



# FG132-GL-00-MiniPCIE Baseband Test Report

V1.1

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# Change History

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V1.1 (2025-03-06)	The chapter 2 update the description of some devices The chapter 3 delete the power on/off stress item
V1.0 (2024-10-21)	Initial version

# 1 Test Version Description

Table 1. Test version description

Product Name	FG132-GL-00-MiniPCIe
Hardware version	V1.0
Software version	19003.1000.00.02.01.46

## 2 Test Device

Table 2. Test device list

No.	Device Name	Manufacturer	Model
1	Electrostatic discharge generator	Shanghai Lioncel Electromagnetic Technology Co., Ltd.	ESD-203B
2	DC power Analyzer	KEYSIGHT	N6705C
3	Wideband radio communication tester	R&S	CMW500
4	Vector signal generator	R&S	SMBV100A
5	Wideband radio communication tester	R&S	CMX500

## 3 Test Summary

Table 3. Test summary

No.	Test Item	Test Result	Remark
1	Low Power Consumption Test	PASS	--
2	Reset Stress Test	PASS	--
3	Flash Stress Test	PASS	--
4	ESD test	PASS	--

## 4 Test Item

### 4.1 Low Power Consumption Test

#### 4.1.1 Test Purpose

To verify the power consumption of the module in standby, sleep, and power off states.

#### 4.1.2 Test Standard

Fibocom standards.

#### 4.1.3 Test Conclusion

1. Test condition: normal temperature of 25°C, 3.8V.
2. Test Data
  - a. Sleep current

Table 4. Test result of sleep current

Mode	Condition	3862#		3631#	
		Test (mA)	Value	Test (mA)	Value
LTE-FDD	Paging Cycle #64(USB disconnected)	4.20		4.27	
	Paging Cycle #128(USB disconnected)	4.01		4.07	
	Paging Cycle #256(USB disconnected)	3.93		3.93	
LTE-TDD	Paging Cycle #64(USB disconnected)	4.24		4.29	
	Paging Cycle #128(USB disconnected)	3.95		4.10	
	Paging Cycle #256(USB disconnected)	3.79		3.96	
NR-FDD	Paging Cycle #64(USB disconnected)	4.39		4.43	
	Paging Cycle #128(USB disconnected)	4.09		4.15	
	Paging Cycle #256(USB disconnected)	3.90		3.93	
NR-TDD	Paging Cycle #64(USB disconnected)	4.48		4.52	
	Paging Cycle #128(USB disconnected)	4.19		4.21	
	Paging Cycle #256(USB disconnected)	4.00		4.02	
LTE-FDD	eDRX=20.48s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.84		3.84	
	eDRX=40.96s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.74		3.74	



Mode	Condition	3862#	3631#
		Test (mA)	Value Test (mA) Value
LTE-TDD	eDRX=81.92s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.70	3.70
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	3.71	3.71
	eDRX=20.48s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.89	3.89
	eDRX=40.96s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.79	3.79
	eDRX=81.92s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.73	3.73
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	3.75	3.75
NR-FDD	eDRX=20.48s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.60	3.60
	eDRX=40.96s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.57	3.57
	eDRX=81.92s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.53	3.52
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	3.53	3.53
NR-TDD	eDRX=20.48s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.60	3.65
	eDRX=40.96s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.52	3.60
	eDRX=81.92s; PTW=1.28s; DRX=1.28s (USB disconnected)	3.52	3.58
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	3.52	3.58
Radio Off	AT+CFUN=0, Flight Mode (USB disconnected)	3.39	3.47

## b. Idle current

Table 5. Test result of idle current

Mode	Condition	3862#	3631#
		Test (mA)	Value Test (mA) Value
LTE-FDD	Paging Cycle #64(USB disconnected)	12.2	12.4
	Paging Cycle #64(USB connected)	21.3	21.4
LTE-TDD	Paging Cycle #64(USB disconnected)	12.3	12.4
	Paging Cycle #64(USB connected)	21.3	21.4
NR-FDD	Paging Cycle #64(USB disconnected)	12.9	12.9
	Paging Cycle #64(USB connected)	21.2	21.3
NR-TDD	Paging Cycle #64(USB disconnected)	12.9	13.1
	Paging Cycle #64(USB connected)	21.8	21.9
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	11.5	11.8

Mode	Condition	3862#	3631#
		Test (mA)	Value Test (mA)
LTE-FDD	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB connected)	20.4	20.8
LTE-TDD	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	11.5	11.8
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB connected)	20.5	21.0
NR-FDD	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	11.3	11.6
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB connected)	20.4	20.7
NR-TDD	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB disconnected)	11.4	11.5
	eDRX=81.92s; PTW=2.56s; DRX=1.28s (USB connected)	20.3	20.7

3. Test result:

PASS

## 4.2 Reset Stress Test

### 4.2.1 Test Purpose

To verify that the reset function and stability of the module satisfy Fibocom standards

### 4.2.2 Test Standard

Test times  $\geq 5000$  and test time  $\geq 48$  hours. After the test is completed, the functions of the module are normal, the reset success rate is  $\geq 99.5\%$ , and the register success rate is  $\geq 99\%$ .

### 4.2.3 Test Conclusion

1. Test data

Table 6. Test reset of the reset stress

Parameter	Test Standard	Reset signal controlling time: 0.7s		Reset signal controlling time: 1s	
		3755#	3029#	3755#	3029#
Test times	$\geq 5000$	5618	6892	5165	6021
Test time	$\geq 48H$	74H	72H	68H	70H
Reset success rate	$\geq 99.5\%$	100%	100%	100%	99.98%
Register success rate	$\geq 99\%$	100%	99.83%	100%	100%

2. Test result

PASS

## 4.3 Flash Stress Test

### 4.3.1 Test Purpose

To verify the Flash and system stability.

### 4.3.2 Test Standard

After a cumulative number of 10000 random power-down during read and write in Flash key partitions, the functions of the module are normal. There is no failure to boot or parameters loss.

### 4.3.3 Test Conclusion

1. Test data

Table 7. Test result of the flash stress

Cumulative Duration (Days)	1	2	3	4	5
Cumulative Times	1700	3500	5200	7200	10050
6239#	PASS	PASS	PASS	PASS	PASS
4457#	PASS	PASS	PASS	PASS	PASS
6213#	PASS	PASS	PASS	PASS	PASS
4028#	PASS	PASS	PASS	PASS	PASS
3541#	PASS	PASS	PASS	PASS	PASS

2. Test result

PASS

## 4.4 ESD Test

### 4.4.1 Test Purpose

To verify that the ESD performance of the module meets design requirements.

## 4.4.2 Test Standard

Table 8. ESD performance parameters (Temperature: 25°C, Humidity: 45%)

Test Point	Contact Discharge	Air Discharge	Unit
Antenna GND	$\pm 8$	$\pm 15$	kV
Antenna interface	$\pm 8$	--	kV
Other interfaces	$\pm 0.5$	$\pm 1$	kV

## 4.4.3 Test Conclusion

PASS