

ROM number	
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**RENESAS ELECTRONICS  
SINGLE-CHIP 16-BIT MICROCOMPUTER  
R5F2L3ACMNXXXFP  
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     R5F2L3ACMNXXXFP

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.

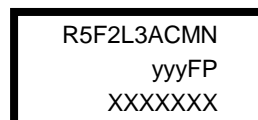
Note 2 : ROM data confirmation request

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.
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Fig. 1

# RENESAS ELECTRONICS SINGLE-CHIP 16-BIT MICROCOMPUTER R5F2L3ACMNXXXFP

## 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 ( $V_{cc}$ ) 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                       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  
Voltage Detection 2 Target              $V_{cc}$                        LVCMP2

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

High-Speed On-Chip Oscillator     Use                       Not use                       Not use  
Frequency                       40MHz                       36.864MHz                       32MHz  
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?

XCIN-XCOUT Oscillates             Use                       Not use  
Oscillator type                       Crystal Oscillator     Others (                      )  
Frequency                       $f(XCIN) =$  \_\_\_\_\_ kHz  
Load capacity                      XCIN side = \_\_\_\_\_ pF                      XCOUT side = \_\_\_\_\_ pF  
Internal feedback resistance             Use                       Not use

# RENESAS ELECTRONICS SINGLE-CHIP 16-BIT MICROCOMPUTER R5F2L3ACMNXXXFP

(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 mode

(11) Will you use Flash memory?

- CPU rewrite mode     Use     Not use  
ROM code protect     Use     Not use  
Low-Current-Consumption Read Mode     Use    CPU clock frequency = \_\_\_\_\_ kHz     Not use  
Erase-suspend     Use     Not use  
BGO function     Use     Not use

(12) Which timer mode will you use?

- Timer RA     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 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 RA 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     fOCO40M  
                           fOCO-F     TRCCLK
- Timer RD     Use     Not use  
Count     Up count     Down count  
Operation mode     Timer mode     Input capture function     Output compare function  
                           PWM mode     Reset synchronous PWM mode     Complimentary PWM mode  
                           PWM3 mode  
Operation Clock     f1     f2     f4     f8     f32     fC2  
                           fOCO40M     fOCO-F     TRDCLK
- Timer RE     Use     Not use  
Operation mode     Output compare mode     Real-time clock mode  
Operation Clock     f4     f8     f32     fC4
- Timer RG     Use     Not use  
Count     Up count     Down count  
Operation mode     Timer mode     Input capture function     Output compare function  
                           PWM mode  
Operation Clock     f1     f2     f4     f8     f32     fC2  
                           fOCO40M     TRGCLKA     TRGCLKB

## RENESAS ELECTRONICS SINGLE-CHIP 16-BIT MICROCOMPUTER R5F2L3ACMNXXXFP

(13) On which condition will you use UART?

- |   |   |  |
|---|---|--|
| UART0                                       | <input type="checkbox"/> Use                                  | <input type="checkbox"/> Not use                               |
| Operation mode                              | <input type="checkbox"/> Clock synchronous serial I/O mode    | <input type="checkbox"/> Clock non-synchronous serial I/O mode |
| UART1                                       | <input type="checkbox"/> Use                                  | <input type="checkbox"/> Not use                               |
| Operation mode                              | <input type="checkbox"/> Clock synchronous serial I/O mode    | <input type="checkbox"/> Clock non-synchronous serial I/O mode |
| UART2                                       | <input type="checkbox"/> Use                                  | <input type="checkbox"/> Not use                               |
| Operation mode                              | <input type="checkbox"/> Clock synchronous serial I/O mode    | <input type="checkbox"/> Clock non-synchronous serial I/O mode |
|   | <input type="checkbox"/> I2C mode                             | <input type="checkbox"/> Multiprocessor communication function |
| Synchronous Serial Communication Unit (SSU) | <input type="checkbox"/> Use                                  | <input type="checkbox"/> Not use                               |
| Operation mode                              | <input type="checkbox"/> Clock synchronous communication mode | <input type="checkbox"/> 4 lines bus communication mode        |
| I2C bus Interface                           | <input type="checkbox"/> Use                                  | <input type="checkbox"/> Not use                               |
| Operation mode                              | <input type="checkbox"/> I2C bus interface mode               | <input type="checkbox"/> Clock synchronous serial mode         |
| LIN Module                                  | <input type="checkbox"/> Use                                  | <input type="checkbox"/> Not use                               |
|   | <input type="checkbox"/> Master mode                          | <input type="checkbox"/> Slave mode                            |

(14) On which condition will you use DTC?

- |                         |                                      |                                      |
|-------------------------|--------------------------------------|--------------------------------------|
|                         | <input type="checkbox"/> Use         | <input type="checkbox"/> Not use     |
| Transfer mode           | <input type="checkbox"/> Normal mode | <input type="checkbox"/> Repeat mode |
| Transfer times = _____. |                                      |                                      |

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

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

(16) Will you use D/A converter?

- |                              |                                  |
|------------------------------|----------------------------------|
| <input type="checkbox"/> Use | <input type="checkbox"/> Not use |
|------------------------------|----------------------------------|

(17) On which condition will you use ComparatorA?

- |                   |   |  |
|-------------------|---|--|
| Comparator A1     | <input type="checkbox"/> Use                        | <input type="checkbox"/> Not use                 |
| Reference voltage | <input type="checkbox"/> Internal reference voltage | <input type="checkbox"/> LVREF pin input voltage |
| Digital Filter    | <input type="checkbox"/> Use                        | <input type="checkbox"/> Not use                 |
| Comparator A2     | <input type="checkbox"/> Use                        | <input type="checkbox"/> Not use                 |
| Reference voltage | <input type="checkbox"/> Internal reference voltage | <input type="checkbox"/> LVREF pin input voltage |
| Digital Filter    | <input type="checkbox"/> Use                        | <input type="checkbox"/> Not use                 |

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(18) 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 |

(19) 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                            | <input type="checkbox"/> 1/4  |
| LCD panel waveform   | <input type="checkbox"/> Segment panel waveform                                      | <input type="checkbox"/> Dot matrix panel waveform                              |
| Usage of LCD panel   | <input type="checkbox"/> 5V faction <input type="checkbox"/> 3V faction              | <input type="checkbox"/> Others(                      )                         |
| LCD Clock Source   | <input type="checkbox"/> f4 <input type="checkbox"/> f32                             | <input type="checkbox"/> fC-LCD   |
| Division ratio   | <input type="checkbox"/> In frequency/1 <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"/> Use External division resistor          |  |   |
| Range of LCD power supply voltage (VL4)                          | Min. = _____ V   | Max. = _____ V  |
| Division resistance  | One Resister Value = _____ kΩ  |   |
| <input type="checkbox"/> Use Internal voltage multiplier circuit |  |   |
| Voltage of VL1   | <input type="checkbox"/> External input voltage = _____ V                            | <input type="checkbox"/> Internally-generated voltage accuracy                  |
| Capaciter for voltage multiplier                                 | CL1-CL2 = _____ F  | VL4,VL3,VL2,VL1= _____ F  |
| Data display mode  | <input type="checkbox"/> Blinking display <input type="checkbox"/> Reversing display | <input type="checkbox"/> Not use  |
| Frame frequency = _____ Hz                                       |  |   |

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

- |   |   |                                  |
|---|---|----------------------------------|
|   | <input type="checkbox"/> Use  | <input type="checkbox"/> Not use |
| Count Source  | <input type="checkbox"/> CPU clock <input type="checkbox"/> Low-speed on-chip oscillator clock for the watchdog timer clock |                                  |
| Division ratio of the prescaler                       | <input type="checkbox"/> 1/2 <input type="checkbox"/> 1/16 <input type="checkbox"/> 1/128                                   |                                  |
| Watchdog timer underflow period set bit               | <input type="checkbox"/> 03FFh <input type="checkbox"/> 0FFFh <input type="checkbox"/> 1FFFh <input type="checkbox"/> 3FFFh |                                  |
| Watchdog timer refresh acknowledgement period set bit | <input type="checkbox"/> 25% <input type="checkbox"/> 50% <input type="checkbox"/> 75% <input type="checkbox"/> 100%        |                                  |
| Watchdog timer start select bit                       | <input type="checkbox"/> Watchdog timer automatically starts after reset  |                                  |
|   | <input type="checkbox"/> Watchdog timer is stopped after reset  |                                  |
| Count source protection mode after reset select bit   | <input type="checkbox"/> Count source protection mode enabled after reset   |                                  |
|   | <input type="checkbox"/> Count source protection mode disabled after reset  |                                  |

Thank you for your cooperation.