

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	SD3379	AMM	2020-09-21	2021-09-21
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	2021-03-11	2022-03-11
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 power spectral density was measured using the channels and modes as called out on the following data sheets.

The method of ANSI C63.26-2015 section 5.2.4.5 was used to make this measurement.

The RF conducted emission testing was performed on one port. The AZQW antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in the "Output Power - All Ports" report section) and antenna port 8 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 PSD for all antenna ports (at the radio output) were determined per ANSI C63.26-2015 paragraph 6.4.3.2.4. The EIRP calculations are based upon ANSI C63.26-2015 paragraphs 6.4 and 6.4.6.3.

The applicable FCC regulatory requirement for EIRP are provided below:

FCC Requirements: §27.50 Power limits and duty cycle.

27.50 (j) The following power requirements apply to stations transmitting in the 3700-3980 MHz band:

(1) The power of each fixed or base station transmitting in the 3700-3980 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3700-3980 MHz band and situated in any geographic location other than that described in paragraph (j)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.



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								TbtTx 2021.03.19.	XMit 2020.12.30.0
EUT	: Airscale Base Transcei	ver Station Remote Radio Head Mode	el AZQW				Work Order:	NOK10028	
Serial Number:	YK211100168	4					Date:	17-Jun-21	
Attendees	Lohn Battanayong Day	id Lo					Temperature:	21.0 C	
Project	None						Barometric Pres.:	1019 mbar	
Tested by:	Brandon Hobbs		Power:	54VDC			Job Site:	TX05	
TEST SPECIFICAT	TIONS			Test Method					
FCC 27:2021				ANSI C63.26:2015	5				
				<u>.</u>					
		ted for in the reference level effect in		stars filters and D					
port 8. The PSD w total PSD for two   Log(8)]. External	as measured while trans port operation is single p 1 gating was set using a	mitting one carrier on Port 8. The to ort PSD +3dB [i.e. 10 Log(2)]. The to trig delay = 86.2us and a gate length	tal PSD for multipol tal PSD for four por = 3.714ms. The car	rt (2x2 MIMO, 4x4 I rt operation is sing rrier power was set	MIMO & 8x8 MIN Ile port PSD +6 to maximum for	MO) operation was d dB [i.e. 10 Log(4)]. 1 or all testing.	eterminded based upor The total PSD for eight p	ANSI 63.26 clause 6.4.3	3.2.4 (10 Log Nout). The port PSD +9dB [i.e. 10
DEVIATIONS FRO	M TEST STANDARD								
None			/						
Configuration #	2	Signature	2. 1.	1					
				Initial Value dBm/MHz	Duty Cycle Factor (dB)	Single Port dBm/MHz == PSD	Two Port (2x2 MIMO) dBm/MHz == PSD	Four Port (4x4 MIMO) dBm/MHz == PSD	Eight Port (8x8 MIMO) dBm/MHz ==PSD
Band n77, 3700 MH	Hz - 3980 MHz, 5G NR								
	Port 8	,							
		OPSK Modulation							
		Mid Ch. 3840 MHz		29.214	0	29.21	32.21	35.21	38.21
		16-QAM Modulation			_				
		Mid Ch. 3840 MHz		30.472	0	30.47	33.47	36.47	39.47
		Mid Ch. 3840 MHz		29.126	0	29.13	32.13	35.13	38.13
		256-QAM Modulation			-				
		Mid Ch. 3840 MHz		29.475	0	29.48	32.48	35.48	38.48
	40 MHz BW	ODOK Madulatian							
		Low Ch. 3720 Mbz		29 168	0	29.17	32 17	35.17	38.17
		Mid Ch. 3840 MHz		29.428	õ	29.43	32.43	35.43	38.43
		High Ch. 3960 MHz		29.346	0	29.35	32.35	35.35	38.35
		16-QAM Modulation		20.000	0	20.00	22.00	20.00	20.00
		Low Cn. 3720 Minz Mid Ch. 3840 MHz		30.896	0	30.90	33.90	36.90	39.90
		High Ch. 3960 MHz		31.295	õ	31.30	34.30	37.30	40.30
		64-QAM Modulation							
		Low Ch. 3720 Mhz		29.352	0	29.35	32.35	35.35	38.35
		Mid Ch. 3840 MHz		29.671	0	29.67	32.67	35.67	38.67
		256-QAM Modulation		29.517	0	23.32	JZ.JZ	55.5z	30.32
		Low Ch. 3720 Mhz		29.501	0	29.50	32.50	35.50	38.50
		Mid Ch. 3840 MHz		29.551	0	29.55	32.55	35.55	38.55
		High Ch. 3960 MHz		29.601	0	29.60	32.60	35.60	38.60
	OU WITZ DW	OPSK Modulation							
		Mid Ch. 3840 MHz		28.773	0	28.77	31.77	34.77	37.77
		16-QAM Modulation							
		Mid Ch. 3840 MHz		30.273	0	30.27	33.27	36.27	39.27
		Mid Ch. 3840 MHz		28.575	0	28.58	31.58	34.58	37.58
		256-QAM Modulation			-				
		Mid Ch. 3840 MHz		28.636	0	28.64	31.64	34.64	37.64
	80 MHz BW	ODOK Madulatian							
		Mid Ch. 3840 MHz		27.034	0	27.03	30.03	33.03	36.03
		16-QAM Modulation		21.001	0	21.00	00.00	00.00	00.00
		Mid Ch. 3840 MHz		28.909	0	28.91	31.91	34.91	37.91
		64-QAM Modulation		07.455	0	07.40	20.40	22.40	20.40
		256-QAM Modulation		21.400	U	21.40	30.40	33.40	30.40
		Mid Ch. 3840 MHz		26.897	0	26.90	29.90	32.90	35.90
	100 MHz B	N							
		QPSK Modulation		26.022	0	26.02	20.02	22.02	25.02
		16-QAM Modulation		20.923	U	20.92	23.92	32.82	33.92
		Mid Ch. 3840 MHz		28.889	0	28.89	31.89	34.89	37.89
		64-QAM Modulation							
		Mid Ch. 3840 MHz		26.952	0	26.95	29.95	32.95	35.95
		250-QAW Wodulation Mid Ch. 3840 MHz		26.91	0	26.91	29.91	32.91	35.91
				20.01	v	20.01	20.01	02.01	00.01





VBW 3.0 MHz\*





VBW 3.0 MHz\*



	Band	n77, 3700 MHz - 398	30 MHz, 5G NR.	Port 8, 40 MHz BW, 0	OPSK Modul	lation, Low Ch. 37	720 Mhz		
	Initial V	alue Duty Cycle	e Single F	ort Two Port (2x	2 MIMO) Fo	our Port (4x4 MI	MO) Eigh	t Port (8x8 MIMO)	
	29.16	IHZFactor (dE680	29.16	B 32.16	8 8	35.168		38.168	1
Keysight Spectrum / Ku RL RF	Analyzer - Element Mater 50 Ω DC	rials Technology	SENSE:EXT	ALIGN AUTO/NO RF	DMS	09:14:09 AM Ju	in 16, 2021		
(	Gate: LO	PNO: Fast ↔	Trig: Externa #Atten: 30 dB	1 Avg Hold:	100/100	TYPE / DET	1 2 3 4 5 6 A WWWWW A A A A A A		
Ref	Offset 39 99 dB	IFGam.Low	Witten: 00 db		1	Mkr1 3.736 6	7 GHz		
10 dB/div Ref	f 40.00 dBm					29.168	3 dBm		
				1					
30.0		· · · · · · · · · · · · · · · · · · ·							
20.0					l				
10.0									
		l I							
0.00									
-10.0									
					himmon	1074M 40040 40040 400040			
-20.0									
-30.0									
-40.0									
-50.0									
Center 3 7200	0 GH7					Span 100	0 MHz		
0 cm cr 0.1 200	V OIL2					opullio			
#Res BW 1.0	MHz	#V	BW 3.0 MHz*		#Swe	ep 601.0 ms (6	601 pts)		
#Res BW 1.0 M	MHz	#V	BW 3.0 MHz*	STATUS	#Swe	ep 601.0 ms (6	501 pts)		
#Res BW 1.0 M	VIHz Band	#V n77, 3700 MHz - 398	BW 3.0 MHz* 30 MHz, 5G NR,	STATUS Port 8, 40 MHz BW, 0	#Swe	ep 601.0 ms (6	6 <b>01 pts)</b> 840 MHz		
#Res BW 1.0 M	MHz Band Initial Va dBm/M	#V n77, 3700 MHz - 394 alue Duty Cycle IHz Factor (dE	BW 3.0 MHz* 30 MHz, 5G NR, a Single F 3) dBm/MHz =	Port 8, 40 MHz BW, 0 Port Two Port (2x	#Swe QPSK Modul 2 MIMO) Fo == PSD	ep 601.0 ms (6 lation, Mid Ch. 38 our Port (4x4 MII dBm/MHz == PS	340 MHz MO) Eigh	t Port (8x8 MIMO) 3m/MHz ==PSD	
#Res BW 1.0 M	MHz Band Initial V: dBm/M 29.42	#V n77, 3700 MHz - 394 alue Duty Cycle IHz Factor (dE 28 0	BW 3.0 MHz* 30 MHz, 5G NR, Single F dBm/MHz = 29.42	Port 8, 40 MHz BW, 0           Port 7           Yort 7           Two Port (2x           = PSD dBm/MHz           8           32.42	#Swe QPSK Modul 2 MIMO) Fo == PSD 8	ep 601.0 ms (6 lation, Mid Ch. 38 our Port (4x4 MII dBm/MHz == PS 35.428	601 pts) 640 MHz MO) Eigh 6D dE	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h	MHz Band Initial V: dBm/M 29.42	#V n77, 3700 MHz - 394 alue Duty Cycle IHz Factor (dE 28 0	BW 3.0 MHz* 30 MHz, 5G NR, 30 MHz, 5G NR, 3	STATUS           Port 8, 40 MHz BW, (           ort         Two Port (2x           = PSD         dBm/MHz :           8         32.42	#Swe QPSK Modul 2 MIMO) Fo == PSD 8	ep 601.0 ms (6 lation, Mid Ch. 38 our Port (4x4 Mil dBm/MHz == PS 35.428	601 pts) 640 MHz MO) Eigh 6D dE	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 M MSG BIL Keysight Spectrum X RL   RF	MHZ Band i Initial Vi dBm/M 29.42 Analyzer - Element Mater 50 Ω DC	#V n77, 3700 MHz - 39/ alue Duty Cycle HIz Factor (dE 28 0 rials Technology	BW 3.0 MHz* 30 MHz, 5G NR, 5 Single F 1 29.42 EXT REF  Trip Delay51	STATUS Port 8, 40 MHz BW, ( port Two Port (2x = PSD dBm/MHz : 3 32.42 ALIGN AUTO/NO RF	#Swe	ep 601.0 ms (6 lation, Mid Ch. 38 bour Port (4x4 Mil dBm/MHz == PS 35.428	601 pts) 340 MHz MO) Eigh 5D dE	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 M MSG Keysight Spectrum X RL RF	MHz Band Initial V: dBm/M 29.42 Analyzer - Element Mater 50 Ω DC Gate: LO	#V n77, 3700 MHz - 394 alue Duty Cycle HIz Factor (dE 28 0 rials Technology	BW 3.0 MHz* 30 MHz, 5G NR, a Single F ) dBm/MHz = 29.42 EXT REF Trig Delay5.1 Trig: Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( Port Two Port (2x = PSD dBm/MHz 8 32.42 ▲ ALIGN AUTO/NO RF   µs #Avg Type 1 Avg Hold:	#Swe	ep 601.0 ms (6 bur Port (4x4 Mil dBm/MHz == PS 35.428	601 pts) 640 MHz MO) Eigh 6D dE 10 15,2021 12 3 4 5 6 A AAA AAA	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 M MSG Keysight Spectrum R L RF	MHz Band I Initial V. dBm/M 29.42 Analyzer - Element Mater 50 Ω DC Sate: LO	#V n77, 3700 MHz - 394 alue Duty Cycle HZ Factor (dE 28 0 PNO: Fast IFGain:Low	BW 3.0 MHz* 30 MHz, 5G NR, ⇒ Single F b) dBm/MHz = 29.42 Ext REF Trig Delay5.1 Trig: Externa #Atten: 30 dB	STATUS           Port 8, 40 MHz BW, 0           fort         Two Port (2x)           B         32.42           ▲ ALIGN AUTO/NO RF           µs         #Avg Type           Avg Hold:	#Swe QPSK Modul 2 MIMO) Fo == PSD 8	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Mil dBm/MHz == PS 35.428	601 pts) 340 MHz MO) Eigh 6D dE 100 dE 10	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h MSG Keysight Spectrum // R RL Ref 10 dB/div Ref	MHz Band I Initial V. dBm/M 29.42 Analyzer - Element Mater 50 Ω DC Sate: LO Offset 39.99 dB f 41.00 dBm	#V n77, 3700 MHz - 394 alue Duty Cycle IHz Factor (dE 28 0 nials Technology PNO: Fast IFGain:Low	BW 3.0 MHz* BO MHz, 5G NR, Single F dBm/MHz = 29.42 EXT REF Trig Delay5.1 Trig Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x = PSD dBm/MHz : 8 32.42 Augn Auto/No RF   µs #Avg Type 1 Avg Hold:	#Swe QPSK Modul 2 MIMO) Fo == PSD 8	ep 601.0 ms (6 lation, Mid Ch. 38 our Port (4x4 Mll dBm/MHz == PS 35.428	601 pts) 640 MHz MO) Eigh D dE 152 021 12 0421 12 0421 12 0421 13 0484 13 0484 13 0484 13 0484 14 0494 15 0	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h MSG MSG Keysight Spectrum R RL RL Ref 10 clE/div Ref CO	MHz Band Initial V dBm/M 29.42 Analyzer - Element Mater 50Ω 0C Gate: LO Offset 39.99 dB F 41.00 dBm	#V n77, 3700 MHz - 394 alue Duty Cycle IHz Factor (dE 8 0 rials Technology PNO: Fast IFGain:Low	BW 3.0 MHz, 5G NR, So MHz, 5G NR, BM Single F BM MHz = 29.42 EXT REF Trig Delay5.1 Trig Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x = PSD dBm/MHz : 8 32.42 ALIGN AUTO/NO RF   µs #Avg Type 1 Avg Hold:	#Swe QPSK Modul 2 MIMO) Fo == PSD 8	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Mil dBm/MHz == PS 35.428	40 MHz 40 MHz MO) Eigh 50 dE 10 dE 12 34 56 12 36 12 34 56 12 34 5	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	]
#Res BW 1.0 h MSG BIK Keysight Spectrum M RL RF 10 dB/div Ref 31.0	MHz Band Initial Vi dBm/M 29.42 Analyzer - Element Mate 50 Ω DC Sate: LO Offset 39.99 dB f 41.00 dBm	#V n77, 3700 MHz - 394 alue Duty Cycle Hz Factor (dE 8 0 rials Technology PNO: Fast ←	BW 3.0 MHz, 5G NR, So MHz, 5G NR, B Single F B dBm/MHz = 29.42 EXT REF Trig Delay5.1 Trig Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x = PSD dBm/MHz : 3 32.42 ALIGN AUTO/NO RF   µs #Avg Type 1 Avg Hold:	#Swe 2PSK Modul 2 MIMO) Fo == PSD 8   : RMS 100/100	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Mil dBm/MHz == PS 35.428	40 MHz MO) Eigh D dE m 55,2021 12,244 3 GHz 3 GHz 3 GHz	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h MSG  MSG  MSG  MSG  MSG  MSG  MSG  MSG	MHz Band Initial Vi dBm/M 29.42 Analyzer - Element Mater 5 0 Ω DC Sate: LO Offset 39.99 dB f 41.00 dBm	#V	BW 3.0 MHz, 5G NR, Single F dBm/MHz = 29.42 Ext REF Trig Delay5.1 Trig: Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( Port Two Port (2x = PSD dBm/MHz : 3 32.42 ALIGN AUTO/NO RF   #Avg Type 1 AvgIHold:	#Swe 2PSK Modul 2 MIMO) Fo == PSD 8   100/100	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Mil dBm/MHz == PS 35.428 03:09:48 PMJ TRACE TYPE Der Mkr1 3.852 3 29.428	40 MHz 40 MHz 40 Eigh D dE 12 4221 4 AAAAA 3 GHz 3 dBm	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h MSG Keysight Spectrum A Ref O dB/div Ref	MHz Band I Initial V. dBm/M 29.42 Analyzer - Element Mater 50 Q DC Sate: LO Offset 39.99 dB f 41.00 dBm	#V	BW 3.0 MHz* 30 MHz, 5G NR, a Single F b) dBm/MHz = 29.42 EXT REF  Trig Delay5.1 Trig Delay5.1 Trig Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x = PSD dBm/MHz = 8 32.42 ALIGN AUTO/NO RF   µs #Avg Type 1 Avg Hold:	#Swe	ep 601.0 ms (6 lation, Mid Ch. 38 our Port (4x4 Mll dBm/MHz == PS 35.428	40 MHz MO) Eigh D dE in 15,2021 12,34,56 AAAAAA 3 GHz 3 dBm	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h MSG Keysight Spectrum // Ref 10 dB/div Ref 31.0 21.0 11.0	MHz Band I Initial V. dBm/M 29.42 Analyzer - Element Mater 50 Ω DC Gate: LO Offset 39.99 dB F 41.00 dBm	#V n77, 3700 MHz - 394 alue Duty Cycle Hz Factor (dE 8 0 nais Technology PNO: Fast + IFGain:Low	BW 3.0 MHz* BO MHz, 5G NR, Single F dBm/MHz = 29.42 EXT REF Trig Delay5.1 - Trig: Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x = PSD dBm/MHz : 8 32.42 Augn Auto/No RF   µs #Avg Type 1 Avg Hold:	#Swe QPSK Modul 2 MIMO) Fo == PSD 8	ep 601.0 ms (6 lation, Mid Ch. 38 our Port (4x4 Mll dBm/MHz == PS 35.428	40 MHz MO) Eigh D dE in 15,2021 3 3 GHz 3 GHz	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h           MSG         MSG           Image: Spectrum view of the system o	MHz Band Initial V dBm/M 29.42 Analyzer - Element Mater 50Ω DC Gate: LO Offset 39.99 dB F 41.00 dBm	#V	BW 3.0 MHz, 5G NR, So MHz, 5G NR, BM Single F BM MHz = 29.42 EXT REF Trig Delay5.1 Trig Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x = PSD dBm/MHz : 8 32.42 ▲ ALIGN AUTO/NO RF   µs #Avg Type 1 Avg Hold:	#Swe 2PSK Modul 2 MIMO) Fo == PSD 8 100/100	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Ml dBm/MHz == PS 35.428	40 MHz 40 MHz MO) Eigh 50 dE 10 dE 12 3 4 5 6 13 4 4 4 4 3 GHz 3 GHz	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 I           MSG           Image: Constraint of the second seco	MHz Band Initial V dBm/M 29.42 Analyzer-Element Mater 50 Ω DC Gate: LO Offset 39.99 dB f 41.00 dBm	#V	BW 3.0 MHz, SG NR, So MHz, SG NR, B Single F B dBm/MHz = 29.42 EXT REF Trig Delay5.1 Trig Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x = PSD dBm/MHz : 8 32.42 ALIGN AUTO/NO RF   µs #Avg Type 1 Avg Hold:	#Swe	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Ml dBm/MHz == PS 35.428	40 MHz MO) Eigh D dE m 15,2021 22,44,36 3 GHz 3 GHz	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 h MSG  BIL Keysight Spectrum A RL  C  C  C  C  C  C  C  C  C  C  C  C  C	MHz Band Initial Vi dBm/M 29.42 Analyzer - Element Mate 50 Ω DC Sate: LO Offset 39.99 dB f 41.00 dBm	#V	BW 3.0 MHz, SG NR, So MHz, SG NR, So Single F B) dBm/MHz = 29.42 EXT REF Trig Delay5.1 Trig Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( fort Two Port (2x = PSD dBm/MHz : 3 32.42 ALIGN AUTO/NO RF   4 Avg Type 1 Avg Hold:	#Swe	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Mil dBm/MHz == PS 35.428	40 MHz MO) Eigh D dE m 15.2021 3 GHz 3 GHz 3 GHz	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res         BW         1.0 In           MSG         MSG         MSG           Image: Sector and the sect	MHz Band Initial Vi dBm/M 29.42 Analyzer - Element Mater 5 0 Ω DC Gate: LO Offset 39.99 dB f 41.00 dBm	#V	BW 3.0 MHz, 5G NR, Single F dBm/MHz = 29.42 Ext REF Trig Delay5.1 Trig: Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( Port Two Port (2x PSD dBm/MHz : 3 32.42 ALIGN AUTO/NO RF ] 4 Avg Type 4 Avg Hold:	#Swe	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Mil dBm/MHz == PS 35.428	40 MHz MO) Eigh D dE 12.2021 13.2021 3 GHz 3 dBm	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 N MSG  MSG  MSG  MSG  MSG  MSG  MSG  MSG	MHz Band Initial Vi dBm/M 29.42 Analyzer - Element Mater 5 0 Ω DC Gate: LO Offiset 39.39 dB f 41.00 dBm	#V	BW 3.0 MHz, 5G NR, Single F dBm/MHz = 29.42 Ext REF Trig Delay5.1 Trig: Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( Port Two Port (2x = PSD dBm/MHz : 3 32.42 ALIGN AUTO/NO RF   #Avg Type 1 Avg Hold:	#Swe	ep 601.0 ms (6 lation, Mid Ch. 38 bour Port (4x4 MII dBm/MHz == PS 35.428 03:09:48 PMJ TRACE TYPE 03:09:48 PMJ TRACE TYPE 03:09:48 PMJ TRACE TYPE 04:00 TY	340 MHz MO) Eigh D dE in 15,2421 3 GHz 3 dBm	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1
#Res BW 1.0 N MSG  MSG  Keysight Spectrum N Ref O G G G G G G G G G G G G G G G G G G	MHz Band Initial V dBm/M 29.42 Analyzer - Element Mater 50 Q DC Gate: LO Offset 39.99 dB r 41.00 dBm	#V	BW 3.0 MHz, 5G NR, 30 MHz, 5G NR, 30 dBm/MHz = 29.42 EXT REF  Trig Delay5.1 - Trig: Externa #Atten: 30 dB	STATUS Port 8, 40 MHz BW, ( ort Two Port (2x PSD dBm/MHz : 8 32.42 ALIGN AUTO/NO RF   µs #Avg Type 1 Avg Hold:	#Swe	ep 601.0 ms (6 lation, Mid Ch. 38 bur Port (4x4 Mll dBm/MHz == PS 35.428	340 MHz MO) Eigh D dE in 15, 221 2342 3 dBm 3 dBm	t Port (8x8 MIMO) 3m/MHz ==PSD 38.428	1

 
 Center 3.84000 GHz #Res BW 1.0 MHz
 Span 100.0 MHz #VBW 3.0 MHz\*
 Span 100.0 MHz #Sweep
 Span 100.0 MHz

 Msg
 #VBW 3.0 MHz\*
 #Sweep
 601.0 ms (601 pts)





#VBW 3.0 MHz\*

Span 100.0 MHz #Sweep 601.0 ms (601 pts)

Report No. NOKI0028.1

Center 3.72000 GHz #Res BW 1.0 MHz







	dBm/MHz	Factor (dB)	dBm/MHz == P	SD dBm/MHz == PS	SD dBm/MHz == l	PSD dBm/MHz ==PSD
	29.352	0	29.352	32.352	35.352	38.352
					-	
RL RF	Analyzer - Element Materials Techn 50 Ω DC	iology	SENSE:EXT	ALIGN AUTO/NO RF	09:29:44 A	— ) 🐨 🔜
			Trig Delay5.1 µs	#Avg Type: RMS	TRAC	
0	Gate: LO	PNO: Fast ++-	#Atten: 30 dB	Avginola. 100/10	DE	
Ref	Offset 39 99 dB				Mkr1 3.729	83 GHz
0 dB/div Re	f 41.00 dBm				29.3	52 dBm
09						
31.0				<b>\</b> 1		
21.0						
		1				
11.0						
1.00						
1.00						
9.00						
		~		hen	AND THE CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE	and the second
19.0						
-29.0						
20.0						
-39.0						
49.0						
Center 3 7200	0.047				Span 1	00.0 MHz
Res BW 101	MH7	#VB	W/ 3.0 MHz*		opanii	00.0 141112
			1 0.0 11112		#Sweep <u>601.0 ms</u>	(601 pts)
G				STATUS	#Sweep 601.0 ms	(601 pts)
G				STATUS	#Sweep 601.0 ms	(601 pts)
G	Band n77, 37(	00 MHz - 3980 Duty Cycle	MHz, 5G NR, Port	STATUS 3, 40 MHz BW, 64-QA	#Sweep 601.0 ms M Modulation, Mid Ch	. (601 pts) . 3840 MHz MIMO) Fight Port (8x8 MIM)
G	Band n77, 370 Initial Value dBm/MHz	00 MHz - 3980 Duty Cycle Factor (dB)	MHz, 5G NR, Port Single Port dBm/MHz == P	status 3, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == I	: (601 pts) . 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD
G	Band n77, 370 Initial Value dBm/MHz 29.671	00 MHz - 3980 Duty Cycle Factor (dB) 0	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671	8, 40 MHz BW, 64-QA Two Port (2x2 Mil D dBm/MHz == PS 32.671	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz == 1 35.671	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
SG	Band n77, 37( Initial Value dBm/MHz 29.671	00 MHz - 3980 Duty Cycle Factor (dB) 0	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671	status           8, 40 MHz BW, 64-QA           Two Port (2x2 MII           5D         dBm/MHz == PS           32.671	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
SG Keysight Spectrum / RL RF	Band n77, 370 Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Ω DC	00 MHz - 3980 Duty Cycle Factor (dB) 0	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671	status           8, 40 MHz BW, 64-QA           Two Port (2x2 MIR           D         dBm/MHz == PS           32.671           ALIGN AUTO/NO RF	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz == 1 35.671	. 3640 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
SG Keysight Spectrum RL RF	Band n77, 370 Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Q DC	00 MHz - 3980 Duty Cycle Factor (dB) 0	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671 EXT REF Trig Delay5.1 µs Trig: Delay5.1 µs	status           8, 40 MHz BW, 64-QA           Two Port (2x2 MIR           5D         dBm/MHz == PS           32.671           ALIGN AUTO/NO RF           #Avg Type: RMS           Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz == 1 35.671	(601 pts)     . 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD
SG Keysight Spectrum RL   RF	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Ω DC	00 MHz - 3980 Duty Cycle Factor (dB) 0 vology PNO: Fast →	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg[Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671	. 3840 MHz           MIMO)         Eight Port (8x8 MIM0           PSD         dBm/MHz ==PSD           38.671
SG Keysight Spectrum RL   RF (	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Ω DC   Sate: LO Offset 39.99 dB	00 MHz - 3980 Duty Cycle Factor (dB) 0 vology PNO: Fast →	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 0 TRAC 00 TV 00	(601 pts)     . 3840 MHz MIMO) Eight Port (8x8 MIM0 PSD dBm/MHz ==PSD
sg ( Keysight Spectrum RL RF O dB/div Ref O dB/div Ref	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Ω DC Gate: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 vology PNO: Fast →	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671 EXT REF Trig Delay5.1 µs Trig: External #Atten: 30 dB	STATUS 8, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 0 3:32:58 PI 0 TFAC 00 TFAC 00 TFAC 00 TFAC 00 TFAC 00 TFAC	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671 
sg Keysight Spectrum RL RF O dB/div Ref O dB/div Ref	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Ω DC Sate: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 uology PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671 EXT REF Trig Delay5.1 µs Trig: External #Atten: 30 dB	STATUS 8, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 0 3:32:58 PI 0 1747 0 777 0 777 0 777 0 823258 PI 0 777 0 777 0 777 0 777	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
Keysight Spectrum RL RF 0 dB/div Ref 22.0	Band n77, 37( Initial Value dBm/MHz 29.671 29.671 30Ω DC 50Ω DC 50Ω DC 53te: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P3 29.671	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 03:32:58 PI 00 Trif Mkr1 3.849 29.6	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
Keysight Spectrum / RL RF 0 dB/div Ref	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Teche 50 Ω DC Sate: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P3 29.671	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 03:3258 PI 03:3258 PI 03:3258 PI 00 TRAC 00 TRAC 00 Rkr1 3.849 29.6	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
Keysight Spectrum / RL RF 0 dB/div Ref 32.0	Band n77, 37( Initial Value dBm/MHz 29.671 29.671 Analyzer - Element Materials Techr 50 Ω DC 56te: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671	STATUS 3, 40 MHZ BW, 64-QA Two Port (2x2 MIR 3D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 03:32:58 PI 03:32:58 PI 00 TRAC 00 TRAC 00 Rkr1 3.849 29.6	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
Keysight Spectrum //     RL RF     Re     Solution	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techr 50 Ω DC Sate: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P3 29.671	STATUS 3, 40 MHZ BW, 64-QA Two Port (2x2 MIR D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 f SD dBm/MHz == 1 35.671 03:3258 pt 00:3258 pt 00:3258 pt 03:3258 pt 04:3258 pt 04:3258 pt 04:3258 pt 04:3258 pt 04:3258 pt 04:3258 pt 04:3258 pt 05:3258	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
IL Keysight Spectrum / R L RF 10 dB/div Ref 32.0 12.0	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techr 50 Ω DC Sate: LO	00 MHz - 3980 Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MIP D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz == 1 35.671 00:3258 PI 00:3258	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671 
IL Keysight Spectrum // Ref //	Band n77, 370 Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techr 50 Ω DC Sate: LO	00 MHz - 3980 Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P? 29.671 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MIP D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz == 35.671 03:32:58 PI 00 Tr Mkr1 3.849 29.6	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671 
I Keysight Spectrum / RL Ref 0 dB/dty Ref 0 dB/dty Ref 22 0 22 0 2 00	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Ω DC Gate: LO	00 MHz - 3980 Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P? 29.671	STATUS         3, 40 MHz BW, 64-QA         Two Port (2x2 MIP         D       dBm/MHz == PS         32.671         ALIGN AUTO/NO RF         #Avg Type: RMS         Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz ==   35.671 0 3:32:59 Pl 0 3:32:59 Pl 0 0 Mkr1 3.849 29.6	. 3640 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
Il         Keysight Spectrum //           @         R.L         Ref           0         dB/div         Ref           20	Band n77, 370 Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techn 50 Ω DC Gate: LO	00 MHz - 3980 Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P 29.671	STATUS         3, 40 MHz BW, 64-QA         Two Port (2x2 MIR         D       dBm/MHz == PS         32.671         ALIGN AUTO/NO RF         #Avg Type: RMS         Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz == 1 35.671 03:32:58 PI 00 TRAA 00 Mkr1 3.849 29.6	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671
I Keysight Spectrum // RL Ref 0 dB/div Ref 22.0 2.00 8.00	Band n77, 370           Initial Value           dBm/MHz           29.671           Analyzer - Element Materials Technet           50 Ω         DC           Sate: LO           Offset 39.99 dB           f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 vology PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == Pt 29.671	STATUS         3, 40 MHz BW, 64-QA         Two Port (2x2 MIR         D       dBm/MHz == PS         32.671         ALIGN AUTO/NO RF         #Avg Type: RMS         Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 N SD dBm/MHz == 1 35.671 03:32:58 P 03:32:58 P 03:58 P 0	(601 pts)     . 3840 MHz MIMO) Eight Port (8x8 MIM0 PSD dBm/MHz ==PSD
Keysight Spectrum /     Keysight Spectrum /     RL RF     C     C     C     Ref     C	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Teche 50 Ω DC   Sate: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 ellogy PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P3 29.671	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 0 3:32:58 P 0 3:32:58 P 0 TRAC 0 0 Mkr1 3.849 29.6	: (601 pts) : 3840 MHz MIMO) Eight Port (8x8 MIMO PSD dBm/MHz ==PSD 38.671 : 38.671 : 38.671 : 43.44.44 : 43.44.44.44 : 43.44.44.44 : 43.44.44.44 : 43.44.44.44.44 : 43.44.44.44.44.44.44.44.44.44.44.44.44.4
Keysight Spectrum /      Register Spectrum /      Register Spectrum /      Ref     dB/div Ref     22.0     2.0     12.0     12.0     18.0     18.0     18.0	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Element Materials Techr 50 Ω DC Sate: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P3 29.671	STATUS 3, 40 MHz BW, 64-QA Two Port (2x2 MII 5D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 0 3:32:58 PI 0 7TRA 0 7TRA 0 7TRA 29.6	3840 MHz MIMO) Eight Port (8x8 MIMO PSD dBm/MHz ==PSD 38.671 38.671 38.671 38.671 17 GHz 71 dBm
Keysight Spectrum,           R         Ref           0         B/dlv         Ref           32.0	Band n77, 37( Initial Value dBm/MHz 29.671 Analyzer - Bement Materials Techr 50Ω DC   Sate: LO Offset 39.99 dB f 42.00 dBm	00 MHz - 3980 Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	MHz, 5G NR, Port Single Port dBm/MHz == P3 29.671	STATUS 3, 40 MHZ BW, 64-QAI Two Port (2x2 MIR 3D dBm/MHz == PS 32.671 ALIGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/10	#Sweep 601.0 ms M Modulation, Mid Ch MO) Four Port (4x4 I SD dBm/MHz == 1 35.671 0 TRAC 00 TRAC 00 TRAC 00 TRAC 00 TRAC 01 TRA	. 3840 MHz MIMO) Eight Port (8x8 MIM PSD dBm/MHz ==PSD 38.671

#VBW 3.0 MHz\*

STATUS

Span 100.0 MHz #Sweep 601.0 ms (601 pts)

Center 3.84000 GHz #Res BW 1.0 MHz



	dBm/MHz	Factor (dB)	dBm/MH	e Port z == PSD	dBm/MHz :	== PSD	dBm/MHz =	= PSD	dBm/MHz ==PSD
	29.517	0	29.	517	32.51	7	35.517	7	38.517
Keysight Spectrum Analyzer - F	lement Materials Techn	aology							
X RL RF 50	Ω DC		EXT REF	ALIO	SN AUTO/NO RF	: RMS	11:57:2 T	9 AM Jun 16, 2021	
Gate: LO		PNO: Fast ++- IFGain:Low	. Trig: Exter #Atten: 30	rnal1 dB	Avg Hold:	100/100			A
Ref Offset 3	9.99 dB						Mkr1 3.94	2 67 GH	Z
<sup>-09</sup>	dBm								
31.0		<b>↓</b> 1							
21.0						1			
11.0						1			
1.00									
-9 00						ļ			
		and the second s				L			
-19.0									
-29.0									
-39.0									
10.0									
-49.0									
enter 3.96000 GHz							Spar	100.0 MH	z
Center 3.96000 GHz Res BW 1.0 MHz	,	#VB	W 3.0 MHz	*	STATUS	#Sw	Spar veep 601.0 r	100.0 MH ns (601 pts	z s)
Center 3.96000 GHz #Res BW 1.0 MHz		#VB	W 3.0 MHz	*	STATUS	#Sw	Spar reep 601.0 r	100.0 MH ns (601 pts	z ()
Center 3.96000 GHz Res BW 1.0 MHz sa	Band n77, 370	#VE 0 MHz - 3980 I Duty Cycle	W 3.0 MHz MHz, 5G NR Single	* , Port 8, 40 e <b>Por</b> t	STATUS MHz BW, 25 Two Port (2x	#Sw 66-QAM Ma (2 MIMO)	Spar reep 601.0 r odulation, Low Four Port (4x	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E	z b) lhz ight Port (8x8 MIMC
Center 3.96000 GHz Res BW 1.0 MHz	Band n77, 370 Initial Value dBm/MHz 29 501	#VE 0 MHz - 3980 I Duty Cycle Factor (dB)	W 3.0 MHz MHz, 5G NR Singl dBm/MH 29	* , Port 8, 40 e Port z == PSD 501	STATUS MHz BW, 25 Two Port (2x dBm/MHz : 32 50	#Sw 66-QAM Mo 22 MIMO) == PSD 1	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz =	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD	hz light Port (8x8 MIMC dBm/MHz ==PSD 38 501
Center 3.96000 GHz #Res BW 1.0 MHz	Band n77, 370 Initial Value dBm/MHz 29.501	#VB 00 MHz - 3980 I Duty Cycle Factor (dB) 0	W 3.0 MHz MHz, 5G NR Singl dBm/MH 29.	* , Port 8, 40 e Port z == PSD 501	MHz BW, 25 Two Port (2x dBm/MHz 32.50	#Sw 66-QAM Mo 22 MIMO) == PSD 1	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD	Ihz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz           #Res BW 1.0 MHz           #SG           Mil Keysight Spectrum Analyzer - E           RL         PF	Band n77, 370 Initial Value dBm/MHz 29.501	#VE 00 MHz - 3980 I Duty Cycle Factor (dB) 0	W 3.0 MHz MHz, 5G NR Singl dBm/MH 29. SENSE:EXT	* , Port 8, 40 e Port z == PSD 501	STATUS MHz BW, 25 Two Port (2x dBm/MHz = 32.50 SN AUTO/NO RF	#Sw 56-QAM Mc 22 MIMO)   == PSD 1	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>-</sup> 09:56:4	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD	hz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz Isg Isg Keysight Spectrum Analyzer - E R L RF 50: Gate: L0	Band n77, 370 Initial Value dBm/MHz 29.501	#VIE 00 MHz - 3980 1 Duty Cycle Factor (dB) 0 nelogy PNO: Fast →	W 3.0 MHz MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exte	., Port 8, 40 e Port z == PSD 501 501 5.1 µs mal1	MHz BW, 25 Two Port (2x dBm/MHz = 32.50 SN AUTO/NO RF   #Avg Type Avg Hold:	#Sw 66-QAM Mo 22 MIMO) 1 == PSD 1 1	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>-</sup> 09:56:4 T	1000.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16,2021 TYPE & 4 A 4 A 4	Ihz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz #SG Keysight Spectrum Analyzer - E RL RF 50: Gate: LO	Band n77, 370 Initial Value dBm/MHz 29.501	#VE 00 MHz - 3980 0 Duty Cycle Factor (dB) 0 vology PNO: Fast FGain:Low	W 3.0 MHz MHz, 5G NR Singl dBm/MH 29. sense:ext Trig Delay Trig: Exter #Atten: 30	* Port 8, 40 e Port z == PSD 501 [ δ.1 μs rnal1 dB	STATUS MHZ BW, 25 Two Port (2x dBm/MHz 32.50 SN AUTO/NO RF #Avg Type Avg Hold:	#SW 66-QAM Mc 22 MIMO) 1 == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:56:4 T Mkr1 3.73	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16,202 RACE 1234 S TYPE A A A A A 0 50 GH	Ihz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3,96000 GHz #Res BW 1.0 MHz Asg Asg RL RF 50: Gate: L0 Ref Offset 3 00 dB/div Ref 41.00	Band n77, 370 Initial Value dBm/MHz 29.501 ement Materials Techn $\Omega$ DC 9.99 dB dBm	#VE 00 MHz - 3980 I Duty Cycle Factor (dB) 0 vology PNO: Fast IFGain:Low	W 3.0 MHz MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig Exte #Atten: 30	* , Port 8, 40 e Port z == PSD 501 6.1 µs mal1 dB	STATUS MHZ BW, 25 Two Port (2x dBm/MHZ : 32.50 SN AUTO/NO RF   #Avg Type Avg Hold:	#Sw 66-QAM Mo (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 m odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>°</sup> 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16, 2027 A AMJUN 16, 2027 A AMJUN 16, 2027 Ch. 3720 M 4 AMJUN 16, 2027 Ch. 3720 M 4 MIMO) E = A A A A 0 50 GH 50 GH	Ihz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3,96000 GHz #Res BW 1.0 MHz asg asg RL RE 50 Gate: L0 Gate: L0 Ref Offset 3 Ref 41.00	Band n77, 370 Initial Value dBm/MHz 29.501 ement Materials Techr 2 DC 9.99 dB dBm	#VIE 00 MHz - 3980 I Duty Cycle Factor (dB) 0 nelogy PNO: Fast IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exte #Atten: 30	x , Port 8, 40 e Port z == PSD 501 501 6.1 µs call dB	STATUS MHz BW, 25 Two Port (2x dBm/MHz : 32.50 SN AUTO/NO RF   #Avg Type Avg Hold:	#SW 66-QAM Mc (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16, 2027 4 AMJun 16, 2027 4 AMJun 16, 2027 4 AMJun 16, 2027 50 GH 501 dBn	hz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG Keysight Spectrum Analyzer - E X RL RF 50: Gate: L0 Ref Offset 3 10 dB/div Ref 41.00	Band n77, 370 Initial Value dBm/MHz 29.501 Imment Materials Techn 2 DC   9.99 dB dBm	#VE 0 MHz - 3980 Duty Cycle Factor (dB) 0 Nology PNO: Fast IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* , Port 8, 40 e Port 7 z == PSD 501 5 501 6 Auto mal1 dB	STATUS MHZ BW, 25 Two Port (2x dBm/MHz 32:50 SN ALITO/NO RF   #Avg Type Avg Hold:	#Sw 66-QAM Ma (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 ANJUN 16,2027 TYPE 2 2 4 ANJUN 16,2027 TYPE 2 4 ANJUN 16,2027	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz #sg Keysight Spectrum Analyzer - E R RL RF 50: Gate: L0 Gate: L0 10 dB/div Ref 41.00 31.0	Band n77, 370 Initial Value dBm/MHz 29.501	#VE 00 MHz - 3980 1 Duty Cycle Factor (dB) 0 vology PNO: Fast → IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* Port 8, 40 e Port z == PSD 501       	STATUS MHZ BW, 25 Two Port (2x dBm/MHz 32.50 SN AUTO/NO RF #Avg Type Avg Hold:	#SW 66-QAM Mo 2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>°</sup> 09:564 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16, 2027 A AMJun 16, 2027 A AMJUN 16, 2027 Children 10 Children 10 Chi	Ihz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG MSG Keysight Spectrum Analyzer - E R R S0 RL RF 50 Gate: L0 Gate: L0 Cate: L0 Cat	Band n77, 370 Initial Value dBm/MHz 29.501 lement Materials Techr 2 DC	#VE	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exte #Atten: 30	* , Port 8, 40 e Port 501 501 6.1 µs rma1 dB	STATUS MHz BW, 25 Two Port (2x dBm/MHz : 32:50 SN AUTO/NO RF [ #Avg Type Avg Hold:	#SW 66-QAM Mc (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>-0</sup> 09:56:4 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16,2027 AACH 2 34 5 TYPE A AAAA 0 50 GH 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3,96000 GHz #Res BW 1.0 MHz MSG BE Keysight Spectrum Analyzer - E C RL RF 50: Gate: L0 C Gate: L0 C Ga	Band n77, 370 Initial Value dBm/MHz 29.501 Imment Materials Techno Ω DC   9.99 dB dBm	#VE 00 MHz - 3980 1 Duty Cycle Factor (dB) 0 nelogy PNO: Fast → IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig Delay #Atten: 30	* , Port 8, 40 e Port z == PSD 501 6.1 µs dB	STATUS MHz BW, 25 Two Port (2x dBm/MHz : 32.50 SN AUTO/NO RF   #Avg Type Avg Hold:	#SW 66-QAM Mc (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:564 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16,2021 PET AAAAA CO 500 GH 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG MSG Keysight Spectrum Analyzer - E X RL RF 50 Gate: L0 C Ref Offset 3 10 dB/div Ref 41.00 21.0	Band n77, 370 Initial Value dBm/MHz 29.501 Imment Materials Techn 2 DC	#VE 0 MHz - 3980 Duty Cycle Factor (dB) 0 Nology PNO: Fast IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* , Port 8, 40 e Port z == PSD 501 6.1 µs mal1 dB	STATUS MHZ BW, 25 Two Port (2x dBm/MHz 32:50 SN ALITO/NO RF   #Avg Type Avg Hold:	#Sw 66-QAM Md (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 ANJUN 16, 2022 A ANJUN 16, 2022 TYPE A XAAAA 0 50 GH; 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG MSG Keysight Spectrum Analyzer - E M RL RF 50: Gate: L0 Gate: L0 21.0 21.0 11.0 -9.00	Band n77, 370 Initial Value dBm/MHz 29.501 ement Materials Techn Ω DC	#VE	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* , Port 8, 40 e Port z == PSD 501 (A ALIO 6 Just mal1 dB	STATUS MHZ BW, 25 Two Port (2x dBm/MHz 32.50 SN AUTO/NO RF   #Avg Type Avg Hoid:	#SW 66-QAM Md 22 MIMO) 1 == PSD 1 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJUN 16,202 4 AMJUN 16,202 FTYPE A AAAA 0 500 GH 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG	Band n77, 370 Initial Value dBm/MHz 29.501 iement Materials Techr 2 DC 9.99 dB dBm	#VIE 00 MHz - 3980 I Duty Cycle Factor (dB) 0 PNO: Fast IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* , Port 8, 40 e Port z == PSD 501 6.1 µs mai dB	STATUS MHz BW, 25 Two Port (2x dBm/MHz : 32.50 SN AUTO/NO RF   #Avg Type Avg Hold:	#SW 66-QAM Mc 2 MIMO) == PSD 1 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>-</sup> 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16, 2027 AACE 12 34 5 TYPE AAAAA 0 50 GH 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG	Band n77, 370 Initial Value dBm/MHz 29.501 Imment Materials Technology 0.59 dB dBm	#VE 0 MHz - 3980 I Duty Cycle Factor (dB) 0 PNO: Fast → IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig Delay 4 Trig: Exter #Atten: 30	* , Port 8, 40 e Port z == PSD 501 6.1 µs mai1 dB	STATUS MHz BW, 25 Two Port (2x dBm/MHz : 32.50 SN AUTO/NO RF   #Avg Type Avg Hold:	#SW 66-QAM Mc (2 MIMO) == PSD 1 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>-</sup> 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJun 16,2021 4 AMJun 16,2021 DET AAAAA 0 50 GH 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG BK Keysight Spectrum Analyzer - E (X RL RF 50) Gate: L0 Cate: L0 31.0 31.0 21.0 21.0 21.0 -29.0	Band n77, 370 Initial Value dBm/MHz 29.501 Imment Materials Techno 2 DC   9.99 dB dBm	#VE 0 MHz - 3980 Duty Cycle Factor (dB) 0 Nology PNO: Fast IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* ;, Port 8, 40 e Port 7 z == PSD 501 1 6.1 µs mai1 dB	STATUS MHz BW, 25 Two Port (2x dBm/MHz 32:50 SN AUTO/NO RF #Avg Type Avg Hold:	#Sw 6-QAM Mc (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 <sup>-</sup> 09:56:4 7 Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AN Jun 16, 202 AAN Jun 16, 202 AAN Jun 16, 202 Charlen 12, 3, 4 Det AAAAA 50 50 GH 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG MSG Keysight Spectrum Analyzer - E C Ref Offset 3 Ref 41.00 31 0 21.0 11.0 1.0 1.0 -29.0	Band n77, 370 Initial Value dBm/MHz 29.501 Imment Materials Techno 2 DC 9.59 dB dBm	#VE 0 MHz - 3980 1 Duty Cycle Factor (dB) 0 Nology PNO: Fast IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* , Port 8, 40 e Port z == PSD 501  AALC BALL	STATUS MHZ BW, 25 Two Port (2x dBm/MHz 32:50 SN AUTO/NO RF   #Avg Type Avg Hold:	#Sw 6-QAM Md (2 MIMO) == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 ANJUN 16,2343 TYPE A XAAA 0 50 GH; 501 dBn	z ight Port (8x8 MIMC dBm/MHz ==PSD 38.501
Center 3.96000 GHz #Res BW 1.0 MHz MSG	Band n77, 370 Initial Value dBm/MHz 29.501	#VE 0 MHz - 3980 I Duty Cycle Factor (dB) 0 vology PNO: Fast IFGain:Low	MHz, 5G NR Singl dBm/MH 29. SENSE:EXT Trig Delay Trig: Exter #Atten: 30	* , Port 8, 40 e Port z == PSD 501  (A Alic So 1 us mal1 dB	STATUS MHZ BW, 25 Two Port (2x dBm/MHz 32.50 SN AUTO/NO RF   #Avg Type Avg Hoid:	#SW 66-QAM Md 2 MIMO) 1 == PSD 1 : RMS 100/100	Spar reep 601.0 r odulation, Low Four Port (4x dBm/MHz = 35.50 09:56:4 T Mkr1 3.73 29	100.0 MH ns (601 pts Ch. 3720 M 4 MIMO) E = PSD 4 AMJUN 16,223 4 TYPE A AAAA 0 501 dBn	Ihz ight Port (8x8 MIMC dBm/MHz ==PSD 38.501

MSG



	dBm/MHz	Factor (dB)	dBm/MHz == PSD	dBm/MHz == PSD	dBm/MHz == PSD	dBm/MHz ==PSD
	29.551	0	29.551	32.551	35.551	38.551
Keysight Spectrum Analyzer - E K RL RF 50	ilement Materials Techn Ω DC	ology	EXT REF	SN AUTO/NO RF	03:46:58 PM Jun 15,	2021
Gate: LO		PNO: Fast 🔸	Trig Delay5.1 µs Trig: External1	#Avg Type: RMS Avg Hold: 100/100	TRACE 1 2 3 TYPE A WW DET A A A	4 5 6 MMW A A A
Diforente		IFGain:Low	#Atten: 30 dB		Mkr1 3.847 33 G	Hz
10 dB/div Ref 41.00	dBm				29.551 dl	Bm
2			<b>1</b>			
31.0						
21.0						
44.0						
11.0						
1.00				1		
-9.00						
	ummmmmm			hermon	missioner en	
-19.0						
-29.0						
20.0						
-39.0						
-49.0						
Center 3.84000 GHz #Res BW 1.0 MHz	Band n77, 3700	#VBN	W 3.0 MHz*	#Status MHz BW, 256-QAM M	Span 100.0 M weep 601.0 ms (601   odulation, High Ch. 396(	/IHz pts)
Center 3.84000 GHz #Res BW 1.0 MHz MSG	Band n77, 3700 Initial Value dBm/MHz	#VB ) MHz - 3980 M Duty Cycle Factor (dB)	W 3.0 MHz* IHz, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD	#STATUS STATUS MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD	Span 100.0 M weep 601.0 ms (601 j odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD	HHZ pts) D MHZ Eight Port (8x8 MIMO) dBm/MHz ==PSD
Center 3.84000 GHz #Res BW 1.0 MHz MSG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX 0 MHz - 3980 M Duty Cycle Factor (dB) 0	W 3.0 MHz* Hz, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29.601	#ST STATUS MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601	HHz pts) MHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MSG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX 0 MHz - 3980 M Duty Cycle Factor (dB) 0	W 3.0 MHz* IHz, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29,601	#Status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601	Span 100.0 K weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601	HHZ pts) D MHZ Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz Msg Keysight Spectrum Analyzer - E R RL RF 50	Band n77, 3700 Initial Value dBm/MHz 29.601	#VE	W 3.0 MHz* HZ, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29.601 Extr REF Trig Delay5.1 µs	#ST STATUS MHZ BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 St Auto/No RF #Avg Type: RMS	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601	AHz         D MHz         Eight Port (8x8 MIMO)         dBm/MHz ==PSD         38.601
Center 3.84000 GHz #Res BW 1.0 MHz MSG Keysight Spectrum Analyzer - 1 K RL RF 50 Gate: LO	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX 0 MHz - 3980 M Duty Cycle Factor (dB) 0 elogy PNO: Fast ++- IFGain:Low	W 3.0 MHz* HZ, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29.601 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 32.601 w Auto/No RF #Avg Type: RMS Avg[Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 16, TRACE 1 2 3 TYPE A AA	AHz pts) D MHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX D MHz - 3980 M Duty Cycle Factor (dB) 0 elegy PNO: Fast IFGain:Low	W 3.0 MHz* Hz, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29.601 EXT REF Trig Delay5.1 µ Trig: External 1 #Atten: 30 dB	#ST STATUS MHZ BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHZ == PSD 32.601 SN AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 16, TRACE 12.3 TYPE 2.3 DET AAA	AHZ pts) DMHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz           #Res BW 1.0 MHz           MSG           MSG           Image: Sector and Sec	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX D MHz - 3980 M Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	W 3.0 MHz*	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 IN AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100	Span 100.0 N weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AM Jun 16, 11:00:14 AM Jun 16, 11:00:14 AM Jun 16, 12:00:14 AM Jun 16, 14:00:14 AM Jun 16, 14:00:	AHz pts) D MHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX D MHz - 3980 M Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	W 3.0 MHz* HZ, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29.601 EXT REF Trig Delay5.1 us Trig: External1 #Atten: 30 dB	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 IN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/100	Span 100.0 N weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 16. TRAC 12. TYPE A AA Mkr1 3.950 67 C 29.601 dl	AHz         D MHz         Eight Port (8x8 MIMO)         dBm/MHz ==PSD         38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBN DMHz - 3980 M Duty Cycle Factor (dB) 0 ology PNO: Fast	W 3.0 MHz* HZ, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29.601 Extr REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	#ST STATUS MHZ BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 N AUTO/NO RF Avg[Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 16. TRACE 12.3 TYPE A AA Mkr1 3.950 67 G 29.601 df	AHz pts) D MHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601 38.601 Hz Bm
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBN Duty Cycle Factor (dB) 0 clogy PNO: Fast IFGain:Low	W 3.0 MHz* IHZ, 5G NR, Port 8, 40 Single Port dBm/MHz == PSD 29.601 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 St Auto/No RF   #Avg Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AVJUN TRACE 10.0 TRACE 12.3 TYPE A VA Mkr1 3.950 67 G 29.601 dl	HHz Fight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX D MHz - 3980 M Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	W 3.0 MHz*	#ST STATUS MHZ BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHZ == PSD 32.601 32.601 WAUTO/NO RF #Avg Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 MJ un 16. TRACE 1 2 3 Tread 2 4 AM	AHz         D MHz         Eight Port (8x8 MIMO)         dBm/MHz ==PSD         38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX D MHz - 3980 M Duty Cycle Factor (dB) 0 elogy PNO: Fast IFGain:Low	W 3.0 MHz*	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 IN AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100	Span 100.0 N weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 MJun 16, TTACE 123 TYPE A WAY DET AAA Mkr1 3.950 67 G 29.601 dl	AHz pts) DMHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX D MHz - 3980 M Duty Cycle Factor (dB) 0 alogy PNO: Fast IFGain:Low	W 3.0 MHz*	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 IN AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 16.1 Trace 12.3 Trace 13.3 Trace 13.3 T	AHz pts) DMHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBA	W 3.0 MHz*	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 M AUTO/NO RF #Avg Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 16.2 TRACE 12.3 TRACE 13.3 TRACE 13.3 T	AHz D MHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601 38.601 Hz Bm
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBN Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	W 3.0 MHz*	#SY  status  MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 IN AUTO/NO RF   MAYON Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMI 12.3 TYRE AXA Mkr1 3.950 67 G 29.601 dl	AHZ D) MHZ Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBN Duty Cycle Factor (dB) 0 alogy PNO: Fast IFGain:Low	W 3.0 MHz*	#SI status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 IN AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AVJUN TRACE 10.5 TRACE 10.5 TRACE 10.5 TRACE 10.5 Mkr1 3.950 67 G 29.601 dl	HHz Fight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBN Duty Cycle Factor (dB) 0 elegy PN0: Fast IFGain:Low	W 3.0 MHz*	#SI	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 16, TRACE 1 2 3 TYPE A AA Mkr1 3.950 67 G 29.601 dl	HHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601 Hz Hz
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VEX D MHz - 3980 M Duty Cycle Factor (dB) 0 alogy PNO: Fast IFGain:Low	W 3.0 MHz*	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 M AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 MJ un 15, TRACE 123 TYPE 2 A Mkr1 3.950 67 G 29.601 dl	HHz D MHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBA	W 3.0 MHz*	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 M AUTO/NO RF #Avg Type: RMS Avg Hold: 100/100 Avg Hold: 10	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 MJun 12, TRACE 12, TRACE 12, TRACE 29,601 d1	AHZ Dight Port (8x8 MIMO) dBm/MHz ==PSD 38.601
Center 3.84000 GHz #Res BW 1.0 MHz MsG MsG MsG Ref Offset 3 Gate: LO Gate: LO Gate: LO Control Control C	Band n77, 3700 Initial Value dBm/MHz 29.601	#VBN Duty Cycle Factor (dB) 0 ology PNO: Fast IFGain:Low	W 3.0 MHz*	#St status MHz BW, 256-QAM M Two Port (2x2 MIMO) dBm/MHz == PSD 32.601 M AUTO/NO RF #Avg Type: RMS Avg[Hold: 100/100 Avg[Hold: 10	Span 100.0 M weep 601.0 ms (601 odulation, High Ch. 3960 Four Port (4x4 MIMO) dBm/MHz == PSD 35.601 11:00:14 AMJun 6. TRACE 12.3 TYPE AWA DET A AA Mkr1 3.950 67 G 29.601 d1	HHZ Eight Port (8x8 MIMO) dBm/MHz ==PSD 38.601

MSG





VBW 3.0 MHz\*

Span 150.0 MHz #Sweep 601.0 ms (601 pts)

STATUS

Center 3.84000 GHz #Res BW 1.0 MHz





VBW 3.0 MHz\*

Span 150.0 MHz #Sweep 601.0 ms (601 pts)

STATUS

Center 3.84000 GHz #Res BW 1.0 MHz





#VBW 3.0 MHz\*

Span 200.0 MHz #Sweep 601.0 ms (601 pts)

Center 3.8400 GHz #Res BW 1.0 MHz



	Band n77, 370	00 MHz - 3980 I	MHz, 5G NR, Port 8,	30 MHz BW, 64-QAM Mo	dulation, Mid Ch. 3840	) MHz
	Initial Value dBm/MHz	Duty Cycle Factor (dB)	Single Port dBm/MHz == PSD	Two Port (2x2 MIMO) F dBm/MHz == PSD	Four Port (4x4 MIMO) dBm/MHz == PSD	Eight Port (8x8 MIMO) dBm/MHz ==PSD
	27.455	0	27.455	30.455	33.455	36.455
Kouright Spectrum Applager	Element Materials Techn	alam				
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Gate: LO	)	PNO: Fast	Trig: External1 #Atten: 30 dB	Avg Hold: 100/100	TYPE A WW DET A N N	
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Res BW 1.0 MHz		VBW	/ 3.0 MHz*	#Sw	span 200.0 r eep 601.0 ms (601	pts)
G BW 1.0 MHz		VBW	/ 3.0 MHz*	#Sw Status	span 200.0 r eep 601.0 ms (601	pts)
Res BW 1.0 MHz	Band n77, 370	VBW 0 MHz - 3980 N	V 3.0 MHz*	#Sw Status 0 MHz BW, 256-QAM Mo	span 200.0 r eep 601.0 ms (601	0 MHz
Res BW 1.0 MHz	Band n77, 370 Initial Value dBm/MHz	VBW 0 MHz - 3980 M Duty Cycle Factor (dB)	MHz, 5G NR, Port 8, 8 Single Port dBm/MHz == PSD	#Sw status 0 MHz BW, 256-QAM Mo Two Port (2x2 MIMO) F dBm/MHz == PSD	dulation, Mid Ch. 3840 Gour Port (4x4 MIMO) dBm/MHz == PSD	0 MHz bight Port (8x8 MIMO) dBm/MHz ==PSD
Res BW 1.0 MHz	Band n77, 370 Initial Value dBm/MHz 26.897	VEW 0 MHz - 3980 N Duty Cycle Factor (dB) 0	V 3.0 MHz* MHz, 5G NR, Port 8, 8 Single Port dBm/MHz == PSD 26.897	#Sw status 0 MHz BW, 256-QAM Mo Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897	dulation, Mid Ch. 3844 Four Port (4x4 MIMO) dBm/MHz == PSD 32.897	0 MHz 0 MHz 1 Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897
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Res BW 1.0 MHz SG SG Keysight Spectrum Analyzer RL RF SG Gate: LO Ref Offset Defined	Band n77, 370 Initial Value dBm/MHz 26.897 Element Materials Techn 0 Q DC 39.99 dB	VBW 0 MHz - 3980 N Duty Cycle Factor (dB) 0 Nellogy PNO: Fast IFGain:Low	V 3.0 MHz* MHz, 5G NR, Port 8, 6 Single Port dBm/MHz == PSD 26.897 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	#Sw status 0 MHz BW, 256-QAM Mc Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 IGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/100	Span 200.01 eep 601.0 ms (601 dulation, Mid Ch. 3844 Four Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PM Jun 14 TRACE 10.2 TRACE	0 MHz 0 MHz 1 Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897
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Keysight Spectrum Analyzer- RL RF 50 Gate: L0 Ref Offset Ref 39.00	Band n77, 370 Initial Value dBm/MHz 26.897 Element Materials Techn 0 Ω DC 39,99 dB 0 dBm	VBW 0 MHz - 3980 N Duty Cycle Factor (dB) 0 sology PNO: Fast IFGain:Low	V 3.0 MHz* MHz, 5G NR, Port 8, 8 Single Port dBm/MHz == PSD 26.897 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	#Sw status 0 MHz BW, 256-QAM Mo Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 29.897	Span 2000 eep 601.0 ms (601 dulation, Mid Ch. 3844 Four Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PM/Dun 14, TRACE 112 TRACE 12 TRACE 12 MKr1 3.859 7 C 26.897 d	0 MHz 0 Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897
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Res BW 1.0 MHz           SG           SG           I Keysight Spectrum Analyzer           RL         RF           Sd Gate: LO           Gate: LO           Gate: Co           GB/div           Ref Offset           9           9           9           9           9           9           9           9           9           9	Band n77, 370 Initial Value dBm/MHz 26.897 Element Materials Techn 0 Ω DC 39.99 dB 0 dBm	VBW 0 MHz - 3980 N Duty Cycle Factor (dB) 0 PNO: Fast IFGain:Low	V 3.0 MHz* MHz, 5G NR, Port 8, 6 Single Port dBm/MHz == PSD 26.897 EXT REF Trig: External1 #Atten: 30 dB	#Sw STATUS 0 MHz BW, 256-QAM Mo Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 ION AUTO/NO RF #Avg Type: RMS Avg[Hold: 100/100	Span 2000 eep 601.0 ms (601 dulation, Mid Ch. 384( four Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PM Jun 14, TRACE [12:32:14 PM Jun 14, TRACE [12:34:14 PM Jun 14, TRACE [12:34:14 PM Jun 14, TRACE [13:34:14 PM Jun 14, TRACE [13:34:14	0 MHz ) Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897
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FRes BW 1.0 MHz SG SG Keysight Spectrum Analyzer RL RF SI Gate: L0 Gate: L0 Gg 29.0 S00 S00 S00 S00 S00 S00 S00 S00 S00 S	Band n77, 370 Initial Value dBm/MHz 26.897 Element Materials Techn ο Ω DC 39.99 dB 0 dBm	VBW 0 MHz - 3980 N Duty Cycle Factor (dB) 0 rology PNO: Fast IFGain:Low	V 3.0 MHz* Single Port dBm/MHz == PSD 26.897 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	#Sw status 0 MHz BW, 256-QAM Mc Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 IGN AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100	Span 2000 eep 601.0 ms (601 dulation, Mid Ch. 3844 our Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PM)un 14 Tree II 22 Tree A Orr AA Mkr1 3.859 7 C 26.897 d	WHz         0 MHz         ) Eight Port (8x8 MIMO) dBm/MHz ==PSD         35.897
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Res BW 1.0 MHz           Isci           Isci           Isci           Reysight Spectrum Analyzer           RL         RF           Gate: LO           O dB/div         Ref 0ffset           0 dB/div         Ref 39.0           29 0	Band n77, 370 Initial Value dBm/MHz 26.897 Element Materials Techn 0 Q DC 39.99 dB 0 dBm	VBW 0 MHz - 3980 N Duty Cycle Factor (dB) 0 PNO: Fast IFGaintLow	V 3.0 MHz* MHz, 5G NR, Port 8, 8 Single Port dBm/MHz == PSD 26.897 EXT REF Trig: External1 #Atten: 30 dB	#Sw STATUS 0 MHz BW, 256-QAM Mc Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 IGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/100 1 1 1 1 1 1 1 1 1 1 1 1 1	Span 200.0 r eep 601.0 ms (601 dulation, Mid Ch. 3844 Four Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PNJ un 1 TRACE 11 2 TRACE 11 2 TRACE 12 Mkr1 3.859 7 C 26.897 d	MHz 0 MHz 0 Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897 35.897 35.897
FRes BW 1.0 MHz           Isci           Isci           Isci           Rt           Rt <td>Band n77, 370 Initial Value dBm/MHz 26.897 Element Materials Techn 0 Ω DC 39.99 dB 0 dBm</td> <td>VBW</td> <td>V 3.0 MHz* MHz, 5G NR, Port 8, 6 Single Port dBm/MHz == PSD 26.897 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB</td> <td>#Sw STATUS 0 MHz BW, 256-QAM Mc Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 IGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/100 1 1 1 1 1 1 1 1 1</td> <td>Span 2000 eep 601.0 ms (601 dulation, Mid Ch. 3844 Four Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PMJunt 1 TRACE T</td> <td>MHz 0 MHz 1 Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897 35.897 35.897 35.897 35.897</td>	Band n77, 370 Initial Value dBm/MHz 26.897 Element Materials Techn 0 Ω DC 39.99 dB 0 dBm	VBW	V 3.0 MHz* MHz, 5G NR, Port 8, 6 Single Port dBm/MHz == PSD 26.897 EXT REF Trig Delay5.1 µs Trig: External1 #Atten: 30 dB	#Sw STATUS 0 MHz BW, 256-QAM Mc Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 IGN AUTO/NO RF #Avg Type: RMS Avg Hold: 100/100 1 1 1 1 1 1 1 1 1	Span 2000 eep 601.0 ms (601 dulation, Mid Ch. 3844 Four Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PMJunt 1 TRACE T	MHz 0 MHz 1 Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897 35.897 35.897 35.897 35.897
Res BW 1.0 MHz           SG           SG           SG           Keysight Spectrum Analyzer           RL         RF           RE         Gate: LO           Gate: LO           Gate: LO           Gate: CO           Gate: LO           Gate: LO           Gate: LO           Ref Offset           9.0           9.0           10           10           10	Band n77, 370 Initial Value dBm/MHz 26.897 Bernent Materials Techn 0 Ω DC 39,99 dB 0 dBm	VBW 0 MHz - 3980 N Duty Cycle Factor (dB) 0 PNC: Fast IFGain:Low	V 3.0 MHz* MHz, 5G NR, Port 8, 6 Single Port dBm/MHz == PSD 26.897 EXT REF Trig: External1 #Atten: 30 dB	#Sw STATUS 0 MHz BW, 256-QAM Mc Two Port (2x2 MIMO) F dBm/MHz == PSD 29.897 IGN AUTO/NO RF   #Avg Type: RMS Avg Hold: 100/100 1 1 1 1 1 1 1 1 1	Span 2000 eep 601.0 ms (601 dulation, Mid Ch. 3844 Four Port (4x4 MIMO) dBm/MHz == PSD 32.897 12:32:14 PMJun 14 TRace D & Trace D & Trace D & C & AA Mkr1 3.859 7 C 26.897 d	WHz 0 MHz Eight Port (8x8 MIMO) dBm/MHz ==PSD 35.897 35.897 35.897

#VBW 3.0 MHz\*

STATUS

Span 200.0 MHz #Sweep 601.0 ms (601 pts)

Center 3.8400 GHz #Res BW 1.0 MHz





#VBW 3.0 MHz\*

Report No. NOKI0028.1







#### 5G NR EIRP Calculations for Eight Port MIMO Operations

EIRP calculations are needed at each transmitter location to optimize base station operational performance while meeting regulatory requirements. Each cell site installation needs to consider the power measurements in the radio certification report as well as site specific regulatory requirements (such as antenna height, population density, etc.), site installation parameters (line loss between antenna and radio, antenna parameters, etc.) and base station operational parameters (MIMO operational setup, carrier power level, channel bandwidth, modulation type, etc.) to optimize performance. Transmitter output power may be reduced (from maximum) by base station setup parameters. Base station antennas are selected by the customer.

The base station antenna is selected by the customer and this EIRP calculation is based upon a sample worst case antenna. The EIRP calculation is based upon the Commscope Antenna Assembly model NNH4S4-65B-R7. This antenna assembly has four columns with a maximum beamforming gain of 21.2dBi. The columns within the antenna have  $\pm$ 45° cross-polarized (orthogonal) radiators. The eight AZQW transmitter outputs are connected to the columns (four are connected to +45° radiators/antennas and four are connected to the -45° radiators/antennas). The AZQW provides transmitter outputs for one 4-column antenna assembly.

Equivalent Isotropically Radiated Power (EIRP) is calculated (as specified in ANSI C63.26-2015 section 6.4 for a system of correlated output signals) from the results of power measurements (highest measured average power for each channel bandwidth type). The maximum antenna assembly beamforming gain was used for this calculation. The cable loss between the antenna and transmitter is site dependent (will not be 0 dB) but for this worst case EIRP calculation 0 dB was used. Calculations of worst-case EIRP for eight port MIMO are as follows:

Parameter	20 MHz Ch BW	40 MHz Ch BW	60 MHz Ch BW	80 MHz Ch BW	100 MHz Ch BW
Warst Care BSD/Antonna	1.12 W/MHz	1.35 W/MHz	1.07 W/MHz	0.78 W/MHz	0.78 W/MHz
Port	or	or	or	or	or
	30.5 dBm/MHz	31.3 dBm/MHz	30.3 dBm/MHz	28.9 dBm/MHz	28.9 dBm/MHz
Cable Loss	0 dB	0 dB	0 dB	0 dB	0 dB
Number of Ant Ports per Polarization	4	4	4	4	4
Total PSD per Polarization	36.5 dBm/MHz	37.3 dBm/MHz	36.3 dBm/MHz	34.9 dBm/MHz	34.9 dBm/MHz
Maximum Antenna Beamforming Gain per Polarization	21.2 dBi	21.2 dBi	21.2 dBi	21.2 dBi	21.2 dBi
	57.7 dBm/MHz	58.5 dBm/MHz	57.5 dBm/MHz	56.1 dBm/MHz	56.1 dBm/MHz
EIRP per Polarization	or	or	or	or	or
	589 W/MHz	708 W/MHz	562 W/MHz	407 W/MHz	407 W/MHz
Number of Polarizations	2	2	2	2	2
	57.7 dBm/MHz	58.5 dBm/MHz	57.5 dBm/MHz	56.1 dBm/MHz	56.1 dBm/MHz
EIRP Total (See Note 1)	or	or	or	or	or
	589 W/MHz	708 W/MHz	562 W/MHz	407 W/MHz	407 W/MHz
	62.15 dBm/MHz	62.15 dBm/MHz	62.15 dBm/MHz	62.15 dBm/MHz	62.15 dBm/MHz
EIRP Limit	or	or	or	or	or
	1640 (04/04/04	164034/6414	1640 W/MILe	1640 (04)	1640 W/Mile

Note 1: The EIRP per antenna polarization is required to be below the regulatory limit as described in ANSI C63.26-2015 section 6.4.6.3 b)2) and KDB 662911 D02v01 page 3 example (2) since the two transmitter outputs to each antenr are 90 degree-phase shifted relative to each other (cross-polarized radiators).

#### **Calculation Summary**

The worst case AZQW eight port MIMO EIRP levels for all 5G NR channel bandwidths using the Commscope Antenna Assembly model "NNH4S4-65B-R7" are less than the FCC regulatory limits (1640 W/MHz or 62.15 dBm/MHz).



End of Test Report