

SKI.WB638BU.2_668BU

IEEE 802.11b/g/n/a/ac 2T2R USB WiFi Module

Integrated BT 2.1/3.0/4.2

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REVISION HISTORY

VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
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1. Introduction (简介)

SKI.WB638BU.2_668BU module is based on MediaTek MT7668BUN solution. MT7668BUN is a highly integrated single chip which features a low power 2x2 802.11b/g/n Wi-Fi subsystem and a Bluetooth subsystem. The Wi-Fi subsystem contains the 802.11 a/b/g/n/ac radio, baseband, and MAC that are designed to meet both the low power and high throughput application. The Bluetooth subsystem contains the Bluetooth radio which complies with Bluetooth v2.1+EDR, v4.2, and v5.0, baseband, link controller. This documentation describes the engineering requirements specification.

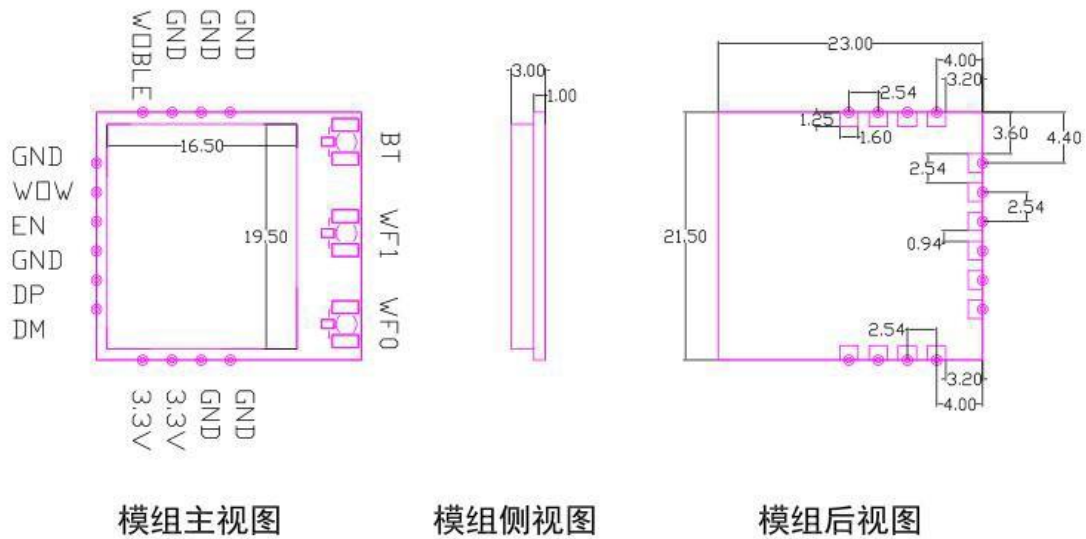
SKI.WB638BU.2_668BU 模块基于 MEDIATEK MT7668BUN 解决方案。MT7668BUN 是一款高度集成的芯片，具有低功耗 2x2 802.11 a/b/g/n/ac Wi-Fi 子系统和蓝牙子系统。Wi-Fi 子系统包含 802.11b/g/n 射频、基带和 MAC，旨在满足低功耗和高吞吐量应用。蓝牙子系统包含蓝牙 2.1+EDR、v4.2 和 v5.0、基带和链路控制器。本文件描述了工程需求规范。

2. Features (特性)

Reserving System 接收制式	IEEE Std. 802.11a
	IEEE Std. 802.11b
	IEEE Std. 802.11g
	IEEE Std. 802.11n
	IEEE Std. 802.11ac
	BT 2.1+EDR
	BT 4.2
	BT 5.0
Chip Solution 芯片方案	MT7668BUN
Band 波段	2.4GHz/5GHz
Dimensions 尺寸	23mm×21.5mm×3mm

Model 型号	Installation Mode 安装方式	Protocol I 支持标准	Frequency 频段	Antenna 天线	Remark 备注
SKI.WB638BU.2_668BU	SMD	IEEE 802.11a/b/g/n/ac BT2.1/4.2/5.0	2.4GHz/5GHz	IPEX	23mm×21.5mm×3mm

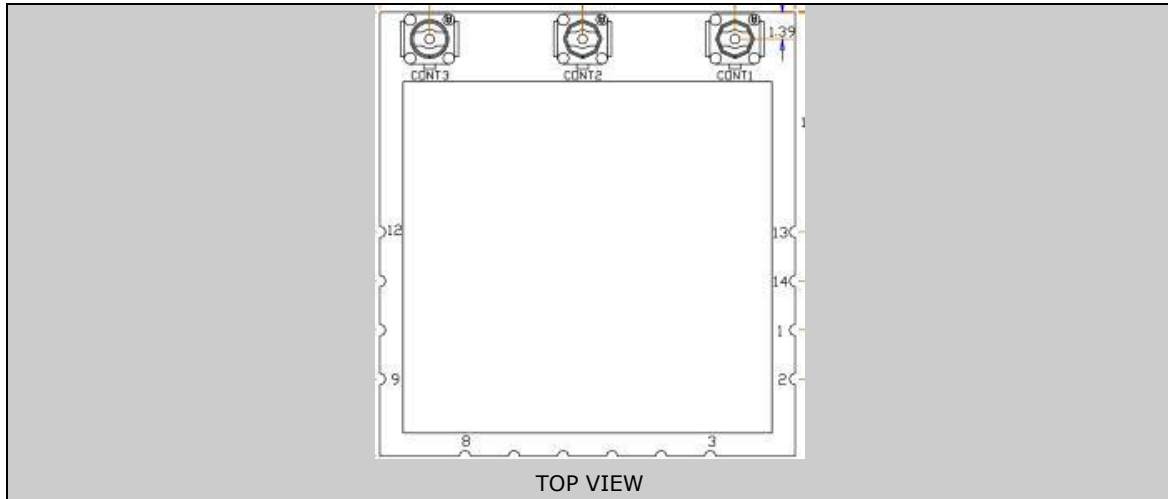
4. Package Outline and Mounting (外形及安装尺寸)



注意：1单位为mm

2模组外形尺寸公差为0.2mm，板厚以及未标注公差为0.1mm

Pin Definition (引脚定义)



PIN	SYMBOL	DESCRIPTION
1	3.3V	3.3V 供电
2	3.3V	3.3V 供电
3	DM	USB_DM
4	DP	USB_DP
6	RESET	内部有 10K 上拉电阻, 低电平有效
7	WL_HOST_WAKE	内部有 10K 上拉电阻, 低电平有效
9	BT_HOSTWAKE	内部有 10K 上拉电阻, 低电平有效
5,8,10,11,12,13,14	GND	GND

5. Product Pictures (实物图片)



正视图 (top view)



背视图 (bottom view)



标签信息 (information view)

6. Key Materials (关键物料)

No. 序号	Name 关键件名称	Model 型号	Specification 规格/材料	Remark 备注
1	集成电路	MT7668BUN	76-QFN	
2	PCB	SKI.WB638BU.2_668BU	FR-4,4LAY	
3	晶体振荡器	CF4040M00015T2115142	40MHz	

7. General Requirements (一般要求)

No.	Feature	Description
8-1	Operation Voltage 工作电压范围	3.3V+/-0.3
8-2	Current Consumption 最大电流	700mA
8-3	Ripple 纹波	≤100mV
8-4	Operation Temperature 工作温度范围	0°C to +40°C
8-5	Antenna Type 天线类型	External antenna
8-6	USB	High Speed USB 2.0 Interface
8-7	Storage Temperature 存储温度	-40°C to +125°C

8. Electrical Characteristics (电气特性)

除非另有说明，电气规范试验都在下列条件下进行：

环境条件温度：25°C ± 5°C；

电源电压：模块输入电压 3.3V (±10%)；

The Test for electrical specification was performed under the following condition unless otherwise specified:

Ambient condition Temperature :25°C ± 5°C；

Power supply voltages: 3.3V (±10%) input power at the Module；

8.1 IEEE 802.11b Section

Items	Contents				
Specification	IEEE802.11b				
Mode	CCK				
Channel	CH1 to CH11				
Data rate	1, 2, 5.5, 11Mbps				
TX Characteristics	Min.	Typ.	Max.	Unit	Remark
1. Power Levels(Calibrated)					
1) For antenna port	15	17	17	dBm	
2. Spectrum Mask @ target power					
1) fc +/-11MHz to +/-22MHz	-	-	-30	dBr	
2) fc > +/-22MHz	-	-	-50	dBr	
3 Constellation Error(EVM)@ target power					
1) 1Mbps	-	-	-10	dB	
2) 2Mbps	-	-	-10	dB	
3) 5.5Mbps	-	-	-10	dB	
4) 11Mbps	-	-	-10	dB	
4. Frequency Error	-20	-	20	ppm	
RX Characteristics	Min.	Typ.	Max.	Unit	

5 Minimum Input Level Sensitivity (each chain)					
1) 1Mbps (FER ≤ 8%)	-	-	-83	dBm	
2) 2Mbps (FER ≤ 8%)	-	-	-80	dBm	
3) 5.5Mbps (FER ≤ 8%)	-	-	-79	dBm	
4) 11Mbps (FER ≤ 8%)	-	-	-76	dBm	
6 Maximum Input Level (FER ≤ 8%)	-10	-	-	dBm	

8.2 IEEE 802.11g Section

Items	Contents				
Specification	IEEE802.11g				
Mode	OFDM				
Channel	CH1 to CH11				
Data rate	6, 9, 12, 18, 24, 36, 48, 54Mbps				
TX Characteristics	Min.	Typ.	Max.	Unit	Remark
1. Power Levels					
1) For antenna port	13	15	15	dBm	
2. Spectrum Mask @ target power					
1) at fc +/-11MHz	-	-	-20	dBr	
2) at fc +/-20MHz	-	-	-28	dBr	
3) at fc > +/-30MHz	-	-	-40	dBr	
3 Constellation Error(EVM)@ target power					
1) 6Mbps	-	-	-5	dB	
2) 9Mbps	-	-	-8	dB	
3) 12Mbps	-	-	-10	dB	
4) 18Mbps	-	-	-13	dB	
5) 24Mbps	-	-	-16	dB	
6) 36Mbps	-	-	-19	dB	
7) 48Mbps	-	-	-22	dB	
8) 54Mbps	-	-	-25	dB	
4 Frequency Error	-20	-	20	ppm	
RX Characteristics	Min.	Typ.	Max.	Unit	
5 Minimum Input Level Sensitivity (each chain)					
1) 6Mbps (PER ≤ 10%)	-	-	-85	dBm	
2) 9Mbps (PER ≤ 10%)	-	-	-84	dBm	
3) 12Mbps (PER ≤ 10%)	-	-	-82	dBm	
4) 18Mbps (PER ≤ 10%)	-	-	-80	dBm	
5) 24Mbps (PER ≤ 10%)	-	-	-77	dBm	
6) 36Mbps (PER ≤ 10%)	-	-	-73	dBm	
7) 48Mbps (PER ≤ 10%)	-	-	-69	dBm	

8) 54Mbps (PER ≤ 10%)	-	-	-65	dBm	
6 Maximum Input Level (PER ≤ 10%)	-20	-	-	dBm	

9.3 IEEE 802.11n HT20 Section

Items	Contents				
Specification	IEEE802.11n HT20 @ 2.4GHz				
Mode	OFDM				
Channel	CH1 to CH11				
Data rate (MCS index)	MCS0/1/2/3/4/5/6/7				
TX Characteristics	Min.	Typ.	Max.	Unit	
1. Power Levels					
1) For antenna port	13	15	14	dBm	
2. Spectrum Mask @ target power					
1) at fc +/-11MHz	-	-	-20	dBr	
2) at fc +/-20MHz	-	-	-28	dBr	
3) at fc > +/-30MHz	-	-	-45	dBr	
3. Constellation Error(EVM)@ target power					
1) MCS0	-	-	-5	dB	
2) MCS1	-	-	-10	dB	
3) MCS2	-	-	-13	dB	
4) MCS3	-	-	-16	dB	
5) MCS4	-	-	-19	dB	
6) MCS5	-	-	-22	dB	
7) MCS6	-	-	-25	dB	
8) MCS7	-	-	-28	dB	
4. Frequency Error	-20	-	20	ppm	
RX Characteristics	Min.	Typ.	Max.	Unit	
5. Minimum Input Level Sensitivity (each chain)					
1) MCS0 (PER ≤ 10%)	-	-	-82	dBm	
2) MCS1 (PER ≤ 10%)	-	-	-79	dBm	
3) MCS2 (PER ≤ 10%)	-	-	-77	dBm	
4) MCS3 (PER ≤ 10%)	-	-	-74	dBm	
5) MCS4 (PER ≤ 10%)	-	-	-70	dBm	
6) MCS5 (PER ≤ 10%)	-	-	-66	dBm	
7) MCS6 (PER ≤ 10%)	-	-	-65	dBm	
8) MCS7 (PER ≤ 10%)	-	-	-64	dBm	
7. Maximum Input Level (PER ≤ 10%)	-20	-	-	dBm	

9.4 IEEE 802.11n HT40 Section

Items	Contents				
Specification	IEEE802.11n HT40 @ 2.4GHz				
Mode	OFDM				
Channel	CH3 to CH9				
Data rate (MCS index)	MCS0/1/2/3/4/5/6/7				
TX Characteristics	Min.	Typ.	Max.	Unit	
1. Power Levels (Calibrated)					
1) For antenna port	13	15	12	dBm	
2. Spectrum Mask @target power					
1) at fc +/-22MHz	-	-	-20	dBr	
2) at fc +/-40MHz	-	-	-28	dBr	
3) at fc > +/-60MHz	-	-	-45	dBr	
3. Constellation Error(EVM)@ target power					
1) MCS0	-	-	-5	dB	
2) MCS1	-	-	-10	dB	
3) MCS2	-	-	-13	dB	
4) MCS3	-	-	-16	dB	
5) MCS4	-	-	-19	dB	
6) MCS5	-	-	-22	dB	
7) MCS6	-	-	-25	dB	
8) MCS7	-	-	-28	dB	
4. Frequency Error	-20	-	20	ppm	
RX Characteristics	Min.	Typ.	Max.	Unit	
5. Minimum Input Level Sensitivity (each chain)					
1) MCS0 (PER ≤ 10%)	-	-	-79	dBm	
2) MCS1 (PER ≤ 10%)	-	-	-76	dBm	
3) MCS2 (PER ≤ 10%)	-	-	-74	dBm	
4) MCS3 (PER ≤ 10%)	-	-	-71	dBm	
5) MCS4 (PER ≤ 10%)	-	-	-67	dBm	
6) MCS5 (PER ≤ 10%)	-	-	-63	dBm	
7) MCS6 (PER ≤ 10%)	-	-	-62	dBm	
8) MCS7 (PER ≤ 10%)	-	-	-61	dBm	
6. Maximum Input Level (PER ≤ 10%)	-20	-	-	dBm	

9.5 IEEE 802.11a Section

Items	Contents				
Specification	IEEE802.11a				
Mode	OFDM				
Channel	CH36 to CH165				
Data rate (MCS index)	6, 9, 12, 18, 24, 36, 48, 54Mbps				
TX Characteristics	Min.	Typ.	Max.	Unit	
1. Power Levels (Calibrated)					
1) For antenna port	12	14	15	dBm	
2. Spectrum Mask @target power					
1) at fc +/-11MHz	-	-	-20	dBm	
2) at fc +/-20MHz	-	-	-28	dBm	
3) at fc > +/-30MHz	-	-	-40	dBm	
3. Constellation Error(EVM)@ target power					
1) 6Mbps	-	-	-5	dB	
2) 9Mbps	-	-	-8	dB	
3) 12Mbps	-	-	-10	dB	
4) 18Mbps	-	-	-13	dB	
5) 24Mbps	-	-	-16	dB	
6) 36Mbps	-	-	-19	dB	
7) 48Mbps	-	-	-22	dB	
8) 54Mbps	-	-	-25	dB	
4 Frequency Error	-20	-	20	ppm	
RX Characteristics	Min.	Typ.	Max.	Unit	
5 Minimum Input Level Sensitivity (each chain)					
1) 6Mbps (PER ≤ 10%)	-	-	-82	dBm	
2) 9Mbps (PER ≤ 10%)	-	-	-81	dBm	
3) 12Mbps (PER ≤ 10%)	-	-	-79	dBm	
4) 18Mbps (PER ≤ 10%)	-	-	-77	dBm	
5) 24Mbps (PER ≤ 10%)	-	-	-74	dBm	
6) 36Mbps (PER ≤ 10%)	-	-	-70	dBm	
7) 48Mbps (PER ≤ 10%)	-	-	-66	dBm	
8) 54Mbps (PER ≤ 10%)	-	-	-65	dBm	
6. Maximum Input Level (PER ≤ 10%)	-30	-	-	dBm	

9.6 IEEE 802.11n HT20 Section(5GHz)

Items	Contents				
Specification	IEEE802.11n HT20 @ 5GHz				
Mode	BPSK, QPSK, 16QAM, 64QAM and OFDM				
Channel	CH36 to CH165				
Data rate (MCS index)	MCS0/1/2/3/4/5/6/7				
TX Characteristics	Min.	Typ.	Max.	Unit	
1. Power Levels (Calibrated)					
1) For antenna port	11	13	17	dBm	
2. Spectrum Mask @target power					
1) at fc +/-11MHz	-	-	-20	dBr	
2) at fc +/-20MHz	-	-	-28	dBr	
3) at fc > +/-30MHz	-	-	-45	dBr	
3. Constellation Error(EVM)@ target power					
1) MCS0	-	-	-5	dB	
2) MCS1	-	-	-10	dB	
3) MCS2	-	-	-13	dB	
4) MCS3	-	-	-16	dB	
5) MCS4	-	-	-19	dB	
6) MCS5	-	-	-22	dB	
7) MCS6	-	-	-25	dB	
8) MCS7	-	-	-28	dB	
4. Frequency Error	-20	-	20	ppm	
RX Characteristics	Min.	Typ.	Max.	Unit	
6. Minimum Input Level Sensitivity (each chain)					
1) MCS0 (PER ≤ 10%)	-	-	-82	dBm	
2) MCS1 (PER ≤ 10%)	-	-	-79	dBm	
3) MCS2 (PER ≤ 10%)	-	-	-77	dBm	
4) MCS3 (PER ≤ 10%)	-	-	-74	dBm	
5) MCS4 (PER ≤ 10%)	-	-	-70	dBm	
6) MCS5 (PER ≤ 10%)	-	-	-66	dBm	
7) MCS6 (PER ≤ 10%)	-	-	-65	dBm	
8) MCS7 (PER ≤ 10%)	-	-	-64	dBm	
6. Maximum Input Level (PER ≤ 10%)	-30	-	-	dBm	

9.7 IEEE 802.11n HT40 Section(5GHz)

Items	Contents				
Specification	IEEE802.11n HT40 @ 5GHz				
Mode	BPSK, QPSK, 16QAM, 64QAM and OFDM				
Channel	CH38 to CH163				
Data rate (MCS index)	MCS0/1/2/3/4/5/6/7				
TX Characteristics	Min.	Typ.	Max.	Unit	
1. Power Levels (Calibrated)					
1) For antenna port	11	13	16	dBm	
2. Spectrum Mask @target power					
1) at fc +/-21MHz	-	-	-20	dBr	
2) at fc +/-40MHz	-	-	-28	dBr	
3) at fc > +/-60MHz	-	-	-45	dBr	
3. Constellation Error(EVM)@ target power					
1) MCS0	-	-	-5	dB	
2) MCS1	-	-	-10	dB	
3) MCS2	-	-	-13	dB	
4) MCS3	-	-	-16	dB	
5) MCS4	-	-	-19	dB	
6) MCS5	-	-	-22	dB	
7) MCS6	-	-	-25	dB	
8) MCS7	-	-	-28	dB	
4. Frequency Error	-20	-	20	ppm	
RX Characteristics	Min.	Typ.	Max.	Unit	
7. Minimum Input Level Sensitivity (each chain)					
1) MCS0 (PER ≤ 10%)	-	-	-79	dBm	
2) MCS1 (PER ≤ 10%)	-	-	-76	dBm	
3) MCS2 (PER ≤ 10%)	-	-	-74	dBm	
4) MCS3 (PER ≤ 10%)	-	-	-71	dBm	
5) MCS4 (PER ≤ 10%)	-	-	-67	dBm	
6) MCS5 (PER ≤ 10%)	-	-	-63	dBm	
7) MCS6 (PER ≤ 10%)	-	-	-62	dBm	
8) MCS7 (PER ≤ 10%)	-	-	-61	dBm	
6. Maximum Input Level (PER ≤ 10%)	-30	-	-	dBm	

9.8 IEEE 802.11ac Section(5GHz)

Items	Contents					
Specification	IEEE802.11ac					
Mode	BPSK, QPSK, 16QAM, 64QAM ,256QAM and OFDM					
Channel	CH36 to CH165 VHT20 CH38 to CH163 VHT40 CH42 to CH157 VHT80					
Data rate (MCS index)	MCS0/1/2/3/4/5/6/7/8/9					
	Min.	Typ.	Max.	Unit	Remark	
TX Characteristics	Min.	Typ.	Max.	Unit		
1. Power Levels (Calibrated)						
1) For antenna port	11	13	18	dBm		
2. Spectrum Mask @VHT20/VHT40/VHT80 target power						
1) at fc +/-11MHz/21MHz/41MHz	-	-	-20	dBr		
2) at fc +/-20MHz/40MHz/80MHz	-	-	-28	dBr		
3) at fc +/-30MHz/60MHz/120MHz	-	-	-40	dBr		
3. Constellation Error(EVM)@ target power						
1) MCS0	-	-	-5	dB		
2) MCS1	-	-	-10	dB		
3) MCS2	-	-	-13	dB		
4) MCS3	-	-	-16	dB		
5) MCS4	-	-	-19	dB		
6) MCS5	-	-	-22	dB		
7) MCS6	-	-	-25	dB		
8) MCS7	-	-	-27	dB		
9) MCS8	-	-	-30	dB		
10) MCS9	-	-	-32	dB		
4. Frequency Error	-20	-	20	ppm		
RX Characteristics	Min.	Typ.	Max.	Unit		
5. Minimum Input Level Sensitivity (each chain)			VHT 20	VHT 40	VHT 80	
1) MCS0 (PER ≤ 10%)	-	-	-82	-79	-76	dBm
2) MCS1 (PER ≤ 10%)	-	-	-79	-76	-73	dBm
3) MCS2 (PER ≤ 10%)	-	-	-77	-74	-71	dBm
4) MCS3 (PER ≤ 10%)	-	-	-74	-71	-68	dBm
5) MCS4 (PER ≤ 10%)	-	-	-70	-67	-64	dBm
6) MCS5 (PER ≤ 10%)	-	-	-66	-63	-60	dBm
7) MCS6 (PER ≤ 10%)	-	-	-65	-62	-59	dBm

8) MCS7 (PER ≤ 10%)	-	-	-64	-61	-58	dBm	
9) MCS8(PER ≤ 10%)	-	-	-59	-56	-53	dBm	
10) MCS9(PER ≤ 10%)	-	-	-57	-54	-51	dBm	
6. Maximum Input Level (PER ≤ 10%)	-30	-	-			dBm	

9.9 Bluetooth Section

Items	Contents				
Specification	BT2.1+EDR/4.2/5.0				
Mode	FHSS,GFSK,DPSK,DQPSK				
Number of Channel	79 Channels				
Frequency Band	2.402 GHz ~2.480GHz				
	Min.	Typ.	Max.	Unit	Remark
1. Output Power		4	-	dBm	
2. Gain step	2	4	8	dB	
3. Receiver sensitivity (BER ≅0.1%)	-	-93.5	-80	dBm	
4. Maximum usable signal (BER ≅0.1%)	-	-5	-		
5. C/I co-channel (BER<0.1%)	-	4	11	dB	
6. C/I 1MHz (BER<0.1%)	-	-14	0	dB	
7. C/I 2MHz (BER<0.1%)	-	-42	-30	dB	
8. C/I≥3MHz (BER<0.1%)	-	-49	-40	dB	
9. C/I Image channel (BER<0.1%)	-	-25	-9	dB	
10. C/I Image 1MHz (BER<0.1%)	-	-50	-20	dB	
11. Inter-modulation	-	-13	-	dB	
12. Out-of-band blocking					
1). 30MHz to 2000MHz	-10	-	-	dBm	
2). 2000MHz to 2399MHz	-27	-	-	dBm	
3). 2498MHz to 3000MHz	-27	-	-	dBm	
4). 3000MHz to 12.75GHz	-10	-	-	dBm	
13. Modulation characteristics					
1). Δf1avg	140	157	175	KHz	
2). Δf2max (For at least 99.9% of all Δf2max)	115	140	-	KHz	
3). Δf1avg /Δf2avg	0.8	0.98	-	KHz	
14. ICFT	-75	±20	+75	KHz	
15. Carrier frequency drift					
1). One slot packet (DH1)	-25	±15	+25	KHz	
2). Two slot packet (DH3)	-40	±15	+40	KHz	
3). Five slot packet (DH5)	-40	±15	+40	KHz	
4). Max drift rate	-	6	20	KHz/50us	
16. TX output spectrum(20dB bandwidth)	-	922	1000	KHz	
17. In-Band spurious emission					
1). ±2MHz offset	-	-45	-20	dBm	

2). ± 3 MHz offset	-	-48	-40	dBm	
3). $> \pm 3$ MHz offset	-	-48	-40	dBm	

9. Mechanical, Environmental and Reliability Tests

(机械、环境和可靠性测试)

Test Items		Test Conditions	Qty	Criteria Condition
10-1	Drop test	The packed samples was tested at below condition: Drop height: 760mm(0.5~9.5kg) 610mm(9.5~18.5kg) Drop time: 1x corner, 3x edge and 6x face.	1xBox	After test, the outer box and inner box will not be broken by appearance visual inspection, and the products should be ok.
10-2	Vibration test	X-Y-Z direction, first Frequency changing from 10Hz to 30Hz to 10Hz, amplitude 2.0mm, 5 times vibrations, 5x times vibration.	1xBox	After test, the outer box and inner box will not be broken by appearance visual inspection and the products should be ok.
10-3	Soldering ability test (Only for SKI module)	Soldering temperature: $245 \pm 5^{\circ}\text{C}$ Soldering duration: $3 \pm 0.5\text{S}$	3	1. After soldering, the soldered area must be covered by a smooth bright solder layer, some deficiencies such as a small amount of the pinhole, not wetting are allowed, but the deficiencies can not be in the same place; 2. At least 90% of soldered area shall be covered continuously by the soldering material.
10-4	High Temperature and Humidity Operation Test	Leave samples in 60°C , 90% RH @ 24 hours	4	After test, the products appearance, power, EVM and frequency error functional parameter shall be satisfied with the test specification.
10-5	Low Temperature Operation Test	Leave samples in -15°C @24 hours	4	After test, the products appearance, power, EVM and frequency error functional parameter shall be satisfied with the test specification.

10-6	High Temperature and Humidity Start Test	Leave samples in 60℃, 90% RH for 4x hours	4	After test, power on and off the samples for 3x tiems, the samples should be able to start normally
10-7	Low temperature start test	Leave samples in -15℃ for 4x hours	4	After test, power on and off the samples for 3x tiems, the samples should be able to start normally
10-8	High Temperature and Humidity Storage Test	Leave samples in 85℃, 95% RH @ 48 hours	4	After test, the products appearance, power, EVM and frequency error functional parameter shall be satisfied with the test specification.
10-9	Low Temperature Storage Test	Leave samples in -40℃, @48 hours	4	After test, the products appearance, power, EVM and frequency error functional parameter shall be satisfied with the test specification.
10-10	Thermal Shock Test	-40~85℃, dwell time: 30min, 50cycles	4	After test, the products appearance, power, EVM and frequency error functional parameter shall be satisfied with the test specification.
10-11	Aging Test	60℃, 120Hrs	10	The products at high temperature for a long time can continuous work normally
10-12	Salt spray test	NSS,35C,PH:6.5~7.2, 24H	2	The Sample shall has no minor or major defects, such as physical damage, crack, corrosion, deformation etc;
10-13	ESD	Discharge voltage: 1kV C: 50pF Discharge resistance: 330Ω Positive10 times 1 time for each second	3	The products can recoverable smoothly after ESD test.

10. Package (包装)

11. Software Requirements (软件要求)

The driver supports the following operating systems: Microsoft Windows XP, Vista and Win7.
驱动程序支持以下操作系统：微软 Windows XP, Vista 和 win7。