

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics Corporation

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## 7544 Group

### Termination of Unused Pins

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#### 1. Abstract

The following article introduces and shows the termination of unused pins on the 7544 Group device.

#### 2. Introduction

The explanation of this issue is applied to the following condition:

Applicable MCU: 7544 Group

### 3. Contents

#### 3.1 Termination of Unused Pins

Table 3.1 Termination of Unused Pins

Pin/Port Name	Termination
P0, P1, P2, P3	<ul style="list-style-type: none"> <li>- Set a port to the input mode and connect the port to Vcc or Vss through a 1 k<math>\Omega</math> to 10 k<math>\Omega</math> resistor. The port which can select a built-in pull-up resistor can also use the built-in pull-up resistor.</li> <li>- Set a port to the output mode, and leave the port open at "H" or "L".</li> </ul>
VREF	Connect to Vss (GND).
XIN	When an on-chip oscillator is used as the main clock, connect this pin to Vcc through a 1 k $\Omega$ to 10 k $\Omega$ resistor.
XOUT	<ul style="list-style-type: none"> <li>- When an external clock is used, leave this pin open.</li> <li>- When an on-chip oscillator is used as the main clock, leave this pin open.</li> </ul>

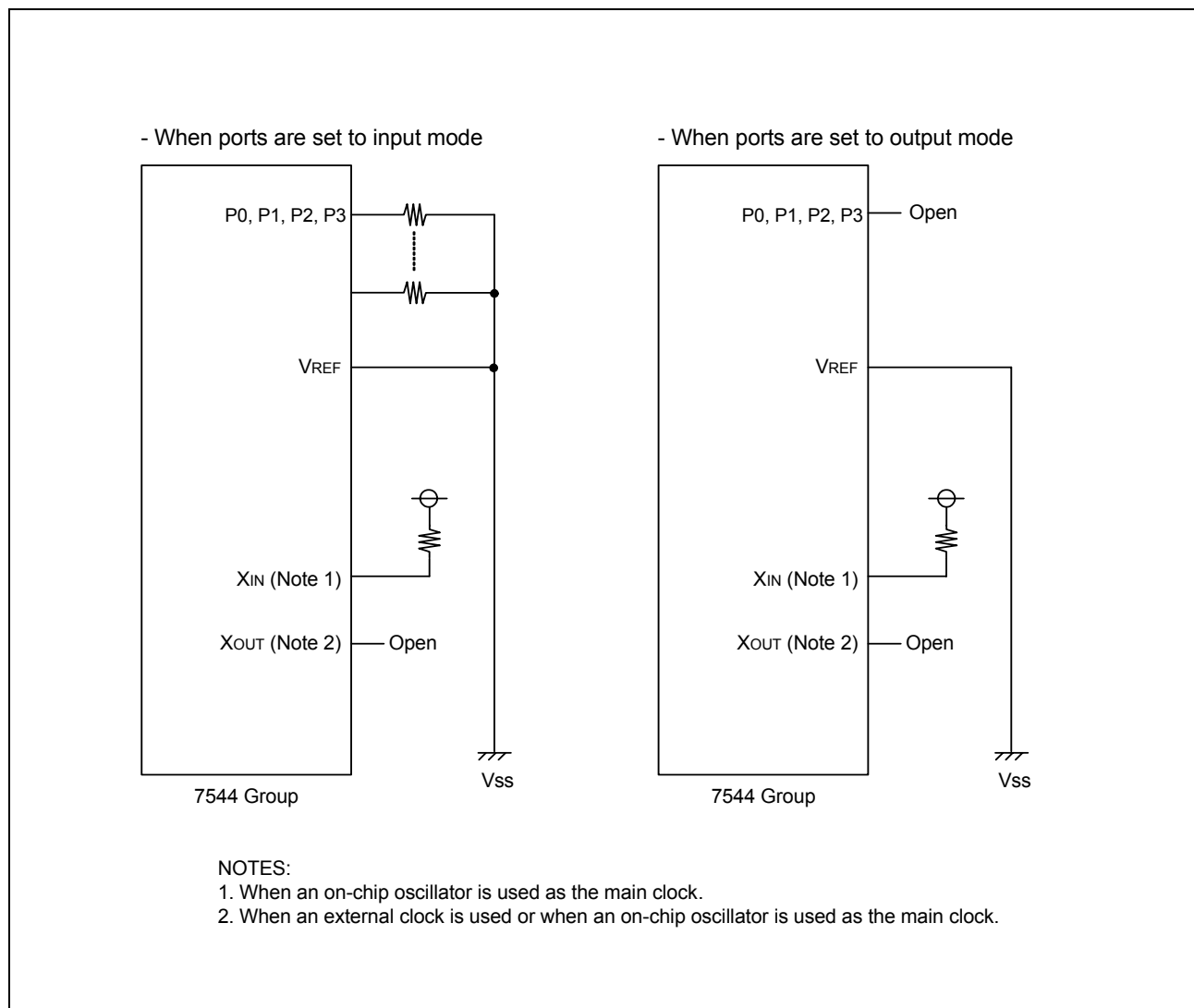


Figure 3.1 Termination Example of Unused Pins

#### 4. Reference

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Data Sheet  
7544 group  
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REVISION HISTORY	7544 Group Termination of Unused Pins Application Note
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Rev.	Date	Description	
		Page	Summary
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