Microcontroller Technical Information

<table>
<tr><td rowspan="4">IE-789456-NS-EM1
In-Circuit Emulator for
μPD789446, μPD789456 Subseries

Usage Restrictions</td><td>Document No.</td><td colspan="2">ZBG-CD-09-0049</td><td>1/1</td></tr>
<tr><td>Date issued</td><td colspan="3">August 31, 2009</td></tr>
<tr><td>Issued by</td><td colspan="3">Development Tool Solution Group
Multipurpose Microcomputer Systems Division
Microcomputer Operations Unit
NEC Electronics Corporation</td></tr>
</table>

Related documents	Notification classification	√	Usage restriction
IE-789456-NS-EM1 User's Manual:			Upgrade
U16289EJ1V0UM00			Document modification
IE-789456-NS-EM1 Operating Precautions: ZUD-CD-09-0176			Other notification

1. Affected product

Product	Outline	Control Code[Note]
IE-789456-NS-EM1	In-circuit emulator for μPD789446, μPD789456 Subseries	A, B

Note The control code is the second digit from the left in the 10-digit serial number in the warranty supplied with the in-circuit emulator you purchased (if it has not been upgraded). If it has been upgraded, a label indicating the new version is attached to the emulator and the *x* in **V-UP LEVEL *x*** on this label indicates the control code.

2. New restriction

Restriction No. 2 (restriction on target interface voltage) has been added. See the attachment for details.

3. Workaround

There is no workaround.

4. Modification schedule

Restriction No. 2 will not be corrected, so regard it as a specification.

5. List of restrictions

See the attachment.

6. Document revision history

Document Number	Issued on	Description
SBG-T-2203	November 1, 2000	1st edition
ZBG-CD-09-0049	August 31, 2009	Addition of restriction (No. 2)

Operating Precautions for IE-789456-NS-EM1

1. Product Version

Control Code**Note**	Supported Devices
A	μPD78F9456 Ver. 1.0 and 1.1
B	μPD78F9456 Ver. 1.0 and 1.1

Note The control code is the second digit from the left in the 10-digit serial number in the warranty supplied with the in-circuit emulator you purchased (if it has not been upgraded). If it has been upgraded, a label indicating the new version is attached to the emulator and the *x* in **V-UP LEVEL *x*** on this label indicates the control code.

2. Restrictions

2.1 List of restrictions

No.	Restrictions	Control Code	
		A	B
1	Restriction on booster operation for LCD feature	$\times$	O
2	Restriction on target interface voltage	Permanent restriction	

$\times$: Restriction applicable, O: Restriction not applicable

2.2 Restriction details

No. 1   Restriction on booster operation for LCD feature

[Description]

  The LCD booster does not run normally during emulation of the LCD feature.

  Even if the voltage boost level while the booster is running is multiplied by 1.5 using the LCD boost control register (LCDVA0), COM and segment pins are only boosted up to the voltage level of the user power supply.

[Workaround]

  There is no workaround.

[Correction]

  This issue has been corrected in IE-789456-NS-EM1 with control code B.

No. 2   Restriction on target interface voltage

[Description]

  If the product is used at a voltage lower than the minimum target interface voltage (V_{DD} = 2.1 V), the operation becomes incorrect.

[Workaround]

  There is no workaround. Use the product at the voltage in the range from 2.1 to 5.5 V.

[Correction]

  This problem will not be corrected, so regard it as a specification.