



## 7.7 CONDUCTED BAND EDGE MEASUREMENT

## 7.7.1 Applicable Standard

According to FCC Part 15.247(d) and KDB 558074 DTS 01 Meas. Guidance v04

### 7.7.2 Conformance Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

### 7.7.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

### 7.7.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.7.5 Test Procedure

The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously.

The EUT was operating in controlled its channel.

Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.

Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

Repeat above procedures until all measured frequencies were complete.





# 7.7.6 Test Results

EUT:	8-Inch Fully Ruggedized Tablet	Model No.:	SV-86H
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	802.11b/g/n20/n40	Test By:	Cheng Jiawen

# **Test plot For**

# 802.11b: Band Edge-Low Channel



# 802.11b: Band Edge-High Channel

# 802.11g: Band Edge-Low Channel



# 802.11g: Band Edge-High Channel









## Test plot For

802.11n20: Band Edge-Low Channel

802.11n40: Band Edge-Low Channel



802.11n20: Band Edge-High Channel



802.11n40: Band Edge-High Channel



Agilent Spectrum Analyzer - Swept SA					
DORL RF 50 Q AC	SE	Ava	ALIGNAUTO	12:28:16 AM May 29, 2018	Display
PNO	D: Fast Trig: Free in:Low Atten: 30	Run dB	.,,,	DET P N N N N N	
10 dB/div Ref 20.00 dBm	Annotation►				
10.0 0.00 .10.0	1 phone balance had	haladadada			Title►
-20.0	<i>i</i> l			.21.52 alim	Graticule
-30.0		- Andrew		anter an and the second second second	<u>On</u> Off
-80.0					Display Line -21.52 dBm On Off
Start 2.43000 GHz #Res BW 100 kHz	Stop 2.50000 GHz 5.73 ms (1001 pts)				
MKR MODE TRC SCL X	GHz J 52 dE	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 7 2.483 50 3 4 5 5 6	GHz 42.46 dE	3m			System Display⊁ Settings
7 8 9 10					
12			STATIS		





## 7.8 SPURIOUS RF CONDUCTED EMISSIONS

### 7.8.1 Conformance Limit

1. Below -20dB of the highest emission level in operating band.

2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

### 7.8.2 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

### 7.8.3 Test Setup

Please refer to Section 6.1 of this test report.

### 7.8.4 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW= 300KHz to measure the peak field strength , and measure frequency range from 9KHz to 26.5GHz.

#### 7.8.5 Test Results

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.



Peak Sea

35,18

NextPea

Next Pk Righ

Next Pk Lef

Marker Delt

Mkr→CF

Mkr→RefLv

Peak Search

NextPea

Next Pk Right

Next Pk Lef

Marker Del

Mkr→CF

More 1 of 2

Mkr→RefLv

Stop 26.50 GHz Sweep 2.44 s (1001 pts)

More 1 of 2





More 1 of 2

art 1.00 GHz es BW 100 kHz

#VBW 300 kHz

Stop 1.0000 GF Sweep 92.7 ms (1001 pt

Start 30.0 MHz #Res BW 100 kHz

#VBW 300 kHz







**Test Plot** 



802.11b on channel 06







NextPea

Mkr→CF

More 1 of 2

NextPea

Mkr→CF

More 1 of 2











NTEK北测



802.11g on channel 01

802.11g on channel 01



802.11g on channel 01

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Next Pk Lef

Marker Delt

Mkr→CF

Mkr→RefLv

More 1 of 2



**♦**<sup>1</sup>

Stop 1.0000 G Sweep 92.7 ms (1001 p

NTEK北测



802.11g on channel 06



Start 30.0 MHz #Res BW 100 kHz

#VBW 300 kHz



NextPea

Next Pk Lef

Marker Delt

Mkr→CF

Mkr→RefLv

Peak Search

NextPea

Next Pk Lef

Marker Delt

Mkr→RefLv

Mkr→CF

More 1 of 2

More 1 of 2









**Test Plot** 



802.11n20 on channel 01



802.11 n20 on channel 01

802.11 n20 on channel 01







Peak Sea





**Test Plot** 

NextPea Next Pk Righ Next Pk Lef Marker Delt Mkr→CF Mkr→RefLv More 1 of 2 Stop 30.00 MH; Sweep 2.87 ms (1001 pts 802.11 n20 on channel 06





#### Report No.: S18092602601E004





Test Plot



802.11 n20 on channel 11



802.11 n20 on channel 11

802.11 n20 on channel 11

RL	RF 50 Q AC		SENSE:IN	T	ALIGNAUTO	03:57:10	AM May 29, 2018	Pask Saarch
		PNO: Fast	Trig: Free Run	Avg Typ	e: Log-Pwr	TRA	CE 1 2 3 4 5 6 /PE MWAAAAAA	r eak Search
		IFGain:Low	Atten: 30 dB			1	DET EINERALINER	NextBook
10 dB/div	Ref 20.00 dBm				М	kr1 935 -59.	.01 MHz .63 dBm	NextPea
10.0								Next Pk Righ
0.00								
10.0								Next Pk Le
-20.0							-20.20 dBm	
30.0								MarkerDeil
40.0								Mkr-C
50.0								
							<u>1</u>	
-60.0	and a family the former of the second	howelsteastic	had white the had	والمحاربة والمراجع	and realized	in the state	nutritication	Mkr→RefLv
-70.0								
Start 20.0						Oton 4	0000 CH	Mon
#Res BW	100 kHz	#VBW 3	300 kHz		Sweep	92.7 ms	(1001 gHz)	1 07.
	100 KH2	#VDVV	300 KH2		SWeep	92.7 1115	(1001 pts)	

 Applient Spectrum Analyzer - Sweet State
 Peak Search

 L/L
 Nr.
 Spectrum Analyzer
 Spectrum Analyzer
 Spectrum Analyzer
 Spectrum Analyzer
 Spectrum Analyzer
 Peak Search
 Peak Search
 Peak Search
 Peak Search
 Next Peak Search
 Peak Search
 Next Peak Search
 N





**Test Plot** 



802.11n40 on channel 03





802.11n40 on channel 03

Aug Type: Log-Pwr Peak Sea PNO: Fast 
Trig: Free Run
CGaind ave
Atten: 30 dB TYPE Next Pea 995.15 M -58.99 d Ref 20.00 dBm Next Pk Righ Next Pk Lef Marker Delt Mkr→CF Mkr→RefLv More 1 of 2 Start 30.0 MHz #Res BW 100 kHz Stop 1.0000 GF Sweep 92.7 ms (1001 pt #VBW 300 kHz

802.11n40 on channel 03





















## 7.9 ANTENNA APPLICATION

### 7.9.1 Antenna Requirement

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### 7.9.2 Result

The EUT antenna is permanent attached FPCB antenna(Gain:2 dBi). It comply with the standard requirement.

END OF REPORT