This document is a compilation of the restrictions of the corresponding products that have already been reported, and will be utilized in the NEC microcomputer technical document browsing service. All the restrictions as of September 18, 2001 are included.

NEC Microcomputer Technical Information

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μPD780308, 780308Y Subseries Usage Restrictions		Document No.	SBG-T-2507-E	1/1
		Date issued	September 18, 2001	
		Issued by	Microcomputer Engineering Dept. Solution Engineering Div. NEC Electron Devices NEC Corporation	
Related documents	User's manual (U14260EJ1V1UM00) Data sheet (U14590EJ1V1DS00) Data sheet (U14258EJ1V0DS00)	Notification classification	√	Usage restriction
				Upgrade
				Document modification
				Other notification

1. Affected products

    μPD780306, 780308, 78P0308

    μPD780306Y, 780308Y, 78P0308Y

    μPD780306(A), 780308(A), 78P0308(A)

2. List of restrictions

    The restriction history and detailed information is described in the attachment.

List of Usage Restrictions in µPD780308 Subseries

1. Product Version

µPD780306, 780308:   Rank K

µPD780306Y, 780308Y: Rank K

µPD780306(A), 780308(A):   Rank K

µPD780306Y(A), 780308Y(A):   Rank K

µPD78P0308, 78P0308Y, 78P0308Y(A): Rank K, E, I

* The rank is indicated by the letter appearing as the 5th digit from the left in the lot number marked on each product.

2. Product History

\<Mask ROM version\>

Description		Rank	UPD780306, 780308 UPD780306Y, 780308Y UPD780306(A), 780308(A) UPD780306Y(A), 780308Y(A)
		Rank	K
Item 1	Restriction on low-voltage operation of CPU		–
Item 2	Restriction on low-voltage operation of LCD display data memory		–
Item 3	Restriction on low-voltage operation of A/D converter		–
Item 4	Restriction on serial interface channel 3		–
Item 5	Restriction on low-voltage operation mode of the LCD display mode register		–
Item 6	Restriction on UART I/O pin selection function		–

<OTP version>

Description		Rank	UPD78P0308GC UPD78P0308GF UPD78P0308YGC UPD78P0308YGF UPD78P0308GC(A) UPD78P0308GF(A) UPD78P0308YGC(A) UPD78P0308YGF(A)			UPD78P0308KL-T UPD78P0308YKL-T	
			K	E		I	
				*1	*2	*3	*4
Item 1	Restriction on low-voltage operation of CPU		×	×	√	×	√
Item 2	Restriction on low-voltage operation of LCD display data memory		×	√	√	×	√
Item 3	Restriction on low-voltage operation of A/D converter		×	×	√	×	√
Item 4	Restriction on serial interface channel 3		×	√	√	×	√
Item 5	Restriction on low-voltage operation mode of the LCD display mode register		×	√	√	×	√
Item 6	Restriction on UART I/O pin selection function		×	√	√	×	√

*1 A product with a lot number whose first four characters are smaller than 9920.

*2 A product with a lot number whose first four characters are larger than 9920.

*3 A product with a lot number whose first four characters are smaller than 9912.

*4 A product with a lot number whose first four characters are larger than 9912.

Notes 1. The rank is indicated by the fifth character from the left in the lot number marked on the package.

2. The meaning of each symbol is as follows.

−: Restriction does not apply

√: Restriction already corrected

×: Restriction applies (correction is planned)

∆: Restriction applies (correction is not planned)

3. Details of Usage Restrictions

Item 1: Refer to Attachment 2 for details.
Item 2: Refer to Attachment 3 for details.
Item 3: Refer to Attachment 4 for details.
Item 4: Refer to Attachment 5 for details.
Item 5: Refer to Attachment 6 for details.
Item 6: Refer to Attachment 7 for details.

4. Other Cautions

None.

Item 1. Restriction on low-voltage operation of CPU

[Description]

The CPU cannot be operated at a low voltage.

The CPU can operate with a voltage of $2.7 \leq VDD \leq 5.5$.

<Original specification>

   The CPU can operate with a voltage of $2.0 \leq VDD \leq 5.5$

[Workaround]

Use the CPU with a voltage of $2.7 \leq VDD \leq 5.5$.

[Action]

The device will be corrected.

Item 2. Restriction on low-voltage operation of LCD display data memory

[Description]

If the instructions listed in the table below are used for the LCD display data memory (FA58 to FA7F), the instruction may not be executed correctly.

Note that even in this case, the LCD display can operate correctly.

Instructions that cannot be used for LCD data memory

Mnemonic	Operand	Mnemonic	Operand
MOV	A, !addr16 A, [DE] A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]	AND	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]
XCH	A, !addr16 A, [DE] A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]	OR	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]
MOVW	AX, !addr16	XOR	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]
ADD	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]		
ADDC	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]	CMP	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]
SUB	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]	MOV1	CY, [HL].bit [HL].bit, CY
		AND1'	CY, [HL].bit
		OR1	CY, [HL].bit
SUBC	A, !addr16 A, [HL] A, [HL+byte] A, [HL+B] A, [HL+C]	XOR1	CY, [HL].bit
		SET1	[HL].bit
		CLR1	[HL].bit
ROR4	[HL]	BT	[HL].bit, $addr16
ROL4	[HL]		

[Workaround]

Do not use the instructions listed above for the LCD display data memory (FA58 to FA7F).

[Action]

The device will be corrected.

Item 3. Restriction on low-voltage operation of A/D converter

[Description]

Use the A/D converter with a voltage of VDD1 = VDD2 = AVRE = 4.0 V or higher; otherwise the conversion accuracy is considerably degraded.

[Action]

The device will be corrected.

Item 4. Restriction on serial interface channel 3

[Description]

Serial interface channel 3 cannot be used.

[Action]

The device will be corrected.

Item 5. Restriction on low-voltage operation mode of the LCD display mode register

[Description]

The low-voltage operation mode cannot be selected by the LCD display mode register (bit 3 of the LCDM register). Set bit 3 of the LCDM register to 0.

[Action]

The device will be corrected.

Item 6. Restriction on UART I/O pin selection function

[Description]

The I/O pin cannot be selected by the UART I/O pin selection function (SIPS register).

Other functions of serial interface channel 2 operate correctly.

[Action]

The device will be corrected.