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RENESAS TECHNICAL UPDATE

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Product Category	MPU & MCU		Document No.	TN-RX*-A087A/E	Rev.	1.00
Title	Changes to Specifications of the LOCO Clock Oscillation Frequency in the RX210 Group		Information Category	Technical Notification		
Applicable Product	69-Pin WLBGA in the RX210 Group Part number: R5F52106BDBM, R5F52105BDBM	Lot No. All	Reference Document	RX210 Group User's Manual: Hardware Rev.1.50 (R01UH0037EJ0150)		

This document describes changes to specifications of the LOCO clock oscillation frequency for the 69-pin WLBGA package in the RX210 Group.

1. Specification Changes

The maximum and minimum values of the LOCO clock oscillation frequency for the applicable products are changed as follows:

Before change

Item	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
LOCO clock oscillation frequency	f_{LOCO}	—	125	—	kHz	

After change

Item	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
LOCO clock oscillation frequency	f_{LOCO}	112.5	125	137.5	kHz	

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2. Changes to the Manual

With the above specification changes, Table 42.44 on page 1524 of RX210 Group User's Manual: Hardware is changed as follows:

Before change

Table 42.44 Clock Timing

Conditions: VCC = AVCC0 = 1.62 to 5.5 V, VSS = AVSS0 = VREFL = VREFL0 = 0 V, T_a = -40 to +105°C

Item	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
omitted						
LOCO clock oscillation frequency*6	f_{LOCO}	112.5	125	137.5	kHz	
LOCO clock oscillation stabilization wait time	t_{LOCOWT}	—	—	20	µs	Figure 42.62
HOCO clock oscillation frequency*7	f_{HOCO}	31.680	32	32.320	MHz	Ta = 0 to 50°C
		36.495	36.864	37.233		
		39.600	40	40.400		
		49.500	50	50.500		
		31.520	32	32.480		Ta = -40 to 105°C
		36.311	36.864	37.417		
		39.400	40	40.600		
		49.250	50	50.750		
omitted						

omitted

Note 6. There is no minimum or maximum value for 69-pin WLBGA.
Note 7. Characteristic value before mounting on the board for 69-pin WLBGA.

After change

Table 42.44 Clock Timing

Conditions: VCC = AVCC0 = 1.62 to 5.5 V, VSS = AVSS0 = VREFL = VREFL0 = 0 V, T_a = -40 to +105°C

Item	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
omitted						
LOCO clock oscillation frequency	f_{LOCO}	112.5	125	137.5	kHz	
LOCO clock oscillation stabilization wait time	t_{LOCOWT}	—	—	20	µs	Figure 42.62
HOCO clock oscillation frequency*6	f_{HOCO}	31.680	32	32.320	MHz	Ta = 0 to 50°C
		36.495	36.864	37.233		
		39.600	40	40.400		
		49.500	50	50.500		
		31.520	32	32.480		Ta = -40 to 105°C
		36.311	36.864	37.417		
		39.400	40	40.600		
		49.250	50	50.750		
omitted						

omitted

Note 6. Characteristic value before mounting on the board for 69-pin WLBGA.