

RENESAS TECHNICAL UPDATE

TOYOSU FORESIA, 3-2-24, Toyosu, Koto-ku, Tokyo 135-0061, Japan
Renesas Electronics Corporation

Product Category	MPU/MCU		Document No.	TN-RX*-A0269A/E	Rev.	1.00
Title	RX13T Group, RX140 Group, RX23E-A Group; Correction of Note Regarding the Specification of the Decoupling Capacitance for Stabilizing the Internal Voltage		Information Category	Technical Notification		
Applicable Product	RX13T Group, RX140 Group, RX23E-A Group	Lot No.	Reference Document	User's Manual: Hardware for applicable products (refer to Reference Documents below)		
		All				

This document describes a correction to a note on the decoupling capacitance required for stabilizing the internal voltage in User's Manual: Hardware for the applicable products.

The page and table numbers, and descriptions are based on those of the manual for the RX13T Group. Refer to Reference Documents below for the corresponding page and table numbers in the manuals for other groups.

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The corrections are made as follows.

Before correction

Table 32.3 Recommended Operating Conditions (2)

Item	Symbol	Value
Decoupling capacitance to stabilize the internal voltage	C_{VCL}	$4.7 \mu\text{F} \pm 3.0\%^{11}$

Note 1. Use a multilayer ceramic capacitor **whose** nominal capacitance **is** $4.7 \mu\text{F}$ **and a** capacitance tolerance **is** $\pm 30\%$ **or better**.

After correction

Table 32.3 Recommended Operating Conditions (2)

Item	Symbol	Value
Decoupling capacitance for stabilizing the internal voltage	C_{VCL}	$4.7 \mu\text{F} \pm 30\%^{11}$

Note 1. Use a multilayer ceramic capacitor **with a** nominal capacitance **of** $4.7 \mu\text{F}$, **for which the sum of the** capacitance tolerance **and change in the capacitance under the usage conditions will be no greater than** $\pm 30\%$.

•Reference Documents

Group	Manual Title (Document Number)	Page	Table
RX13T Group	RX13T Group User's Manual: Hardware Rev.1.10 (R01UH0822EJ0110)	Page 995 of 1055	Table 32.3
RX140 Group	RX140 Group User's Manual: Hardware Rev.1.10 (R01UH0905EJ0110)	Page 1441 of 1536	Table 42.3
RX23E-A Group	RX23E-A Group User's Manual: Hardware Rev.1.20 (R01UH0749EJ0120)	Page 1342 of 1428	Table 39.3