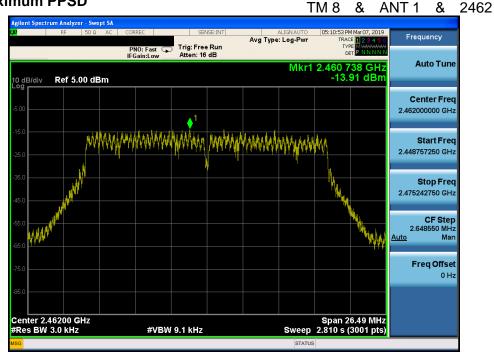
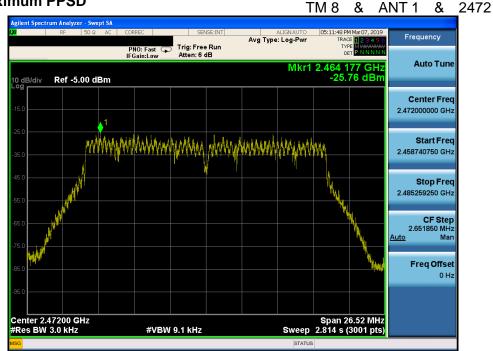
### **Maximum PPSD**



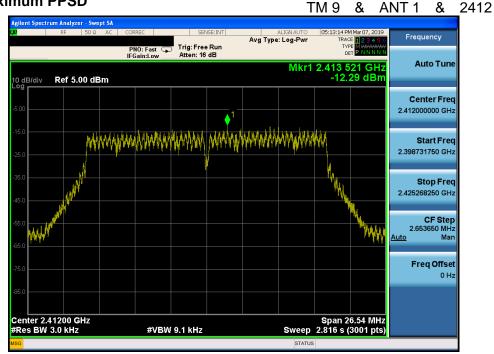
### **Maximum PPSD**

### TM 8 & ANT 1 & 2467



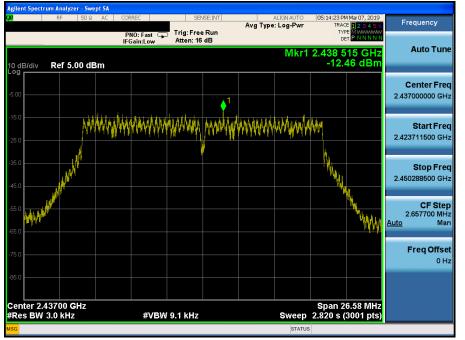


### **Maximum PPSD**

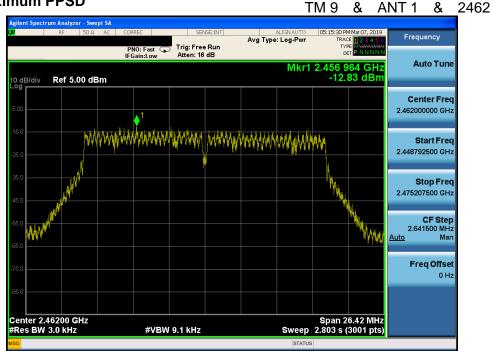


#### **Maximum PPSD**

TM 9 & ANT 1 & 2437

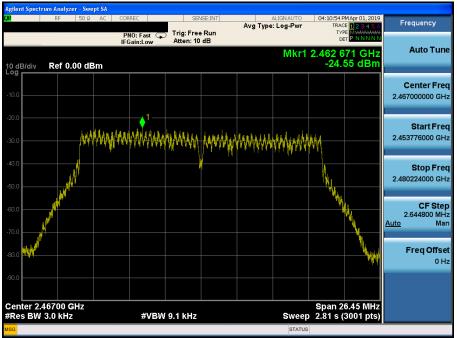


### Maximum PPSD



### **Maximum PPSD**

### TM 9 & ANT 1 & 2467





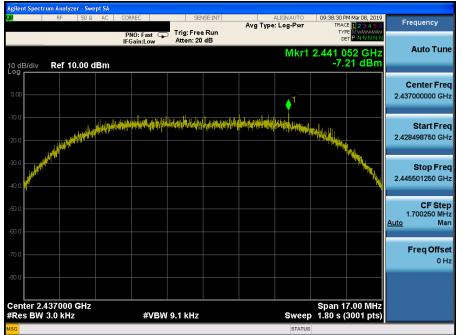
### **Maximum PPSD**





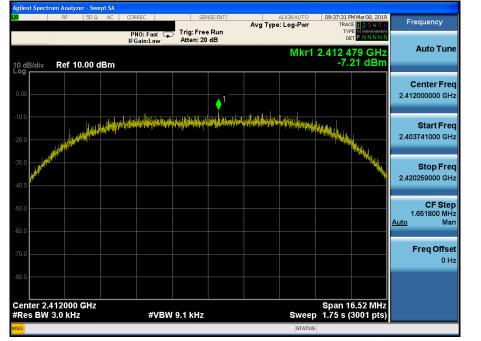
#### Maximum PPSD

TM 1 & ANT 2 & 2437



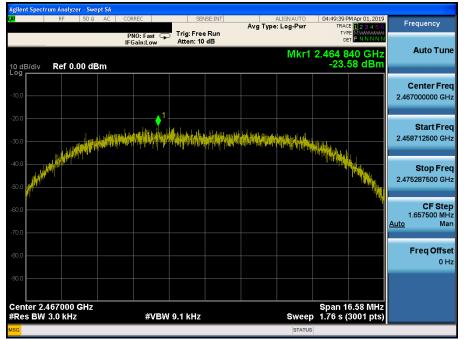
### **Maximum PPSD**





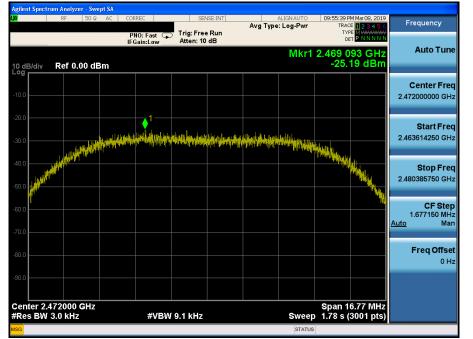
#### Maximum PPSD

TM 1 & ANT 2 & 2467



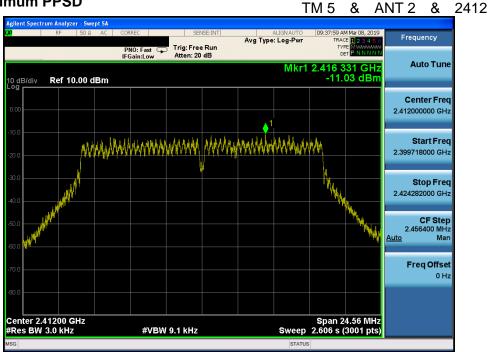
## **Dt&C**





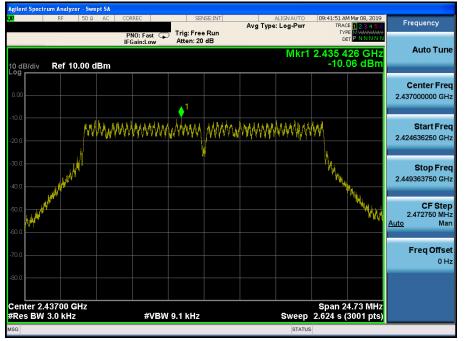
## **Dt&C**

### **Maximum PPSD**

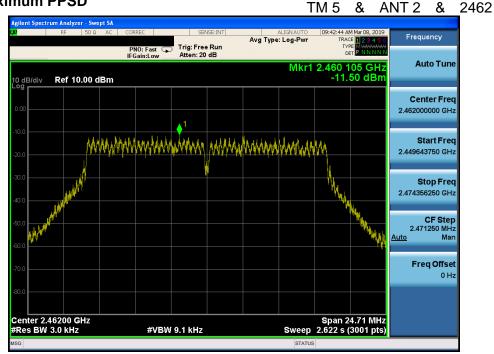


#### **Maximum PPSD**

TM 5 & ANT 2 & 2437



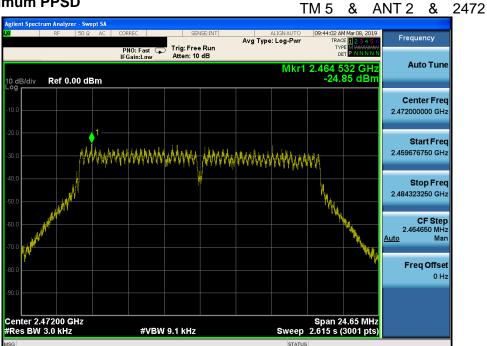
### **Maximum PPSD**



### **Maximum PPSD**

TM 5 & ANT 2 & 2467





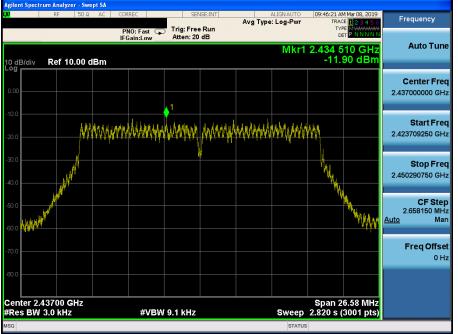
#### Maximum PPSD

TM 6 & ANT 2 & 2412



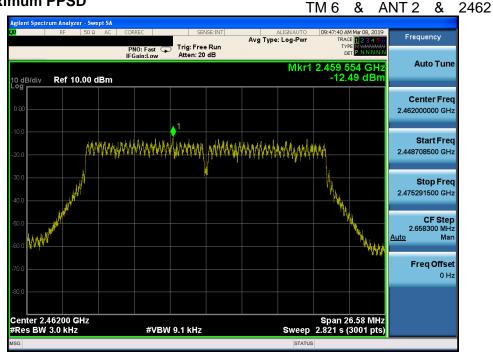
#### Maximum PPSD

TM 6 & ANT 2 & 2437



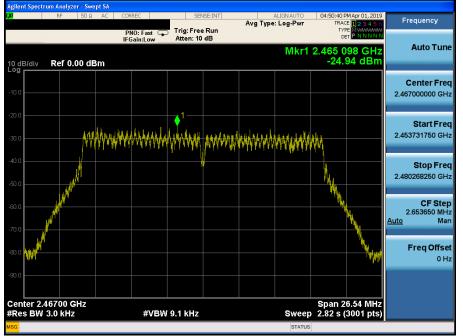
## **Dt&C**

### **Maximum PPSD**



#### **Maximum PPSD**

TM 6 & ANT 2 & 2467





## **Dt&C**

### **Maximum PPSD**

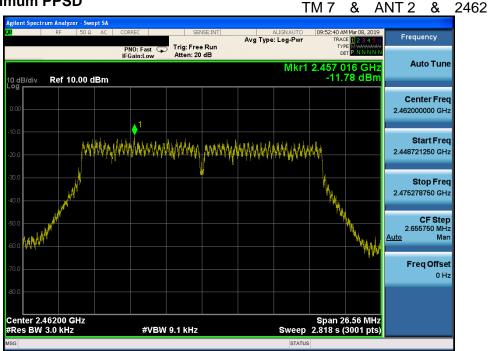


#### **Maximum PPSD**

TM 7 & ANT 2 & 2437

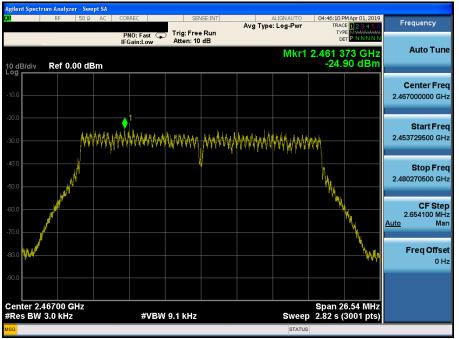


### **Maximum PPSD**

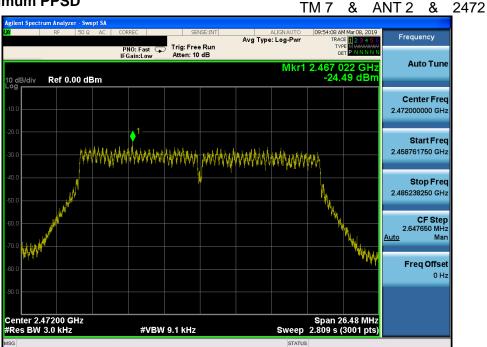


#### **Maximum PPSD**

### TM 7 & ANT 2 & 2467

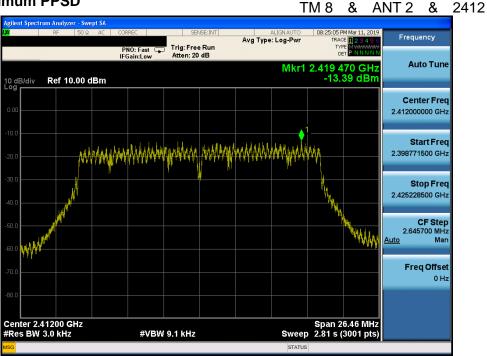






## 🛈 Dt&C

### **Maximum PPSD**

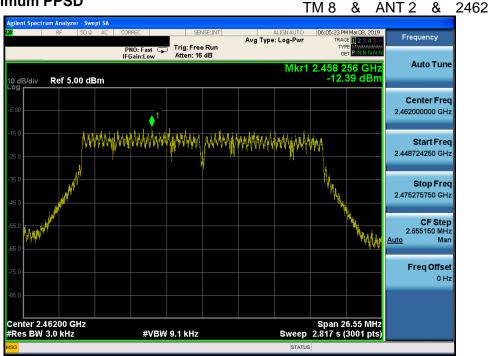


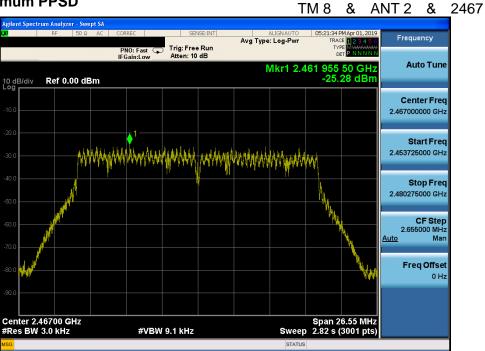
#### Maximum PPSD

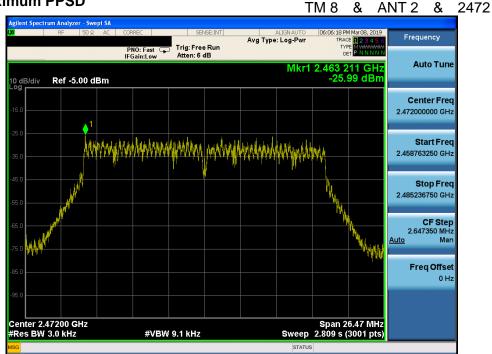


TM 8 & ANT 2 & 2437

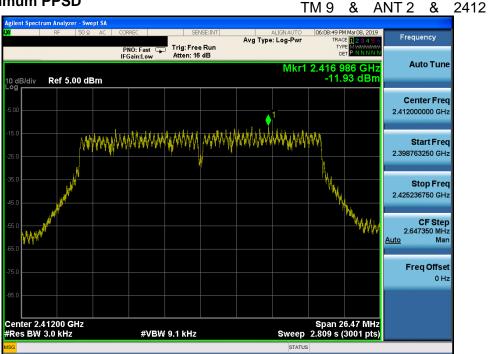
### **Maximum PPSD**



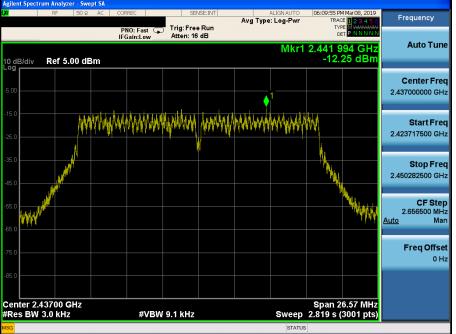




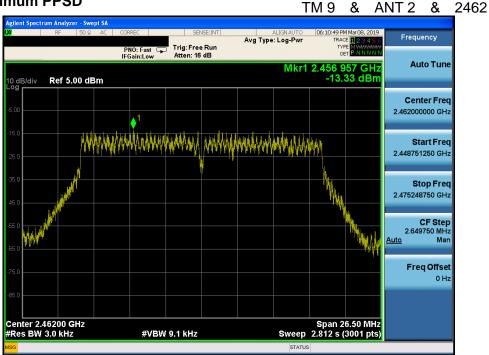
### **Maximum PPSD**

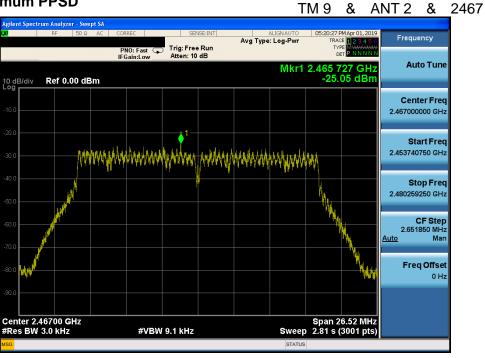






### Maximum PPSD









## 8.4 Out of band emissions at the band edge / conducted spurious emissions

#### Test requirements and limit, §15.247(d)

**§15.247(d)** specifies that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to 15.247(b)(3) requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to 15.247(b)(3) requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 10 kHz outside of the authorized frequency band shall be attenuated by at least 30 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in band average PSD level.

In either case, attenuation to levels below the general emission limits specified in §15.209(a) is not required.

#### **Test Configuration:**

Refer to the APPENDIX I.

#### Test Procedure

- KDB558074 D01v05r01 - Section 8.5

#### - ANSI C63.10-2013 – Section 11.11

#### **Reference level measurement**

- 1. Set instrument center frequency to DTS channel center frequency.
- 2. Set the span to  $\geq$  1.5 times the DTS bandwidth.
- 3. Set the RBW = 100 kHz.
- 4. Set the VBW  $\geq$  3 x RBW.
- 5. Detector = Peak.
- 6. Sweep time = **Auto couple.**
- 7. Trace mode = **Max hold.**
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum PSD level.

#### **Emission level measurement**

- 1. Set the center frequency and span to encompass frequency range to be measured.
- 2. Set the RBW = 100 kHz. (Actual 1 MHz , See below note)
- 3. Set the VBW ≥ 3 x RBW. (Actual 3 MHz, See below note)
- 4. Detector = **Peak**.
- 5. Ensure that the number of measurement points  $\geq$  Span / RBW.
- 6. Sweep time = Auto couple.
- 7. Trace mode = **Max hold.**
- 8. Allow the trace to stabilize. (this may take some time, depending on the extent of the span)
- 9. Use the peak marker function to determine the maximum amplitude level.

Note: The conducted spurious emission was tested with below settings. Frequency range: 9 kHz ~ 30 MHz RBW = 100 kHz, VBW = 300 kHz, Sweep time = Auto, Detector = Peak, Trace = Max hold, Sweep points: 40001 Frequency range: 30 MHz ~ 10 GHz, 10 GHz ~ 25 GHz RBW = 1 MHz, VBW = 3 MHz, Sweep time = Auto, Detector = Peak, Trace = Max hold, Sweep points: 40001

#### LIMIT LINE = 20 dB below of the reference level of above measurement procedure Step 2. (RBW = 100 kHz, VBW = 300 kHz)

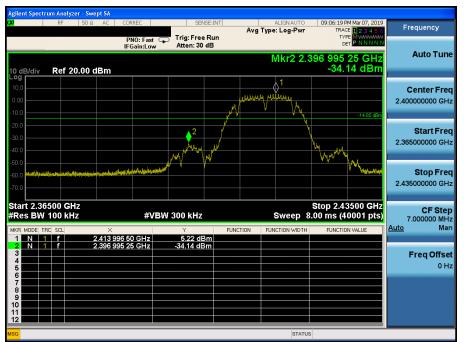
If the emission level with above setting was close to the limit (ie, less than 3 dB margin) then zoom scan is required using RBW = 100 kHz, VBW = 300 kHz, SPAN = 100 MHz and BINS = 2001 to get accurate emission level within 100 kHz BW.

### RESULT PLOTS

TM 1 & ANT 1 & 2412

#### Reference Frequency Avg Type: Log-Pwr PNO: Fast Trig: Free Run IFGain:Low Atten: 30 dB TYPE DET Auto Tune Mkr1 2.413 495 GHz 5.35 dBm Ref 20.00 dBm 10 dB/div Center Freq 2.412000000 GHz m Man m Start Freq 2.404399500 GHz Stop Freq 2.419600500 GHz **CF Step** 1.520100 MHz Man Auto Freq Offset 0 Hz Center 2.412000 GHz #Res BW 100 kHz Span 15.20 MHz Sweep 1.60 ms (3001 pts) #VBW 300 kHz

### Low Band-edge



Agilent Spectrum A							
<b>l,XI</b> F	ιF 50 Ω 🧘 DC	CORREC	SENSE:I	Avg	ALIGN AUTO Type: Log-Pwr	09:06:59 PM Mar 07, 2019 TRACE 1 2 3 4 5 6	Frequency
		PNO: Fast 📮 IFGain:Low	Trig: Free Ru Atten: 30 dB	n -		TYPE MWWWWW DET P N.N.N.N.N	
10 dB/div R	ef 20.00 dBm					Mkr1 294.7 kHz -51.78 dBm	Auto Tune
Log 10.0 0.00							Center Freq 15.004500 MHz
-10.0						-14.65 dBm	Start Fred
-40.0							9.000 kHz
-60.0	herense har herende her Herende herende herende Herende herende	li ya ina ana ana ana ana ana ana ana ana an	ayyan (ayi kutu ayan ayan kutu	untiisitestajat finaad kita	Ashehanan anarke fasika karahar	and a constant and and for the constant of the	Stop Fred 30.000000 MHz
Start 9 kHz #Res BW 100		#VBW	300 kHz			Stop 30.00 MHz .33 ms (40001 pts)	2.999100 MH
MKR MODE TRC SC		294.7 kHz	۲ -51.78 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	Auto Mar
2 3 4 5 6							<b>Freq Offse</b> 0 Ha
8 7 8 9 10							
11 12							
MSG					STATUS	DC Coupled	

Agilent Spectrum Analyzer	- Swept SA						
XI RF !	50 Q AC (	CORREC	SENSE:1		ALIGN AUTO	09:08:06 PM Mar 07, 2019	
		PNO: Fast 🗣 IFGain:Low	Trig: Free Ru Atten: 30 dB		Type: Log-Pwr	TRACE 123456 TYPE MWWWWW DET PNNNN	
10 dB/div Ref 20.0	)0 dBm				Mkr	3 3.179 77 GHz -41.78 dBm	
10.0 0.00	1					-14.65 dBm	Center Fred 5.015000000 GH;
-20.0		3				a deserving the program and a second state of the second state	Start Free 30.000000 MH;
-50.0							<b>Stop Free</b> 10.000000000 GH:
Start 30 MHz #Res BW 1.0 MHz		#VBW	3.0 MHz		Sweep 1	Stop 10.000 GHz 8.7 ms (40001 pts)	997.000000 MH
MKR MODE TRC SCL	× 2.413	83 GHz	⊻ 8.72 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
2 N 1 f 3 N 1 f 4 5 6	7.112	2 19 GHz 77 GHz	-40.37 dBm -41.78 dBm				Freq Offse 0 Ha
7 8 9 9 10 11							
12 <b>12 1</b> 1					STATUS		





### TM 1 & ANT 1 & 2437

### Reference



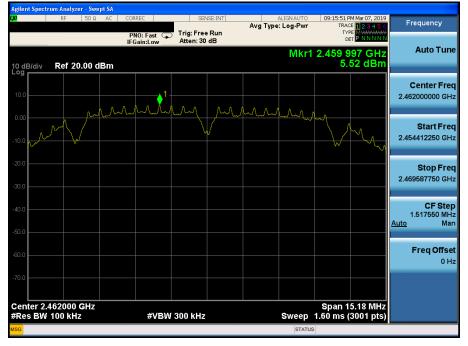
Agilent Spectrum Analyze		ORREC	SENSE:I	NT.	ALIGN AUTO	00:11:42.0	4 Mar 07, 2019	
		PNO: Fast G		Avg	Type: Log-Pwr	TRACE	123456 MWWWWWW PNNNNN	Frequency
10 dB/div Ref 20	.00 dBm	FGain:Low	Atten: 30 dB			Vikr1 28 -52.6	1.9 kHz 8 dBm	Auto Tune
Log 10.0 0.00 -10.0							-14.86 dBm	Center Fred 15.004500 MH;
-20.0								Start Free 9.000 kH:
-50.0	etal na ditakan (silan /se), ana pira a	مۇر ئىرىيىلىرىيىكى بىرىيىرىيىيى	nya dalaman karakan dari	undin safafat attission	gina ng Milal (ali alagina dipa sa talar	mitterationauth	vilipelingenspeciel	Stop Free 30.000000 MH
Start 9 kHz #Res BW 100 kHz MKR MODE TRC SCL	×	#VBW	/ 300 kHz	FUNCTION	Sweep 5			<b>CF Step</b> 2.999100 MH <u>Auto</u> Mai
1 N 1 f		31.9 kHz	-52.68 dBm	FUNCTION	FONCTION WIDTH	PONCTION	VALUE	
2 3 4 5 6								<b>Freq Offse</b> 0 H
7 8 9 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10								
11 12 12 13 13 1414					STATUS	DC Cou	pled	

RF 50 Ω	AC CORREC	SEN	E:INT	ALIGN AUTO	09:13:02 PM Mar 07, 2019	E
	PNO: IFGair	Fast Trig: Free h:Low Atten: 30	Run	e: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NIN N N	Frequency
dB/div Ref 20.00	dBm			Mkr4	3.154 85 GHz -41.73 dBm	Auto Tun
9 .0 .0					-14.86 dBm	Center Fre 5.015000000 GF
.0 .0 .0			2	<b>⊘</b> <sup>3</sup>	مر الدوم مقالة وروب و المراجع مرجع المراجع	Start Fre 30.000000 MH
.0						<b>Stop Fre</b> 10.000000000 GF
art 30 MHz tes BW 1.0 MHz		#VBW 3.0 MHz		Sweep 18	Stop 10.000 GHz 3.7 ms (40001 pts)	CF Ste 997.000000 Mi
R MODE TRC SCL	× 2.434 51 G 5.942 71 G	Hz 8.57 dB Hz -40.52 dB	m	NCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
N 1 f	7.193 69 G 3.154 85 G	Hz -40.81 dB	m			Freq Offs 0 H



### TM 1 & ANT 1 & 2462

### Reference

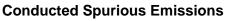


### **High Band-edge**



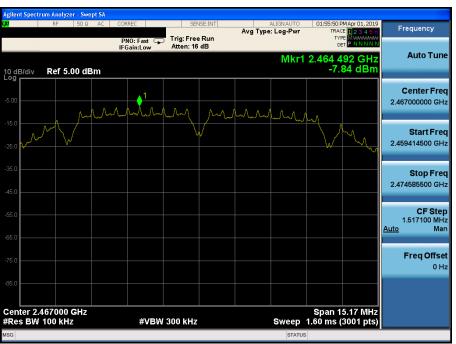
Agilent Spectru										
L <u>XI</u>	RF	50 Ω 🧥 DC	CORREC		SENSE:INT	Avg	ALIGNAUTO Type: Log-Pwr	TRACE	4 Mar 07, 2019	Frequency
			PNO: Fas IFGain:Lo		ree Run 30 dB			DE		
10 dB/div	Ref 20	.00 dBm						Mkr1 299 -52.3	9.2 kHz 36 dBm	Auto Tune
10.0										Center Free
0.00										15.004500 MH
-10.0									-14.48 dBm	
-30.0										Start Free
-40.0 + 1										9.000 kH
-50.0										Oton Ero
-60.0	n des polición en	nanalynd spiraeda	hybernadi Britandoff	httalpetalpethiesesterasteraste	del ar for grant says that so	anen si	an an ann an Anna Anna Anna Anna Anna Anna Anna	adirgi yang mutana yang	akatenti suskan malapata	Stop Free 30.000000 MH
Start 9 kHz #Res BW 1		2	#\	/BW 300 k	Hz		Sweep \$	Stop 30 5.33 ms (40	0.00 MHz 0001 pts)	2.999100 MH
MKR MODE TRC		×	299.2 kHz	ү -52.36		UNCTION	FUNCTION WIDTH	FUNCTION	N VALUE	<u>Auto</u> Ma
2			233.2 KHZ							Freq Offse
4										0 H
6										
8										
10										
12										
ISG							STATU	s 🚹 DC Cou	pled	

Agilent Spectrum Anal	yzer - Swept SA						
LXI RF	50 Q AC	CORREC	SENSE:IN		ALIGN AUTO	09:18:49 PM Mar 07, 2019	Frequency
		PNO: Fast 🗣 IFGain:Low	Trig: Free Run Atten: 30 dB		e: Log-Pwr	TRACE 123456 TYPE MWWWWWW DET PNNNN	
10 dB/div Ref	20.00 dBm				Mkr	3 3.179 27 GHz -41.16 dBm	Auto Tune
Log 10.0 0.00 -10.0	\^1					-14.48 dBm	Center Freq 5.015000000 GHz
-20.0		3		er jaadmit nameli er jatherekons, den	<b>⊉</b> <sup>2</sup>	Antibioten grantes in Just water states with part	Start Freq 30.000000 MHz
-50.0							<b>Stop Freq</b> 10.000000000 GHz
Start 30 MHz #Res BW 1.0 M		#VBW	/ 3.0 MHz			Stop 10.000 GHz 8.7 ms (40001 pts)	997.000000 MHz
MKR MODE TRC SCL	× 2.4	59 44 GHz	∀ 8.98 dBm	FUNCTION FL	JNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
2 N 1 f 3 N 1 f 4 5 6	6.9	73 36 GHz 79 27 GHz	-40.71 dBm -41.16 dBm				Freq Offset 0 Hz
7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9							
					STATUS		



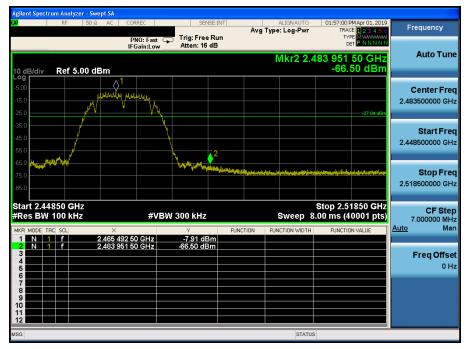


### TM 1 & ANT 1 & 2467



#### Reference

### **High Band-edge**



RF 50	Ω 🚹 DC CORREC	SENSE:INT	ALIGNAUTO	01:57:31 PM Apr 01, 2019	Frequency
	PNO: Fast IFGain:Low	Trig: Free Run Atten: 16 dB	Avg Type: Log-Pwr	TRACE 123456 TYPE MWWWWW DET PNNNNN	ricqueriey
dB/div Ref 5.00				Mkr1 281.9 kHz -66.86 dBm	Auto Tune
9 .0 .0					Center Fre 15.004500 MH
0 0 1 0 1					Start Fre 9.000 kH
.0 .0	nungentighten eine an Adrianistike	ปกร้างมีกลางสีมีสะกัญราณที่รูปหน้าที่สุดหรือสุดสุด	da yaad doo ayaa ayaa ayaa da d	<sub>ส</sub> ประประการแรงการหมังประการสำนักงารก	Stop Fre 30.000000 M⊦
art 9 kHz es BW 100 kHz	#VB	W 300 kHz		Stop 30.00 MHz .33 ms (40001 pts)	CF Ste 2.999100 M⊦
R MODE TRC SCL	× 281.9 kHz	Y FUN -66.86 dBm	CTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
					FreqOffse 0 ⊦

Agilent Spectr												
l <mark>XI</mark>	RF	50 Ω	AC	CORREC		SEN	SE:INT	A	ALIGN AUTO Type: Log-Pwr		7 PM Apr 01, 2019	Frequency
				PNO: F IFGain:L	ast 🖵 .ow	Trig: Free Atten: 16		Avg	Type. Log-Pwr			
10 dB/div	Ref 5	.00 dBi	m						Mki		3 64 GHz 5.96 dBm	Auto Tune
-5.00 -15.0 -25.0											-27.94 dBitt	Center Freq 5.015000000 GHz
-35.0 -45.0 -55.0		(1) (1) (1)					Andread & China David and July	et al. (al. family and parts)	2 2	$\Diamond^3$		Start Freq 30.000000 MHz
-65.0 -75.0												Stop Fred 10.000000000 GHz
Start 30 N #Res BW	1.0 MH	z		ł	¢VB₩	3.0 MHz				18.7 ms	0.000 GHz (40001 pts)	CF Step 997.000000 MHz
MKR MODE TH			× 2.46	4 67 GH	-	⊻ -4.20 dE		JNCTION	FUNCTION WIDTH	FUNC	TION VALUE	<u>Auto</u> Man
- 2 N 1 3 N 1 4 N 1 5 6	f		7.02	4 95 GH 0 48 GH 3 64 GH	z z	-55.25 dB -55.96 dB	m m					Freq Offset 0 Hz
6 7 8 9 10 11 12												
									STATU	s		



