

MP5000

Wireless Test Station

PRODUCT BROCHURE

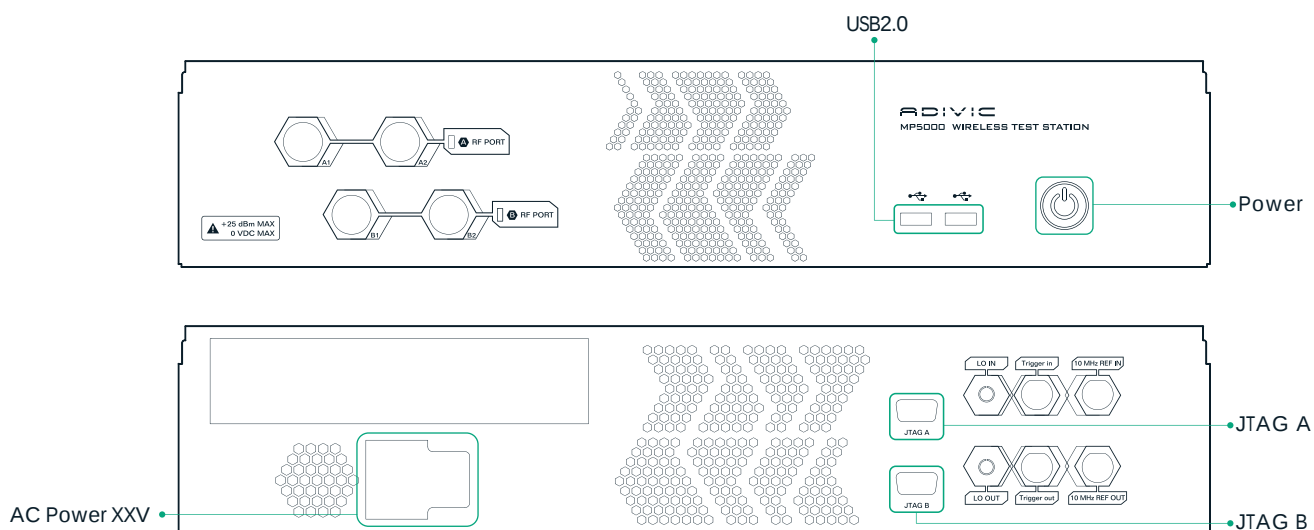
ADIVIC
— RF TEST & MEASUREMENT —

MP5000

Wireless Test Station

Features

1. Software Defined Radio(SDR) architecture with VSG/VSA in one box
2. Support 802.11ac, 802.11a/b/g/n standards
3. Support Bluetooth V1.x/V2.x/V3.x EDR/V4.x BLE
4. Signal measurement engine in box
5. User friendly GUI for R&D/QA applications
6. API for production automation programming
7. Turn-key production automation software support upon request



Mechanical

Dimensions : L:480mm X W:425mm X H:89mm
Weight : 12Kg



MP5000

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MP5000 General Technical Specifications

>> RF Analyzer

Parameter	Specifications
Input Frequency Range	2150~2600 MHz, 4900~6000 MHz optional 300KHz~6GHz full band
RF Port number	2 Ports
IF bandwidth	120 MHz
Max input power	+30 dBm peak, +20 dBm average
Input power accuracy @(+20 to -75 dBm)	+/-0.75 dB (+/-0.5 dB Typ) +/-1.0 dB @ 0 °C ~ 50°C
Phase Noise	Phase noise <-100dBc: 1 KHz offset @2.4 GHz Phase noise <-95dBc: 1 KHz offset @5.8 GHz
LO Leakage (after self-calibration)	< -50 dBc
sideband image (IQ-imbalance) @after self-calibration	<-50dBc @ 2.4GHz, -10dBm <-50dBc @ 5.8GHz, -10dBm
Third order input inter-modulation distortion(IMD3)	< -70dBc@-10 dBm
Input Return loss	> 10 dB 2150~2600 MHz > 12 dB 4900~6000 MHz
ADC resolution	16 Bits
Sample rate	160 MS/s
Initial achievable accuracy	+/-50 ppb maximum (OCXO) @25 °C, after 60 minutes warm up
Temperature stability	+/-20 ppb maximum(OCXO) @0 °C ~50 °C
Aging	+/-1 ppb / day maximum (OCXO) +/-100 ppb / yr maximum (OCXO)
Operating Temperature	0 °C to 50 °C
Operating Voltage	100 V to 240 V
Warm-up time	> 30 minute

>> RF Generator

Parameter	Specifications
Output Frequency Range	4900~6000 MHz, 2150~2600 MHz optional 300KHz~6GHz full band
IF bandwidth	120 MHz
Max Output power@ CW	+10 dBm @ 2150~2600 MHz +7 dBm @ 4900 ~ 6000 MHz
Power Accuracy@(0 to -95 dBm)	+/-0.75 dB (+/- 0.5 dB Typ) +/-1.0 dB @ 0 °C ~ 50 °C
Phase Noise	Phase noise <-100 dBc: 1 KHz offset @ 2.4 GHz Phase noise <-95 dBc: 1 KHz offset @ 5.8 GHz
LO leakage(DC offset) @after self-calibration	< -50 dBc @ 2.4 GHz, -10 dBm < -50 dBc @ 5.8 GHz, -10 dBm
sideband image (IQ-imbalance) @after self-calibration	< -50 dBc @ 2.4 GHz, -10 dBm < -50 dBc @ 5.8 GHz, -10 dBm
Third order inter-modulation distortion(IMD3)	<-60dBc@-10dBm(two -13dBm Tone)
Return loss	> 10 dB 2150 ~ 2600 MHz > 12 dB 4900 ~ 6000 MHz
DAC resolution	16 Bits
Sample rate	960 MS/s
Initial achievable accuracy	+/- 50 ppb maximum (OCXO) @ 25 °C, after 60 minutes warm up
Temperature stability	+/- 20 ppb maximum (OCXO) @ 0 °C ~ 50 °C
Aging	+/-1 ppb / day maximum (OCXO) +/-100 ppb / yr maximum (OCXO)
Operating Temperature	0 °C to 50 °C
Operating Voltage	100 V to 240 V
Warm-up time	> 30 minute

*** Test condition Temperature : 15 °C ~ 35°C**
Voltage : 100 V to 240 V

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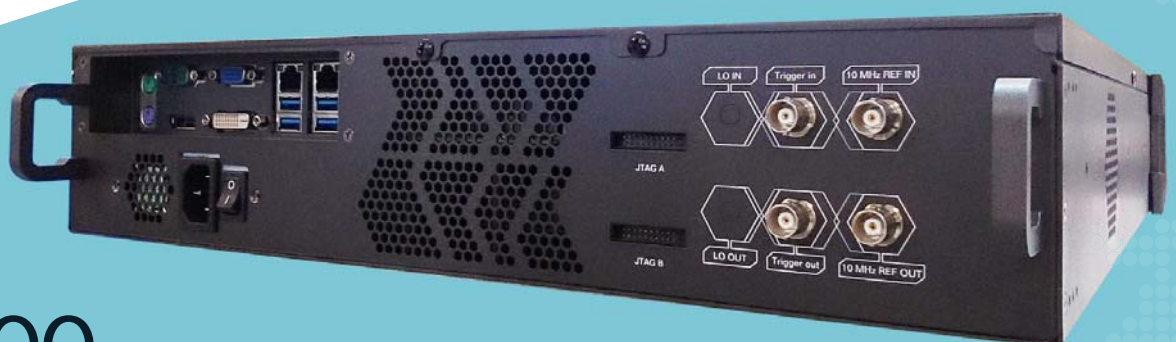
Wireless Test Station

The MP5000 deploys state of the art Software Designed Radio (SDR) architecture that allows full flexibility with all current and future Wifi / Bluetooth standards. Utilizing SDR future firmware upgrade will allow support for LTE and other wireless standards.

The MP5000 contains high quality VSA (Vector Signal Analyzer) & VSG (Vector Signal Generator) to provide a complete and versatile test environment. A highly informative GUI that's both intuitive and user-friendly allows easy test of wi-fi & bluetooth signal with a few clicks of a mouse.

Supported measurement items include EVM, power, frequency error, IQ imbalance, 20dB Bandwidth, FM Demodulator Output...etc.

The MP5000 comes fully programmed with test waveforms for wi-fi 802.11a/b/g/n/ac & Bluetooth V.1.x/2.x/3.x EDR/4.x BLE waveform to allow immediate testing of DUTs. Moreover, a built-in waveform generator utility allows users to establish arbitrary Wi-Fi/Bluetooth testing signals. Automatic mass production turnkey software is also available upon request.

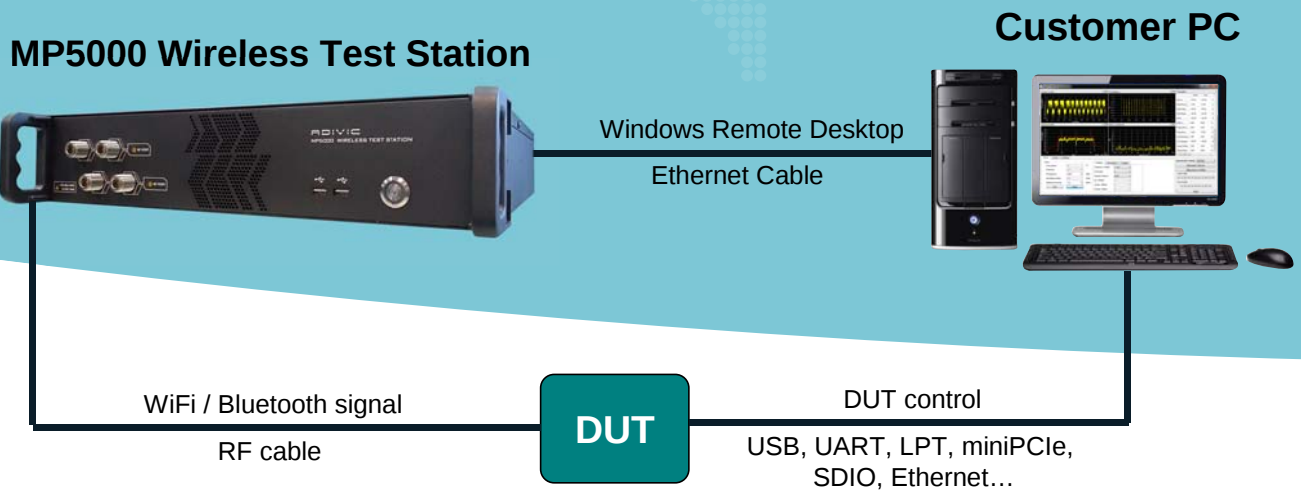


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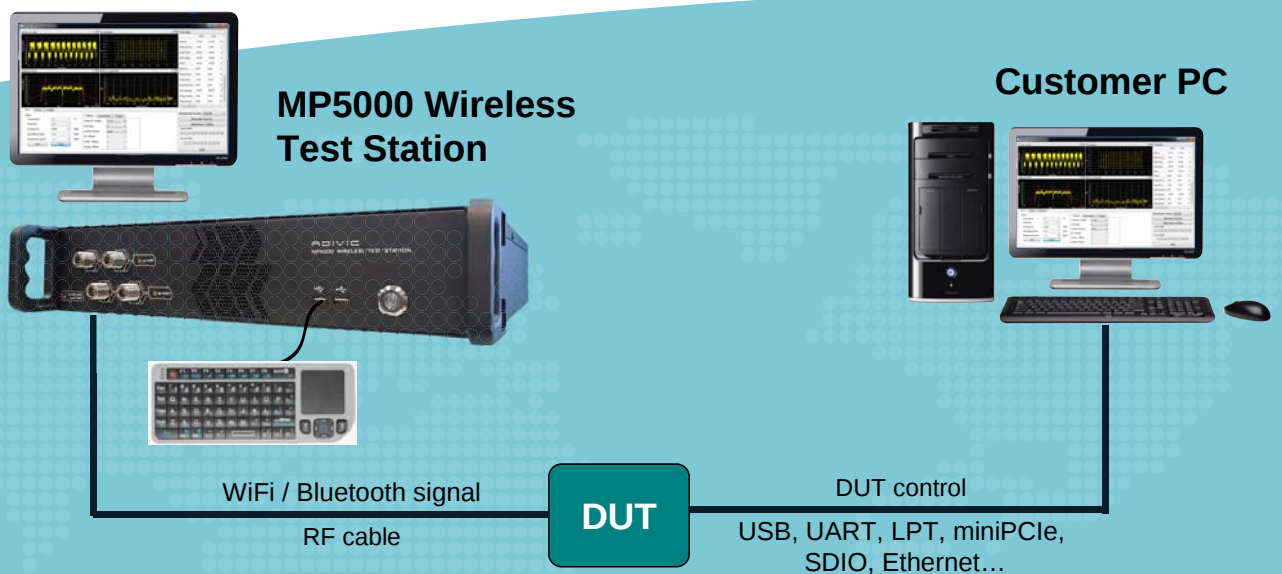
MP5000 R&D Graphic Program

MP5000 Full Test Setup for R&D/QA



GUI application runs on the MP5000 Tester
Manage the GUI application thru Windows Remote Desktop
No need to install additional software package into your PC/NB

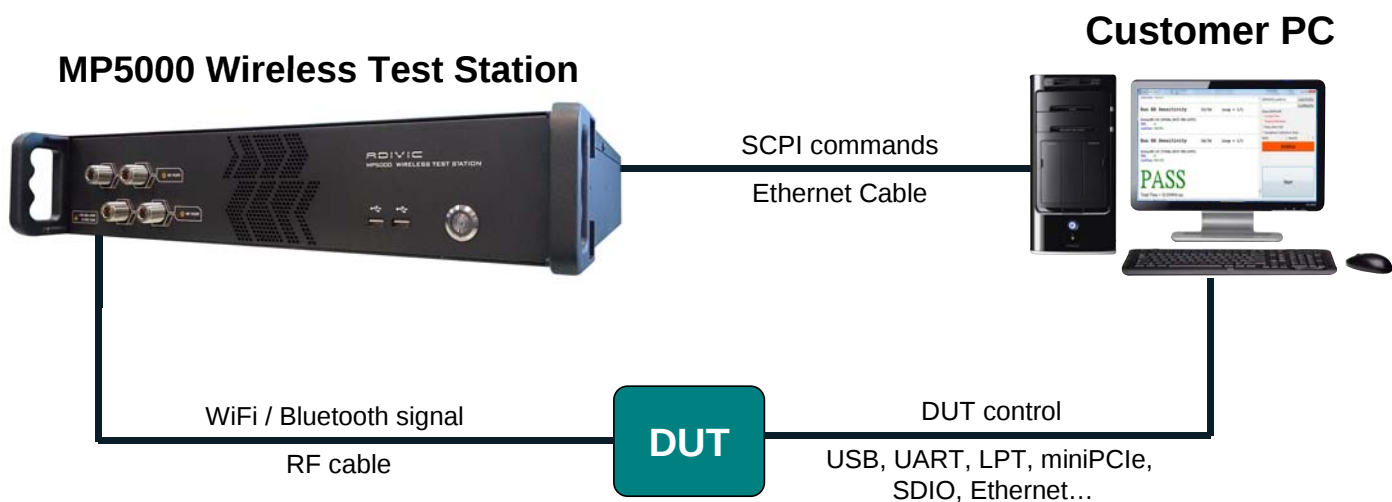
MP5000 Simple Test Setup for R&D/QA



GUI application runs on the MP5000 Tester
Manage MP5000 as a PC



MP5000 Automated Test Setup for Mass-Production



VSA/VSG engines run on the MP5000 Tester
Mass-production software runs on the customer's PC

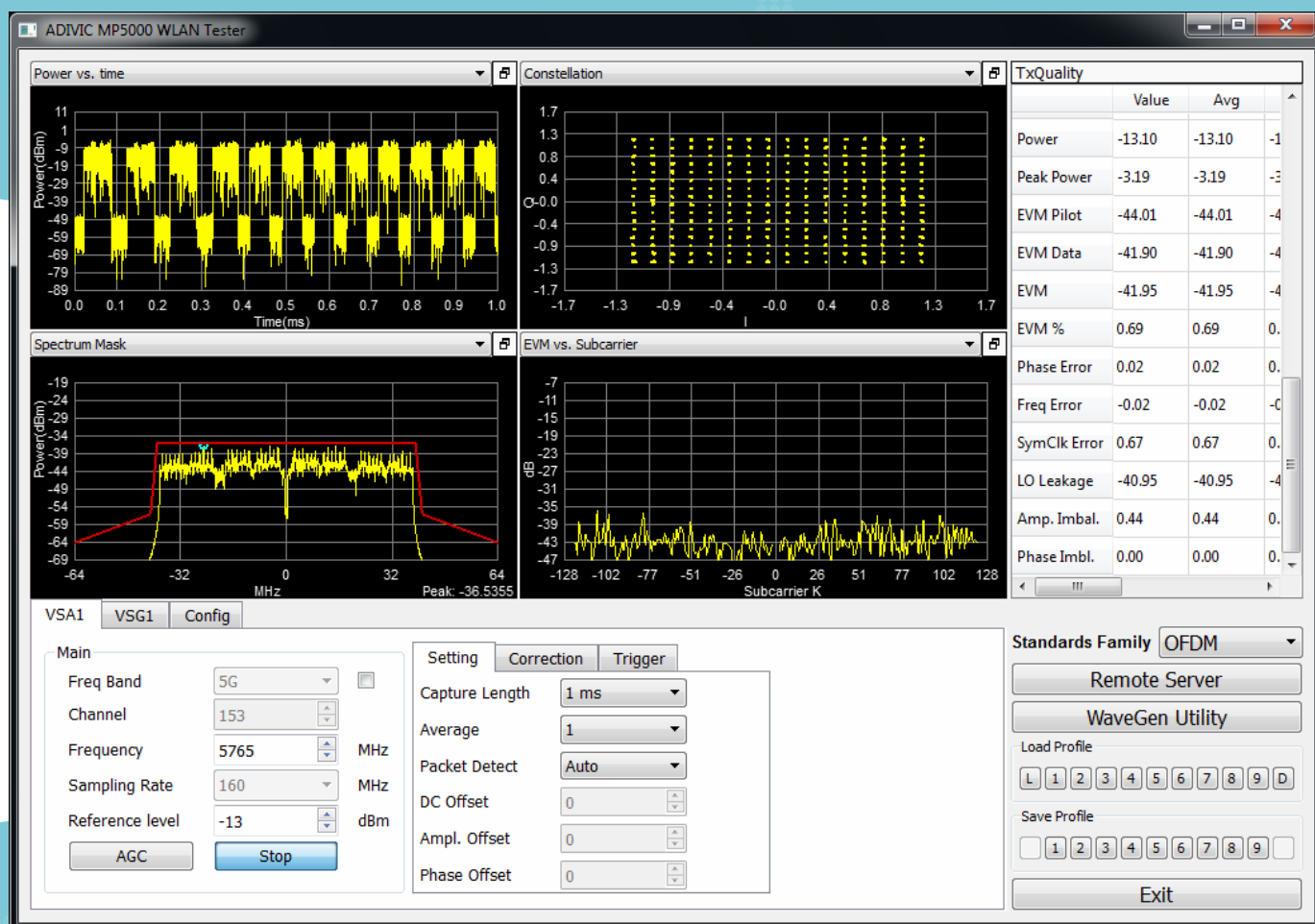
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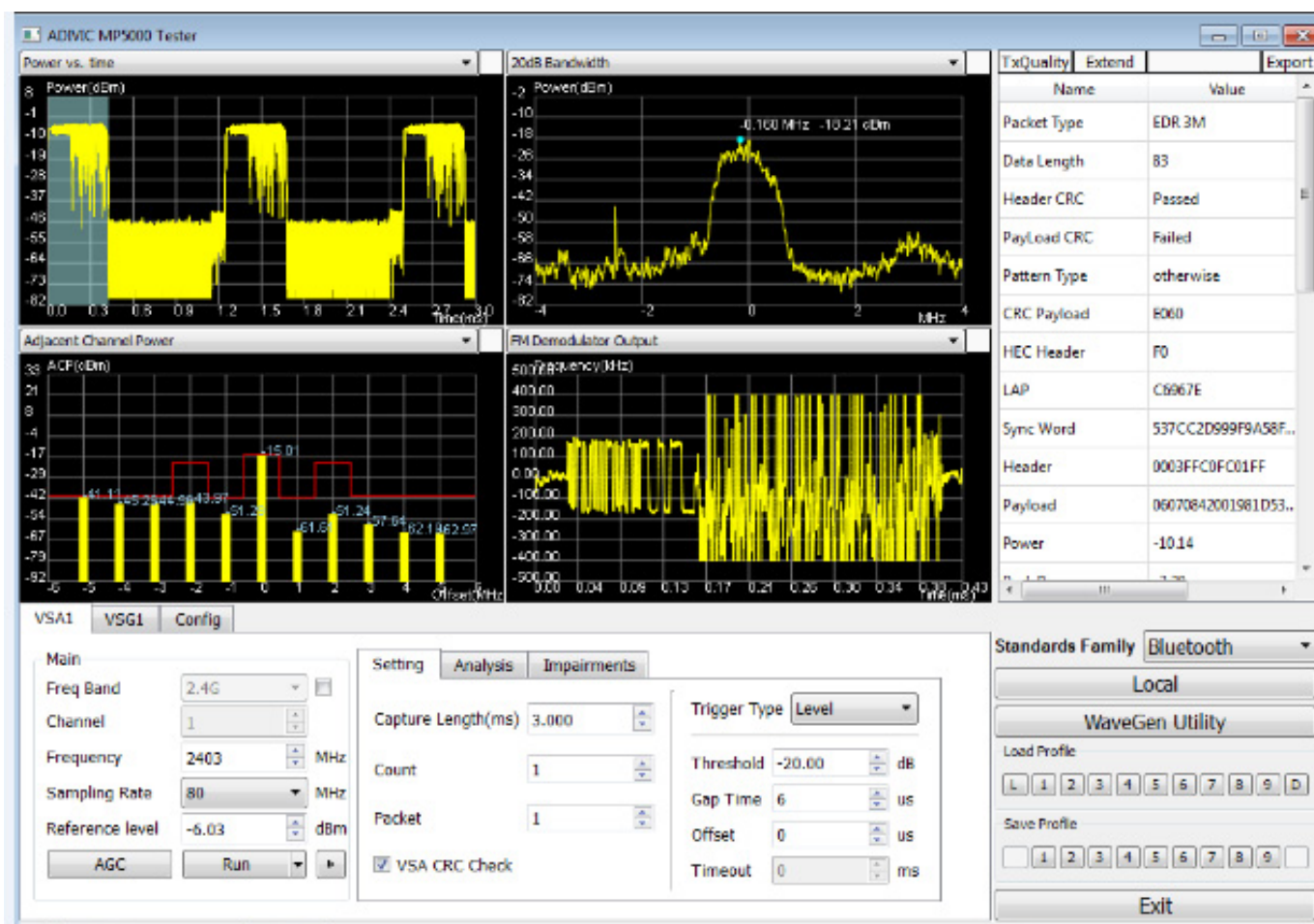
Wireless Test Station

MP5000 GUI outlook (Wi-Fi)





MP5000 GUI outlook (Bluetooth)



MP5000 automated mass-production turnkey software

ADIVIC_MFG_Tool Version 3.16.0309

RF 2

Test Flow: WIFI_Spec., BT_Spec.

OFDM TX Measurement 34/35

Setting: 802.11AC 5190Mhz MCS7 40M (ANT1)

Power	12.79 / 13.00 (dBm)	(+11.00).....(+15.00)
EVM	-39.00 (dBm)	(-45.00)....0.....(-27.00)
Mask	Pass	
MaskError	0.00 (%)	(+00.00)0.....(+05.00)
FreqError	-3.58 (ppm)	(-20.00)....0.....(+20.00)
PhaseError	0.59 (deg)	
SymClockError	-2.94 (ppm)	
LoLeakage	-42.99 (dB)	
ItemTime	1039.41 (ms)	

Close DUT 35/35

Close DUT Success

PASS

DUT1 Test Time = 31.71 Sec
DUT Init Time = 2.44 Sec
Total Test Time = 32.34 Sec

00:34056

RTL8812au

Pass = 467 Error = 11
97.70%

MAC :
SN :

Start

ADIVIC_MFG_Tool Version 3.16.0309

RF 2

Test Flow: WIFI_Spec., BT_Spec.

BT TX Measurement 19/20

Setting: BDR_DataPattern: PRBS9_11110000_10101010_2480Mhz_DH5_
PowerLevel:1

Power	-16.13 (dBm)
InitFreqError	1.68 (kHz)
BW_20dB	0.88 (MHz)
Freq_Drift	-7.97 (kHz)
Delta_F1_AVG	155.28 (kHz)
Delta_F2_Max	139.57 (kHz)
Delta_F2F1_Ratio	0.94
ItemTime	5198.89 (ms)

Close DUT 20/20

Close DUT Success

PASS

DUT1 Test Time = 42.72 Sec
DUT Init Time = 8.87 Sec
Total Test Time = 43.33 Sec

00:51436

BT_WL18xx

Pass = 461 Error = 10
97.88%

MAC :
SN :

Start

