

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>.

Mask ROM number	
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**740 FAMILY MASK ROM CONFIRMATION FORM
SINGLE-CHIP MICROCOMPUTER M37150MA-XXXFP
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.

Ordering by EPROMs

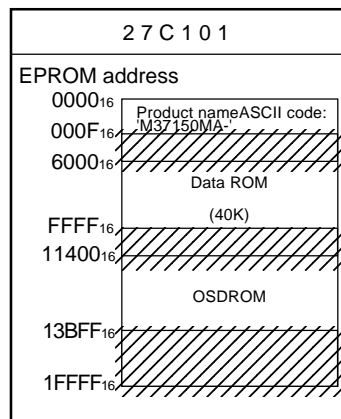
If at least two of the three sets of EPROMs submitted contain identical data, we will produce masks based on this data. We shall assume the responsibility for errors only if the mask ROM data on the products we produce differs from this data. Thus, extreme care must be taken to verify the data in the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

Checksum code for entire EPROM

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 (hexadecimal notation)

EPROM type (indicate the type used)



(1) Set "FF16" in the shaded area.

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(2) Write the ASCII codes that indicate the product name of "M37150MA-" to addresses 0000₁₆ to 000F₁₆.

Addresses 0000₁₆ to 000F₁₆ store the product name.
ASCII codes 'M37150MA-' are listed on the right.
The addresses and data are in hexadecimal notation.

Address		Address	
0000 ₁₆	'M' = 4D ₁₆	0008 ₁₆	'-' = 2D ₁₆
0001 ₁₆	'3' = 33 ₁₆	0009 ₁₆	FF ₁₆
0002 ₁₆	'7' = 37 ₁₆	000A ₁₆	FF ₁₆
0003 ₁₆	'1' = 31 ₁₆	000B ₁₆	FF ₁₆
0004 ₁₆	'5' = 35 ₁₆	000C ₁₆	FF ₁₆
0005 ₁₆	'0' = 30 ₁₆	000D ₁₆	FF ₁₆
0006 ₁₆	'M' = 4D ₁₆	000E ₁₆	FF ₁₆
0007 ₁₆	'A' = 41 ₁₆	000F ₁₆	FF ₁₆

Note: If the name of the product contained in the EPROMs does not match the name on the mask ROM confirmation form, the ROM processing is disabled. Please make sure the data is written correctly.

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

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 (hexadecimal notation)

Mask file name

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 .MSK (equal or less than eight characters)

*2. Mark specification

Mark specification must be submitted using the correct form for the type of package being ordered. Fill the appropriate mark specification form (42P2R for M37150MA-XXXFP) and attach to the mask ROM confirmation form.

*3. Comments

740 FAMILY MASK ROM CONFIRMATION FORM SINGLE-CHIP MICROCOMPUTER M37150MA-XXXFP RENESAS TECHNOLOGY

Font data must be stored in the proper OSD ROM address according to the following table.

OSD ROM address of character font data

OSD ROM address bit	AD16	AD15	AD14	AD13	AD12	AD11	AD10	AD9	AD8	AD7	AD6	AD5	AD4	AD3	AD2	AD1	AD0
Line number / Character code / Font bit	1	0	0	Line number					Character code							Font bit	

Line number = 0A₁₆ to 1D₁₆

Character code = 00₁₆ to FF₁₆ (Do not set 7F₁₆ and 80₁₆.)

Font bit = 0 : Left font
 1 : Right font

Example) The font data "60" (shaded area) of the character code "AA₁₆" is stored in address

1:0010:0101:0101:0100:1000:2 = 12554₁₆.

Line number	Left font								Right font							
	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
0A ₁₆																
0B ₁₆																
0C ₁₆																
0D ₁₆																
0E ₁₆																
0F ₁₆																
10 ₁₆																
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17 ₁₆																
18 ₁₆																
19 ₁₆																
1A ₁₆																
1B ₁₆																
1C ₁₆																
1D ₁₆																

Character code "AA₁₆"

Notes 1 : The 80-byte addresses corresponding to the character code "7F₁₆" and "80₁₆" in OSD ROM are the test data storing area. Set "FF₁₆" to the area (We stores the test data to this area and the different data from "FF₁₆" is stored for the actual products.)

The test data storing area :
addresses 11000₁₆+(4+2n)X100₁₆+FE₁₆ to 11000₁₆+(5+2n)X100₁₆+01₁₆(n=0 to 19)

addresses 114FE ₁₆ to 11501 ₁₆
addresses 116FE ₁₆ to 11701 ₁₆
⋮
addresses 138FE ₁₆ to 13901 ₁₆
addresses 13AFE ₁₆ to 13B01 ₁₆

2 : The character code "09₁₆" is used for "transparent space" when displaying Closed Caption. Therefore, set "00₁₆" to the 40-byte addresses corresponding to the character code "09₁₆."

The transparent space font data storing area :
addresses 11000₁₆+(4+2n)X100₁₆+12₁₆ to 11000₁₆+(4+2n)X100₁₆+13₁₆ (n=0 to 19)

addresses 11412 ₁₆ and 11413 ₁₆
addresses 11612 ₁₆ and 11613 ₁₆
⋮
addresses 13812 ₁₆ and 13813 ₁₆
addresses 13A12 ₁₆ and 13A13 ₁₆