

# RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RX*-A121A/E	Rev.	1.00
Title	Add restrictions for falling time of input signal		Information Category	Technical Notification		
Applicable Product	RX62T Group RX62G Group RX63T Group		Lot No.	Reference Document	RX62T Group、RX62G Group User's Manual: Hardware Rev.2.00 (R01UH0034EJ0200) RX63T Group User's Manual: Hardware Rev.2.10 (R01UH0238EJ0210)	
			All lots			

We have identified some restrictions of input signal as the followings are added.

## ■Restrictions for falling time of input signal

The tables below show added restrictions for falling time of input signal.

### RX62T Group, RX62G Group

Item		Symbol	min	typ	max	Unit	Condition
MTU3	Input capture input fall time	$t_{TICTF}$	—	—	0.1	us/V	When Input capture at rising edge, or Input capture at both edges is selected.
	Timer clock input fall time	$t_{TOKTF}$	—	—	0.1	us/V	
GPT	Input capture input fall time	$t_{GTICTF}$	—	—	0.1	us/V	When Input capture at rising edge, or Input capture at both edges is selected. When Count operation is started at rising edge, or Count operation is started at both edges is selected. When Count operation is stopped at rising edge, or Count operation is stopped at both edges is selected. When Counter is cleared at rising edge, or Counter is cleared at both edges is selected.
	External trigger input fall time	$t_{GTETRGTF}$	—	—	0.1	us/V	When Count operation is started at rising edge, or Count operation is started at both edges is selected. When Count operation is stopped at rising edge, or Count operation is stopped at both edges is selected. When Counter is cleared at rising edge, or Counter is cleared at both edges is selected.
SCI	Receive data fall time	$t_{TICTF}$	—	—	0.1	us/V	When Noise Cancellation Function is not used.
RSPI	RSPCK clock fall time	Input $t_{SPCKF}$	—	—	0.1	us/V	

### RX63T Group 【144/120/112/100 Pins】

Item		Symbol	min	typ	max	Unit	Condition
MTU3	Input capture input fall time	$t_{TICTF}$	—	—	0.1	us/V	When Input capture at rising edge, or Input capture at both edges is selected.
	Timer clock input fall time	$t_{TOKTF}$	—	—	0.1	us/V	
GPT	Input capture input fall time	$t_{GTICTF}$	—	—	0.1	us/V	When Input capture at rising edge, or Input capture at both edges is selected. When Count operation is started at rising edge, or Count operation is started at both edges is selected. When Count operation is stopped at rising edge, or Count operation is stopped at both edges is selected. When Counter is cleared at rising edge, or Counter is cleared at both edges is selected.
	External trigger input fall time	$t_{GTETRGTF}$	—	—	0.1	us/V	When Count operation is started at rising edge, or Count operation is started at both edges is selected. When Count operation is stopped at rising edge, or Count operation is stopped at both edges is selected. When Counter is cleared at rising edge, or Counter is cleared at both edges is selected.
SCI	Receive data fall time	$t_{TICTF}$	—	—	0.1	us/V	When Noise Cancellation Function is not used.
RSPI	RSPCK clock fall time	Input $t_{SPCKF}$	—	—	0.1	us/V	
CAC	CACREF input fall time	$t_{CACREFTF}$	—	—	0.1	us/V	

There is no restriction for rising time of input signal.

■Applicable device

All RX62T Group, RX62G Group all products

All RX63T Group 144pins/120pins/112pins/100pins products

■Permanent Countermeasure

Corrections to eliminate the above limitations are under discussion.