













802.11n20, HT8 (MIMO)

















802.11n40, HT0 (SISO)

















802.11n40, HT8 (MIMO)

















802.11ac80, VHT0 (SISO)















802.11ac80, VHT0 (MIMO)











-70 dBm -80 dBm

CF 5.6838 GHz

Channel Power

Bandwidth 82.40 MHz

500 pts

Power 18.90 dBm

Span 150.0 MHz

Tx Total 18.90 dBm

Dia 10 10



B.3 Undesirable emissions limits: Band Edge (conducted)

Test limits:

FCC part	RSS part	Limits					
15.407 (b) (3)	RSS-247 Clause 6.2.2 (2)	For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.					
		Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a):					
		Freg Range	Field Strength	Field Strength	Meas. Distance		
15.209	RSS-GEN, Clause 8.9	(MHz)	(μV/m)	(dBµV/m)	(m)		
		0.009-0.490	2400/f(kHz)	-	300		
		0.490-1.705	24000/f(kHz)	-	300		
		1.705-30.0	30	-	30		
		30-88	100	40	3		
		88-216	150	43.5	3		
		216-960	200	46	3		
		960-25000	500	54	3		
		The emission limits shown in the table above are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.					

Test procedure:

The setup below was used to measure undesirable emissions on the Band Edge domain. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss and the declared Antenna Gain.

For Band Edge measurements in average mode on the low frequency section, the Video Bandwidth Method was used according to section G) 6) (KDB 789033 D02), with the following parameters:

- When the duty cycle is > 98 %, VBW = 10Hz
- When the duty cycle is < 98 %, VBW > 1/T, where T is defined in section II.B.1.a

For the BE High, we use the integration method as defined in the band edge measurements section (paragraph II.G.3.d) of KDB 789033 D02.

In case of Band Edge measurements falling in restricted bands, the declared Antenna Gain is also compensated in the graph.

The declared maximum antenna gain is 5dBi.





The following limits in dBm were applied for the average detector after the conversion from the limits detailed above in dB μ V/m, according to FCC 47 CFR part 15 - Subpart C – §15.209(a). The limits in dBm for peak detector are 20dB above the indicated values in the table.

	§15.209(a)		Converted values		
Freq Range (MHz)	Distance (m)	Field strength (microvolts/meter)	Field strength (dB microvolts/meter)	Power (dBm)	
960-25000	3	500	53.98	-41.2	



Results Screenshot:

802.11a, 6Mbps – Chain A









802.11a, 6Mbps – Chain B









802.11n20, HT0 (SISO) - Chain A









802.11n20, HT0 (SISO) - Chain B









802.11n20, HT8 (MIMO) - Chain A









802.11n20, HT8 (MIMO) - Chain B





Spectrum)					
Ref Level 10.0 Att SGL Count 110/1	0 dBm Offse 15 dB - SWT 10 TDF	t 5.00 dB 100 ms	 RBW 100 kHz VBW 300 kHz 	Mode Auto Swee	әр	1
1Pk Max				M1[1]		-44.98 dBr
10.00	D dBm	-			N N	5.7255500 GH
dam	Aya	_				
-10 dBm	1	-	-			-
20 dBm	WAL					
eo dom	TOP IN					
30 dBm	-	Wile.	-			-
40 dBm		MWANA A	UL TOTAL			
HO COM			THE PARTY OF THE PARTY	Manual and and a	and a second second	La dina la st
-S0 dBm		-		Contraction of the state of the	A PARA A LAND A LAND A LAND	Live all the set of the set
60 40m						
GO GBIN						
-70 dBm		-				-
00.40-			-			52
-au dem-			21			
CF 5.725 GHz			3001 pt	s	5	pan 50.0 MHz
Type Ref Trc X-value		Y-value	Function	Function Re	sult	
M1	1 S.7	2555 GHz	-44.98 d8m	Band Power		-34.79 dBm
						and the local second



802.11n40, HT0 (SISO) - Chain A




spectrum				(W
Ref Level 10.00 c Att 15 SGL Count 110/110	8m Offset 5.00 d dB • SWT 100 m TDF	8 • RBW 100 kHz s • VBW 300 kHz	Mode Auto Swee	p
1Pk Max	0			
0 dBm 10.000 d	Bro		M1[1]	-36.18 dBn 5.7274990 GH
d8m-				
10 dBm				
20 dBm	0			
elsterior and the second states and	ANA CHARLAND AND A SUCCESSION OF A	s is an	M1	
40 dBm	AND IN A	Yandhadaana willingariid	W. Waleswitzen under	Anthenness and the second second
50 dBm			e de se de la constitue	a constant of the second of the second s
60 dBm-				
70 dBm				
70 dBm		S1		94
70 dBm 90 dBm 7F 5.725 GHz		51- 3001 pt	s	Span 50.0 MHz
70 dBm 90 dBm F 5.725 GHz arker Type Ref Trc	X-value	51	s Function	Span 50.0 MHz Function Result



802.11n40, HT0 (SISO) - Chain B





Spectrum			(H)
Ref Level 10.00 dBm Offset 5. Att 15 dB SWT 1 SGL Count 110/110 TDF	00 dB • RBW 100 kHz 00 ms • VBW 300 kHz	Mode Auto Sweep	ie futi
1Pk Max			
10 dBm 10.000 dBm		M1[1]	-34,28 dBr 5,7274990 GH
0 d8m-			
-10 dBm			
-20 dBm			
and the second state of th	Alexandre and	T.	
-40 dBm	PR REPRESENT AND PROPERTY AND A DESCRIPTION	ANT MANY MALILALINA MALIL	uditation de parte de la companya de
-50 dBm		2 10 0000000000000000000000000000000000	THE REAL PROPERTY OF THE PARTY OF
-60 dBm			
-70 dBm			
	51		54
-90 d8m			
-90 dBm CF 5.725 GHz	3001 pt	s	Span 50.0 MHz
-90 dBm CF 5.725 GHz Marker	3001 pt	s l	Span 50.0 MHz
-90 d8m CF 5.725 GHz Marker Type Ref Trc X-value M1 1 5.727499	3001 pt: <u>Y-value</u> GHz -34.28 dBm	s Function Band Power	Span 50.0 MHz Function Result -31.33 dBm



802.11n40, HT8 (MIMO) - Chain A





Spectrum				(W)
Ref Level 10.00 dB Att 15 d SGL Count 110/110	m Offset 5.00 dB B SWT 100 ms TDF	 RBW 100 kHz VBW 300 kHz 	Mode Auto Sweep	
Pk Max	1999			
10 dBm 10.000 dBr	0		M1[1]	-40.41 dBn 5.7274990 GH
0 d8m		_		
-10 dBm				
-20 dBm	0			
vallen and the second states of the second states o	AMANDAGANA			
-40 dBm	THE REAL PROPERTY AND A DESCRIPTION OF A	WINNING MARY AND	101	and the second second
-50 dBm-			a na	en and an and a state of the st
-60 dBm				
-60 dBm				
-60 dBm				52
-60 dBm -70 dBm -80 dBm CF 5.725 GHz			5	Span 50.0 MHz
-60 dBm -70 dBm -90 dBm CF 5.725 GHz Marker		-51- 3001 pts	s	Span 50.0 MHz
-50 dBm -70 dBm -30 dB	X-value 5.727499 GHz	51 3001 pts Y-value -40.41 d8m	s Function Band Power	Span 50.0 MHz Function Result -34.10 dBm



802.11n40, HT8 (MIMO) – Chain B





Spectrum			(U)
Ref Level 10.00 dBm Offset 5. Att 15 dB SWT 1 SGL Count 110/110 TDF	00 dB • RBW 100 kHz 00 ms • VBW 300 kHz	Mode Auto Sweep	3
1Pk Max			
10 dBm 10.000 dBm		M1[1]	-39.40 dBr 5.7275160 GH
0 dBm			
-10 dBm			
20 dBm			
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40 dBm	West Anter the set of the set of the	The last strength of the	
S0 dBm		an nanananan nanan nanan na	and a state of the second and a state of the second second second second second second second second second se
60 dBm			
-70 dBm			
-80 d8m	51		52
CF 5.725 GHz	3001 pts		Span 50.0 MHz
larker			
Type Ref Trc X-value	Y-value	Function Band Power	Function Result
M1 1 5.727516	- Carte - 100 - 900 - 100100		and soft a life had a had had a first a first and a had had a first a first and a soft a first a first a soft a first a soft a s



802.11ac80, VHT0 (SISO) - Chain A





802.11ac80, VHT0 (SISO) - Chain B





802.11ac80, VHT0 (MIMO)- Chain A





802.11ac80, VHT0 (MIMO)- Chain B





B.4 Radiated spurious emission

Standard references:

FCC part	RSS part	Limits				
15.407 (b) (3)	RSS-247 Clause 6.2.2 (2)	For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.				
	ands, as defined in ed emission limits					
	RSS-GEN, Clause 8.9	Freq Range	Field Strength	Field Strength	Meas. Distance	
			$(\mu V/III)$ 2400/f(kHz)		300	
		0.490-1.705	2400/f(kHz)	-	300	
		1.705-30.0	30	-	30	
		30-88	100	40	3	
		88-216	150	43.5	3	
15.209		216-960	200	46	3	
		Above 960	500	54	3	
		The emission I measurements e frequency bands Radiated emiss measurements e For average rad there is also a function, corresp table.	imits shown in employing CISPR s 9-90 kHz, 110 ion limits in th employing an ave diated emission limit specified w ponding to 20 dE	the above tal quasi-peak det 0-490 kHz and hese three ban rage detector. measurements then measuring 3 above the india	ble are based on ector except for the above 1000 MHz. ds are based on above 1000 MHz, with peak detector cated values in the	

Test procedure:

The below setups were used to measure the radiated spurious emissions.

Depending of the frequency range and bands being tested, different antennas and filters were used. The final measurement is done by varying the antenna height from, the EUT azimuth over 360° and for both Vertical and Horizontal polarizations.

The radiated spurious emissions were measured on the worst case configuration selected from the chapter B.2 and using the lowest, middle and highest channels.



Radiated Setup < 1GHz



Radiated Setup 1 GHz - 18 GHz



Radiated Setup 18 GHz - 26.5 GHz





Radiated Setup > 26.5 GHz





Test Results:







1 GHz – 18 GHz, 802.11a, 6Mbps, Chain A









































17511

46.7

54

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7.3




















































































Rev.00





























18GHz – 40GHz

Radiated Spurious – All modes

