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**YIC51612EBGG-33 & YIC51612EBGGB & YIC51612EBGGBL5**  
**Comparison Report for Static Test**




Tester :Ben

Date:2024/7/8

### 1. Purposes for testing

To compare with YIC51612EBGG-33 & YIC51612EBGGB & YIC51612EBGGBL5 in static mode testing for satellite signal collection result under outdoor & indoor environment.

### 2. Product & parameter

Picture			
Part No	YIC51612EBGG-33	YIC51612EBGGB	YIC51612EBGGBL5
Accuracy	GNSS:3m CEP	GNSS:1.5m CEP	GNSS:1m CEP
Update Rate	1Hz	1Hz	1Hz
Satellite reception	GPS/QZSS/GLONASS/GALILEO/SBAS	GPS/QZSS/GLONASS/Galileo/BeiDou/SBAS	GPS/QZSS/GLONASS/Galileo/BeiDou/L5/SBAS
Baud Rate	9600	115200	115200
Test Equipment	Notebook、YIC-GPS-EVK-1612EB、PowerGPS、ATGG4336M-SMA-5、ATGGBL54138M-SMA-3		

### 3. Testing diagram

These three GNSS modules were connected to a notebook via EVK

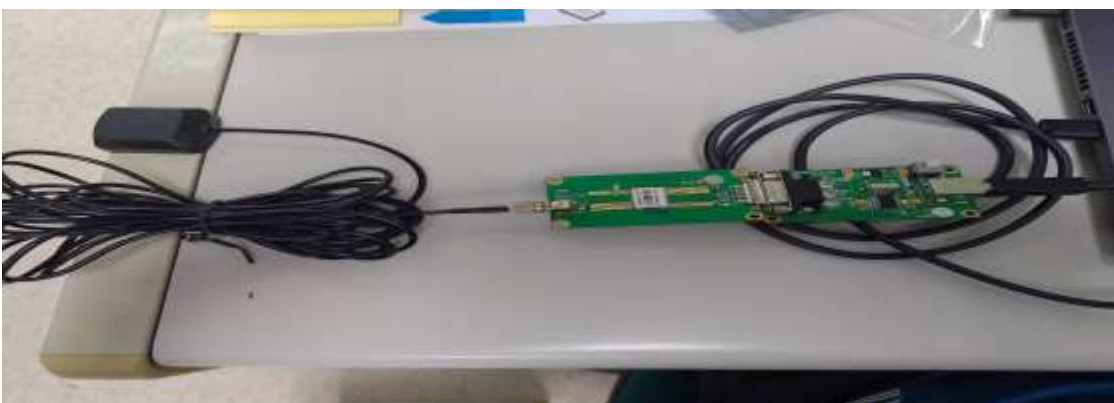
- YIC51612EBGG-33



- YIC51612EBGGB



- YIC51612EBGGBL5

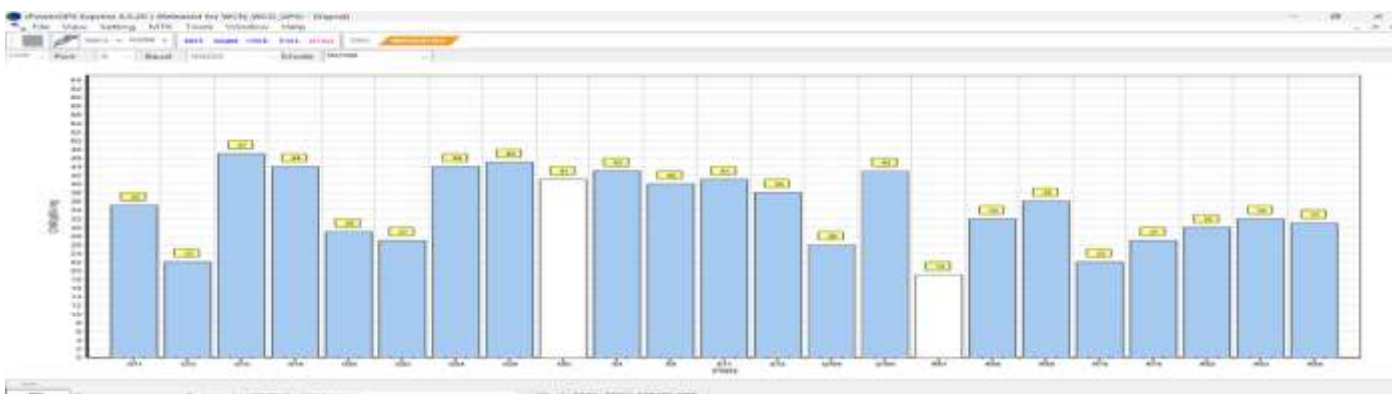


### 4. Outdoor static test

#### 1. Empty roof



- YIC51612EBGG-33



- YIC51612EBGGB



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- YIC51612EBGGBL5

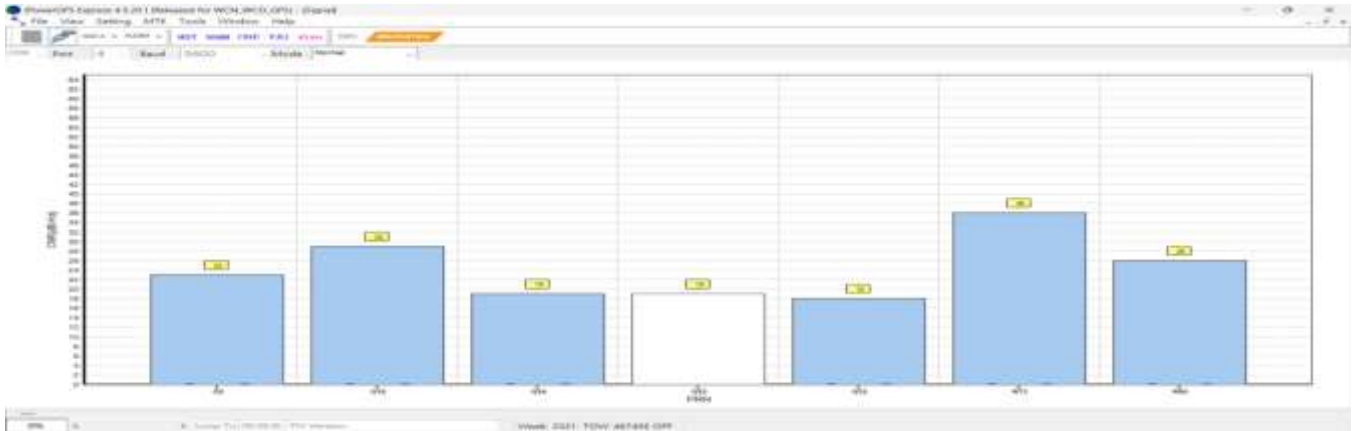


## 2. Near By window

- Test environment



● YIC51612EBGG-33



● YIC51612EBGGB



● YIC51612EBGGBL5



### 5. Statistics

Module	YIC51612EBGG-33	YIC51612EBGGB	YIC51612EBGGBL5
Status	Outdoor Static Test		
S/N Ratio	42db	45db	48db
Satellite Reception	23 pcs	24 pcs	32 pcs
Cold Start (TTF)	22 sec	21sec	21sec

Module	YIC51612EBGG-33	YIC51612EBGGB	YIC51612EBGGBL5
Status	Near By Window		
S/N Ratio	35db	37db	40db
Satellite Reception	7 pcs	14 pcs	17 pcs
Cold Start (TTF)	60 sec	40 sec	32 sec

The above testing results are for outdoor static test and nearby window

### 6. Conclusion:

#### a. Satellite reception & TTF:

YIC51612EBGGBL5 has more satellites single support & better S/N ratio for better position accuracy, YIC51612EBGGB is the second.

The last is YIC51612EBGG-33

YIC51612EBGGBL5 > YIC51612EBGGB > YIC51612EBGG-33 ◦

#### b. Under weakness signal environment (in building ,nearby window)

YIC51612EBGGBL5 has faster cold start time,

YIC51612EBGGB is the second

The YIC51612EBGG-33 is the last.

YIC51612EBGGBL5 > YIC51612EBGGB > YIC51612EBGG-33 ◦