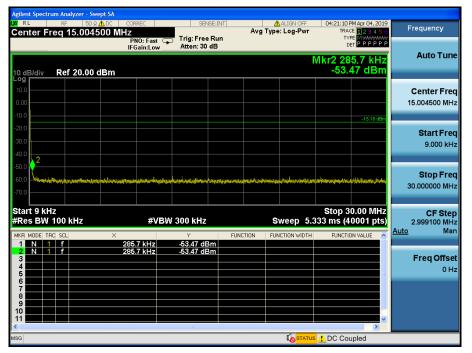


TM 2 & 2437



Reference



Agilent Spectrum Analyzer - S X/ RL RF 50	wept SA Ω AC CORREC	SENSE:INT	ALIGN OFF	04:21:25 PM Apr 04, 2019	
Center Freq 5.0150			Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast (IFGain:Low	Trig: Free Run Atten: 30 dB		TYPE MWWWWWW DET P P P P P P	
			Mkr	5 7.056 36 GHz	Auto Tune
10 dB/div Ref 20.00	dBm			-42.53 dBm	
Log	Q1				
					Center Fre
0.00					5.015000000 GH
10.0				-15.18 dBm	
-20.0					Start Fre
-30.0	23		5	∧4	30.000000 MH
40.0	A LOUGH AND AND A LOUGH AND AND A LOUGH AND AND AND A LOUGH AND AND A LOUGH AND AND AND A LOUGH AND AND AND AND AND AND AND AN	فعطيه ومغمران بالتقط ويريبه وحمدته بالبر	antipering to see the second		
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-60.0					10.000000000 GH
70.0					10.0000000000000
Start 30 MHz				Stop 10.000 GHz	05.044
Res BW 1.0 MHz	#VB	W 3.0 MHz	Sweep 18	.67 ms (40001 pts)	CF Ste 997.000000 MH
MKR MODE TRC SCL	×	Y F	UNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
1 N 1 f	2.433 52 GHz	12.26 dBm			
2 N 1 f 3 N 1 f	3.026 48 GHz 3.163 32 GHz	-41.92 dBm -41.94 dBm			Freq Offse
4 N 1 f 5 N 1 f	8.094 23 GHz 7.056 36 GHz	-42.10 dBm -42.53 dBm			0 H
6	7.000 00 0112	-42.55 dBill			
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SG					

Agilent Spectrum Analyze						
	50 Ω AC CORREC	SENSE:IN		ALIGN OFF	04:21:37 PM Apr 04, 2019 TRACE 1 2 3 4 5 6	Frequency
Center Freq 17.	5000000000 GHZ PNO: Fast IFGain:Lov			Type: Log-Pwr		
				Mkr3 2	3.897 125 GHz	Auto Tune
10 dB/div Ref 20).00 dBm				-31.52 dBm	
10.0						Center Freq
0.00						17.500000000 GHz
-10.0						11.00000000000
-20.0					-15.18 dBm	
-30.0						Start Freq
-40.0		يسبى ولقر بسيانا فحالتهم سيروس	and the second second second			10.00000000 GHz
-50.0			and the second			
-50.0						Stop Freq
						25.00000000 GHz
-70.0						
Start 10.000 GHz					Stop 25.000 GHz	CF Step
#Res BW 1.0 MH	z #V	'BW 3.0 MHz		Sweep 40	.00 ms (40001 pts)	1.50000000 GHz
MKR MODE TRC SCL	×	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1 f 2 N 1 f	24.225 625 GHz 24.225 625 GHz	-30.30 dBm -30.30 dBm				
3 N 1 f	23.897 125 GHz	-31.52 dBm				Freq Offset
5					3	0 Hz
6						
8						
10						
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TM 2 & 2462



High Band-edge



	um Analyzer - Swe									
Center Fr	RF 50Ω 15.0045			SENSE	INT		ALIGN OFF	TRAG	M Apr 04, 2019	Frequency
Center II	eq 15.0045			Trig: Free R Atten: 30 di				TY D		
10 dB/div	Ref 20.00 c	lBm					1	Mkr2 28 -52.	9.4 kHz 15 dBm	Auto Tune
Log 10.0 0.00										Center Freq 15.004500 MHz
-10.0 -20.0 -30.0 -40.0									-14.84 dBm	Start Freq 9.000 kHz
-50.0	Manifest (and to be taken of the	and the second secon	i gadi ing papiana	nindd y Connydd Maefyry	ayaha darinak	aduntain adunts (Mart	entertatung (senat	n ha fan her til tenter	darmininini	Stop Freq 30.000000 MHz
Start 9 kH #Res BW			#VBW 3	00 kHz		s	weep 5.3		0.00 MHz 0001 pts)	CF Step 2.999100 MHz Auto Man
MKR MODE TR	C SCL f f	× 289.4 289.4	(Hz (Hz	Ƴ -52.15 dBm -52.15 dBm	FUNC	TION FUI	NCTION WIDTH	FUNCTIO	ON VALUE	Freq Offset
4 5 6 7										0 Hz
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MSG								上 DC Coi	upled	

9	ım Analyzer - Swe									
Center Fr	RF 50 Ω eq 5.01500	AC CORRE		SENS	E:INT		ALIGN OFF	TRAC	M Apr 04, 2019 E 1 2 3 4 5 6	Frequency
		PNO: IFGai		Trig: Free F Atten: 30 d				TYF	E M WWWWWWW T P P P P P P	
		1 0 81	1.20		_		Mkr	5 6.791	40 GH7	Auto Tune
10 dB/div	Ref 20.00 d	1Bm							18 dBm	
Log 10.0		\								Center Freq
0.00										5.015000000 GHz
-10.0										0.01000000000112
-20.0									-14.84 dBm	
-30.0										Start Freq 30.000000 MHz
-40.0					\(\lambda \begin{bmatrix} 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \	\$ ⁵	$\overset{2}{\vdash} \overset{3}{\bigtriangledown}$			30.000000 MHZ
-50.0 Performan			And the sector that	Contraction of the second			And the second sec	and the second	and Specific Methods and	
-60.0										Stop Freq
-70.0										10.00000000 GHz
Start 30 M #Res BW			#VBW 3	3.0 MHz		s	weep 18		.000 GHz 0001 pts)	CF Step 997.000000 MHz
MKR MODE TRI		X		Y	FUNC	TION FUN	ICTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> Man
1 N 1 2 N 1	f	2.463 18 0 6.904 32 0		12.49 dBr -41.82 dBr	n n					
3 N 1	f	7.522 46 0	Hz	-42.20 dBr -42.21 dBr	n					Freq Offset
5 N 1	f	6.791 40 0		-42.48 dBr					=	0 Hz
6 7										
8										
10										
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TM 2 & 2472



Reference

High Band-edge



Agilent Spectru		- Swept SA 50 Ω 🔥 DC	CORREC	SEA	ISE:INT		ALIGNAUTO	05:03:461	PM Apr 04, 2019	
	lu	30 % <u>M</u> DC	PNO: Fast			Avg Typ	e: Log-Pwr	TRAG		Frequency
			IFGain:Low	Atten: 20						Auto Tune
10 dB/div	Ref 10.	00 dBm						48 Wkr1 28 -62	6.4 kHz 89 dBm	Auto Tune
0.00										Center Freq
-10.0										15.004500 MHz
-20.0									-25.34 dBm	
-40.0										Start Freq 9.000 kHz
-50.0 - 1										9.000 KH2
-60.0										Stop Freq
-70.0	and a state of the second s	win meterendeler	alterna y ay y suitable	eler fallen sjoerele ler bester op stere	net s ny thisisti t	an charlestar	assainate-bolligesee	here i la sensitare est	ann that sit a ts	30.000000 MHz
Start 9 kH #Res BW			VBV	V 300 kHz		s	weep 5.3		0.00 MHz 0001 pts)	CF Step 2.999100 MHz
MKR MODE TR		×	286.4 kHz	Y		CTION FU	NCTION WIDTH	FUNCTIO	ON VALUE	<u>Auto</u> Man
1 N 1 2 3			286.4 KHZ	-62.89 dE	sm					Freq Offset
4									_	0 Hz
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MSG								DC Cou	upled	

Agilent Spectrum Analyzer - Swe					
L <mark>X/I</mark> T RF 50Ω	AC CORREC	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	05:04:44 PM Apr 04, 2019 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast (IFGain:Low	Trig: Free Run Atten: 20 dB	0 // 0	TYPE MWWWWWW DET PPPPP	
	IFGain:Low	Atten: 20 dB	Miles		Auto Tune
10 dB/div Ref 10.00 d	dBm		IVIKI	5 8.893 33 GHz -53.13 dBm	
Log 0.00					
					Center Freq
-10.0					5.015000000 GHz
-20.0				-25.34 dBm	
-30.0					Start Freq
-40.0				∧ ³ _5	30.000000 MHz
-50.0	and a state of the second				
-60.0					Stop Freq
-70.0					10.00000000 GHz
-80.0					
Start 30 MHz				Stop 10.000 GHz	CF Step
#Res BW 1.0 MHz	VBV	/ 3.0 MHz	Sweep 18	.67 ms (40001 pts)	997.000000 MHz
MKR MODE TRC SCL	×		CTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1 f 2 N 1 f	2.467 67 GHz 3.297 92 GHz	2.68 dBm -51.32 dBm			
3 N 1 f	8.076 79 GHz 5.716 64 GHz	-52.11 dBm -52.13 dBm			Freq Offset
5 N 1 f	8.893 33 GHz	-53.13 dBm		=	0 Hz
6 7 7					
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TM 3 & 2412



Reference

Low Band-edge



	um Analyzer - Swe									
Center Fr	RF 50 ຊ Teg 15.0045		EC	SENS	E:INT		ALIGN OFF e: Log-Pwr	TRAG	M Apr 04, 2019	Frequency
	oq Toroc-N	PN	D: Fast 🖵 ain:Low	Trig: Free Atten: 30 d			-	TY D		
10 dB/div	Ref 20.00 (dBm						Mkr2 28 -52.	1.9 kHz 74 dBm	Auto Tune
10.0 0.00										Center Freq 15.004500 MHz
-20.0 -30.0 -40.0									-17.61 dBm	Start Freq 9.000 kHz
-50.0 -60.0 -70.0	hai Hadd ddy can folgol dy e	y/////Uughapisyita	deje gradataj janda	hadisələri olaradı. Azərbay	Palet (Pold , N	kalenge waarge	spandsmanlanden	h a danka n asarta da ka	patran Manaponta adalari	Stop Freq 30.000000 MHz
Start 9 kH #Res BW			#VBW	300 kHz		s	weep 5.	Stop 3 333 ms (4	0.00 MHz 0001 pts)	CF Step 2.999100 MHz Auto Man
MKR MODE TR	C SCL f f	× 281.9 281.9		-52.74 dBi -52.74 dBi	m	CTION FU	NCTION WIDTH	FUNCTIO	DN VALUE	Freq Offset
5 6 7 8 9									E	0 Hz
10 11 <							2		~	
MSG								s 🚹 DC Cou	upled	

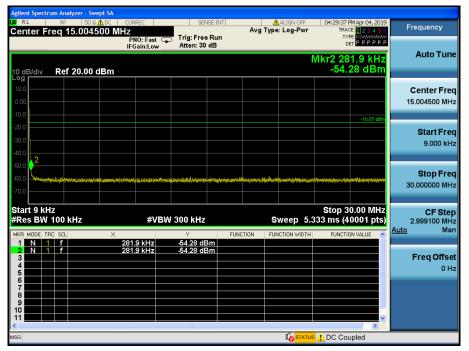
Agilent Spectrum Analyzer - Swith Ω RL RF 50 Ω Center Freq 5.01500	AC CORREC 00000 GHz PNO: Fast	SENSE:INT ☐ Trig: Free Run Atten: 30 dB	ALIGN OFF Avg Type: Log-Pwr	04:27:35 PM Apr 04, 2019 TRACE 1 2 3 4 5 6 TYPE M WWWWWW DET P P P P P P	Frequency
10 dB/div Ref 20.00	IFGain:Low	Atten: 30 dB	Mkr	5 2.580 08 GHz -41.62 dBm	Auto Tune
Log 10.0 0.00					Center Freq 5.015000000 GHz
-20.0 -30.0 -40.0	5 <u>23</u>		liter samtiker opplanne der ferer anverbiter opplangs	-17.61 dBm	Start Freq 30.000000 MHz
-60.0					Stop Freq 10.000000000 GHz
Start 30 MHz #Res BW 1.0 MHz	#VBV		Sweep 18	Stop 10.000 GHz .67 ms (40001 pts) FUNCTION VALUE	CF Step 997.000000 MHz <u>Auto</u> Man
1 N 1 f 2 N 1 f 3 N 1 f 4 N 1 f 5 N 1 f 6	2.411 09 GHz 3.125 44 GHz 3.301 66 GHz 5.759 26 GHz 2.580 08 GHz	10.26 dBm -41.18 dBm -41.18 dBm -41.21 dBm -41.62 dBm			Freq Offset 0 Hz
8 9 10 11 ×		10	I STATUS	×	



TM 3 & 2437



Reference



RL RF 50	Ω AC CORREC	SENSE:INT	ALIGN OFF	04:29:51 PM Apr 04, 2019	
enter Freq 5.0150	000000 GHz PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	TRACE 123456 TYPE MWWWWWW DET PPPPP	Frequency
0 dB/div Ref 20.00		M Atten: 30 dB	Mkr	7.088 51 GHz -41.94 dBm	Auto Tuno
.og 10.0 0.00 10.0				-16.07 dBm	Center Fre 5.015000000 GH
20.0		2		- 15.07 dom	Start Fre 30.000000 M⊦
50.0					Stop Fre 10.00000000 GF
start 30 MHz Res BW 1.0 MHz		/BW 3.0 MHz		Stop 10.000 GHz 67 ms (40001 pts)	CF Ste 997.000000 MH Auto Ma
MKR MODE TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 N 1 f 5 N 1 f	× 2.432 52 GHz 3.463 67 GHz 3.271 25 GHz 6.899 83 GHz 7.088 51 GHz	41.55 dBm -41.32 dBm -41.70 dBm -41.74 dBm -41.94 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	FreqOffse 0⊦
8 9 10 11				×	
			I STATUS		

Agilent Spectru	m Analyzer - Sw	ept SA					
LXI RL		AC CORREC	SENSE:I		ALIGN OFF	04:30:03 PM Apr 04, 2019	Frequency
Center Fre	eq 17.5000	000000 GHz	👝 Trig: Free Ru		Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE M WWWWWW	Trequency
		PNO: Fast IEGain:Low				DETPPPP	
		II OUIIILON			Milwo o		Auto Tune
					IVIKIS 2	4.210 625 GHz	
10 dB/div Log	Ref 20.00	dBm				-30.32 dBm	
10.0							
							Center Freq
0.00							17.50000000 GHz
-10.0							
-20.0						-16.07 dBm	
						3 (*)	Start Freq
-30.0					يعلقه وتخبيته يبس	Contractory of the owner of the owner of the	10.00000000 GHz
-40.0	and the second second second	A DESCRIPTION OF DESCRIPTIONO		A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OWN	And the second second	And the second division of the second divisio	
-50.0	State of the local division of the local div						
							Stop Freq
-60.0							25.00000000 GHz
-70.0							
Start 10.00						Stop 25.000 GHz	CF Step
#Res BW 1	.0 MHz	#V	BW 3.0 MHz		Sweep 40	.00 ms (40001 pts)	1.50000000 GHz
MKR MODE TRO	SCL	×	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1	f	24.728 500 GHz	-29.65 dBm				
2 N 1	f	24.728 500 GHz	-29.65 dBm				Erog Offect
3 N 1 4	f	24.210 625 GHz	-30.32 dBm				Freq Offset
5						8	0 Hz
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TM 3 & 2462



High Band-edge



Agilent Spectru	um Analyzer - S		RREC	SEN	E:INT		ALIGN OFF	04:31:56.0	M Apr 04, 2019	
		4500 MHz	NO: Fast				e: Log-Pwr	TRAC		Frequency
		IF	Gain:Low	Atten: 30						Auto Tune
10 dB/div	Ref 20.00	0 dBm						Mkr2 28 -53.3	1.9 kHz 36 dBm	Auto Func
Log 10.0										Center Freq
0.00										15.004500 MHz
-10.0									-16.66 dBm	
-30.0										Start Freq
-40.0										9.000 kHz
-50.0										04 E
-60.0	nnina canadada si	ner et auf an air air an an an air air an an an air an an an air an an air an an air an an air an air an air a	and server of the second s	ang di patrina (ku dibigar),	hergiselenseeleri	hat state at the	handletgersynnau fwr	1		Stop Freq 30.000000 MHz
-70.0										
Start 9 kH #Res BW			#VBV	W 300 kHz		8	weep 5.	Stop 3 333 ms (4	0.00 MHz 0001 pts)	CF Step 2.999100 MHz
MKR MODE TR	C SCL	X 204	.9 kHz	√ -53.36 dB		TION FU	NCTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> Man
2 N 1		281	.9 kHz	-53.36 dB						Freq Offset
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8										
10									~	
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MSG							I o <mark>statu:</mark>	<mark>δ 🚹</mark> DC Coι	upled	

Agilent Spectrum Analyzer - Swep ໝັດເມືອງເຊັດ Center Freq 5.015000	AC CORREC 0000 GHz	SENSE:INT	ALIGN OFF	04:32:09 PM Apr 04, 2019 TRACE 123456	Frequency
10 dB/div Ref 20.00 d	PNO: Fast G IFGain:Low BM	Trig: Free Run Atten: 30 dB	Mkr	түре рет Р Р Р Р Р Р 5 3.554 15 GHz -42.35 dBm	Auto Tune
10.0 0.00 -10.0					Center Freq 5.015000000 GHz
-20.0 -30.0 -40.0			4 In Andrik Kong, Juli prediktetik, societist proc. 20,	-15.66 dBm	Start Freq 30.000000 MHz
-50.0 1 -0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0					Stop Freq 10.000000000 GHz
Start 30 MHz #Res BW 1.0 MHz MKR MODE TRC SCL	X		Sweep 18	Stop 10.000 GHz .67 ms (40001 pts)	CF Step 997.000000 MHz <u>Auto</u> Man
1 N 1 F 2 N 1 F 3 N 1 F 4 N 1 F 5 N 1 F 6 7	2.464 92 GHz 3.305 39 GHz 5.489 82 GHz 5.789 17 GHz 3.554 15 GHz	10.46 dBm -41.71 dBm -41.98 dBm -42.09 dBm -42.35 dBm			Freq Offset 0 Hz
8 9 10 11 K		eur	I STATUS	>	



TM 3 & 2472



Reference

High Band-edge



Agilent Spectrum Analyzer - Swept					
🗶 T RF 50 Ω 🥼 Ι	DC CORREC	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	05:07:30 PM Apr 04, 2019 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast 🕞 IFGain:Low) Trig: Free Run Atten: 20 dB		DET PPPPP	
10 dB/div Ref 10.00 dB	Sm			Vkr1 282.7 kHz -64.13 dBm	Auto Tune
0.00					Center Freq 15.004500 MHz
-20.0				-25.33 dBm	
-40.0					Start Freq 9.000 kHz
-60.0	nation and the second secon	ay to alweet the start of the star	neer aanse jaragist na teknetaiteet efte intertekse intertekse intertekse intertekse intertekse intertekse inte	deren ander der seinen der soller	Stop Fred 30.000000 MHz
Start 9 kHz #Res BW 100 kHz	VBW	300 kHz	Sweep 5.3	Stop 30.00 MHz 333 ms (40001 pts)	CF Step 2.999100 MH
MKR MODE TRC SCL	× 282.7 kHz	Y FU -64.13 dBm	NCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Mar
2 3 4 5					Freq Offset 0 Hz
6 7 8 9					
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Agilent Spectru													
LXI T	RF	50 Ω	AC	CORRE	:C	SEI	ISE:INT	Ava		IGNAUTO	TRA	PM Apr 04, 2019 CE 123456	Frequency
				PNO	:Fast ⊂ in:Low	Trig: Free Atten: 20			"	Ū	TY	PE MWWWWWW ET P P P P P P	
				IFGa	III.LOW	1100011.20				Mkr	5 7 562	83 GHz	Auto Tun
10 dB/div	Ref 1	0.00 d								IVIIVI		13 dBm	
Log			Q1										Center Fre
-10.0													5.015000000 GH
-20.0												-25.33 dBm	
-30.0												-23.53 0.511	Start Fre
-40.0				∆ 3	<u>^2</u>			<u>^4</u>		5			30.000000 MH
-50.0) منا المدد	2	<u> </u>		التقويل والتر				dea	the large station is a	
-60.0							and share we have	No. of Street, or other					Stop Fre
-70.0													10.000000000 GH
-80.0													
Start 30 IV												.000 GHz	CF Ste
#Res BW	1.0 MH	z			VBW	3.0 MHz			Sw	eep 18	.67 ms (4	0001 pts)	997.000000 MH
MKR MODE TR	C SCL		×	57 67 (оц.,	∀ 2.60 dl		NCTION	FUNCT	ION WIDTH	FUNCTI	DN VALUE	<u>Auto</u> Ma
2 N 1	f		3.27	75 98 (GHz	-50.34 dl	3m						Freq Offse
3 N 1 4 N 1	f f		6.24	93 49 (44 80 (GHz	-51.39 di -51.93 di	3m						
5 N 1 6	f		7.56	52 83 (GHz	-52.13 dl	3m					=	
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8.5 Radiated spurious emissions

Test Requirements and limit, §15.247(d), §15.205, §15.209

In any 100 kHz bandwidth outside the operating frequency band, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 KHz bandwidth within the band. In case the emission fall within the restricted band specified on 15.205(a) and (b), then the 15.209(a) limit in the table below has to be followed.

•	-CC	Part	15.209(a) and ((b)
---	-----	------	---------	----------	-----

Frequency (MHz)	Limit (uV/m)	Measurement Distance (meter)
0.009 - 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 – 30.0	30	30
30 ~ 88	100 **	3
88 ~ 216	150 **	3
216 ~ 960	200 **	3
Above 960	500	3

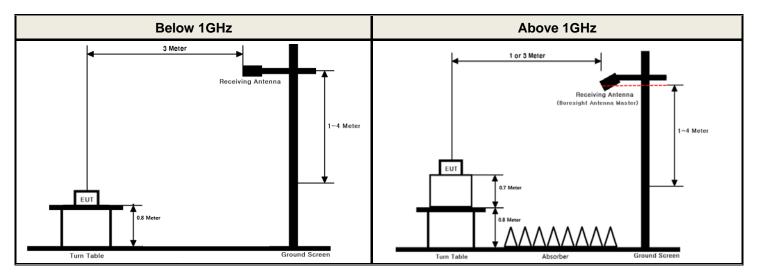
** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

 FCC Part 15.205 	(a): Only spurious emission	s are permitted in any of the	e frequency bands listed below:
-------------------------------------	-----------------------------	-------------------------------	---------------------------------

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.52525	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	156.7 ~ 156.9	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	162.0125 ~ 167.17	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	167.72 ~ 173.2	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	240 ~ 285	2655 ~ 2900		
8.291 ~ 8.294	37.5 ~ 38.25	322 ~ 335.4	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	399.90 ~ 410	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	608 ~ 614	3345.8 ~ 3358		
		960 ~ 1240	3600 ~ 4400		

• FCC Part 15.205(b): The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

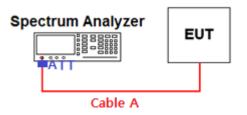
Test Configuration



Test Procedure

- 1. The EUT is placed on a non-conductive table, emission measurements at below 1 GHz, the table height is 80 cm and above 1 GHz, the table height is 1.5 m.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 1 or 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until the measurements for all frequencies are complete.

Conducted Measurement



Path loss information

Frequency (GHz)	Path Loss (dB)	Frequency (GHz)	Path Loss (dB)
0.03	3.16	15	7.17
1	3.40	20	8.37
2.412 & 2.437 & 2.472	4.04	25	9.46
5	4.60	-	-
10	6.07	-	-

Note 1: The path loss from EUT to Spectrum analyzer was measured and used for test. Path loss (S/A's correction factor) = Cable A (Attenuator, Applied only when it was used externally)



Measurement Instrument Setting for Radiated Emission Measurements.

The radiated emission was tested according to the section 6.3, 6.4, 6.5 and 6.6 of the ANSI C63.10-2013 with following settings.

Peak Measurement

RBW = As specified in below table, VBW \geq 3 x RBW, Sweep = Auto, Detector = Peak, Trace mode = Max Hold until the trace stabilizes.

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

Average Measurement:

- 1. RBW = 1 MHz (unless otherwise specified).
- 2. VBW ≥ 3 x RBW.
- 3. Detector = RMS (Number of points \ge 2 x Span / RBW)
- 4. Averaging type = power. (i.e., RMS)
- 5. Sweep time = auto.
- 6. Perform a trace average of at least 100 traces.
- 7. A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
- 1) If power averaging (RMS) mode was used in step 4, then the applicable correction factor is 10 log(1/D), where D is the duty cycle.
- 2) If linear voltage averaging mode was used in step 4, then the applicable correction factor is 20 log(1/D), where D is the duty cycle.
- 3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

Test Mode	Date rate	T _{on} (ms)	T _{on+off} (ms)	D = T _{on} / (T _{on+off})	DCCF(dB)
TM 1	1 Mbps	12.1900	12.3100	0.9903	NA
TM 2	6 Mbps	2.7560	2.8450	0.9687	0.14
1 101 2	54 Mbps	0.3242	0.4137	0.7837	1.06
TM 2	MCS 0	2.5600	2.6500	0.9660	0.16
TM 3	MCS 7	0.2922	0.3816	0.7657	1.16

Duty Cycle Correction factor

Note1: Where, T= Transmission duration / D= Duty cycle Note2: Please refer to the appendix I for duty cycle plots.

Test Results: Comply

Please refer to next page for data table and the appendix II for worst data plots.

Tested Frequency	Frequency (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	2389.06	Н	Х	PK	53.49	2.76	N/A	N/A	56.25	74.00	17.75
2412	2389.78	н	Х	AV	42.55	2.77	N/A	N/A	45.32	54.00	8.68
2412	4823.99	Н	Y	PK	51.62	1.64	N/A	N/A	53.26	74.00	20.74
	4823.97	Н	Y	AV	43.47	1.64	N/A	N/A	45.11	54.00	8.89
0.407	4874.03	Н	Y	PK	50.66	1.62	N/A	N/A	52.28	74.00	21.72
2437	4873.87	Н	Y	AV	41.65	1.62	N/A	N/A	43.27	54.00	10.73
	2486.32	Н	Х	PK	53.84	3.27	N/A	N/A	57.11	74.00	16.89
2462	2485.11	Н	Х	AV	42.75	3.27	N/A	N/A	46.02	54.00	7.98
2462	4924.00	Н	Y	PK	52.37	1.68	N/A	N/A	54.05	74.00	19.95
	4924.07	Н	Y	AV	43.29	1.68	N/A	N/A	44.97	54.00	9.03
	2483.62	н	Х	PK	52.95	3.26	N/A	N/A	56.21	74.00	17.79
0470	2484.05	н	Х	AV	41.77	3.27	N/A	N/A	45.04	54.00	8.96
2472	4944.26	Н	Y	PK	50.14	1.73	N/A	N/A	51.87	74.00	22.13
	4944.10	Н	Y	AV	39.13	1.73	N/A	N/A	40.86	54.00	13.14

Radiated Spurious Emissions data(9 kHz ~ 25 GHz) : TM 1

Note.

- 1. The radiated emissions were investigated 9kHz to 25GHz. And no other spurious and harmonic emissions were found above listed frequencies.
- 2. Sample Calculation.

Margin = Limit – Result / Result = Reading + T.F + DCCF + DCF / T.F = AF + CL – AG Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain, DCCF = Duty Cycle Correction Factor, DCF = Distance Correction Factor

3. Information of Distance Factor.

For finding emissions, the test distance might be reduced from 3m to 1m. In this case, the distance factor(-9.54dB) is applied to the result.

- Calculation of distance factor = 20 log(applied distance / required distance) = 20 log(1 m / 3 m) = -9.54 dB

Tested Frequency	Frequency (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	2389.70	Н	Х	PK	61.97	2.77	N/A	N/A	64.74	74.00	9.26
2412	2389.98	н	Х	AV	44.61	2.77	1.06	N/A	48.44	54.00	5.56
2412	4824.65	Н	Y	PK	50.05	1.64	N/A	N/A	51.69	74.00	22.31
	4825.78	Н	Y	AV	39.65	1.64	1.06	N/A	42.35	54.00	11.65
2437	4873.58	Н	Y	PK	49.88	1.62	N/A	N/A	51.50	74.00	22.50
	4873.72	Н	Y	AV	39.15	1.62	1.06	N/A	41.83	54.00	12.17
	2484.13	Н	Х	PK	58.36	3.27	N/A	N/A	61.63	74.00	12.37
2462	2483.78	Н	Х	AV	44.92	3.26	1.06	N/A	49.24	54.00	4.76
2462	4923.35	Н	Y	PK	49.86	1.68	N/A	N/A	51.54	74.00	22.46
	4923.37	Н	Y	AV	39.26	1.68	1.06	N/A	42.00	54.00	12.00
	2483.73	н	Х	PK	53.29	3.26	N/A	N/A	56.55	74.00	17.45
0.470	2484.02	Н	Х	AV	42.51	3.27	0.14	N/A	45.92	54.00	8.08
2472	4943.26	Н	Y	PK	49.63	1.73	N/A	N/A	51.36	74.00	22.64
	4944.55	Н	Y	AV	38.23	1.73	0.14	N/A	40.10	54.00	13.90

Radiated Spurious Emissions data(9 kHz ~ 25 GHz) : TM 2

Note.

- 1. The radiated emissions were investigated 9kHz to 25GHz. And no other spurious and harmonic emissions were found above listed frequencies.
- 2. Sample Calculation.

Margin = Limit – Result / Result = Reading + T.F + DCCF + DCF / T.F = AF + CL – AG Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain, DCCF = Duty Cycle Correction Factor, DCF = Distance Correction Factor

3. Information of Distance Factor.

For finding emissions, the test distance might be reduced from 3m to 1m. In this case, the distance factor(-9.54dB) is applied to the result.

- Calculation of distance factor = 20 log(applied distance / required distance) = 20 log(1 m / 3 m) = -9.54 dB

Tested Frequency	Frequency (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	2389.14	Н	Х	PK	55.54	2.76	N/A	N/A	58.30	74.00	15.70
2412	2389.88	Н	Х	AV	43.10	2.77	1.16	N/A	47.03	54.00	6.97
2412	4823.15	Н	Y	PK	50.68	1.64	N/A	N/A	52.32	74.00	21.68
	4823.27	Н	Y	AV	39.47	1.64	1.16	N/A	42.27	54.00	11.73
0.407	4875.34	Н	Y	PK	49.98	1.62	N/A	N/A	51.60	74.00	22.40
2437	4874.99	Н	Y	AV	39.12	1.62	1.16	N/A	41.90	54.00	12.10
	2484.50	Н	Х	PK	54.92	3.27	N/A	N/A	58.19	74.00	15.81
2462	2483.55	Н	Х	AV	43.59	3.26	1.16	N/A	48.01	54.00	5.99
2462	4925.87	Н	Y	PK	49.30	1.68	N/A	N/A	50.98	74.00	23.02
	4924.37	Н	Y	AV	39.10	1.68	1.16	N/A	41.94	54.00	12.06
	2483.97	Н	Х	PK	52.57	3.27	N/A	N/A	55.84	74.00	18.16
2472	2483.72	Н	Х	AV	42.59	3.26	0.16	N/A	46.01	54.00	7.99
241Z	4943.14	Н	Y	PK	49.15	1.73	N/A	N/A	50.88	74.00	23.12
	4942.61	Н	Y	AV	38.34	1.73	0.16	N/A	40.23	54.00	13.77

Radiated Spurious Emissions data(9 kHz ~ 25 GHz) : TM 3

Note.

- 1. The radiated emissions were investigated 9kHz to 25GHz. And no other spurious and harmonic emissions were found above listed frequencies.
- 2. Sample Calculation.

Margin = Limit – Result / Result = Reading + T.F + DCCF + DCF / T.F = AF + CL – AG Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain, DCCF = Duty Cycle Correction Factor, DCF = Distance Correction Factor

3. Information of Distance Factor.

For finding emissions, the test distance might be reduced from 3m to 1m. In this case, the distance factor(-9.54dB) is applied to the result.

- Calculation of distance factor = 20 log(applied distance / required distance) = 20 log(1 m / 3 m) = -9.54 dB

8.6 Power-line conducted emissions

Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 uH/50 ohm line impedance stabilization network(LISN).

Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

Frequency Range	Conducted Limit (dBuV)				
(MHz)	Quasi-Peak	Average			
0.15 ~ 0.5	66 to 56 *	56 to 46 *			
0.5 ~ 5	56	46			
5 ~ 30	60	50			

* Decreases with the logarithm of the frequency

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs for the actual connections between EUT and support equipment.

Test Procedure

- 1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
- 2. The EUT is connected via LISN to the test power supply.
- 3. The measurement results are obtained as described below:
- 4. Detectors Quasi Peak and Average Detector.

Test Results: Comply(Refer to next page.)

The worst data was reported.

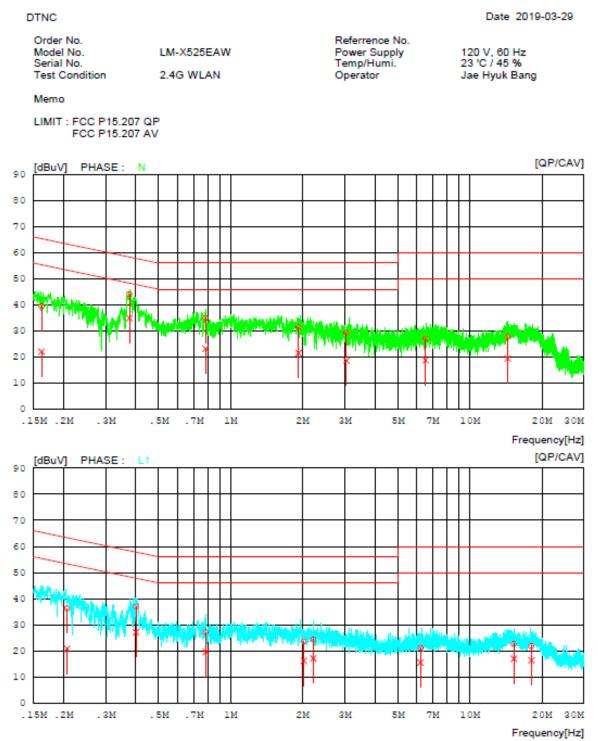


RESULT PLOTS

AC Line Conducted Emissions (Graph)

Test Mode: TM 2 & 2437 MHz

Results of Conducted Emission



AC Line Conducted Emissions (List)

Test Mode: TM 2 & 2437 MHz

Results of Conducted Emission

Date 2019-03-29

Order No.		Referrence No.	
Model No.	LM-X525EAW	Power Supply	120 V, 60 Hz
Serial No.		Temp/Humi.	23 'C / 45 %
Test Condition	2.4G WLAN	Operator	Jae Hyuk Bang

Memo

DTNC

LIMIT : FCC P15.207 QP FCC P15.207 AV

NC	FREQ	READING QP CAV [dBuV][dBuV]	C.FACTOR] [dB]	RESULT QP CAV [dBuV][dBuV	QP	CAV CAV [dBuV]	MARGIN QP CAV [dBuV][dBuV	PHASE
1	0.16186	29.54 12.20	9.94	39.48 22.14	65.37	55.37	25.8933.23	N
2	0.37708	34.12 25.02	9.95	44.07 34.97	58.34	48.34	14.27 13.37	N
3	0.78466	25.0313.32	9.97	35.00 23.29	56.00	46.00	21.00 22.71	N
4	1.92000	21.39 11.48	10.03	31.42 21.51	56.00	46.00	24.58 24.49	N
5	3.04560	19.26 8.65	10.07	29.3318.72	56.00	46.00	26.67 27.28	N
6	6.52080	17.02 8.60	10.20	27.22 18.80	60.00	50.00	32.78 31.20	N
7	14.36720	17.30 8.96	10.48	27.78 19.44	60.00	50.00	32.22 30.56	N
8	0.20704	26.27 10.84	9.94	36.21 20.78	63.32	53.32	27.11 32.54	L1
9	0.40150	26.98 17.10	9.95	36.93 27.05	57.82	47.82	20.8920.77	L1
10	0.78702	17.19 9.55	9.96	27.15 19.51	56.00	46.00	28.8526.49	L1
11	2.02120	13.52 6.07	10.03	23.5516.10	56.00	46.00	32.45 29.90	L1
12	2.21520	14.20 7.08	10.03	24.23 17.11	56.00	46.00	31.77 28.89	ь1
13	6.21500	10.88 5.22	10.20	21.08 15.42	60.00	50.00	38.92 34.58	L1
14	15.26420	12.06 6.44	10.46	22.5216.90	60.00	50.00	37.48 33.10	L1
15	18.04720	11.22 5.82	10.50	21.7216.32	60.00	50.00	38.28 33.68	L1

9. LIST OF TEST EQUIPMENT

Туре	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent Technologies	N9020A	18/12/19	19/12/19	MY50410357
Spectrum Analyzer	Agilent Technologies	N9020A	18/12/19	19/12/19	MY48011700
DC Power Supply	Agilent Technologies	66332A	18/07/02	19/07/02	MY43000211
Multimeter	FLUKE	17B	18/12/18	19/12/18	26030065WS
Signal Generator	Rohde Schwarz	SMBV100A	18/12/19	19/12/19	255571
Signal Generator	ANRITSU	MG3695C	18/12/10	19/12/10	173501
Thermohygrometer	BODYCOM	BJ5478	18/12/27	19/12/27	120612-1
Thermohygrometer	SATO	PC-5000TRH-II	18/07/18	19/07/18	N/A
Thermohygrometer	BODYCOM	BJ5478	18/07/09	19/07/09	N/A
HYGROMETER	TESTO	608-H1	19/01/31	20/01/31	34862883
Loop Antenna	Schwarzbeck	FMZB1513	18/01/30	20/01/30	1513-128
BILOG ANTENNA	Schwarzbeck	VULB 9160	18/07/13	20/07/13	3359
Horn Antenna	ETS-Lindgren	3115	19/01/11	21/01/11	9202-3820
Horn Antenna	Schwarzbeck	BBHA 9120C	17/12/04	19/12/04	9120C-561
Horn Antenna	A.H.Systems Inc.	SAS-574	17/07/31	19/07/31	155
PreAmplifier	tsj	MLA-0118-J01-45	18/12/19	19/12/19	17138
PreAmplifier	tsj	MLA-1840-J02-45	18/07/06	19/07/06	16966-10728
PreAmplifier	tsj	MLA-10K01-B01-27	18/10/31	19/10/31	2005354
Attenuator	SMAJK	SMAJK-2-3	18/07/02	19/07/02	3
Attenuator	Aeroflex/Weinschel	56-3	18/07/02	19/07/02	Y2370
Attenuator	SRTechnology	F01-B0606-01	18/07/02	19/07/02	13092403
Attenuator	Hefei Shunze	SS5T2.92-10-40	18/07/03	19/07/03	16012202
Attenuator	SMAJK	SMAJK-2-3	18/07/04	19/07/04	4
High Pass Filter	Wainwright Instruments	WHNX8.0/26.5-6SS	18/07/03	19/07/03	3
High Pass Filter	Wainwright Instruments	WHKX12-935-1000- 15000-40SS	18/07/02	19/07/02	8
High Pass Filter	Wainwright Instruments	WHKX10-2838-3300- 18000-60SS	18/07/02	19/07/02	1
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2496A MA2411B	18/12/19	19/12/19	1338004 1306053
EMI Receiver	ROHDE&SCHWARZ	ESW44	18/08/06	19/08/06	101645
EMI Test Receiver	Rohde Schwarz	ESCI7	19/01/30	20/01/30	100910
PULSE LIMITER	Rohde Schwarz	ESH3-Z2	18/09/27	19/09/27	101333
LISN	SCHWARZBECK	NNLK 8121	18/03/20	19/03/20	06183
			19/03/19	20/03/19	
Cable	HUBER+SUHNER	SUCOFLEX	18/12/21	19/12/21	C-1
Cable	HUBER+SUHNER	SUCOFLEX	18/12/21	19/12/21	C-2
Cable	HUBER+SUHNER	SUCOFLEX	18/12/21	19/12/21	C-3
Cable	HUBER+SUHNER	SUCOFLEX	18/12/21	19/12/21	C-4
Cable	Junkosha	MWX241	18/06/25	19/06/25	G-04
Cable	Junkosha	MWX241	18/06/25	19/06/25	G-07
Cable	DT&C	Cable	18/07/06	19/07/06	G-13
Cable	DT&C	Cable	18/07/06	19/07/06	G-14
Cable	HUBER+SUHNER	SUCOFLEX 104	18/07/06	19/07/06	G-15
Cable	DT&C	CABLE	18/07/05	19/07/05	RF-82

Note 1: The measurement antennas were calibrated in accordance to the requirements of ANSI C63.5-2017 Note 2: The cable is not a regular calibration item, so it has been calibrated by DT & C itself.



APPENDIX I

Duty cycle plots

Test Procedure

Duty Cycle was measured using section 6.0 b) of KDB558074 D01v05r01 :

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set RBW \geq OBW if possible; otherwise, set RBW to the largest available value. Set VBW \geq RBW. Set detector = peak or average.

The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if T \leq 16.7 microseconds.)

Duty Cycle

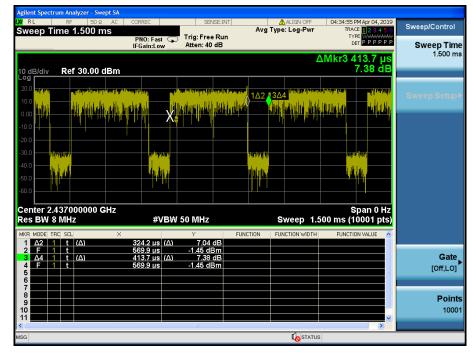
TM 1 (1Mbps) & 2437

sweep	Time 5	50Ω AC 50.00 ms	CORREC	SENSE:INT		ALIGN OFF	04:05:45 PM A TRACE	PPPPP	Sweep/Control
			PNO: Fast C IFGain:Low	 Trig: Free Run Atten: 30 dB 			DET	PPPPP	Sweep Tim
10 dB/di	v Ref	f 20.00 dBm				Δ	Mkr3 12.3 -0.1	31 ms 10 dB	50.00 n
- og 10.0						3∆4			
0.00				X_					
10.0									
20.0									
-30.0									
40.0					+				
50.0 60.0									
70.0									
	2.4450 8 MHz	00000 GHz z	#VB	W 50 MHz		Sweep 50.	Spa 00 ms (100	in 0 Hz 01 pts)	
ces BV									
MKR MODE	TRC SCL		42.40 mg /4	Y 0.02 dB	FUNCTION F	UNCTION WIDTH	FUNCTION V.	ALUE 🔼	
MKR MODE	1 t 1 t	(Δ)	12.19 ms (A 20.98 ms) 0.23 dB 4.95 dBm	FUNCTION F	UNCTION WIDTH	FUNCTION V.	ALUE 🔼	Cat
MKR MODE 1 Δ2 2 F 3 Δ4 4 F	1 t	(Δ)		a) 0.23 dB 4.95 dBm	FUNCTION F	UNCTION WIDTH	FUNCTION V.	ALUE	
4 F 5 6	1 t 1 t 1 t	(Δ)	20.98 ms 12.31 ms (Δ	a) 0.23 dB 4.95 dBm a) -0.10 dB	FUNCTION F	UNCTION WIDTH	FUNCTION V.	ALUE	
MKR MODE 2 F 3 Δ4 4 F 5 6 7 8	1 t 1 t 1 t	(Δ)	20.98 ms 12.31 ms (Δ	a) 0.23 dB 4.95 dBm a) -0.10 dB	FUNCTION F	UNCTION WIDTH	FUNCTION V.	ALUE	[Off,LO
MKR MODE 1 Δ2 2 F 3 Δ4 4 F 5 6 7 8 9 1	1 t 1 t 1 t	(Δ)	20.98 ms 12.31 ms (Δ	a) 0.23 dB 4.95 dBm a) -0.10 dB	FUNCTION F	UNCTION WIDTH	FUNCTION V.		[Off,LO Poin
MKR MODE 2 F 3 Δ4 4 F 5 6 7 8	1 t 1 t 1 t	(Δ)	20.98 ms 12.31 ms (Δ	a) 0.23 dB 4.95 dBm a) -0.10 dB	FUNCTION F		FUNCTION V.		Gate [Off,LO Poin 100

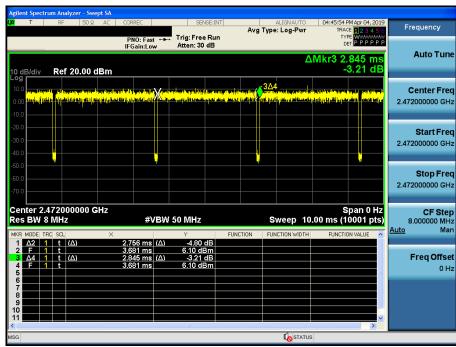
Dt&C

TM 2 (54Mbps) & 2437

Duty Cycle



TM 2 (6Mbps) & 2472

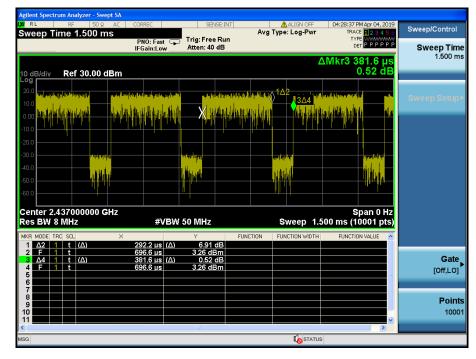


Duty Cycle

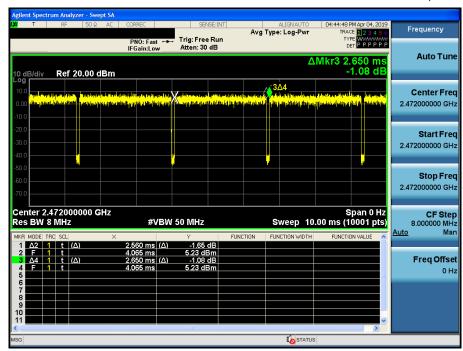
Dt&C

Duty Cycle

TM 3 (MCS7) & 2437



TM 3 (MCS0) & 2472

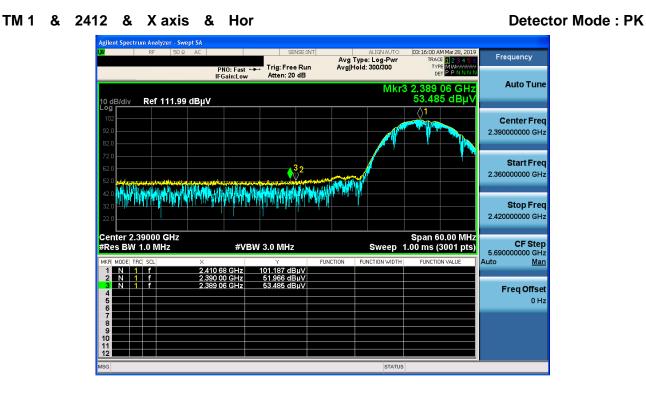


Duty Cycle

Pages: 73 / 84

APPENDIX II

Unwanted Emissions (Radiated) Test Plot



TM 1 & 2412 & X axis & Hor

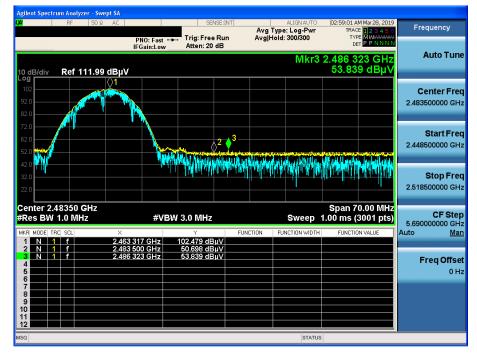
Detector Mode : AV



Detector Mode : PK



TM 1 & 2462 & X axis & Hor



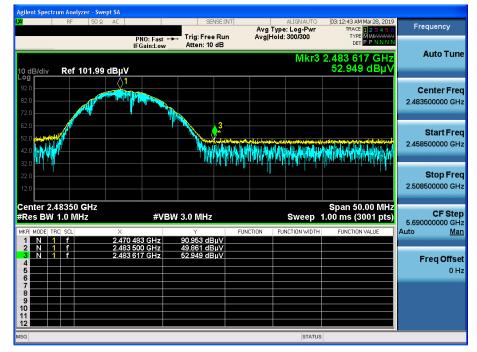
TM 1 & 2462 & X axis & Hor

Swept SA Frequency Avg Type: RMS Avg|Hold: 300/300 TYPE A WATAN DET A P N N N Trig: Free Run Atten: 20 dB PNO: Fast +++ IFGain:Low Mkr3 2.485 110 GHz 42.745 dBµV Auto Tune Ref 111.99 dBµV I0 dB/div **Center Freq** 2.483500000 GHz Start Freq 2.448500000 GHz 23 Stop Freq 2.518500000 GHz Center 2.48350 GHz #Res BW 1.0 MHz Span 70.00 MHz 1.00 ms (3001 pts) CF Step 5.69000000 GHz uto <u>Man</u> #VBW 3.0 MHz* Sweep **Auto** 42.150 dBµV 42.745 dBµV 2.483 500 GHz 2.485 110 GHz Ň Freq Offset 0 Hz STATUS

Detector Mode : AV



TM 1 & 2472 & X axis & Hor



TM 1 & 2472 & X axis & Hor

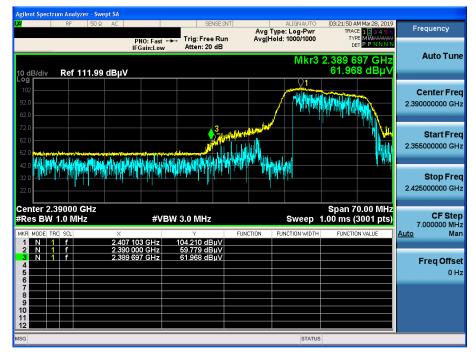
Swept SA Frequency Avg Type: RMS Avg|Hold: 300/300 TYPE A UNANA Trig: Free Run Atten: 10 dB PNO: Fast +++ IFGain:Low Auto Tune Mkr3 2.484 050 GHz 41.771 dBµV Ref 101.99 dBµV I0 dB/div **Center Freq** 2.483500000 GHz Start Freq 13 2.458500000 GHz Stop Freq 2.508500000 GHz Center 2.48350 GHz #Res BW 1.0 MHz Span 50.00 MHz 1.00 ms (3001 pts) CF Step 5.69000000 GHz auto <u>Man</u> #VBW 3.0 MHz* Sweep **Auto** NN 41.197 dBµV 41.771 dBµV 2.483 500 GHz 2.484 050 GHz Freq Offset 0 Hz STATUS

Detector Mode : AV

Detector Mode : PK



TM 2 & 2412 & X axis & Hor



TM 2 & 2412 & X axis & Hor

zer - Swept SA Frequency Avg Type: RMS Avg|Hold: 1000/1000 12345 A A P N N N Trig: Free Run Atten: 20 dB PNO: Fast 🔸 DE1 Auto Tune Mkr3 2.389 977 GHz 44.614 dBµ\ Ref 111.99 dBµV 10 dB/div -og \Diamond^1 **Center Freq** 2.390000000 GHz Start Freq 2.355000000 GHz 3 Stop Freq 2.425000000 GHz Center 2.39000 GHz #Res BW 1.0 MHz Span 70.00 MHz Sweep 1.00 ms (3001 pts) CF Step 7.000000 MHz #VBW 3.0 MHz* Man Auto NN 44.517 dBµV 44.614 dBµV 2.390 000 GHz 2.389 977 GHz Freq Offset 4 0 Hz 10 11 12 G File <g_2412_54M_1_x_h_sb.png> saved STATUS

Detector Mode : AV

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Detector Mode : PK



TM 2 & 2462 & X axis & Hor



TM 2 & 2462 & X axis & Hor

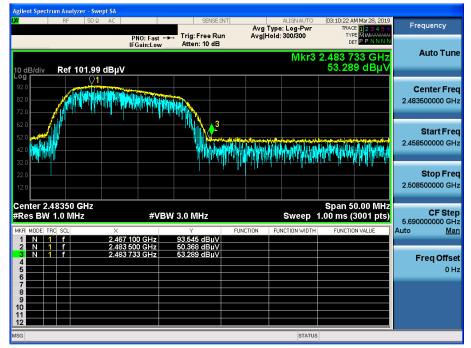
Swept SA Frequency Avg Type: RMS Avg|Hold: 300/300 TYPE A WATAN DET A P N N N Trig: Free Run Atten: 20 dB PNO: Fast +++ IFGain:Low Mkr3 2.483 780 GHz 44.916 dBµV Auto Tune Ref 111.99 dBµV 10 dB/div \Diamond^1 **Center Freq** 2.483500000 GHz Start Freq 2.448500000 GHz 3 Stop Freq 2.518500000 GHz Center 2.48350 GHz #Res BW 1.0 MHz Span 70.00 MHz 1.00 ms (3001 pts) CF Step 5.69000000 GHz auto <u>Man</u> #VBW 3.0 MHz* Sweep **Auto** 5.014 d 44.297 dBµV 44.916 dBµV Ň 2.483 500 GHz 2.483 780 GHz Freq Offset 0 Hz STATUS

Detector Mode : AV

Pages: 78 / 84



TM 2 & 2472 & X axis & Hor



TM 2 & 2472 & X axis & Hor

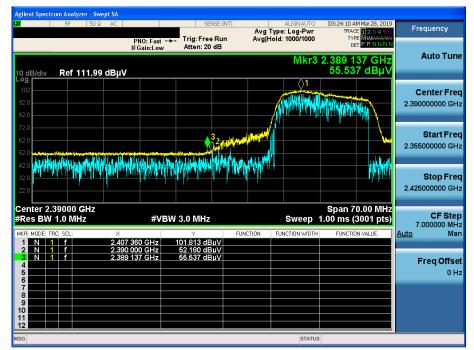
Swept SA Frequency Avg Type: RMS Avg|Hold: 300/300 TYPE A WATAN DET A P N N N Trig: Free Run Atten: 10 dB PNO: Fast +++ IFGain:Low Auto Tune Mkr3 2.484 017 GHz 42.511 dBµ\ Ref 101.99 dBµV I0 dB/div \Diamond^1 **Center Freq** 2.483500000 GHz Start Freq <mark>⁄</mark>3 2.458500000 GHz Stop Freq 2.508500000 GHz Center 2.48350 GHz #Res BW 1.0 MHz Span 50.00 MHz 1.00 ms (3001 pts) CF Step 5.69000000 GHz uuto <u>Man</u> #VBW 3.0 MHz* Sweep **Auto** 41.496 dBµV 42.511 dBµV N 2.483 500 GHz 2.484 017 GHz Freq Offset 0 Hz STATUS

Detector Mode : AV

Detector Mode : PK



TM 3 & 2412 & X axis & Hor



TM 3 & 2412 & X axis & Hor

zer - Swept SA Frequency Avg Type: RMS Avg|Hold: 1000/1000 12345 A Trig: Free Run Atten: 20 dB PNO: Fast 🔸 DE1 Auto Tune Mkr3 2.389 883 GHz 43.100 dBµ\ Ref 111.99 dBµV 10 dB/div -og **Center Freq** \Diamond^1 2.390000000 GHz Start Freq 2.355000000 GHz 3 Stop Freq 2.425000000 GHz Center 2.39000 GHz #Res BW 1.0 MHz Span 70.00 MHz Sweep 1.00 ms (3001 pts) CF Step 7.000000 MHz Man #VBW 3.0 MHz* Auto NN <u>43.060 dBµV</u> 43.100 dBµV 2 389 883 GHz Freq Offset 0 Hz STATUS

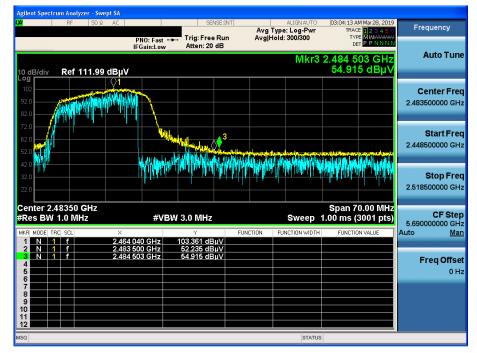
Detector Mode : AV

Detector Mode : PK

Detector Mode : PK



TM 3 & 2462 & X axis & Hor



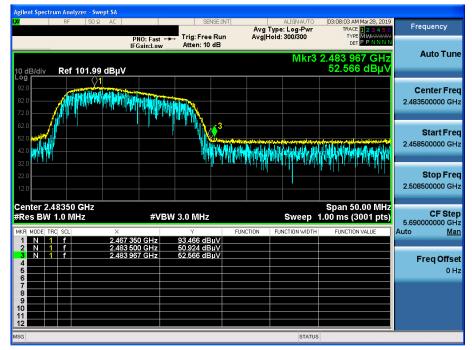
TM 3 & 2462 & X axis & Hor

Swept SA Frequency Avg Type: RMS Avg|Hold: 300/300 Trig: Free Run Atten: 20 dB PNO: Fast +++ IFGain:Low DE1 Mkr3 2.483 547 GHz 43.594 dBµ\ Auto Tune Ref 111.99 dBµV 0 dB/div \Diamond^1 **Center Freq** 2.483500000 GHz Start Freq 2.448500000 GHz 3 Stop Freq 2.518500000 GHz Center 2.48350 GHz #Res BW 1.0 MHz Span 70.00 MHz 1.00 ms (3001 pts) CF Step 5.69000000 GHz auto <u>Man</u> #VBW 3.0 MHz* Sweep **Auto** 2.483 500 GHZ 2.483 547 GHz 42.839 dBµv 43.594 dBuv Ň Freq Offset 0 Hz STATUS

Detector Mode : AV



TM 3 & 2472 & X axis & Hor



TM 3 & 2472 & X axis & Hor

er - Swept SA Frequency Avg Type: RMS Avg|Hold: 300/300 12345 A Trig: Free Run Atten: 10 dB PNO: Fast +++ IFGain:Low TYPE DE1 Mkr3 2.483 717 GHz 42.590 dBµ\ Auto Tune Ref 101.99 dBµV I0 dB/div \Diamond^1 **Center Freq** 2.483500000 GHz Start Freq 2.458500000 GHz Stop Freq 2.508500000 GHz Center 2.48350 GHz #Res BW 1.0 MHz Span 50.00 MHz Sweep 1.00 ms (3001 pts) CF Step 5.69000000 GHz auto <u>Man</u> #VBW 3.0 MHz* **Auto** N 2.483 500 GHz 2.483 717 GHz 42.446 dBµv 42.590 dBuv Freq Offset 0 Hz STATUS

Detector Mode : AV

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Detector Mode : PK

Detector Mode : AV



TM 1 & 2412 & Yaxis & Hor



TM 2 & 2412 & Yaxis & Hor

er - Swept SA Frequency TYPE A WAANA Avg Type: RMS Avg|Hold: 200/200 PNO: Fast +++ Trig: Free Run IFGain:High #Atten: 0 dB Auto Tune Mkr1 4.825 780 GHz 39.652 dBµ∨ Ref 71.99 dBµV 5 dB/div Log **Center Freq** 4.824000000 GHz Start Freq 4.814000000 GHz Stop Freq 4.834000000 GHz **CF Step** 2.412000000 GHz Auto <u>Man</u> Freq Offset 0 Hz Center 4.82400 GHz #Res BW 1.0 MHz Span 20.00 MHz Sweep 1.00 ms (3001 pts) #VBW 3.0 MHz*

Detector Mode : AV



Detector Mode : AV

TM 3 & 2412 & Yaxis & Hor

