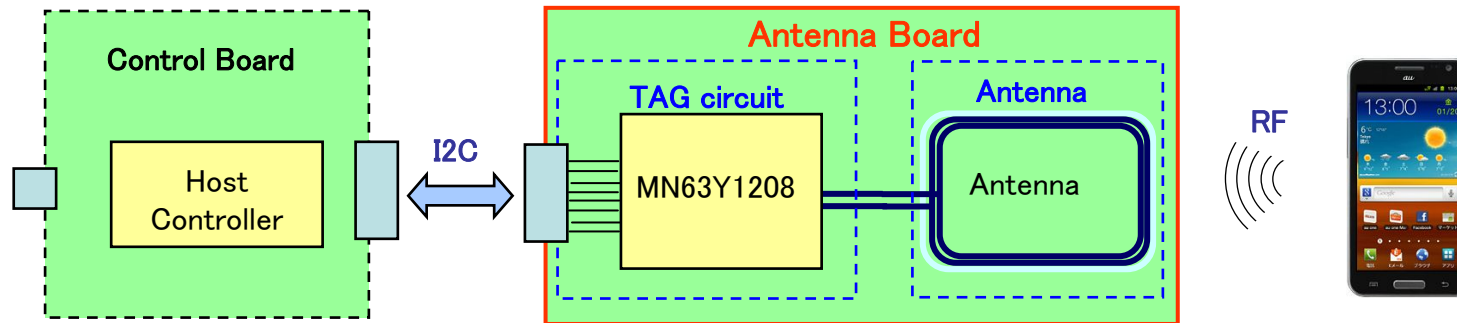
| PIN Number | Terminal name | Input/output | Input and output type | function                                                        |
|------------|---------------|--------------|-----------------------|-----------------------------------------------------------------|
| 1          | VB            | I/O          | —                     | Coil terminal                                                   |
| 2          | VDDEX         | —            | Power                 | Power supply for contact (Input 1.7V ~ 3.6V)                    |
| 3          | VSS           | —            | GND                   | Ground                                                          |
| 4          | VA            | I/O          | —                     | Coil terminal                                                   |
| 5          | N.C.          | —            | —                     | Unconnected pin                                                 |
| 6          | VDDD          | —            | Power                 | Digital internal power supply (Connect capacitance between VSS) |
| 7          | TEST1         | input        | —                     | Test control (Normally connected to VSS)                        |
| 8          | N.C.          | —            | —                     | Unconnected pin                                                 |
| 9          | NIRQ          | output       | Open Drain            | Interrupt request output                                        |
| 10         | TEST3         | input        | —                     | Test control (Normally connected to VSS)                        |
| 11         | SCL           | input        | —                     | HOST I/F (I2C 100kHz)                                           |
| 12         | SDA           | I/O          | Open Drain            | HOST I/F (I2C 100kHz)                                           |
| 13         | N.C.          | —            | —                     | Unconnected pin                                                 |
| 14         | TEST4         | input        | —                     | Test control (Normally connected to VSS)                        |
| 15         | TEST2         | input        | —                     | Test control (Normally connected to VSS)                        |
| 16         | VDDA          | —            | Power                 | Analog internal power supply (Connect capacitance between VSS)  |



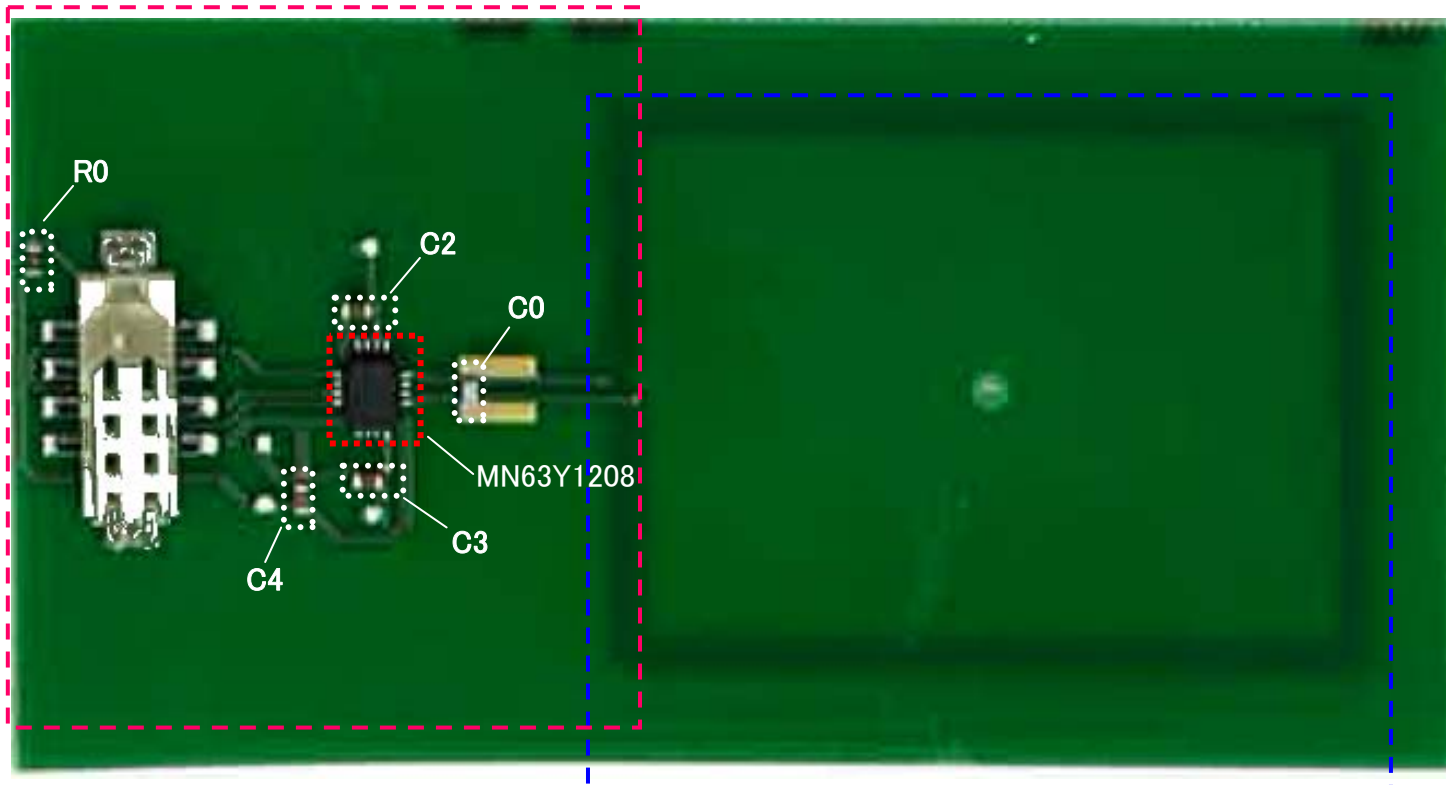
| External part | Recommendation Value | Detailed explanation                                                                                                                                                                                                                 |
|---------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R1,R2         | 3.3k $\Omega$        | It is pulling up resistance for I2C signal lines. Please decide the resistance level in consideration of transmission rate, wiring capacity, current ability.<br>In our NFC tag board "ANT4030_02_0505_B0_L," it is not implemented. |
| R3            | 3.3k $\Omega$        | It is pulling up resistance for interrupt signal lines.<br>Please decide the resistance level in consideration of wiring capacity, current ability.<br>In our NFC tag board "ANT4030_02_0505_B0_L," it is not implemented.           |
| C2、C3、C4      | 0.1 $\mu$ F          | It is a fixed value at the capacity between the power supply for operation stabilization of the tag LSI.<br>C2 is connected to VDDD, and C3 is connected to VDDA and C4 is connected to VDDEx                                        |
| R0            | 100k $\Omega$        | It is pulling up resistance to prevent an uncertainty state of SCL causing the malfunction.<br>When NFC tag LSI has the terms of use that R1 is not connected to, I am necessary.                                                    |

※ I connect pulling up resistance (R,R2,R3) to the microcomputer board of our offer.

## NFC tag system constitution



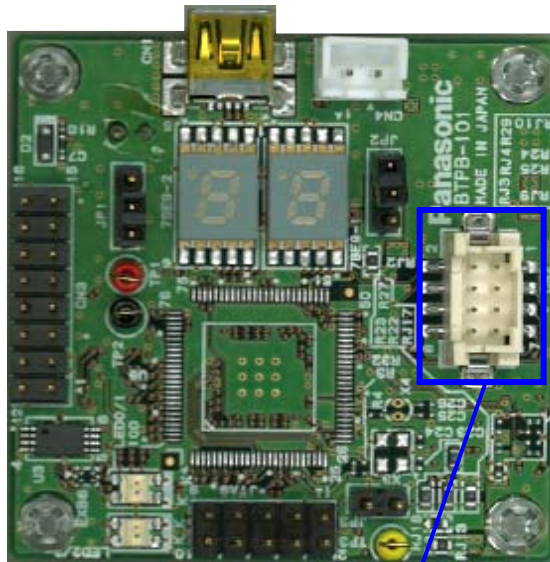
Chip and Parts are implemented by the board surface



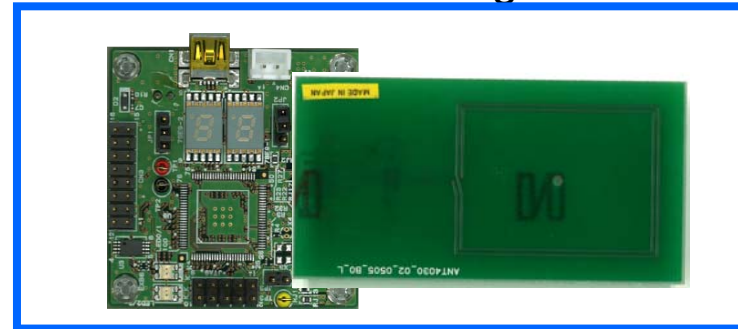
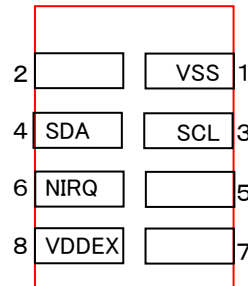
Antenna is implemented by the board back side

## Connection image

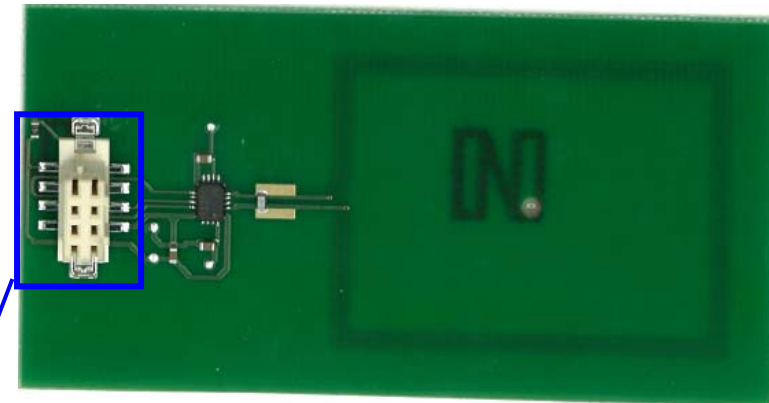
Micon Board [BTPB101-B]



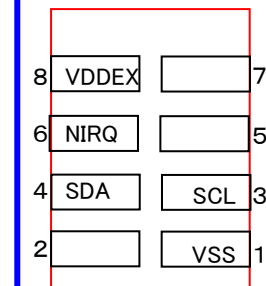
DF11CZ-8DP-2V(27)  
( Hirose Electric )



Antenna Board [ANT4030\_02\_0505\_B0\_L]



HRS DF11CZ- 8DS-2V  
( Hirose Electric )



## Request for your special attention and precautions in using the technical information and semiconductors described in this book

- (1) If any of the products or technical information described in this book is to be exported or provided to non-residents, the laws and regulations of the exporting country, especially, those with regard to security export control, must be observed.
- (2) The technical information described in this book is intended only to show the main characteristics and application circuit examples of the products. No license is granted in and to any intellectual property right or other right owned by Panasonic Corporation or any other company. Therefore, no responsibility is assumed by our company as to the infringement upon any such right owned by any other company which may arise as a result of the use of technical information described in this book.
- (3) The products described in this book are intended to be used for general applications (such as office equipment, communications equipment, measuring instruments and household appliances), or for specific applications as expressly stated in this book. Consult our sales staff in advance for information on the following applications:
  - Special applications (such as for airplanes, aerospace, automotive equipment, traffic signaling equipment, combustion equipment, life support systems and safety devices) in which exceptional quality and reliability are required, or if the failure or malfunction of the products may directly jeopardize life or harm the human body.It is to be understood that our company shall not be held responsible for any damage incurred as a result of or in connection with your using the products described in this book for any special application, unless our company agrees to your using the products in this book for any special application.
- (4) The products and product specifications described in this book are subject to change without notice for modification and/or improvement. At the final stage of your design, purchasing, or use of the products, therefore, ask for the most up-to-date Product Standards in advance to make sure that the latest specifications satisfy your requirements.
- (5) When designing your equipment, comply with the range of absolute maximum rating and the guaranteed operating conditions (operating power supply voltage and operating environment etc.). Especially, please be careful not to exceed the range of absolute maximum rating on the transient state, such as power-on, power-off and mode-switching. Otherwise, we will not be liable for any defect which may arise later in your equipment.

Even when the products are used within the guaranteed values, take into the consideration of incidence of break down and failure mode, possible to occur to semiconductor products. Measures on the systems such as redundant design, arresting the spread of fire or preventing glitch are recommended in order to prevent physical injury, fire, social damages, for example, by using the products.
- (6) Comply with the instructions for use in order to prevent breakdown and characteristics change due to external factors (ESD, EOS, thermal stress and mechanical stress) at the time of handling, mounting or at customer's process. When using products for which damp-proof packing is required, satisfy the conditions, such as shelf life and the elapsed time since first opening the packages.
- (7) This book may be not reprinted or reproduced whether wholly or partially, without the prior written permission of our company.

# AMEYA360

Components Supply Platform

Authorized Distribution Brand :



Website :

Welcome to visit [www.ameya360.com](http://www.ameya360.com)

Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd  
Minhang District, Shanghai , China

➤ Sales :

Direct    +86 (21) 6401-6692  
Email     amall@ameya360.com  
QQ        800077892  
Skype     ameyasales1 ameyasales2

➤ Customer Service :

Email     service@ameya360.com

➤ Partnership :

Tel        +86 (21) 64016692-8333  
Email     mkt@ameya360.com