To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

Send any inquiries to http://www.renesas.com/inquiry.

REJ19B0689-0100

Mask ROM number	

740 FAMILY MASK ROM CONFIRMATION FORM
SINGLE-CHIP MICROCOMPUTER M37540M4-XXXSP/FP/GP
RENESAS TECHNOLOGY

Receipt	Date:	
	Section head signature	Supervisor signature

Note : Please fill in all items marked ✵.

✵	Customer	Company name	TEL ( )	Issuance signature	Submitted by	Supervisor
		Date issued	Date:			

✵ 1. Confirmation

Specify the name of the product being ordered.
Three EPROMs are required for each pattern if this order is performed by EPROMs.
One floppy disk is required for each pattern if this order is performed by a floppy disk.

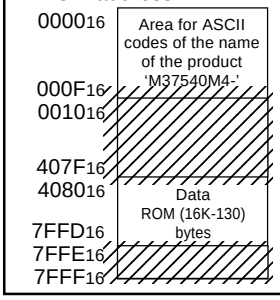
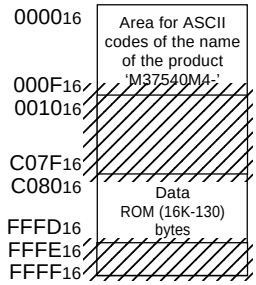
Microcomputer name: ☐ M37540M4-XXXSP ☐ M37540M4-XXXFP ☐ M37540M4-XXXGP

☐ Ordering by EPROMs

Specify the type of EPROMs submitted.
If at least two of the three sets of EPROMs submitted contain identical data, we will produce masks based on this data. We shall assume the responsibility for errors only if the mask ROM data on the products we produce differs from this data. Thus, extreme care must be taken to verify the data in the submitted EPROMs.

Checksum code for entire EPROM | | | | | (hexadecimal notation)

EPROM type (indicate the type used)

☐ 27C256	☐ 27C512
EPROM address	EPROM address
	

In the address space of the microcomputer, the internal ROM area is from address C080₁₆ to FFFD₁₆. The reset vector is stored in addresses FFFC₁₆ and FFFD₁₆.

(1) Set the data in the unused area (the shaded area of the diagram) to "FF₁₆".
(2) The ASCII codes of the product name "M37540M4–" must be entered in addresses 0000₁₆ to 0008₁₆. And set the data "FF₁₆" in addresses 0009₁₆ to 000F₁₆. The ASCII codes and addresses are listed to the right in hexadecimal notation.

Address	
0000₁₆	'M' = 4D₁₆
0001₁₆	'3' = 33₁₆
0002₁₆	'7' = 37₁₆
0003₁₆	'5' = 35₁₆
0004₁₆	'4' = 34₁₆
0005₁₆	'0' = 30₁₆
0006₁₆	'M' = 4D₁₆
0007₁₆	'4' = 34₁₆

Address	
0008₁₆	'–' = 2D₁₆
0009₁₆	FF₁₆
000A₁₆	FF₁₆
000B₁₆	FF₁₆
000C₁₆	FF₁₆
000D₁₆	FF₁₆
000E₁₆	FF₁₆
000F₁₆	FF₁₆

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We recommend the use of the following pseudo-command to set the start address of the assembler source program because ASCII codes of the product name are written to addresses 0000_{16} to 0008_{16} of EPROM.

EPROM type	27C256	27C512
The pseudo-command	△ ✻=△ $8000 △ .BYTE△ 'M37540M4–'	△ ✻=△ $0000 △ .BYTE△ 'M37540M4–'

Note : If the name of the product written to the EPROMs does not match the name of the mask confirmation form, the ROM will not be processed.

☐ Ordering by floppy disk

We will produce masks based on the mask files generated by the mask file generating utility. We shall assume the responsibility for errors only if the mask ROM data on the products we produce differs from this mask file. Thus, extreme care must be taken to verify the mask file in the submitted floppy disk.

The submitted floppy disk must be 3.5-inch 2HD type and DOS/V format. And the number of the mask files must be 1 in one floppy disk.

File code | | | | | | | | | (hexadecimal notation)

Mask file name | | | | | | | | | .MSK (equal or less than eight characters)

✺ 2. Mark specification

Mark specification must be submitted using the correct form for the package being ordered. Fill out the appropriate mark specification form (32P4B for M37540M4-XXXSP, 36P2R-A for M37540M4-XXXFP, 32P6U-A for M37540M4-XXXGP) and attach it to the mask ROM confirmation form.

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✵ 3. Usage conditions

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

(1) Which operation source clock you use?

☐ Ceramic resonator
☐ RC oscillation
☐ External clock input
☐ Quartz-crystal oscillation

What frequency do you use?
$f(X_{IN})$= ☐ MHz

☐ Other( )
☐ Ring oscillator

(2) What is the voltage of power supply (V_{DD}) you use?
Typ.= ☐ V Min.= ☐ V Max.= ☐ V

(3) What is the ambient temperature you use?
Typ.= ☐ °C Min.= ☐ °C Max.= ☐ °C

(4) Which clock division ratio you use?
☐ Double-speed mode ($f(\phi)=F(X_{IN})$) ☐ High-speed mode ($f(\phi)=F(X_{IN})/2$)
☐ Middle-speed mode ($f(\phi)=F(X_{IN})/8$) ☐ Applied from ring oscillator

(5) Please reply to the following questions about timer function.

(i) Which timer you use?
☐ timer1 ☐ timerA ☐ timerX ☐ timerY ☐ timerZ

(ii) Which count source of timer you use?
- Timer X ☐ $f(X_{IN})/16$ ☐ $f(X_{IN})/2$ ☐ $f(X_{IN})$
- Timer Y ☐ $f(X_{IN})/16$ ☐ $f(X_{IN})/2$ ☐ Ring oscillator output
- Timer Z ☐ $f(X_{IN})/16$ ☐ $f(X_{IN})/2$ ☐ Timer Y underflow

(iii) Which operating mode you use?
- Timer A ☐ Timer mode ☐ Period measurement mode / ☐ Event counter mode ☐ Pulse width HL continuously measurement mode
- Timer X ☐ Timer mode ☐ Pulse output mode / ☐ Event counter mode ☐ Pulse width measurement mode
- Timer Y ☐ Timer mode ☐ Programmable waveform generation mode
- Timer Z ☐ Timer mode ☐ Programmable waveform generation mode / ☐ Programmable one-shot generation mode / ☐ Programmable wait one-shot generation mode

(6) Do you use the Serial I/O?
☐ Use ☐ Not use
☐ Serial I/O1 (☐ Clock synchronous Serial I/O1 mode ☐ Asynchronous Serial I/O1(UART) mode)
☐ Serial I/O2

(7) Do you use the A-D converter?
☐ Use ☐ Not use

(8) Do you use the Watchdog timer?
☐ Use ☐ Not use

(9) Do you use the oscillation stop detection circuit?
☐ Use ☐ Not use

Thank you cooperation.

✵ 4. Comments

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