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RENESAS TECHNICAL UPDATE

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Product Category	MPU & MCU		Document No.	TN-RX*-A090A/E	Rev.	1.00
Title	Restriction on AVCC0 in the RX111 Group		Information Category	Technical Notification		
Applicable Product	RX111 Group	Lot No. All	Reference Document	RX111 Group User's Manual: Hardware Rev.1.00 (R01UH0365EJ0100)		

This document describes a restriction on the operating conditions for AVCC0 in RX111 Group User's Manual: Hardware.

1. Restriction

Set the voltage for the AVCC0 pin to the same voltage as the VCC pin.

2. Corrections to the Manual

Since the above restriction is added, descriptions in the manual are corrected as follows.

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Descriptions in 30.7.10 are corrected as follows:

Before correction

•Relationship between power supply pin pairs (AVCC0–AVSS0, VREFH0–VREFL0, VCC–VSS)
Relationship between AVSS0 and VSS: AVSS0 = VSS. A 0.1-µF capacitor should be connected between each pair of power supply pins to create a closed loop with the shortest rout possible as shown in Figure 30.16, and connection should be made so that the following conditions are satisfied at the supply side.
VREFL0 = AVSS0 = VSS
When the A/D converter is not used, the following conditions should be satisfied.
VREFH0 = AVCC0 = VCC and VREFL0 = AVSS0 = VSS

After correction

•Relationship between power supply pin pairs (AVCC0–AVSS0, VREFH0–VREFL0, VCC–VSS)
The following conditions should be satisfied: AVCC0 = VCC, and AVSS0 = VSS. A 0.1-µF capacitor should be connected between each pair of power supply pins to create a closed loop with the shortest route possible as shown in Figure 30.16, and connection should be made so that the following conditions are satisfied at the supply side.
VREFL0 = AVSS0 = VSS
When the A/D converter is not used, the following conditions should be satisfied.
VREFH0 = AVCC0 = VCC and VREFL0 = AVSS0 = VSS

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Table 36.2 is corrected as follows:

Before correction

Table 36.2 Recommended Operating Voltage Conditions

Item	Symbol	Value	Unit
Recommended operating voltage conditions	VCC, VCC_USB*1	1.8 to 3.6 (during no USB communication) 3.0 to 3.6 (during USB communication)	V
	AVCC0*2	1.8 to 3.6	V

Note 1. Set VCC and VCC_USB to the same potential. Also, set VSS, AVSS0, and VSS_USB to the same potential.
Note 2. AVCC0 and VCC can be set individually within the operating range. For details, 30.7.10 Voltage Range of Analog Power Supply Pins.

After correction

Table 36.2 Operating Conditions

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Power supply voltage	VCC	The USB is not used.	1.8	—	3.6	V
		The USB is used.	3.0	—	3.6	V
	VSS		—	0	—	V
USB power supply voltage	VCC_USB		—	VCC	—	V
	VSS_USB		—	0	—	V
Analog power supply voltage	AVCC0 *1		—	VCC	—	V
	AVSS0		—	0	—	V

Note 1. For details, refer to section 30.7.10, Voltage Range of Analog Power Supply Pins.