Date: Oct. 1, 2014

RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RL*-A034A/E	Rev.	1.00
Title	Correction for Incorrect Description Notice RL78/G10 Descriptions in the Hardware User's Manual Rev. 2.00 Changed		Information Category	Technical Notification		
Applicable Product	RL78/G10 R5F10Yxxx	Lot No. All lots	Reference Document	RL78/G10 User's Manual: Hardware Rev.2.00 R01UH0384EJ0200 (Dec. 2013)		

This document describes misstatements found in the RL78/G10 User's Manual: Hardware Rev.2.00 (R01UH0384EJ0200).

Corrections

Applicable Item	Applicable Page	Contents
RL78/G10 add products for Industrial applications(D) 1.2 List of Part Numbers	Page 3	Add item
20.3.1P40/TOOL0 pin	Page 551	Incorrect descriptions revised
24.6.6Data retention power supply voltage characteristics	Page 601	Content change
25 Package Drawings 25.2 16-pin products	Page 605	Incorrect descriptions revised

Document Improvement

The above corrections will be made for the next revision of the User's Manual: Hardware.

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Corrections in the User's Manual: Hardware

No.	Corrections and Applicable Items			Pages in this document for corrections
		Document No.	English	R01UH0384EJ0200
1	RL78/G10 add products for Industrial applications(D) 1.2 List of Part Numbers		Page 3	Page 3 Page4
2	20.3.1P40/TOOL0 pin		Page 551	Page 5
3	24.6.6Data retention power supply voltage characteristics		Page 601	Page 6
4	25 Package Drawings 25.2 16-pin products		Page 605	Page 7

Incorrect: Bold with underline; Correct: Gray hatched

Revision History

RL78/G10 User's Manual: Hardware Rev.2.00 Correction for Incorrect Description Notice

Document Number	Date	Description
TN-RL*-A034A/E	Oct. 1, 2014	First edition issued No.1 to 4 in corrections (This notice)

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1. RL78/G10 add Industrial applications (D)

1.2 List of Part Numbers (Page 3)

Add)

1.2 List of Part Numbers

Figure 1-1. Part Number, Memory Size, and Package of RL78/G10

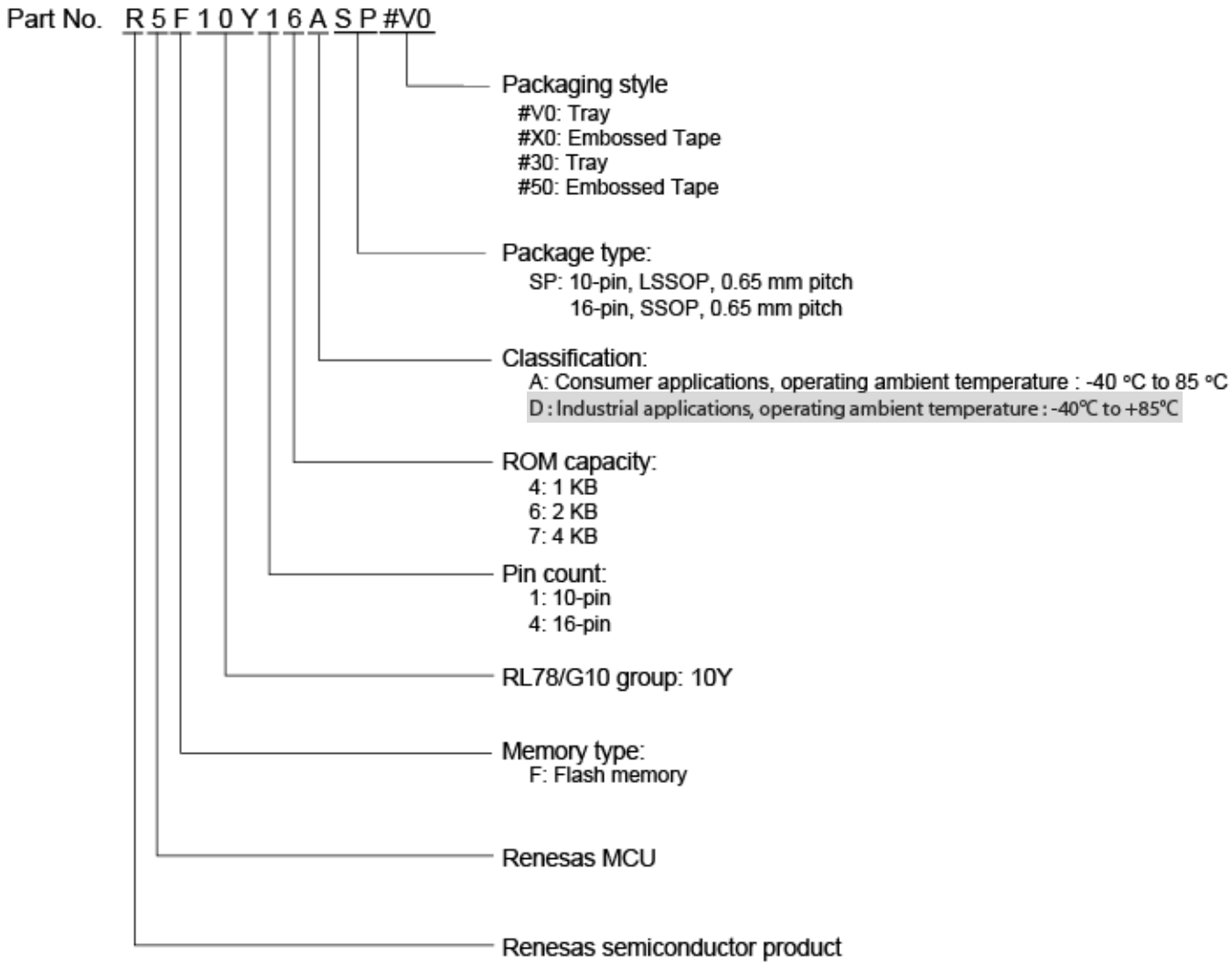

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Table 1-1.List of Ordering Part Numbers

Pin count	Package	Fields of Application Note1	Part Number
10 pins	10-pin plastic LSSOP (4.4 × 3.6 mm, 0.65 mm pitch)	A	R5F10Y17ASP#30, R5F10Y17ASP#50 R5F10Y16ASP#V0, R5F10Y16ASP#X0 R5F10Y14ASP#V0, R5F10Y14ASP#X0
		D Note2	R5F10Y17DSP#30, R5F10Y17DSP#50 R5F10Y16DSP#V0, R5F10Y16DSP#X0 R5F10Y14DSP#V0, R5F10Y14DSP#X0
16 pins	16-pin plastic SSOP (4.4 × 5.0 mm, 0.65 mm pitch)	A	R5F10Y47ASP#30, R5F10Y47ASP#50 R5F10Y46ASP#30, R5F10Y46ASP#50 R5F10Y44ASP#30, R5F10Y44ASP#50
		D Note2	R5F10Y47DSP#30, R5F10Y47DSP#50 R5F10Y46DSP#30, R5F10Y46DSP#50 R5F10Y44DSP#30, R5F10Y44DSP#50

Note 1. For the fields of application, refer to Figure 1-1 Part Number, MemorySize, and Package of RL78/G13.

2. Under development

Caution The part numbers represents the number at the time of publication.

Be sure to review the latest part number through the target product page in the Renesas Electronics website

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2. 20.3.1 P40/TOOL0 pin(Page 551)

Old:

In the flash memory programming mode, pull up externally with a 1 KΩ resister, and connect it to the dedicated flash memory programmer.
When the P40/TOOL0 pin is in use as a port pin, if release from the reset state proceeds while the level on the P40 pin is low, the reset processing time increases by several hundred ms and the value returned in RESF on release from the reset state is 10H.

Remark The SAU and IICA pins are not used for communication between the RL78 microcontroller and dedicated flash memory programmer, because single-line UART (TOOL0 pin) is used.

New:

In the flash memory programming mode, pull up externally with a 1 KΩ resister, and connect it to the dedicated flash memory programmer.
When this pin is used as the port pin, use that by the following method.
When used as an input pin: Input of low-level is prohibited for t_{HD} period after external pin reset release. However, when this pin is used via pull-down resistors, use the 500 kΩ or more resistors.

Remarks 1. t_{HD}: How long to keep the TOOL0 pin at the low level from when the external and internal resets end for setting of the flash memory programming mode (see 24.9 Timing of Entry to Flash Memory Programming Modes)

2. The SAU and IICA pins are not used for communication between the RL78 microcontroller and dedicated flash memory programmer, because single-line UART (TOOL0 pin) is used.

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3.24.6 Analog Characteristics (Page601)

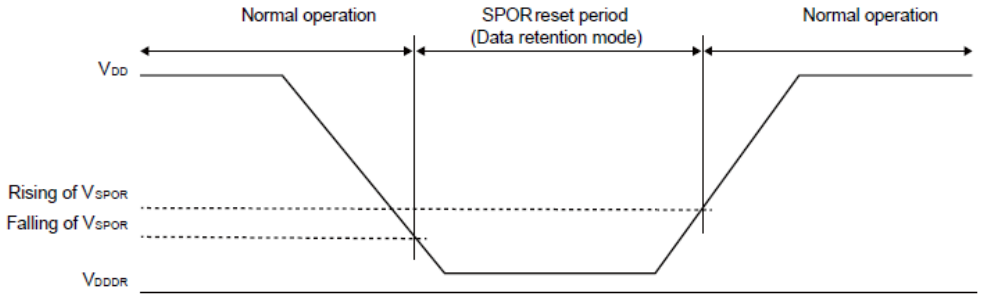
Old:

24.6.6 Data retention power supply voltage characteristics

(T_A = –40 to +105°C, V_{SS} = 0 V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Data retention supply voltage	V_{DDDR}		1.9		5.5	V

Caution Data in the RESF register is retained until the power supply voltage becomes under the minimum value of the data retention power supply voltage (V_{DDDR}).Note that data in the RESF register might not be cleared even if the power supply voltage becomes under the minimum value of the data retention power supply voltage (V_{DDDR}).



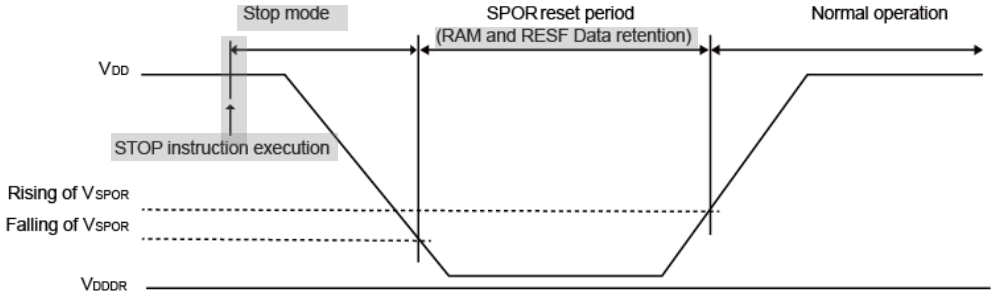
New:

24.6.6 RAM Data Retention Characteristics

(T_A = –40 to +105°C, V_{SS} = 0 V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Data retention supply voltage	V_{DDDR}		1.9		5.5	V

Caution Data in the RAM is retained until the power supply voltage becomes under the minimum value of the data retention power supply voltage (V_{DDDR}).Note that data in the RESF register might not be cleared even if the power supply voltage becomes under the minimum value of the data retention power supply voltage (V_{DDDR}).



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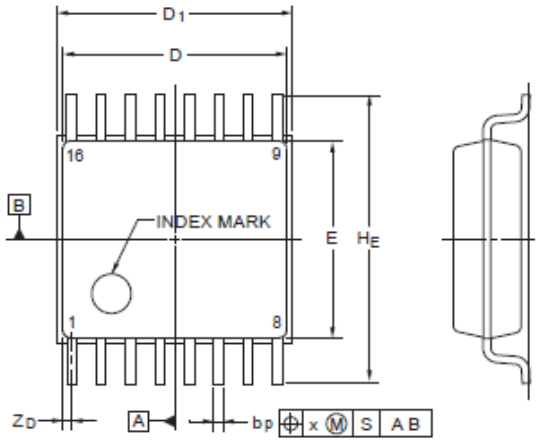
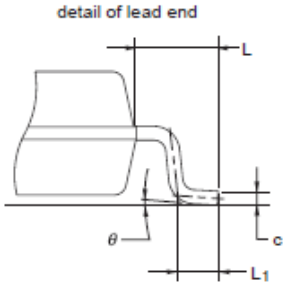
4.25 PACKAGE DRAWINGS (Page605)

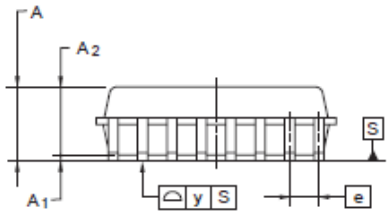
Old:

25.2 16-pin products

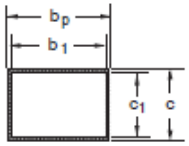
JEITA Package code	RENESAS code	Previous code	MASS(TYP.)[g]
P-SSOP16-4.4x5-0.65	PRSP0016JC-B	P16MA-65-FAB	0.08







Terminal cross section

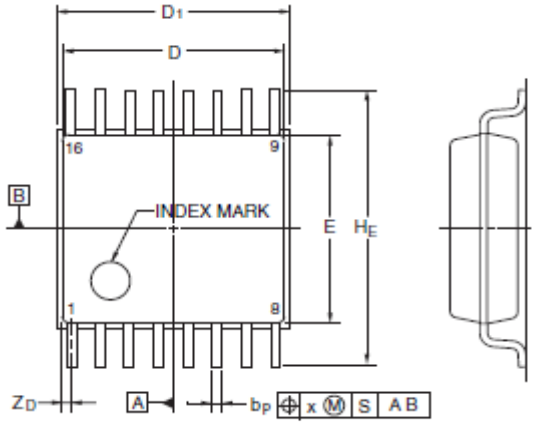


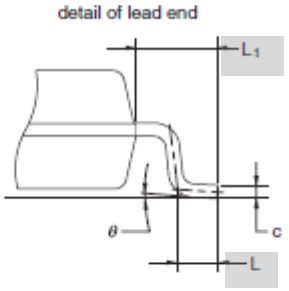
Referance Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	4.85	5.00	5.15
D_1	5.05	5.20	5.35
E	4.20	4.40	4.60
A_2	—	1.50	—
A_1	0.075	0.125	0.175
A	—	—	1.725
b_p	0.17	0.24	0.32
b_1	—	0.22	—
c	0.14	0.17	0.20
c_1	—	0.15	—
θ	0°	—	8°
H_E	6.20	6.40	6.60
e	—	0.65	—
x	—	—	0.13
y	—	—	0.10
Z_D	—	0.225	—
L	0.35	0.50	0.65
L_1	—	1.00	—

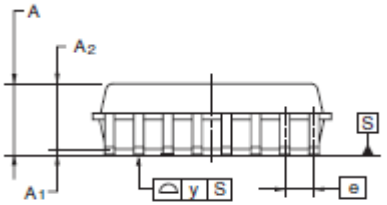
New:

25.2 16-pin products

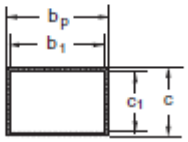
JEITA Package code	RENESAS code	Previous code	MASS(TYP.)[g]
P-SSOP16-4.4x5-0.65	PRSP0016JC-B	P16MA-65-FAB-1	0.08







Terminal cross section



Referance Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	4.85	5.00	5.15
D_1	5.05	5.20	5.35
E	4.20	4.40	4.60
A_2	—	1.50	—
A_1	0.075	0.125	0.175
A	—	—	1.725
b_p	0.17	0.24	0.32
b_1	—	0.22	—
c	0.14	0.17	0.20
c_1	—	0.15	—
θ	0°	—	8°
H_E	6.20	6.40	6.60
e	—	0.65	—
x	—	—	0.13
y	—	—	0.10
Z_D	—	0.225	—
L	0.35	0.50	0.65
L_1	—	1.00	—

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