

ROM number	
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**RENESAS ELECTRONICS  
SINGLE-CHIP 16-BIT MICROCOMPUTER  
R5F2LA87ANXXXFA  
ROM PROGRAMMING CONFIRMATION FORM**

Receipt	Date:	
	Section mgr signature	PIC signature

Note: Please fill in all items marked \*.

* Applicant	Company Name	TEL	Applicant signature	Submitted by
	Date issued	Year / Month / Date		

**\* 1. Mask file**

Please kindly verify and confirm the mask file in the submitted CD-R prior to submission.  
Please submit mask files on CD-R. And the number of the mask file must be 1 mask file per one CD-R.

Part Number     R5F2LA87ANXXXFA

File Code        

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 (hexadecimal notation)

Mask file name    

--	--	--	--	--	--	--	--

 .MSK (no more than 8 characters)

**\* 2. Mask option**

Set the mask option in the mask file generating utility as follows:

Address : 10h                       Data : 01h

**\* 3. ROM data which must be set by user**

Check the option function select registers (OFS, OFS2) and ID code areas to be set for appropriate values as ROM data.

OFS register                       OFS2 register                       ID code areas

**CAUTION:**

Note 1 : ROM order of this product programs the Data Flash area.

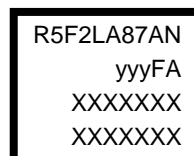
Note 2 : ROM data confirmation request

ROM programming will be processed based on the mask file generated by the mask file generating utility. Only in case when ROM data programmed in the actual mass produced product differs from that of above mentioned mask file, RENESAS takes the responsibility. There is no Engineering Sample, thus please confirm the ROM data at the receipt of the Initial product delivery.

Should you find any problem, please return immediately. 2 weeks without technical error feedback towards RENESAS will automatically be regarded as acceptance of products.

Note 3 : Mark specification

Please refer to Fig. 1 about mark specification.



yyy : ROM number  
XXXXXXX : Lot number.

Fig. 1

# RENESAS ELECTRONICS SINGLE-CHIP 16-BIT MICROCOMPUTER R5F2LA87ANXXXFA

Usage conditions

For our reference of new products, please reply to the following questions about the usage of the products you ordered.

(1) What is the voltage of power supply (Vcc) you use?

Typ. =  V                      Min. =  V                      Max. =  V

(2) What is the ambient temperature you use?

Typ. =  °C                      Min. =  °C                      Max. =  °C

(3) On which condition will you use Reset? (Plural answers are possible.)

Hardware Reset                       Power-on reset Reset                       Voltage monitor 0 Reset  
 Watchdog timer Reset                       Software Reset

(4) On which condition will you use Voltage monitor 0 Circuit?

Use                       Not use  
Voltage Detection 0 Level Select     3.80V                       2.85V                       2.35V                       1.90V

(5) On which condition will you use Voltage monitor 1 Circuit?

Use                       Not use  
Voltage Detection 1 Level Select     2.20V                       2.35V                       2.50V                       2.65V  
 2.80V                       2.95V                       3.10V                       3.25V  
 3.40V                       3.55V                       3.70V                       3.85V  
 4.00V                       4.15V                       4.30V                       4.45V

(6) Will you use Voltage monitor 2 Circuit?

Use                       Not use

(7) On which condition will you use High-speed clock?

High-Speed On-Chip Oscillator     Use                       Not use  
Frequency                       20MHz                       18.432MHz  
Division ratio                      Divide-by- mode

XIN-XOUT Oscillates                       Use                       Not use                       External clock input  
Oscillator type                       Crystal Oscillator                       Ceramic resonator                       Others (                      )  
Frequency                      f(XIN) =  MHz  
Load capacity                      XIN side =  pF                      XOUT side =  pF  
Internal feedback resistance                       Use                       Not use  
Oscillation stop detection                       Use                       Not use

(8) On which condition will you use Low-speed clock?

Use                       Not use                       Low-speed on-chip oscillator  
Oscillator type                       Crystal Oscillator                       Others (                      )  
Frequency                      f(XCIN) =  kHz  
Load capacity                      XCIN side =  pF                      XCOUT side =  pF  
Internal feedback resistance                       Use                       Not use

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(9) On which condition will you use System clock division ratio?

- No division mode     Divide-by-2 mode     Divide-by-4 mode  
 Divide-by-8 mode     Divide-by-16 mode

(10) Which Power control mode will you use? (Plural answers are possible.)

- Wait mode     Stop mode  
 Power-off 0 mode     Power-off 2 mode

(11) Will you use Flash memory?

- CPU rewrite mode     Use     Not use  
ROM code protect     Use     Not use

(12) Which timer mode will you use?

- Timer RB     Use     Not use  
Operation mode     Timer mode     Programmable one-shot generation mode  
                           Programmable waveform generation mode     Programmable wait one-shot generation mode  
Count source     f1     f2     f8     Timer RJ under flow

- Timer RC     Use     Not use  
Operation mode     Timer mode     Input capture function     Output compare function  
                           PWM mode     PWM2 mode  
Count source     f1     f2     f4     f8     f32     fOCO20M  
                           fOCO-F     TRCCLK

- Timer RH     Use     Not use  
Operation mode     Output compare mode     Real-time clock mode  
Count source     f8     f32     f256     f512     f2048     f4096  
                           f8192     fc-TRH

- Timer RJ     Use     Not use  
Operation mode     Timer mode     Pulse output mode     Event counter mode  
                           Pulse width measurement mode     Pulse period measurement mode  
Count source     f1     f2     f8     fOCO     fC32     fC  
                           Timer RJ under flow

(13) On which condition will you use UART?

- UART0     Use     Not use  
Operation mode     Clock synchronous serial I/O mode     Clock non-synchronous serial I/O mode

- UART2     Use     Not use  
Operation mode     Clock synchronous serial I/O mode     Clock non-synchronous serial I/O mode  
                           I2C mode     Multiprocessor communication function

- Synchronous Serial Communication Unit (SSU)     Use     Not use  
Operation mode     Clock synchronous communication mode     4 lines bus communication mode

- I2C bus Interface     Use     Not use  
Operation mode     I2C bus interface mode     Clock synchronous serial mode

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(14) On which condition will you use A/D converter?

- |                                    |  |  |   |
|------------------------------------|--|--|---|
|                                    | <input type="checkbox"/> Use               |  | <input type="checkbox"/> Not use  |
| A/D input pin                      | Number of A/D input pins used = _____ pins |  |   |
| Conversion mode                    | <input type="checkbox"/> 8bit A/D          |  | <input type="checkbox"/> 10bit A/D  |
| A/D clock source                   | <input type="checkbox"/> f1                |  | <input type="checkbox"/> fOCO-F   |
| Division ratio                     | <input type="checkbox"/> No division       | <input type="checkbox"/> In frequency/2    | <input type="checkbox"/> In frequency/4 <input type="checkbox"/> In frequency/8 |
| A/D Trigger                        | <input type="checkbox"/> Software          | <input type="checkbox"/> Timer RH          | <input type="checkbox"/> Timer RC <input type="checkbox"/> External Trigger     |
|                                    | <input type="checkbox"/> Not use           |  |   |
| A/D Operation mode                 | <input type="checkbox"/> Single mode       | <input type="checkbox"/> Repeat mode0      | <input type="checkbox"/> Repeat mode1   |
|                                    | <input type="checkbox"/> Single sweep mode | <input type="checkbox"/> Repeat sweep mode | Sweep pin = _____ pins  |
| Disconnection-detection assistance |  | <input type="checkbox"/> Use               | <input type="checkbox"/> Not use  |
| Gain amplifier                     | <input type="checkbox"/> Use               |  | <input type="checkbox"/> Not use  |
| Gain amplifier selection           | <input type="checkbox"/> Gain1             | <input type="checkbox"/> Gain2             | <input type="checkbox"/> Gain4  |
|                                    | <input type="checkbox"/> Gain6             | <input type="checkbox"/> Gain8             |   |

(15) On which condition will you use Temperature Sensor?

- |                          |                                |                                |                                  |
|--------------------------|--------------------------------|--------------------------------|----------------------------------|
|                          | <input type="checkbox"/> Use   |                                | <input type="checkbox"/> Not use |
| Gain amplifier           | <input type="checkbox"/> Use   |                                | <input type="checkbox"/> Not use |
| Gain amplifier selection | <input type="checkbox"/> Gain1 | <input type="checkbox"/> Gain2 | <input type="checkbox"/> Gain4   |
|                          | <input type="checkbox"/> Gain6 | <input type="checkbox"/> Gain8 |                                  |

(16) On which condition will you use ComparatorB?

- |                |                              |  |                                  |
|----------------|------------------------------|--|----------------------------------|
| Comparator B1  | <input type="checkbox"/> Use |  | <input type="checkbox"/> Not use |
| Digital Filter | <input type="checkbox"/> Use |  | <input type="checkbox"/> Not use |
| Comparator B3  | <input type="checkbox"/> Use |  | <input type="checkbox"/> Not use |
| Digital Filter | <input type="checkbox"/> Use |  | <input type="checkbox"/> Not use |

(17) On which condition will you use LCD Drive Control Circuit?

- |   |   |  |  |
|---|---|--|--|
|   | <input type="checkbox"/> Use  |  | <input type="checkbox"/> Not use   |
| Usage of LCD pins                       | Number of common pins used = _____ pins      Number of segment pins used = _____ pins |  |  |
| Bias                                    | <input type="checkbox"/> 1/2  | <input type="checkbox"/> 1/3             |  |
| Usage of LCD panel                      | <input type="checkbox"/> 5V faction   |  | <input type="checkbox"/> 3V faction  |
|   | <input type="checkbox"/> Memory-Type Liquid Crystal Panel                             |  | <input type="checkbox"/> Others(                      )                          |
| LCD Clock Source                        | <input type="checkbox"/> f32  |  | <input type="checkbox"/> fC-LCD  |
| Division ratio                          | <input type="checkbox"/> In frequency/2   | <input type="checkbox"/> In frequency/4  | <input type="checkbox"/> In frequency/8 <input type="checkbox"/> In frequency/16 |
|   | <input type="checkbox"/> In frequency/32  | <input type="checkbox"/> In frequency/64 | <input type="checkbox"/> In frequency/128  |
| External division resistor              | <input type="checkbox"/> Use  |  | <input type="checkbox"/> Not use   |
| Range of LCD power supply voltage (VL3) | Min. = _____ V  |  | Max. = _____ V   |
| Division resistance                     | One Resistor Value = _____ kΩ   |  |  |
| Frame frequency = _____ Hz              |   |  |  |

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(18) On which condition will you use Watchdog Timer?

Use  Not use

Count Source  CPU clock  Low-speed on-chip oscillator clock for the watchdog timer clock

Division ratio of the prescaler

1/2  1/16  1/128

Watchdog timer underflow period set bit

03FFh  0FFFh  1FFFh  3FFFh

Watchdog timer refresh acknowledgement period set bit

25%  50%  75%  100%

Watchdog timer start select bit

Watchdog timer automatically starts after reset

Watchdog timer is stopped after reset

Count source protection mode after reset select bit

Count source protection mode enabled after reset

Count source protection mode disabled after reset

Thank you for your cooperation.