

MEDIATEK

CONFIDENTIAL B

MT2503 Power Consumption Data



MT2503 Power Consumption Data

- Version Overview

Date	Version	Note
2016.01.13	V0.1	MT2503 low power data draft

Note : (1) HW test environment: MT2503_EVB
(2) SW version: MT2503A_EVB_MAUI_11CW1352SP3_W15_48

MT2503 BB & RF Low Power Data

VBAT = 4.0v [Unit : mA]

	Test case	Test parameters	Reference Data(mA)
BB	Power off		0.160
	Flight mode suspend		0.580
	Music playback MP3	Flight mode, no backlight	16.265
RF	2G Standby	GSM900 PG2 BA16	1.472
	2G Standby	GSM900 PG9 BA1	0.771
	2G Talking	GSM900 PCL19 without PA	59.236

Note : (1) Avg current for reference only.

MT2503 GPS Low Power Data

VBAT = 4.0v [Unit : mA]

	Test case	Test parameters	Reference Data(mA)				
			MT6261 (4.2V)	MT3333 (3.3V)	LNA (2.8V)	TCXO (2.8V)	Antenna (4.2V)
GPS	GPS off	Flight mode	0.563	0.011	0	0	0
	GPS Acquisition	Flight mode, ACQ	1.520	22.275	3.79	0.87	7.89
	GPS Tracking	Flight mode, tracking	2.037	18.645	3.79	0.87	7.89
	GLP mode	Flight mode, 1 update/s	1.971	7.458	3.79	0.87	7.89
	LLE periodic mode	Flight mode, 1 update/min	0.992	3.542	0.66	0.85	1.49

Note :

1. The total power consumption of MT2503 consists of MT6261 and MT3333.
2. LNA/TCXO/Antenna are discrete devices, the power consumption data is for reference only.

MT2503 BT Low Power Data

VBAT = 4.0v [Unit : mA]

	Test case	Test parameters	Reference Data(mA)
BT	BT on without connect	BT interval = 2.56s, 2G standby (PG9 BA1)	1.265
	BT connect and idle	BT interval = 1.28s, 2G standby (PG9 BA1)	1.7853
	BT voice active	GSM900 PCL19 without PA	72.938
	BT A2DP MP3 active	BT A2DP, 2G standby (PG9 BA1)	35.613

Note : (1) Avg current for reference only.

APPENDIX

MT2503 BB Low Power test flow

Test Flow Description (1/6)

Test case	Test step	Reference Data(mA)
Power off	<ol style="list-style-type: none">1. Connect the device and power supply2. Measure the average leakage current	0.160
Flight mode suspend	<ol style="list-style-type: none">1. Power on device2. Check system setting, turn off BT/GPS/WIFI3. Check system setting, turn on flight mode4. Press HW key to make display off and measure the average current over 5 mins.	0.580
Music playback MP3	<ol style="list-style-type: none">1. Plug in T-card with test music2. Power on device3. Check system setting, turn off BT/GPS/WIFI4. Check system setting, turn on flight mode5. Connect MT2503 with earphone.6. Turn on audio player, start playing music7. Press HW key to make display off and measure the average current over 5 mins.	16.265

MT2503 RF Low Power test flow

Test Flow Description (2/6)

Test case	Test step	Reference Data(mA)
2G Standby GSM900 PG2 BA16	<ol style="list-style-type: none">1. Plug in test SIM card2. Connect the device with CMU200/Agilent 89603. Change CMU200 parameters (depends on different test cases)4. Connect the device and power supply5. Power on device6. Wait until the device connects with CMU200 and goes into standby mode7. Wait for 5 minutes8. Measure the average current for 5~30mins.	1.472
2G Standby GSM900 PG9 BA1	<ol style="list-style-type: none">1. The same as the test step above	0.771
2G Talking	<ol style="list-style-type: none">1. Plug in test SIM card2. Connect the device with CMU200/Agilent 89603. Change CMU200 parameters (depends on different test cases)4. Connect the device and power supply5. Power on device6. Wait until the device connects with CMU200 and goes into standby mode7. Dial from CMU200, answered by device8. Wait until the screen off, then wait for 5 minutes9. Measure the average current for 5~30mins.	59.236

Note : (1) Device should be put in a shielding box or shielding room

MT2503 RF Low Power test flow

Test Flow Description (3/6)

- GSM standby CMU200 test parameter

Standby	GSM900	
Setting Items	PG2/BA16	PG9/BA1
BS-PA-MFRMS	2	9
BCCH Channel	62	
TCH Channel	62	
Rx Level	-82dbm	
Traffic Mode	Full Rate Version1	FRV1
PCL	5	5
Timeslot	3	3
Backlight	off	off
BA list	1,9,17,26,34,42,50,58,67,75,83,91,99,108,116,124	1,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF,OFF

Note : (1) Device should be put in a shielding box or shielding room

MT2503 RF Low Power test flow

- Test Flow Description (4/6)

- GSM talking CMU200 test parameter

Talking	GSM900
PCL	12
Traffic Mode	FRV2
Bit Stream	2E9-1 PSR Bit Pattern
BCCH Channel	62
TCH Channel	62
Rx Level	-82dbm
Timeslot	3
Backlight	off

Note : (1) Device should be put in a shielding box or shielding room

MT2503 WCN Low Power test flow

Test Flow Description (5/6)

	Test case	Test parameters	Reference Data(mA)				
			MT6261 (4.2V)	MT3333 (3.3V)	LNA (2.8V)	TCXO (2.8V)	Antenna (4.2V)
GPS	GPS off	Under preparing	0.563	0.011	0	0	0
	GPS Acquisition	Under preparing	1.520	22.275	3.79	0.87	7.89
	GPS Tracking	Under preparing	2.037	18.645	3.79	0.87	7.89
	GLP mode	Under preparing	1.971	7.458	3.79	0.87	7.89
	LLE periodic mode	Under preparing	0.992	3.542	0.66	0.85	1.49

Note : (1) GPS test step will be updated in next version.

MT2503 WCN Low Power test flow

Test Flow Description (6/6)

Test case	Test step	Reference Data(mA)
BT on without connect	<ol style="list-style-type: none">1. Refer to '2G standby PG9 BA1' test step 1~42. Power on device3. Turn on BT, but do not connect any devices4. Wait until the device connects with CMU200 and goes into standby mode5. Wait for 5 minutes6. Measure the average current for 5~30mins.	1.265
BT connect and idle	<ol style="list-style-type: none">1. Refer to '2G standby PG9 BA1' test step 1~42. Power on device3. Turn on BT, connect with BT earphone4. Wait until the device connects with CMU200 and goes into standby mode5. Wait for 5 minutes6. Measure the average current for 5~30mins.	1.7853
BT voice active	<ol style="list-style-type: none">1. Refer to 'BT connect and idle' test step 1~42. Dial from CMU200, answered by device3. Wait for 5 minutes4. Measure the average current for 5~30mins.	72.938
BT A2DP MP3 active	<ol style="list-style-type: none">1. Refer to 'Music playback MP3' test step2. When checking system setting, turn BT on3. Measure the average current for 5~30mins.	35.613

MEDIATEK

everyday genius