



MT6628Q/T

Performance Report

V0.0

Wi-Fi Feature and Performance

- WLAN general features
 - 802.11b/g /n MAC/BB/RF integrated
 - Built-in 21dBm WiFi PA with self-calibration
 - SDIO 2.0 (4-bits and 1-bit up to 50MHz)
 - Support WiFi Direct (WFA P2P standard)

@ MT6628 Chip-out

WiFi			
Item	Condition	Number	Unit
Rx current	2.4GHz, 1Mbps	49.5	mA
Rx current	2.4GHz, 54Mbps	53.7	mA
Rx current	2.4GHz, HT20 MCS7	53.5	mA
Rx current	2.4GHz, HT40 MCS7	63	mA
Rx current	Listen	47.3	mA
Rx current	Sleep	0.117	mA
Rx current	Power Saving, DTIM=1	0.56	mA
Tx current	2.4GHz, 1Mbps, 21dBm	210	mA
Tx current	2.4GHz, 54Mbps, 18dBm	185	mA
Tx current	2.4GHz, HT20 MCS7, 16dBm	172.5	mA
Tx current	2.4GHz, HT40 MCS7, 16dBm	181	mA

WiFi Test @ Chip in/out			
Item	Condition	Number	Unit
Rx sensitivity	2.4GHz, 1Mbps	-98.5	dBm
Rx sensitivity	2.4GHz, 11Mbps	-91	dBm
Rx sensitivity	2.4GHz, 6Mbps	-95	dBm
Rx sensitivity	2.4GHz, 54Mbps	-77.5	dBm
Rx sensitivity	2.4GHz, HT20 MCS7	-75.5	dBm
Rx sensitivity	2.4GHz, HT40 MCS7	-72	dBm
Tx power	2.4GHz, 1Mbps	21	dBm
Tx power	2.4GHz, 11Mbps	21	dBm
Tx power	2.4GHz, 6Mbps	18	dBm
Tx power	2.4GHz, 54Mbps	18	dBm
Tx power	2.4GHz, HT20 MCS7	18	dBm
Tx power	2.4GHz, HT40 MCS7	16	dBm

Bluetooth Feature and Performance

■ Bluetooth features

- Supported Bluetooth 4.0, BT Low Energy (LE)
- Bluetooth specification 3.0+HS compliance
- Bluetooth 4.0, BT Low Energy (LE)
- Integrated PA with 11dBm (class 1) transmit power

■ BT RF performance

Bluetooth		Test @ Chip in/out	
Item	Condition	Number	Unit
Rx sensitivity	BDR	-95	dBm
Rx sensitivity	2EDR	-94	dBm
Rx sensitivity	3EDR	-87	dBm
Rx sensitivity	BLE	-96	dBm
Tx power	BDR	10	dBm
Tx power	2EDR	7	dBm
Tx power	3EDR	7	dBm

■ BT/BLE Current consumption performance

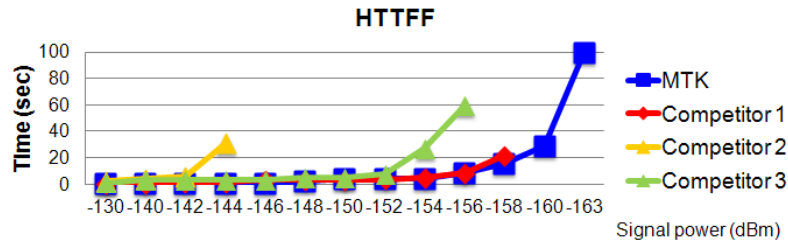
Bluetooth			
Item	Condition	Number	Unit
Rx current	Max	21.1	mA
Tx current	@ 11dBm output	48.3	mA
Current	Sleep mode floor	0.12	mA
Current	I. scan 2.56s	0.26	mA
Current	P. scan 1.28s, I. scan 2.56s	0.53	mA
Current	Inquiry	22.2	mA
Current	Sniff 0.5s, (master or slave)	0.35	mA
Current	SCO-HFP/HSP w/ Sniff 0.5s and P(1.28s)/I (2.56s)scan	10.3	mA

Bluetooth BLE			
Item	Condition	Number	Unit
Current	500ms (3 Tx + 3 Rx) Undirected connectable advertise /ADV_IND	327.8	uA
Current	1280ms (3 Tx + 3 Rx) Undirected connectable advertise /ADV_IND	199.35	uA
Current	300ms (11.25ms Rx window) passive scan	926.7	uA
Current	1.28sec connection interval (MASTER) (1T + 1R)	184.2	uA
Current	1.28sec connection interval (SLAVE) (1R + 1T)	194.2	uA

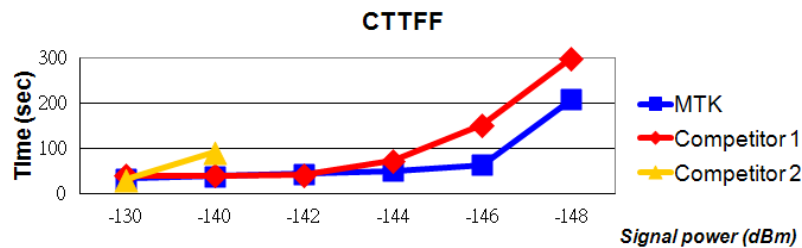
GPS Features and Performance

■ GPS features (Only for MT6628Q)

- Support GPS/QZSS/SBAS(WAAS/MSAS/EGNOS/GAGAN)
- Full A-GPS capability (E911/SUPL/EPO/BEE)
- Best in class sensitivity performance
 - -165 dBm tracking sensitivity
 - -160 dBm hot start sensitivity



- -148 dBm cold and warm start sensitivity



- Lowest power consumption

SMPS Mode	MT6620	MT6628	Competitor
ACQ (mW)	54.62	38.04	Average 72
Track (mW)	40.58	28.72	

FM Features & Performance Overview

■ FM features

- FM 76-108MHz band with 50KHz step and RDS/RBDS supported
- Audio sensitivity 2dB μ Vemf at ((S+N)/N=26dB)
- RDS sensitivity 16dB μ Vemf at RDS_Dev.=2KHz ,5% BLER
- Digital audio interface (I²S)

FM			
Item	Condition	Number	Unit
SINAD	Mono 22.5kHz	60	dB
Sensitivity	SINAD = 26dB	2	dB μ Vemf
THD	dev : 75KHz	0.05	%
ACI	@ -200KHz	55	dB
ACI	@ -400KHz	70	dB
AM supression		62	dB
Stereo separation ratio	Stereo 22.5kHz	40	dB

FM			
Item	Condition	Number	Unit
Rx current		12.4	mA