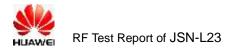


# **Appendix for Test Report**



# Appendix A: DTS (6 dB) Bandwidth

In this document, the "DTS6dBBW" refers to the measured "DTS (6 dB) Bandwidth" value. In this Appendix, the "fc(DTS6dBBW)" refers to the centre of the measured "DTS6dBBW". The introduction of the "fc(DTS6dBBW)" is due to that other measurements use it as the spectrum analyzer setting.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

#### Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
TM1 _Ch0	L	2402	Ant 1	0.72	pass
TM1 _Ch19	М	2440	Ant 1	0.71	pass
TM1 _Ch39	Н	2480	Ant 1	0.71	pass



#### Part II - Test Plots

#### 2.1 TM1 \_Ch0@Ant 1





# 2.2 TM1 \_Ch19@Ant 1

Center Freq 2.440000000	-+- Trig: f	sense init in Freq: 2.440000000 GHz Free Run Avg[Hold: h: 40 dB	ALIGNAUTO 05:02:39 PM Aug 21, Radio Std: None 10/10 Radio Device: BTS	Frequency
Ref Offset 0.5 dB 10 dB/div Ref 25.00 dBm				
5,00		~~~		Center Freq 2.440000000 GHz
5.00 15.0 25.0				
35 0 45 0 55 0			N. Company and State	
Center 2.44 GHz Res BW 100 kHz	#	VBW 300 kHz	Span 4 M Sweep 2	CF Step 400.000 kHz Auto Man
Occupied Bandwidth 1.(	, 0595 MHz	Total Power	8.40 dBm	Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	5.100 kHz 708.4 kHz	OBW Power x dB	99.00 % -6.00 dB	
150			STATUS	



# 2.3 TM1 \_Ch39@Ant 1

RL RF 509 AC Center Freq 2.480000000	GHz Cente	sense invi in Freq: 2.480000000 GHz Free Run Avg[Hold: h: 40 dB	ALIGNAUTO 05:08:43 PM Aug 21, 2 Radio Std: None 10/10 Radio Device: BTS	018 Frequency
Ref Offset 0.5 dE Ref 25.00 dBr	n			
-og 15.0 5.00		~		Center Freq 2.480000000 GHz
5.00 15.0 25.0				
15.0 15.0 15.0			have a norm	
enter 2.48 GHz Res BW 100 kHz	#	VBW 300 kHz	Span 4 Mi Sweep 2 n	CF Step 400.000 kH Auto Mar
Occupied Bandwidt	<sup>h</sup> 0572 MHz	Total Power	11.4 dBm	Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	2.472 kHz 711.8 kHz	OBW Power x dB	99.00 % -6.00 dB	
50			STATUS	



# Appendix B: Occupied Bandwidth

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

### Part I - Test Results

Test Mode	Test Channel Frequency[MHz]		Ant	Occupied Bandwidth [MHz]	Verdict
TM1 _Ch0	L	2402	Ant 1	1.04	pass
TM1 _Ch19	М	2440	Ant 1	1.04	pass
TM1 _Ch39	Н	2480	Ant 1	1.04	pass



#### Part II - Test Plots

#### 2.1 TM1 \_Ch0@Ant 1





# 2.2 TM1 \_Ch19@Ant 1

	F 500 AC 2.440000000	GHz #IFGain:Low	Center Freq: 2 Trig: Free Run #Atten: 40 dB	440000000 GHz	1:> 10/10	D5:02:47 F Radio Std Radio Dev		Frequer	ncy
0 dB/div	Ref Offset 0.5 dB Ref 25.00 dBn								
5.00								Cente 2.4400000	111111111
50 50 50		, po	Maria	m					
150	a the second	m		Y	m				
50 A. March						mountain	monorma		
Center 2.44 Res BW 20			#VBW (	52 kHz		Sp Swee	an 4 MHz p 9.6 ms		F Step 000 kHz Mar
Occupie	d Bandwidt 1.	<sup>h</sup> 0399 MH		tal Power	7.93	dBm		Freq	Offsel 0 Ha
Transmit   x dB Band	Freq Error dwidth	11.049 k 1.263 M		W Power B		.00 % )0 dB			
0					STATUS				



# 2.3 TM1 \_Ch39@Ant 1

	eq 2.48000000	O GHz Cent	SENCE INT er Freq: 2.480000000 GHz Free Run Avg[Hold: n: 40 dB	ALIGNAUTO 05:08:51 PM Aug 21 Radio Std: None : 10/10 Radio Device: B1	Frequency
0 dB/div	Ref Offset 0.5 df Ref 25.00 dB				
5.00		- AM	00000		Center Freq 2.480000000 GHz
50			in analytic	De A	
50 50 50	mont		Į,	marganer	
enter 2.43 Res BW 2			#VBW 62 kHz	Span 4 Sweep 9.6	
Occupi	ed Bandwid 1	<sup>th</sup> .0373 MHz	Total Power	11.0 dBm	Freq Offse 0 H
Transmi x dB Bai	it Freq Error ndwidth	8.954 kHz 1.260 MHz	OBW Power x dB	99.00 % -26.00 dB	
a				STATUS	



# Appendix C: Duty Cycle

### Part I - Test Results

Test Mode	TX Freq. [MHz]	Duty cycle [%]
TM1	CH0,CH19,CH39	60.5

#### Part II - Test Plots

#### 2.1 TM1

anter Fr	eq 2.44000	PNC	East Tr	SENSE INT rig Delay-2.000 r rig: Video Atten: 30 dB	ıs #AvgTy	ALIGNAUTO	11:42:56 AM TRACE TYPE DET	Aug 21, 2018	Frequency
dB/div	Ref Offset 9.3	3 dB dBm				L	Mkr3 62 -0	25.1 µs .33 dB	Auto Tune
).3 30	2∆1								Center Free 2.440000000 GH
70 17 17 17	30.							THOSM	Start Free 2.440000000 GH
17 <mark>14</mark>	****		- Contraction				W		Stop Free 2.440000000 GH
enter 2.4 es BW 8	40000000 C MHz	GHz	#VBW 8.0	) MHz		Sweep 5.		oan 0 Hz 000 pts)	CF Ste 8.000000 MH
R MODE TR	C SCL	×	1 us <b>anna</b> - 1	Y / 2.06 dBm	UNCTION F	UNCTION WIDTH	FUNCTION	I VALUE	Auto Mai
	t (Δ) t (Δ)	378	2 μs (Δ) 1 μs (Δ)	14.12 dB -0.33 dB					Freq Offse 0 H
1								2	
1						<b>STATUS</b>	Ť.		91



# Appendix D: Maximum Conducted Average Output Power

# Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	Power[dBm]	Verdict
TM1 _Ch0	L	2402	Ant 1	3.69	pass
TM1 _Ch19	М	2440	Ant 1	1.51	pass
TM1 _Ch39	Н	2480	Ant 1	5.05	pass



#### Part II - Test Plots

### 2.1 TM1 \_Ch0@Ant 1

RL RF 30.9 AC enter Freq 2.402000000 GHz PNO: Wide - [EGain:Low	Trig: Free Run Atten: 38 dB	#Avg Type: RMS Avg[Held: 500/500	D4:58:39 PM Aug 21, 2018 TRACE 2 2 3 4 5 1 TYPE A VM AMAM DET A A A A A A	Frequency
Ref Offset 2.68 dB dB/div Ref 30.00 dBm		Mkr1 2 Band Powe	402 000 GHz er 3.690 dBm	Auto Tune
00				Center Free 2.402000000 GH
	www.			Start Free 2.400000000 GH
		And	~~~	<b>Stop Fre</b> 2.404000000 GH
RI MODE, TRC SCL X		Sweep 1	p 2.404000 GHz 2.3 ms (601 pts) FUNCTION VALUE	С <b>F Ste</b> j 400.000 кн <u>tto</u> Ма
N 1 f 2.402 000 GHz	-9,447 dBm Band	3 Power 1,053 MHz	3.690 dBm	Freq Offse 0 H



# 2.2 TM1 \_Ch19@Ant 1





# 2.3 TM1 \_Ch39@Ant 1





# Appendix E: Maximum Power Spectral Density Level

# Part I - Test Results

Test Mode	Test Channel Frequency[MHz]		Ant	PD[MHz]	Verdict
TM1 _Ch0	L	2402	Ant 1	-9.93	pass
TM1 _Ch19	М	2440	Ant 1	-9.87	pass
TM1 _Ch39	Н	2480	Ant 1	-9.64	pass



### Part II - Test Plots

#### 2.1 TM1 \_Ch0@Ant 1





# 2.2 TM1 \_Ch19@Ant 1





# 2.3 TM1 \_Ch39@Ant 1





# Appendix F: Band Edges Compliance

# Part I - Test Results

Test	Test	Frequency[MHz]	Ant	Carrier	Max.Spurious	Verdict
Mode	Channel	Frequency[winz]	Ant	Power[dBm]	Level[dBm]	veruici
TM1		2402	Ant	3.01	-50.53	2000
_Ch0	L	2402	1	3.01	-30.33	pass
TM1	Н	2480	Ant	4.17	E1 C0	2000
_Ch39		2480	1	4.17	-51.68	pass



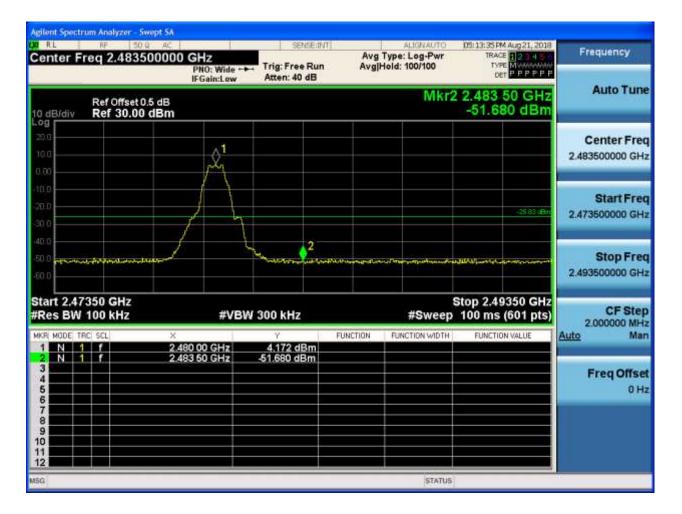
### Part II - Test Plots

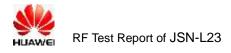
### 2.1 TM1 \_Ch0@Ant 1

ter Fr			Hz NO: Wide Gain:Low				ALIGNAUTO Type: Log-Pwr Hold: 10/10	TRAC TVI	MAUQ21, 2018 E 1 2 1 4 5 1 E MANAGANA E P P P P P P	Frequency
B/div	Ref Offset						Mkr		00 GHz 32 dBm	Auto Tune
								Å		Center Fre 2.392500000 GH
								ļ	-26.99.dbm	Start Fre 2.380000000 GH
****	an mada ya mana na	n splanning	yann mal	later and the second	ليعره ليذار	erij-Alvel	artunety-metr-b	2'	l'allowayares	Stop Fre 2.405000000 GH
	000 GHz 100 kHz	×	#VB	W 300 kHz		NCTION		100 ms	0500 GHz (601 pts)	CF Ste 2.500000 MH Auto Ma
N 1 N 1	f all	2.402	00 GHz 00 GHz	3.006 dl -50.532 dl	3m	RETION	Function wip in	Policini	IN VALUE	
										Freq Offs 0 F
						_	STATUS	di.		,



# 2.2 TM1 \_Ch39@Ant 1





# Appendix G: Unwanted Emissions into Non-Restricted Frequency

# Bands

In this Appendix, the "Pref", which is used as the reference level, refers to the peak power level in any 100 kHz bandwidth within the fundamental emission, the "Puw" referrers to the maximum emission power in 100 kHz band segments outside of the authorized frequency band.

Considering that the higher ratio of RBW to the span for the frequency ranges below 30 MHz makes the results determination be complicated, a narrower RBW other than 100 kHz is used for these ranges. The measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =  $10 \times lg(100 \ [kHz]/narrower RBW \ [kHz])$ . As to this Appendix, the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain and used as respective results for each chain, due to the relative-limit requirement.

In the result table, the "< Limit" denotes that "The Puw [dBm] is less than Pref[dBm]-30[dBm],see test plots for detailed".

Test Mode	Test Channel	Frequency[MHz]	Ant	Pref[dBm]	Puw[dBm]	Verdict
TM1 _Ch0	L	2402	Ant 1	2.96	<limit< td=""><td>pass</td></limit<>	pass
TM1 _Ch19	М	2440	Ant 1	1.11	<limit< td=""><td>pass</td></limit<>	pass
TM1 _Ch39	Н	2480	Ant 1	4.14	<limit< td=""><td>pass</td></limit<>	pass

### Part I - Test Results



### Part II - Test Plots

### 2.1 TM1 \_Ch0@Ant 1

#### Pref:

RL RF 500 AC Center Freq 2.402000000 GH: PRG	SENSE INT	AVg Type: Log-Pwr Avg[Hold:>1000/1000	D4:59:43 PM Aug 21, 2018 TRACE 2 3 4 5 TYPE MYMMMMM DET P P P P P P	Frequency
Ref Offset 0.5 dB 0 dB/div Ref 20.00 dBm		Mkr1	2.401 993 GHz 2.964 dBm	Auto Tune
10.0	1			Center Fred 2.402000000 GH
9.00				Start Free 2.400000000 GH
80				Stop Free 2.404000000 GH:
80			how and	CF Stej 400.000 kH Auto Ma
20.0			- Andrew - A	Freq Offse 0 H
start 2.400000 GHz Res BW 100 kHz	#VBW 300 kHz	Swaan	top 2.404000 GHz 2.00 ms (601 pts)	



# Puw:

RL RF SORADC		SENSEIINT	ALIGNA		M Aug 21, 2018	Frequency
Center Freq 79.500 kHz	PNO: Close 🖵	Trig: Free Run #Atten: 26 dB	Avg Type: Log- Avg Hold:>50/50	Pwr TRA TY D	ET P P P P P P	Frequency
Ref Offset 0.5 dB 0 dB/div Ref 0.00 dBm				Mkr1 11. -72.7	350 kHz 28 dBm	Auto Tune
<b>cg</b>						Center Fred 79.500 kHz
30.0						Start Free 9.000 kHz
60.0 50.0					-47.64 dEm	Stop Freq 150.000 kHz
πα α τα α φ <sup>1</sup>					A	CF Step 14.100 kHz uto Man
and Mary Maring Marine 1	anter-read	- Joy and and	<b>ng hydroetholdool</b> y	vernet a mar	polynetry	Freq Offset 0 Hz
tart 9.00 kHz Res BW 1.0 kHz	#VBW :				50.00 kHz	



RL	RF 50 Q A DC		SENSEIINT	AL AL	IGNAUTO	DS:00:21 PM A	Ug21, 2018	20 000 000 000 0 1000
enter F	req 15.075000	MHz PNO: Wide 🖵	Trig: Free Run #Atten: 40 dB	Avg Type: L Avg[Hold:>5		TRACE TYPE		Frequency
0 dB/div	Ref Offset 0.5 dB Ref 20.00 dBm				Mk	r1 20.57 -63.27		Auto Tun
10.0								Center Free 15.075000 MH
0.0 0.0								Start Fre 150.000 kH
0.0 0.0								Stop Fre 30.000000 MH
2.0							-37 D4 dEm	CF Ste 2.985000 MH Auto Ma
a.o <b>1111-1-1</b>	in the second	ad alada yan yana y	, indistriction fighter	لەر يەرە بەتر يەرە بىر يەرە ئەر يەرە بەتر يەرە بىر يەرە	Photosia in the second second	egir sali daga da biy	in tanin	Freq Offse 0 H
tart 150 Res BW		#VBW	30 kHz		Sweep	Stop 30. 285 ms (30	00 MHz 001 pts)	



RL RF 50.9	AC	SENSEITVT	ALIGNAUTO	D5:00:40 PM Aug 21, 2018	Law State State State
Center Freq 1.16500	0000 GHz PNO: Fast G	Trig: Free Run #Atten: 40 dB	Avg Type: Log-Pwr Avg[Hold:>50/50	TRACE 2 2 4 5 T TYPE M WARAWAY OUT P P P P P P	Frequency
Ref Offset 0.5 0 dB/div Ref 20.00 d	dB		Mkr	2.176 57 GHz -48.915 dBm	Auto Tune
10.0					Center Fred 1.165000000 GH
0.0					Start Free 30.000000 MH
0.0				-27 04 dBm	Stop Free 2.300000000 GH
80	d i ou bian protone i dan dan		den dita ini di falla seriela d		CF Step 227.000000 MH Auto Ma
					Freq Offse 0 H
tart 30 MHz Res BW 100 kHz	#VBV	V 300 kHz	Sweep	Stop 2.300 GHz 217 ms (8001 pts)	



RF 50.0 AC		SENSE:(INT)	ALIGNAUTO	D5:00:53 PM Aug 21, 2018	and the second second second
req 2.35000000	PNO: Fast Trig: F		Avg Type: Log-Pwr Avg[Hold:>200/200	TRACE 12345 TYPE MWWWWW OUT PPPPP	Frequency
Ref Offset 0.5 dB Ref 20.00 dBm			MI	kr1 2.394 0 GHz -49.514 dBm	Auto Tune
					Center Free 2.350000000 GHz
					Start Free 2.300000000 GH:
				-27 04 dBm	Stop Free 2.400000000 GH:
				^1	CF Step 10.000000 MH Auto Mar
mertionight another here	romantintranstration	<i>Abrehotsydul</i>	and and a standard and a stan	contribution of South and Ministerie	
					Freq Offset 0 Hi
000 GHz 100 kHz	#VBW 300 ki		Sween	Stop 2.40000 GHz 9.60 ms (1001 pts)	
	Ref Offset 0.5 dB Ref 20.00 dBm	IFGain:Low #Atten	req 2.35000000 GHz PN0: Fast IFGain:Low Phile Free Run #Atten: 40 dB Ref Offset 0.5 dB Ref 20.00 dBm I I I I I I I I I I I I I I I I I I I	req 2.350000000 GHz Avg Type: Log-Pwr Avg[Hold:>200/200   PN0: Fast T Trig: Free Run #Atten: 40 dB   Ref Offset 0.5 dB Ref 20.00 dBm M	req 2.35000000 GHz IFGain:Low   Trig: Free Run #Atten: 40 dB   Avg Type: Log-Pwr AvgHeld>200/200   Trice E   23.4 By Ceff   23



RL RF 50.0 AC	SENSEITUT	ALIGNAUTO	D5:01:01 PM Aug 21, 2018	Contraction of the second second
enter Freq 2.49175000		Avg Type: Log-Pwr Avg Hold:>200/200	TRACE	Frequency
Ref Offset 0.5 dB dB/div Ref 20.00 dBm		Mkr1 2	484 655 0 GHz -50.314 dBm	Auto Tune
0.0				Center Fred 2.491750000 GHz
0.0				Start Fred 2.483500000 GH
0.0			-27 04 dBm	Stop Fred 2.500000000 GHz
	charlader Jonafaan Malaamar Yi			CF Step 1.650000 MH: Auto Mar
0.0	ין אראיאיאיזער איז פאיייער איז	and the state of t	Anador an 114 Al Manazan D	Freq Offse 0 Ha
tart 2.483500 GHz Res BW 100 kHz	#VBW 300 kHz		top 2.500000 GHz 1.60 ms (601 pts)	



a state the set	D5:01:34 PM Aug 21, 2018	ALIGNAUTO	SENSE:INT	RF 50.Q AC	RL
Frequency	TRACE 12345 TYPE MWWWWWW DET PPPPP	Avg Type: Log-Pwr Avg[Hold: 10/10	Trig: Free Run #Atten: 40 dB	eq 14.500000000 GHz PNO: Fast () IF Gain: Low	Center Fr
Auto Tune	r1 25.057 GHz -34.711 dBm	Mk		Ref Offset 0.5 dB Ref 20.00 dBm	0 dB/div
Center Fred 14.500000000 GHz					10.0
Start Fred 2.500000000 GH:					10.0
Stop Fred 26.50000000 GH2	-27 04 dBm				30.0
CF Step 2.400000000 GH2 <u>Auto</u> Mar		الأمطوم والمتراطع	an a	وليعتد والمتنا والمتنا والمتنا والمتنا والمتنا والمتنا	41.0 53.0 <b></b>
Freq Offse 0 H					52.0
	Stop 26.50 GHz			CH7	70.0 Start 2.50
	2.29 s (8001 pts)	Sweep	300 kHz		Res BW
		STATUS			50



# 2.2 TM1 \_Ch19@Ant 11

#### Pref:





# Puw:

RL RF SO Q DC		SENSEIINT		LIGNAUTO		MAug21, 2018	Eromineer
Center Freq 79.500 kHz	PNO: Close 🖵	Trig: Free Run #Atten: 26 dB	Avg Type: Avg[Hold:>		TRAC TVI DI	E 12345 MWWWWW T P P P P P P	Frequency
Ref Offset 0.5 dB 0 dB/div Ref 0.00 dBm				N		000 kHz 80 dBm	Auto Tu
12.0							Center Fr 79.500 k
30.0							Start Fr 9.000 k
60.0						-40 09 dBm	Stop Fr 150.000 k
30.0 <b>1</b> .						A	CF St 14.100 k Auto N
200 Whater	lood Amar	were hopp how	yoo pooloogo	ngalangertad	Wrony	wifting	Freq Offs 0
tart 9.00 kHz Res BW 1.0 kHz	#VBW :				Stop 15	0.00 kHz (601 pts)	



RL	RF 50 Q 🕭	DC		SE	NSEINT		ALIGNAUTO	DS:04:55 PM	Aug 21, 2018	1 Contractor	No. Contraction
enter F	req 15.07500	0 MHz	0: Wide 🖵	Trig: Fre #Atten: 4		Avg Type Avg[Hold:	:: Log-Pwr >50/50	TRACE	123451 Mwwwww PPPPPP	Freque	ncy
dB/div	Ref Offset 0.5 d Ref 20.00 dB	B Im						Mkr1 2 -63.16	20 kHz 1 dBm	Auto	o Tune
0.0										Cente 15.0750	er Fred 000 MH:
0.0										10000000	rt Fred 000 kH:
a.0 a.0										Sto 30.0000	p Free
a.o a.o											F Step 00 MH Ma
ao 1	anyo tury beep tarkahan saar	يومايين ارمو وومايين ارمو	hagila	wy, dii sidaya	i na katalan ka	willige star	u tiller sitter	i territory) M	/iantsilvine	Freq	Offse 0 H
tart 150 Res BW			#VBW	30 kHz			Sweep	Stop 30 285 ms (3	.00 MHz 001 pts)		



RL RF 50	Q AC	SENSEINT	ALIGNAUTO	05:05:14PM Aug 21, 2018	Construction of the
enter Freq 1.1650		🔔 Trig: Free Run	Avg Type: Log-Pwr Avg[Hold:>50/50	TRACE 2 2 4 8 1 TYPE MWWWWW OUT P P P P P	Frequency
Ref Offset 0 dB/div Ref 20.00	).5 dB idBm		Mkr	2.055 69 GHz -49.140 dBm	Auto Tune
10.0					Center Fred 1.165000000 GH
10.0					Start Free 30.000000 MH
20.0				-30 09 dBm	Stop Free 2.300000000 GH:
80.0			y (dec) of the trade is decided in the later		CF Stej 227.000000 MH Auto Mar
20	den den de la consecutiva de la consecu				Freq Offse 0 H
tart 30 MHz Res BW 100 kHz	#VI	BW 300 kHz	Sweep	Stop 2.300 GHz 217 ms (8001 pts)	



RL	RF 50.Q AC		SENSEITVT	ALIGNAUT	0 05:05:27 PM Aug 21, 2018	an and a star of the
Center F	req 2.350000000	PNO: Fast () Tri	ig: Free Run tten: 40 dB	Avg Type: Log-Pw Avg[Hold:>200/200	r TRACE 2045	Frequency
0 dB/div	Ref Offset 0.5 dB Ref 20.00 dBm				1kr1 2.331 0 GHz -50.298 dBm	Auto Tune
10.0						Center Freq 2.350000000 GHz
9.00						Start Fred 2.300000000 GHz
20.0 30.0					-30 69 oBm	Stop Fred 2.400000000 GH:
40.0 53.0		<b>↓</b> <sup>1</sup>				CF Step 10.000000 MH: Auto Mar
<b>141.44-4</b> 521.0	a Milling and the state of the	ana shi filima kila shiri ndara - dag	talangung ang ang ang ang ang ang ang ang ang a	fallifist-s-fallifistoriaanasik-dalt	ralishi qangayar katada kataw	Freq Offse 0 H
70.0 Start 2.30					Stop 2.40000 GHz	
Res BW	100 KHZ	#VBW 300	) KHZ	Sweet	9.60 ms (1001 pts)	



RL	RF 50.Q AC	In the second se	SENSE:INT	ALIGNAUTO	DS:05:35 PM Aug 21, 2018	and the second s
Center Fi	req 2.49175000	PNO: Wide	Trig: Free Run #Atten: 40 dB	Avg Type: Log-Pwr Avg Hold:>200/200	TRACE 2 2 4 5 TYPE MUNICIPAL DET P P P P P	Frequency
0 dB/div	Ref Offset 0.5 dB Ref 20.00 dBm			Mkr1 2	2.487 982 5 GHz -50.486 dBm	Auto Tune
10.0						Center Fred 2.491750000 GH
10.0						Start Fred 2.483500000 GH
33.0					20 09 a£m	Stop Free 2.500000000 GH:
10.0		▲ <sup>1</sup>				CF Step 1.650000 MH Auto Ma
8.0 8.0		1840 CAUCARTAN	/Manhamatin	กรับแรกการจะเราให้เป็นไปได้แก่หั	ri-ฉับประชาก	Freq Offse 0 H
70.0 Start 2.48	3500 GHz				Stop 2.500000 GHz	
Res BW	100 kHz	#VBW 3	00 kHz	Sweep	0 1.60 ms (601 pts)	
Res BW	100 kHz	#VBW 3	00 kHz	Sweet		







# 2.3 TM1 \_Ch39@Ant 1

#### Pref:





#### Puw:





enter F	reg 15.075000 M	Hz		intellisionen er		Log-Pwr	TRAC	E 1 2 8 4 5 f	Frequency
		PNO: Wide C	Trig: Free #Atten: 40		Avg[Hold:	>50/50	T YP DE	E MWWWWW T P P P P P P	1
0 dB/div	Ref Offset 0.5 dB Ref 20.00 dBm					MI	(r1 12.6 -62.8	87 MHz 20 dBm	Auto Tun
10.0									Center Fre 15.075000 MH
10.0									Start Fre 150.000 kH
30.0 30.0								-35 05 of 34	Stop Fre 30.000000 MH
8.0								-35 UN 0131	CF Ste 2.985000 MH Auto Ma
Berth Hart Barter	hatio wangelengipatangipa	an adig disk same the s	↓1 net defensively		uluri lasin u	d and an instant	Niderichari		Freq Offso 0 H
tart 150 Res BW	kHz	#VBW						0.00 MHz	



	05:12:16 PM Aug 21, 2018	ALIGNAUTO	SENSEIINT		RF 50.Q	RL
Frequency	TYPE MWWWWW OUT P P P P P	Avg Type: Log-Pwr Avg Hold:>50/50	Trig: Free Run #Atten: 40 dB	PNO: Fast C	Freq 1.165000	Center
Auto Tun	2.274 18 GHz -48.746 dBm	Mkr		dB IBm	Ref Offset 0.5 o Ref 20.00 dE	0 dB/di
Center Fre 1.165000000 GH						10.0
Start Fre 30.000000 MH						0.0
Stop Fre 2.300000000 GH	- 25 86 aBri					10.0 10.0
CF Ste 227.000000 MH Auto Ma		i di stati e still un scoole		a) white we have been a with some		10 10
Freq Offse 0 H					telinidatelate	a.o <mark>111</mark>
	Store 2 200 OU-				BALL	70.0
	Stop 2.300 GHz 217 ms (8001 pts)	Sweep	300 kHz	#VBW :	V 100 kHz	tart 3 Res B
		STATUS				0



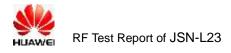
RL	RF 50.Q AC		SENSEINT	ALIGNAUTO	D5:12:29 PM Aug 21, 2018	Eron internet
enter F	req 2.350000000	PNO: Fast Trig:	Free Run n: 40 dB	Avg Type: Log-Pwr Avg Hold>200/200	TRACE 2 2 4 5 6 TYPE MWWWWW OUT P P P P P P	Frequency
0 dB/div	Ref Offset 0.5 dB Ref 20.00 dBm	1 COMILON		Mk	r1 2.377 0 GHz -49.261 dBm	Auto Tune
10.0						Center Free 2.35000000 GH
0.0						Start Fre 2.300000000 GH
30.0					- 25 86 aBrs	Stop Free 2.400000000 GH
93.0 				• <sup>1</sup>		CF Ste 10.000000 MH Auto Ma
0.0	anyaan arana di anyara anya	haa ya ahaa ka ahaa ka ahaa ka ahaa ka ahaa ahaa ka ahaa	\$*sty/nenlW	kgabril,nimatrigra,−infini.terno <sup>1</sup> nific	nyoladiriyin yitaraliyin .	Freq Offse 0 H
	0000 GHz 100 kHz	#VBW 300 I	H7	Sween	Stop 2.40000 GHz 9.60 ms (1001 pts)	



RL	RF SO Q AC		SENSE:INT	ALIGNAUTO	D5:12:35 PM Aug 21, 2018	A REMARKANCE THE
enter F	req 2.491750000	PNO: Wide	g: Free Run ten: 40 dB	Avg Type: Log-Pwr Avg[Hold:>200/200	TRACE 22345 TYPE MUSER	Frequency
0 dB/div	Ref Offset 0.5 dB Ref 20.00 dBm	Pouncow		Mkr1 2	.499 230 0 GHz -49.590 dBm	Auto Tune
.og 10.0						Center Fred 2.491750000 GHz
10.0						Start Free 2.483500000 GHz
20.0 30.0					-25 86 aBm	Stop Fred 2.50000000 GHz
40.0				- <b>1</b> -		CF Step 1.650000 MHz Auto Mar
******* 51.0	ી‰નિત્∐ાજન્ય\જા]કીમ્પ્રેન્ડન્ડન્ડન	งประกง <sub>ไ</sub> ข้าง <sub>ที่ไ</sub> ขบ <sub>ังสัญ</sub>	by Assemble	rohmmelmentil agelow	ษศในโพษีท≌า≱ษาษณ์ไ?ุ\rd	Freq Offse 0 Hz
Start 2.48	3500 GHz	#VBW 300			Stop 2.500000 GHz 1.60 ms (601 pts)	
Res DW	100 KH2	#VDVV 300	- KHZ	aweep	1.00 ms (00 mpts)	



1 2 2 3 A A A A A A A A A A A A A A A A A	D5:13:10 PM Aug 21, 2018	ALIGNAUTO	SENSEIINT	RF 50.Q AC	RL RF 50.0
Frequency	TRACE 123451 TYPE MWWWWW DET PPPPP	Avg Type: Log-Pwr Avg Hold: 10/10	Trig: Free Run #Atten: 40 dB	req 14.500000000 GHz PN0: Fast I IFGain:Low	enter Freq 14.5000
Auto Tune	r1 25.015 GHz -35.326 dBm	Mk		Ref Offset 0.5 dB Ref 20.00 dBm	Ref Offset 0.5 dB/div Ref 20.00 d
Center Fred 14.500000000 GH					0.0
Start Free 2.500000000 GH					0.0
Stop Free 26.50000000 GH:	-25 86 aBms				a.0 
CF Step 2.400000000 GH <u>Auto</u> Mar		and market and the second second	اليديدة بطلب فالمحفظ والمترجلة ومنترجلة وم	المالية المردية والمالية المراجعة المراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة	a.a. a.a. <mark>m.h., A.a.</mark> iyo a diitaatali
Freq Offse 0 H					
	Stop 26.50 GHz		200 kHz		tart 2.50 GHz
	2.29 s (8001 pts)	sweep	300 kHz	100 KHZ #VBW	Res BW 100 kHz



# **Appendix H: Radiated Spurious Emission & Spurious in Restricted**

# Band

Note: We tested all modes, but the data presented below is the worst case.

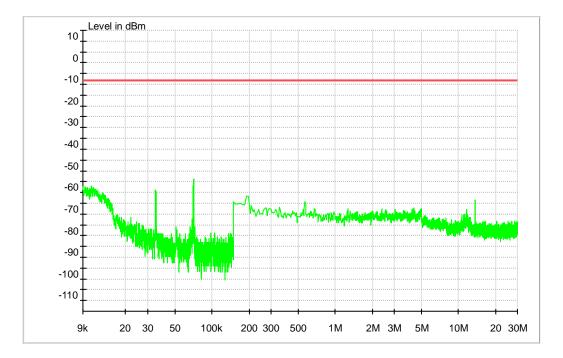
Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

#### 1.1 Part 1: Testing Range of "9 kHz to 30MHz"

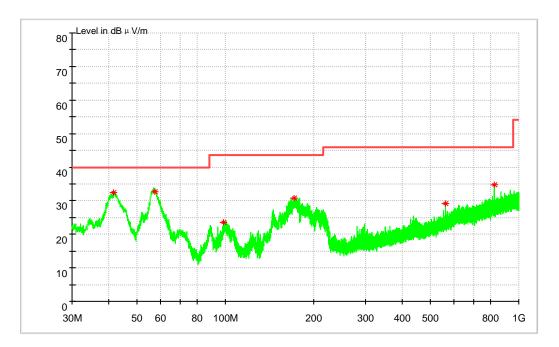
Note 1: The test results and plot for testing range of "9 kHz to 30 MHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.





# 1.2 Part 2: Testing Range of "30 MHz to 1 GHz"

- Note 1: The test results and plot for testing range of "30 MHz to 1 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



Frequency	Level	Limit	Margin	Height	Pol	Azimuth	Transd.
(MHz)	(dB	(dB	(dB)	(cm)		(deg)	(dB)
41.446000	32.32	40.00	7.68	156	V	18	14.4
57.303860	32.60	40.00	7.40	226	V	17	14.0
98.676000	23.53	43.50	19.97	100	н	94	14.4
171.474500	30.73	43.50	12.77	101	V	115	10.9
561.608500	29.04	46.00	16.96	125	V	66	21.1
825.836500	34.76	46.00	11.24	200	Н	94	24.4

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain) The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

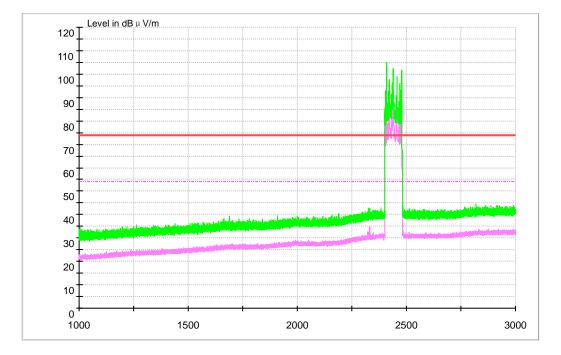


# 1.3 Part 3: Testing Range of "1GHz to 3GHz"

- Note 1: The testing range of "1GHz to 3 GHz" is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74  $dB\mu V/m$ ) and Average Limit (54  $dB\mu V/m$ ).

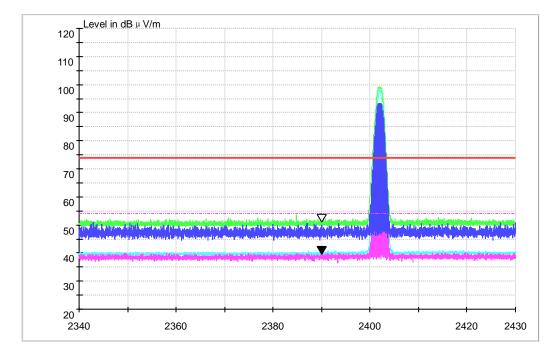
Note 3: The peak spike exceeds the limit line is EUT's operating frequency. Test Mode:

# 1.3.1Test Mode: TM1





## 1.3.1.1 Channel 0



# MEASUREMENT RESULT: AV Detector

Frequency	Level	Limit	Margin	Height	Pol	Azimut	Transd.
(MHz)	(dB µ V/m)	(dB µ V/m)	(dB)	(cm)		h	(dB)
2390	39.95	54.00	14.05	150.0	V	190.0	8.1

MEASUREMENT RESULT: PK Detector

Frequency	Level	Limit	Margin	Height	Pol	Azimut	Transd.
(MHz)	(dB µ V/m)	(dB µ V/m)	(dB)	(cm)		h (deg)	(dB)
2390	51.39	74.00	22.61	150.0	V	190.0	8.1

Note:

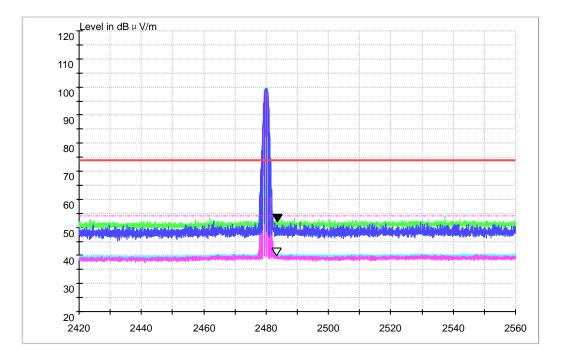
1, Level =Reading level by receiver + Transd (Antenna factor + cable loss - preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level



# 1.3.1.2 Channel 39



#### MEASUREMENT RESULT: AV Detector

Frequency	Level	Limit	Margin	Height	Pol	Azimut	Transd.
(MHz)	(dB µ V/m)	(dB µ V/m)	(dB)	(cm)		h(deg)	(dB)
2483.5	40.13	54.00	13.87	175.0	Н	230.0	8.5

#### MEASUREMENT RESULT: PK Detector

Frequency	Level	Limit	Margin	Height	Pol	Azimut	Transd.
(MHz)	(dB µ V/m)	(dB µ V/m)	(dB)	(cm)		h (deg)	(dB)
2483.5	52.15	74.00	21.85	175.0	Н	230.0	8.5

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss - preamplifier gain)

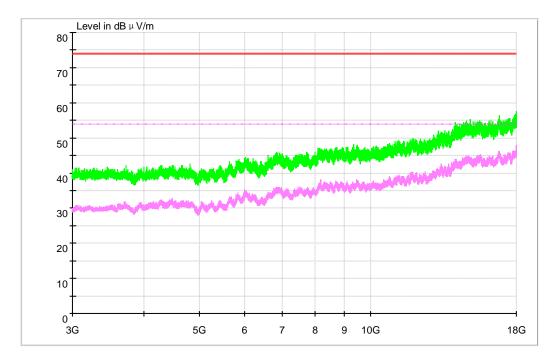
The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level



# 1.4 Part 4: Testing Range of "3 GHz to 18 GHz"

- Note 1: The test results and plot for testing range of "3 GHz to 18 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of "3 GHz to 18 GHz" is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74  $dB\mu V/m$ ) and Average Limit (54  $dB\mu V/m$ ).



#### Note:

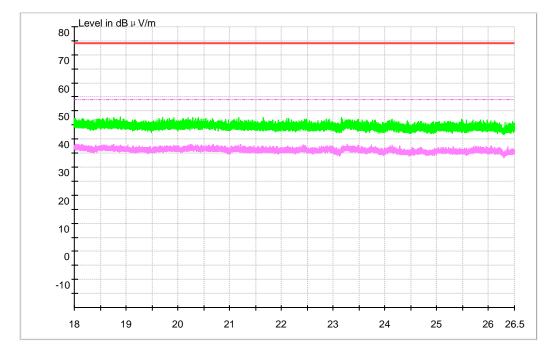
1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain) The reading level is calculated by software which is not shown in the sheet.

# 2, Margin=Limit – Level



# 1.5 Part 5: Testing Range of "18 GHz to 26.5 GHz"

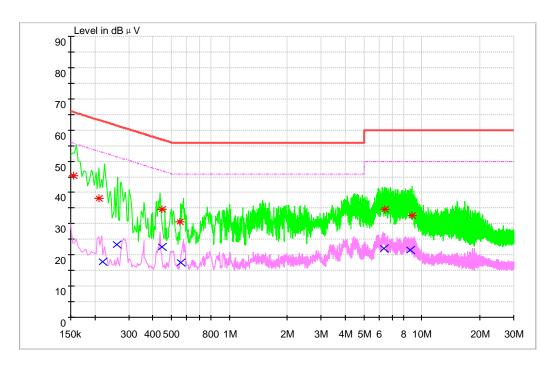
- Note 1: The test results and plot for testing range of "18 GHz to 26.5 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of "18 GHz to 26.5 GHz" is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74  $dB\mu V/m$ ) and Average Limit (54  $dB\mu V/m$ ).





# Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz



# Channel 39

#### MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB µ V)	Limit (dB µ V)	Transd. (dB)	Margin (dB)	Line	PE
0.154846	45.38	65.73	9.7	20.35	Ν	FLO
0.210774	38.08	63.17	9.7	25.09	Ν	FLO
0.4482	34.58	56.91	9.7	22.33	Ν	FLO
0.553141	30.6	56	9.7	25.4	Ν	FLO
6.40178	34.68	60	9.9	25.32	Ν	FLO
8.885939	32.5	60	9.9	27.5	Ν	FLO

Frequency	Level	Limit	Transd.	Margin	Line	PE
(MHz)	(dB µ V)	(dB	(dB)	(dB)		
0.21918	17.75	52.85	9.7	35.10	L1	FLO
0.261377	23.26	51.38	9.7	28.12	L1	FLO
0.447168	22.54	46.93	9.7	24.39	Ν	FLO
0.560735	17.51	46	9.7	28.49	Ν	FLO
6.321699	22.1	50	9.8	27.9	Ν	FLO
8.751258	21.67	50	9.9	28.33	Ν	FLO

# MEASUREMENT RESULT: AV Detector

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

END