

RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RX*-A161A/E	Rev.	1.00
Title	Note on the Output Protection Function of the General PWM Timer (GPT) in the RX600 Series and RX700 Series		Information Category	Technical Notification		
Applicable Product	RX62T Group, RX62G Group, RX63T Group, RX64M Group, RX71M Group	Lot No.	Reference Document	User's Manual: Hardware for the applicable products (see the list of reference documents for details)		
		All				

This document describes a note regarding the output protection function of the general PWM timer (GPT) that is incorporated in the products listed above.

Note:

The output protection of the GPT is performed when the GTCCRA register is set to 0000h or a value greater than or equal to that set in the GTPR register while the automatic dead time setting function is enabled in triangle-wave PWM mode. However, the value of the GTCCRA register satisfies one of the following conditions when a buffer transfer is performed, the output protection is not performed normally.

- The GTCCRA value was greater than or equal to $[GTPR + GTDVD - 1]$ when a buffer transfer is performed at a crest, or
- The GTCCRA value was equal to the GTPR value and the GTDVU value is equal to $[GTPR - 1]$ when a buffer transfer is performed at a trough.

Measure:

Set the value of the GTCCRA, GTDVU, GTDVD, and GTPR registers such that the following conditions are all satisfied even if a value greater than or equal to that set in the GTPR register may be set in the GTCCRA register.

- The GTCCRA value is smaller than $[GTPR + GTDVD - 1]$ when a buffer transfer is performed at a crest, and
- The GTDVU value is smaller than $[GTPR - 1]$ when the GTCCRA value may be equal to that of the GTPR value when a buffer transfer is performed at a trough.

Reference Documents

Group	Document	Rev.	Document Number
RX62T Group RX62G Group	RX62T Group, RX62G Group User's Manual: Hardware	2.00	R01UH0034EJ0200
RX63T Group	RX63T Group User's Manual: Hardware	2.20	R01UH0238EJ0220
RX64M Group	RX64M Group User's Manual: Hardware	1.00	R01UH0377EJ0100
RX71M Group	RX71M Group User's Manual: Hardware	1.00	R01UH0493EJ0100

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