



SIM8200 M2 Series Module TDD_SYNC_PPS Signal Test Guidelines

5G Module

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Contents

1	Introduction.....	7
1.1	TDD_SYNC_PPS Signal Output.....	7
1.1.1	TDD_SYNC_PPS Signal Test Point on the SIM8200-M2-EVB.....	8
1.1.2	TDD_SYNC_PPS Signal Test Point on the SIM8300-M2-EVB.....	9
1.2	SA/NSA TX(DL) and RX(UL) Duty Cycle Signal Output.....	11

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Table Index

Table 1: Pin description.....	7
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Figure Index

Figure 1: TDD_SYNC_PPS signal output PIN of M2 interface.....	7
Figure 2: Remove the R121 of the SIM8200-M2-EVB2.....	8
Figure 3: TDD_SYNC_PPS signal test point of SIM8300G-M2-EVB.....	9
Figure 4: TDD_SYNC_PPS signal test point of SIM8300-M2-EVB.....	10
Figure 5: SIM8200-M2-EVB2(PN: S2-108RC).....	11
Figure 6: SIM8300G-M2-EVB(PN:S2-109W3).....	12
Figure 7: SIM8300-M2-EVB (PN:S2-109WN).....	13

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1 Introduction

1.1 TDD_SYNC_PPS Signal Output

SIM8200 M.2 series modules choose PIN26 of M2 interface output the TDD_SYNC_PPS signal, as shown in the following figure.

Before testing TDD_SYNC_PPS signal, firstly, connect 5G SA/NSA (**Under TDD mode**), and then send AT command “**AT+C5GTDDCFG="time_sync_pulse",1025,10,100**”, the TDD_SYNC_PPS signal wave output by PIN26 of the module. About TDD_SYNC_PPS signal AT command more details, please refer to SIM8200 Series_AT Command Manual.

Table 1: Pin description

Pin name	Pin no.	Electrical description	Description
TDD_SYNC_PPS (1PPS_OUT)	26	1.8V DO	TDD_SYNC_PPS signal output

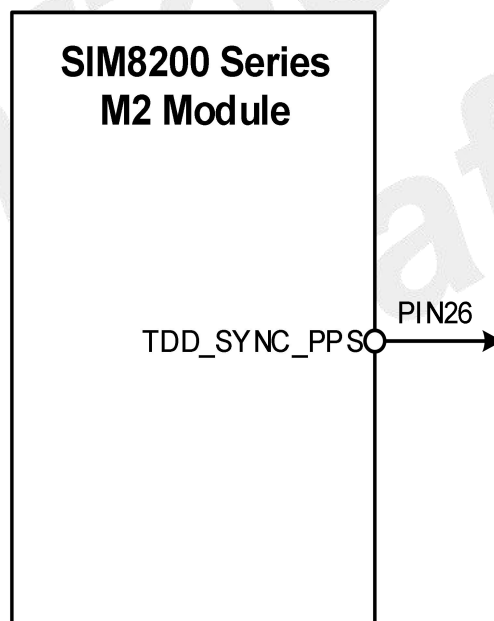


Figure 1: TDD_SYNC_PPS signal output PIN of M2 interface

NOTE

The TDD_SYNC_PPS pin also can be configured GPS_1PPS signal output by software, the TDD_SYNC_PPS and GPS_1PPS two functions can't be used at the same time.

1.1.1 TDD_SYNC_PPS Signal Test Point on the SIM8200-M2-EVB

The following figure is SIM8200-M2-EVB2 (PN: **S2-108RC**) TDD_SYNC_PPS test point. The R121 must be removed before testing TDD_SYNC_PPS signal, as shown in the following.

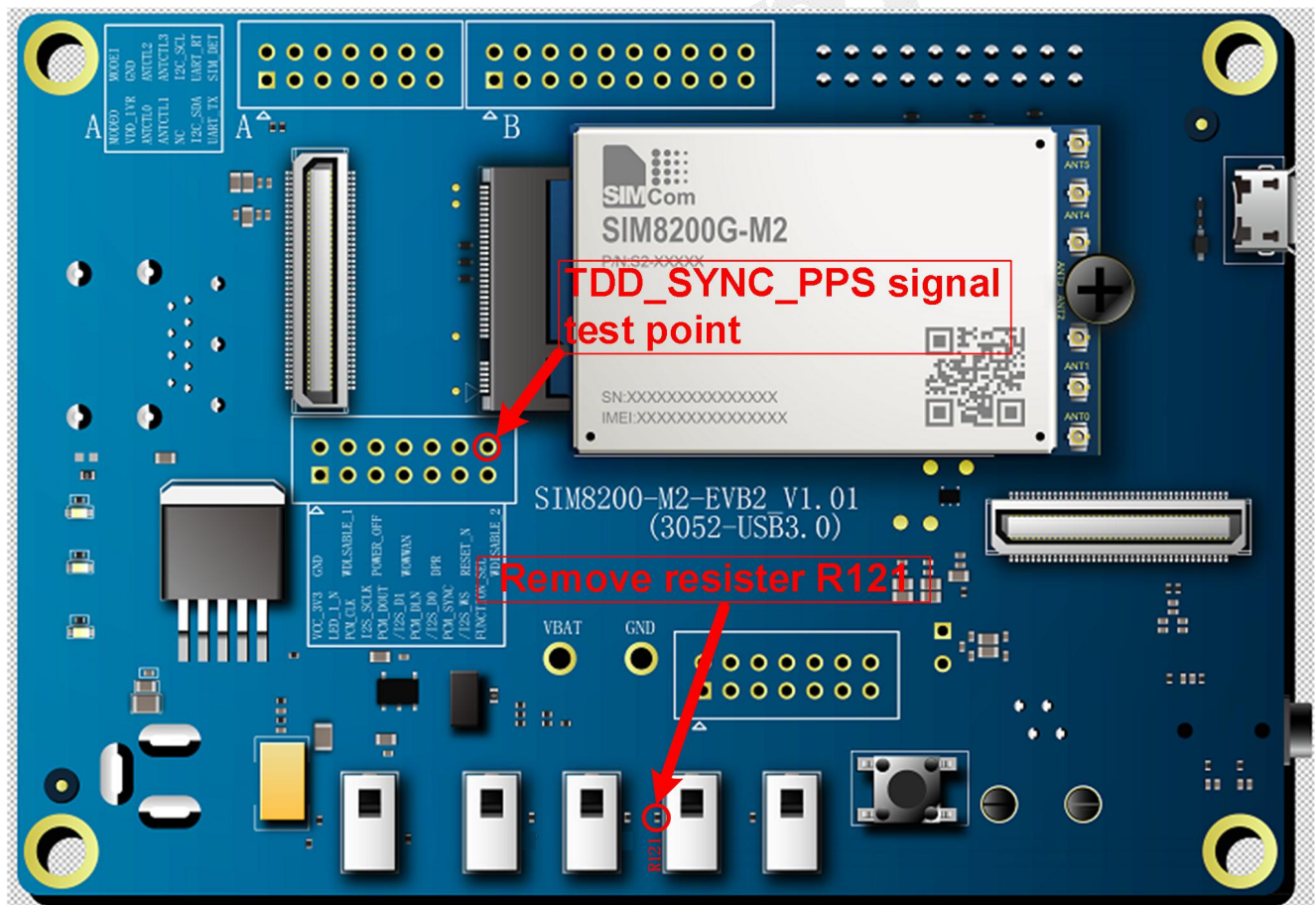


Figure 2: Remove the R121 of the SIM8200-M2-EVB2

1.1.2 TDD_SYNC_PPS Signal Test Point on the SIM8300-M2-EVB

The following figure is SIM8300G-M2-EVB (PN:**S2-109W3**) TDD_SYNC_PPS test point.

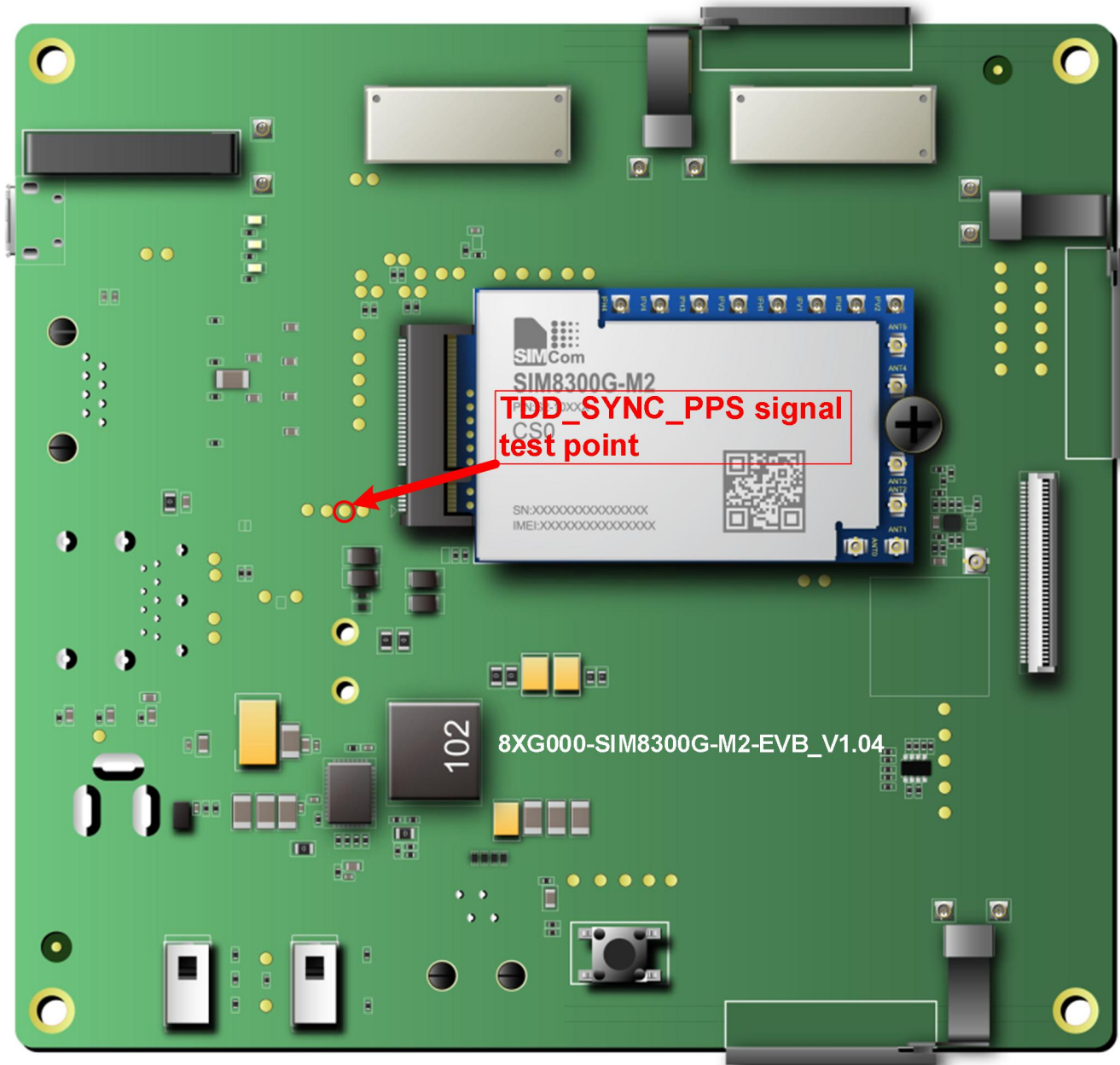


Figure 3: TDD_SYNC_PPS signal test point of SIM8300G-M2-EVB

The following figure is SIM8300-M2-EVB (PN:**S2-109WN**) TDD_SYNC_PPS test point.

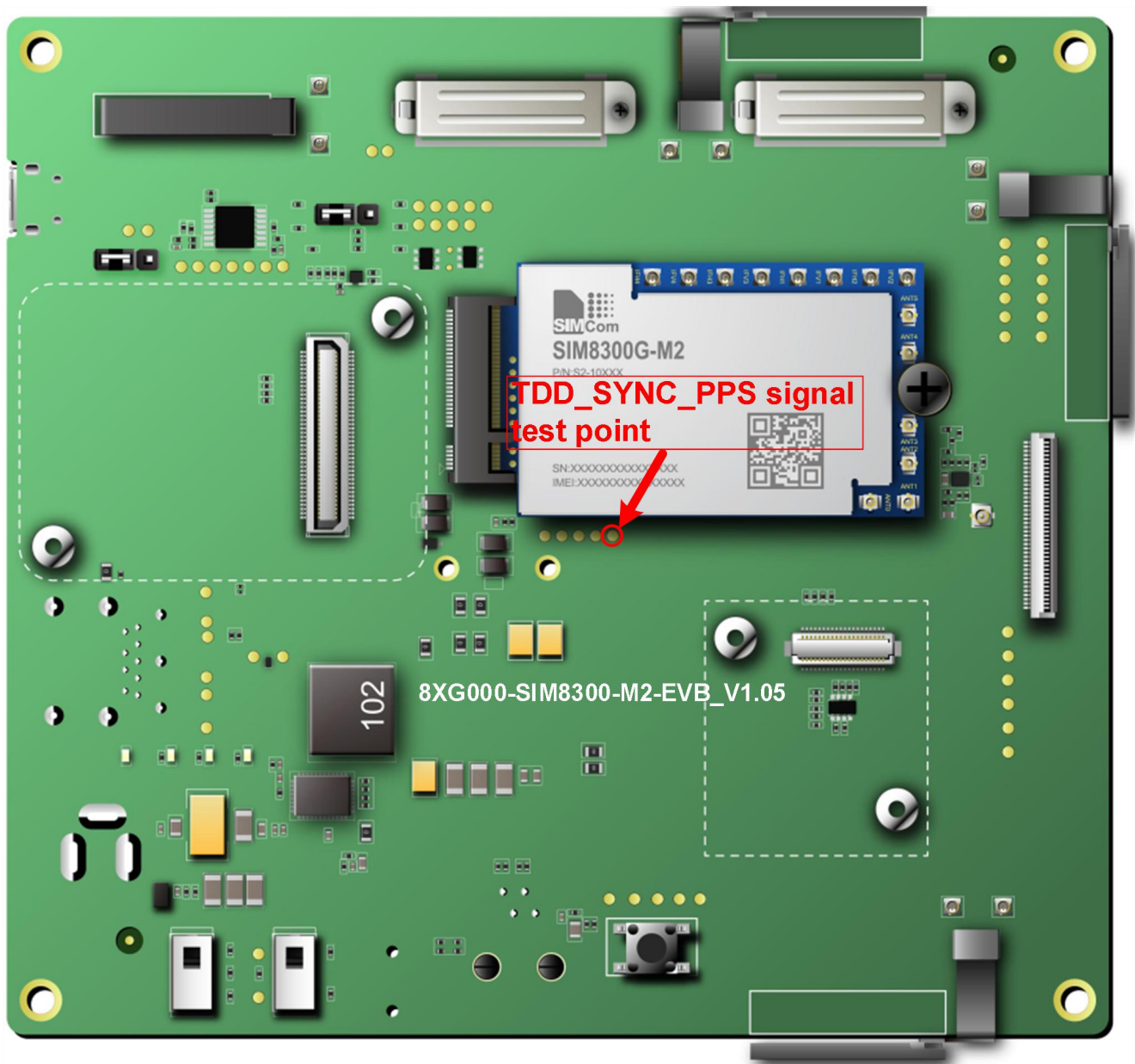


Figure 4: TDD_SYNC_PPS signal test point of SIM8300-M2-EVB

1.2 SA/NSA TX(DL) and RX(UL) Duty Cycle Signal Output

Before testing TX(DL) and RX(UL) Duty Cycle wave, firstly, connect 5G SA/NSA (Under TDD mode), and then send AT command “AT+C5GTDDCFG="time_sync_pulse",1025,10,100”, connect GPIO38(ANTCTL0) to PIN26, finally, testing GPIO39(ANTCTL1) output wave, according to different versions of EVB, the specific connection method can refer to the following figures.

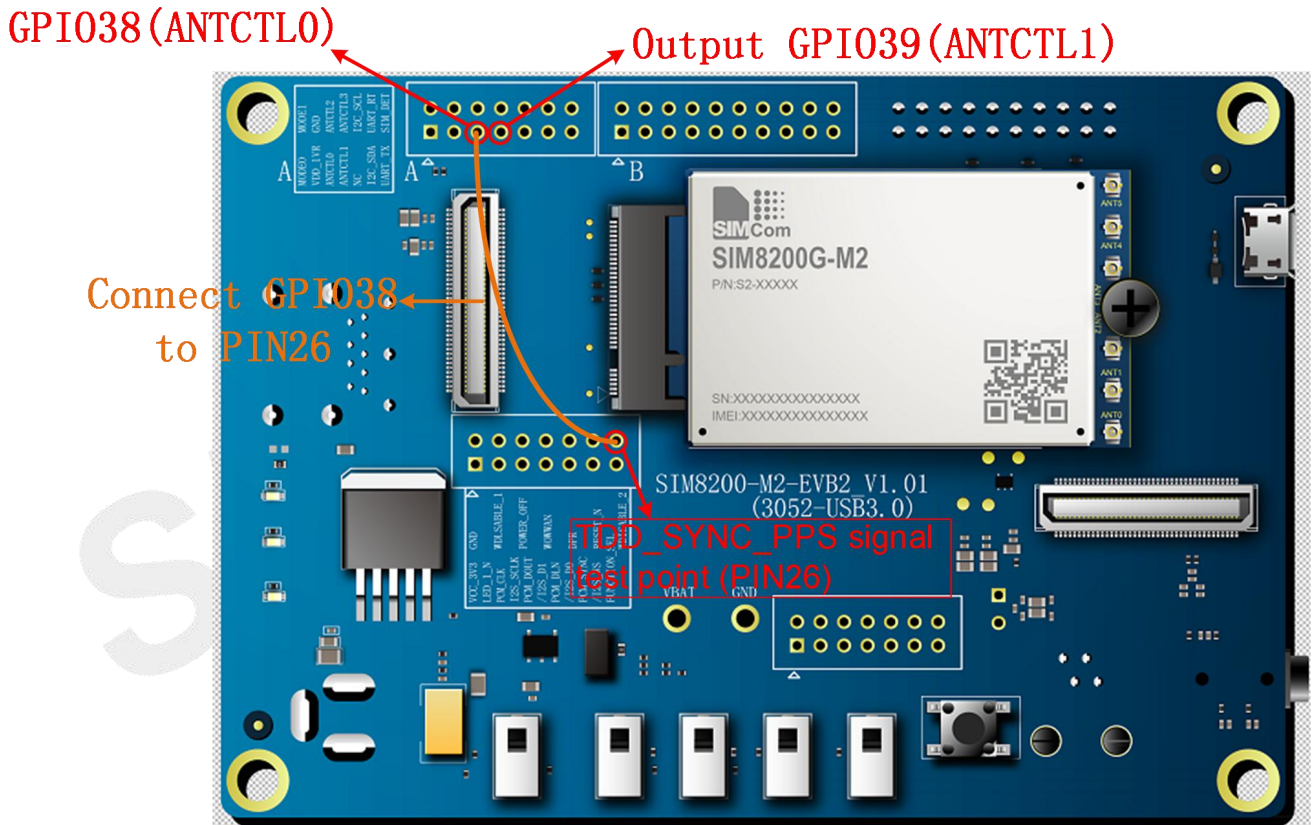


Figure 5: SIM8200-M2-EVB2(PN: **S2-108RC**)

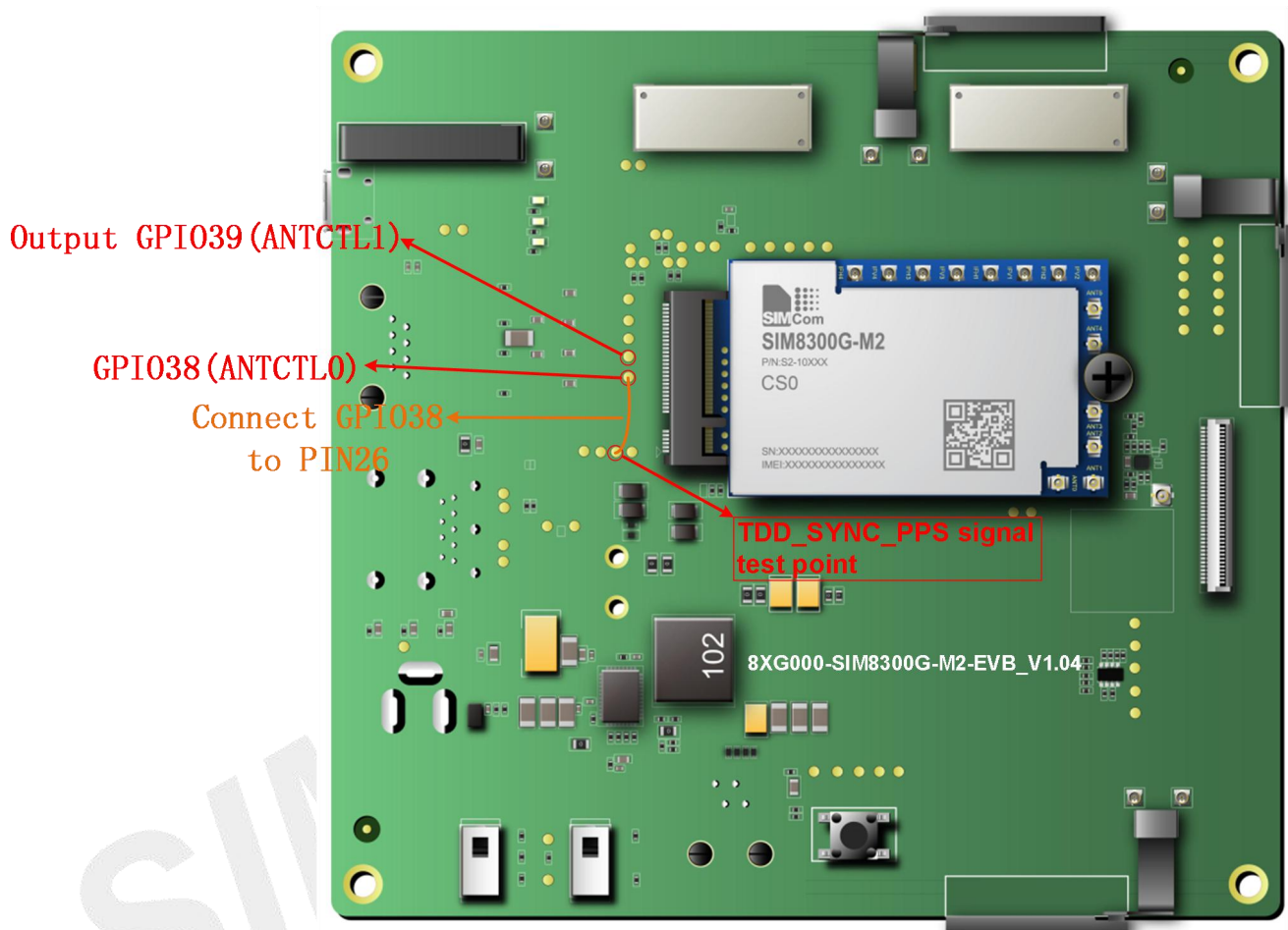


Figure 6: SIM8300G-M2-EVB(PN:**S2-109W3**)

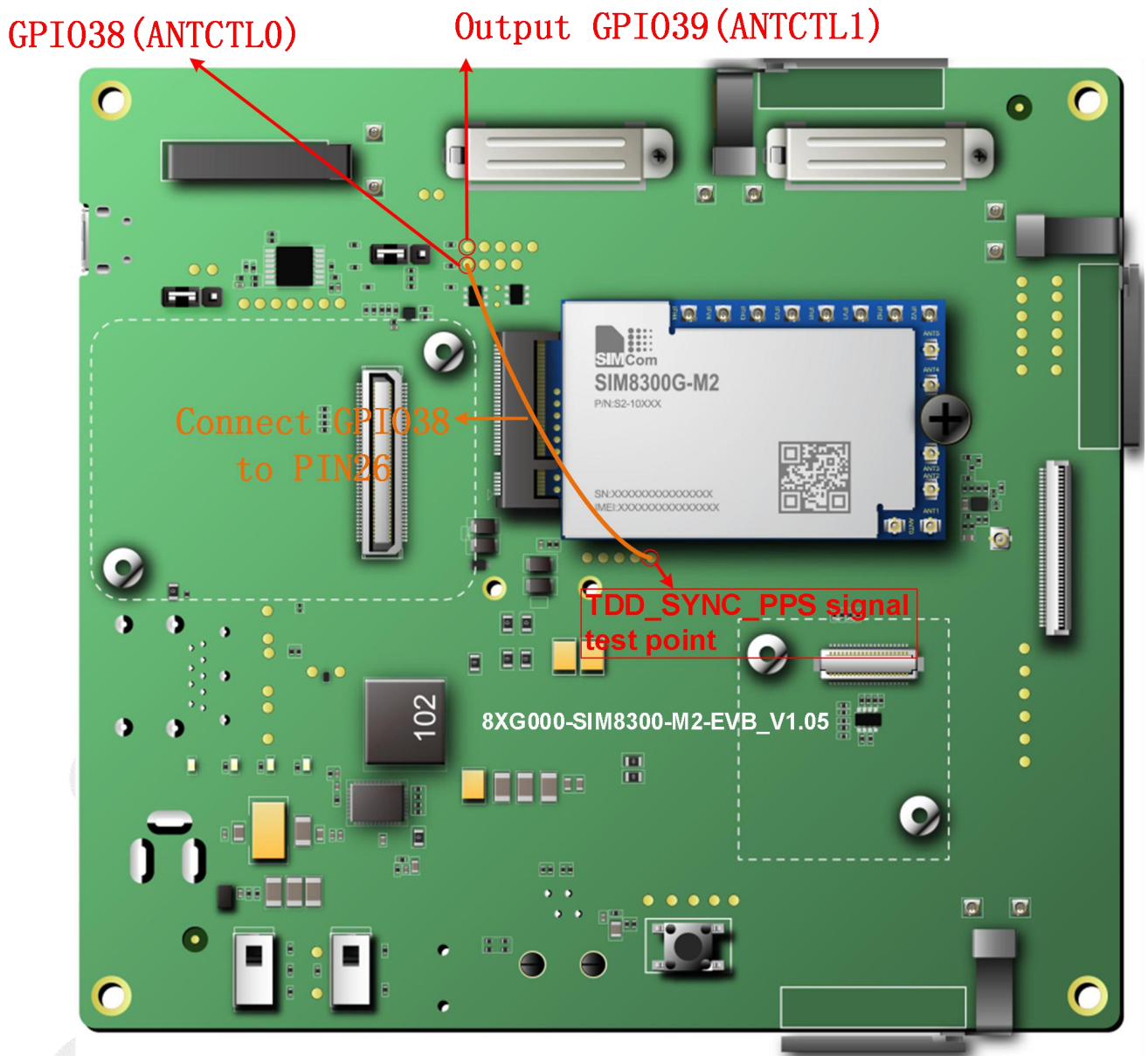


Figure 7: SIM8300-M2-EVB (PN:**S2-109WN**)