

XMit 2022.02.07.0

61/200

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2022-01-17	2023-01-17
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17
Block - DC	Fairview Microwave	SD3239	ANC	2022-03-02	2023-03-02

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

The method in section 5.2.4.4 of ANSI C63.26 was used to make the measurements. This method uses trace averaging across the ON and OFF times of the EUT transmissions in the spectrum analyzer channel power function using an RMS detector. Following the measurement a duty cycle correction was applied by adding [10 log (1/D)], where D is the duty cycle in decimal, to the measured power to compute the average power during the actual transmission times

RF conducted emissions testing was performed only on one port. The testing was performed on the same version of hardware (AHFII) as the original certification test. The AHFII antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 1 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraphs 5.2.5.3, 5.7.2i and 6.4.

The total average transmit power of all antenna ports was determined per ANSI C63.26-2105 paragraph 6.4.3.1.



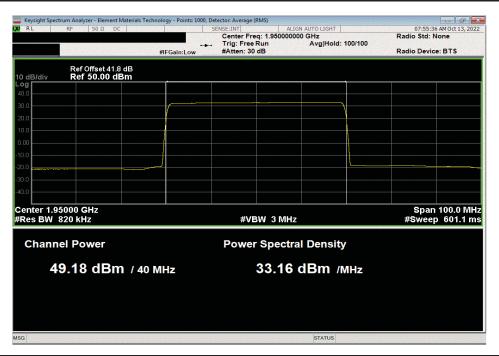
							TbtTx 2022.06.03.0	XMit 2022.02.0
EUT:	AHFII (FCC/ISED C2PC	3)				Work Order:	NOKI0050	
Serial Number:	K9181401111	•				Date:	18-Oct-22	
Customer:	Nokia of America Corp	oration				Temperature:	19.9 °C	
Attendees:	Mitchell Hill					Humidity:	33.7% RH	
Project: I	None					Barometric Pres.:	1029 mbar	
Tested by:	Brandon Hobbs		Power: 54 VDC			Job Site:	TX07	
EST SPECIFICATION	ONS		Test Method					
CC 24E:2022			ANSI C63.26:2015					
SS-133 Issue 6:201	13+A1:2018		ANSI C63.26:2015					
OMMENTS								
utput power measi	urements at the radio of	output ports. The output power	est including any attenuators, filters and DC was measured for a single carrier over the ca 3.2.4 (10 log Nout). The total output power for	arrier channel ba	ndwidth on port 1. T	he total output power for	or multiport (2x2 MIMO, 4x4 MIMO)
	port power + 6dB [i.e. 1	10log(4)].			•			
	TEST STANDARD							
one								
onfiguration #	2	Signature	7-11					
		Signature	Initial Value dBm/MHz	Duty Cycle Factor (dB)	Single Port dBm/Carrier BW	Two Port (2x2 MIMO) dBm/Carrier BW	Four Port (4x4 MIMO) dBm/Carrier BW	
ort 1, Band n25, NR	40 MHz, 1930 - 1995 N							
	40 MHz							
	40 MHz				dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
	40 MHz	1Hz	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
	40 MHz	MHz Low Channel, 1950 MHz	dBm/MHz 49.177	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
	40 MHz	IHz Low Channel, 1950 MHz Mid Channel, 1962.5 MHz	dBm/MHz 49.177 49.194	Factor (dB) 0 0	49.2 49.2	52.2 52.2	55.2 55.2	
	40 MHz QPSK	IHz Low Channel, 1950 MHz Mid Channel, 1962.5 MHz	dBm/MHz 49.177 49.194	Factor (dB) 0 0	49.2 49.2	52.2 52.2	55.2 55.2	
	40 MHz QPSK	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz	dBm/MHz 49.177 49.194 49.385	0 0 0	49.2 49.2 49.4	52.2 52.2 52.4	55.2 55.2 55.4	
	40 MHz QPSK	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz	dBm/MHz 49.177 49.194 49.385 49.072	0 0 0 0	49.2 49.2 49.2 49.4 49.1	52.2 52.2 52.4 52.1	55.2 55.2 55.4 55.1	
	40 MHz QPSK	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1950.5 MHz	49.177 49.194 49.385 49.072 49.045	0 0 0 0	49.2 49.2 49.2 49.4 49.1 49.0	52.2 52.2 52.4 52.1 52.0	55.2 55.2 55.4 55.4 55.1 55.0	
	QPSK 16QAM	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1950.5 MHz	49.177 49.194 49.385 49.072 49.045	0 0 0 0	49.2 49.2 49.2 49.4 49.1 49.0	52.2 52.2 52.4 52.1 52.0	55.2 55.2 55.4 55.4 55.1 55.0	
	QPSK 16QAM	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz	49.177 49.194 49.385 49.072 49.045 49.295	0 0 0 0	49.2 49.2 49.2 49.4 49.1 49.0 49.3	52.2 52.2 52.4 52.1 52.0 52.3	55.2 55.2 55.2 55.4 55.1 55.0 55.3	
	QPSK 16QAM	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1950 MHz High Channel, 1975 MHz Low Channel, 1975 MHz	49.177 49.194 49.385 49.072 49.045 49.295	0 0 0 0 0	49.2 49.2 49.2 49.4 49.1 49.0 49.3	62.2 52.2 52.2 52.4 52.1 52.0 52.3	55.2 55.2 55.4 55.1 55.0 55.3	
	QPSK 16QAM	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1950 MHz Mid Channel, 1962.5 MHz	49.177 49.194 49.385 49.072 49.045 49.295 49.219 49.181	0 0 0 0 0 0	49.2 49.2 49.4 49.1 49.0 49.3 49.2	52.2 52.2 52.4 52.1 52.0 52.3 52.2 52.2	55.2 55.2 55.4 55.1 55.0 55.3 55.2 55.2	
	QPSK 16QAM 64QAM	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1950 MHz Mid Channel, 1962.5 MHz	49.177 49.194 49.385 49.072 49.045 49.295 49.219 49.181	0 0 0 0 0 0	49.2 49.2 49.2 49.4 49.1 49.0 49.3 49.3 49.2 49.2	52.2 52.2 52.4 52.1 52.0 52.3 52.2 52.2 52.2	55.2 55.2 55.2 55.4 55.1 55.0 55.3 55.2 55.2 55.4	
	QPSK 16QAM 64QAM	Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1950 MHz High Channel, 1975 MHz Low Channel, 1950 MHz Mid Channel, 1950 MHz Mid Channel, 1975 MHz High Channel, 1975 MHz	49.177 49.194 49.385 49.072 49.045 49.295 49.219 49.181 49.393	0 0 0 0 0 0 0	49.2 49.2 49.4 49.1 49.0 49.3 49.2	52.2 52.2 52.4 52.1 52.0 52.3 52.2 52.2	55.2 55.2 55.4 55.1 55.0 55.3 55.2 55.2	



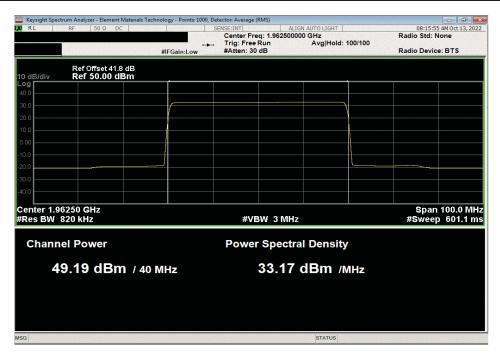
Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, QPSK, Low Channel, 1950 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW

49.177 0 49.177 52.177 55.177

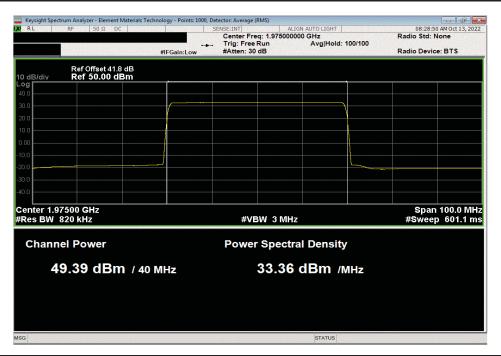


	Port 1, Bar	nd n25, NR 40 MI	Hz, 1930 - 1995 MHz	z, 40 MHz, QPSK, Mid Ch	annel, 1962.5 MHz	
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)	
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
	49.194	0	49.194	52.194	55.194	

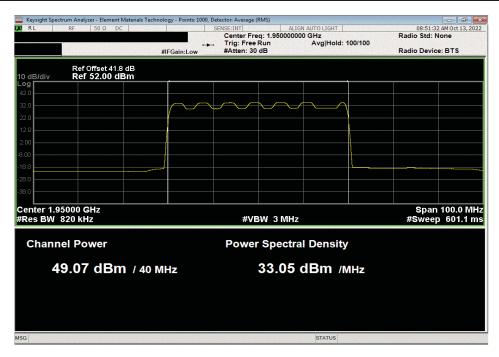




Ì		Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, QPSK, High Channel, 1975 MHz									
I	Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO) dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW dBm/Carrier BW										
ı			49.385	0	49.385	52.385	55.385		1		



Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, 16QAM, Low Channel, 1950 MHz								
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)			
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW			
	49.072	0	49.072	52.072	55.072			

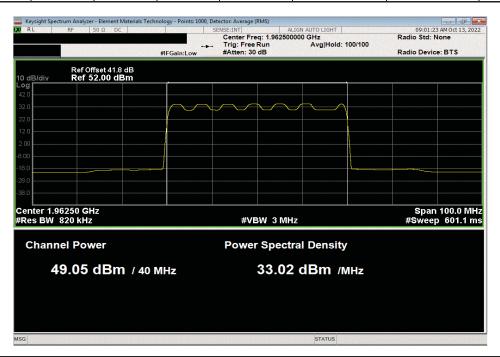




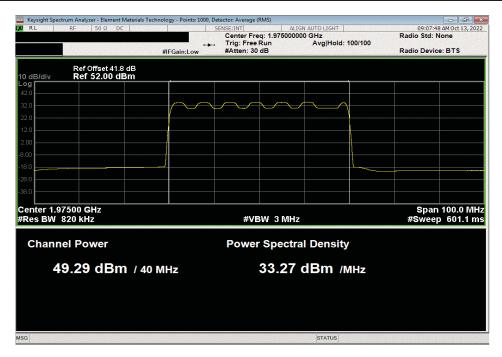
Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, 16QAM, Mid Channel, 1962.5 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW

49.045 0 49.045 52.045 55.045

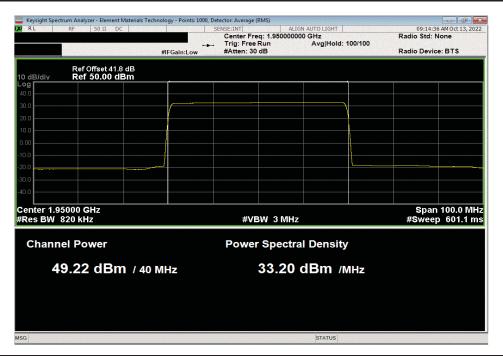


Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, 16QAM, High Channel, 1975 MHz							
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)		
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW		
	49.295	0	49.295	52.295	55.295		

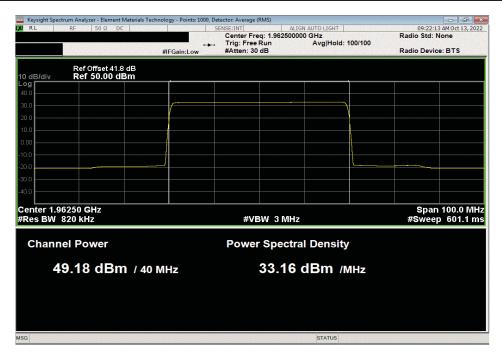




	Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, 64QAM, Low Channel, 1950 MHz									
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO) dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW dBm/Carrier BW										
		UDIII/WII IZ	i actor (ub)	ubili/carrier bw	ubili/calliel bw	ubili/Calliel bw		_		
		49.219	0	49.219	52.219	55.219				



Port 1, Bar	nd n25, NR 40 MH	łz, 1930 - 1995 MHz	r, 40 MHz, 64QAM, Mid C	hannel, 1962.5 MHz	
Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)	
dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
49.181	0	49.181	52.181	55.181	



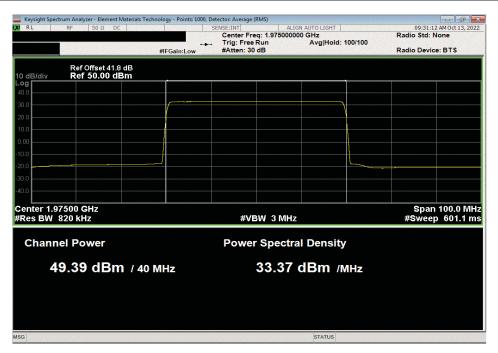


Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, 64QAM, High Channel, 1975 MHz

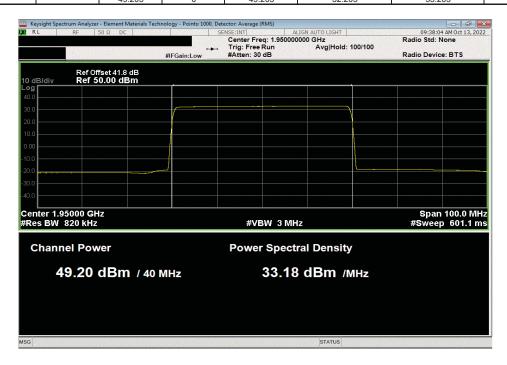
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW

49.393 0 49.393 52.393 55.393



Port 1, Ban	d n25, NR 40 MF	łz, 1930 - 1995 MHz	, 40 MHz, 256QAM, Low	Channel, 1950 MHz	
Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)	
dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
49 205	0	49 205	52 205	55 205	

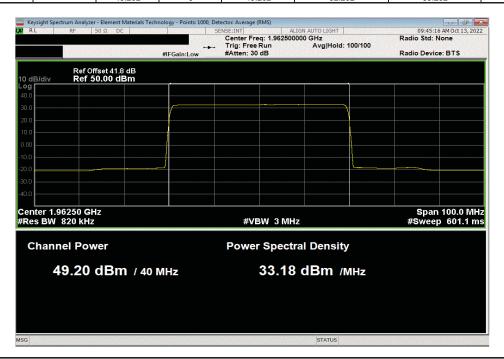




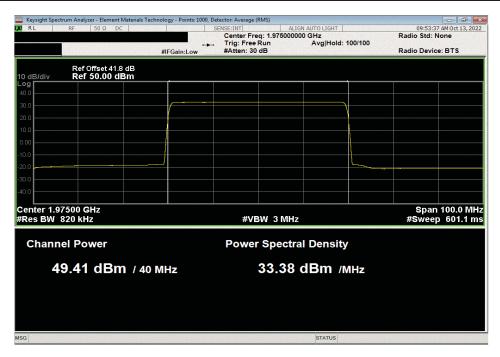
Port 1, Band n25, NR 40 MHz, 1930 - 1995 MHz, 40 MHz, 256QAM, Mid Channel, 1962.5 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW

49.202 0 49.202 52.202 55.202



	Port 1, Ban	d n25, NR 40 MH	lz, 1930 - 1995 MHz,	, 40 MHz, 256QAM, High	Channel, 1975 MHz	
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)	
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
	49.41	0	49.41	52.41	55.41	



OUTPUT POWER - n25 All PORTS



XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2022-01-17	2023-01-17
Block - DC	Fairview Microwave	SD3239	ANC	2022-03-02	2023-03-02
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

The method in section 5.2.4.4 of ANSI C63.26 was used to make the measurements. This method uses trace averaging across the ON and OFF times of the EUT transmissions in the spectrum analyzer channel power function using an RMS detector. Following the measurement a duty cycle correction was applied by adding [10 log (1/D)], where D is the duty cycle in decimal, to the measured power to compute the average power during the actual transmission times

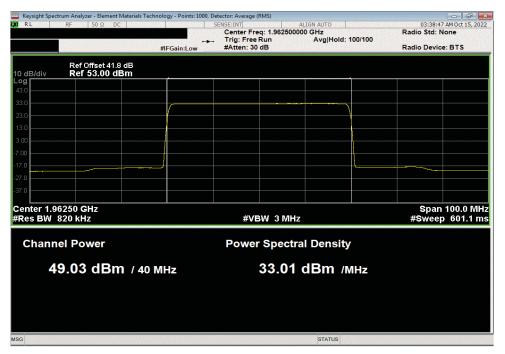
The total average transmit power of all antenna ports was determined per ANSI C63.26-2105 paragraph 6.4.3.1.



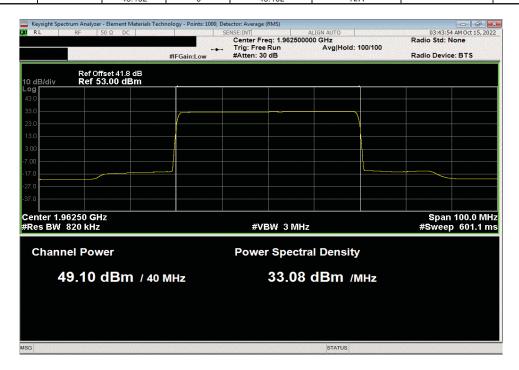
						The	tTx 2022.05.02.0 XMit 2022
FUT	AHFII (FCC/ISED C2PC)					Work Order: NOK	
Serial Number:						Date: 18-0	
	Nokia of America Corpor	ration				Temperature: 22 °	C
	Mitchell Hill					Humidity: 31.1	
Project	None					Barometric Pres.: 1030) mbar
	Brandon Hobbs		Power: 54 VDC			Job Site: TX0	7
TEST SPECIFICAT	TIONS		Test Method				
CC 24E:2022			ANSI C63.26:20	15			
RSS-133 Issue 6:2	2013+A1:2018		ANSI C63.26:20	15			
COMMENTS							
All measurement watts/carrier).	path losses were accounte	ed for in the reference leve	el offest including any attenuators, f	filters and DC blo	ocks. Band n25 carr	iers are enabled at maximui	n power (80
DEVIATIONS FRO	M TEST STANDARD						
None			<u> </u>			<u> </u>	
Configuration #	2	Signature	7-13	-1			
		-	Initial Value dBm/MHz	Duty Cycle Factor (dB)	Single Port dBm/Carrier BW	Four Port (4x4 MIMO) Final Value	
Port 1				<u> </u>			
	5G NR, Band n25, 1930 -						
		Mid Channel, 1962.5 MHz	49.029	0	49.0	N/A	
Port 2		, , , , , , , , , , , , , , , , , , , ,		-			
	5G NR, Band n25, 1930 -						
		Mid Channel, 1962.5 MHz	49.102	0	49.1	N/A	
Port 3		, , , , , , , , , , , , , , , , , , , ,		-			
	5G NR, Band n25, 1930 - 256-QAM Mo						
		Mid Channel, 1962.5 MHz	48.969	0	49.0	N/A	
Port 4							
	5G NR, Band n25, 1930 - 256-QAM Mo						
		Mid Channel, 1962.5 MHz	48.818	0	48.8	N/A	
All Ports							
	5G NR, Band n25, 1930 -						
		Mid Channel, 1962.5 MHz	N/A	N/A	N/A	55.0	



Port 1, 5G NR, Band n25, 1930 - 1995 MHz, 256-QAM Modulation, Mid Channel, 1962.5 MHz
Initial Value Duty Cycle Single Port Four Port (4x4 MIMO)
dBm/MHz Factor (dB) dBm/Carrier BW Final Value
49.029 0 49.029 N/A



Port 2, 5G NR, Band n25, 1930 - 1995 MHz, 256-QAM Modulation, Mid Channel, 1962.5 MHz						
Initial Value	Duty Cycle	Single Port	Four Port (4x4 MIMO)			
 dBm/MHz	Factor (dB)	dBm/Carrier BW	Final Value			
49 102	0	49 102	N/A			



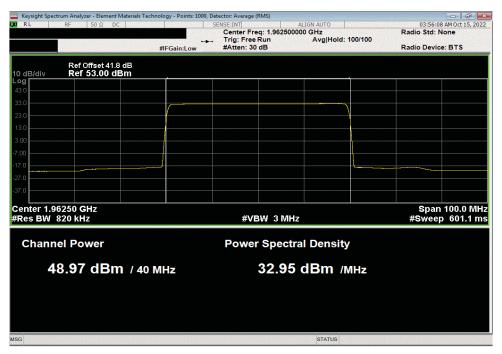


Port 3, 5G NR, Band n25, 1930 - 1995 MHz, 256-QAM Modulation, Mid Channel, 1962.5 MHz

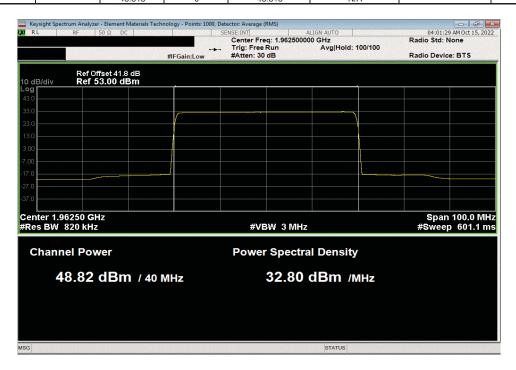
Initial Value Duty Cycle Single Port Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW Final Value

48.969 0 48.969 N/A



Port 4, 5G NR, Band n25, 1930 - 1995 MHz, 256-QAM Modulation, Mid Channel, 1962.5 MHz						
Initial Value	Duty Cycle	Single Port	Four Port (4x4 MIMO)			
 dBm/MHz	Factor (dB)	dBm/Carrier BW	Final Value			
48 818	0	48 818	N/A			





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ſ	All Ports, 50	NR, Band n25, 1	930 - 1995 MHz, 256	-QAM Modulation, Mid C	hannel, 1962.5 MHz	
ı	Initial Value	Duty Cycle	Single Port	Four Port (4x4 MIMO)		
ı	 dBm/MHz	Factor (dB)	dBm/Carrier BW	Final Value		
L	N/A	N/A	N/A	55.00		

Ports	dBm Power	Watts Power	Total Watts Power	Total dBm Power
Port 1	49.03	79.97		
Port 2	49.10	81.32		
Port 3	48.97	78.87		
Port 4	48.82	76.17		
All Ports			316.33	55.00



74/200

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Block - DC	Fairview Microwave	SD3239	ANC	2022-03-02	2023-03-02
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2022-01-17	2023-01-17
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

The method in section 5.2.4.4 of ANSI C63.26 was used to make the measurements. This method uses trace averaging across the ON and OFF times of the EUT transmissions in the spectrum analyzer channel power function using an RMS detector. Following the measurement a duty cycle correction was applied by adding [10 log (1/D)], where D is the duty cycle in decimal, to the measured power to compute the average power during the actual transmission times

RF conducted emissions testing was performed only on one port. The testing was performed on the same version of hardware (AHFII) as the original certification test. The AHFII antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 1 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraphs 5.2.5.3, 5.7.2i and 6.4.

The total average transmit power of all antenna ports was determined per ANSI C63.26-2105 paragraph 6.4.3.1.



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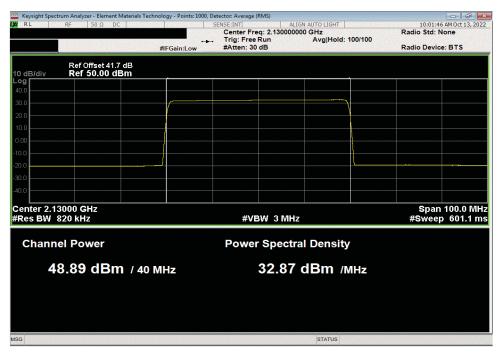
							TbtTx 2022.06.03.0 XMit 2022
EUT:	AHFII (FCC/ISED C2PC	2)				Work Order:	NOKI0050
Serial Number:	K9181401111					Date:	18-Oct-22
Customer:	Nokia of America Corp	poration				Temperature:	22 °C
Attendees:	Mitchell Hill					Humidity:	30.2% RH
Project:						Barometric Pres.:	1030 mbar
Tested by:	Brandon Hobbs		Power: 54 VDC			Job Site:	TX07
EST SPECIFICATI	ONS		Test Method				
CC 27:2022			ANSI C63.26:20	15			
RSS-139 Issue 4:20	022		ANSI C63.26:20	15			
OMMENTS			· · · · · · · · · · · · · · · · · · ·				
Il measurement pa	ath losses were accour	nted for in the reference level offest	t including any attenuators, filters	and DC blocks	Band n66 carriers	are enabled at maximum	n power (80 watts/carrier). The
		nts at the radio output ports. The or					
		ation was determined based upon A					
		four port operation is single port por		(. 5 . 6 5 . 1 6	, outpu	- p	
0. 72	// TEST STANDARD	, and a substitution of the substitution of th					
lone	I I LOI OTANDAND						
lone							
Configuration #	2		1	1			
J		Signature	1				
			Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)
			dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW
ort 1, Band n66, N	R 40 MHz, 2110 - 2200 N	MHz					
	40 1411						
	40 MHz						
	40 MHZ QPSK						
		Low Channel, 2130 MHz	48.895	0	48.9	51.9	54.9
		Low Channel, 2130 MHz Mid Channel, 2155 MHz	48.895 48.575	0	48.9 48.6	51.9 51.6	54.9 54.6
		Mid Channel, 2155 MHz	48.575	0	48.6	51.6	54.6
	QPSK	Mid Channel, 2155 MHz	48.575	0	48.6	51.6	54.6
	QPSK	Mid Channel, 2155 MHz High Channel, 2180 MHz	48.575 48.735	0	48.6 48.7	51.6 51.7	54.6 54.7
	QPSK	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz	48.575 48.735 48.792 48.486	0 0	48.6 48.7 48.8	51.6 51.7 51.8 51.5	54.6 54.7 54.8
	QPSK	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz	48.575 48.735 48.792	0 0	48.6 48.7 48.8 48.5	51.6 51.7 51.8	54.6 54.7 54.8 54.5
	QPSK 16QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz	48.575 48.735 48.792 48.486	0 0	48.6 48.7 48.8 48.5	51.6 51.7 51.8 51.5	54.6 54.7 54.8 54.5
	QPSK 16QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz	48.575 48.735 48.792 48.486 48.823	0 0 0 0	48.6 48.7 48.8 48.5 48.8	51.6 51.7 51.8 51.5 51.8	54.6 54.7 54.8 54.5 54.8
	QPSK 16QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz	48.575 48.735 48.792 48.486 48.823 48.875	0 0 0 0 0	48.6 48.7 48.8 48.5 48.8	51.6 51.7 51.8 51.5 51.8	54.6 54.7 54.8 54.5 54.8
	QPSK 16QAM 64QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz	48.575 48.735 48.792 48.486 48.823 48.875 48.524	0 0 0 0 0	48.6 48.7 48.8 48.5 48.8 48.9 48.5	51.6 51.7 51.8 51.5 51.8 51.9 51.5	54.6 54.7 54.8 54.5 54.8 54.9 54.5
	QPSK 16QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz	48.575 48.735 48.792 48.486 48.823 48.875 48.524 48.901	0 0 0 0 0	48.6 48.7 48.8 48.5 48.8 48.9 48.9	51.6 51.7 51.8 51.5 51.8 51.9 51.9	54.6 54.7 54.8 54.5 54.8 54.9 54.9 54.9
	QPSK 16QAM 64QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz	48.575 48.735 48.792 48.486 48.823 48.875 48.524 48.901	0 0 0 0 0	48.6 48.7 48.8 48.5 48.9 48.9 48.9	51.6 51.7 51.8 51.5 51.8 51.9 51.5 51.9	54.6 54.7 54.8 54.5 54.8 54.9 54.5 54.9
	QPSK 16QAM 64QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz	48.575 48.735 48.792 48.486 48.823 48.875 48.524 48.901	0 0 0 0 0 0	48.6 48.7 48.8 48.5 48.8 48.9 48.5 48.9	51.6 51.7 51.8 51.5 51.8 51.9 51.5 51.9 51.9	54.6 54.7 54.8 54.5 54.8 54.9 54.5 54.9 54.9 54.6
	QPSK 16QAM 64QAM	Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2130 MHz	48.575 48.735 48.792 48.486 48.823 48.875 48.524 48.901	0 0 0 0 0	48.6 48.7 48.8 48.5 48.9 48.9 48.9	51.6 51.7 51.8 51.5 51.8 51.9 51.5 51.9	54.6 54.7 54.8 54.5 54.8 54.9 54.5 54.9



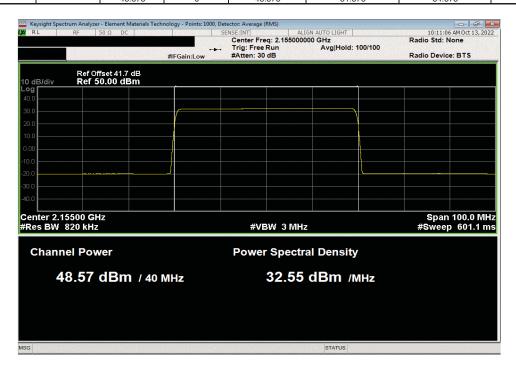
Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, QPSK, Low Channel, 2130 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW dBm/Carrier BW

48.895 0 48.895 51.895 54.895



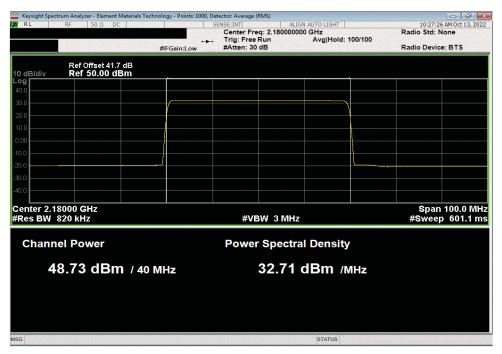
	Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, QPSK, Mid Channel, 2155 MHz							
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)			
_	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW			
	48 575	0	48 575	51 575	54 575			



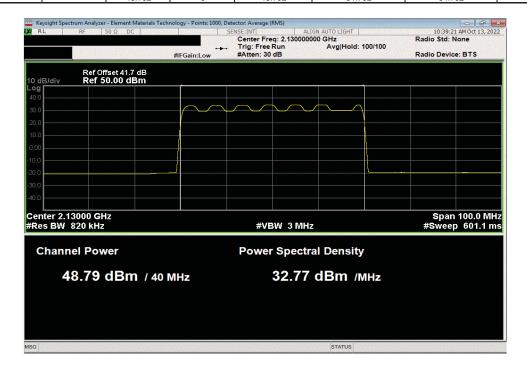


Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, QPSK, High Channel, 2180 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)
dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW dBm/Carrier BW

48.735 0 48.735 51.735 54.735

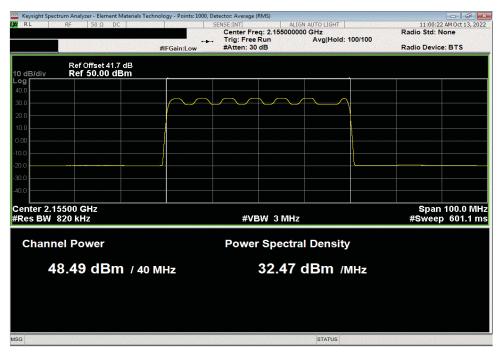


	Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 16QAM, Low Channel, 2130 MHz							
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)			
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW			
	48 792	0	48 792	51 792	54 792			

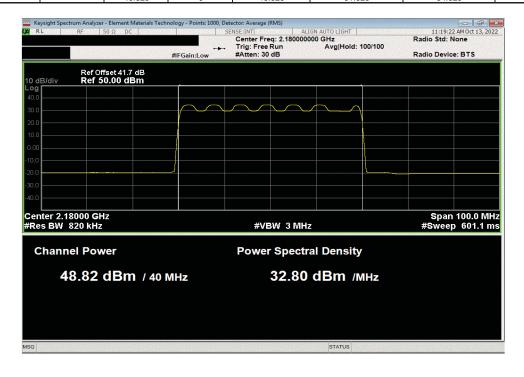




Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 16QAM, Mid Channel, 2155 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)
dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW
48.486 0 48.486 51.486 54.486



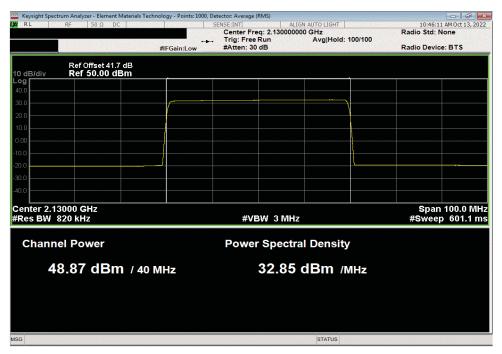
	Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 16QAM, High Channel, 2180 MHz							
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)			
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW			
	48 823	0	48 823	51 823	54 823			



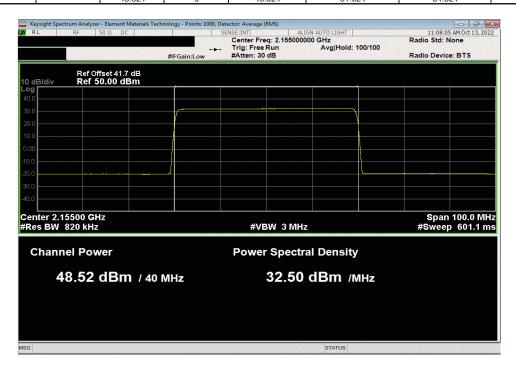


Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 64QAM, Low Channel, 2130 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)
dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW dBm/Carrier BW

48.875 0 48.875 51.875 54.875



	Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 64QAM, Mid Channel, 2155 MHz						
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)		
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW		
	48 524	0	48 524	51 524	54 524		

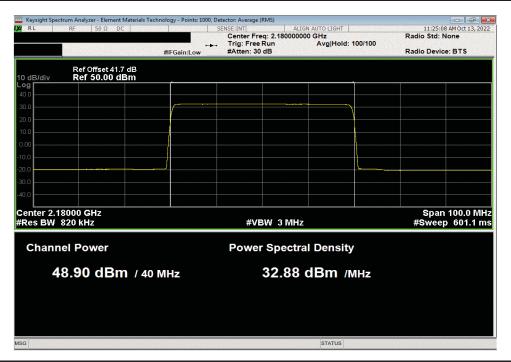




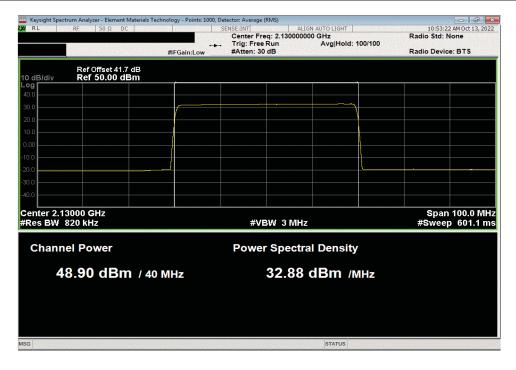
Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 64QAM, High Channel, 2180 MHz
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW dBm/Carrier BW

48.901 0 48.901 51.901 54.901



Port 1, Ban	d n66, NR 40 MH	z, 2110 - 2200 MHz,	40 MHz, 256QAM, Low 0	Channel, 2130 MHz	
Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)	
dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW	
48.903	0	48.903	51.903	54.903	



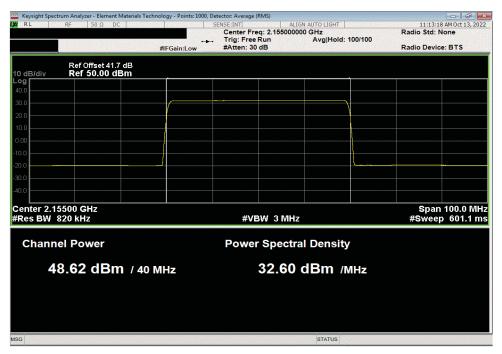


Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 256QAM, Mid Channel, 2155 MHz

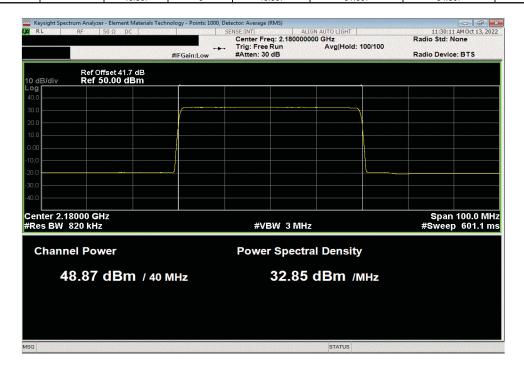
Initial Value Duty Cycle Single Port Two Port (2x2 MIMO) Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW dBm/Carrier BW dBm/Carrier BW

48.618 0 48.618 51.618 54.618



	Port 1, Band n66, NR 40 MHz, 2110 - 2200 MHz, 40 MHz, 256QAM, High Channel, 2180 MHz						
	Initial Value	Duty Cycle	Single Port	Two Port (2x2 MIMO)	Four Port (4x4 MIMO)		
	dBm/MHz	Factor (dB)	dBm/Carrier BW	dBm/Carrier BW	dBm/Carrier BW		
	48 867	0	48 867	51 867	54 867		





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

0 0					
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2022-01-17	2023-01-17
Block - DC	Fairview Microwave	SD3239	ANC	2022-03-02	2023-03-02

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

The method in section 5.2.4.4 of ANSI C63.26 was used to make the measurements. This method uses trace averaging across the ON and OFF times of the EUT transmissions in the spectrum analyzer channel power function using an RMS detector. Following the measurement a duty cycle correction was applied by adding [10 log (1/D)], where D is the duty cycle in decimal, to the measured power to compute the average power during the actual transmission times

The total average transmit power of all antenna ports was determined per ANSI C63.26-2105 paragraph 6.4.3.1.



TbtTx 2022.05.02.0 EUT: AHFII (FCC/ISED C2PC) Work Order: NOKI0050 Serial Number: K9181401111 Date: 18-Oct-22 Temperature: 22.2 °C
Humidity: 30.4% RH
Barometric Pres.: 1030 mbar
Job Site: TX07 Customer: Nokia of America Corporation Attendees: Mitchell Hill Project: None
Tested by: Brandon Hobbs
TEST SPECIFICATIONS Power: 54 VDC Test Method FCC 27:2022 ANSI C63.26:2015 RSS-139 Issue 4:2022 ANSI C63.26:2015 COMMENTS All measurement path losses were accounted for in the reference level offest including any attenuators, filters and DC blocks. Band n66 carriers are enabled at maximum power (80 watts/carrier). DEVIATIONS FROM TEST STANDARD None Configuration # Signature Duty Cycle Factor (dB) Initial Value Single Port Four Port (4x4 MIMO) dBm/MHz dBm/Carrier BW Port 1 5G NR, Band n66, 2110 - 2200 MHz 256-QAM Modulation Mid Channel, 2155 MHz 48.479 0 48.5 N/A Port 2 5G NR, Band n66, 2110 - 2200 MHz 256-QAM Modulation Mid Channel, 2155 MHz 48.588 48.6 N/A Port 3 5G NR, Band n66, 2110 - 2200 MHz 256-QAM Modulation Mid Channel, 2155 MHz 48.7 48.698 N/A 0 5G NR. Band n66, 2110 - 2200 MHz 256-QAM Modulation Mid Channel, 2155 MHz 48,468 0 48.5 N/A All Ports 5G NR, Band n66, 2110 - 2200 MHz 256-QAM Modulation Mid Channel, 2155 MHz 54.6

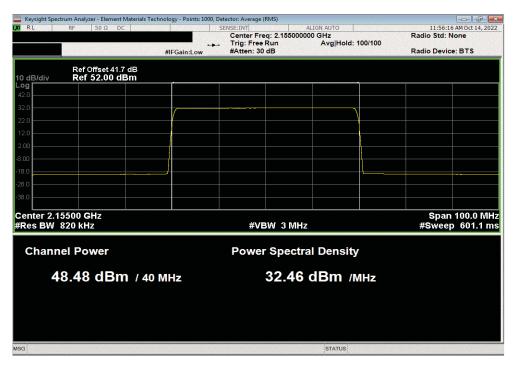


Port 1, 5G NR, Band n66, 2110 - 2200 MHz, 256-QAM Modulation, Mid Channel, 2155 MHz

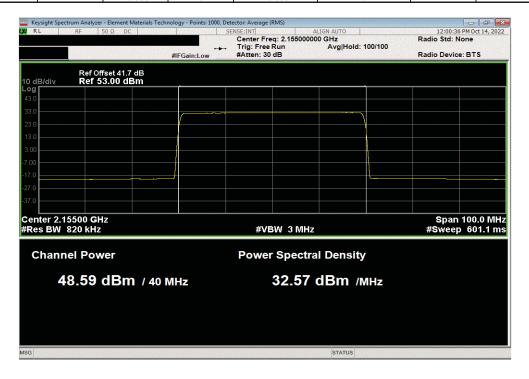
Initial Value Duty Cycle Single Port Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW Final Value

48.479 0 48.479 N/A



Port 2, 5G NR, Band n66, 2110 - 2200 MHz, 256-QAM Modulation, Mid Channel, 2155 MHz										
	Initial Value	Duty Cycle	Single Port	Four Port (4x4 MIMO)						
	dBm/MHz	Factor (dB)	dBm/Carrier BW	Final Value						
	48.588	0	48.588	N/A						



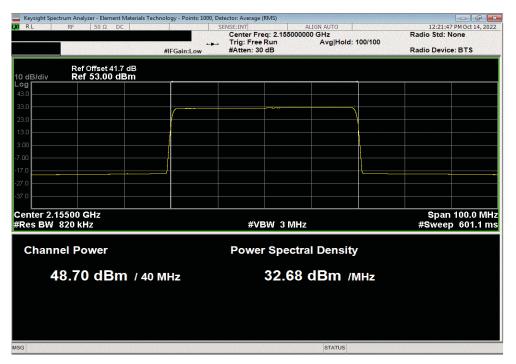


Port 3, 5G NR, Band n66, 2110 - 2200 MHz, 256-QAM Modulation, Mid Channel, 2155 MHz

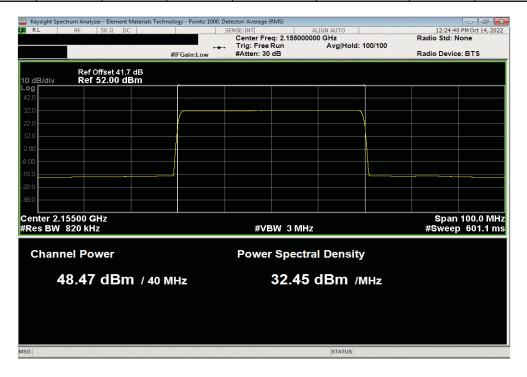
Initial Value Duty Cycle Single Port Four Port (4x4 MIMO)

dBm/MHz Factor (dB) dBm/Carrier BW Final Value

48.698 0 48.698 N/A



Port 4, 5G NR, Band n66, 2110 - 2200 MHz, 256-QAM Modulation, Mid Channel, 2155 MHz											
Initial Value Duty Cycle Single Port Four Port (4x4 MIMO)											
	dBm/MHz	Factor (dB)	dBm/Carrier BW	Final Value							
	48.468	0	48.468	N/A							





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All Ports, 5G NR, Band n66, 2110 - 2200 MHz, 256-QAM Modulation, Mid Channel, 2155 MHz												
Initial Value Duty Cycle Single Port Four Port (4x4 MIMO)												
		dBm/MHz	Factor (dB)	dBm/Carrier BW	Final Value							
		N/A	0	N/A	54.58							

Ports	dBm Power	Watts Power	Total Watts Power	Total dBm Power
Port 1	48.48	70.45		
Port 2	48.59	72.24		
Port 3	48.70	74.10		
Port 4	48.47	70.27		
All Ports			287.07	54.58



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2022-01-17	2023-01-17
Block - DC	Fairview Microwave	SD3239	ANC	2022-03-02	2023-03-02
Spectrum Analyzer	Agilent Technologies, Inc.	N9020A	R316	2021-08-19	2023-08-19

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

Because the conducted Output Power was measured using a RMS Average detector, the Peak to Average Power Ratio (PAPR) was measured to show that the maximum peak-max-hold spectrum to the maximum of the average spectrum does not exceed the rule part defined limit.

The PAPR measurement method is described in ANSI C63.26 section 5.2.3.4. The PAPR was measured using the CCDF function of the spectrum analyzer.

Per FCC part 24.232(d) and RSS 133 6.4, the PAPR limit shall not exceed 13 dB for more than the ANSI described 0.1% of the time.

RF conducted emissions testing was performed only on one port. The testing was performed on the same version of hardware (AHFII) as the original certification test. The AHFII antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 3 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraphs 5.2.5.3, 5.7.2i, and 6.4.



EUT: AHFII (FCC/ISED C2PC)

Serial Number: K9181401111

Customer: Nokia of America Corporation

Attendees: Mitchell Hill

Project: None Work Order: NOKI0050 Date: 18-Oct-22 Temperature: 21.6 °C Humidity: 29.2% RH Barometric Pres.: 1029 mbar Project: None
Tested by: Brandon Hobbs
TEST SPECIFICATIONS Power: 54 VDC Test Method Job Site: TX07 FCC 24E:2022 RSS-133 Issue 6:2013+A1:2018 COMMENTS All measurement path losses were accounted for in the reference level offest including any attenuators, filters and DC blocks. Band n25 carriers are enabled at maximum power (80 watts/carrier). DEVIATIONS FROM TEST STANDARD Configuration # 2 Signature 0.1% PAPR PAPF Limit (dB) Results Value (dB) Port 3, Band n25, 1930 MHz - 1995 MHz, 5G NR 40 MHz Bandwidth

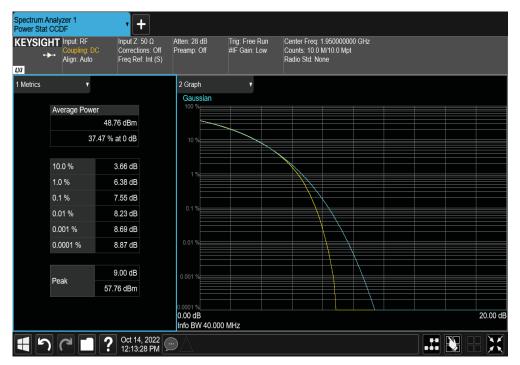
QPSK Modulation Pass Pass Low Channel, 1950 MHz 7.55 Mid Channel, 1962.5 MHz 6.92 13 High Channel, 1975 MHz 16-QAM Modulation 7.27 13 Pass Low Channel, 1950 MHz Mid Channel, 1962.5 MHz 7.68 7.15 Pass Pass 13 13 High Channel, 1975 MHz 64-QAM Modulation 7.38 13 Pass Low Channel, 1950 MHz Mid Channel, 1962.5 MHz High Channel, 1975 MHz 256-QAM Modulation 7.60 7.12 13 13 Pass Pass 7.05 13 Pass Low Channel, 1950 MHz Mid Channel, 1962.5 MHz 13 13 Pass 6.32 Pass High Channel, 1975 MHz 6.97 13 Pass



Port 3, Band n25, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, QPSK Modulation, Low Channel, 1950 MHz

0.1% PAPR PAPR
Value (dB) Limit (dB) Results

7.55 13 Pass



Port 3, Band n	25, 1930 MHz - 1	995 MHz, 5G NR,	, 40 MHz Bandwi	dth, QPSK Modul	ation, Mid Chann	el, 1962.5 MHz
				0.1% PAPR	PAPR	
				Value (dB)	Limit (dB)	Results
				6.92	13	Pass

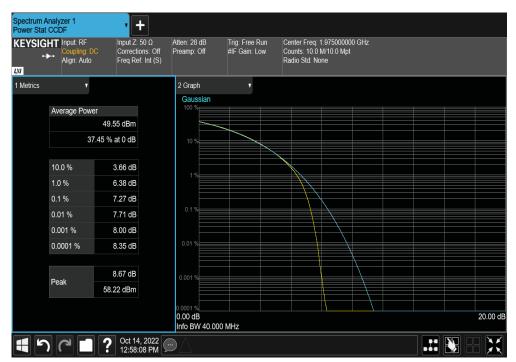




Port 3, Band n25, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, QPSK Modulation, High Channel, 1975 MHz

0.1% PAPR PAPR
Value (dB) Limit (dB) Results

7.27 13 Pass



Port 3, Band n2	25, 1930 MHz - 19	995 MHz, 5G NR,	40 MHz Bandwid	dth, 16-QAM Mod	ulation, Low Cha	nnel, 1950 MHz
				0.1% PAPR	PAPR	
				Value (dB)	Limit (dB)	Results
				7.68	13	Pass

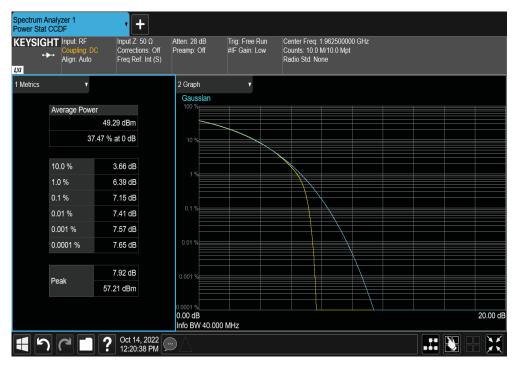




Port 3, Band n25, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 16-QAM Modulation, Mid Channel, 1962.5 MHz

0.1% PAPR PAPR
Value (dB) Limit (dB) Results

7.15 13 Pass



Port 3, Band n2	5, 1930 MHz - 19	95 MHz, 5G NR,	40 MHz Bandwid	th, 16-QAM Mod	ulation, High Cha	nnel, 1975 MHz
				0.1% PAPR	PAPR	
				Value (dB)	Limit (dB)	Results
				7.38	13	Pass

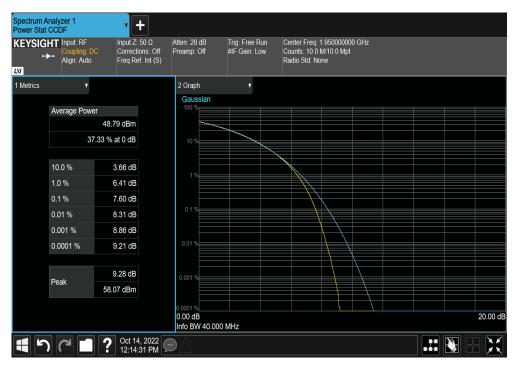




Port 3, Band n25, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 64-QAM Modulation, Low Channel, 1950 MHz

0.1% PAPR PAPR
Value (dB) Limit (dB) Results

7.6 13 Pass



Port 3, Band n2	5, 1930 MHz - 19	95 MHz, 5G NR,	40 MHz Bandwid	th, 64-QAM Modu	ulation, Mid Chan	nel, 1962.5 MHz
				0.1% PAPR	PAPR	
				Value (dB)	Limit (dB)	Results
				7.12	13	Pass



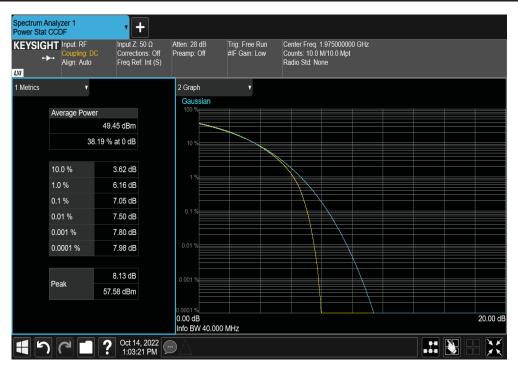


Port 3, Band n25, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 64-QAM Modulation, High Channel, 1975 MHz

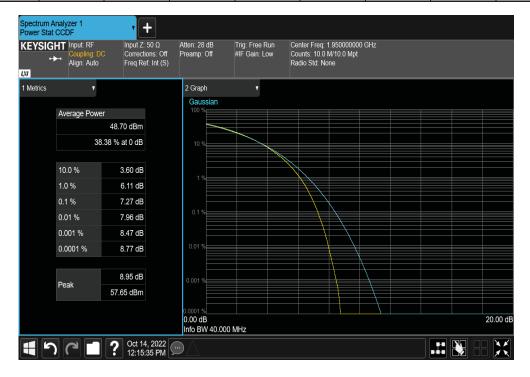
0.1% PAPR PAPR

Value (dB) Limit (dB) Results

7.05 13 Pass



Port 3, Band n2	5, 1930 MHz - 19	95 MHz, 5G NR,	40 MHz Bandwid	th, 256-QAM Mod	dulation, Low Cha	annel, 1950 MHz
				0.1% PAPR	PAPR	
				Value (dB)	Limit (dB)	Results
				7.27	13	Pass



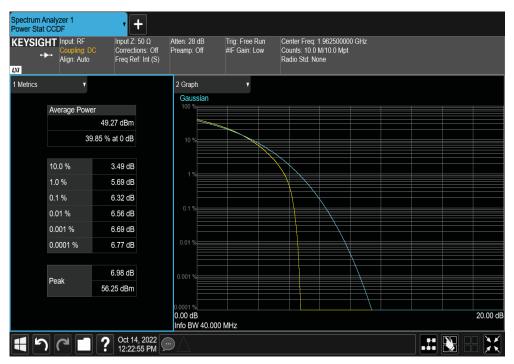


Port 3, Band n25, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 1962.5 MHz

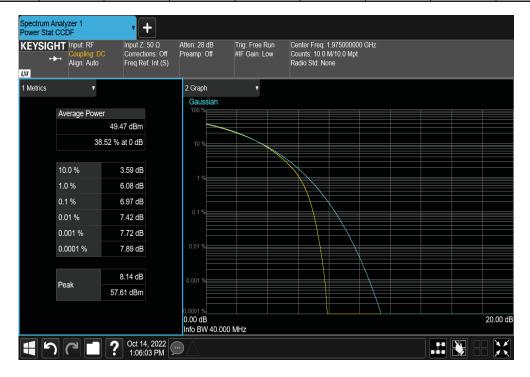
0.1% PAPR PAPR

Value (dB) Limit (dB) Results

6.32 13 Pass



Port 3, Band n25	5, 1930 MHz - 199	95 MHz, 5G NR, 4	40 MHz Bandwid	th, 256-QAM Mod	lulation, High Cha	annel, 1975 MHz	
				0.1% PAPR	PAPR		
				Value (dB)	Limit (dB)	Results	
				6.97	13	Pass	





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17
Block - DC	Fairview Microwave	SD3239	ANC	2022-03-02	2023-03-02
Spectrum Analyzer	Agilent Technologies, Inc.	N9020A	R316	2021-08-19	2023-08-19

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

Because the conducted Output Power was measured using a RMS Average detector, the Peak to Average Power Ratio (PAPR) was measured to show that the maximum peak-max-hold spectrum to the maximum of the average spectrum does not exceed the rule part defined limit.

The PAPR measurement method is described in ANSI C63.26 section 5.2.3.4. The PAPR was measured using the CCDF function of the spectrum analyzer.

Per FCC part 27.50(d)(5), RSS-139 6.5, the maximum peak-to-average power ratio (PAPR) is 13dB.

RF conducted emissions testing was performed only on one port. The testing was performed on the same version of hardware (AHFII) as the original certification test. The AHFII antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 3 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraphs 5.2.5.3, 5.7.2i, and 6.4.



XMit 2022 02 07

Serial Number: K9181401111 Customer: Nokia of America Corporation Attendees: Mitchell Hill Project: None Barometric Pres.: 1029 mbar Tested by: Brandon Hobbs Power: 54 VDC Job Site: TX07 TEST SPECIFICATIONS Test Method FCC 27:2022 ANSI C63.26:2015 RSS-139 Issue 4:2022 ANSI C63.26:2015 COMMENTS All measurement path losses were accounted for in the reference level offest including any attenuators, filters and DC blocks. Band n66 carriers are enabled at maximum power (80 watts/carrier). DEVIATIONS FROM TEST STANDARD	FIIT:	AHFII (FCC/ISED C2PC)		Work Order:	NOKI0050	
Customer Nokia of America Corporation Humidity: 31% RH						
Attendeses Mitchell Hill Humidity 31% RH Project None						
Project. None						
TEST SPECIFICATIONS	Project:	None				
ANSI C63 26:2015 ANSI C63 26	Tested by:	Brandon Hobbs	Power: 54 VDC	Job Site:	TX07	
ANSI C63.26:2015	TEST SPECIFICAT	IONS	Test Method			
COMMENTS	FCC 27:2022		ANSI C63.26:2015			
All measurement path losses were accounted for in the reference level offest including any attenuators, filters and DC blocks. Band n66 carriers are enabled at maximum power (80 watts/carrier). DEVIATIONS FROM TEST STANDARD	RSS-139 Issue 4:20	022	ANSI C63.26:2015			
### Action Page 1	COMMENTS					
DEVIATIONS FROM TEST STANDARD None Configuration # 2 Signature D.1% PAPR Value (dB) Limit (dB) Results	All measurement p	ath losses were accounted for in the reference level offest inclu	iding any attenuators, filters and DC blocks.	Band n66 carriers are e	nabled at maximun	power (80
Configuration # 2 Signature Signatur	watts/carrier).					
Configuration # 2 Signature Signatur						
Configuration # 2 Signature O.1% PAPR Value (dB) Limit (dB) Results		/I TEST STANDARD				
Signature Sign	None					
Signature Sign			7 - 11 .			
D.1% PAPR PAPR Value (dB) Limit (dB) Results	Configuration #		The XIA			
Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR		Signature	ϵ			
Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR 40 MHz Bandwidth QPSK Modulation Low Channel, 2130 MHz Aid Channel, 2155 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2130 MHz Low Channel, 2130 MHz Aid Channel, 2155 MHz Low Channel, 2130 MHz Aid Channel, 2155 MHz High Channel, 2180 MHz Aid Cha						- "
A0 MHz Bandwidth QPSK Modulation	Dt 0 D 1 00 44	200 MILE 4005 MILE 50 ND		value (dB)	Limit (dB)	Results
QPSK Modulation Low Channel, 2130 MHz 7.31 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass Pass Pass Pass Pass Pass Pass Pass	Port 3, Band noo, 1					
Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Total High Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2130 MHz High Channel, 2155 MHz Low Channel, 2155 MHz High Channel, 2180 MHz High Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz Low Channel, 2180 MHz Low Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High Channel, 2180 MHz Low Channel, 2180 MHz High						
Mid Channel, 2155 MHz 7.11 13 Pass High Channel, 2180 MHz 7.13 13 Pass 16-QAM Modulation 7.38 13 Pass Mid Channel, 2155 MHz 7.14 13 Pass High Channel, 2180 MHz 7.32 13 Pass 64-QAM Modulation 7.27 13 Pass Mid Channel, 2155 MHz 7.10 13 Pass High Channel, 2180 MHz 7.24 13 Pass 256-QAM Modulation 7.26 13 Pass Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass				7 21	12	Poor
High Channel, 2180 MHz 7.13 13 Pass 16-QAM Modulation 7.38 13 Pass Low Channel, 2130 MHz 7.38 13 Pass Mid Channel, 2155 MHz 7.14 13 Pass High Channel, 2180 MHz 7.32 13 Pass 64-QAM Modulation 7.27 13 Pass Mid Channel, 2155 MHz 7.10 13 Pass High Channel, 2180 MHz 7.24 13 Pass 256-QAM Modulation 7.26 13 Pass Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass						
16-QAM Modulation Low Channel, 2130 MHz 7.38 13 Pass Mid Channel, 2155 MHz 7.14 13 Pass High Channel, 2180 MHz 7.32 13 Pass 64-QAM Modulation Low Channel, 2130 MHz 7.27 13 Pass Mid Channel, 2155 MHz 7.10 13 Pass Light Channel, 2180 MHz 7.24 13 Pass 256-QAM Modulation Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass						
Low Channel, 2130 MHz Mid Channel, 2155 MHz High Channel, 2180 MHz Channel, 2180 MHz Algorithms 64-QAM Modulation Low Channel, 2130 MHz High Channel, 2155 MHz Low Channel, 2150 MHz Algorithms Algo				7.10	10	1 833
Mid Channel, 2155 MHz 7.14 13 Pass High Channel, 2180 MHz 7.32 13 Pass 64-QAM Modulation 7.27 13 Pass Low Channel, 2130 MHz 7.10 13 Pass High Channel, 2180 MHz 7.24 13 Pass 256-QAM Modulation 7.26 13 Pass Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass				7.38	13	Pass
High Channel, 2180 MHz 7.32 13 Pass 64-QAM Modulation						
64-QAM Modulation Low Channel, 2130 MHz 7.27 13 Pass Mid Channel, 2155 MHz 7.10 13 Pass High Channel, 2180 MHz 7.24 13 Pass 256-QAM Modulation Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass						
Mid Channel, 2155 MHz 7.10 13 Pass High Channel, 2180 MHz 7.24 13 Pass 256-QAM Modulation						
High Channel, 2180 MHz 7.24 13 Pass 256-QAM Modulation Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass		Low Channel, 2130 MHz		7.27	13	Pass
256-QAM Modulation Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass		Mid Channel, 2155 MHz		7.10	13	Pass
Low Channel, 2130 MHz 7.26 13 Pass Mid Channel, 2155 MHz 7.11 13 Pass		High Channel, 2180 MHz		7.24	13	Pass
Mid Channel, 2155 MHz 7.11 13 Pass		256-QAM Modulation				
		Low Channel, 2130 MHz		7.26	13	Pass
High Channel, 2180 MHz 7.21 13 Pass						Pass
		High Channel, 2180 MHz		7.21	13	Pass

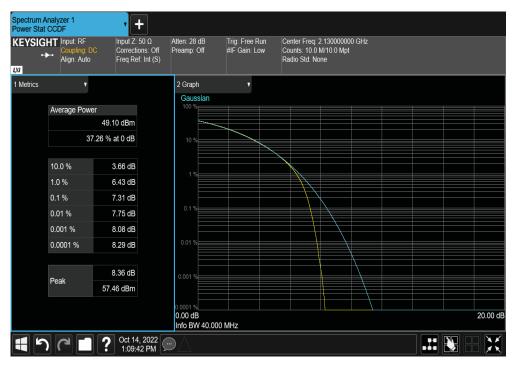


Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, QPSK Modulation, Low Channel, 2130 MHz

0.1% PAPR PAPR

Value (dB) Limit (dB) Results

7.31 13 Pass



Port 3, Band r	Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz									
0.1% PAPR PAPR										
				Value (dB)	Limit (dB)	Results				
				7.11	13	Pass				

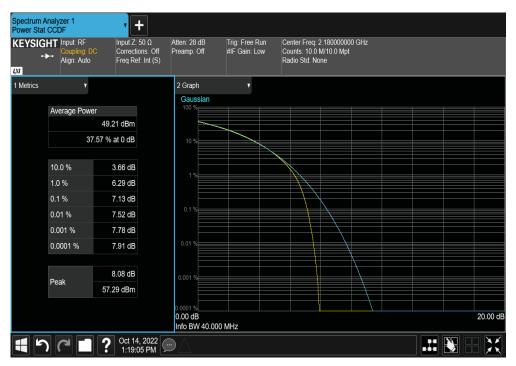




Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, QPSK Modulation, High Channel, 2180 MHz

0.1% PAPR PAPR
Value (dB) Limit (dB) Results

7.13 13 Pass



Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 16-QAM Modulation, Low Channel, 2130 MHz									
0.1% PAPR PAPR									
				Value (dB)	Limit (dB)	Results			
				7.38	13	Pass			

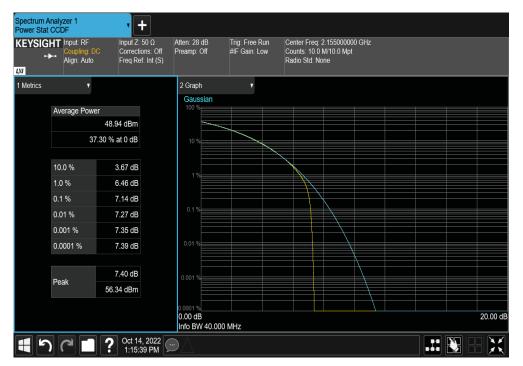




Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 16-QAM Modulation, Mid Channel, 2155 MHz

0.1% PAPR PAPR
Value (dB) Limit (dB) Results

7.14 13 Pass



	Port 3, Band n6	6, 1930 MHz - 19	995 MHz, 5G NR,	40 MHz Bandwid	lth, 16-QAM Mod	ulation, High Cha	nnel, 2180 MHz	
					0.1% PAPR	PAPR		
1					Value (dB)	Limit (dB)	Results	
1					7.32	13	Pass	



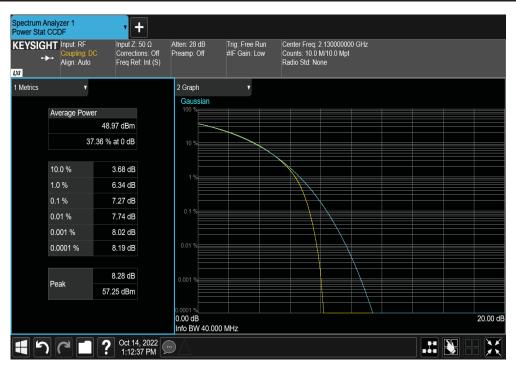


Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 64-QAM Modulation, Low Channel, 2130 MHz

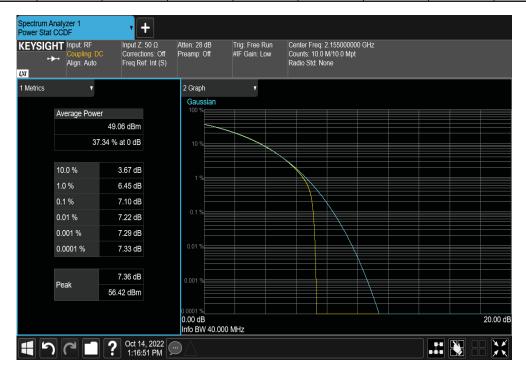
0.1% PAPR PAPR

Value (dB) Limit (dB) Results

7.27 13 Pass



Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz									
0.1% PAPR PAPR									
				Value (dB)	Limit (dB)	Results			
				7.1	13	Pass			



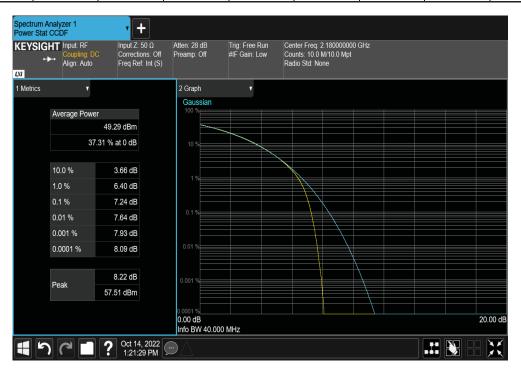


Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 64-QAM Modulation, High Channel, 2180 MHz

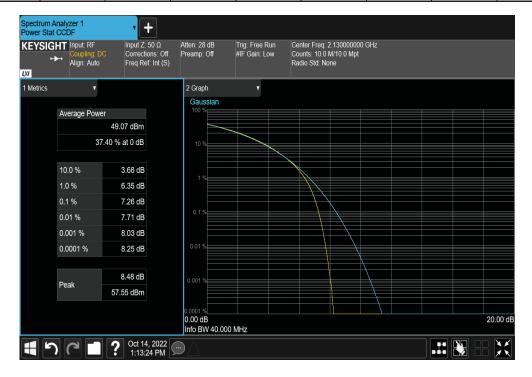
0.1% PAPR PAPR

Value (dB) Limit (dB) Results

7.24 13 Pass



Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 256-QAM Modulation, Low Channel, 2130 MHz									
0.1% PAPR PAPR									
				Value (dB)	Limit (dB)	Results			
				7.26	13	Pass			

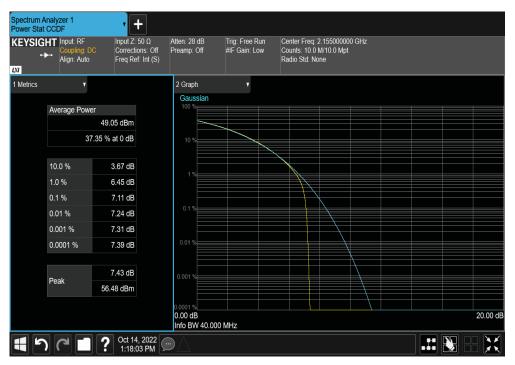




Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz

0.1% PAPR PAPR
Value (dB) Limit (dB) Results

7.11 13 Pass



Port 3, Band n66, 1930 MHz - 1995 MHz, 5G NR, 40 MHz Bandwidth, 256-QAM Modulation, High Channel, 2180 MHz									
0.1% PAPR PAPR									
				Value (dB)	Limit (dB)	Results			
				7.21	13	Pass			

