# Appendix for Test report



## Appendix A: 20dB Emission Bandwidth (EBW)

#### 1 Result Table

EUT Conf.	EBW [MHz]	Limit[MHz]	Verdict
TM1_DH5_Ch0	0.94		Pass
TM1_DH5_Ch39	0.95		Pass
TM1_DH5_Ch78	0.95		Pass
TM2_2DH5_Ch0	1.31		Pass
TM2_2DH5_Ch39	1.32		Pass
TM2_2DH5_Ch78	1.32		Pass
TM3_3DH5_Ch0	1.31		Pass
TM3_3DH5_Ch39	1.32		Pass
TM3_3DH5_Ch78	1.32		Pass



#### 2 Test Plot









#### TM1\_DH5\_Ch78

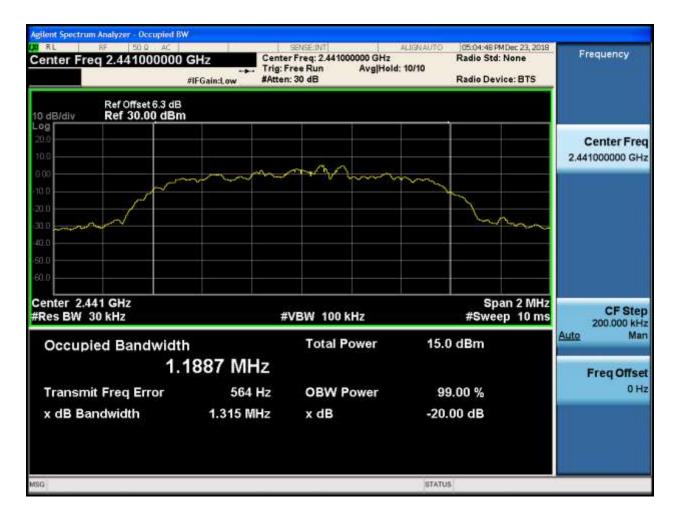


Public



























# **Appendix B: Carrier Frequency Separation**

#### 1 Result Table

EUT Conf.	Carrier Frequency Separation [MHz]	Limit[MHz]	Verdict
TM1_DH5_Hop	0.95	≥0.633	Pass
TM2_2DH5_Hop	1.05	≥0.880	Pass
TM3_3DH5_Hop	0.95	≥0.880	Pass



#### 2 Test Plot

#### TM1\_DH5\_Hop

RL RF 50.0 AC		SENSE:INT			PMDec 23, 2018	Frequency
enter Freq 2.441000000	PNO: Wide -	Trig: Free Run #Atten: 30 dB	Avg Type: L Avg Hold: 10	0/100	ACE 123450	requeity
Ref Offset 6.3 dB	I Controw			Mkr2 2.441 8.3	000 GHz 294 dBm	Auto Tune
29 53 30 70	man 1	2		m. m	and the	Center Fre 2.441000000 GH
3.7			~ <del>````````````````````````````````````</del>	- Aregyl		Start Fre 2.438500000 GH
37						Stop Fre 2.443500000 GH
art 2.438500 GHz Res BW 100 kHz	#VB\	W 300 kHz	s	Stop 2.44 weep 2.520 m		CF Ste 500.000 kF
R MODE TRC SCL X	0 050 GHz	Y 1 8.291 dBm	UNCTION FUNCTI	ION WIDTH FUNC	TION VALUE	<u>Auto</u> Ma
2 N 1 f 2.44	1 000 GHz	8.294 dBm				Freq Offse 0 H
7						



#### TM2\_2DH5\_Hop

enter Freq 2.44100000	PNO: Wide Trig:		ALIGNAUTO Nyg Type: Log-Pwr vgjHold: 100/100	05:02:38 PMDer: 23, 2018 TRACE 2, 2, 3, 4, 5 TYPE MULLION DET P. N.N.N.N.M	Frequency
Ref Offset 6.3 dB			Mkr2	2.441 200 GHz 3.580 dBm	Auto Tune
09 16.3 5.30 1.70 20-70-40 41/1-40 /1.1/1 48/44-11-0	ndren Sonwaparmer	2	aray and an	wayerburrerance	Center Free 2.441000000 GH
37					Start Fre 2.438500000 GH
13.7					Stop Fre 2.443500000 GH
tart 2.438500 GHz Res BW 100 kHz	#VBW 300 P	(Hz	S Sweep 2	top 2.443500 GHz 2.520 ms (601 pts)	CF Ste 500.000 kH Auto Ma
		FUNCTION 2 dBm	FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
2 N 1 f 2.44 3 4 5 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	41 200 GHz 3.58	0 dBm			Freq Offse 0 H
9 0 1				*	



## TM3\_3DH5\_Hop

RL RF 50.0 AC	and the second second	SENSE:INT	ALIGNAUTO	05:18:02 PMDec 23, 2018	Construction of the
enter Freq 2.441000000	GHz PNO: Wide	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 2345 TYPE MUSEUM NNN DET PINNNNN	Frequency
Ref Offset 6.3 dB dB/div Ref 26.30 dBm			Mkr2	2.441 050 GHz 5.986 dBm	Auto Tune
99 6.3 30 400	and Warn	warmall and and	and an sold and and an all	p-growerly and good and good and a second and a second second second second second second second second second	Center Fred 2.441000000 GH:
3.7					Start Fred 2.438500000 GH:
37					Stop Free 2.443500000 GH
tart 2.438500 GHz Res BW 100 kHz	#VBV	V 300 kHz		Stop 2.443500 GHz 2.520 ms (601 pts)	CF Step 500.000 kH
	) 100 GHz	6.506 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	Auto Ma
2 N 1 f 2.441 3 4 5 6	1 050 GHz	5.986 dBm			Freq Offse 0 H
7 8 9 0					
			i		



# **Appendix C: Number of Hopping Channel**

#### 1 Result Table

EUT Conf.	Number of Hopping Channel	Limit	Verdict
TM1_DH5_Hop	79	≥15	Pass
TM2_2DH5_Hop	79	≥15	Pass
TM3_3DH5_Hop	79	≥15	Pass



#### 2 Test Plot

#### TM1\_DH5\_Hop

RL	RF 50.0 AC		SENSE: INT	and the 2	ALIGNAUTO	04:53:35 Pt	Dec 23, 2018	CONTRACTOR DATA
Center Fr	eq 2.44100000	PNO: Fast	Trig: Free Run #Atten: 30 dB	Avg Type Avg Hold	: Log-Pwr 100/100	TRAC TVI DI	E 123451 E MUNICIPALITY ET PINNNNN	Frequency
0 dB/div	Ref Offset 6.3 dB Ref 20.00 dBm				Mk	r1 2.48 6.8	0 0 GHz 54 dBm	Auto Tune
.og	10600000000000000000000000000000000000	haddaallannaaaa	AND DO AND	ANANAA	DANGONAN		1	Center Free 2.441000000 GH
10.0								Start Free 2.391000000 GH
x0 x0								Stop Fre 2.491000000 GH
0.0								CF Ste 10.000000 MH Auto Ma
0.0	Juga						hanadame	Freq Offse 0 H
enter 2.4	4100 GHz 100 kHz	#VBW	300 kHz		Sweep 9	Span 1 .600 ms (	00.0 MHz 1001 pts)	
so i					STATUS	_		

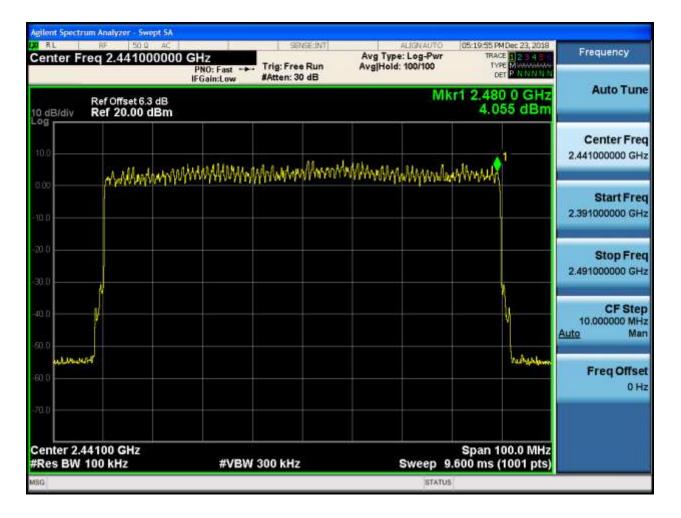


## TM2\_2DH5\_Hop





## TM3\_3DH5\_Hop





# Appendix D: Time of Occupancy (Dwell Time)

#### 1 Result Table

The Dwell Time = Burst Width \* Total Hops. The detailed calculations are showed as follows:

- The duration for dwell time calculation: 0.4 [s] \* hopping number = 0.4 [s] \* 79 [ch] = 31.6 [s\*ch];
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf uses a slot type of 5-Tx&1-Rx and a hopping rate of 1600 [ch\*hop/s] for all channels. So the final hopping rate for all channels is 1600 / 6 = 266.67 [ch\*hop/s];
- The hops per second on one channel: 266.67 [ch\*hop/s] / 79 [ch] =3.38 [hop/s];
- The total hops for all channels within the dwell time calculation duration: 3.38 [hop/s] \* 31.6 [s\*ch] = 106.67 [hop\*ch];
- The dwell time for all channels hopping: 106.67 [hop\*ch] \* Burst Width [ms/hop/ch].

EUT Conf.	Burst Width [s/hop/ch]	Total Hops [hop*ch]	Dwell Time [ms]	Verdict
TM1_DH5_Ch39	0.0029	106.67	0.309	Pass
TM2_2DH5_Ch39	0.0029	106.67	0.309	Pass
TM3_3DH5_Ch39	0.0029	106.67	0.309	Pass



#### 2 Test Plot

NOTE: The test plots are only for Burst Width measurements.

nter Fre	aq 2.4410000		Trig: Free Run #Atten: 30 dB	Avg	ALIGNAUTO Type: Log-Pwr	04:57:19 PM Dec 23, 2018 TRACE 23, 4 S TYPE WARMANN N OET P N N N N N	
dB/div	Ref Offset 6.3 dB Ref 20.00 dBr	n				Mkr2 7.600 ms -49.68 dBm	Auto Tune
9 ,0 .0 .0			<u>\</u> 1				Center Free 2.441000000 GH:
0 0 0					2		Start Free 2.441000000 GH
0 0 0	n <del>a d</del> apilaria	hipedrawith an open second	Nortonia			เงาลางจาสุโทสไรทย์รู้เขาะกำารงเวลา <sub>เ</sub> ง	Stop Fred 2.441000000 GHz
nter 2.44 s BW 1.0	41000000 GHz 0 MHz		W 3.0 MHz		Sweep 1	Span 0 Hz 0.00 ms (1001 pts)	CF Step 1.000000 MH
N 1	SCL	× 4.700 ms	Y 9.07 dBm	FUNCTION	FUNCTION WDTH	FUNCTION VALUE	Auto Mar
N 1		7.600 ms	-49.68 dBm				Freq Offse 0 Ha
						2	
-					STATUS	3	



RL RF 500 Center Freq 2.4410	000000 GHz PNO: Wide IFGain:Low	Trig: Free Run #Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr	05:12:44 PMDec 23, 2018 TRACE 1 2 5 4 5 Type Without A	Frequency
Ref Offset 6 0 dB/div Ref 20.00	.3 dB dBm			Mkr2 5.020 ms -50.05 dBm	Auto Tune
0.00 0.00 10.0	¢1				Center Free 2.441000000 GH:
20.0		2			Start Free 2.441000000 GH
63.0 <mark>with free as Hold Anarythed</mark> 63.0 73.0	10	Colomba	nuhlahalalankathaha	des qui	Stop Free 2.441000000 GH
Center 2.441000000 Res BW 1.0 MHz		3W 3.0 MHz	Sweep 1	Span 0 Hz 0.00 ms (1001 pts)	CF Ster 1.000000 MH Auto Ma
1 N 1 t 2 N 1 t 3	2.120 ms 5.020 ms	7.72 dBm -50.05 dBm	ONCHON PONCHON WOTH	PORCHOR WEDE	Freq Offse
4 5 6 7 8 9 9 10					он



RL enter Fr	req 2.4410		) GHz	Wide -+ n:Low	Trig: Free F #Atten: 30 c	tun	Avg Ty	ALIGNAUTO pe: Log-Pwr	TRA	MDec 23, 2018 CE 1 2 3 4 5 1 PE WWWWWWWW ET P N N N N N	Frequency
dB/div	Ref Offset 6 Ref 20.00									.400 ms 40 dBm	Auto Tuno
0,0 0,0 00 0.0		5	<u>}</u> 1						-		Center Free 2.441000000 GH
0.0 0.0 0.0						2					Start Free 2.441000000 GH
0.0 0.0	dear storade h	Rufunfadi.				<b>S</b> afata	gy gran to a start of the second	gravano filosonalo	Madapatar		Stop Fre 2.441000000 GH
enter 2.4 es BW 1		GHz			3.0 MHz Y		CTION F	Sweep 1	0.00 ms (	span 0 Hz (1001 pts)	CF Ste 1.000000 MH <u>Auto</u> Ma
1 N 1 2 N 1 3 4 5 6	t		2.500 5.400		7.72 dBr -51.40 dBn						Freq Offse 0 H
7 8 9 0											
G .								STATU	5		



#### 1 Result Table

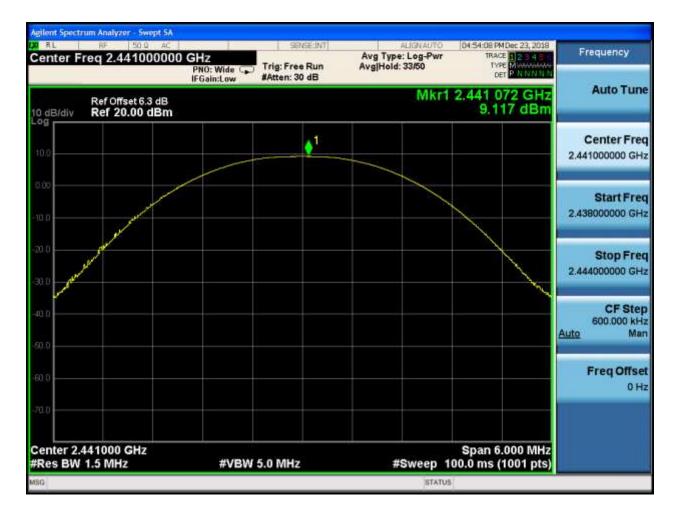
EUT Conf.	Max. Peak Power [dBm]	Limit[dBm]	Verdict
TM1_DH5_Ch0	7.639	20.97	Pass
TM1_DH5_Ch39	9.117	20.97	Pass
TM1_DH5_Ch78	8.072	20.97	Pass
TM2_2DH5_Ch0	7.646	20.97	Pass
TM2_2DH5_Ch39	9.306	20.97	Pass
TM2_2DH5_Ch78	8.341	20.97	Pass
TM3_3DH5_Ch0	7.685	20.97	Pass
TM3_3DH5_Ch39	9.305	20.97	Pass
TM3_3DH5_Ch78	8.349	20.97	Pass



#### 2 Test Plot

SENSE:INT	ALIGNAUTO	04:33:05 PMDec 23, 2018	
: Wide 😱 Trig: Free Run	Avg Type: Log-Pwr Avg Hold: 43/50	TRACE 1234	Frequency
ter Freq 2.402000000 GHz PN0: Wide Alfond Hatten: 30 dB PN0: Wide Alfond Hatten: 30 dB Proceeding Area Point AnglHold: 43/50 Mkr1 2.402 018 0 Mkr1 2.402 018 0	2.402 018 GHz 7.639 dBm	Auto Tuni	
1	-		Center Free 2.402000000 GH
			Start Fre 2.39900000 GH
			Stop Fre 2.405000000 GH
		<u>`````````````````````````````````````</u>	CF Ste 600.000 kH Auto Ma
			Freq Offse 0 H
#VBW 5.0 MHz	#Sweep 1	Span 6.000 MHz 00.0 ms (1001 pts)	
	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 43/50 Mkr1	Avg Type: Log-Pwr AvgHold: 43/50 Mkr1 2.402 018 GHz 7.639 dBm

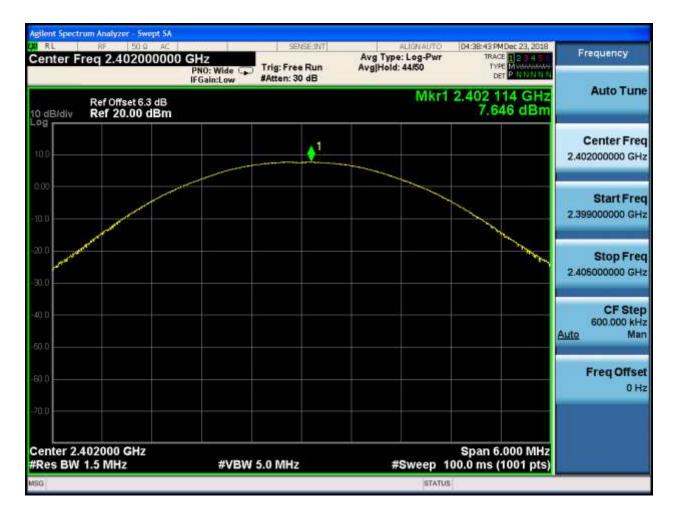




















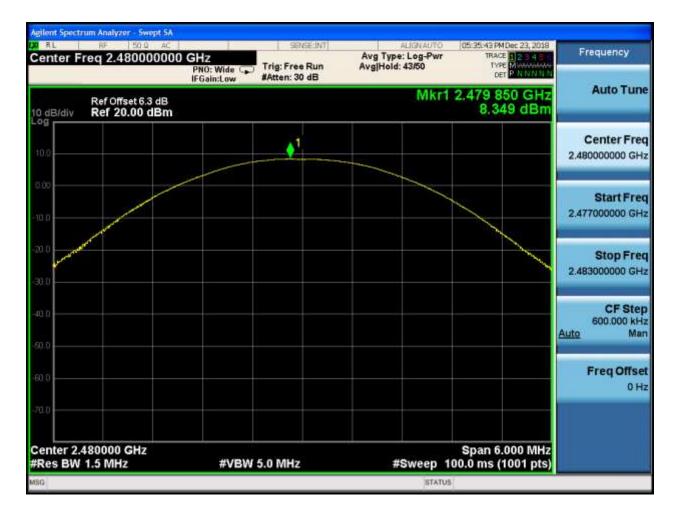














# Appendix F: Band edge spurious emission

#### 1 Result Table

EUT Conf.	Channel No.	Carrier Frequency [MHz]	Max. Spurious Level [dBm]	Frequency Hopping	Carrier Power [dBm]	Limit [dBm]	Result
TM1 DH5 Ch0	0	2402	-51.837	Off	7.157	-12.843	Pass
	-	-	-54.025	On	6.728	-13.272	Pass
	78	2480	-54.097	Off	7.629	-12.371	Pass
TM1_DH5_Ch78	-	-	-56.427	On	7.367	-12.633	Pass
TM2 2DH5 Ch0	0	2402	-41.076	Off	5.44	-14.56	Pass
	-	-	-42.767	On	4.725	-15.275	Pass
TM2_2DH5_Ch7	78	2480	-54.52	Off	5.936	-14.064	Pass
8	-	-	-56.863	On	5.847	-14.153	Pass
TM3_3DH5_Ch0	0	2402	-41.687	Off	5.497	-14.503	Pass
		-	-43.876	On	5.547	-14.453	Pass
TM3_3DH5_Ch7	78	2480	-55.479	Off	5.939	-14.061	Pass
8	-	-	-55.646	On	5.305	-14.695	Pass



## 2 Test Plot

#### 2.1 TM1\_DH5\_Ch0

## No hopping

Frequency	04:34:05 PMDec 23, 2018 TRACE 0 23 4 5 TVPE MUSEUM	ALIGNAUTO Type: Log-Pwr Hold>1000/1000	10	SENSE IN	GHZ PNO: Wide	50.0 AC		iter Fr
Auto Tur	2.400 00 GHz -51.837 dBm	Mkr2		#Atten: 30 dB	IFGain:Low	et 6.3 dB	Ref Offse Ref 20.	B/div
Center Fre 2.400000000 GF	1241 (01-						Kti 20.	
Start Fre 2.395000000 GH		h	-	2				
Stop Fre 2.405000000 GF	Martines of				norrela d/driftqaqoadh	an share are an		us Joyden
CF Ste 1.000000 Mi- Auto Ma	Span 10.00 MHz 000 ms (1001 pts)	Sweep 5.0	FUNCTIO	300 kHz	#VBW	Hz	100000 G 100 kHz	
Freq Offs 0 F				7.157 dBm 51.837 dBm	2 16 GHz 0 00 GHz	2.402 2.400	f	N 1
	*							
		STATUS						



## With hopping





## 2.2 TM1\_DH5\_Ch78

RL RF 50.0 AC		SENSEIN		ALIGNAUTO	05:25:28 PMDec 23, 2018	HIS SAULT IN
enter Freq 2.48350000	PNO: Wide C IFGain:Low	Trig: Free Run #Atten: 30 dB		Type: Log-Pwr Hold>1000/1000	TRACE 2 3 4 5 1 TYPE MUNICIPAL OFF P N N N N N	Frequency
Ref Offset 6.3 dB				Mkr	2.483 50 GHz -54.097 dBm	Auto Tune
					- L2 37 45A	Center Fred 2.483500000 GH2
	<u></u>					Start Fred 2.478500000 GH:
00 00 00	- Antonio	Marana and Ang	w-logetan	ner-merenterseter	r-r-srsp.du-d.ram	Stop Free 2.488500000 GH
enter 2.483500 GHz Res BW 100 kHz	#VB	W 300 kHz		Sweep 5.	Span 10.00 MHz 000 ms (1001 pts)	CF Step 1.000000 MH
	480 17 GHz	۲ 7.629 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	Auto Mar
2 N 1 f 2, 3 4 5	483 50 GHz	-54.097 dBm				Freq Offse 0 H
6 7 8 9 9						
		н			2	
3				STATUS		







#### Public

#### 2.3 TM2\_2DH5\_Ch0

		SENSE:INT	, and the	ALIGNAUTO	04:39:43 PMDec 23, 20	18
enter Freq 2.40000000	PNO: Wide IFGain:Low	Trig: Free Run #Atten: 30 dB		Type: Log-Pwr Hold>1000/1000	TRACE 2 3 4 TYPE MUNUU DET P N NN	Frequency
Ref Offset 6.3 dB	in connection			Mkr	2.400 00 GH -41.076 dB	Auto Tune
29 0,0 00 00			/	m	.14.52 d	Center Free 2.400000000 GH
10		2	-	- L	my	Start Fre 2.395000000 GH
00 00 00 00	and an and a second					Stop Fre 2.405000000 GH
enter 2.400000 GHz Res BW 100 kHz	#VBW	/ 300 kHz		Sweep 5.	Span 10.00 Mł 000 ms (1001 pt	s) 1.000000 MH
R MODE TRC SCL X	402 17 GHz	Y 5.440 dBm	FUNCTION	FUNCTION WDTH	FUNCTION VALUE	Auto Ma
	400 00 GHz	-41.076 dBm				Freq Offse
2 N 1 f 24 3 4 5 6						0 H
2 N 1 f 2.4 3 4 5						он ×







#### Public

#### 2.4 TM2\_2DH5\_Ch78

	Re-entre	SENSEIIN	1	ALIGNAUTO	05:31:05 PMDec 23, 2018	
enter Freq 2.483500000	PNO: Wide C	Trig: Free Run		Type: Log-Pwr Hold>1000/1000	TRACE 2 3 4 5 TYPE MUSEUM DET DINNINN	Frequency
Ref Offset 6.3 dB dB/div Ref 20.00 dBm	in Galificour			Mkr	2 2.483 50 GHz -54.520 dBm	Auto Tune
					-74 (St. Berl	Center Free 2.483500000 GH
	m					Start Free 2.478500000 GH
		Werning 2	Addine a server	at an a start and a start and	anne an the standard	Stop Fre 2.488500000 GH
enter 2.483500 GHz Res BW 100 kHz	#VB	W 300 kHz		Sweep 5.	Span 10.00 MHz 000 ms (1001 pts)	1.000000 MH
Res BW 100 kHz R MODE TRC SCL X N 1 f 2.4	80 16 GHz	۲ 5.936 dBm	FUNCTION	Sweep 5.	Span 10.00 MHz 000 ms (1001 pts) FUNCTION VALUE	1.000000 MH
Res BW 100 kHz       R MODE TRC SCL     X       N     1     f     2,4       N     1     f     2,4		Y	FUNCTION		000 ms (1001 pts)	CF Step 1.000000 MH Auto Ma Freq Offse 0 H
N     1     f     2.4       N     1     f     2.4       N     1     f     2.4	80 16 GHz	۲ 5.936 dBm	FUNCTION		000 ms (1001 pts)	1.000000 MH Auto Ma Freq Offse







#### 2.5 TM3\_3DH5\_Ch0

RL RF 50.0 AC		SENSEINT		ALIGNAUTO	04:45:21 PMDec 23, 2018	HORMAN DU NAV
enter Freq 2.400000000	PNO: Wide G	Trig: Free Run #Atten: 30 dB		Type: Log-Pwr Hold>1000/1000	TRACE 2 2 3 4 5 TYPE MUSEUM DET P N N N N N	Frequency
Ref Offset 6.3 dB dB/div Ref 20.00 dBm	Auto Tune					
9 ),0 				~2	-14 50 tBrs	Center Free 2,400000000 GH
		profest	~~		many	Start Free 2.395000000 GH
0 0 0	مدفر «برا معلم مریوشهر استال					Stop Fre 2.405000000 GH
enter 2.400000 GHz tes BW 100 kHz	#VBW	/ 300 kHz		Sweep 5.	Span 10.00 MHz 000 ms (1001 pts)	CF Ste 1.000000 MH
R MODE TRC SCL X	02 17 GHz	Y 5.497 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
N 1 F 2.40	00 00 GHz	-41.687 dBm				Freq Offse 0 H
			_		2	



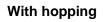




### 2.6 TM3\_3DH5\_Ch78

enter Freg 2.483500000	GHz	SENSE:INT]	ALIGNAUTO Avg Type: Log-Pwr	05:36:44 PMDec 23, 2018 TRACE 1 2 8 4 8 4	Frequency			
	PNO: Wide G	7 Trig: Free Run #Atten: 30 dB	Avg Hold>1000/1000	DET P N N N N	1000			
Ref Offset 6.3 dB dB/div Ref 20.00 dBm			Mkr2 2.483 50 GHz -55.479 dBm					
					Center Free 2,483500000 GH:			
				-1415: 885				
	man and and and and and and and and and a				Start Fred 2.478500000 GHz			
90 90 90		musures tomme	Verande Locurerande	alperature, and the states	Stop Fred 2.488500000 GH			
enter 2.483500 GHz Res BW 100 kHz	#VBV	/ 300 kHz	Sweep 5.	Span 10.00 MHz 000 ms (1001 pts)	CF Step 1.000000 MH			
	80 16 GHz	5.939 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Mar			
2 N 1 f 2.4	183 50 GHz	-55.479 dBm			Freq Offset 0 Ha			









# Appendix G: Conducted RF Spurious Emission

#### 1 Result Table

In this Appendix, the "Pref" refers to the peak power level in any 100 kHz bandwidth within the fundamental emission which is used as the reference level, 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.

In the result table, the "< Limit" denotes that "The Puw [dBm] is less than Pref [dBm] - 20 [dB], see test plots for detailed".

EUT Conf.	Pref [dBm/100 kHz]	Puw [dBm/100 kHz]	Verdict
TM1_DH5_Ch0	7.206	< Limit	Pass
TM1_DH5_Ch39	8.976	< Limit	Pass
TM1_DH5_Ch78	7.71	< Limit	Pass
TM2_2DH5_Ch0	5.484	< Limit	Pass
TM2_2DH5_Ch39	7.482	< Limit	Pass
TM2_2DH5_Ch78	5.952	< Limit	Pass
TM3_3DH5_Ch0	5.516	< Limit	Pass
TM3_3DH5_Ch39	7.489	< Limit	Pass
TM3_3DH5_Ch78	5.947	< Limit	Pass



#### 2 Test Plot

#### 2.1 TM1\_DH5\_Ch0

#### 2.1.1 Pref

0 RL   RF   50 Q AC	SENSE:INT	ALIGNAUTO	04:35:58 PMDec 23, 2018	AND A CONTRACTOR OF A				
Center Freq 2.40200000		Avg Type: Log-Pwr Avg Hold: 40/100	TRACE 12.0.4 CHI TYPE MICONTACT DET P.N.N.N.N.N	Frequency				
Ref Offset 6.3 dB Mkr1 2.402 160 74 GHz 10 dB/div Ref 20.00 dBm 7.206 dBm								
10.0		<b>1</b>		Center Free 2,402000000 GH				
10.00				Start Free 2.401530000 GH				
0.0				Stop Fre 2.402470000 GH				
υ.0 				CF Ste 94.000 kH Auto Ma				
0.0				Freq Offso 0 H				
20.0 Center 2.4020000 GHz			Span 940.0 kHz					
Res BW 100 kHz	#VBW 300 kHz	#Sweep	1.000 s (1001 pts)					
SG		STATUS		91				



#### 2.1.2 Puw

RL RF 500 ADC Center Freq 79.500 kHz	PNO: Close 😱	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	04-36:19 PMDec 23, 201 TRACE 2 2 3 4 TYPE MUSEUM DET P N N.N.N	Frequency
Ref Offset 7 dB IO dB/div Ref 20.00 dBm	in connective			Mkr1 9.42 kH -73.911 dBr	z Auto Tune
10.0					Center Fred 79.500 kHz
10.0					Start Free 9.000 kHz
30.0				-32.75 dB	Stop Free 150.000 kH
wia					С <b>F Ste</b> 14.100 kH <u>Ашto</u> Ма
80.0					Freq Offse 0 H
20.0 Start 9.00 kHz #Res BW 1.0 kHz	www.www. #VBW			Stop 150.00 kH 34.8 ms (1000 pts	a Z S)



	rum Analyzer - Sw							provide to the second		
Center F	req 15.0750	PI	10: Wide 🦕	-			ALIGNAUTO : Log-Pwr 59/100	TRAC	Dec 23, 2018 E 2 2 3 4 5 1 E MINNINN	Frequency
i concor								Mkr1 24.863 MHz -67.296 dBm		
10.0										Center Free 15.075000 MH
10.0										Start Free 150.000 kH
20.0 30.0									-22.79 dðin	Stop Free 30.000000 MH
40.0										CF Step 2.985000 MH <u>Auto</u> Ma
80.0					rynunger (			<b>1</b>		Freq Offse 0 H
Start 150				30 kHz	and a share of the	ad yatina ana			0.00 MHz	
6G	To MILE		a della	ov Aut2				DC Cou		



	50.0 AC		SENSE:INT	ALIGNAUTO	04:37:01 PMDec 23, 2018	Frequency
Center Freq	.165000000	PNO: Fast	Frig: Free Run Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 77/100	TRACE 2 3 4 5 1 TYPE MUMMMMM DET P N N N N N	
	Offset 7 dB 20.00 dBm			Mk	r1 2.242 36 GHz -52.816 dBm	Auto Tune
10.0						Center Fred 1.165000000 GH
10.0					.1279 abre	Start Free 30.000000 MH:
20.0 30.0						Stop Fred 2.300000000 GH;
40.0						С <b>F Ste</b> j 227.000000 МН <u>Auto</u> Ма
60.0 <b>Hittini e i</b>	ana a dana da	أنتخاص غاصي والرا			مي المدادين الي المارين المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراج	Freq Offse
70.0						
Start 30 MHz Res BW 100	kHz	#VBW 3	00 kHz	Sween	Stop 2.300 GHz	
Start 30 MHz #Res BW 100 I	kHz	#VBW 3	00 kHz	Sweep	217.3 ms (8192 pts)	



Agilent Spectr	RF 30.0 AC		SENSE:(NT)	ALIGNAUTO	04:37:22 PMDec 23, 2018	
	req 2.35000000	PNO: Fast	rig: Free Run Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 12345 TYPE MUSANNAN DET PINNINN	Frequency
IO dB/div	Ref Offset 7 dB Ref 20.00 dBm		Mkr1 2.399 540 G -49.408 dl			Auto Tuno
10.0						Center Free 2,350000000 GH
10.00					1279 dbm	Start Free 2.300000000 GH
20.0 30.0						Stop Fre 2.400000000 GH
40.0 50.0						СF Ste 10.000000 МН Ашto Ма
60.0	enerelisten tank metrika	ling dam yi yang saga dari ya ki	nadio antenanga da	الإلياق أربله فرانيا والمعادمة والعراقية والمعارية	annan an a	Freq Offse 0 H
5tart 2.30					Stop 2.40000 GHz	
Res BW	100 kHz	#VBW 3	00 kHz	Sweep 9	.665 ms (5000 pts)	



RL RL	reg 2.4917	50000 CH		SENSEIINT	Avg Type: Log-	Per TRAC	4Dec 23, 2018	Frequency
Jenter P	req 2.4917	PN	0: Wide 😱 Tri	ig: Free Run tten: 30 dB	Avg Hold>100/1	00 TH		
0 dB/div	Ref Offset 7 Ref 20.00				М	kr1 2.498 4 -52.7	16 GHz 81 dBm	Auto Tune
10.0								Center Fred 2.491750000 GH
10.00							-1279 mbm	Start Free 2.483500000 GH
20.0 30.0								Stop Fre 2.500000000 GH
40.0							1	С <b>F Ste</b> 1.650000 МН <u>Ашto</u> Ма
60.0	dressing of a state	n sono a ma	en feliningen	homewhole	eMyelan-segentlahan-senerte	nantinanalalan	Montratalism	Freq Offse 0 H
	3500 GHz 100 kHz		#VBW 300	1643	Swaa	Stop 2.50		







#### 2.2 TM1\_DH5\_Ch39

#### 2.1.3 Pref

RL RF 50.0 AC	SENSE:INT	ALIGNAUTO	04:58:11 PMDec 23, 2018	The second second second
enter Freq 2.441000000		Avg Type: Log-Pwr Avg Hold: 40/100	TRACE 123451 TYPE MUSEUM DET PININNNN	Frequency
Ref Offset 6.3 dB dB/div Ref 20.00 dBm		Mkr1 2.4	41 160 55 GHz 8.976 dBm	Auto Tun
0.0				Center Fre 2.441000000 GH
0.0				Start Fre 2.440525000 GH
0.0				Stop Fre 2.441475000 GH
				CF Ste 95.000 kH Auto Ma
				Freq Offs 0 F
enter 2.4410000 GHz Res BW 100 kHz	#VBW 300 kHz	#Sween	Span 950.0 kHz 1.000 s (1001 pts)	
	CONCEAN PROVING AND A	STATUS		



#### 2.1.4 Puw

RL	RF 50.0 🔥 DC		SENSE:INT	ALIGNAUTO	04 58:32 PMDec 23, 2018	Frequency
Center Fr	eq 79.500 kHz	PNO: Close 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2 2 4 5 4 TYPE MUNICIPALITYPE DET P N N N N N	requirey
0 dB/div	Ref Offset 7 dB Ref 20.00 dBm				Mkr1 9.28 kHz -72.366 dBm	Auto Tun
10.0						Center Free 79.500 kH
10.00						Start Free 9.000 kH
33.0					JL 10 ATE	Stop Free 150.000 kH
43.0 50.0						CF Ste 14,100 kH Auto Ma
80.0						Freq Offse 0 H
Start 9.00	kHz	Mahasham #VBW		n almana	<u>መሊስለሳ ሲልለት - 5</u> Stop 150.00 kHz 34.8 ms (1000 pts)	
5G?			ana makhika		1 DC Coupled	-



Agilent Spect	rum Analyzer - Swi	opt SA		1	2012/10/201		ALIGNAUTO		Dec 23, 2018	
	req 15.0750	000 MHz	IO: Wide 😱 Sain:Low	-		Avg Type Avg Hold	e: Log-Pwr	TRACI		Frequency
10 dB/div	Ref Offset 7 o Ref 20.00 o	1B	Joint Con				M	(r1 25.3) -67.04	41 MHz 48 dBm	Auto Tune
10.0										Center Fred 15.075000 MH:
10.0										Start Free 150.000 kH
200 30.0									.Qt 02 dBn	Stop Free 30.000000 MH;
40.0 50.0										CF Step 2.985000 MH Auto Mar
60.0					t detelitar	Louise .			1.6.4.41	Freq Offse 0 Ha
tart 150 Res BW				30 kHz				Stop 30 85.3 ms (2	).00 MHz 2000 pts)	
60								DC Cou		



RL RF 50.0 A		SENSELINT	Aug Type: Log-Pwr	04:59:14 PMDec 23, 2018 TRACE 2 3 4 5	Frequency
enter Freq 1.1650000	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold: 76/100	TYPE MUNNINNE DET PINNNNN	
Ref Offset 7 dB	n		Mkr	1 2.144 81 GHz -52.391 dBm	Auto Tun
0.0					Center Fre 1.16500000 GH
00				-11.02 (56)	Start Fre 30.000000 MH
0.0					Stop Fre 2.300000000 GH
0.0				• • • •	CF Ste 227.000000 MH Auto Ma
0.0 <b>National destruction of the sec</b>	جوياة الارتيا الأور أوالية المراجع	and the second second	interior de childenste		Freq Offse 0 H
tart 30 MHz Res BW 100 kHz		300 kHz		Stop 2.300 GHz 17.3 ms (8192 pts)	



RL	RF 50.0 AC		SENSE: INT	ALIGNAUTO	04:59:35 PMDec 23, 2018	
Center F	req 2.350000000	PNO: Fast Trig: F	ree Run : 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2.2.4.4.4.4 TYPE MUNICIPALITY OFT P. N.N.N.N.N.	Frequency
0 dB/div	Ref Offset 7 dB Ref 20.00 dBm			Mkr1	2.394 699 GHz -53.596 dBm	Auto Tuni
10.0						Center Free 2.35000000 GH
10.0					-11.02 (Bio	Start Free 2.300000000 GH
20.0 30.0						Stop Free 2.400000000 GH
40.0 50.0						CF Ste 10.000000 MH <u>Auto</u> Ma
60.0	بالماشيون فلانتها والمردما والالا	งานี้สร้องที่ข้างเขียชีเองที่งที่เรื่องของที่เรื่อง 	Veloniuluidittii	fðunndulsur rænnensindur dörar	an a far an	Freq Offse 0 H
70.0 Start 2.30					Stop 2.40000 GHz	
Res BW	100 kHz	#VBW 300 k	HZ	Sweep 9	.665 ms (5000 pts)	



SENSE INT	ALISNAUTO	04 59 56 PMDec 23, 2018	
GHz PNO: Wide C Trig: Free Run	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 12 3 4 5 TYPE MICONTANI DET P. N.N.N.N.N.	Frequency
	Mkr1	2.492 135 GHz -53.124 dBm	Auto Tune
			Center Fred 2.491750000 GHz
		-01.02 rBn	Start Fred 2.483500000 GHz
			Stop Fred 2.500000000 GH;
			CF Step 1.650000 MH Auto Mar
n driven and the second s	artinopal topological particulation	heer to have to obtain a strend and a second	Freq Offset 0 Hz
#VBW 300 kHz	Sween 1	Stop 2.500000 GHz	
	PNO: Wids Trig: Frée Run IFGain:Low #Atten: 30 dB	CHZ PNO: Wide IFGain:Low Trig: Free Run #Atten: 30 dB Mkr1 Mkr1	GHz PNO: Wide IFGain:Low   Trig: Free Run #Atten: 30 dB   Avg Type: Log-Pwr Avg/Hold>100/100   Trace Type: Det Public Det Public   Det Public     IMkr1 2.492 135 GHz -53.124 dBm







#### 2.3 TM1\_DH5\_Ch78

#### 2.1.5 Pref

RL RF 50.0 AC	SENSE:INT	ALIGNAUTO	05:27:20 PM Dec 23, 2018	The second second
enter Freq 2.480000000	CHZ PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 40/100	TRACE 2 2 3 4 5 1 TYPE MINININ DET PINNININ	Frequency
Ref Offset 6.3 dB dB/div Ref 20.00 dBm		Mkr1 2.4	80 161 50 GHz 7.710 dBm	Auto Tun
0.0		<b>1</b>		Center Fre 2.480000000 GH
10				Start Fre 2.479525000 GF
i.o				Stop Fre 2.480475000 GH
io				CF Ste 95.000 ki Auto Mi
1.0				Freq Offs 01
enter 2.4800000 GHz Res BW 100 kHz	#VBW 300 kHz	#Swaan	Span 950.0 kHz 1.000 s (1001 pts)	
al al and the too kinz	#VEVV 500 KHZ	STATUS		



#### 2.1.6 Puw

Tria: Free Run	Avg Type: Log-Pwr Avg[Hold>100/100	TRACE 2 2 3 4 5 1	Frequency
	Highlord > room of	DET P N N N N N	1000
		Vkr1 16.34 kHz -72.262 dBm	Auto Tune
			Center Freq 79.500 kHz
			Start Fred 9.000 kHz
		-32.29 684	Stop Freq 150.000 kHz
			CF Step 14.100 kH Auto Mar
			Freq Offse 0 H
		Stop 150.00 kHz	
IFGalin:Low	IFGain:Low #Atten: 30 dB	HEGoln:Low #Atten: 30 dB	Index     #Atten: 30 dB     Mkr1 16.34 kHz -72.262 dBm



	rum Analyzer - Swept S					
Center F	req 15.075000	PNO: Wide 🖵	Trig: Free Run	Avg Type: Log-Pwr Avg Hold: 59/100	05:28:02 PM Dec 23, 2018 TRACE 1 2:3 4 5 TYPE M OFT P. N.N.N.N.	Frequency
10 dB/div	Ref Offset 7 dB Ref 20.00 dBr	IFGain:Low	#Atten: 30 dB	М	kr1 18.233 MHz -67.127 dBm	Auto Tune
10.0						Center Fred 15.075000 MH
10.00						Start Free 150.000 kH
20.0 30.0					-22 29 diate	Stop Free 30.000000 MH:
40.0						CF Step 2.985000 MH Auto Mar
60.0 70.0 <b>44.4</b> 1			Law Constant	1	an es ha bas tant	Freq Offse 0 H
t 150		#VBW		Sweep 2	Stop 30.00 MHz 85.3 ms (2000 pts)	
190				STATU	DC Coupled	91



RL   RF   50.0 AC	SENSE:INT	ALIGNAUTO	05:28:23 PMDec 23, 2018	Frequency
enter Freq 1.165000000	PN0: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 77/100	TRACE 2345 TYPE DET P.N.N.N.N.N.	
Ref Offset 7 dB 0 dB/div Ref 20.00 dBm		Mkr	1 2.138 71 GHz -52.580 dBm	Auto Tuno
10.0				Center Fred 1.165000000 GH
0.00			-12.22 (54)	Start Free 30.000000 MH
0.0				Stop Free 2.300000000 GH
ю.о 			<b>\</b>	СF Ste 227.000000 МН <u>Auto</u> Ма
o o davida si ka da anna das dividua	a da de marte de la califa de la de de de de la califa de la de			Freq Offse 0 H
			Stop 2 200 GHz	
tart 30 MHz Res BW 100 kHz	#VBW 300 kHz	Sweep 2	Stop 2.300 GHz 17.3 ms (8192 pts)	



	AL.	SENSE: INT	ALIGNAUTO	05:28:44 PMDec 23, 2018	HIS AND A SOL
enter Freq 2.35000	0000 GHz PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2 3 4 5 1 TYPE MUNICIPAL OF P. N.N.N.N.N.	Frequency
Ref Offset 7 d 0 dB/div Ref 20.00 d	в Вm		Mkr1	2.318 484 GHz -52.623 dBm	Auto Tun
10.0					Center Fre 2,35000000 GH
10.0				-12.29 (696)	Start Free 2.300000000 GH
000					Stop Fre 2.400000000 GH
00	1				CF Ste 10.000000 MH Auto Ma
<b>ji, kuru, kuri, Majaya, kuraja,</b> 10.0	firstogrades bertagen af genad	ayalahiyyyiti Uhojina ya Noy Kini	in and a subsection of the second	n, un an	Freq Offse 0 H
tart 2.30000 GHz Res BW 100 kHz	#VBW	300 kHz	Sweep	Stop 2.40000 GHz .665 ms (5000 pts)	



RL		AC	6 I I I	SENSE: INT	Aug Type: Lo		05:29:05 PMDec 2		Frequency
Center F	req 2.4917	PN	O: Wide	ig: Free Run Atten: 30 dB	Avg Hold>10		TRACE 2 2 TYPE MIN DET P N		
0 dB/div	Ref Offset 7 Ref 20.00					Mkr1 2	.483 606 ( -52.288 c	GHz IBm	Auto Tun
10.0								2	Center Free 2.491750000 GH
10.00							-10	2	Start Free 483500000 GH
20.0 30.0								2	Stop Fre 500000000 GH
e0.0								Аш	CF Ste 1.650000 MH to Ma
60.0	webs with more than	unniderenadhe	งสถางการเปล่างระเปลี่	wayaliyahay hariy	nonongratheralasian iaa	ranan	nardundanna	-	Freq Offse 0 H
	3500 GHz 100 kHz		#VBW 30	0 kHz	Sw		op 2.500000 66 ms (5000		







### 2.4 TM2\_2DH5\_Ch0

#### 2.1.7 Pref

Center Fr	eq 2.40200000		SENSE INT	Avg Type: Log-Pwr Avg[Hold: 40/100	04:41:36 PMDec 23, 2018 TRACE 1 2 3 4 8 TYPE MINOR	Frequency	
10 dB/div	Ref Offset 6.3 dB Ref 20.00 dBm			Mkr1 2.	Mkr1 2.402 159 82 GHz 5.484 dBm		
10.0			·			Center Fred 2.402000000 GHz	
10.00			U l'and and and and and and and and and and		M	Start Fred 2.401345000 GH2	
20.0 30.0						Stop Fred 2.402655000 GH	
40.0						CF Step 131.000 kH Auto Mar	
80.0						Freq Offse 0 H	
	020000 GHz	#1/21	200 kHz	#6	Span 1.310 MHz		
Res BW 100 kHz #VBW 300 kHz #Sweep 1.000 s (1001 pts)							



## 2.1.8 Puw

	SENSE: INT	ALIGNAUTO	04:41:57 PMDec 23, 2018	AND DESCRIPTION OF A
PNO: Close 🧔	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE D 2 5 4 5 1 TYPE MENNINN M	Frequency
I COMLOW			Mkr1 9.42 kHz -73.215 dBm	Auto Tune
				Center Fred 79.500 kHz
				Start Fred 9.000 kHz
				Stop Free 150.000 kH
				CF Ste 14.100 kH Auto Ma
				Freq Offse 0 H
			Stop 150.00 kHz	
	PNO: Clese IFGain:Low	PNO: Close Trig: Free Run #Atten: 30 dB	PNO: Close Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg Hold>100/100	PNO: Close Trig: Free Run #Atten: 30 dB Mkr1 9.42 kHz -73.215 dBm 34 Ster Stop 150.00 kHz



Center Pred 15.075000 MHZ     Trig: Free Run #Atten: 30 dB     Avgihiol: 57/100     Pre: No.000 MHZ     Auto Tu       Ref Offset 7 dB     Mikr1 9.498 MHZ     -66.233 dBm     -66.233 dBm     -66.233 dBm     -66.235 dBm     -66.256 dBm	RL	rum Analyzer - Sweg RF 50 9 /	DC J	SENSE:INT	ALIGNAUTO	04:42:18 PMDec 23, 2018	PROVIDE ANY
Ref Offset 7 dB     Wikt 9,498 WiF2       10 dB/div     Ref 20.00 dBm     -66.233 dBm       00     -66.233 dBm     15.075000 f       000     -100     -100     -100       000     -100     -100     -100       000     -100     -100     -100     -100       000     -100	Center F	req 15.0750	PNO: Wide 😱			TRACE 2345 TYPE MUNICIPAL OFT PINNING	Frequency
100   Center F     100   15.075000 F     100   Start F     <		Ref Offset 7 di Ref 20.00 di	в Вm		Ν	/kr1 9.498 MHz -66.233 dBm	Auto Tune
100   Start F     100   Stop F     200   Stop F							Center Fred 15.075000 MH
30.0 Stop F 30.000000 M 30.000000 M 30.000000 M 30.000000 M 30.000000 M 30.000000 M Auto Freq Off CF S 2.985000 M Auto							Start Free 150.000 kH
2.985000 M 50 0 60 0 Freq Off C C C C C C C C C C C C C	-					34 52 dEn	Stop Free 30.000000 MH
							CF Ste 2.985000 MH <u>Auto</u> Ma
70.0 https://www.analyterles.and.com/analyterlang.ch.analyterradigerland.com/analyterradical/analyterrad	80.0		1				Freq Offse 0 H
ort 150 kHz			yakilan dahif kati kana dapat yakat	altrodijatrijethistori	astronet states all the states and the states		
	Start 150 kHz     Stop 30.00 MHz       #Res BW 10 kHz     #VBW 30 kHz     Sweep 285.3 ms (2000 pts)						



RL		AC.	(a. 1	SENSE:INT	ALIGNAUTO	04:42:39 PM Dec 23, 2018	Frequency
enter F	req 1.1650	Р	NO: Fast 😱 Gain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 77/100	TRACE 2 2 4 5 1 TYPE MUSANINA DET P.N.N.N.N.N.N.	
0 dB/div	Ref Offset 7 Ref 20.00	dB dBm			Mkr	1 2.040 05 GHz -51.850 dBm	Auto Tune
10.0							Center Free 1.165000000 GH
10.0						-14 52 (Em	Start Free 30.000000 MH
30.0 30.0							Stop Fre 2.300000000 GH
40.0 50.0						<b>↓</b> 1	CF Ste 227.000000 MH Auto Ma
50.0 <b>- 14 14 1</b>		and in the state	det geter de	in the second		un and the same set of the set of the	Freq Offse 0 H
70.0							
tart 30 M	1Hz 100 kHz		#VBW	300 kHz	Sweep 2	Stop 2.300 GHz 17.3 ms (8192 pts)	



SENSEJINT	ALIGNAUTO	04:43:00 PM Dec 23, 2018	Francisco
CHZ PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2.2.4 4 11 TYPE MUNICIPAL DET P. N.N.N.N.N.	Frequency
	Mkr1	2.399 540 GHz -35.173 dBm	Auto Tuni
			Center Fre 2,35000000 GH
		-14 52 (Em	Start Fre 2.300000000 GH
		,	Stop Fre 2.400000000 GH
			С <b>F Ste</b> 10.000000 МН <u>Аuto</u> Ма
9-8488-11-1-5-1-1-0	ngi yalan san kalan salan yaka walan yaya	an a	Freq Offse 0 H
#VBW 300 kHz	Sween	Stop 2.40000 GHz	
	CH2 PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB	CH2   Trig: Free Run   Avg Type: Log-Pwr     PN0: Fast   #Atten: 30 dB   IMkr1     IFGain:Low   #Atten: 30 dB   IMkr1     Image: State of the st	GHZ PNO: Fast IFGain:Low   Trig: Free Run #Atten: 30 dB   Avg Type: Log-Pwr AvgHeld>100/100   Trig: Free Run Wer   Trig: Free Run Wer   Trig: Free Run Mkr1 2.399 540 GHz -35.173 dBm     Image: Step 2.40000 GHz   Image: Step 2.40000 GHz   Image: Step 2.40000 GHz



RL RF 50.0	AL.	SENSEINT	ALIGNAUTO	04:43:21 PMDec 23, 2018	HIR STREET, SOM
Center Freq 2.491750	000 GHz PNO: Wide C	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2.3.4.5.1 TYPE MUNININ DET P. N.N.N.N.N.	Frequency
Ref Offset 7 dB 0 dB/div Ref 20.00 dB			Mkr1	2.492 748 GHz -53.349 dBm	Auto Tune
10.0					Center Fred 2.491750000 GH2
10.0				-14.52 dBe	Start Fred 2.483500000 GHz
80.0					Stop Fred 2.500000000 GH
40.0					CF Step 1.650000 MH Auto Mar
60.0	ann i marta ann an tha an t	ntwood-antain-station	within the langest started and	ananan an	Freq Offse 0 Ha
70.0 Start 2.483500 GHz #Res BW 100 kHz	#VBW	300 kHz	Sweep 1	top 2.500000 GHz .666 ms (5000 pts)	







### 2.5 TM2\_2DH5\_Ch39

#### 2.1.9 Pref

RL RF 50.0 AC	SENSE:INT	ALIGNAUTO	05:13:36 PMDec 23, 2018	HIR COLUMN
enter Freq 2.441000000 GH	Trig: Free Run Gain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 40/100	TRACE 2 2 4 5 1 TYPE MUNICIPAL OFT P N N N N N	Frequency
Ref Offset 6.3 dB dB/div Ref 20.00 dBm		Mkr1 2	.441 159 7 GHz 7.482 dBm	Auto Tune
g .0		<b>0</b> <sup>1</sup>		Center Free 2.441000000 GH
				Start Fre 2.440340000 GH
0				Stop Fre 2.441660000 GH
0 0				CF Ste 132.000 kF Auto Ma
0				Freq Offso 0 H
enter 2.4410000 GHz			Span 1.320 MHz	
Res BW 100 kHz	#VBW 300 kHz	#Sweep	1.000 s (1001 pts)	



# 2.1.10 Puw

RL RF 50.0 10 0		SENSE: INT	ALIGNAUTO	05:13:57 PMDec 23, 2018	HIBACALLERIN
enter Freq 79.500 kHz	PNO: Close 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2.3.4.8 TYPE MUNICIPAL DET P.N.N.N.N.N.	Frequency
Ref Offset 7 dB 0 dB/div Ref 20.00 dBm				Vkr1 12.25 kHz -72.022 dBm	Auto Tune
og 10.0					Center Fred 79.500 kH
0.0					Start Fred 9.000 kHz
900				-32.52.60m	Stop Fred 160.000 kH
000					CF Stej 14.100 kH Auto Ma
00					Freq Offse 0 H
tart 9.00 kHz Res BW 1.0 kHz		10 kHz		<u>سمبر المراجم م</u> Stop 150.00 kHz 34.8 ms (1000 pts)	



RL RF 50 Q DC		SENS	E:INT		ALIGNAUTO		Dec 23, 2018	TRACK STATE
enter Freq 15.075000 MH	PNO: Wide C	Trig: Free #Atten: 30		Avg Type Avg Hold:	: Log-Pwr 59/100	TRACI TYP DE	123451 MWWWWW PNNNNN	Frequency
Ref Offset 7 dB dB/div Ref 20.00 dBm							95 kHz 70 dBm	Auto Tun
0.0								Center Fre 15.075000 MH
0.0								Start Free 150.000 kH
0.0							-22.52 dBm	Stop Fre 30.000000 MH
0.0								CF Ste 2.985000 MH <u>Auto</u> Ma
0.0 1								Freq Offse 0 H
0.0 Hayob (marillandi na Marina) (1996) (1996) (1996) (1996)	inter transportioned	naimpealuse.	All the states		42200 Annalised		ndistania dhar	
tart 150 kHz Res BW 10 kHz	#VBW	30 kHz			Sweep 2	Stop 30 85.3 ms (2	).00 MHz 2000 pts)	



RL		AL .		SENSEINT	ALIGNAUTO	05:14:39 PMDec 23, 2018	Frequency
Center F	req 1.1650	F	NO: Fast	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 77/100	TRACE 2345 TYPE MUNINAL DET PINNINA	
IO dB/div	Ref Offset 7 Ref 20.00	dB dBm			Mkr	1 1.748 23 GHz -50.893 dBm	Auto Tuno
10.0							Center Fred 1.165000000 GH
10.00						-12 SI 687	Start Free 30.000000 MH:
20.0							Stop Free 2.300000000 GH
43.0							CF Ste 227.000000 MH Auto Ma
60.0 <mark>Manua</mark>		kaan piraal	de la Propulsion de la constante de la constant La constante de la constante de	n i i santa da ita	a katalan ina interdukat hisini	andri kan kenteri kenter	Freq Offse 0 H
70.0 Start 30 M						Stop 2.300 GHz	
start 30 A #Res BW			#VBW 3	00 kHz	Sweep 2	Stop 2.300 GHz 17.3 ms (8192 pts)	



RL	RF 50.0 AC		SENSE:INT	ALIGNAUTO	05:15:00 PMDec 23, 2018	Frequency
Center F	req 2.350000000	PNO: Fast Trig:	Free Run n: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2.3.4.5 TYPE MINNER OFT P.N.N.N.N.	
0 dB/div	Ref Offset 7 dB Ref 20.00 dBm			Mkr1	2.310 662 GHz -53.180 dBm	Auto Tuno
10.0						Center Fred 2.350000000 GH
10.00					-12 51 dBm	Start Free 2.300000000 GH
20.0						Stop Free 2.400000000 GH
40.0 50.0	1					СF Stej 10.000000 МН <u>Аuto</u> Ма
0.0	culately in a support of the other	anan kunakunan	وبالينما المنعرية	r, estendation), betardate.	and the Million of a particular and	Freq Offse 0 H
	0000 GHz 100 kHz	#VBW 300 I	KHZ	Sweep 9	Stop 2.40000 GHz .665 ms (5000 pts)	



RL	RF 50.9 AC	Sector 1	SENSE:(INT)	ALIGNAUTO	05:15:21 PMDec 23, 2018	
Center Fr	eq 2.49175000	PNO: Wide	rig: Free Run Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2 3 4 5 1 TYPE MUMMMM DET P N N N N N	Frequency
0 dB/div	Ref Offset 7 dB Ref 20.00 dBm			Mkr	2.485 302 GHz -53.387 dBm	Auto Tun
10.0						Center Free 2,491750000 GH
10.02					-12 51 obn	Start Free 2.483500000 GH
20.0 30.0						Stop Fre 2.500000000 GH
40.0	1					CF Ste 1.650000 MH <u>Auto</u> Ma
80.0	una manshippaan	ng mangaput sundur you	ndaannamaanna ah	hale to the second s	mannahmana	Freq Offse 0 H
70.0 Start 2.48 #Res BW	3500 GHz	#VBW 3	00 kHz	Sween	Stop 2.500000 GHz 1.666 ms (5000 pts)	







## 2.6 TM2\_2DH5\_Ch78

### 2.1.11 Pref

RL RF 50.0 AC Center Freq 2.48000000	0 GHz	ig: Free Run tten: 30 dB	Avg Type Avg Hold	ALIGNAUTO 2: Log-Pwr 2: 40/100	05:32:57 PMD TRACE TVPE DET	ec 23, 2018 2 3 4 8 1 Material A	Frequen	cy
Ref Offset 6.3 dB				Mkr1 2.	480 157 5.95	1 GHz 2 dBm	Auto	Tune
10.0			• <sup>1</sup>				Center 2,48000000	
10.0							Star 2.47934000	tFrec 00 GH:
30.0							Stop 2.48066000	o Fred
40.0 50.0							CF 132.00 Auto	Step 00 kH Mar
60.0							Freq	Offse 0 H
70.0 Center 2.4800000 GHz					Span 1.3	20 MHz	_	
Res BW 100 kHz	#VBW 30	0 kHz		#Sweep	1.000 s (1	001 pts)		



# 2.1.12 Puw

15	SENSE: (INT)	ALIGNAUTO	05/33:18 PMDec 23, 2018	ERRORATE RAY, 11
		Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2345 TYPE MUNICIPAL DET PININININ	Frequency
		1	Mkr1 13.52 kHz -72.760 dBm	Auto Tune
				Center Freq 79.500 kHz
				Start Fred 9.000 kHz
			01 M 480	Stop Fred 150.000 kHz
				CF Step 14.100 kH: Auto Mar
				Freq Offse 0 H:
			Stop 150.00 KHZ	
	IFGaintLow I	PNO: Close Trig: Free Run IFGain:Low Atten: 30 dB	PNO: Clase   Trig: Free Run #Atten: 30 dB   Avg Type: Log-Pwr AvgjHold>100/100     IFGoin:Low   #Atten: 30 dB   Image: State of the	PNO: Close     Trig: Free Run     AvgType: Leg-Pwr     Trig: Or Privation       #Atten: 30 dB     Mkr1 13.52 kHz     -72.760 dBm



Agilent Spectr	rum Analyzer - Swe	pt SA ALDC		1	SEINTI		ALIGNALITO	Lon bo do te	Dec 23, 2018	
	req 15.0750	00 MHz	10: Wide 🖕 Sain:Low		Run	Avg Type Avg Hold	e: Log-Pwr	TRAC		Frequency
10 dB/div	Ref Offset 7 d Ref 20.00 d	в	Samelow	southern. of			M	cr1 27.6 -66.91	26 MHz 88 dBm	Auto Tur
10.0										Center Fre 15.075000 MH
10.0										Start Fre
20.0 30.0									-,24.05.1⊞n	Stop Fre 30.000000 MH
43.0										CF Ste 2.985000 MH Auto Ma
60.0		100 100 100	1120100-0		بل ر بس				<b>,</b> ∮ <sup>1</sup>	Freq Offs 0 F
t 150	kHz 10 kHz	Ny Chattaine		30 kHz	er. Maria		Sweep 2	Stop 3	0.00 MHz	
6G								1 DC Cou		



SENSE:INT	ALIGNAUTO	05:34:00 PMDec 23, 2018	Frequency
PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 76/100	TRACE 2 2 4 5 TYPE MUNICIPAL OFT PINNNNN	Frequency
	Mkr	1 2.286 70 GHz -52.070 dBm	Auto Tune
			Center Fred 1.165000000 GH2
		-14.05 dBm	Start Free 30.000000 MH
			Stop Free 2.300000000 GH
			CF Step 227.000000 MH Auto Mar
an a	to an electrophysical federation in the second	in the state of the	Freq Offse 0 H
#VBW 300 kHz	Survey	Stop 2.300 GHz	
	CH2 PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB	CHZ PNO: Fast IFGain:Low   Trig: Free Run #Atten: 30 dB   Avg Type: Log-Pwr Avg Hold: 76/100     IMKr   IMKr     Image: State of the second state of the sec	CHZ PNO: Fast IFGain:Low   Trig: Free Run #Atten: 30 dB   Avg Type: Log-Pwr AvgHold: 76/100   Trig: Charles in the second



RF 50.0 AC		E:INT ALIGNAUTI		Frequency
q 2.350000000	PNO: Fast Trig: Free F	Run Avg Hold>100/100	TYPE MUNICIPALITY	
Ref Offset 7 dB Ref 20.00 dBm		Mk	1 2.398 980 GHz -53.107 dBm	Auto Tune
				Center Fred 2.350000000 GH2
			-14 DS d2m	Start Fred 2.300000000 GH
				Stop Free 2.400000000 GH
				CF Step 10.000000 MH Auto Mar
antion foir density independent	بمنادبه والمرامق وممانيهما ولمابو وتذه	lelledykykysetykysetterysetterysetterysykytysette	ىكى قەھىرە يەر مەرەپ ئەلەرلەر يەسىيەر دايە لەر مۇ	Freq Offse 0 H
0 GHz			Stop 2.40000 GHz	
	tef Offset 7 dB tef 20.00 dBm	Atten: 30 IFGain:Low #Atten: 30 Ref 20.00 dBm	PN0: Fast PN0: Fast AvgiHoid>100/100 #Atten: 30 dB Mki Ref 20.00 dBm	PND: Fast If girled > 100100 Mikr1 2.398 980 GHz -53.107 dBm -53.107 dBm -1405 0m -1405 0m -1405 0m



RL RF 50.0		SENSE:0NT	ALIGNAUTO	05:34:43 PMDec 23, 2018	Contract State
Center Freq 2.491750	PNO: Wide	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2 3 4 5 1 TYPE MEANANN DET P. N.N.N.N.N.	Frequency
Ref Offset 7 dB 0 dB/div Ref 20.00 dB	m		Mkr1	2.484 289 GHz -53.015 dBm	Auto Tuno
10.0					Center Free 2,491750000 GH
10.0				-14.05 dDm	Start Free 2.483500000 GH
90.0					Stop Fre 2.50000000 GH
000 500 <b>1</b>					CF Ste 1.650000 MH Auto Ma
60.0	Angen Programmer and a start start and a start start and a start start start start start start start start star	enereWeinlowskehrennereAr	البسلولة أحلال الأواجر حاصوا مساليه	habengalansibalakkatharteansi	Freq Offse 0 H
300 Start 2.483500 GHz Res BW 100 kHz	#VBW 3	00 kHz	Sweep 1	top 2.500000 GHz .666 ms (5000 pts)	







## 2.7 TM3\_3DH5\_Ch0

### 2.1.13 Pref

Center Fr	RF 50.0 AC		SENSEINT Trig: Free Run #Atten: 30 dB	Avg Type Avg Hold:		TRACE	Dec 23, 2018	Fre	quency	
I0 dB/div	Ref Offset 6.3 dB Ref 20.00 dBm	1		Mkr1 2.402 159 7 GHz 5.516 dBm					Auto Tune	
10.0				• <sup>1</sup>				0.00	enter Fred 000000 GHz	
10.0							$\leq$		Start Fred 340000 GH2	
20.0								and the second second second	Stop Free	
40.0								Auto	CF Step 32.000 kH Mar	
60.0								F	req Offse 0 H	
Center 2.4	020000 GHz	#\/B\	/ 300 kHz		# <b>C</b> woon	Span 1. 1.000 s (1	320 MHz			
BG	100 KH2	#VDV	J00 KH2		#Sweep	_	oon pts)		_	



## 2.1.14 Puw

RL RF 50.0 ADC		SENSE:INT	ALIGNAUTO	04:47:35 PMDec 23, 2018	CONTRACTOR OF THE OWNER.
enter Freq 79.500 kHz	PNO: Close 🖵	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 1234 E	Frequency
Ref Offset 7 dB dB/div Ref 20.00 dBm	IFGain:Low	Anten: 30 db		Mkr1 9.00 kHz -73.053 dBm	Auto Tune
0.0					Center Fred 79.500 kH:
0.0					Start Free 9.000 kH
0.0				34 <i>0</i> (51	Stop Free 150.000 kH
0.0					CF Stej 14.100 kH Auto Mai
0.0					Freq Offse 0 H
and the second s	nahalanah #VBW :			<u>ه من </u>	



Agtiont Spect	rum Analyzer - Swi RF 1.50 D	ADC .		99	ISE:INT]		ALIGNAUTO	04:47:56 PM	Dec 23, 2018	
Center F	req 15.0750	000 MHz	IO: Wide 😱 Sain:Low	-	Run		: Log-Pwr	TRAC		Frequency
l0 dB/div	Ref Offset 7 dB     Mkr1 21.324 MHz       dB/div     Ref 20.00 dBm     -66.625 dBm						Auto Tune			
10.0										Center Fred 15.075000 MH
10.0										Start Fred 150.000 kHz
20.0 30.0									Q448.665	Stop Free 30.000000 MH
40.0										CF Step 2.985000 MH Auto Mar
60.0	din sta an					ar an e le de	<b>∮</b> <sup>1</sup>			Freq Offse 0 Ha
art 150		and the second		30 kHz	*8-41-18-4			Stop 3 85.3 ms (	0.00 MHz	
Start 150 #Res BW			#VBW	30 kHz				Stop 3 85.3 ms ( 1 DC Cou	2000 pts)	



RL	RF 50 0			SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	04:48:17 PM Dec 23, 2018 TRACE 2 2 3 4 5	Frequency	
Senter F	req 1.1650	PN	0: Fast	Trig: Free Run #Atten: 30 dB	Avg Hold: 76/100	TYPE MUNICIPAL OFF	Auto Tune	
0 dB/div	Ref Offset 7 Ref 20.00				Mkr1 2.276 44 GHz -52.505 dBm			
10.0							Center Fred 1.165000000 GH	
10.0						-14.4S (Err.)	Start Free 30.000000 MH	
20.0 30.0							Stop Free 2.300000000 GH	
40.0							CF Stej 227.000000 MH Auto Ma	
60.0 <b>40 (</b> 51		e estate a contract Anna anna a contracta	and the street	lik din din din di	n de service de la constatio de la selata d	e e de cale de la dela serie addi	Freq Offse 0 H	
70.0								
Start 30 M			#VBW 3	00 kHz	Sweep 2	Stop 2.300 GHz 217.3 ms (8192 pts)		
	100 kHz		#VBW 3	00 kHz	Sweep 2	217.3 ms (8192 pts)		



	04:48:39 PMDec 23, 2018	ALIGNAUTO	SENSE:INT	50.Q AC	um Analyzer - Swept RF 50 Q	RL
Frequency	TRACE 2345 TYPE MUNICIPALITY DET PINNINN	Avg Type: Log-Pwr Avg Hold>100/100	Trig: Free Run #Atten: 30 dB	0000000 GHz PNO: Fast CP IFGain:Low	req 2.350000	Center F
Auto Tun	2.399 600 GHz -36.963 dBm	Mkr1			Ref Offset 7 dB Ref 20.00 dB	IO dB/div
Center Free 2.350000000 GH						10.0
Start Free 2.300000000 GH	-1448 (En					10.00
Stop Free 2.400000000 GH	1					20.0 30.0
CF Stej 10.000000 MH Auto Mai						40.0
Freq Offse 0 H	andra lani a landa da ang kapatan di	halishan malike maanini	nutraukseinininininin	a <sub>n n</sub> an den Hannelskark Handelande, kenst Adr	Laborathiji in fan difan an dan.	60.0
	Stop 2.40000 GHz	Sweep 9	300 kHz	#VBW :		Start 2.30
	.665 ms (5000 pts)	Sweep 9	300 kHz	#VBW		



Agilent Spect	rum Analyzer - Swept-SA RF 50.0 AC	SENS		ALIGNAUTO	04:49:00 PM Dec 23, 2018	
	req 2.491750000	GHz PNO: Wide C Trig: Free F	Avg ' Run Avg H	Type: Log-Pwr lold>100/100	TRACE 1234 TRACE 1234 TYPE MINIMUM DET PINIMUM	Frequency
10 dB/div	Ref Offset 7 dB Ref 20.00 dBm	IFGain:Low #Atten: 30 o	10	Mkr1	2.493 352 GHz -52.296 dBm	Auto Tune
10.0						Center Fred 2.491750000 GH:
10.0					-14 49 (En	Start Free 2.483500000 GH
20.0						Stop Fre 2.500000000 GH
40.0			i			CF Ste 1.650000 MH Auto Ma
60.0	workelligentermo	Williammanhaniinanlah	mon han	tunga ditang pana	n na ann an a	Freq Offse 0 H
Start 2.48	3500 GHz 100 kHz	#VBW 300 kHz			top 2.500000 GHz .666 ms (5000 pts)	
ISG				STATUS		-







## 2.8 TM3\_3DH5\_Ch39

### 2.1.15 Pref

enter Freq 2.44100000	PNO: Wide	SENSEJNT Trig: Free Run KAtten: 30 dB	Avg Type: Log-Pwr Avg Hold: 40/100	05:21:43 PM Dec 23, 2018 TRACE 1 2 3 4 5 TYPE MINOR N DET P. N.N.N.N.	Frequency
Ref Offset 6.3 dB 0 dB/div Ref 20.00 dBm			Mkr1 2	.441 159 7 GHz 7.489 dBm	Auto Tune
10.0			•		Center Free 2.441000000 GH
					Start Free 2.440340000 GH
0.0					Stop Fre 2.441660000 GH
0.0					CF Ste 132.000 kH <u>Auto</u> Ma
0.0					Freq Offs 0 H
Center 2.4410000 GHz Res BW 100 kHz	#VBW 3	00 kHz	#Succes	Span 1.320 MHz 1.000 s (1001 pts)	
Res BW 100 KHZ	#VDVV J	00 KH2	status		



## 2.1.16 Puw

🛛 RL 🛛 RF 🛛 50 Q 🦺 D		SENSE:INT	ALIGNAUTO	05:22:04 PMDec 23, 2018	Frequency
Center Freq 79.500 kH	PNO: Close IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2345 TYPE DET P NNNNN	
Ref Offset 7 dB	m			Mkr1 12.39 kHz -73.264 dBm	Auto Tune
10.0					Center Fred 79.500 kHz
10.0					Start Fred 9.000 kH;
20.0				-32.51 dðre	Stop Free 150.000 kH
40 0					CF Step 14.100 kH Auto Mar
80.0					Freq Offse 0 H
Start 9.00 kHz	//////////////////////////////////////		alwarmer herbrundt	<u>. എ.എ.എ. പ്രക</u> Stop 150.00 kHz 34.8 ms (1000 pts)	
so		and all interesting the second s		1 DC Coupled	-



RL RF S0.0 ADC		SENSEINT	ALIGNAUTO	05/22:25 PMDec 23, 2018	
enter Freq 15.075000 MI	PNO: Wide 😱 IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pw Avg Hold: 59/100		Frequency
Ref Offset 7 dB D dB/div Ref 20.00 dBm	Auto Tune				
0.0					Center Fred 15.075000 MHz
0.0					Start Fred 150.000 kHz
900				-22'51 dBin	Stop Free 30.000000 MH:
00					CF Step 2.985000 MH Auto Mar
0.0	the state of the state	has collate and	on min Marman - weddi id		Freq Offse 0 H
MALLY (MALLY CONTACTION) 50 kHz 3W 10 kHz		30 kHz		Stop 30.00 MHz 285.3 ms (2000 pts)	



RL RF 50.0 AC	E	SENSE: INT	ALIGNAUTO	05:22:46 PMDec 23, 2018	
enter Freq 1.16500000	PNO: Fast	ig: Free Run tten: 30 dB	Avg Type: Log-Pwr Avg Hold: 76/100	TRACE 2 2 4 4 TYPE MINNINN DET PINNINN	Frequency
Ref Offset 7 dB dB/div Ref 20.00 dBm			Mkr	1 2.264 25 GHz -52.210 dBm	Auto Tuno
0.0					Center Fred 1.165000000 GH
				-12.51 dBm	Start Free 30.000000 MH
0.0					Stop Free 2.300000000 GH
0.0					CF Stej 227.000000 MH <u>Auto</u> Ma
o.o. <mark>and the source should be defined a</mark>		é di Nika Jérébéhé	i in it live du military	an in the state of t	Freq Offse 0 H
tart 30 MHz				Stop 2.300 GHz	
Res BW 100 kHz	#VBW 300	) kHz	Sweep 2	17.3 ms (8192 pts)	



N RL	rum Analyzer - Swept SA RF 50.0 AC	-	SENSE:INT	ALIGNAUTO	05:23:07 PMDec 23, 2018	Printer and
Center F	req 2.35000000	0 GHz PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2.3.4.5 TYPE DET P.N.N.N.N.N.	Frequency
10 dB/div	Ref Offset 7 dB Ref 20.00 dBm			Mkr1	2.398 000 GHz -53.031 dBm	Auto Tuno
10.0						Center Fred 2.350000000 GH
10.0					-12 51 dBm	Start Free 2.300000000 GH
20.0 30.0						Stop Free 2.400000000 GH
40.0					4	СF Ste 10.000000 МН <u>Ашто</u> Ма
60.0 <b>(FAI)</b>	tion, and the second rule in the particular	, se an	لين و منها الوره الم	uarnethijurstalskapunantereria	authoriestical descended	Freq Offse 0 H
	0000 GHz				Stop 2.40000 GHz	
Res BW	100 kHz	#VBW	300 kHz	Sweep 9	.665 ms (5000 pts)	



RL RF 50.0 AC	And a second	SENSE:INT	ALIGNAUTO	05:23:28 PMDec 23, 2018	The second second
enter Freq 2.491750000	PNO: Wide	rig: Free Run Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 2 2 4 5 1 TYPE M NNNNN DET PNNNNN	Frequency
Ref Offset 7 dB dB/div Ref 20.00 dBm	in Country		Mkr1	2.485 299 GHz -53.456 dBm	Auto Tune
0.0					Center Fred 2.491750000 GH
0.0				-12.51 dBm	Start Fred 2.483500000 GH
0.0					Stop Free 2.500000000 GH
0.0 <b>1</b>					CF Stej 1.650000 MH Auto Ma
10.0 Marchardrand margine and	eradal miserianados	white white white	munchisaninmheisenn	and a stand of the	Freq Offse 0 H
tart 2.483500 GHz Res BW 100 kHz	#VBW 30	0 kHz	Sween 1	Stop 2.500000 GHz .666 ms (5000 pts)	







## 2.9 TM3\_3DH5\_Ch78

### 2.1.17 Pref

RL RF 500 AC Center Freq 2.48000000	SENSE:INT PN0: Wide →→ IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 40/100	05:38:36 PMDec 23, 2018 TRACE 2 2 3 4 5 TYPE MULLING DET P N N N N N	Frequency
Ref Offset 6.3 dB 0 dB/div Ref 20.00 dBm	PGainLow whiten 30 db	Mkr1 2	.480 162 4 GHz 5.947 dBm	Auto Tune
.og		• <sup>1</sup>		Center Free 2.480000000 GH:
10.00				Start Free 2.479340000 GH
20.0				Stop Fre 2.480660000 GH
¢۵0				CF Ste 132.000 kH Auto Ma
0.0				Freq Offse 0 H
20.0 Center 2.4800000 GHz	#VBW 200 LUE		Span 1.320 MHz	
Res BW 100 kHz	#VBW 300 kHz	#Sweep	1.000 s (1001 pts)	



### 2.1.18 Puw

AL RF 500 ADC Center Freq 79.500 kHz	PNO: Close 😱	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	05/38:56 PMDec 23, 2018 TRACE 2 3 4 5 TYPE MULLIAMU OET P. N.N.N.N.N	Frequency
Ref Offset 7 dB 0 dB/div Ref 20.00 dBm	IFGain:Low	PAtten ov db	1	Mkr1 12.53 kHz -72.577 dBm	Auto Tune
10.0					Center Fred 79.500 kHz
10.0					Start Free 9.000 kH
0.0				.34.05.05m	Stop Fre 150.000 kH
0.0					CF Ste 14.100 kH <u>Auto</u> Ma
800					Freq Offse 0 H
Start 9.00 kHz Res BW 1.0 kHz	www.www. #VBW			۵۵۰۰۵ میلیم Stop 150.00 kHz 34.8 ms (1000 pts)	



	um Analyzer - Sw							2412020-07-010		
Center F	reg 15.075	000 MHz		111 223	ISE:INT	Avg Type	ALIGNAUTO	TRAC	Dec 23, 2018	Frequency
		PN	IO: Wide 🦕 Sain:Low	Trig: Free #Atten: 30		Avg Hold	59/100	DE	P NNNNN	2000 E.S.
IO dB/div	Ref Offset 7 Ref 20.00								14 kHz 18 dBm	Auto Tune
.09										Center Freq
10.0										15.075000 MHz
0.00										StartFree
10.0										150.000 kHz
20.0										Stop Free
30.0									24.05 (En)	30.000000 MHz
40.0										CF Step
50 D										2.985000 MH: Auto Mar
60.0 — " —										Freq Offse
	an a							ML CALLER	and sector in	0 Hz
70.0	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	Red () () () () () ()	ind all real starting the	North Station of	all active	Angen Ar stick	definister and	and the second second	the state of the second se	
Start 150 #Res BW		1	#VBW	30 kHz		<u> </u>	Sweep 2		0.00 MHz	
INGS DVV	19 KII4		20.544	50 KH2				DC Cou		



SENSEJNT	ALIGNAUTO	05:39:40 PM Dec 23, 2018	Frequency
PNO: Fast Frig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 76/100	TRACE 2 3 4 8 4 TYPE MILLION N	
	Mkr	1 2.252 06 GHz -52.363 dBm	Auto Tuno
			Center Fred 1.165000000 GH
		-14 35 dBn	Start Free 30.000000 MH
			Stop Fre 2.300000000 GH
			CF Ste 227.000000 MH Auto Ma
	and a state of the second		Freq Offse 0 H
#VBW 300 kHz	Sweep 2	Stop 2.300 GHz	
	CHZ PNO: Fast IFGain:Low #Atten: 30 dB	CH2 PN0: Fast IFGain:Low   Trig: Free Run #Atten: 30 dB   Avg Type: Log-Pwr AvgjHold: 76/100     IMKr   IMKr     Image: State of the st	GHz   Trig: Free Run   Avg Type: Log-Pwr   Trig: Tree Run   Avg/Hold: 76/100   Trig: Tree Run   Trig: Free Run   Mkr1 2.252 06 GHz     F6ain:Low   Mkr1 2.252 06 GHz   -52.363 dBm     Image: Stop 2.300 GHz   -14.05 dBm     Image: Stop 2.300 GHz   -14.05 dBm



AC.	SENSE:INT	ALIGNAUTO	05:40:01 PMDec 23, 2018	CONTRACTOR OF STREET
000 GHz PNO: Fast CP IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 234 5 TYPE MINININ DET PINNININ	Frequency
		Mkr1	2.334 987 GHz -52.562 dBm	Auto Tun
				Center Free 2.350000000 GH
			-14.05 dBm	Start Fre 2.300000000 GH
				Stop Fre 2.400000000 GH
				CF Ste 10.000000 MH Auto Ma
ula hairagaan iyoo saxaa haa haa haa haa haa haa haa haa haa	واجتنزها الإجتر فاجتز والها	alennet and an an advertised and a state	۵۰۰۹۹ میلاده این ۲۰۱۹ میلیون او میلود. ۱۹۹۰ میلود و دور ۲۰۱۹ میلود او میلود و میلود و میلود و میلود و میلود و م	Freq Offse 0 H
#VBW	300 kHz	Sweep 9	Stop 2.40000 GHz	
	IFGain:Low	000 GHz PN0: Fast IFGain:Low Trig: Free Run #Atten: 30 dB	000 GHz PN0: Fast IFGain:Low Trig: Free Run #Atten: 30 dB Avg1ype: Log-Pwr AvglHold>100/100   Image: State of the stat	OUD GHz IFGaIn:Low   Trig: Free Run MAtten: 30 dB   Avg Type: Log-Pwr Avg Hold>100/100   Trig: Free Run Ver   Trig: Free Run Mkr1 2.334 987 GHz -52.562 dBm     m   -52.562 dBm   -52.562 dBm     m   -11.00000000000000000000000000000000000



44	SENSE:INT	ALIGNAUTO	05:40:22 PMDec 23, 2018	THE REAL PROPERTY OF
DOO GHZ PNO: Wide C IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold>100/100	TRACE 23481 TYPE MWWWWWW DET PNNNN	Frequency
m		Mkr1	2.483 517 GHz -51.627 dBm	Auto Tune
				Center Fred 2.491750000 GH:
			-14 DS 40m	Start Fred 2.483500000 GH
				Stop Fred 2.500000000 GH
				CF Step 1.650000 MH <u>Auto</u> Mar
nen antiacea Inserial North anti-	mbalanahanahana	hassanaft an	Yearth would determined	Freq Offse 0 H
#\/B\//	300 kHz	Sweep 1	stop 2.500000 GHz	
	DOO GHz PNO: Wide S IFGain:Low m	DOD GH2 PNO: Wide IFGain:Low #Atten: 30 dB m	DOO GHZ PN0: Wide   Trig: Free Run #Atten: 30 dB   Avg Type: Log-Pwr Avg Hold>100/100     Mkr1     m	DOD GHZ IFGain:Low   Trig: Free Run MAtten: 30 dB   Avg Type: Log-Pwr Avg Hold>100/100   Trace (234)     Mkr1 2.483 517 GHZ -51.627 dBm







# Appendix H: Radiated Emissions in the Restricted Bands

# 3 Result Table

The whole testing range is from "30 MHz to 26.5 GHz (10th harmonics)" is divided into 5 parts according to the test site settings, which are:

- (Part 1): Test range of "9 KHz to 30 MHz",
- (Part 2): Test range of "30 Mhz to 1GHz
- (Part 3): Test range of "1 GHz to 3 GHz".
- (Part 4): Test range of "3 GHz to 18 GHz",
- (Part 5): Test range of "18 GHz to 26.5 GHz".

In this Appendix, only the test results and plots under the worst case can be reported. In the result table, the "< Limit" denotes that "Not found obvious spikes or see marked spikes on plots and listed emissions records".

Test Range	EUT Conf.	Emissions	Verdict
30 MHz to 1 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass
1 GHz to 3 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass
	TM1_DH5_Ch78 (Worst Conf.)	< Limit	Pass
3 GHz to 18 GHz	TM1_DH5_Ch0 (Worse Conf.)	< Limit	Pass
18 GHz to 26.5 GHz	TM1_DH5_Ch0 (Worst Conf.)	< Limit	Pass

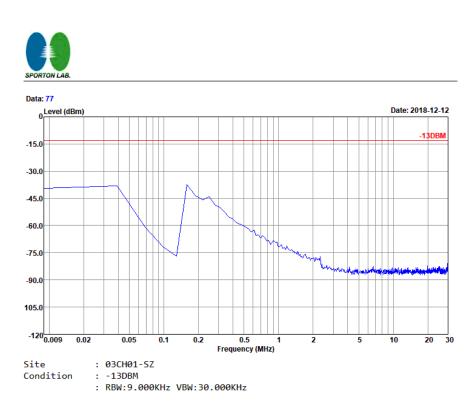
Note: We tested all modes, but the data presented below is the worst case.



# 4 Result Plot

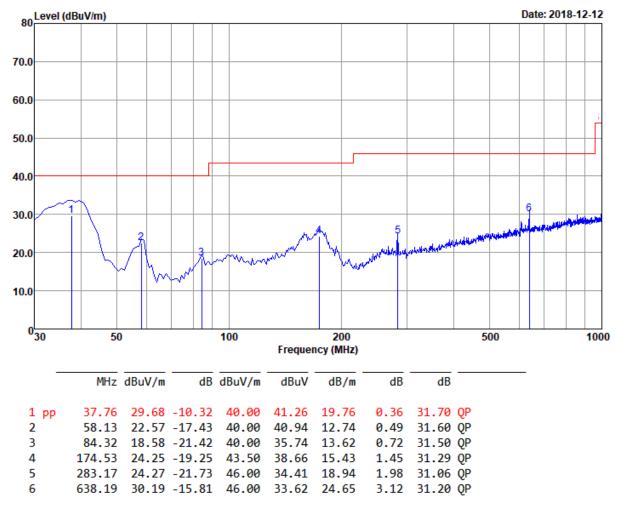
# Part 1: Testing Range of "9 kHz to 30MHz"

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.



# 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).



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.

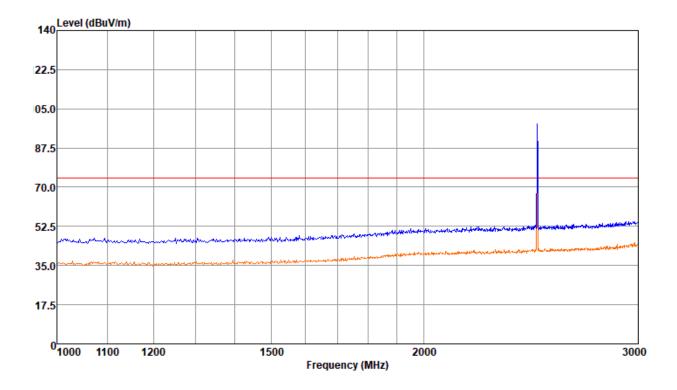
2, Margin=Limit - Level

Public

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

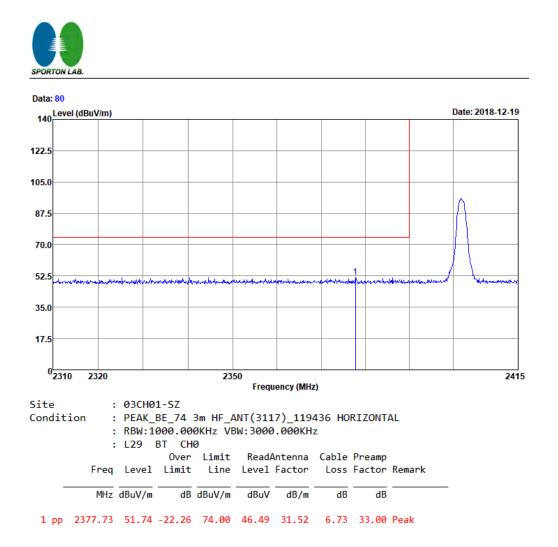
- Note 1: The testing range of "1 GHz to 3 GHz" is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB $\mu$ V/m) and Average Limit (54 dB $\mu$ V/m).

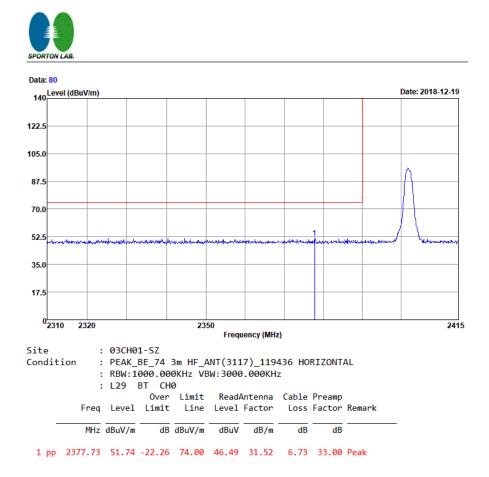
Note 3: The peak spike exceeds the limit line is EUT's operating frequency.



Public

# TM1\_DH5\_Ch0





Note:

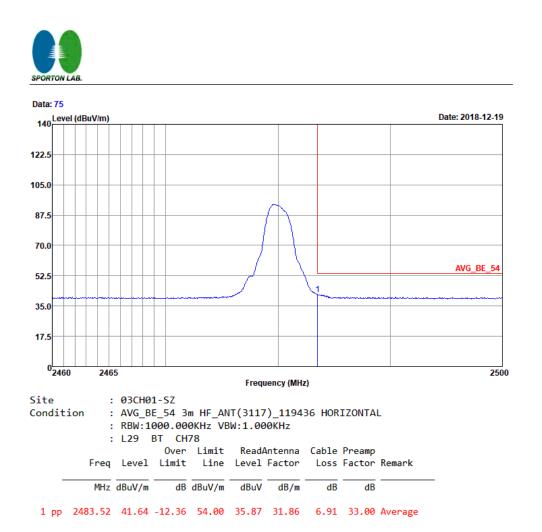
1, Level =Reading level by receiver + Transd (Antenna factor + cable loss - preamplifier gain)

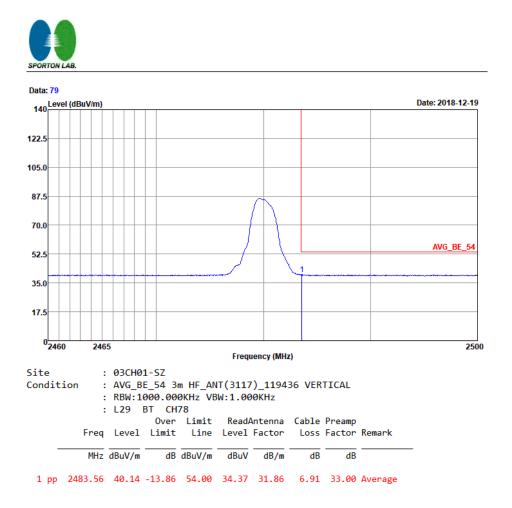
The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level



TM1\_DH5\_Ch78





Note:

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

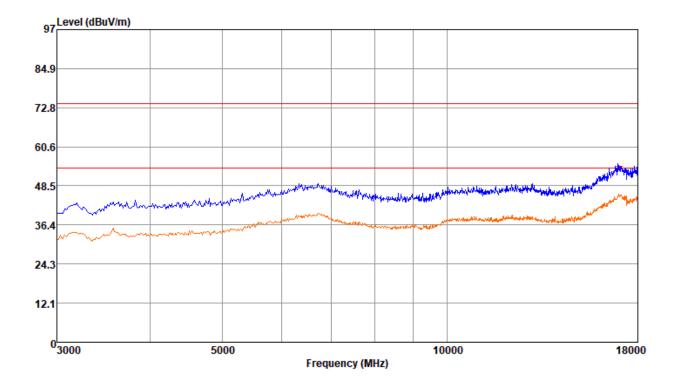
The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level



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

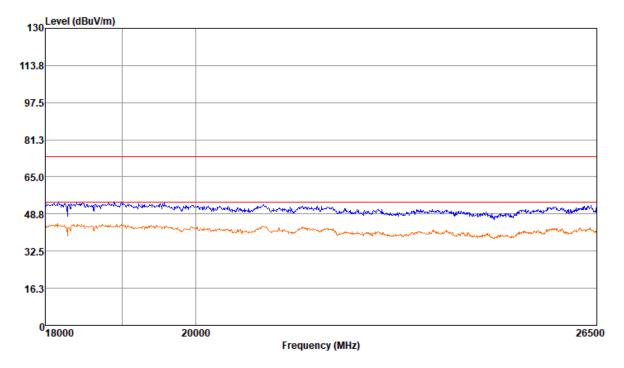
- Note 1: The test results and plot for testing range of "3 GHz to 18 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of "3 GHz to 18 GHz" is for checking radiated emissions located 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).



# 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: AC Power Line Conducted Emissions

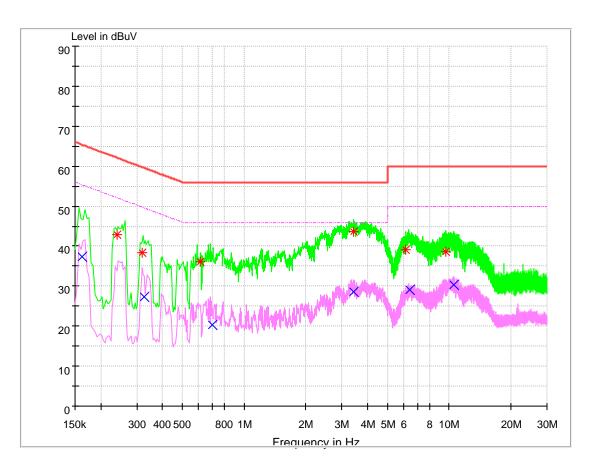
# 1 Result Table

In this Appendix, only the test results and plots under the worst case can be reported.

EUT Conf.	Maximum Emissions	Verdict
TM1_DH5_Ch39	Not found obvious spikes or see marked spikes on plots and listed	Pass
	emissions records.	



# 2 Result Plot



# Channel 39

#### **MEASUREMENT RESULT: PK Detector**

Frequency (MHz)	Level (dB µ V)	Limit (dB µ V)	Transd. (dB)	Margin (dB)	Line	PE
0.241938	42.82	62.03	9.7	19.21	L1	FLO
0.317568	38.27	59.77	9.7	21.50	L1	FLO
0.608891	36.11	56.00	9.7	19.89	Ν	FLO
3.437774	43.69	56.00	9.7	12.31	L1	FLO
6.174855	39.23	60.00	9.7	20.77	L1	FLO
9.611211	38.63	60.00	9.7	21.37	Ν	FLO

# **MEASUREMENT RESULT: AV Detector**

Frequency (MHz)	Level (dB µ V)	Limit (dB µ V)	Transd. (dB)	Margin (dB)	Line	PE
0.162567	37.35	55.33	9.7	17.98	Ν	FLO



0.327660	27.39	49.51	9.7	22.12	L1	FLO
0.700044	20.19	46.00	9.7	25.81	L1	FLO
3.413990	28.56	46.00	9.7	17.44	Ν	FLO
6.427296	29.15	50.00	9.7	20.85	L1	FLO
10.507277	30.45	50.00	9.7	19.55	L1	FLO

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