

To our customers,

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## Old Company Name in Catalogs and Other Documents

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On April 1<sup>st</sup>, 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 1<sup>st</sup>, 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 M37160MF-XXXSP/FP  
RENESAS**

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

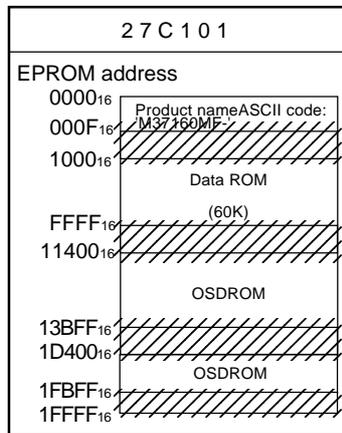
If at least two of the three sets of EPROMs submitted contain identical data, we will produce masks based on this data. We shall assume the responsibility for errors only if the mask ROM data on the products we produce differs from this data. Thus, extreme care must be taken to verify the data in the 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 "M37160MF-" to addresses 0000<sub>16</sub> to 000F<sub>16</sub>.

Addresses 0000<sub>16</sub> to 000F<sub>16</sub> store the product name.  
ASCII codes 'M37160MF-' are listed on the right.  
The addresses and data are in hexadecimal notation.

Address		Address	
0000 <sub>16</sub>	'M' = 4D <sub>16</sub>	0008 <sub>16</sub>	'-' = 2D <sub>16</sub>
0001 <sub>16</sub>	'3' = 33 <sub>16</sub>	0009 <sub>16</sub>	FF <sub>16</sub>
0002 <sub>16</sub>	'7' = 37 <sub>16</sub>	000A <sub>16</sub>	FF <sub>16</sub>
0003 <sub>16</sub>	'1' = 31 <sub>16</sub>	000B <sub>16</sub>	FF <sub>16</sub>
0004 <sub>16</sub>	'6' = 36 <sub>16</sub>	000C <sub>16</sub>	FF <sub>16</sub>
0005 <sub>16</sub>	'0' = 30 <sub>16</sub>	000D <sub>16</sub>	FF <sub>16</sub>
0006 <sub>16</sub>	'M' = 4D <sub>16</sub>	000E <sub>16</sub>	FF <sub>16</sub>
0007 <sub>16</sub>	'F' = 46 <sub>16</sub>	000F <sub>16</sub>	FF <sub>16</sub>

**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 (42P4B for M37160MF-XXXSP, 42P2R for M37160MF-XXXFP) and attach to the mask ROM confirmation form.

**\*3. Comments**

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**RENESAS**

**Notes 1 :** The 80-byte addresses corresponding to the character code "7F<sub>16</sub>" and "80<sub>16</sub>" of a character font, 320-byte addresses corresponding to the character code "15<sub>16</sub>" and "2A<sub>16</sub>" of a color dot font, in OSD ROM are the test data storing area. Set data to the area as follows. Set "FF<sub>16</sub>" to the area (We stores the test data to this area and the different data from "FF<sub>16</sub>" is stored for the actual products.)

The test data storing area :

addresses 11000<sub>16</sub>+(4+2n)X100<sub>16</sub>+FE<sub>16</sub> to 11000<sub>16</sub>+(5+2n)X100<sub>16</sub>+01<sub>16</sub>(n=0 to 19)

addresses 114FE <sub>16</sub> to 11501 <sub>16</sub>
addresses 116FE <sub>16</sub> to 11701 <sub>16</sub>
⋮
addresses 138FE <sub>16</sub> to 13901 <sub>16</sub>
addresses 13AFE <sub>16</sub> to 13B01 <sub>16</sub>

addresses 1D400<sub>16</sub>+8nX10<sub>16</sub>+2A<sub>16</sub> , 1D400<sub>16</sub>+8nX10<sub>16</sub>+2B<sub>16</sub>(n=0 to 79)

addresses 1D42A <sub>16</sub> , 1D42B <sub>16</sub>
addresses 1D4AA <sub>16</sub> , 1D4AB <sub>16</sub>
⋮
addresses 1FB2A <sub>16</sub> , 1FB2B <sub>16</sub>
addresses 1FBAA <sub>16</sub> , 1FBAB <sub>16</sub>

addresses 1D400<sub>16</sub>+8nX10<sub>16</sub>+54<sub>16</sub>, 1D400<sub>16</sub>+8nX10<sub>16</sub>+55<sub>16</sub>(n=0 to 79)

addresses 1D454 <sub>16</sub> , 1D455 <sub>16</sub>
addresses 1D4D4 <sub>16</sub> , 1D4D5 <sub>16</sub>
⋮
addresses 1FB54 <sub>16</sub> , 1FB55 <sub>16</sub>
addresses 1FBD4 <sub>16</sub> , 1FBD5 <sub>16</sub>

**2 :** The character code "09<sub>16</sub>" is used for "transparent space".

Therefore, set "00<sub>16</sub>" to the 40-byte addresses corresponding to the character code "09<sub>16</sub>."

The transparent space font data storing area :

addresses 11000<sub>16</sub>+(4+2n)X100<sub>16</sub>+12<sub>16</sub> to 11000<sub>16</sub>+(4+2n)X100<sub>16</sub>+13<sub>16</sub> (n=0 to 19)

addresses 11412 <sub>16</sub> and 11413 <sub>16</sub>
addresses 11612 <sub>16</sub> and 11613 <sub>16</sub>
⋮
addresses 13812 <sub>16</sub> and 13813 <sub>16</sub>
addresses 13A12 <sub>16</sub> and 13A13 <sub>16</sub>