

Figure 8.5-21: Conducted spurious emissions of 15 MHz two top channels, two-carrier operation

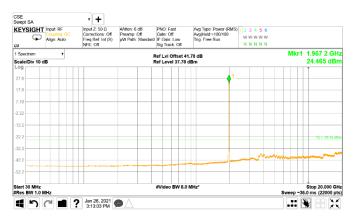


Figure 8.5-23: Conducted spurious emissions of 20 MHz two mid channels, two-carrier operation

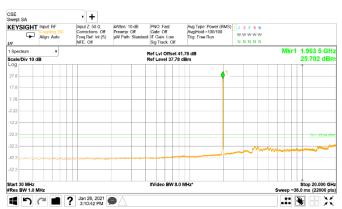
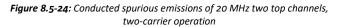


Figure 8.5-20: Conducted spurious emissions of 15 MHz two mid channels, two-carrier operation



Figure 8.5-22: Conducted spurious emissions of 20 MHz two low channels, two-carrier operation

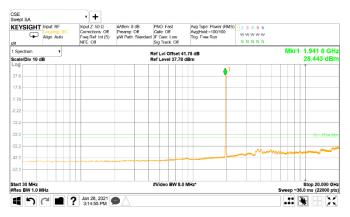


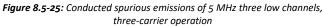


Section 8 Test name Specification

Testing data Spurious out-of-band emissions (Band 2/25a) FCC Part 24 and RSS-133, Issue 6







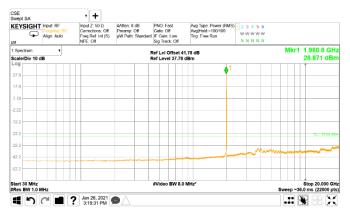


Figure 8.5-27: Conducted spurious emissions of 5 MHz three top channels, three-carrier operation

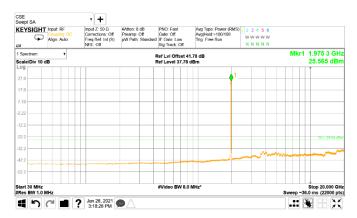


Figure 8.5-29: Conducted spurious emissions of 10 MHz three mid channels, three-carrier operation

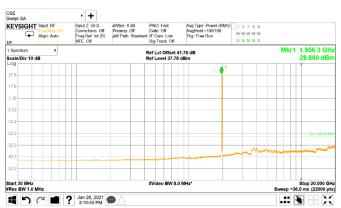
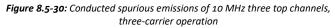


Figure 8.5-26: Conducted spurious emissions of 5 MHz three mid channels, three-carrier operation



Figure 8.5-28: Conducted spurious emissions of 10 MHz three low channels, three-carrier operation

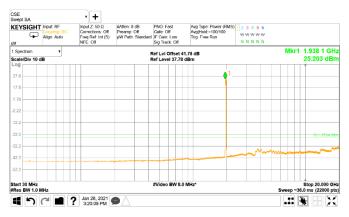


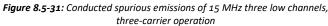


Section 8TeTest nameSpSpecificationFC

Testing data Spurious out-of-band emissions (Band 2/25a) FCC Part 24 and RSS-133, Issue 6







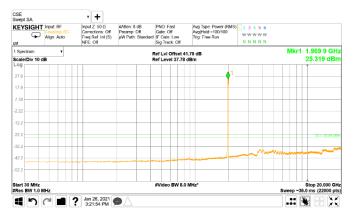


Figure 8.5-33: Conducted spurious emissions of 15 MHz three top channels, three-carrier operation

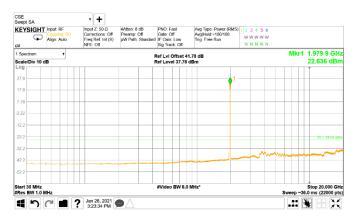


Figure 8.5-35: Conducted spurious emissions of 20 MHz three mid channels, three-carrier operation

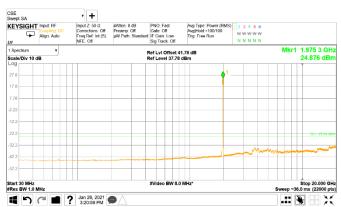


Figure 8.5-32: Conducted spurious emissions of 15 MHz three mid channels, three-carrier operation

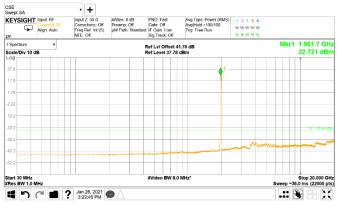
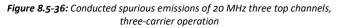


Figure 8.5-34: Conducted spurious emissions of 20 MHz three low channels, three-carrier operation





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Testing data Spurious out-of-band emissions (Band 2/25a) FCC Part 24 and RSS-133, Issue 6



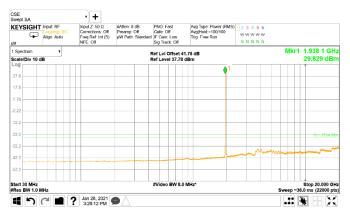


Figure 8.5-37: Conducted spurious emissions of 5 MHz two low channels, LTE + NR operation

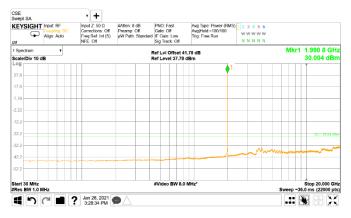


Figure 8.5-39: Conducted spurious emissions of 5 MHz two top channels, LTE + NR operation

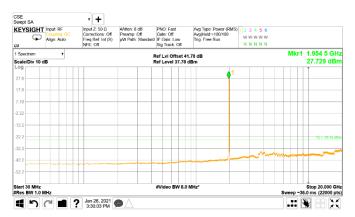


Figure 8.5-41: Conducted spurious emissions of 10 MHz two mid channels, LTE + NR operation

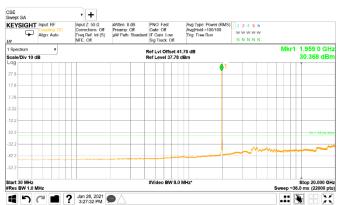
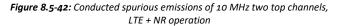


Figure 8.5-38: Conducted spurious emissions of 5 MHz two mid channels, LTE + NR operation



Figure 8.5-40: Conducted spurious emissions of 10 MHz two low channels, LTE + NR operation





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Testing data Spurious out-of-band emissions (Band 2/25a) FCC Part 24 and RSS-133, Issue 6



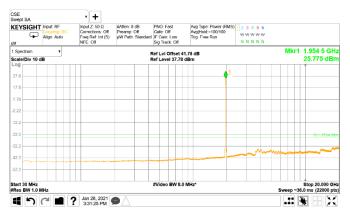


Figure 8.5-43: Conducted spurious emissions of 15 MHz two low channels, LTE + NR operation

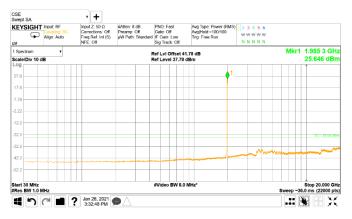


Figure 8.5-45: Conducted spurious emissions of 15 MHz two top channels, LTE + NR operation



Figure 8.5-47: Conducted spurious emissions of 20 MHz two mid channels, LTE + NR operation

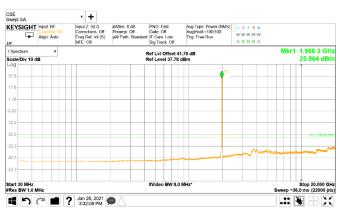


Figure 8.5-44: Conducted spurious emissions of 15 MHz two mid channels, LTE + NR operation

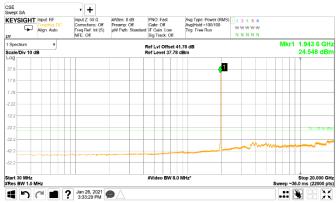
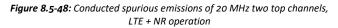


Figure 8.5-46: Conducted spurious emissions of 20 MHz two low channels, LTE + NR operation







Test data, continued

On the plots below the measured "Total Channel Power" value must be lower than -25.04 dBm



Figure 8.5-49: Conducted band edge emission at 1930 MHz, 5 MHz channel single-carrier operation (RBW = 1% of EBW)

	BE 1PC 10M el Power	B25 LBE 1 Channel P		B25 LBE Channel	1PC 20M Power	B25 UBE 1PC 5M Channel Power	• +
	Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.99502500 Avg Hold:>100/100 Radio Std: None	10 GHz	
Graph	•		F	tef LvI Offset 41	.78 dB	Mkr1 1.9	95000000 GH
icale/Div	10.0 dB		F	tef Value 41.78	1Bm		-41.296 dBm
.og							
21.8							
11.8				- the second sec			
1.78		1		1			
8.22		1		1			
18.2							
28.2		1		1			
38.2)					
48.2	and the second s				and the second s		
	95025 GHz 10.000 kHz		١	/ideo BW 100.0	D kHz*	Swee	Span 15 MHz p 179 ms (1001 pts
Metrics	•						
Total Cl	hannel Power	-36.58 dBm / 50.0) kHz				
Total Po	ower Spectral Densit	y83.57 dB	m/Hz				
_							
		Jan 26, 2021 11:28:13 AM					

Figure 8.5-51: Conducted band edge emission at 1995 MHz, 5 MHz channel single-carrier operation (RBW = 1% of EBW)



Figure 8.5-50: Conducted band edge emission at 1929 MHz, 5 MHz channel single-carrier operation (RBW = 1 MHz)

	neut DC			Channel Power		Channel Power		B25 UB Channe
,	Coupling: DC Nign: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate: Off	Center Freq: 1.996 Avg/Hold:>100/100 Radio Std: None			
l Graph Scale/Div 10.0 d	,			Ref Lvi Offset 41.7 Ref Value 41.78 dE			Mkr1	1.996000000 GH -39.587 dBi
Log				Kel Value 41.70 de				-05.001 0.01
21.8	7						_	
11.8								
8.22							_	
18.2								
38.2			1	- former				
Center 1.996500				Video BW 1.0000 M	/Hz*			Span 15 Mi
Res BW 100.00							Sv	weep 1.80 ms (1001 pt
2 Metrics	•							
Total Channel	Power	-31.69 dBm / 1.00	MHz					
Total Power S	pectral Density	-91.69 dB	m/Hz					
4 50	3 🔳 🤈	Jan 26, 2021	Δ					

Figure 8.5-52: Conducted band edge emission at 1996 MHz, 5 MHz channel single-carrier operation (RBW = 1 MHz)



Test data, continued



Figure 8.5-53: Conducted band edge emission at 1930 MHz, 10 MHz channel single-carrier operation (RBW = 1% of EBW)

B25 LBE Channel I		B25 UB Channe	E 1PC 5M Power		B25 UBE Channel		B25 UBE 1PC 10M Channel Power	· +
	T Input RF Coupling DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref. Int (S NFE: Off		Gate:		Center Freq: 1.995050 Avg[Hold:>100/100 Radio Std: None	000 GHz	
Graph cale/Div 10	T				Offset 41 ue 41.78 d		Mkr1 1.995	000000 GH -41.196 dBr
.og				Vel va	100			41.150 abi
31.8								
21.8								
11.8								-
1.78								
3.22	1							_
18.2	- 1							
28.2					Į_			
38.2					- ()			-
48.2 48.2	-				-	all sectors and the sectors and		
enter 1.995 Res BW 30				Video	ار BW 300.00) kHz*	Curren 2	Span 25 MH 3.1 ms (1001 pt
Metrics	.000 KH2						Sweep 5	3.1 ms (1001 pe
Total Cha	nnel Power	-37.80 dBm /	100 kHz					
Total Pow	er Spectral Densit	y -87.80	dBm/Hz					
1 5		Jan 26, 2021 11:34:48 AM						

Figure 8.5-55: Conducted band edge emission at 1995 MHz, 10 MHz channel single-carrier operation (RBW = 1% of EBW)

LBE 1PC 5M B25 LBE 1MHZ Channel Power B25 LBE 1PC 10M + KEYSIGHT Input RF Center Freq: 1.928 Avg/Hold:>100/100 Radio Std. None Att Pre Trig: Free Gate: Off #IF Gain: Off (S) Align: Auto Low Mkr1 1.92900000 GH Scale/Div 10.0 dB ۲ Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm 39.254 d 8.2 Center 1.92850 GHz #Res BW 100.00 kHz Span 25 MHz Sweep 3.00 ms (1001 pts Autrics Total Channel Power -30.76 dBm / 1.00 MHz Total Power Spectral Density -90.76 dBm/Hz ■ ? Jan 26, 2021 10:32:07 AM

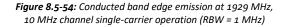




Figure 8.5-56: Conducted band edge emission at 1996 MHz, 10 MHz channel single-carrier operation (RBW = 1 MHz)



Test data, continued

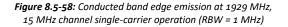


Figure 8.5-57: Conducted band edge emission at 1930 MHz, 15 MHz channel single-carrier operation (RBW = 1% of EBW)

B25 UBE 1F Channel Po			B25 UBE Channel F			B25 UBE Channel	1PC 10M Power	B25 UBE 1PC 15M Channel Power	1	• +
	Input: RF Coupling: DC Align: Auto	Correc	2:50 Ω tions: Off Ref: Int (S) Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate: I		Center Freq: 1.99507 Avg Hold:>100/100 Radio Std: None	5000 GHz		
Graph cale/Div 10.0	۲ dB					Offset 41 ue 41.78		Mkr	1 1.995000 -37.	000 GH 417 dBr
og 1 8						Î				
21.8										
1.8	proved	- m	~~~~	······	.					
.78										
.22	1									
8.2						1				
8.2	1					1				
18.2	5					-				
enter 1.99508					Video I	U 3W 510.0	0 647			ipan 35 MH
Res BW 51.00					video i	514 510.0	U KHZ		Sweep 16.1 m	
Metrics	•									
Total Chann	el Power	-36.5	2 dBm / 15	0 kHz						
Total Power	Spectral Densit	y	-88.28 dE	8m/Hz						
15		Jan 2	26, 2021 7:45 AM						.:: 🔖	
4 -) (11:3	7:45 AM						•••	

Figure 8.5-59: Conducted band edge emission at 1995 MHz, 15 MHz channel single-carrier operation (RBW = 1% of EBW)

LBE 1PC 5M B25 LBE 1PC 15M Channel Power B25 LBE 1MHZ Channel Power B25 LBE 1PC 10M + KEYSIGHT Input RF Center Freq: 1.928 Avg/Hold > 100/100 Radio Std. None Atte Pre uW Trig: Free Gate: Off #IF Gain: Off (S) Align: Auto Low Mkr1 1.929000000 GHz -41.657 dBm ۲ Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm Scale/Div 10.0 dB Center 1.92850 GHz #Res BW 100.00 kHz Span 40 MHz Sweep 4.80 ms (1001 pts) Autrics Total Channel Power -32.24 dBm / 1.00 MHz Total Power Spectral Density -92.24 dBm/Hz



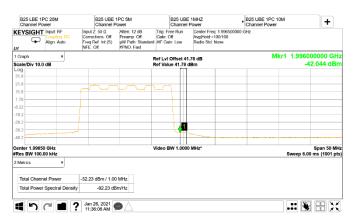


Figure 8.5-60: Conducted band edge emission at 1996 MHz, 15 MHz channel single-carrier operation (RBW = 1 MHz)



Test data, continued

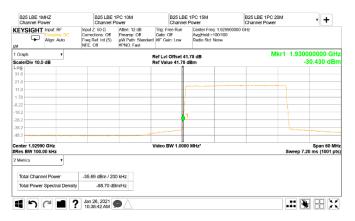


Figure 8.5-61: Conducted band edge emission at 1930 MHz, 20 MHz channel single-carrier operation (RBW = 1% of EBW)

B25 UBE Channel F			5 UBE 1PC 10M annel Power		B25 UBE Channel	1PC 15M Power	B25 UBE 1PC 20M Channel Power	· +
EYSIGH	Coupling DC	Input Z: 50 Correction Freq Ref: 1 NFE: Off	s: Off Preamp: Off	Gate:		Center Freq: 1.9951 Avg Hold:>100/100 Radio Std: None	00000 GHz	
Graph cale/Div 10	۲ 0.0 dB				Offset 41 ue 41.78 d		Mkr1 1.	995000000 GH -31.270 dBr
.og					Î			
21.8								
1.8								
.78								
.22								
8.2					1			
8.2								
48.2								
enter 1.995 Res BW 10				Video E	BW 1.0000) MHz*	Swe	Span 50 MH ep 6.00 ms (1001 pt
Metrics	•							
Total Char	nnel Power	-34.15 dB	3m / 200 kHz					
Total Pow	er Spectral Densi	ty -8	7.16 dBm/Hz					
1 5		Jan 26, 2	2021					
щ <u>-</u>)	(-	11:40:04						

Figure 8.5-63: Conducted band edge emission at 1995 MHz, 20 MHz channel single-carrier operation (RBW = 1% of EBW)

LBE 1PC 5M B25 LBE 1PC 15M Channel Power B25 LBE 1MHZ Channel Power B25 LBE 1PC 10M + KEYSIGHT Input RF Center Freq: 1.928 Avg/Hold > 100/100 Radio Std. None Atte Pre uW Trig: Free Gate: Off #IF Gain: Off (S) Align: Auto Low Mkr1 1.929000000 GHz -42.196 dBm Scale/Div 10.0 dB ۲ Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm 8.2 Center 1.92850 GHz #Res BW 100.00 kHz Span 50 MHz Sweep 6.00 ms (1001 pts Autrics Total Channel Power -32.64 dBm / 1.00 MHz Total Power Spectral Density -92.64 dBm/Hz ■ ? Jan 26, 2021 10:37:13 AM

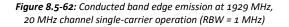




Figure 8.5-64: Conducted band edge emission at 1996 MHz, 20 MHz channel single-carrier operation (RBW = 1 MHz)



Test data, continued

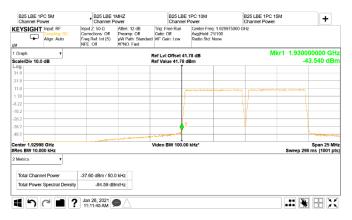


Figure 8.5-65: Conducted band edge emission at 1930 MHz, 5 MHz channel two-carrier operation (RBW = 1% of EBW)

	LBE 1P		B25 LBI Channe		Channel	E 1PC 20M Power	B25 UBE 1PC 5M Channel Power	· +
(EYS	0	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S NFE: Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.99502 Avg[Hold:>100/100 Radio Std: None	5000 GHz	
Graph	Niv 10.0	,			Ref LvI Offset 4 Ref Value 41.78		Mkr1 1.9	95000000 GH -44.625 dBr
.og	10.0	uв			ter value 41.76	ubm		-44.025 UDI
31.8								
1.8								
1.8								
78				1				
22								
8.2				¥	¥			
8.2				1				
8.2		_			<mark>}</mark>	1		
18.2		and the			\ _			
	1.99503 W 10.00			,	video BW 100.0	00 kHz*	Swor	Span 25 MH 298 ms (1001 pts
Metrics		v KH2					3466	p 230 ms (1001 pla
Metrics	5							
	~	Power	-38.86 dBm / 5					
Total	Power	Spectral Densi	y -85.85	dBm/Hz				
	5		Jan 26, 2021					
4 - 1 - 1	-)(11:49:17 AM					

Figure 8.5-67: Conducted band edge emission at 1995 MHz, 5 MHz channel two-carrier operation (RBW = 1% of EBW)

B25 LBE 1PC 5M Channel Power B25 LBE 1PC 15M Channel Power B25 LBE 1MHZ Channel Power B25 LBE 1PC 10M Channel Power + KEYSIGHT Input RF Att Pre Trig: Free Gate: Off #IF Gain: Center Freq: 1.928 Avg[Hold:>100/100 Radio Std None Off Align: Auto Low Mkr1 1.929000000 GH -39.899 dBn ۲ Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm Scale/Div 10.0 dB Center 1.92850 GHz #Res BW 100.00 kHz Span 25 MHz Sweep 3.00 ms (1001 pts Autrics Total Channel Power -30.82 dBm / 1.00 MHz Total Power Spectral Density -90.82 dBm/Hz

> Figure 8.5-66: Conducted band edge emission at 1929 MHz, 5 MHz channel two-carrier operation (RBW = 1 MHz)



Figure 8.5-68: Conducted band edge emission at 1996 MHz, 5 MHz channel two-carrier operation (RBW = 1 MHz)



Test data, continued

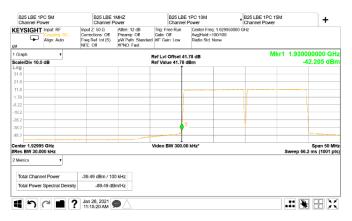


Figure 8.5-69: Conducted band edge emission at 1930 MHz, 10 MHz channel two-carrier operation (RBW = 1% of EBW)

	BE 1MHZ el Power		B25 UBE 1 Channel P			B25 UBE Channel	1PC 15M Power	B25 UBE 1PC 20M Channel Power		+
	Coupling: DO Align: Auto	Corre	Ż: 50 Ω ctions: Off Ref: Int (S) Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate:		Center Frei Avg[Hold:> Radio Std:	0 GHz		
Graph cale/Div	10.0 dB					l Offset 41 lue 41.78 (M	r1 1.995000 -43.	000 GH 519 dBr
.og						1				
21.8										
11.8			c							
.78										
.22										
18.2			- V							
8.2						1				
48.2	hand							 		
	99505 GHz 30.000 kHz				Video	EW 300.0) kHz*		Sweep 59.6 m	pan 45 MH
Metrics	10.000 KHZ								Sweep 55.0 m	5 (1001 pt
	hannel Power		3 dBm / 10							
Total P	ower Spectral De	nsity	-90.03 dB	m/Hz						
		Jan	26, 2021	A					.:. 💘	

Figure 8.5-71: Conducted band edge emission at 1995 MHz, 10 MHz channel two-carrier operation (RBW = 1% of EBW)

B25 LBE 1PC 5M Channel Power B25 LBE 1PC 15M Channel Power B25 LBE 1MHZ Channel Power B25 LBE 1PC 10M Channel Power + KEYSIGHT Input RF Att Pre Trig: Free Gate: Off #IF Gain: Center Freq: 1.928 Avg[Hold:>100/100 Radio Std None Off (S) Align: Auto Low Mkr1 1.929000000 GH ۲ Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm Scale/Div 10.0 dB -42.601 dE 8.2 Center 1.92850 GHz #Res BW 100.00 kHz /ideo BW Span 50 MHz Sweep 6.00 ms (1001 pts Autrics Total Channel Power -32.93 dBm / 1.00 MHz Total Power Spectral Density -92.93 dBm/Hz ゴークローク Jan 26, 2021
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コン 11:15:46 AM

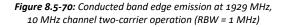
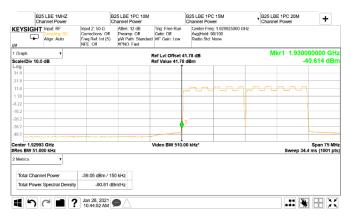


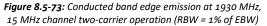


Figure 8.5-72: Conducted band edge emission at 1996 MHz, 10 MHz channel two-carrier operation (RBW = 1 MHz)



Test data, continued





B25 UBE 1MHZ Channel Power	B25 UBE 1PC 10M Channel Power	B25 UBE 1PC Channel Power	15M B25 UE Channe	E 1PC 20M Power	+
V Input: RF	Input Z: 50 Ω Atten: 12 dB Corrections: Off Preamp: Off Freq Ref. Int (S) μW Path: Standa NFE: Off #PNO. Fast	Gate: Off Avg	ter Freq: 1.995075000 GHz Hold:>100/100 io Std: None		-
Graph v cale/Div 10.0 dB		Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm	3	Mkr1 1.995000 -38.0	000 GH 663 dBr
.og 31.8					
1.8					
11.8 m		www			
3.22					
18.2					
18.2		1			
48.2					
enter 1.99508 GHz Res BW 51.000 kHz		Video BW 510.00 kHz*		Sweep 29.8 m	pan 65 MH s (1001 pts
Metrics T					
Total Channel Power	-37.52 dBm / 150 kHz				
Total Power Spectral Density	y -89.28 dBm/Hz				
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Figure 8.5-75: Conducted band edge emission at 1995 MHz, 15 MHz channel two-carrier operation (RBW = 1% of EBW)

B25 LBE 1MHZ Channel Power KEYSIGHT Input RF Coupling DC Align: Auto B25 LBE 1PC 20M Channel Power B25 LBE 1PC 10M Channel Power B25 LBE 1PC 15M + Center Freq: 1.9285 Avg[Hold:>100/100 Radio Std: Norm Atten: 12 dB Preamp: Off uW Path: Sta Trig: Free Gate: Off #IF Gain: Off (S) Low Mkr1 1.929000000 GH ۲ Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm Scale/Div 10.0 dB 43.565 dE Center 1.92850 GHz #Res BW 100.00 kHz Video BW 1.0000 MHz Span 75 MHz Sweep 9.00 ms (1001 pts) Autrics Total Channel Power -33.98 dBm / 1.00 MHz Total Power Spectral Density -93.98 dBm/Hz

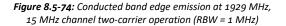




Figure 8.5-76: Conducted band edge emission at 1996 MHz, 15 MHz channel two-carrier operation (RBW = 1 MHz)



Test data, continued

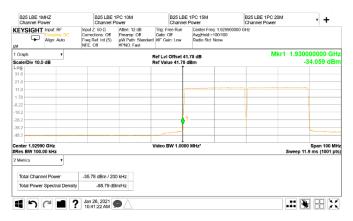


Figure 8.5-77: Conducted band edge emission at 1930 MHz, 20 MHz channel two-carrier operation (RBW = 1% of EBW)

B25 UBE - Channel P			325 UBE Channel F			B25 UBE Channel	1PC 15M Power	B25 UBE 1PC 20M Channel Power	I	• +
EYSIGH	Input: RF Coupling: DC Align: Auto	Input Z Correcti Freq Re NFE: O	ons: Off f: Int (S)	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate:		Center Freq: Awg Hold:>10 Radio Std: N	GHz		
Graph cale/Div 10.	• 0 dB					Offset 41 ue 36.68 d		Mkr	1 1.995000 -38.	000 GH 114 dBr
.og										
6.7										
6.68										
3.32						-				
3.3										
3.3			1			1				
13.3						_ _				
53.3						-+				
enter 1.995 Res BW 100				1	/ideo	BW 1.0000	MHz*		Sweep 10.1 m	ipan 85 MH is (1001 pts
Metrics	•									
Total Chan	nel Power	-37.84	dBm / 20	0 kHz						
Total Powe	r Spectral Densit	y	-90.85 dE	im/Hz						
1 5		Jan 26	, 2021 41 AM	A					.:: 🔖	

Figure 8.5-79: Conducted band edge emission at 1995 MHz, 20 MHz channel two-carrier operation (RBW = 1% of EBW)

B25 LBE 1MHZ Channel Power KEYSIGHT Input RF Coupling DC Align: Auto B25 LBE 1PC 20M Channel Power B25 LBE 1PC 10M Channel Power B25 LBE 1PC 15M + Center Freq: 1.9285 Avg/Hold:>100/100 Radio Std: Norm Trig: Free Run Gate: Off #F Gain: Low Atten: 12 dB Preamp: Off uW Path: Sta Off (S) Mkr1 1.929000000 GH ۲ Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm Scale/Div 10.0 dB -43.447 dE 1 Video BW 1.0000 MHz Center 1.92850 GHz #Res BW 100.00 kHz Span 100 MHz Sweep 11.9 ms (1001 pts) Autrics Total Channel Power -34.14 dBm / 1.00 MHz -94.14 dBm/Hz Total Power Spectral Density **まった こ** ? Jan 26, 2021 の

> Figure 8.5-78: Conducted band edge emission at 1929 MHz, 20 MHz channel two-carrier operation (RBW = 1 MHz)

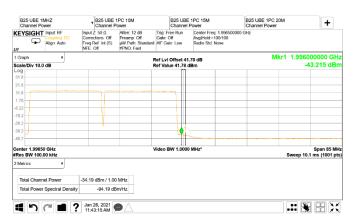


Figure 8.5-80: Conducted band edge emission at 1996 MHz, 20 MHz channel two-carrier operation (RBW = 1 MHz)



Test data, continued



Figure 8.5-81: Conducted band edge emission at 1930 MHz, 5 MHz channel three-carrier operation (RBW = 1% of EBW)

B25 LBE Channel	Power	B25 LBE Channel F		B25 LBE Channel	1PC 20M Power	B25 UBE 1PC 5M Channel Power	• +
CEYSIGI	HT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.99502 Avg[Hold:>100/100 Radio Std: None	25000 GHz	
I Graph Scale/Div 1	T D D d B			Ref LvI Offset 4 Ref Value 41.78		Mkr1 1.99	5000000 GH
	0.0 GB			ter value 41.76	abm		-+5.025 ubi
31.8							
21.8							
11.8							
1.78							
8.22		<u> </u>					
18.2		11	V				
28.2							
38.2							
48.2	and the second			k	in loss of		
Center 1.99	503 GHz			ideo BW 100.0	0 1 1 1 1		Span 35 MH
Res BW 1				100.0	O KIL	Sweep	o 417 ms (1001 pts
2 Metrics	•						
Total Ch	annel Power	-39.67 dBm / 50	0 kHz				
Total Por	wer Spectral Densit	/ -86.65 di	3m/Hz				
1 h		Jan 26, 2021 11:51:29 AM				- 11	❣ == ><

Figure 8.5-83: Conducted band edge emission at 1995 MHz, 5 MHz channel three-carrier operation (RBW = 1% of EBW)



Figure 8.5-82: Conducted band edge emission at 1929 MHz, 5 MHz channel three-carrier operation (RBW = 1 MHz)



Figure 8.5-84: Conducted band edge emission at 1996 MHz, 5 MHz channel three-carrier operation (RBW = 1 MHz)



Test data, continued



Figure 8.5-85: Conducted band edge emission at 1930 MHz, 10 MHz channel three-carrier operation (RBW = 1% of EBW)

MC		BE 1PC 5M el Power	B25 UBE Channel			B25 UBE 1PC 10M Channel Power	•	B25 UBE 1PC 1: Channel Power
EYSIGHT	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Trig: Free Run Gate: Off #IF Gain: Low		eq: 1.995050000 GHz >100/100 1: None		
Graph cale/Div 10.0	r dB			Ref LvI Offset 4 Ref Value 41.78			Mkr1	1.995000000 GH
og	0.5		i i		uem			10.011 0.011
1.8								
21.8								
1.8								
.78		1						
8.2				1				
82								
8.2				1				
18.2								
enter 1.9950 Res BW 30.0			,	Video BW 300.0	0 kHz*			Span 65 MH Sweep 86.1 ms (1001 pts
Metrics	70 KH2							Sweep oo. I his (1001 pis
NIGHT CA								
Total Chann	el Power	-40.70 dBm / 10	0 kHz					
Total Power	Spectral Densit	y -90.70 de	8m/Hz					
		Jan 26, 2021						
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Figure 8.5-87: Conducted band edge emission at 1995 MHz, 10 MHz channel three-carrier operation (RBW = 1% of EBW)



Figure 8.5-86: Conducted band edge emission at 1929 MHz, 10 MHz channel three-carrier operation (RBW = 1 MHz)

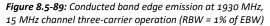


Figure 8.5-88: Conducted band edge emission at 1996 MHz, 10 MHz channel three-carrier operation (RBW = 1 MHz)



Test data, continued

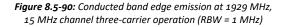




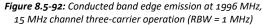
B25 UBE 1MHZ Channel Power	B25 UBE Channel F		B25 UBE Channel	E 1PC 15M Power	B25 UBE 1PC 20M Channel Power	+
EYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Off		g: Free Run ite: Off Gain: Low	Center Freq: 1.99507 Avg[Hold:>100/100 Radio Std: None	5000 GHz	
Graph v icale/Div 10.0 dB			Lvi Offset 41 Value 41.78		Mkr1 1.9950 -3	00000 GH: 8.974 dBn
og						
1.8						
11.8 -	Jun	հաղորակա	wor			
.78						
8.2						
28.2	1					
18 2			ļ.			
enter 1.99508 GHz Res BW 51.000 kHz		Vid	eo BW 510.0	0 kHz*	Sweep 43.5	Span 95 MH 5 ms (1001 pts
Metrics •						
Total Channel Power	-38.82 dBm / 15	0 kHz				
Total Power Spectral Densi	-90.58 dE	im/Hz				
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Figure 8.5-91: Conducted band edge emission at 1995 MHz, 15 MHz channel three-carrier operation (RBW = 1% of EBW)











Test data, continued



Figure 8.5-93: Conducted band edge emission at 1930 MHz, 20 MHz channel three-carrier operation (RBW = 1% of EBW)



Figure 8.5-95: Conducted band edge emission at 1995 MHz, 20 MHz channel three-carrier operation (RBW = 1% of EBW)

B25 LBE 1PC 5M Channel Power B25 LBE 1MHZ Channel Power B25 LBE 1PC 10M B25 LBE 1PC 15M Channel Power + KEYSIGHT Input RF Att Pre Trig: Free Gate: Off #IF Gain: Center Freq: 1.928 Avg[Hold:>100/100 Radio Std None Off Align: Auto Low Mkr1 1.929000000 GH Ref Lvi Offset 41.78 dB Ref Value 41.78 dBm Scale/Div 10.0 dB 43.811 dE Center 1.92850 GHz #Res BW 100.00 kHz Video BW 1.0000 MHa Span 125 MHz Sweep 14.9 ms (1001 pts) letrics Total Channel Power -34.41 dBm / 1.00 MHz -94.41 dBm/Hz Total Power Spectral Density ■ ? Jan 26, 2021 10:58:05 AM

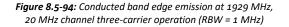




Figure 8.5-96: Conducted band edge emission at 1996 MHz, 20 MHz channel three-carrier operation (RBW = 1 MHz)



Test data, continued



Figure 8.5-97: Conducted band edge emission at 1930 MHz, 5 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)

	LBE 1P nnel Po			B25 LBE 1 Channel P			B25 LBE Channel	1PC 20M Power	B25 UBE 1PC 5M Channel Power	,	+
(EYS	0	Input: RF Coupling: DC Align: Auto	Correc	2:50 Ω stions: Off tef: Int (S)	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate:		Center Free Avg[Hold:>' Radio Std: I	GHz		
Graph cale/E	ı Div 10.0	dB T					Offset 4' ue 41.78		Mkr1	1.9950000 -44.4	00 GH 60 dBr
.0g							1				
21.8											
11.8											
.78		-									
.22											
18.2											
38.2		_			}				 		
48.2		and							 		
	1.99503 W 10.00					Video	BW 100.0	0 kHz*	s	Sp weep 298 ms	an 25 MH (1001 pt
Metric	s	•									
			00.00	dBm / 50.0							
		el Power									
Tota	Power	Spectral Densi	ty	-85.22 dB	m/Hz						
1	-		? Jan 2	26, 2021							

Figure 8.5-99: Conducted band edge emission at 1995 MHz, 5 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)



Figure 8.5-98: Conducted band edge emission at 1929 MHz, 5 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



Figure 8.5-100: Conducted band edge emission at 1996 MHz, 5 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



Test data, continued

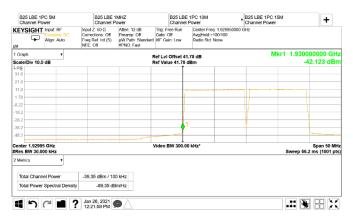


Figure 8.5-101: Conducted band edge emission at 1930 MHz, 10 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)

B25 UBE Channel			5 UBE 1 annel Po	PC 10M wer	,	B25 UB Channe	E 1PC 15M Power	B25 UBE 1PC 20M Channel Power		+
	T Input: RF Coupling: DC Align: Auto	Input Z: 50 Correction Freq Ref: 1 NFE: Off	s: Off	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate		Center Fre Avg[Hold > Radio Std	00 GHz		
Graph cale/Div 10	T L0 dB					Offset 4 ue 41.78		Mkr	1.995000	000 GH 420 dBr
.og						Ī				
21.8										
11.8			r							
3.22										
18.2	1		- 17							
28.2			_¥							
38.2	J		-			- t	1			
48.2]		 		
enter 1.99 Res BW 30				,	/ideo	BW 300.	00 kHz*		Sweep 59.6 m	Span 45 MH ns (1001 pts
Metrics	۲									
	nnel Power	-40.79 dE								
Total Pow	er Spectral Densit	y -9	0.79 dBr	n/Hz						
1 5		Jan 26, 2	2021	Δ.]	.:: 🔖	
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Figure 8.5-103: Conducted band edge emission at 1995 MHz, 10 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)

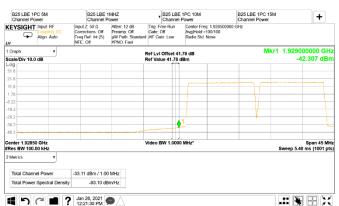


Figure 8.5-102: Conducted band edge emission at 1929 MHz, 10 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



Figure 8.5-104: Conducted band edge emission at 1996 MHz, 10 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



Test data, continued



Figure 8.5-105: Conducted band edge emission at 1930 MHz, 15 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)

B25 UBE Channel			B25 UBE 1 Channel P			B25 UBE Channel	1PC 15M Power	,	B25 UBE 1PC 20M Channel Power	4	+
EYSIGI	T Input: RF Coupling: DC Align: Auto		ions: Off ef: Int (S)	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate:		Center Freq Awg Hold:>1 Radio Std: N		GHz		
Graph cale/Div 1	• 0.0 dB					Offset 41 ue 41.78 d			Mkr	1 1.99500 -45	0000 GH .149 dBr
.og											
21.8											
11.8											
.78			- lí								
8.2											
28.2			{								
38.2			1			- 🖊					
48.2											
enter 1.99 Res BW 5				,	lideo	BW 510.00) kHz*			Sweep 29.8 r	Span 65 MH ns (1001 pt
Metrics	•										
	annel Power		dBm / 15								
Total Pov	ver Spectral Densit	у	-92.82 dB	m/Hz							
1 5		Jan 2	6, 2021	A						.:: 😽	
4 4 (~)	(-	12:18	37 PM								

Figure 8.5-107: Conducted band edge emission at 1995 MHz, 15 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)



Figure 8.5-106: Conducted band edge emission at 1929 MHz, 15 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



Figure 8.5-108: Conducted band edge emission at 1996 MHz, 15 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



Test data, continued



Figure 8.5-109: Conducted band edge emission at 1930 MHz, 20 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)

B25 UBE 1 Channel Po			B25 UBE Channel F			B25 UBE Channel	1PC 15M Power	B25 UBE 1PC 20M Channel Power	4	· +
EYSIGHT	Input: RF Coupling: DC Align: Auto		tions: Off ef: Int (S)	Atten: 12 dB Preamp: Off µW Path: Standard #PNO: Fast	Gate:		Center Free Avg[Hold:>' Radio Std: I	IO GHZ		
Graph cale/Div 10.0	r dB					I Offset 41 lue 36.68 (Mkr	1 1.99500 -31	00000 GH: 7.571 dBn
.og						1				
16.7								 		
5.68										
3.32								_		
13.3			V							
3.3						1		 		
43.3							The second s			
53.3										
enter 1.9951 Res BW 100.					/ideo	BW 1.0000) MHz*		Sweep 10.1	Span 85 MHz ms (1001 pts
Metrics	•									
Total Chann	el Power	-37.82	2 dBm / 20	0 kHz						
Total Power	Spectral Density	/	-90.83 dE	8m/Hz						
1 5		Jan 2	6, 2021						.:: 😵	

Figure 8.5-111: Conducted band edge emission at 1995 MHz, 20 MHz channel two-carrier LTE + NR operation (RBW = 1% of EBW)

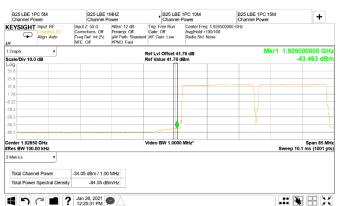


Figure 8.5-110: Conducted band edge emission at 1929 MHz, 20 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



Figure 8.5-112: Conducted band edge emission at 1996 MHz, 20 MHz channel two-carrier LTE + NR operation (RBW = 1 MHz)



8.6 Occupied bandwidth (Band 66)

8.6.1 Definitions and limits

FCC §2.1049:

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

RSS-Gen, 6.7

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

8.6.2 Test summary

Test date	January 22, 2021
Test engineer	Andrey Adelberg

8.6.3 Observations, settings and special notes

Testing was performed per ANSI C63.26 Paragraphs 5.4.3 and 5.4.4 methods.

Spectrum analyzer settings:

Detector mode	Peak
Resolution bandwidth	≥1 % of EBW
Video bandwidth	RBW × 3
Trace mode	Max Hold

8.6.4 Test data

Table 8.6-1: Occupied bandwidth results for 5 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 5 MHz, Low channel	2112.5	4.783	4.4878
16QAM, 5 MHz, Low channel	2112.5	4.772	4.4752
64QAM, 5 MHz, Low channel	2112.5	4.793	4.4921
256QAM, 5 MHz, Low channel	2112.5	4.777	4.4822
QPSK, 5 MHz, Mid channel	2155.0	4.812	4.4896
QPSK, 5 MHz, High channel	2197.5	4.803	4.4907

Table 8.6-2: Occupied bandwidth results for 10 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 10 MHz, Low channel	2115.0	9.665	9.2704
16QAM, 10 MHz, Low channel	2115.0	9.597	9.1802
64QAM, 10 MHz, Low channel	2115.0	9.638	9.2767
256QAM, 10 MHz, Low channel	2115.0	9.646	9.2728
QPSK, 10 MHz, Mid channel	2155.0	9.738	9.2720
QPSK, 10 MHz, High channel	2195.0	9.718	9.2922





Test data, continued

Table 8.6-3: Occupied bandwidth results for 15 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 15 MHz, Low channel	2117.5	14.90	14.121
16QAM, 15 MHz, Low channel	2117.5	14.86	14.101
64QAM, 15 MHz, Low channel	2117.5	14.92	14.134
256QAM, 15 MHz, Low channel	2117.5	14.90	14.109
16QAM, 15 MHz, Mid channel	2155.0	14.87	14.099
16QAM, 15 MHz, High channel	2192.5	14.87	14.106

Table 8.6-4: Occupied bandwidth results for 20 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 20 MHz, Low channel	2120.0	19.79	18.943
16QAM, 20 MHz, Low channel	2120.0	19.73	18.884
64QAM, 20 MHz, Low channel	2120.0	19.79	18.923
256QAM, 20 MHz, Low channel	2120.0	19.80	18.926
QPSK, 20 MHz, Mid channel	2155.0	19.79	18.892
QPSK, 20 MHz, High channel	2190.0	19.79	18.905

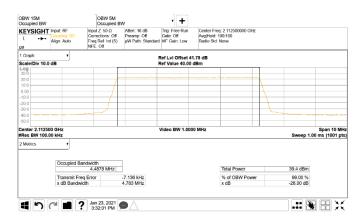


Figure 8.6-1: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 5 MHz channel

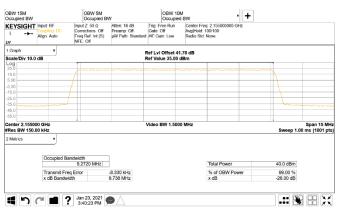


Figure 8.6-2: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 10 MHz channel

Section 8	Testing data
Test name	Occupied bandwidth (Band 66)
Specification	FCC Part 2, RSS-Gen, Issue 5



Test data, continued

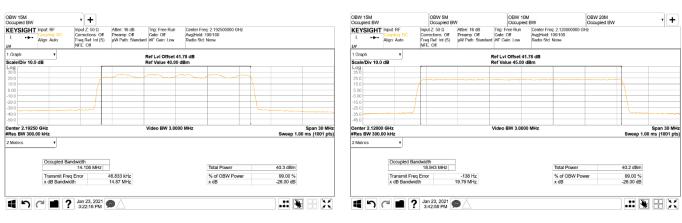


Figure 8.6-3: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 15 MHz channel

Figure 8.6-4: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 20 MHz channel



8.7 Occupied bandwidth (Band 2/25a)

8.7.1 Definitions and limits

FCC §2.1049:

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

RSS-Gen, 6.7

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

8.7.2 Test summary

Test date	January 22, 2021
Test engineer	Andrey Adelberg

8.7.3 Observations, settings and special notes

Testing was performed per ANSI C63.26 Paragraphs 5.4.3 and 5.4.4 methods.

Spectrum analyzer settings:

Detector mode	Peak
Resolution bandwidth	≥1% of EBW
Video bandwidth	RBW × 3
Trace mode	Max Hold

8.7.4 Test data

Table 8.7-1: Occupied bandwidth results for 5 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 5 MHz, Low channel	1932.5	4.793	4.4803
16QAM, 5 MHz, Low channel	1932.5	4.760	4.4779
64QAM, 5 MHz, Low channel	1932.5	4.785	4.4882
256QAM, 5 MHz, Low channel	1932.5	4.764	4.4903
QPSK, 5 MHz, Mid channel	1962.5	4.793	4.4822
QPSK, 5 MHz, High channel	1992.5	4.768	4.4900

Table 8.7-2: Occupied bandwidth results for 10 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 10 MHz, Low channel	1935.0	9.734	9.2949
16QAM, 10 MHz, Low channel	1935.0	9.694	9.1777
64QAM, 10 MHz, Low channel	1935.0	9.749	9.2949
256QAM, 10 MHz, Low channel	1935.0	9.727	9.2920
QPSK, 10 MHz, Mid channel	1962.5	9.755	9.2816
QPSK, 10 MHz, High channel	1990.0	9.735	9.2802



Test data, continued

Table 8.7-3: Occupied bandwidth results for 15 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 15 MHz, Low channel	1937.5	14.91	14.152
16QAM, 15 MHz, Low channel	1937.5	14.85	14.096
64QAM, 15 MHz, Low channel	1937.5	14.90	14.138
256QAM, 15 MHz, Low channel	1937.5	14.91	14.111
16QAM, 15 MHz, Mid channel	1962.5	14.87	14.098
16QAM, 15 MHz, High channel	1987.5	14.86	14.077

Table 8.7-4: Occupied bandwidth results for 20 MHz channel

Remarks	Frequency, MHz	26 dB BW, MHz	99% OBW, MHz
QPSK, 20 MHz, Low channel	1940.0	19.77	18.919
16QAM, 20 MHz, Low channel	1940.0	19.71	18.833
64QAM, 20 MHz, Low channel	1940.0	19.78	18.926
256QAM, 20 MHz, Low channel	1940.0	19.77	18.908
QPSK, 20 MHz, Mid channel	1962.5	19.77	18.922
QPSK, 20 MHz, High channel	1985.0	19.78	18.897

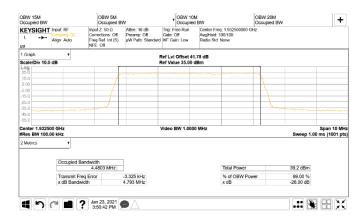


Figure 8.7-1: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 5 MHz channel

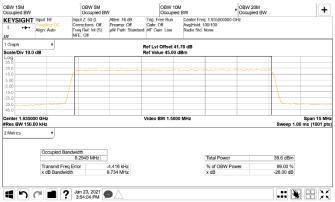


Figure 8.7-2: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 10 MHz channel

Section 8	Testing data
Test name	Occupied bandwidth (Band 2/25a)
Specification	FCC Part 2, RSS-Gen, Issue 5



Test data, continued

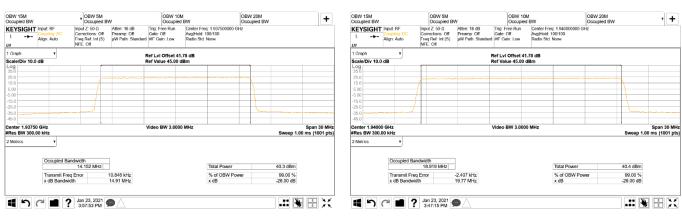
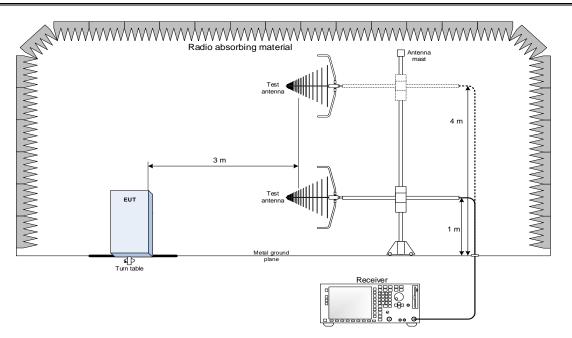


Figure 8.7-3: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 15 MHz channel Figure 8.7-4: 99% Occupied bandwidth and 26 dB bandwidth sample plot for 20 MHz channel

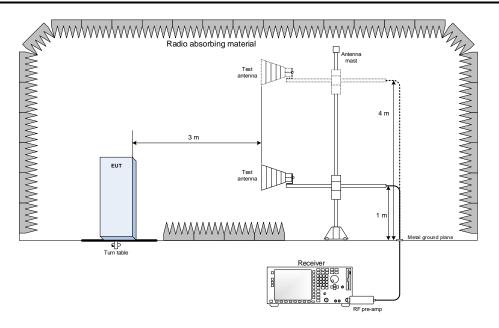


Section 9. Block diagrams of test setups

9.1 Radiated emissions set-up for frequencies below 1 GHz



9.2 Radiated emissions set-up for frequencies above 1 GHz



Report reference ID: 391738-5TRFWL-R1



9.3 Conducted emissions set-up

