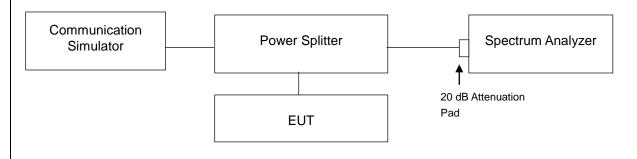


4.6 Conducted Spurious Emissions

4.6.1 Limits of Conducted Spurious Emissions Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P) dB$. The emission limit equal to -13 dBm.

4.6.2 Test Setup



4.6.3 Test Procedure

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 9 GHz. 20 dB attenuation pad is connected with spectrum.
 RBW = 100 kHz and VBW = 300 kHz is used for conducted emission measurement.



4.6.4 Test Results

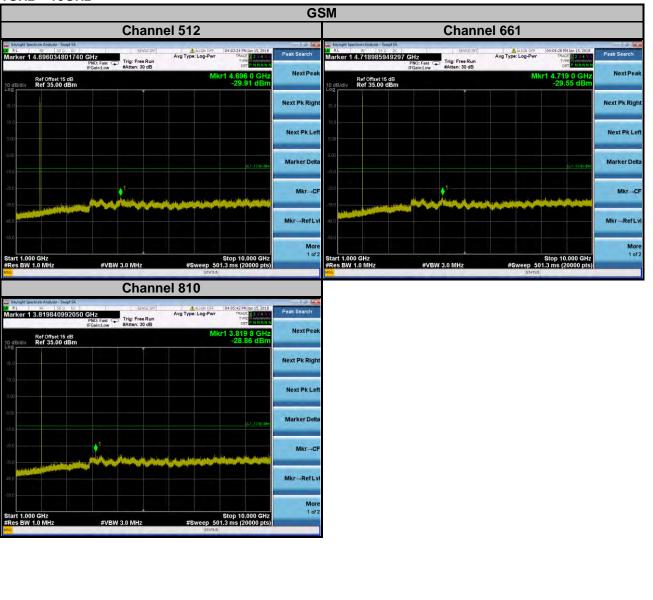
GSM

30MHz ~ 1GHz

		GS	SM
Chanr	nel 512		Channel 661
Kongel tjenstem Andres Start få. Ref 990 bot Ref 990 bot Start 50 Ref 990 bot Start 50 Ref 07fret 15 dB Ref 07fret 15 dB Start 53.00 dBm	4 NUGR OFF 049235 PH Man 15, 2018 Avg Type: Log-Pwr Twe Det Patients Mkr1 842.27 MHz -38, 85 G Brn	Peak Search Next Peak	Book States Stat
10 dBR/div Ref 35.00 dBm		Next Pk Right	10 gBirdly Ref 35.00 dBm -37.20 dBm 50 Next Pk Right
5.00		Next Pk Left	15.0 Next Pk Left
-500	DC1-1320-69-	Marker Delta	500 x3.1220-de Marker Delta
-28.0	1	Mkr→CF	san Mkr⊸CF
450		Mkr→RefLvi	450 Mkr-RefLyl
Start 0.0300 GHz #Res BW 1.0 MHz #VBW 3.0 MHz	Stop 1.0000 GHz #Sweep 501.3 ms (20000 pts)	More 1 of 2	More More Start 0.0300 GHz \$top 1.0000 GHz 1 of 2 #Res BW 1.0 MHz #VBW 3.0 MHz #Sweep 501.3 ms (20000 pts)
	nel 810		
Revealed Spectram Revealed Service Service Structure Service S	ALIGN OFF 04:05:11 PM Ian 15, 2018 Avg Type: Log-Pwr TRACE T TVEE DET COLUMN	Peak Search Next Peak	
Ref Offset 15 dB	Mkr1 842.37 MHz -37.53 dBm	Next Pk Right	
15.0		Next Pk Left	
500	0(1-1200-dbg	Marker Delta	
-150		Mkr→CF	
 at a second secon		Mkr→RefLvi	
Start 0.0300 GHz #Res BW 1.0 MHz #VBW 3.0 MHz	Stop 1.0000 GHz #Sweep 501.3 ms (20000 pts)	More 1 of 2	
**************************************	#Sweep SU1.3 Ms (20000 pts) Status		



<u> 1GHz ~ 10GH</u>z





		GS					
Chann	nel 512		Channel 661				
kerpak Spectrum Andyzer Sang DC RL 87 SB DC Irker 1 26,181534076704 GHz PNO: Fast P IFGinLow #Atten: 30 dB	Aulon OFF 04:03:44 PM Jan 15, 2018 Avg Type: Log-Pwr TRACE 12 or 1 TYPE: DET CANNAN	Peak Search	Keyngle Spectram Andyser, Sengl Sk. Sengl Sk. Sengl Sk. SR Kr. Sengl Sk. Sengl Sk. Marker 1 26:492674133707 GHz. Trig: Free Run IFGeint. Trig: Free Run and St.	ALIGN OFF 04:04-32 PH Jan 15, 2018 Avg Type: Log-Pwr TRACE 13 4 0 TYPE 14 0 Det P.N.16 N.N.			
Ref Offset 15 dB B/div Ref 35.00 dBm	Mkr1 26.181 5 GHz -25.92 dBm	Next Peak	Ref Offset 15 dB 10 dB/div Ref 35.00 dBm Log	Mkr1 26.482 7 GHz -25.80 dBm			
		Next Pk Right	75.0				
0 0 		Next Pk Left	5.00				
	DC1-1300 db9	Marker Delta	150	C.1-1300 dbs			
a an		Mkr→CF	an a				
		Mkr→RefLvi	-45.0				
art 10.000 GHz	Stop 26.500 GHz	More 1 of 2	550 Start 10.000 GHz	Stop 26.500 GHz #Sweep 501.3 ms (20000 pts)			
es BW 1.0 MHz #VBW 3.0 MHz	#Sweep 501.3 ms (20000 pts)		#Res BW 1.0 MHz #VBW 3.0 MHz	#Sweep 501.3 ms (20000 pts)			
	nel 810						
Keynapis Spectrum Analyzer See Disc. See Disc. RL RF See Disc. See Disc. arKer 1 23.542227111356 GHz PNO: Fast Carl Trig: Free Run #Attent: 30 dB	Aug Type: Log-Pwr TRACE 12:001000 TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYPE	Peak Search					
Ref Offset 15 dB dB/div Ref 35.00 dBm	Mkr1 23.542 2 GHz -25.96 dBm	Next Peak					
0		Next Pk Right					
50		Next Pk Left					
n	2x.1 - 13.00 etter	Marker Delta					
	1	Mkr→CF					
		Mkr→RefLvi					
u							
art 10.000 GHz	Stop 26.500 GHz	More 1 of 2					
Res BW 1.0 MHz #VBW 3.0 MHz	#Sweep 501.3 ms (20000 pts)						



EDGE





1GHz ~ 10GHz

				ED	GE				
	Chann	el 512			Channel 661				
keynget Spectrum Analyzer - Seept SA RL RF S8 0 DC arker 1 3.753237661883 GHz PNO: Far IFGain2.t	SENSE:INT Trig: Free Run #Atten: 30 dB	Aug Type: Log-Pwr	04:08:09 PM Jan 15, 2018 TRACE 1 2 1 4 5 TYPE M DET P NINN N	-	Keysight Spectrum Analyzer Swept S RL RF 50 0 1 Marker 1 7.987499374	DC SENSE:	n	04:09:18 PM Jan 15, 2018 TRACE 2 14 5 1 TYPE DOLLARS A	eak Search
Ref Offset 15 dB B/div Ref 35.00 dBm		Mk	r1 3.753 2 GHz -29.96 dBm	Next Peak	Ref Offset 15 dE		Mk	r1 7.987 5 GHz -30.07 dBm	NextPea
5.0				Next Pk Right	25.0			N	lext Pk Rigi
40				Next Pk Left	5.00				Next Pk Le
20			D.1-1380 dan	Marker Delta	-15.0			0.1 - 19 30 40m	Marker Del
o		an a	ول مدينية والمراجع الم	Mkr→CF	-30		1	and the state of the second	Mkr→C
				Mkr→RefLvi	-45 0				Mkr→RefL
art 1.000 GHz Res BW 1.0 MHz #			Stop 10.000 GHz	More 1 of 2	Start 1.000 GHz			Stop 10.000 GHz	Mor 1 of
Res BW 1.0 MHz #	VBW 3.0 MHz	STATUS	1.3 ms (20000 pts)		#Res BW 1.0 MHz ^{MBG}	#VBW 3.0 MHz	#Sweep 50 STATUS	1.3 ms (20000 pts)	
	Chann	el 810							
RL RF 500 DC Aarker 1 9.146307315366 GHz PNC: Fa	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN OFF Avg Type: Log-Pwr	04:10:23 PM Jan 15, 2018 TRACE 1 2 3 4 5 TYPE 0 DET P NNNNN	Peak Search					
Ref Offset 15 dB dB/div Ref 35.00 dBm		Mk	r1 9.146 3 GHz -29.43 dBm	Next Peak					
5.0				Next Pk Right					
.00				Next Pk Left					
5.0			DC1:13/00 dBe	Marker Delta					
50	and the state of the	and the second secon	1 Martin constant and a librar	Mkr→CF					
				Mkr→RefLvi					
6U			Stop 10.000 GHz	More 1 of 2					
Start 1.000 GHz #Res BW 1.0 MHz #	VBW 3.0 MHz	#0	1.3 ms (20000 pts)						



				ED	GE			
	Chann	el 512				Chan	nel 661	
Keysight Spectrum Analyzer Swept SA RL RF 50 0 DC arker 1 24.8160908045	540 GHz PNO: Fast Fries Run IFGoin:Low #Atten: 30 dB	AUGN OFF Avg Type: Log-Pwr	04:08:36 PM Jan 15, 2018 TRACE 2 2 4 5 0 TYPE M DET PINNINN	Peak Search	Keynglet Spectrum Analyzer - Swept SA RL RF Se D DC Marker 1 26.400995049753	SENSE:IM PNO: Fast IFGain:Low #Atten: 30 dB	Augn off Avg Type: Log-Pwr	04:09:38 PM Jan 15, 201 TRACE 1 2 4 4 TYPE N DET P NNNN
B/div Ref 35.00 dBm		Mkr	1 24.816 1 GHz -25.80 dBm	NextPeak	Ref Offset 15 dB		Mk	1 26.401 0 GH -25.30 dBr
5.0				Next Pk Right	75 0			
10				Next Pk Left	5.00			
00 5.0			D.1.1380 abr	Marker Delta	-15.0			D.1.1380-80
	ndersonia a tale sine a barrer danelia			Mkr→CF	-25.0	الأفاحيات فيراح التحاية	الرجحة البني وبالبومة	
				Mkr→RefLvi	450			
tart 10.000 GHz			Stop 26.500 GHz 1.3 ms (20000 pts)	More 1 of 2	-58 U Start 10.000 GHz			Stop 26.500 GH 01.3 ms (20000 pt
Res BW 1.0 MHz	#VBW 3.0 MHz	STATUS	1.3 ms (20000 pts)		#Res BW 1.0 MHz ^{MSG}	#VBW 3.0 MHz	#Sweep 51	01.3 ms (20000 pt
	Chann	el 810						
Keysight Spectrum Analyzer - Swept SA RL RF 58 D DC arker 1 23.8540927046	535 GHz PNO: Fest Frie Run IFGoin:Low #Atten: 30 dB	ALIGN OFF Avg Type: Log-Pwr	04:10:42 PM Jan 15, 2018 TRACE 1 2 3 4 5 0 TYPE MUNICIPAL OF PINNINN	Peak Search				
Ref Offset 15 dB		Mkr	1 23.854 1 GHz -25.94 dBm	Next Peak				
5.0				Next Pk Right				
5.0				Next Pk Left				
n			0.1.1530 abi	Marker Delta				
50	and a start of the start of the start of	- American Soly & American		Mkr→CF				
			الكنانية التقالية					
				Mkr→RefLvi				
60				and the second se				
450 550 Start 10.000 GHz FRes BW 1.0 MHz	#VBW 3.0 MHz	#Sween 50	Stop 26.500 GHz 1.3 ms (20000 pts)	More 1 of 2				



WCDMA





1GHz ~ 10GHz

			WCE	MA			
	Channel	9262				el 9400	
Keynght Spectrum Analyzer Swept SA RL RF S0 D DC arker 1 3.99444972241	SENSE:INT 36 GHz PNO: Fast IFGein:Low #Atten: 30 dB	ALIGN OFF 04:13:48 PM Ian 15, 2018 Avg Type: Log-Pwr TRACE 12 C C TYPE DET PMNINN	Feak Scarch	Keysget Spectrum Analyzer - Seept Sa RL RF 50 D DI Marker 1 4.0192009600	SENSE:INT	Avg Type: Log-Pwr	4:14:50 PM Jan 15, 2018 TRACE 1 2 3 4 F TYPE COMMANY DET P. N.N.N.N.N
dB/div Ref 35.00 dBm		Mkr1 3.994 4 GHz -29.88 dBm	Next Peak	Ref Offset 15 dB	1	Mkr1	4.019 2 GHz -29.12 dBm
0			Next Pk Right	35.0			
			Next Pk Left	5.00			
		0.1 -10.00 e0e	Marker Delta	-15.0			D. 1 : 19 /0 edim
		و والدوار و المراجع المراجع و ا	Mkr→CF	-30		والمتحديد والمراجع والمراجع والمراجع	ومعربة والمراسية
			Mkr→RefLvi	450 Latrantic Latrantic Latra		أقلد يعمل	
art 1.000 GHz		Stop 10.000 GHz	More 1 of 2	-55.0 Start 1.000 GHz		s	top 10.000 GHz
reysight Spectrum Analyzer - Swept SA RL RF - 1500, DC	≠vbw 3.0 MHz Channel	A LUCK OF THE REAL OF DESIGN	1 of 2	Start 1.000 GHz #Res BW 1.0 MHz We	#VBW 3.0 MHz	S #Sweep 501.3 STATUS	top 10.000 GHz ms (20000 pts)
nynget Spectrum Andlyzer - Swept SA L 95 59 0 00 *ker 1 4.76938846943 Ref Offset 15 dB	Channel 22 CH2 PRO: Fast From: Trig: Free Run Atten: 30 dB	STATUS	1 of2	Start 1.000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	\$ #\$weep_501.3 giaus	top 10.000 GHz ms (20000 pts)
evropt Spectrum Androw - Swept SA RL 97 590 00 rker 1 4.76938846943 Ref Offset 15 dB	Channel 22 CH2 PRO: Fast From: Trig: Free Run Atten: 30 dB		1 of2 Peak Search Next Peak	Start 1.000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	\$ #\$weep_501.3 gratu3)	top 10.000 GHz ms (20000 pts)
Art 1.000 GHz es BW 1.0 MHz United Spectrum Address Sector Process Art -	Channel 22 CH2 PRO: Fast From: Trig: Free Run Atten: 30 dB	(0/15:02 PH lan 15: 2018 (0/15:02 PH lan 15: 2018 Avg Type: Log-Pur That: Eleg-Pur That: Eleg-Pur Mkr1 47:69 4 GHz -30.04 dBm	Pesk Search Next Peak Next Pk Right Next Pk Left	Start 1.000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	8 #Sweep 5013 grans	top 10.000 GHz ms (20000 pts)
Art 1.000 GHz es BW 1.0 MHz BK 000 Status Sund 14 8 C 99 Sto BC strker 1 4.76938B46941 diskut Ref 35.00 dBm diskut Ref 35.00 dBm diskut status	Channel 22 CH2 PRO: Fast From: Trig: Free Run Atten: 30 dB	(0/15:02 PH lan 15: 2018 (0/15:02 PH lan 15: 2018 Avg Type: Log-Pur That: Eleg-Pur That: Eleg-Pur Mkr1 47:69 4 GHz -30.04 dBm	Pesk Search Pesk Search Next Peak Next Pk Right Next Pk Left Marker Delta	Start 1.000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	9 #Sweep 5013 grans	top 10.000 GHz ms (20000 pts)
61	Channel 22 CH2 PRO: Fast From: Trig: Free Run Atten: 30 dB	(0/15:02 PH lan 15: 2018 (0/15:02 PH lan 15: 2018 Avg Type: Log-Pur That: Eleg-Pur That: Eleg-Pur Mkr1 47:69 4 GHz -30.04 dBm	1 or2 Peak Search Next Peak Next Pk Right Next Pk Left Marker Delta MkrCF MkrCF	Start 1.000 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	8 #Sweep 5013 grans	top 10.000 GHz ms (20000 pts)



			WC		
	Channe	el 9262			nnel 9400
eysget Spectrum Analyzer - Swept SA RL RF S0 D DC rker 1 26.38779438972	PNC: Fast IFGain:Low #Atten: 30 dB	ALIGN OFF. 04:14:09 PM Jan 15, 2018 Avg Type: Log-Pwr TRACE TYPE TYPE Det PMMMMM	Peak Search	RL RF IS DE DC STATUS RL RF IS DE DC STATUS Marker 1 24.062003100155 GHz FRG RL Trig: Free R IFGani.Jow	B DET PRINT
dB/div Ref 35.00 dBm		Mkr1 26.387 8 GHz -25.79 dBm	NextPeak	Ref Offset 15 dB 10 dB/div Ref 35.00 dBm	Mkr1 24.062 0 G -25.00 dE
5.0			Next Pk Right	75.0	
.0			Next Pk Left	5.00	
00 .0		0.1.13.00 cBn	Marker Delta	-16.0	
a . Marina di Katalan Marina di Katalan Marina			Mkr→CF		
şά			Mkr→RefLvi	-450	
tart 10.000 GHz		Stop 26.500 GHz #Sweep 501.3 ms (20000 pts)	More 1 of 2	Start 10.000 GHz	Stop 26.500 G #Sweep 501.3 ms (20000 p
es BW 1.0 MHz	#VBW 3.0 MHz	STATUS		#Res BW 1.0 MHz #VBW 3.0 MHz	#Sweep 501.3 ms (20000 p
an order Department And and Depart Ch	Channe	el 9538			
Keysight Spectrum Analyzer - Swept SA RL RF 58 D DC arker 1 26.08830441522	PNO: Fast IFGein:Low #Atten: 30 dB	Avg Type: Log-Pwr TRADE 12, 24 1 TYPE: Dog-Pwr TRADE 2, 4 1 TYPE: Dog-Pwr TRADE 12, 4 1	Peak Search		
Ref Offset 15 dB dB/div Ref 35.00 dBm	Pointow writer of ab	Mkr1 26.088 3 GHz -26.08 dBm	Next Peak		
g .0			Next Pk Right		
0 10			Next Pk Left		
0		0.1 -1920 eBe	Marker Delta		
10			Mkr→CF		
	والمحاور والتروير والمرجوع والمقاومات الم				
su su su			Mkr→RefLvi		
		Stop 26.500 GHz	Mkr→RefLvl More 1 of 2		



CDMA

Start 0.0300 GHz #Res BW 1.0 MHz

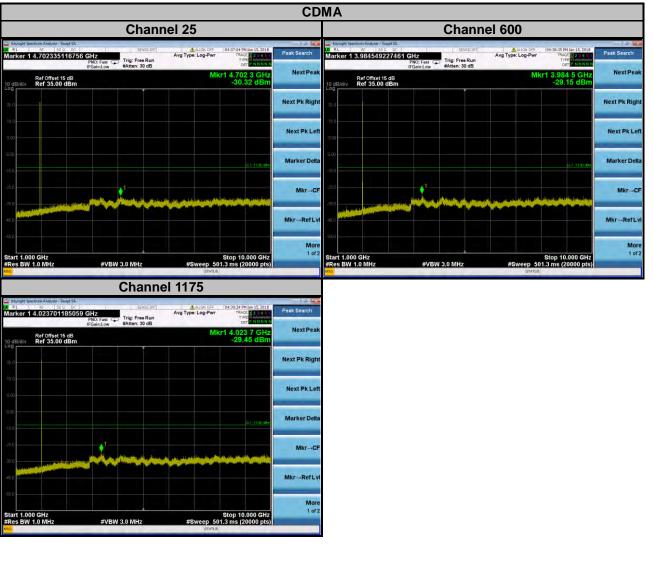
#VBW 3.0 MHz



Stop 1.0000 GHz #Sweep 501.3 ms (20000 pts)



<u> 1GHz ~ 10GH</u>z





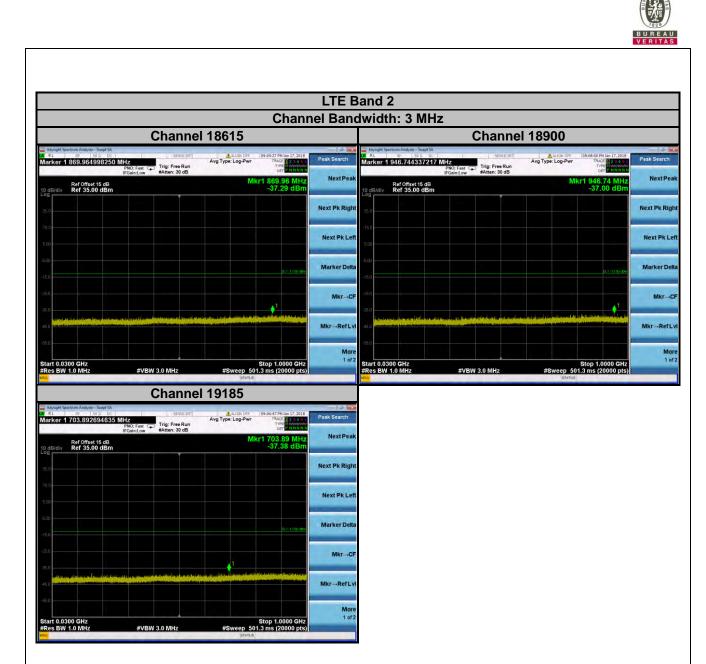
							DMA				
	Chanr	nel 25			Channel 600						
Reysight Spectrum Analyzer - Swept SA RL 9F 58 0 DC Rarker 1 26.0041502075	10 GHz PNO: Fast Trig: Free Run IFGain1.ow #Atten: 30 dB	Avg Type: Log-Pwr	37-23 PM Jan 15, 2018 TRACE 1 2 3 4 5 TYPE NUMBER OF PINNINN	Peak Search	RL RF 500 RL RF 500 Rker 1 26.4282214	11071 GHz	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN C Avg Type: Log-P	OFF 04:38:56 PM II PWF TRACE TVPE DET	123410 NWWWWW PNNNNN	
Ref Offset 15 dB		Mkr1 26	6.004 2 GHz -25.78 dBm	Next Peak	Ref Offset 15 d dB/div Ref 35.00 dB			M	Mkr1 26.428 -25.8	2 GHz Nex	
25.0				Next Pk Right	15.0					Next Pk	
.0				Next Pk Left	5.00					Next P	
5.0			0.1.13/09 dbm	Marker Delta	5.0				a	Marker	
sa sa <mark>kiintinti kuului san Al</mark> i				Mkr→CF	50 8 л <mark>(19 м. с.)</mark> - (19 (19 м.	in the second				Mk	
15 D				Mkr→RefLvi	15 D					Mkr→F	
		Sto	op 26.500 GHz	More 1 of 2					Stop 26.5		
Res BW 1.0 MHz	#VBW 3.0 MHz	Sto #Sweep 501.3 n	ms (20000 pts)	5	tart 10.000 GHz Res BW 1.0 MHz	#VBW	3.0 MHz	#Sweep	Stop 26.5 501.3 ms (20)	000 gHz 000 pts)	
Start 10.000 GHz Res BW 1.0 MHz Res	#VBW 3.0 MHz Channe	STATUS	ms (20000 pts)	#	tart 10.000 GHz Res BW 1.0 MHz	#VBW	3.0 MHz	#Sweep	501.3 ms (201 ATUS	000 pts)	
Reysgiet Spectrum Andrew - Swort SA RL 87 - 199 0 0 0 Jarker 1 26.17658382911 Ref Offset 15 dB	Channe	Allon OFF 04: Avg Type: Log-Pwr MKr1 28	39:55 PM Jan 15, 2018 TRACE 12 14 TYPE P NAMAN DET P NAMAN 5.176 6 GHz	5	tart 10.000 GHz Res BW 1.0 MHz	#VBW	3.0 MHz	#Sweep or	501.3 ms (200	000 pts)	
Arker 1 26. 1765 all of the second se		Allon OFF 04: Avg Type: Log-Pwr MKr1 28	2955 PH Jan 15, 2018 174 GC 11, 2 of 14 174	Peak Search	tart 10.000 GHz Res BW 1.0 MHz	≇VBW	3.0 MHz	#Sweep or	501.3 ms (200	000 pts)	
Keysight Spectrum Analyzer - Swept SA RL RF ISSO DC Aarker 1 26,1765938291		Allon OFF 04: Avg Type: Log-Pwr MKr1 28	2955 PH Jan 15, 2018 174 GC 11, 2 of 14 174	Peak Search Next Peak	tart 10.000 GHz Res BW 1.0 MHz	₽VBW	3.0 MHz	#Sweep	501.3 ms (200	000 pts)	
Asympt Spectrum Budger Swept SA A.L. 000 Atkert 1 26.170563826919 OrdEldiv Ref Offset 15 dB Other State 000 State 000 State 000 State 000		Allon OFF 04: Avg Type: Log-Pwr MKr1 28	2955 PM too 15, 2018 TRACE (D. 24 COL) or (D	Peak Search Next Peak	tart 10.000 GHz Res BW 1.0 MHz	₽VBW	3.0 MHz	#Sweep	<u>501,3 ms (201</u>	000 pts)	
Marget System Redger, Swell A. Marget System Redger, Swell A. Marker 1 26, 17659382913 Aarker 1 26, 17659382913 Order Offset 15 dB 0<		Avg Type: Log-Pwr	29-55 PM too 15, 2018 Third (2) 20 4 5 4 ref 000 5, 176 6 GHz -25, 87 dBm	Peak Search Next Peak Next Pk Right Next Pk Left	tart 10.000 GHz Res BW 1.0 MHz	≢vbw	3.0 MHz	#Sweep	<u>9013 ms (201</u>	000 pts)	
16/02/15/02/5 m Subject 5 mm 12/02 16/02/15/02 mm 12/02/15/02 mm 12/02 Arrker 1 26.1765/83/82/919 0.481div Ref Offset 15 dB 0.481div Ref Offset 15 dB 0.481div Ref 53.00 dBm	Channe PRO: Fear Configuration of the second	Avg Type: Log-Pwr	29-55 PM tao 15, 2018 TRace 16, 2018 v V Core 2018 V V V Core 2018 V V V Core 2018 V V V V Core 2018 V V V V V V V V V V V V V V V V V V V	Peak Search Next Peak Next Pk Right Next Pk Left Marker Delta	tart 10.000 GHz Res BW 1.0 MHz	₽VBW	3.0 MHz	#Sweep	<u>. 501,3 ms (20</u>	000 pts)	

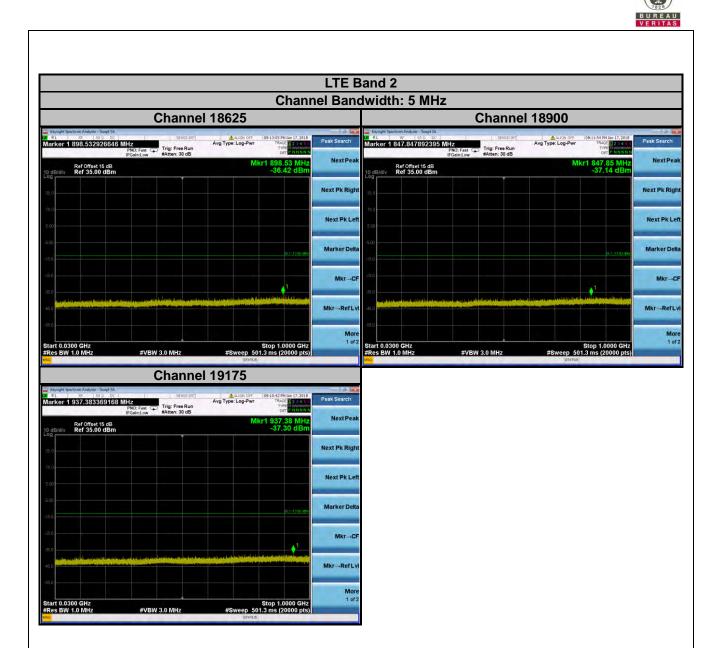


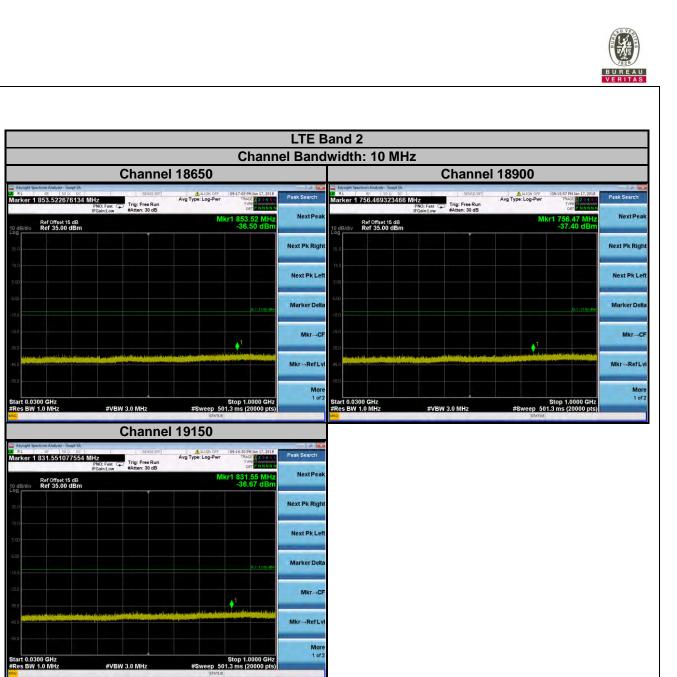
LTE Band 2

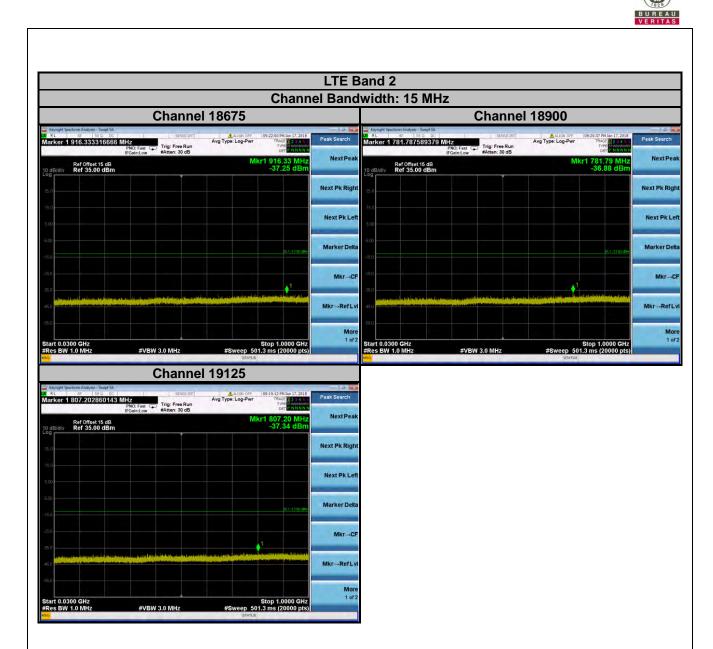
30MHz ~ 1GHz

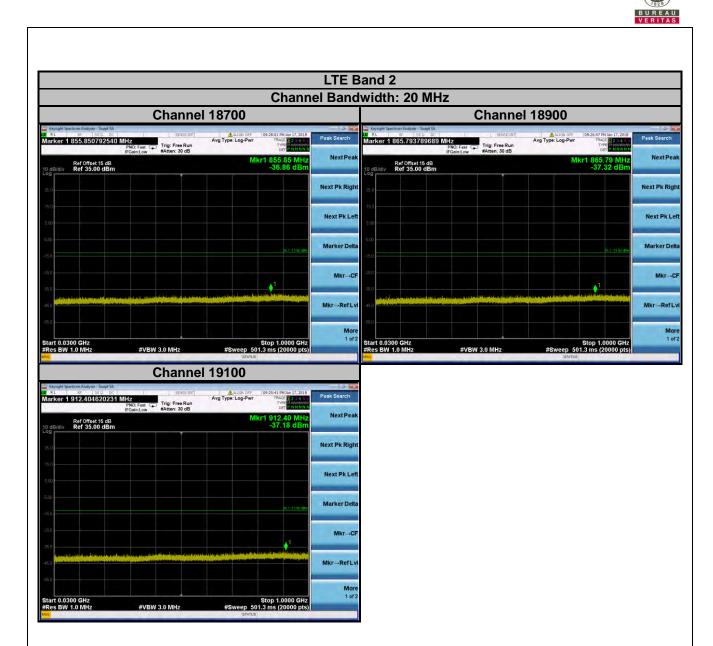






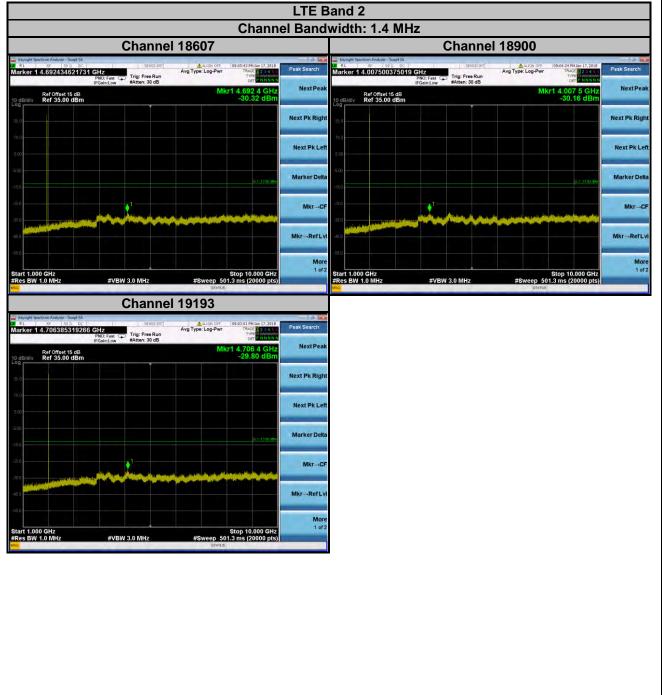


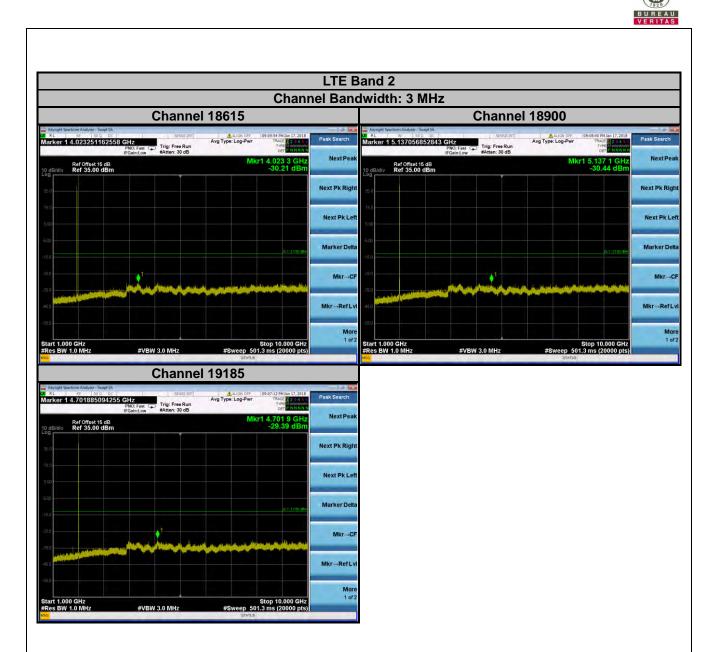


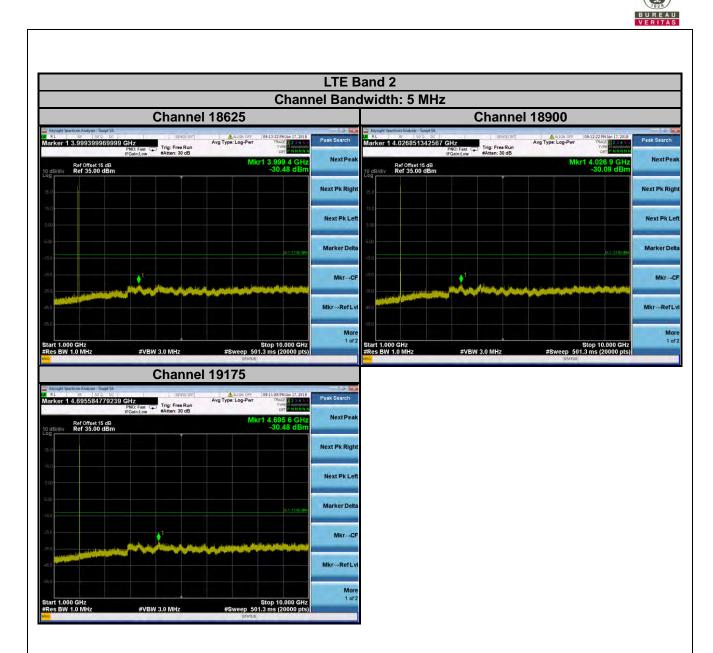


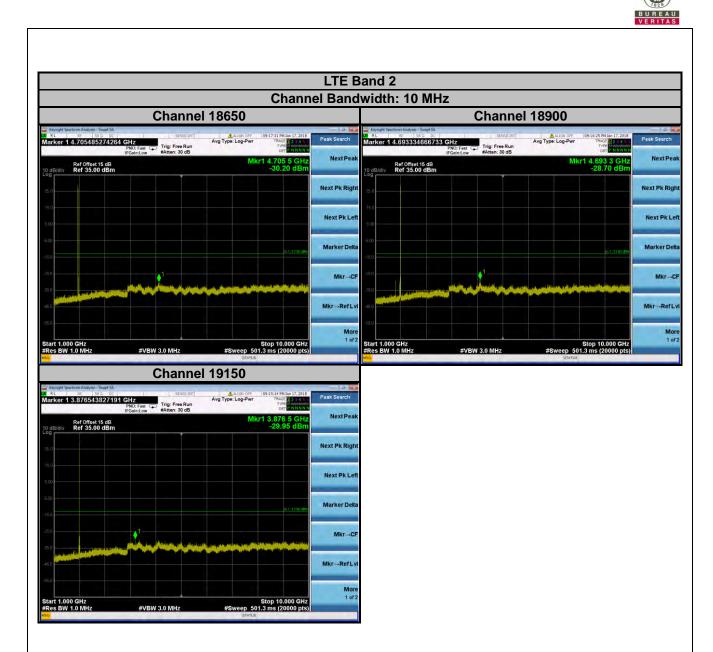


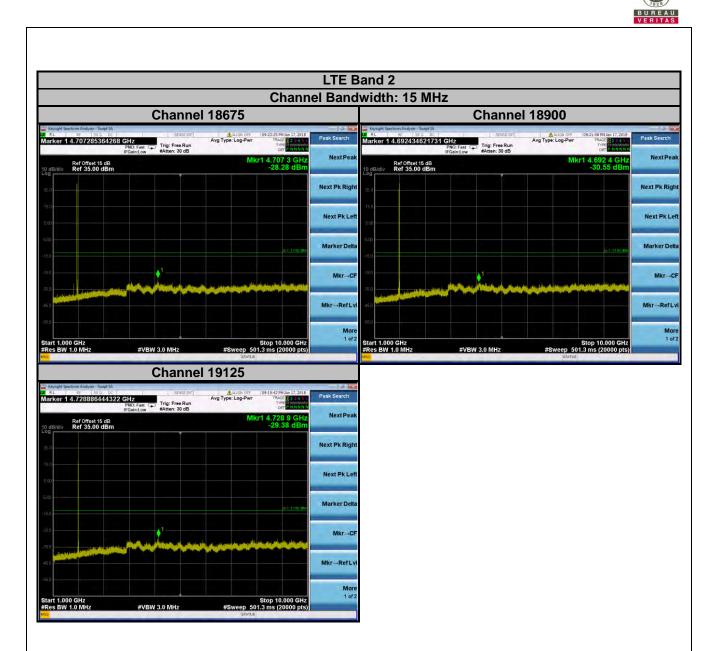
1GHz ~ 10GHz

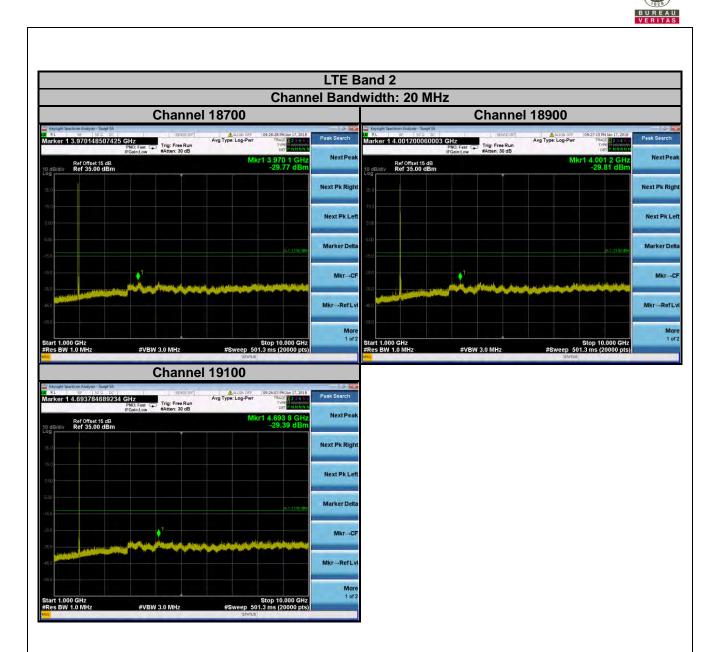






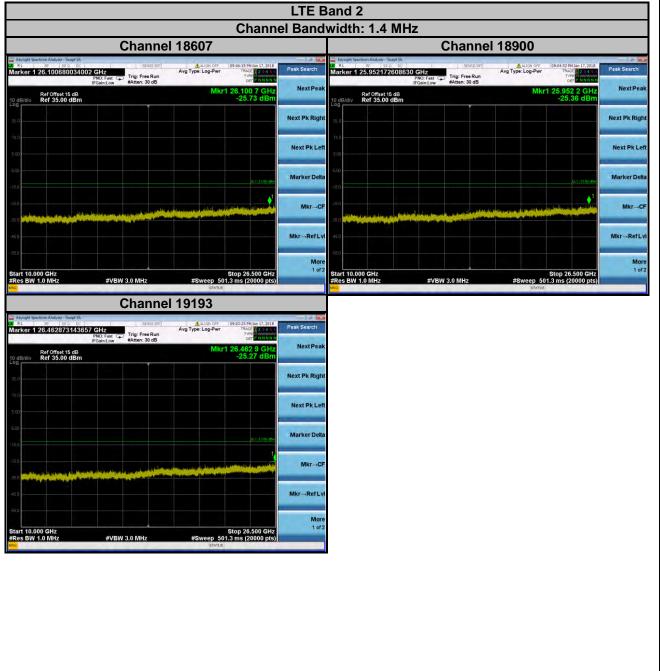






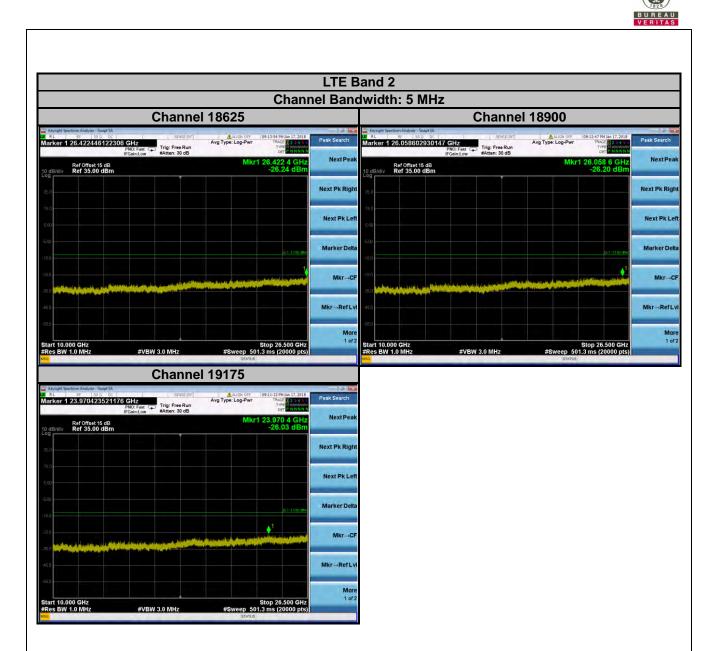


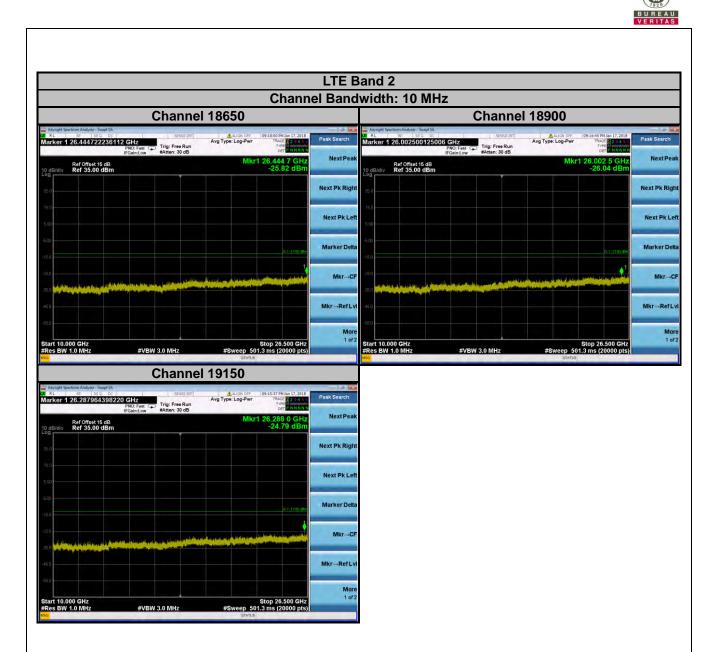
10GHz ~ 26.5GHz

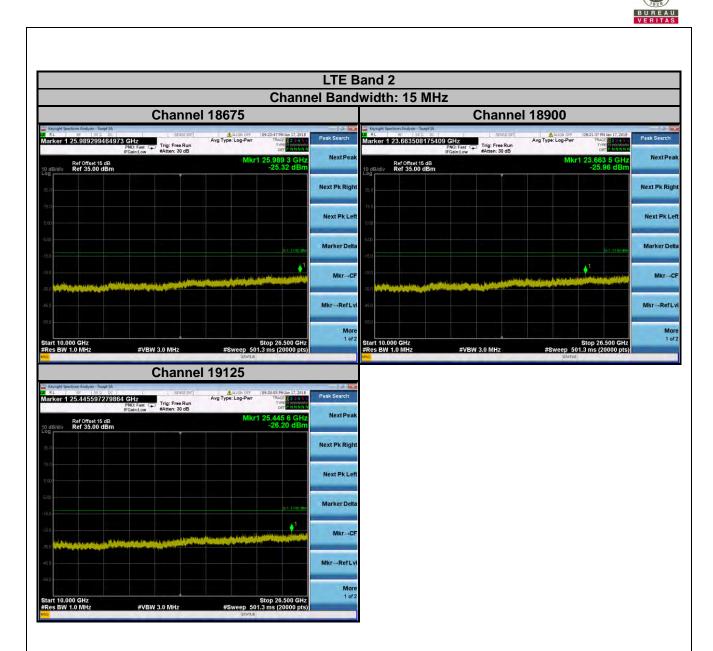


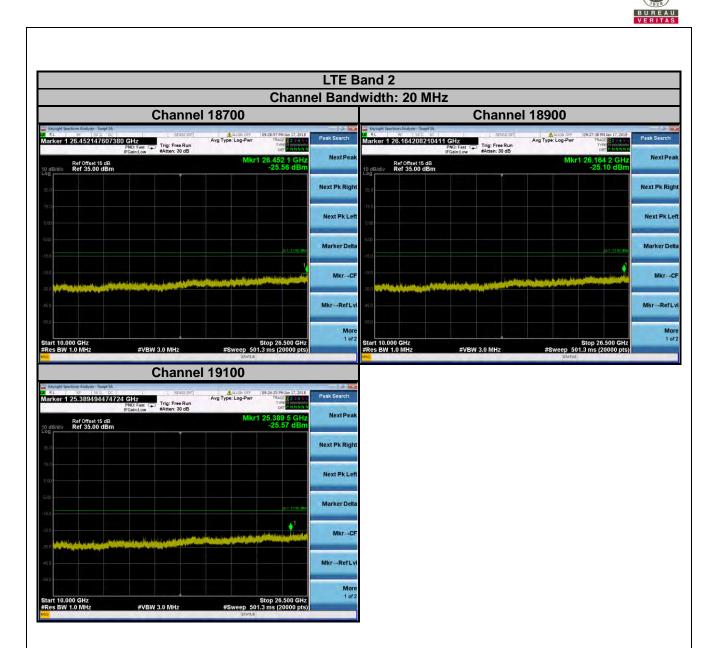
		LTE B			
Channe		nnel Band	lwidth: 3 MHz Channe	149000	
eysight Spectrum Analyzer - Swept SA			Keysight Spectnum Analyzer - Swept SA		
RL RF S40 DC SENSE:INT rker 1 25.272338616931 GHz PNO: Fast IFGainLow #Atten: 30 dB	ALIGN OFF 09:10:18 PM Jan 17, 201 Avg Type: Log-Pwr TRACE 1 - 4 Type Det in the statement		RL RF S9.0_DC SENSE:UTI Marker 1 26,259087954398 GHz Trig: Free Run IFGain2.ow Trig: Free Run #Atten: 30 dB	TYPE DET PNNNNN	Search
Ref Offset 15 dB B/dlv Ref 35.00 dBm	Mkr1 25.272 3 GH -25.76 dBr	z NextPeak	Ref Offset 15 dB	Mkr1 26.259 1 GHz -26.21 dBm	lext Pe
		Next Pk Right	250	Next	Pk Rig
		Next Pk Left	5.00	Nex	kt Pk L
	p. 1 - 12 80 db	Marker Delta	500	St H200der	ker De
		Mkr→CF			Mkr
		Mkr→RefLvi		Mkr-	Ref
t 10.000 GHz	Etan 26 500 CH	More 1 of 2	25.0 Start 10.000 GHz	Stop 26 500 CM	M 1
s BW 1.0 MHz #VBW 3.0 MHz	Stop 26.500 GH #Sweep 501.3 ms (20000 pts status	s)	#Res BW 1.0 MHz #VBW 3.0 MHz	Stop 26,500 GHz #Sweep 501.3 ms (20000 pts) status	
Channe	l 19185				
аусуда Таресткини Анајули - Sano Boo RC 580 Boo PNO: Fast PNO: Fast IFGaint.cov #Atten: 30 dB	Aug North 09:07:31 PM Jan 17, 201 Avg Type: Log-Pwr TRACE	B Peak Search			
IFGain:Low #Atten: 30 dB Ref Offset 15 dB IB/div Ref 35.00 dBm	Mkr1 24.386 2 GH -25.77 dBr	Z NextPeak			
		Next Pk Right			
		Next Pk Left			
		Marker Delta			
	↓ ¹	Mkr→CF			
	and the set of the second se				
		Mkr→RefLvi			
		Mkr→RefLvi			

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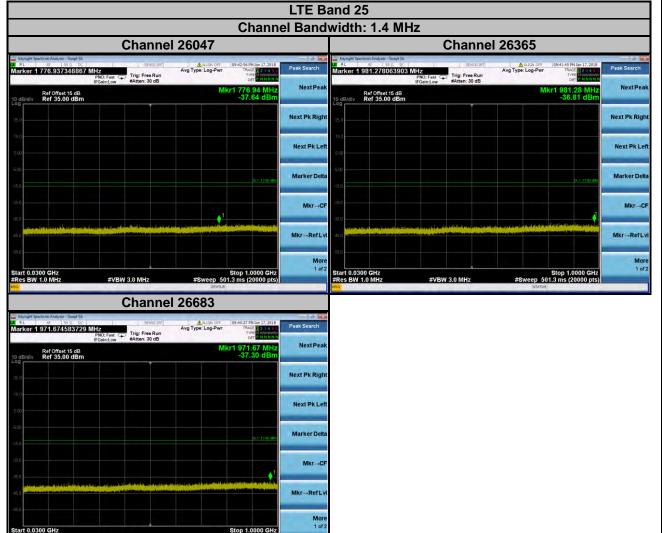






LTE Band 25

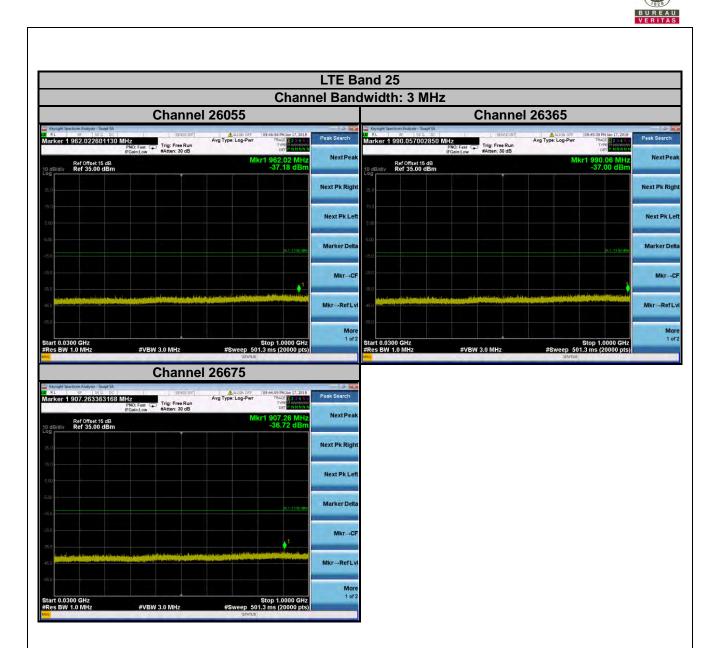
30MHz ~ 1GHz

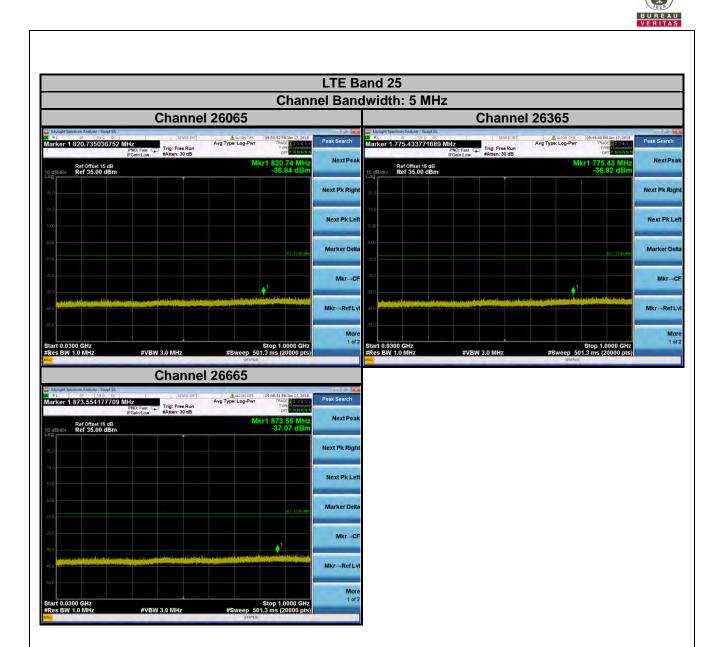


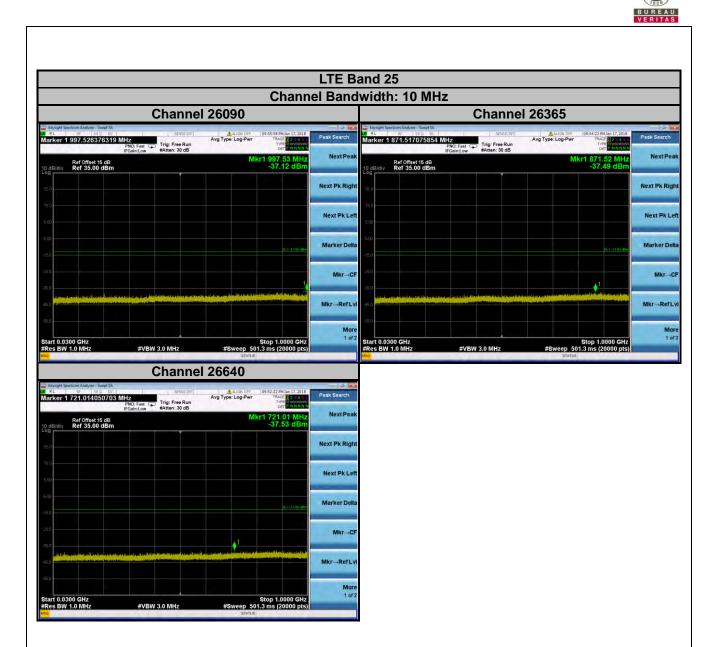
Stop 1.0000 GHz #Sweep 501.3 ms (20000 pts)

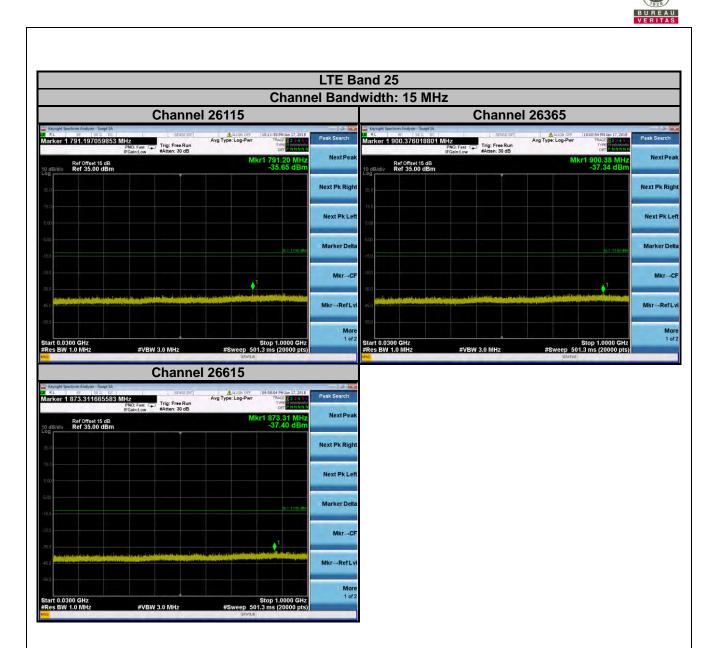
tart 0.0300 GHz Res BW 1.0 MHz

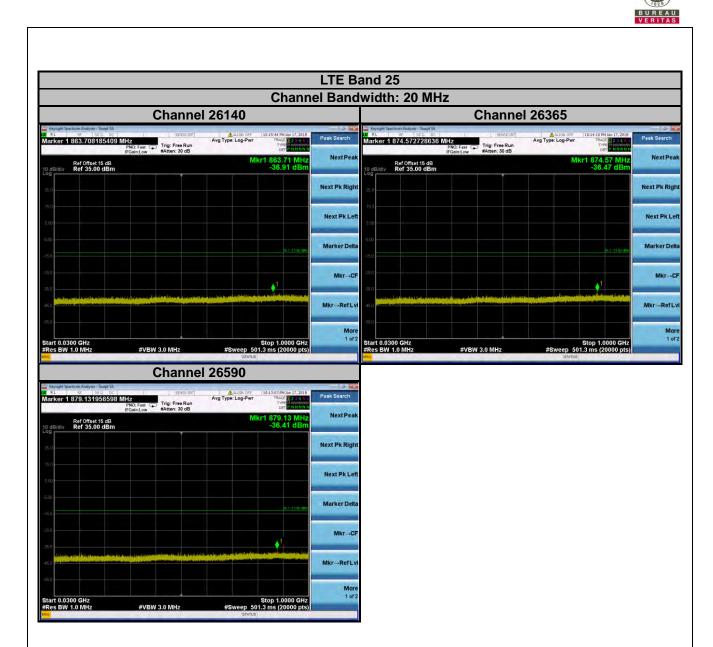
#VBW 3.0 MHz





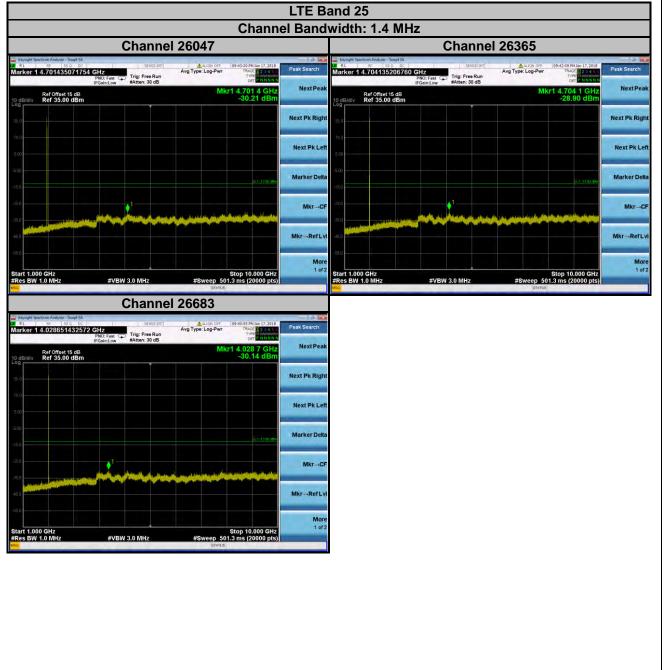


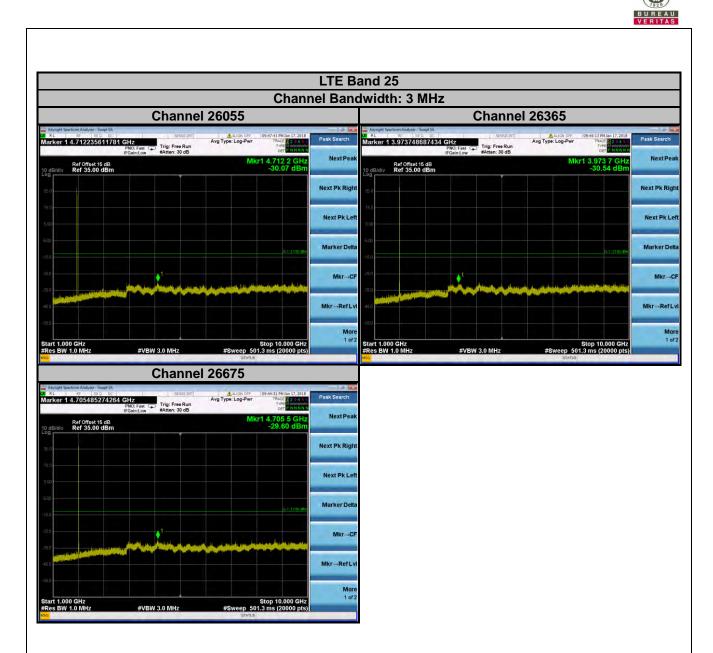


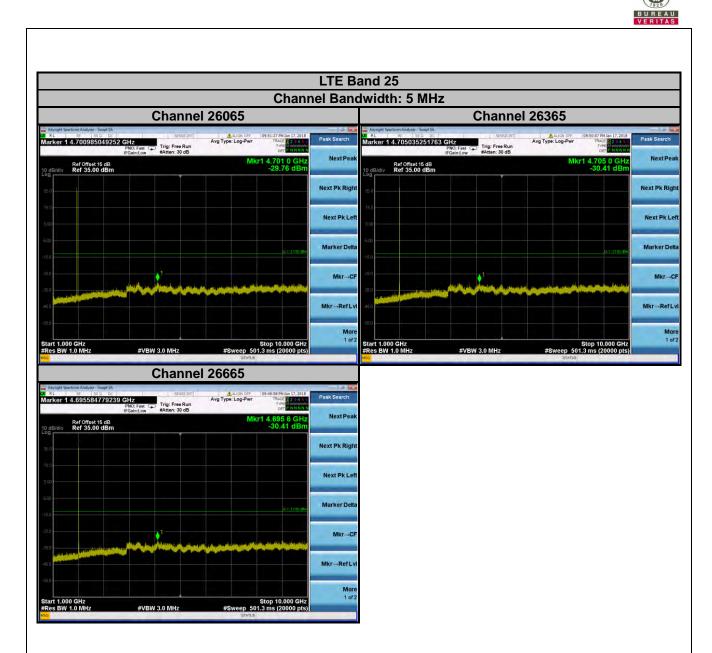


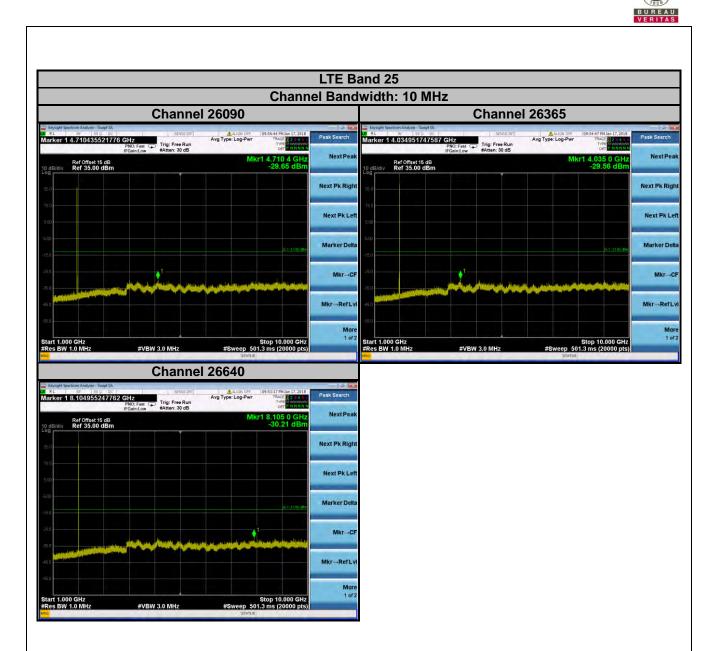


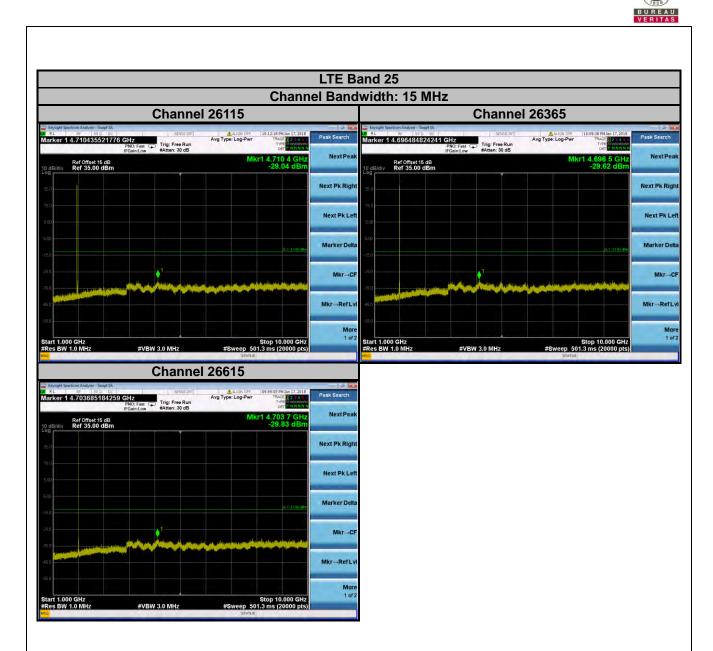
1GHz ~ 10GHz

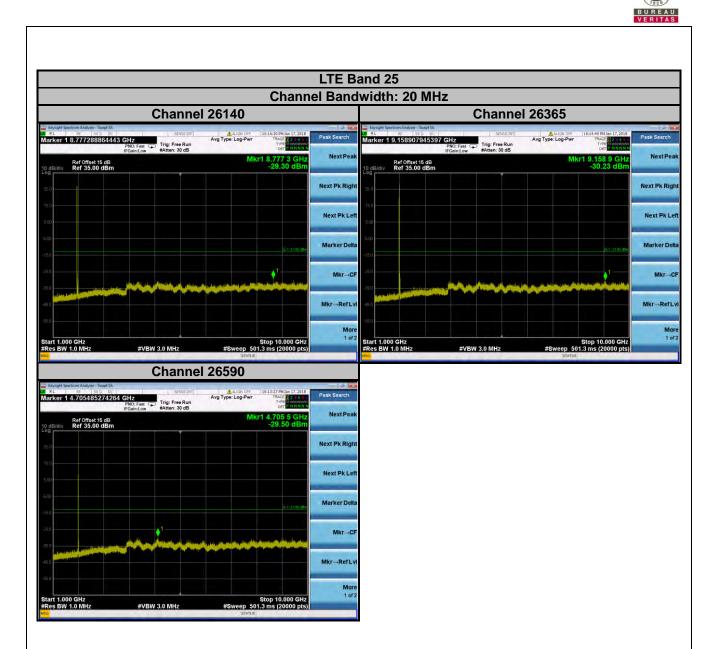






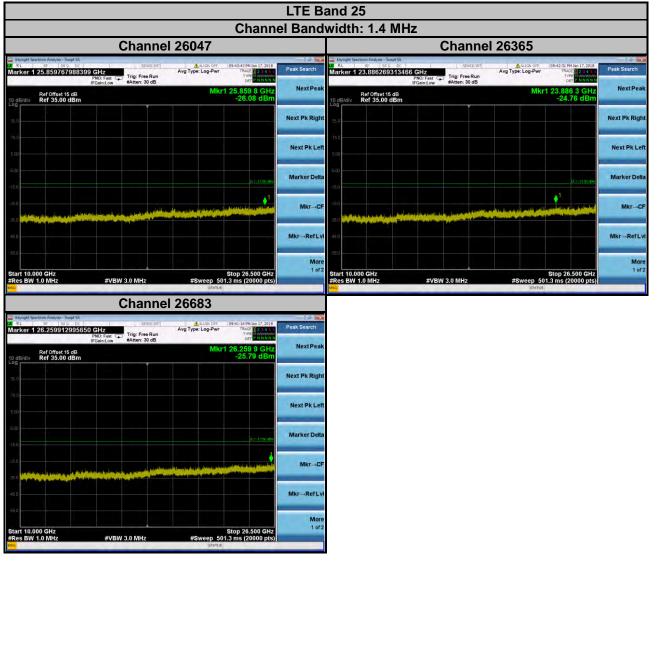


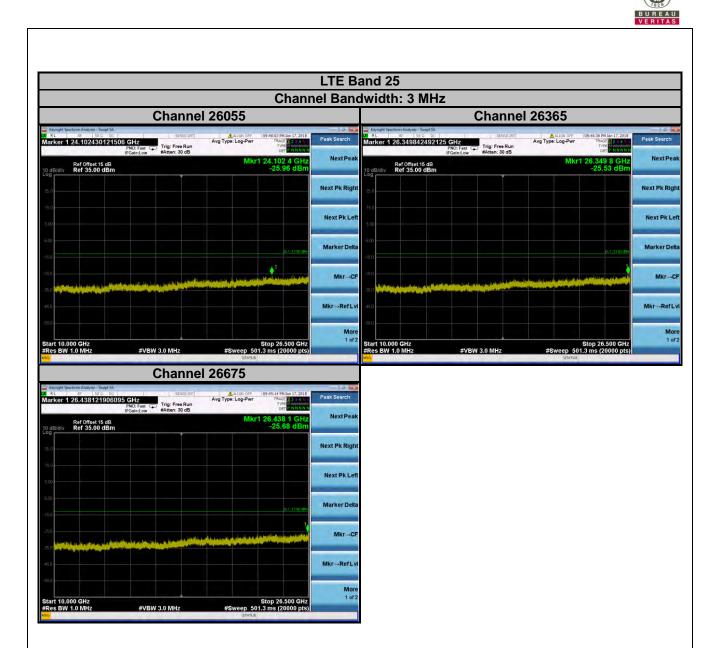


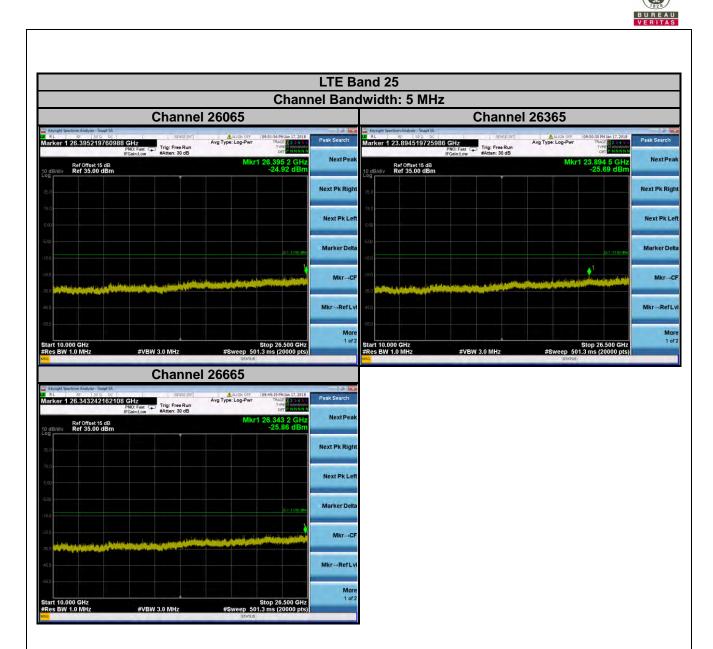


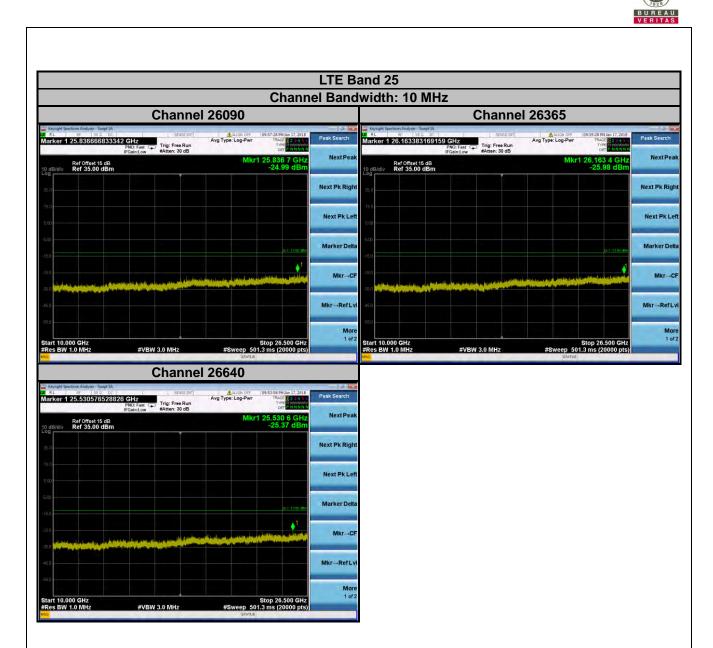


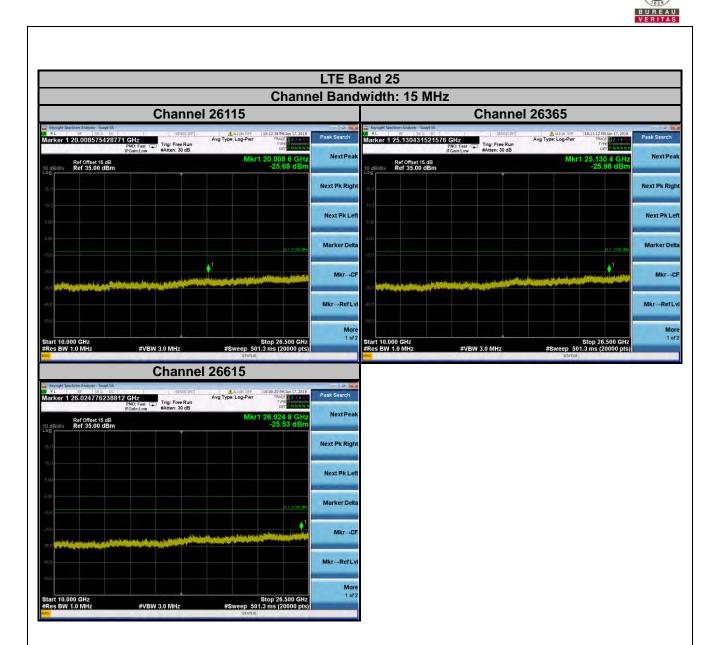
10GHz ~ 26.5GHz

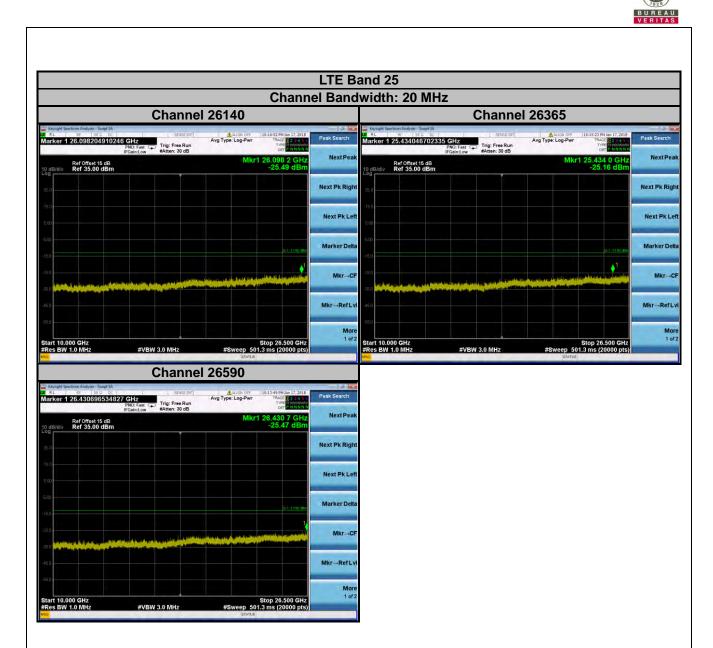














4.7 Radiated Emission Measurement

4.7.1 Limits of Radiated Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P) dB$. The emission limit is equal to -13 dBm.

4.7.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution horn.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power 2.15 dBi.

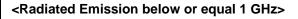
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

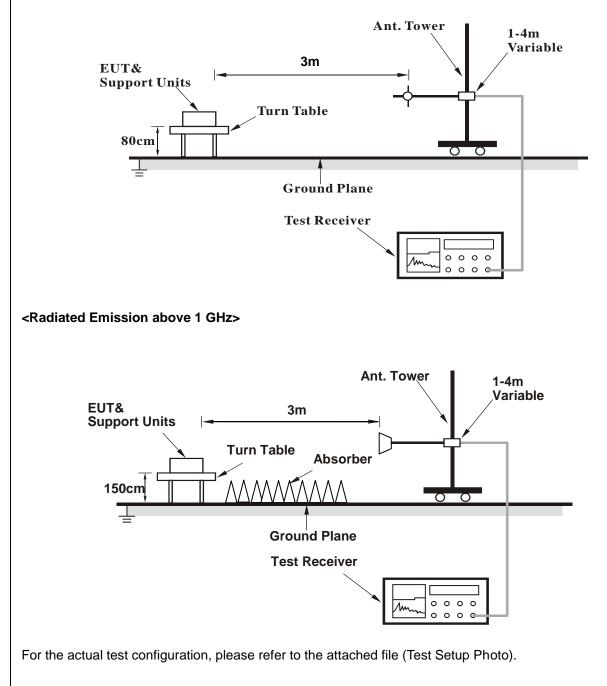
4.7.3 Deviation from Test Standard

No deviation.



4.7.4 Test Setup







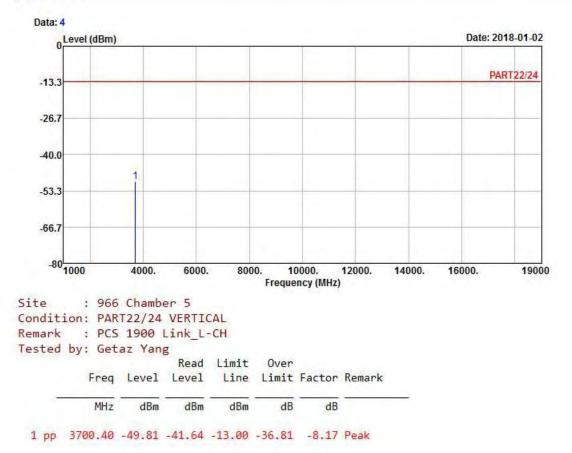
4.7.5 Test Results GSM: Low Channel





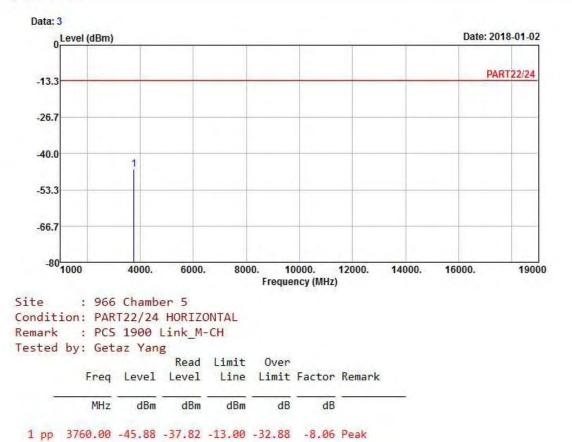


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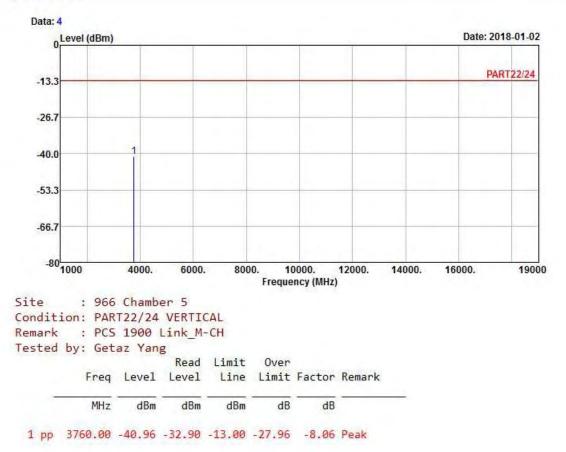








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High Channel

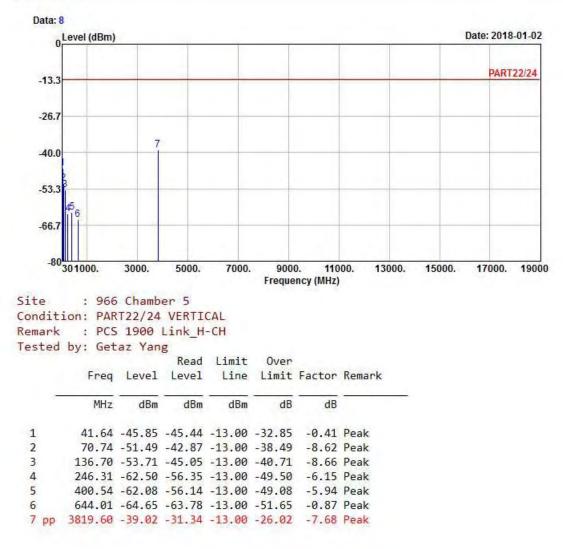






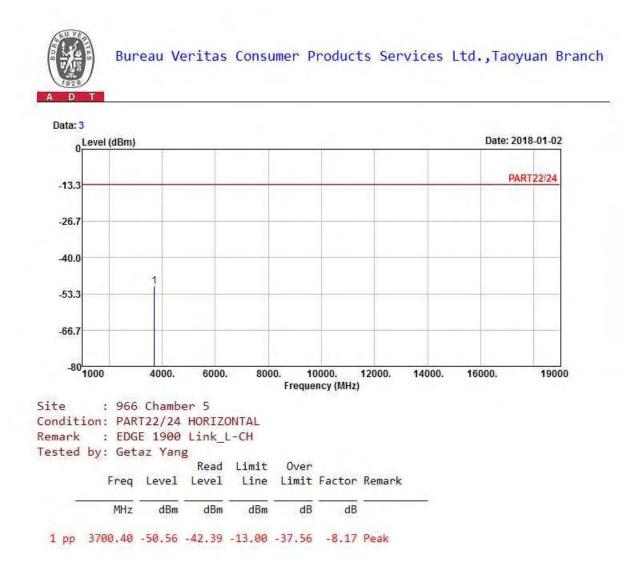


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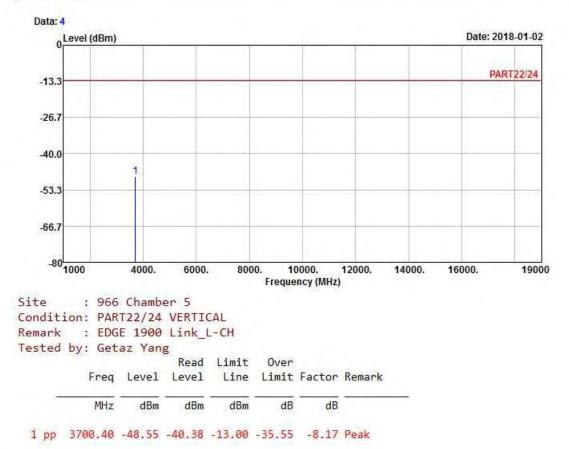
EDGE: Low Channel





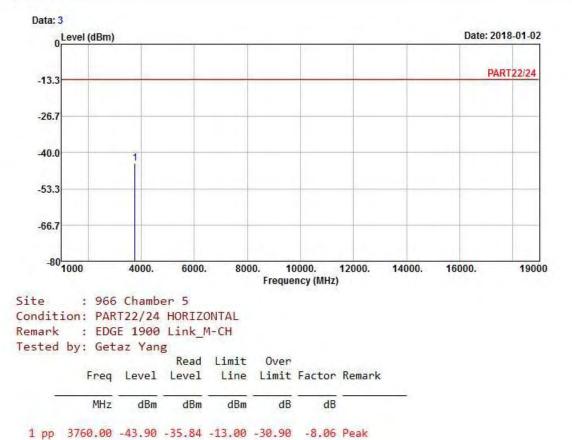


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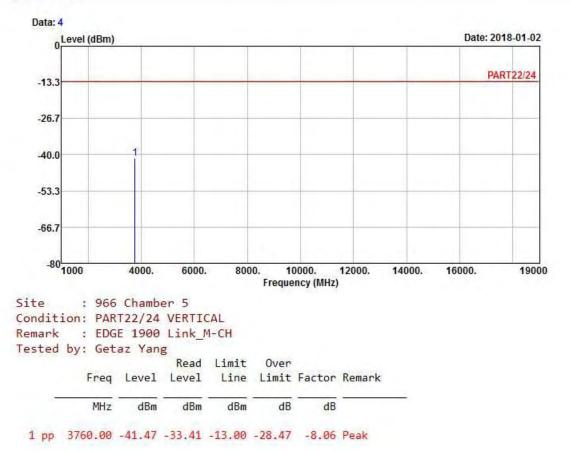








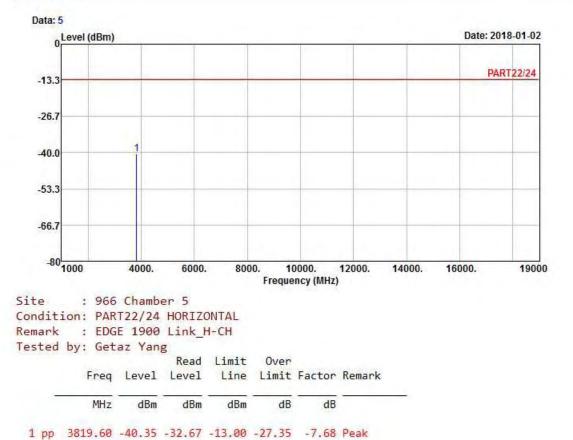
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High Channel

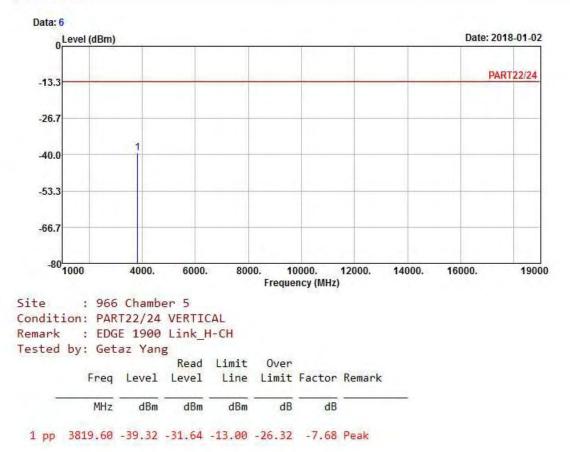








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WCDMA: Low Channel

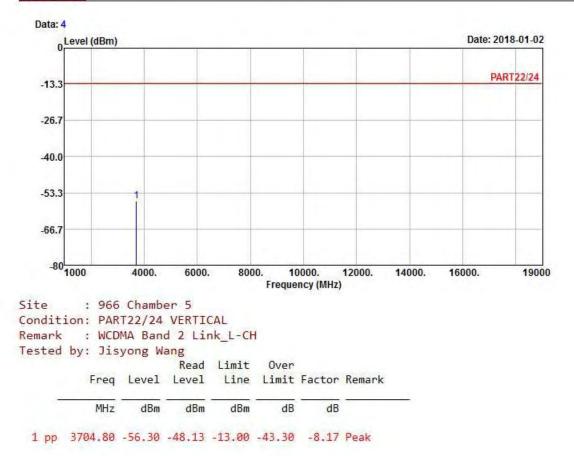


1 pp 3704.80 -53.44 -45.27 -13.00 -40.44 -8.17 Peak



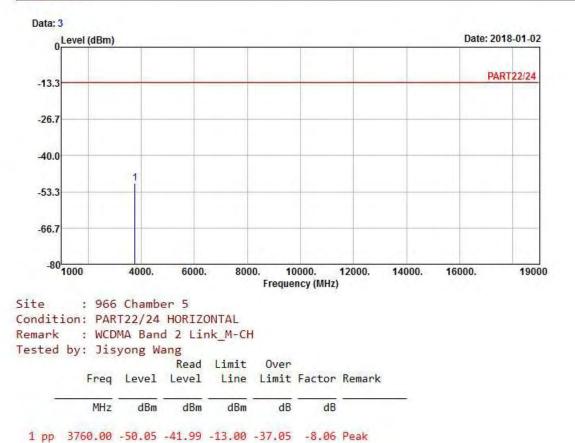


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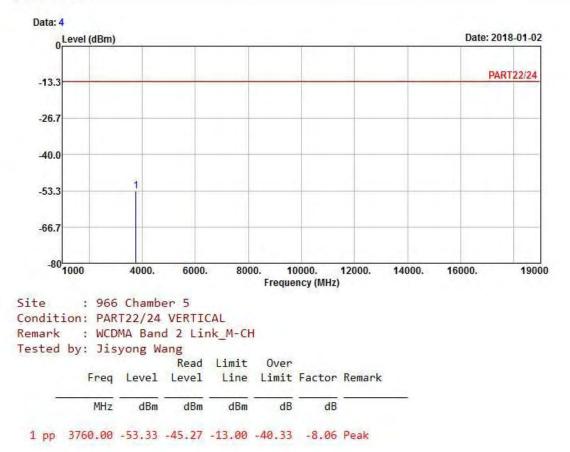






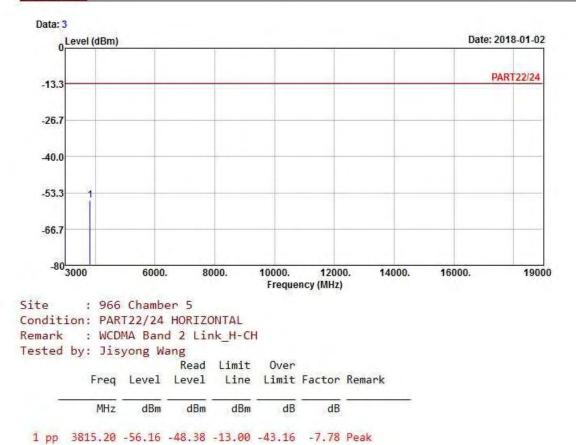


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High Channel





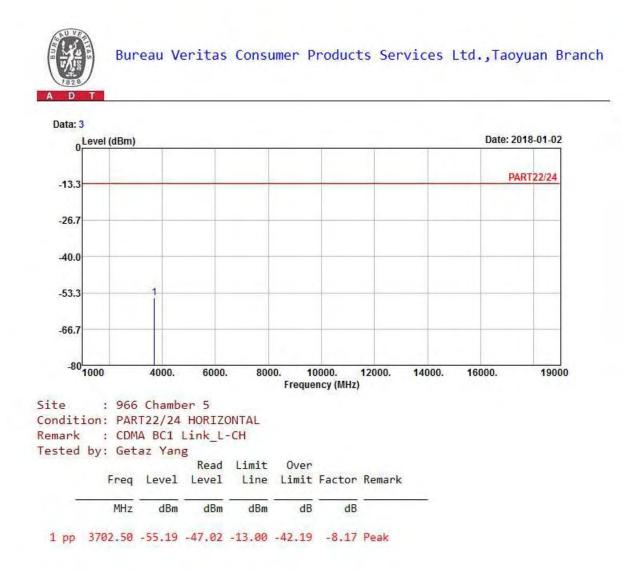


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CDMA: Low Channel





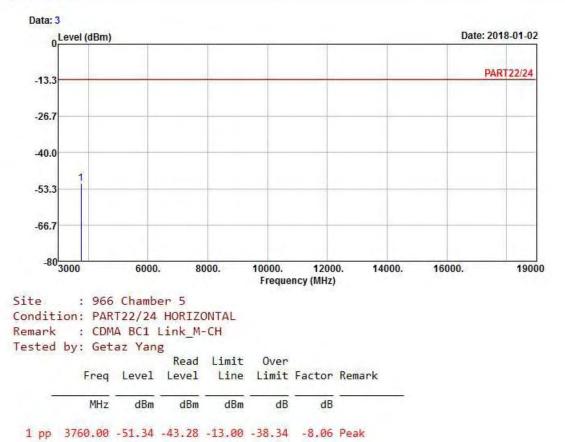


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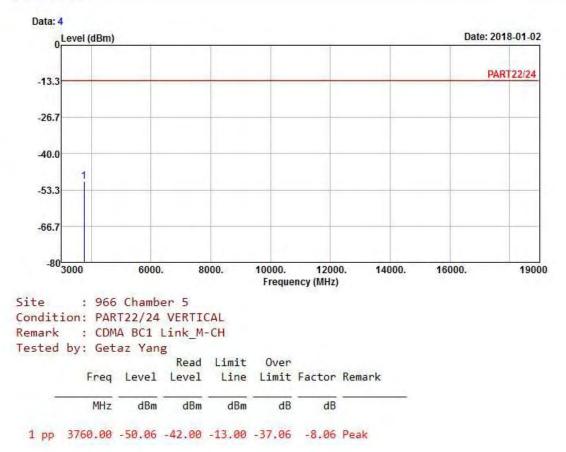








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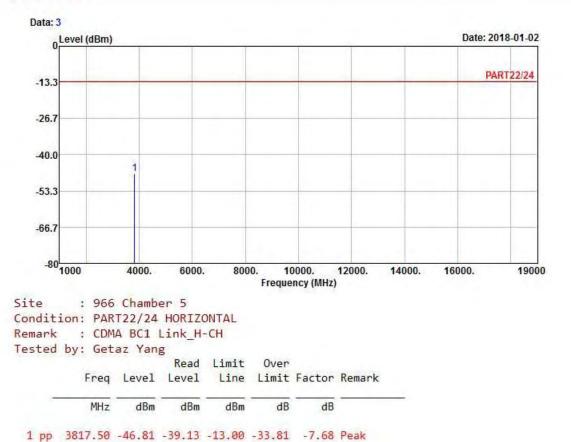




High Channel



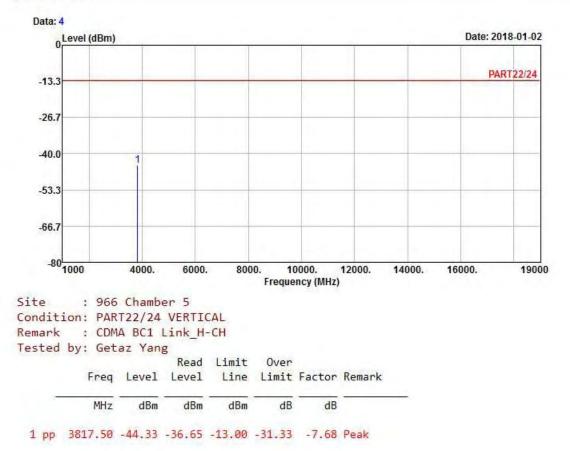
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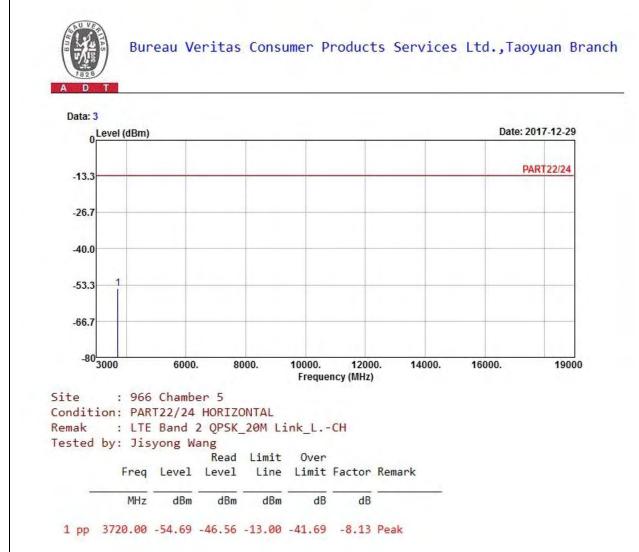


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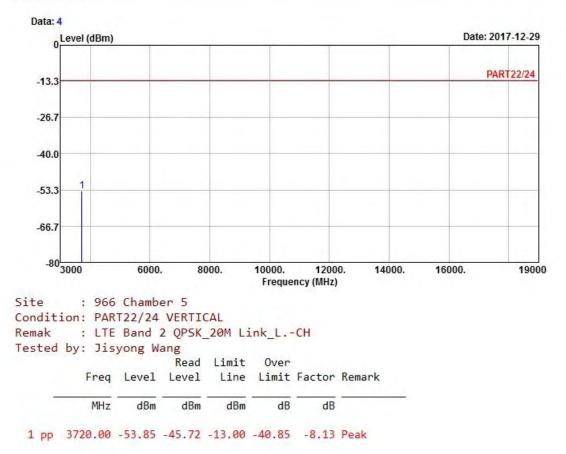
LTE Band 2 Channel Bandwidth: 20 MHz / QPSK Low Channel







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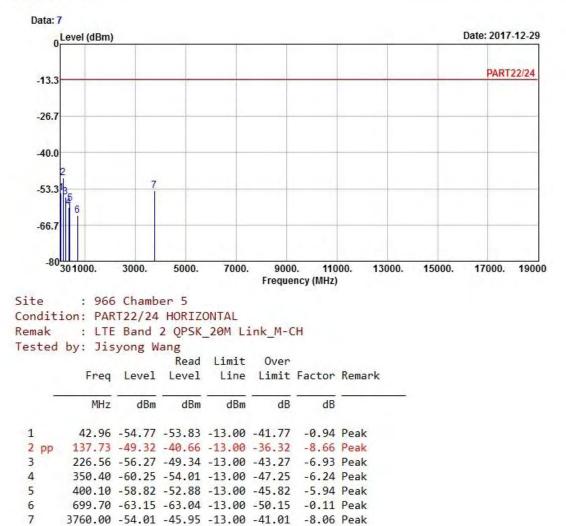




Middle Channel



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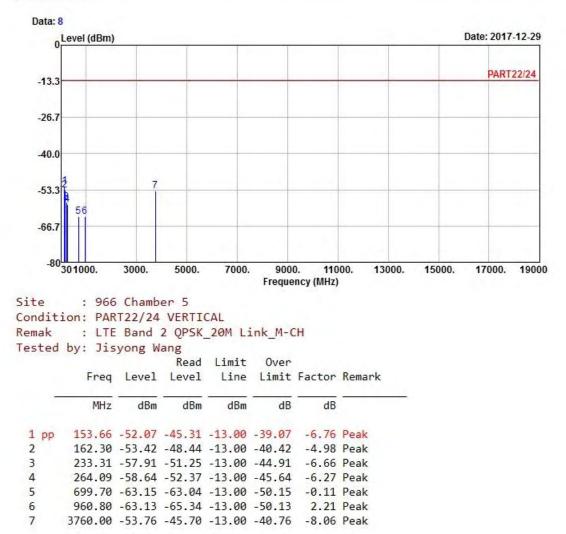


7





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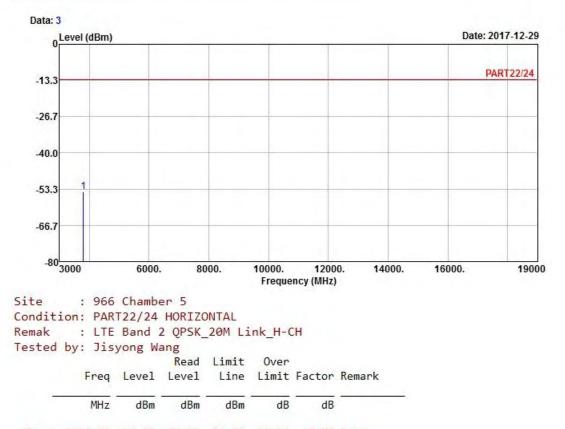




High Channel



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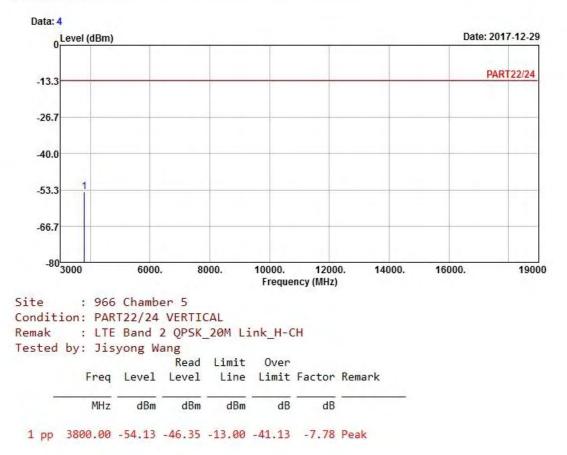


1 pp 3800.00 -54.17 -46.39 -13.00 -41.17 -7.78 Peak



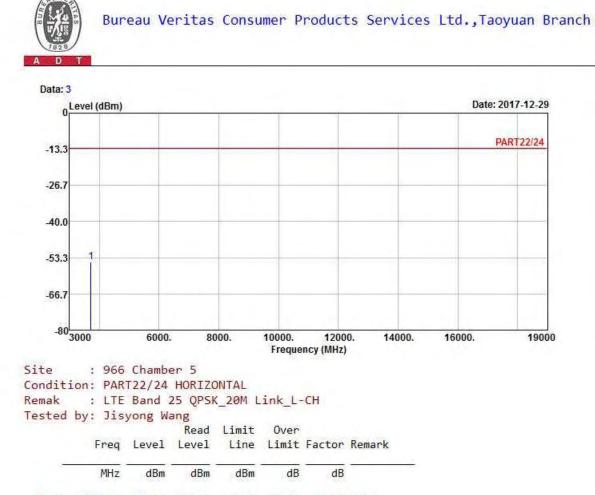


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LTE Band 25 Channel Bandwidth: 20 MHz / QPSK Low Channel

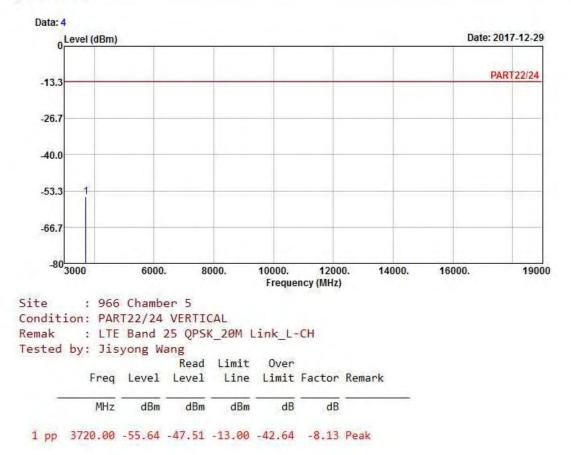


1 pp 3720.00 -55.03 -46.90 -13.00 -42.03 -8.13 Peak





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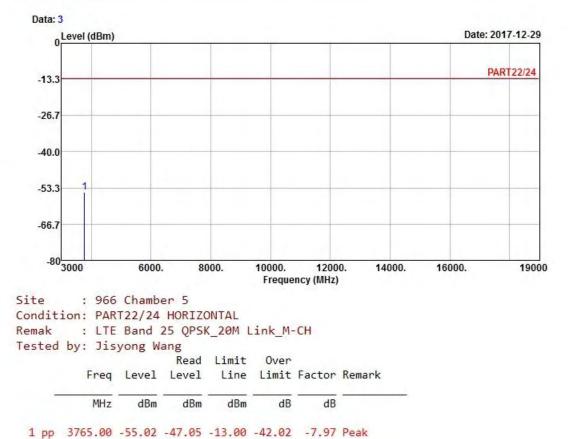




Middle Channel



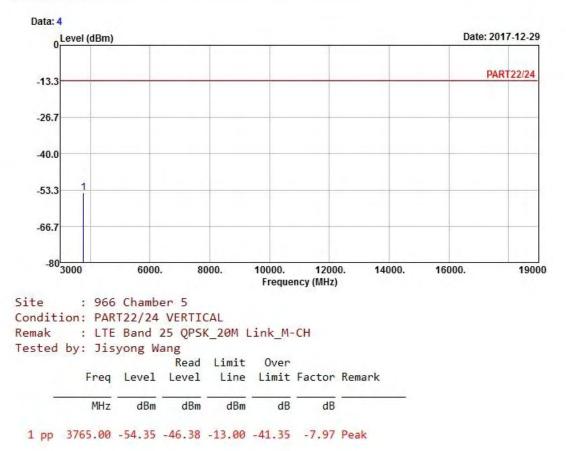
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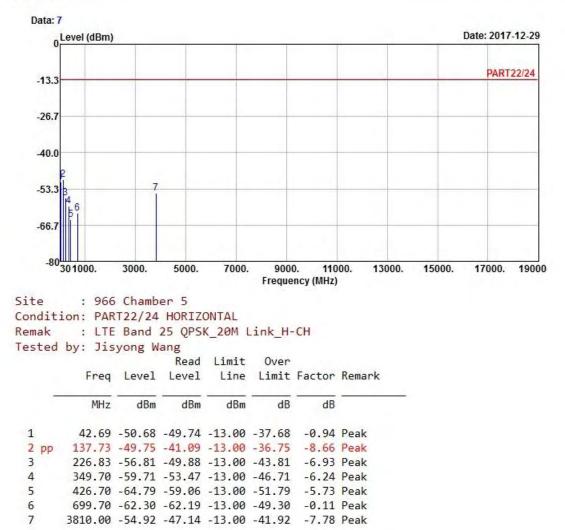




High Channel



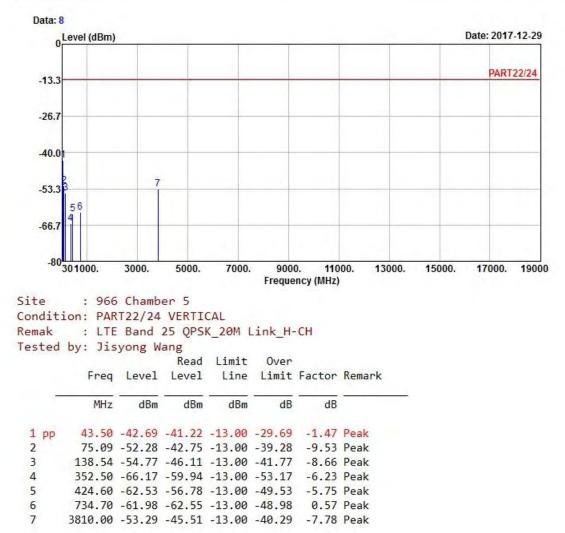
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5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).



Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Hwa Ya EMC/RF/Safety Tel: 886-3-3183232 Fax: 886-3-3270892

Email: <u>service.adt@tw.bureauveritas.com</u> Web Site: <u>www.bureauveritas-adt.com</u>

The address and road map of all our labs can be found in our web site also.

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