OTP64155F-100

User's Manual

Rev.1.00 Mar. 1995

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* This manual contains important information necessary for the safe use of the OTP64155F-100.
  It should be read before use.
* Please keep it in an easily accessible place, near the OTP64155F-100 at all times.


Oki Electric Industry Co.,Ltd.

NOTICE

1. The information contained herein can change without notice owing to product and/or technical improvements. Before using the product, please make sure that the information being referred to is up-to-date.

2. The outline of action and examples for application circuits described herein have been chosen as an explanation for the standard action and performance of the product. When planning to use the product, please ensure that the external conditions are reflected in the actual circuit and assembly designs.

3. When developing and evaluating your product, please use our product below the specified maximum ratings and within the specified operating ranges including, but not   limited to, operating voltage, power dissipation, and operating temperature.

4. **OKI assumes no responsibility or liability whatsoever for any failure or unusual or unexpected operation resulting from misuse, neglect, improper installation, repair, alteration or accident, improper handling, or unusual physical or electrical stress including, but not limited to, exposure to parameters beyond the specified maximum ratings or operation outside the specified operating range.**

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1. OVERVIEW

The OTP64155F-100 is a conversion adapter used to write program data to the ROM(OTP) contained in the MSM64P155/155L-GS-K(Package Type : QFP100-P-1420-0.65-BK) using a general PROM writer (note1).

Data can be written into or read from the ROM(OTP) like an EPROM by inserting the OTP64155F-100 into the socket of a general PROM writer (note2) before inserting the MSM64P155/155L-GS-K into the socket of the OTP64155F-100. (See the figure 1)

OTP64155F-100

Pin 28

A general PROM writer
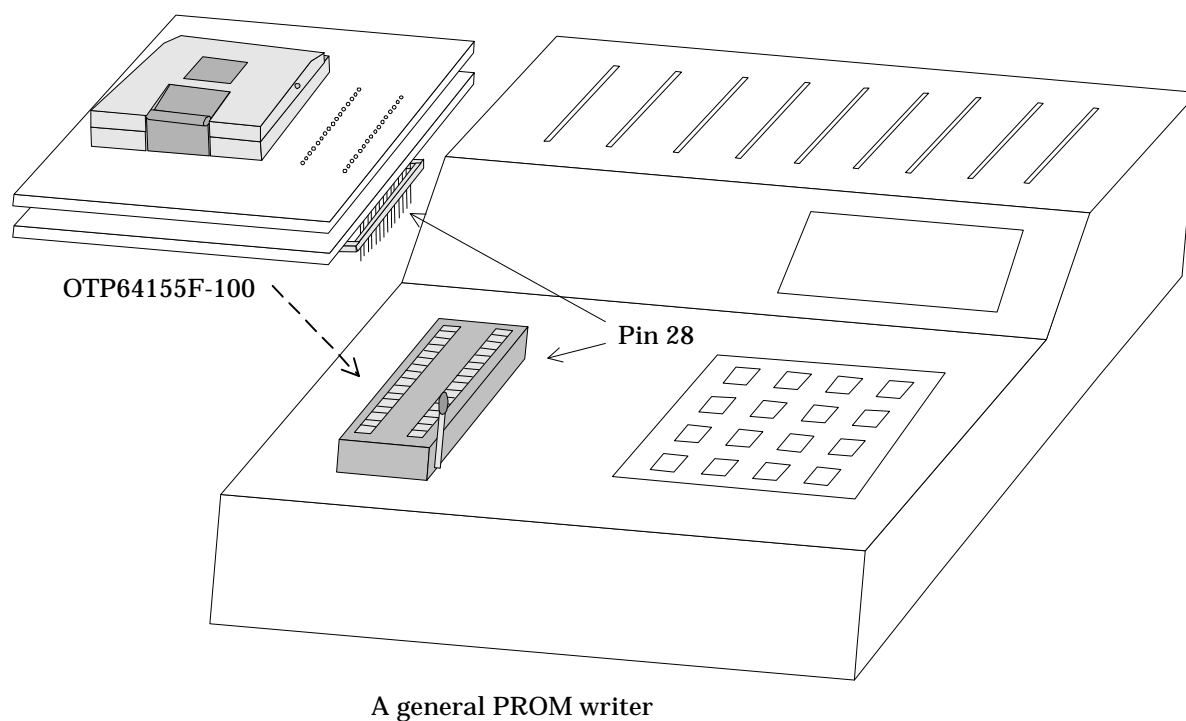
Figure 1. Mounting OTP64155F-100

note1 : We recommend using a PROM writer Model 1866A from MINATO and a PROM writer R4945/TR4943 from ADVANTEST.

note2 : Be sure to insert the OTP64155F-100 into the socket of the general PROM writer in the specified direction as shown in the figure 1 above. Otherwise, the OTP64155F-100 may be damaged.

2. **WRITING PROGRAM DATA**

Turn the SW1 of the OTP64155F-100 to "D".

Make the pin 1 facing to the mark "▲" of the socket when inserting the MSM64P155/155L-GS-K into the socket of the OTP64155F-100. (See the figure 2)

When writing program data (note3), set the ROM type of the PROM writer to the intel fast writing mode (Vpp=12.5V, program pulse width:1ms) for the 27C256 type PROM.

Specify the writing address range to 0000H~1FFFH.

MSM64P155

OTP64155F-100

PIN1

A general PROM writer
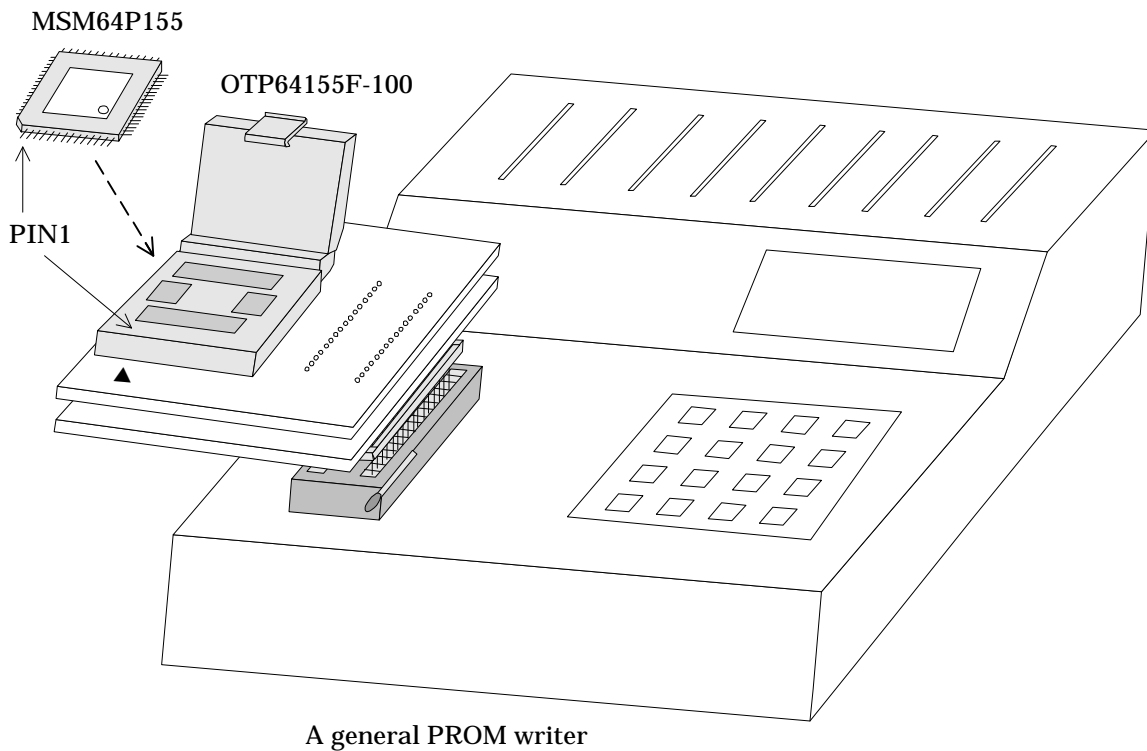
Figure 2. Mounting MSM64P155

note3 : The MSM64P155 dose not contain ID code. Don't set up ID mode (product identification mode) when writing data using a general PROM writer. Otherwise, an error will occur.

3. WRITING SECURITY FLAG

The security flag is used to inhibit reading program data from the MSM64P155/155L-GS-K.

When writing a security flag, write "00" to the address location "0000" after setting the SW1 of the OTP64155F-100 to "S" .

Note that in this case, verification may be impossible and an error may occur in the PROM writer.

[NOTES]

1. Set the SW1 of the OTP64155F-100 to "D" when writing program data.

2. It is impossible to verify the security flag after writing "00" to the security flag. Therefore, when setting a security flag, first write program data after setting the SW1 to "D" . Then write "00" after setting the SW1 to "S". It is impossible to overwrite the existing program data if a new program is written when the SW1 is set to "S".

3. Write program data to the locations 0000H~0FDFH using a PROM writer that can specify the writing address. Data in 0000H~0FDFH may be damaged if data is written into 0FE0~7FFFH.

4. The MSM64P155 is manufactured by using N-well CMOS-structured EPROM process technology whereas a mask ROM is P-wel CMOS-structured. Therefore, in the MSM64P155 the polarity of the power supply for generating an LCD bias is reversed and the structure of the external circuit is different from that of the mask ROM chip. For more information on the MSM64P155, see the MSM64P155 User's Manual.

■ Recommended operating conditions

Parameter	Condition	Rated Value			Unit
		Min	Typ	Max	
Power supply voltage	-	4.75	5.00	5.25	V
Program power supply voltage	Read operation	4.75	5.00	5.25	V
	Programming operation	12.00	12.50	13.50	V
Operating temperature	-	5	-	40	°C
Operating humidity	(without condensation)	30	-	80	%