

Test Report # 3547 C

Equipment Under Test:	Dental Scanner
Requirement(s):	FCC 15.407, FCC 15.209, RSS-247, RSS-GEN UNII (C2PC Antenna Add)
Test Date(s):	January 10 th -14 th , 2022 and November 4 th , 2022
Prepared for:	3Shape TRIOS A/S Attn: Kasper Hansen Niels Juels Gade 13 1059 Copenhagen, Denmark

Report Issued by: Adam Alger, Laboratory Manager	
Signature: <i>Adam Alger</i>	Date: 11/5/2022
Report Reviewed by: Adam Alger, Laboratory Manager	
Signature: <i>Adam Alger</i>	Date: 2/9/2022
Report Constructed by: Zach Wilson, EMC Engineer	
Signature: <i>Zach Wilson</i>	Date: 2/3/2022

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Report: TR3547 C		Model: TRIOS 5
Quote: NBO-11-2021-004342-2		Serial: Engineering Sample

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Laird Connectivity Test Services in Review

The Laird Connectivity LLC laboratory located at W66 N220 Commerce Court Cedarburg, Wisconsin, 53012 USA is recognized through the following organizations:



A2LA – American Association for Laboratory Accreditation

Accreditation based on ISO/IEC 17025:2017 with Electrical (EMC) Scope

A2LA Certificate Number: 1255.01

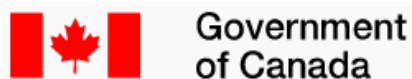
Scope of accreditation includes all test methods listed herein unless otherwise noted



Federal Communications Commission (FCC) – USA

Accredited Test Firm Registration Number: 953492

Recognition of two 3 meter Semi-Anechoic Chambers



Innovation, Science and Economic Development Canada

Accredited U.S. Identification Number: US0218

Recognition of two 3 meter Semi-Anechoic Chambers

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1 TEST REPORT SUMMARY

During **January 10th-14th, 2022** and **November 4th, 2022** the Equipment Under Test (EUT), **Dental Scanner**, as provided by **3Shape TRIOS A/S** was tested to the following requirements of the **Federal Communications Commission** and **Innovation, Science and Economic Development Canada**:

Operation in the 5.15 – 5.25 GHz band

FCC	ISED Canada	Test Description	Measurement Procedure	Compliant
15.407 (b)(1)	RSS-247 Section 6.2.1	Undesirable emissions Limit	ANSI C63.10-2013 Section 12.7	Yes
15.407 (b)(9)	RSS-GEN	Spurious Emissions below 1GHz	ANSI C63.10-2013 Section 12.7	Yes

Operation in the 5.725 – 5.85 GHz band

FCC	ISED Canada	Test Description	Measurement Procedure	Compliant
15.407 (b)(4)	RSS-247 Section 6.2.4	Undesirable emissions Limit	ANSI C63.10-2013 Section 12.7	Yes
15.407 (b)(9)	RSS-GEN	Spurious Emissions below 1GHz & AC Mains	ANSI C63.10-2013 Section 12.7	Yes

Notice:

The results relate only to the item tested as configured and described in this report. Any additional configurations, modes of operation, or modifications made to the equipment under test after the specified test date(s) are at the decision of the client and may not apply to the data seen in this test report.

The decision rule for Pass / Fail assessment to the specification or standard listed in this test report has been agreed upon by the client and laboratory to be as follows:

Measurement Type	Rule
Emissions – Amplitude	1 dB below specified limit
Emissions – Frequency	1% less than the specification
Immunity	Tested at specified level

2 CLIENT INFORMATION

Company Name	3Shape TRIOS A/S
Contact Person	Kasper Hansen
Address	Niels Juels Gade 13 1059 Copenhagen, Denamrk

2.1 Equipment Under Test (EUT) Information

The following information has been supplied by the client

Product Name	Dental Scanner
Model Number	TRIOS 5
Serial Number	Engineering Sample
FCC ID	2A4DE-3S001
ISED ID	28188-3S001

2.2 Product Description

Dental scanning device containing 5GHz WLAN, Bluetooth Classic, and Bluetooth Low Energy radios on a single module. The EUT is battery powered.

2.3 Modifications Incorporated for Compliance

None noted at time of test

2.4 Deviations and Exclusions from Test Specifications

None noted at time of test

2.5 Report Information

Radio previously certified by Laird with an FCC ID of SQG-60SIPT. A change of ID has been completed to place the module under 3Shape. This report is in support of a class two permissive change to add a new antenna.

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2.6 Antenna Information

The EUT utilizes a dual-band, 2.4GHz and 4.9-6GHz, monopole antenna. The antenna is a Taoglas FXP840.54.0018B. Antenna 1 has a peak gain of -3.08 dBi in the 2.4 GHz band and +2.84 dBi in the 5.8 GHz band. Antenna 2 has a peak gain of -4.72 dBi in the 2.4 GHz band and +3.11 dBi in the 5.8 GHz band.

2.7 Radio Programming and Channel/Data Rates

Radio programmed using the Laird LRU tool, v7.0.0.142.

Channel Guide	
Channels	Protocol
36, 40, 44, 48, 149, 153, 157, 161	802.11a, 802.11n (20)
38, 46, 151, 159	802.11n (40)
42, 155	802.11ac (80)

Data Rates	
Protocol	Rate
802.11a	6Mbps, 54Mbps
802.11n (HT20)	MCS0, MCS7
802.11n (HT40)	MCS0, MCS7
802.11ac (HT80)	MCS0, MCS9

Spurious outside of band edges: Channels 36 and 161 using 802.11a, 6Mbps.

3 REFERENCES

Publication	Edition	Date	AMD 1	AMD 2
eCFR	-	2022	-	-
ANSI C63.10	-	2013	-	-
RSS-247	2	2017	-	-
RSS-Gen	5	2018	2019	2021

4 UNCERTAINTY SUMMARY

Using the guidance of the following publications the calculated measurement uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level, using a coverage factor of $k = 2$.

References	Version / Date
CISPR 16-4-1	Ed. 2 (2009-02)
CISPR 16-4-2	Ed. 2 (2011-06)
CISPR 32	Ed. 1 (2012-01)
ANSI C63.23	2012
A2LA P103	February 4, 2016
A2LA P103c	August 10, 2015
ETSI TR 100-028	V1.3.1 (2001-03)

Measurement Type	Configuration	Uncertainty \pm
Radiated Emissions	Biconical Antenna	5.0 dB
Radiated Emissions	Log Periodic Antenna	5.3 dB
Radiated Emissions	Horn Antenna	4.7 dB
AC Line Conducted Emissions	Artificial Mains Network	3.4 dB
Telecom Conducted Emissions	Asymmetric Artificial Network	4.9 dB
Disturbance Power Emissions	Absorbing Clamp	4.1 dB
Radiated Immunity	3 Volts/meter	2.2 dB
Conducted Immunity	CDN/EM/BCI	2.4/3.5/3.4 dB
EFT Burst/Surge	Peak pulse voltage	164 volts
ESD Immunity	15 kV level	1377 Volts

Parameter	ETSI U.C. \pm	U.C. \pm
Radio Frequency, from F0	1×10^{-7}	0.55×10^{-7}
Occupied Channel Bandwidth	5 %	2 %
RF conducted Power (Power Meter)	1.5 dB	1.2 dB
RF conducted emissions (Spectrum Analyzer)	3.0 dB	1.7 dB
All emissions, radiated	6.0 dB	5.3 dB
Temperature	1° C	0.65° C
Humidity	5 %	2.9 %
Supply voltages	3 %	1 %

5 TEST DATA

5.1 Radiated Emissions

<p>Description of Measurement</p>	<p>The frequency spectrum is investigated for intentional and / or unintentional signals emanating from the EUT by use of a standardized test site and measurement antenna.</p> <p>The antenna, cable, pre-amp, and other necessary measurement system correction factors are loaded onto the EMI receiver / spectrum analyzer when the measurements are performed allowing the data to be gathered and reported as corrected values.</p> <p>The maximum emissions from the EUT are determined by turn-table azimuth rotation (360°) and scanning of the measurement antenna. Maximized levels are noted at degree values of azimuth, measurement antenna height, and measurement antenna polarity.</p>
<p>Example Calculations</p>	<p>Measurement (dBμV) + Cable factor (dB) + Other (dB) + Antenna Factor (dB/m) = Corrected Reading (dBμV/m)</p> <p>Margin (dB) = Limit (dBμV/m) - Corrected Reading (dBμV/m)</p> <p>Example at 4000 MHz: Reading = 40 dBμV + 3.4 dB + 0.9 dB + 6.5 dB/m = 50.8 dBμV/m Average Limit = 20 log (500) = 54 dBμV/m Margin = 54 dBμV/m - 50.8 dBμV/m = 3.2 dB</p>

Block Diagram



5.1.1 Radiated Emissions

Operator	Anthony Smith	QA	Zach Wilson, Jon Dilley, Adam Alger
Temperature	22.5°C, 24.1°C, 22.4°C	R.H. %	18.50%, 23.50%, 49.5%
Test Date	1/10/2022 to 1/14/2022, 11/4/2022	Location	Chambers 3 & 5
Requirement	FCC 15.407, RSS-247 FCC 15.209, RSS-Gen	Method	ANSI C63.10

Limits:

Frequency (MHz)	Quasi Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Peak Limit (dBµV/m)
30-88	40.0	-	-
88-216	43.5	-	-
216-960	46.0	-	-
960-1000	54.0	-	-
1000-40000	-	-	68.2*

*See UNII 3 Limit Mask for 5650-5925 MHz

UNII 3 Limit Mask	
Frequency Range (MHz)	Peak Limit (dBµV/m)
5650 to 5700	68.2 to 105.2
5700 to 5720	105.2 to 110.8
5720 to 5725	110.8 to 122.2
5850 to 5855	122.2 to 110.8
5855 to 5875	110.8 to 105.2
5875 to 5925	105.2 to 68.2

Example calculation: -27 dBm/MHz + 95.2 = 68.2 dBµV/m @ 3m

Test Parameters

Frequency	30-40000 MHz	Distance	3m
Detector(s)	Max hold with peak detector for plots. Quasi peak detector for measurements under 1 GHz. Average measurements taken with a reduced VBW (see table below)	Table height	150cm
RBW	Below 1 GHz: 120 kHz Above 1 GHz: 1 MHz	VBW	Below 1 GHz: 1.2 MHz Above 1 GHz Peak: 3 MHz Above 1 GHz Average: see table below *30 kHz used for emission identification

EUT Parameters

Input Power	Battery	Mode	WLAN 5 GHz Transmit
Channels	See section 2.7	Data Rate	See section 2.7
Orientations	Flat, Vertical, Horizontal		
Note	Only showing worst case plots.		

Instrumentation

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
AA 960007	Antenna - Double Ridge Horn	EMCO	3115	9311-4138	8/23/2021	8/23/2022	Active Calibration
AA 960158	Antenna - Double Ridge Horn	ETS Lindgren	3117	109300	9/27/2021	9/27/2022	Active Calibration
AA 960162	Cable	MegaPhase	EM2-S1S1-120	51503501 001	2/3/2021	2/3/2022	Active Verification
AA 960171	Cable	A.H. Systems, Inc.	SAC-26G-6	386	2/3/2021	2/3/2022	Active Verification
AA 960174	Antenna - Small Horn	ETS Lindgren	3116C-PA	00206880	9/1/2021	9/1/2022	Active Calibration
AA 960176	Cable	A.H. Systems, Inc.	SAC-26G-6	395	2/3/2021	2/3/2022	Active Verification
AA 960211	Antenna - Low Noise Amplifier	Mini-Circuits	ZVA-213X-S+	97711030	9/27/2021	9/27/2022	Active Calibration
EE 960087	Analyzer - Spectrum	Agilent	N9010A	MY53400296	7/28/2021	7/28/2022	Active Calibration
EE 960198	Meter - Hygro-Thermometer	Control Company	90080-03	180045460	5/14/2021	5/14/2022	Active Calibration
EE 960203	Analyzer - EMI Receiver	Keysight	N9038A	MY56400072	4/20/2021	4/20/2022	Active Calibration
LSC-500	Cable	Chamber 5 Emissions	-	-	9/14/2020	9/14/2022	Active Verification
AA 960161	Filter - Highpass 5 GHz	K&L Microwave	11SH10-8000	2	4/21/2021	4/21/2022	Active Calibration
LSC-300	Cable	Chamber 3 Emissions	-	-	4/15/2021	4/15/2022	Active Verification
AA 960005	Antenna - Biconical	EMCO	93110B	9601-2280	8/19/2021	8/19/2022	Active Calibration
AA 960078	Antenna - Log Periodic	EMCO	93146	9701-4855	9/2/2021	9/2/2022	Active Calibration

Instrumentation (11/4/2022)

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
AA 960007	Antenna - Double Ridge Horn	EMCO	3115	9311-4138	8/23/2022	8/23/2023	Active Calibration
AA 960161	Filter - Highpass 5 GHz	K&L Microwave	11SH10-8000	2	4/13/2022	4/13/2023	Active Calibration
AA 960176	Cable	A.H. Systems, Inc.	SAC-26G-6	395	3/22/2022	3/22/2023	Active Verification
AA 960209	Antenna - Low Noise Amplifier	Mini-Circuits	ZVA-213X-S+	037101808	8/23/2022	8/23/2023	Active Calibration
EE 960085	Analyzer - EMI Receiver	Agilent	N9038A	MY51210148	4/11/2022	4/11/2023	Active Calibration
EE 960198	Meter - Hygro-Thermometer	Control Company	90080-03	180045460	8/11/2022	8/11/2023	Active Calibration

Data Tables

Data Rate	On Time (ms)	Observation Period (ms)	Duty Cycle	Average VBW (Hz)
802.11a 6Mbps	3.099	15.000	21%	323
802.11a 54Mbps	0.363	5.000	7%	2755
802.11n(20) MCS0	4.764	32.000	15%	210
802.11n(20) MCS7	0.510	22.000	2%	1961
802.11n(40) MCS0	2.313	15.000	15%	432
802.11n(40) MCS7	0.262	5.000	5%	3810
802.11ac(80) MCS0	0.568	22.000	3%	1761
802.11ac(80) MCS9	0.083	1.500	6%	12048

Frequency (MHz)	Antenna Polarity	EUT Orientation	Height (cm)	Azimuth (degree)	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)	Note
6537.7	Vertical	Vertical	100	49	57.9	68.2	10.3	Ch 161
6535.4	Horizontal	Vertical	226	180	53.6	68.2	14.7	Ch 161
6537.9	Horizontal	Horizontal	275	28	57.6	68.2	10.6	Ch 161
6535.9	Vertical	Horizontal	150	195	54.2	68.2	14.1	Ch 161
6538.0	Vertical	Flat	233	5	55.9	68.2	12.3	Ch 161
6537.7	Horizontal	Flat	315	54	59.4	68.2	8.9	Ch 161

Frequency (MHz)	Antenna Polarity	EUT Orientation	Height (cm)	Azimuth (degree)	Average Reading (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)	Note
11611.6	Horizontal	Vertical	169	219	47.4	54.0	6.6	59.2	68.2	9.0	Ch 161
11608.5	Vertical	Vertical	163	274	44.1	54.0	9.9	56.5	68.2	11.7	Ch 161
11608.9	Vertical	Horizontal	249	301	48.1	54.0	5.9	59.6	68.2	8.6	Ch 161
11610.6	Horizontal	Horizontal	250	159	46.7	54.0	7.3	57.5	68.2	10.7	Ch 161
11607.2	Horizontal	Flat	211	317	46.9	54.0	7.1	58.3	68.2	9.9	Ch 161
11608.7	Vertical	Flat	182	341	44.5	54.0	9.5	56.0	68.2	12.2	Ch 161
11530.0	Vertical	Horizontal	246	298	48.1	54.0	5.9	58.8	68.2	9.4	Ch 153
11491.9	Vertical	Horizontal	193	301	42.6	54.0	11.4	55.3	68.2	12.9	Ch 149

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Model: TRIOS 5

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Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Peak Reading (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	EUT Orientation	Channel	Data Rate/BW
5149.1	Horizontal	308	63	56.2	74.0	17.8	Flat	36	6/20
5148.4	Horizontal	308	63	58.6	74.0	15.4	Flat	36	54/20
5146.4	Horizontal	308	63	59.9	74.0	14.1	Flat	36	mcs0/20
5148.1	Horizontal	308	63	58.5	74.0	15.5	Flat	36	mcs7/20
5150.0	Horizontal	308	63	52.9	74.0	21.2	Flat	40	6/20
5141.3	Horizontal	308	63	50.0	74.0	24.0	Flat	40	54/20
5145.5	Horizontal	308	63	53.3	74.0	20.7	Flat	40	mcs0/20
5148.9	Horizontal	308	63	49.2	74.0	24.8	Flat	40	mcs7/20
5145.3	Horizontal	308	63	59.5	74.0	14.6	Flat	38	mcs0/40
5146.7	Horizontal	308	63	55.7	74.0	18.3	Flat	38	mcs7/40
5143.5	Horizontal	308	63	54.5	74.0	19.5	Flat	42	mcs0/80
5147.4	Horizontal	308	63	54.0	74.0	20.0	Flat	42	mcs7/80

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Average Reading (dBµV/m)	Average Limit (dBµV/m)	Average Margin (dB)	EUT Orientation	Channel	Data Rate/BW
5150.0	Horizontal	308	63	46.0	54.0	8.0	Flat	36	6/20
5144.3	Horizontal	308	63	49.2	54.0	4.8	Flat	36	54/20
5149.9	Horizontal	308	63	47.3	54.0	6.7	Flat	36	mcs0/20
5150.0	Horizontal	308	63	47.7	54.0	6.3	Flat	36	mcs7/20
5150.0	Horizontal	308	63	43.5	54.0	10.5	Flat	40	6/20
5117.3	Horizontal	308	63	43.6	54.0	10.4	Flat	40	54/20
5149.9	Horizontal	308	63	44.0	54.0	10.0	Flat	40	mcs0/20
5149.8	Horizontal	308	63	42.4	54.0	11.6	Flat	40	mcs7/20
5150.0	Horizontal	308	63	50.8	54.0	3.2	Flat	38	mcs0/40
5146.9	Horizontal	308	63	50.8	54.0	3.2	Flat	38	mcs7/40
5145.2	Horizontal	308	63	48.4	54.0	5.6	Flat	42	mcs0/80
5149.4	Horizontal	308	63	49.0	54.0	5.0	Flat	42	mcs7/80

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Average Reading (dBµV/m)	Average Limit (dBµV/m)	Average Margin (dB)	EUT Orientation	Channel	Data Rate/BW
5381.7	Horizontal	308	63	41.7	54.0	12.3	Flat	44	6/20
5426.3	Horizontal	308	63	43.6	54.0	10.4	Flat	44	54/20
5382.2	Horizontal	308	63	42.0	54.0	12.0	Flat	44	mcs0/20
5384.0	Horizontal	308	63	41.6	54.0	12.4	Flat	44	mcs7/20
5402.1	Horizontal	308	63	42.1	54.0	11.9	Flat	48	6/20
5403.3	Horizontal	308	63	43.4	54.0	10.6	Flat	48	54/20
5402.0	Horizontal	308	63	42.2	54.0	11.8	Flat	48	mcs0/20
5401.9	Horizontal	308	63	42.0	54.0	12.0	Flat	48	mcs7/20
5450.1	Horizontal	308	63	38.3	54.0	15.7	Flat	46	mcs0/40
5434.9	Horizontal	308	63	39.8	54.0	14.2	Flat	46	mcs7/40
5452.8	Horizontal	308	63	39.0	54.0	15.0	Flat	42	mcs0/80
5368.2	Horizontal	308	63	41.4	54.0	12.6	Flat	42	mcs7/80

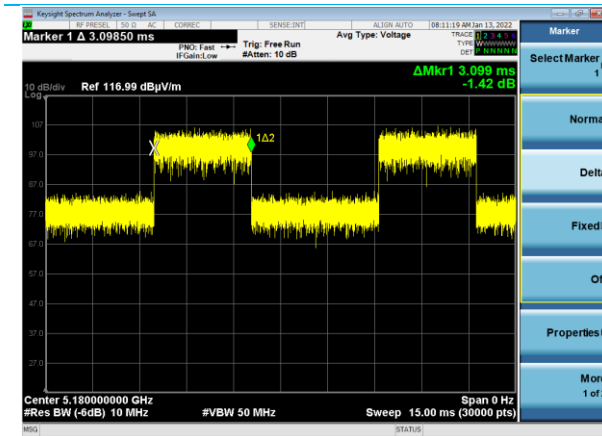
Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Peak Reading (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	EUT Orientation	Channel	Data Rate/BW
5385.1	Horizontal	308	63	54.1	74.0	19.9	Flat	44	6/20
5412.3	Horizontal	308	63	51.5	74.0	22.5	Flat	44	54/20
5388.2	Horizontal	308	63	54.1	74.0	19.9	Flat	44	mcs0/20
5396.9	Horizontal	308	63	50.7	74.0	23.3	Flat	44	mcs7/20
5353.5	Horizontal	308	63	53.5	74.0	20.5	Flat	48	6/20
5409.8	Horizontal	308	63	51.9	74.0	22.1	Flat	48	54/20
5361.4	Horizontal	308	63	54.2	74.0	19.8	Flat	48	mcs0/20
5364.7	Horizontal	308	63	50.9	74.0	23.1	Flat	48	mcs7/20
5430.6	Horizontal	308	63	49.1	74.0	24.9	Flat	46	mcs0/40
5383.8	Horizontal	308	63	49.2	74.0	24.8	Flat	46	mcs7/40
5445.4	Horizontal	308	63	49.8	74.0	24.2	Flat	42	mcs0/80
5397.7	Horizontal	308	63	49.6	74.0	24.4	Flat	42	mcs7/80

Frequency (MHz)	Antenna Polarity	EUT Orientation	Height (cm)	Azimuth (degree)	Peak Reading (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	Channel	Data Rate/BW
5855.2	Horizontal	Flat	303	51	74.5	110.7	36.2	161	6MBPS/20
5853.0	Horizontal	Flat	303	51	60.9	115.3	54.4	161	54MBPS/20
5856.3	Horizontal	Flat	303	51	68.4	110.4	42.0	161	MCS0/20
5850.5	Horizontal	Flat	303	51	59.5	121.0	61.5	161	MCS7/20
5853.2	Horizontal	Flat	303	51	65.7	114.9	49.2	159	MCS0/40
5880.3	Horizontal	Flat	303	51	60.8	101.3	40.5	155	MCS0/80

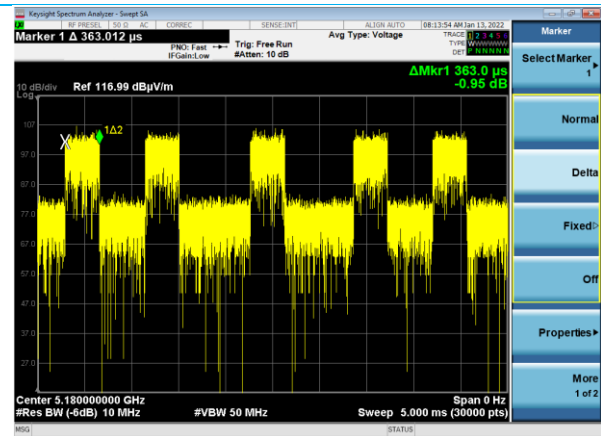
Channel 149 band-edge

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Peak Reading (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin (dB)	EUT Orientation	Channel / Rate
5724.9	H	284	61	77.8	122.0	44.2	Flat	149/6mbps
5831.2	H	284	61	56.9	122.2	65.3	Flat	149/6mbps
5723.6	H	284	61	71.4	119.0	47.6	Flat	149/54mbps
5724.7	H	284	61	80.3	121.5	41.2	Flat	149/mcs0
5723.2	H	284	61	73.2	118.1	44.9	Flat	149/mcs7

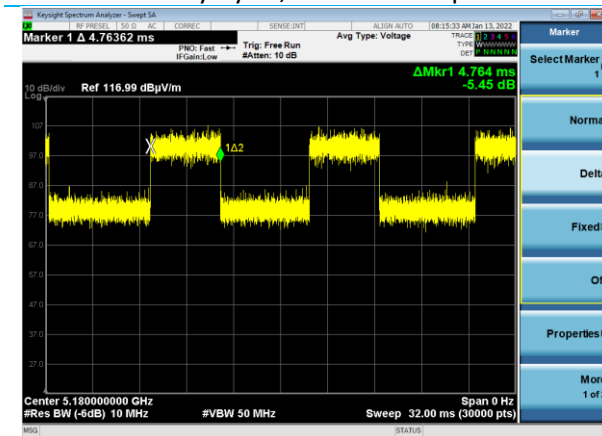
Plots



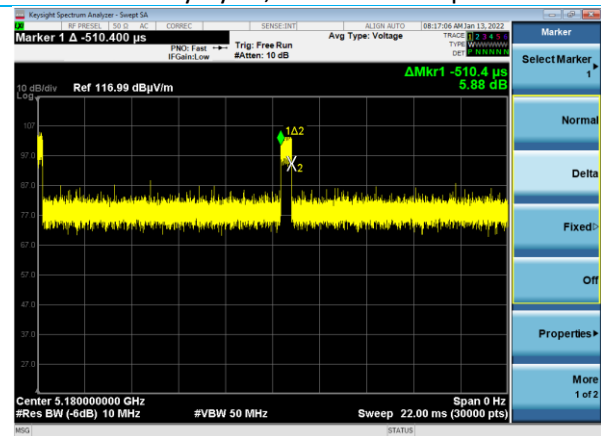
Duty Cycle, 802.11a 6Mbps



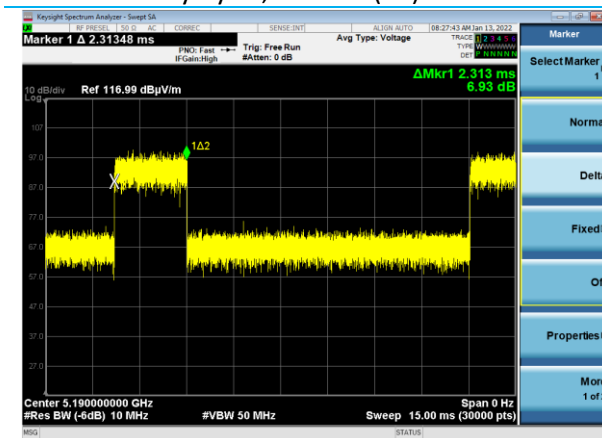
Duty Cycle, 802.11a 54Mbps



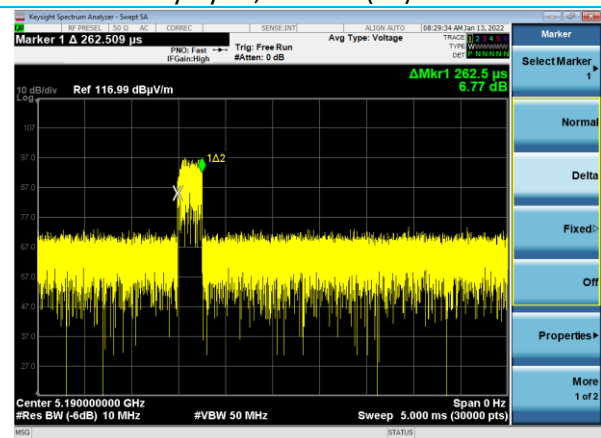
Duty Cycle, 802.11n(20) MCS0



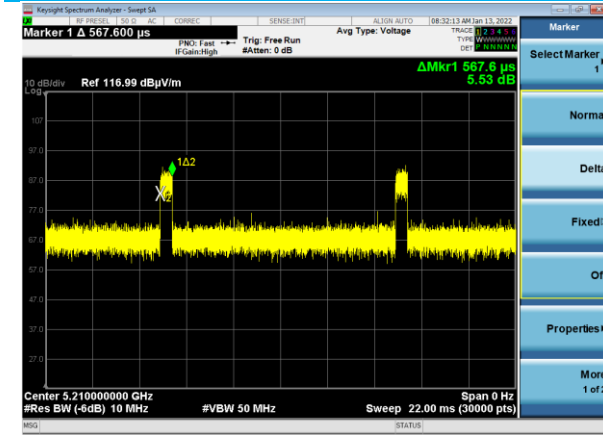
Duty Cycle, 802.11n(20) MCS7



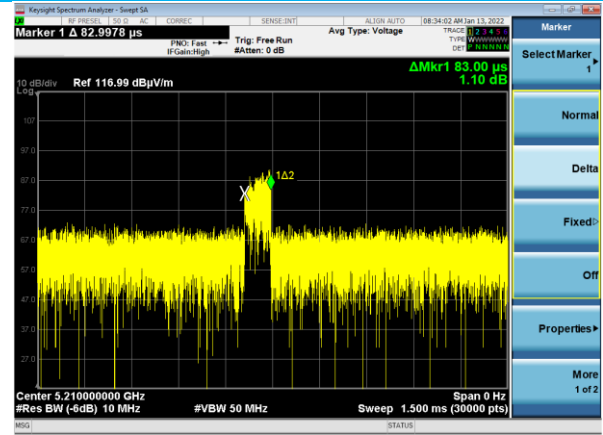
Duty Cycle, 802.11n(40) MCS0



Duty Cycle, 802.11n(40) MCS7

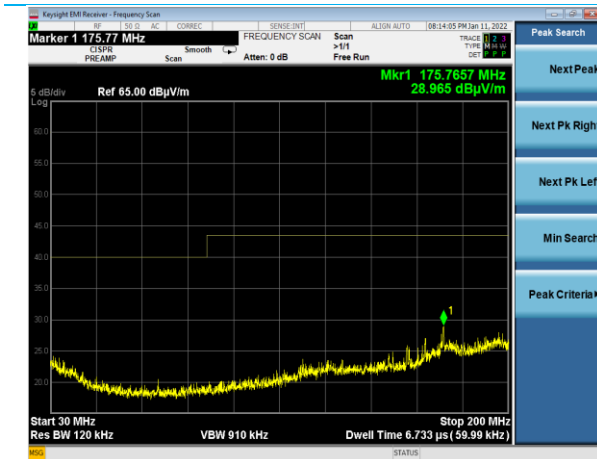


Duty Cycle, 802.11ac(80) MCS0

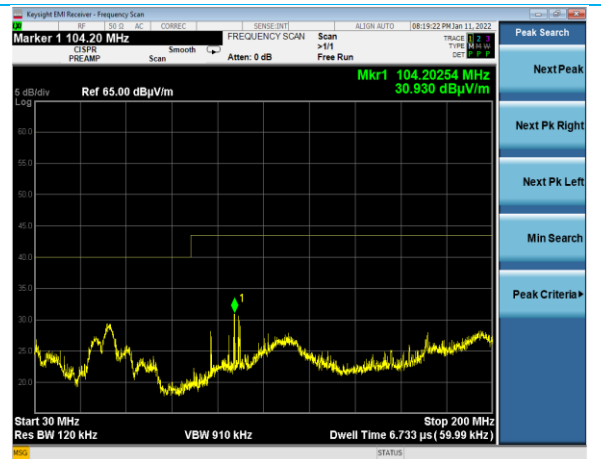


Duty Cycle, 802.11ac(80) MCS9

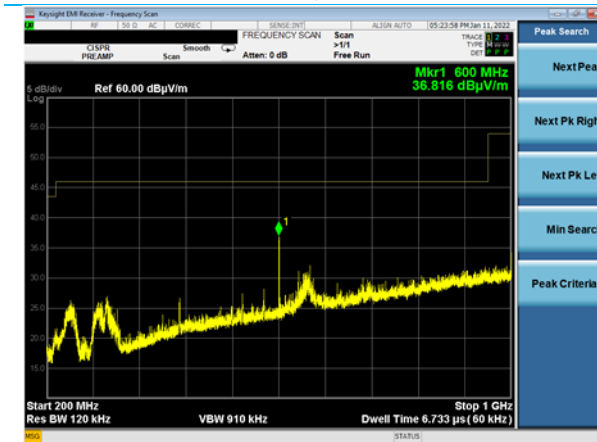
Company: 3Shape TRIOS A/S	Page 17 of 26	Name: Dental Scanner
Report: TR3547 C		Model: TRIOS 5
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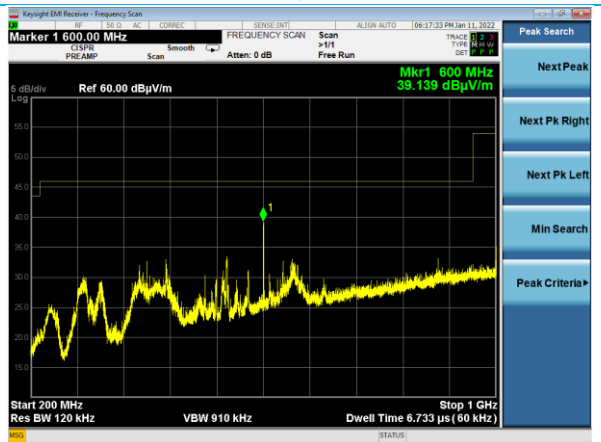
30-200 MHz, Horizontal Antenna
Vertical EUT, Channel 36



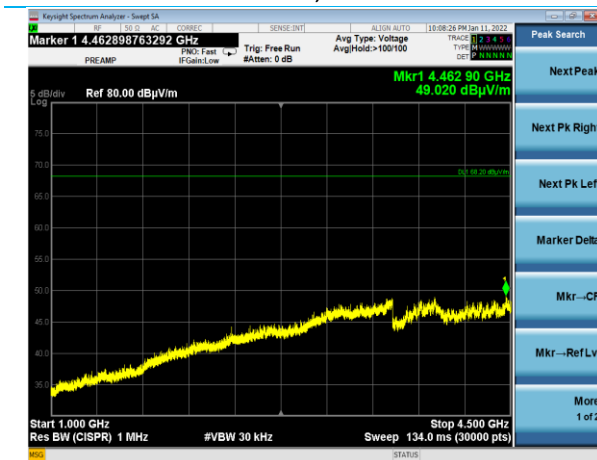
30-200 MHz, Vertical Antenna
Vertical EUT, Channel 36



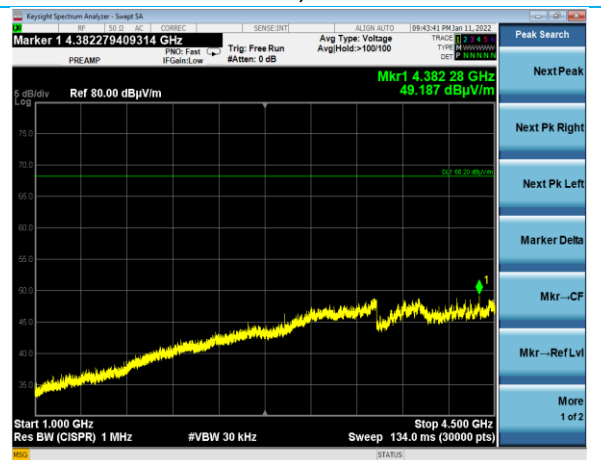
200-1000 MHz, Horizontal Antenna
Vertical EUT, Channel 36



200-1000 MHz, Vertical Antenna
Vertical EUT, Channel 36

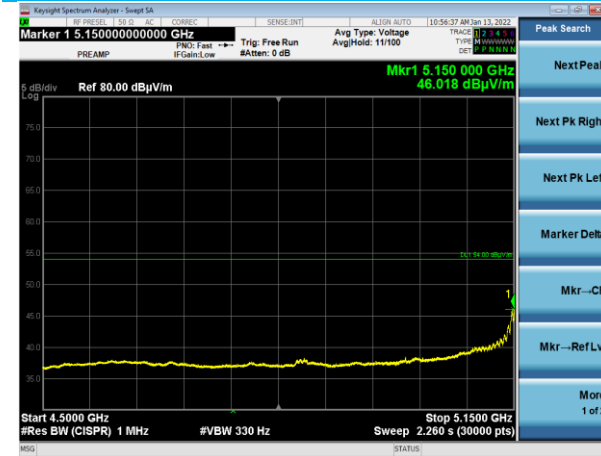


1-4.5 GHz, Horizontal Antenna
Vertical EUT, Channel 36

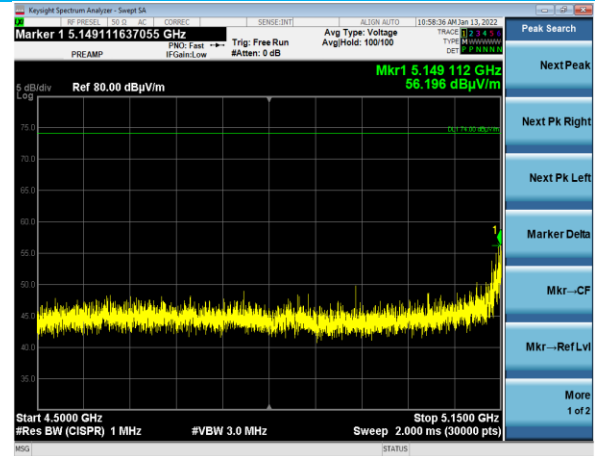


1-4.5 GHz, Vertical Antenna
Vertical EUT, Channel 36

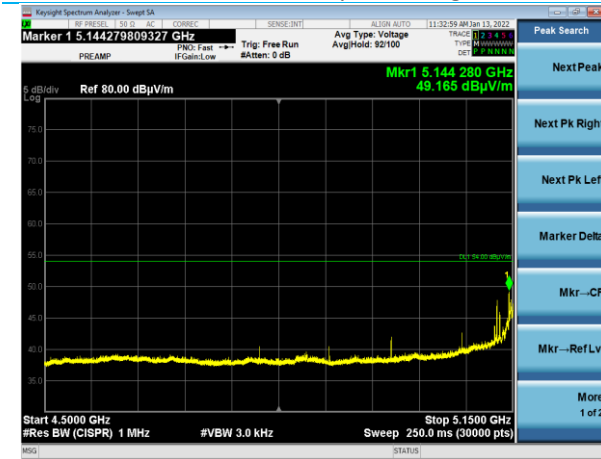
Company: 3Shape TRIOS A/S	Page 18 of 26	Name: Dental Scanner
Report: TR3547 C		Model: TRIOS 5
Quote: NBO-11-2021-004342-2		Serial: Engineering Sample



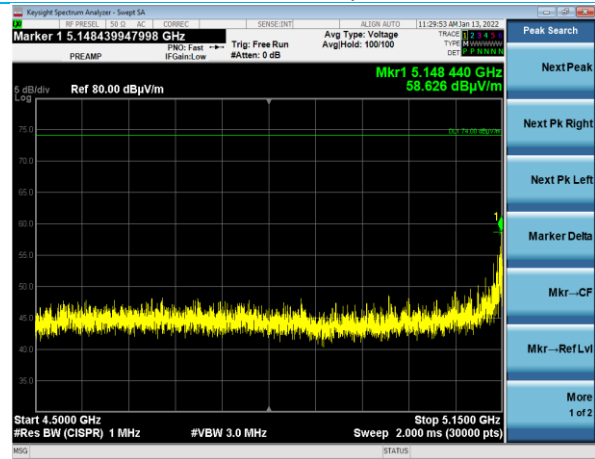
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11a 6Mbps, Average, Ch 36



4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11a 6Mbps, Peak, Ch 36



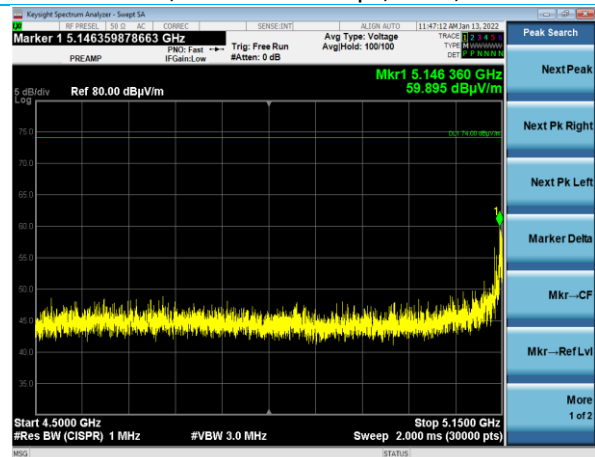
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11a 54Mbps, Average, Ch 36



4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11a 54Mbps, Peak, Ch 36

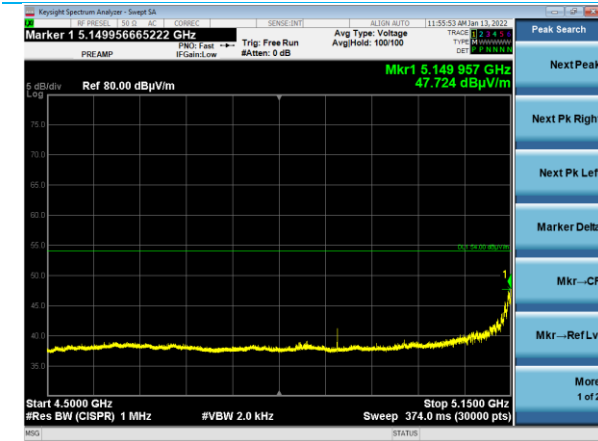


4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS0, Average, Ch 36

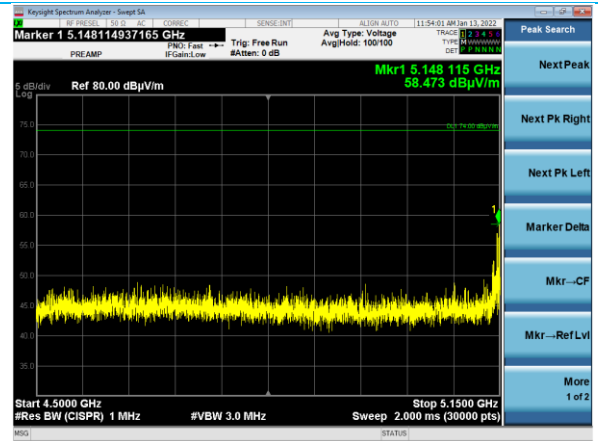


4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS0, Peak, Ch 36

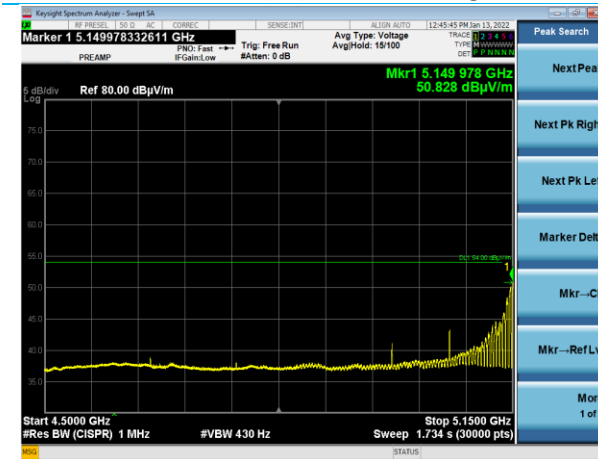
Company: 3Shape TRIOS A/S	Page 19 of 26	Name: Dental Scanner
Report: TR3547 C		Model: TRIOS 5
Quote: NBO-11-2021-004342-2		Serial: Engineering Sample



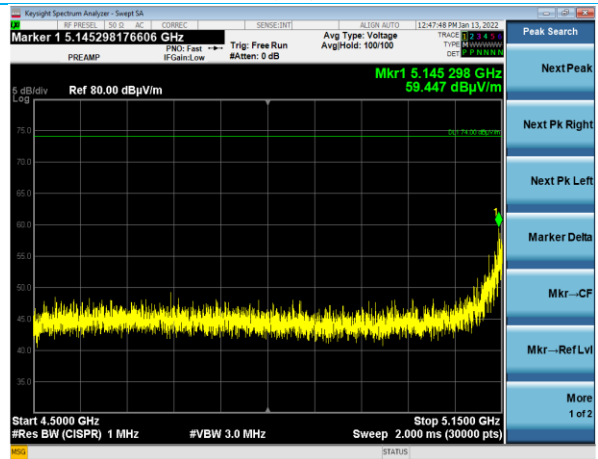
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS7, Average, Ch 36



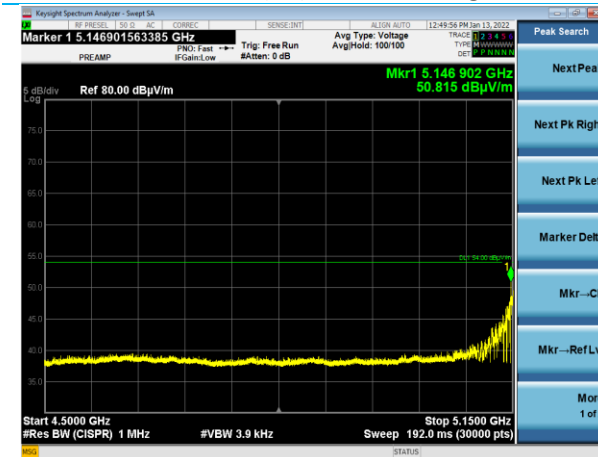
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS7, Peak, Ch 36



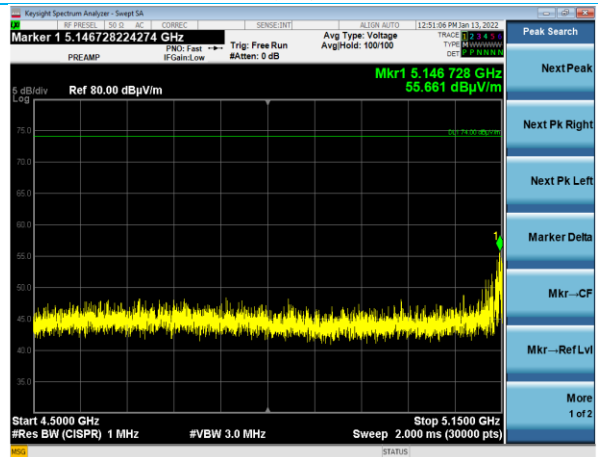
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(40) MCS0, Average, Ch 38



4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(40) MCS0, Peak, Ch 38

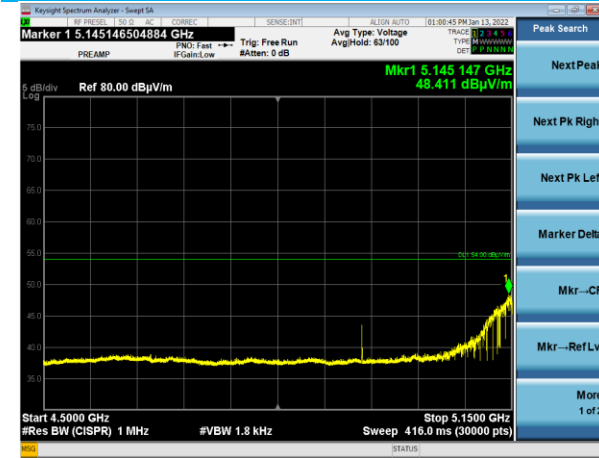


4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(40) MCS7, Average, Ch 38

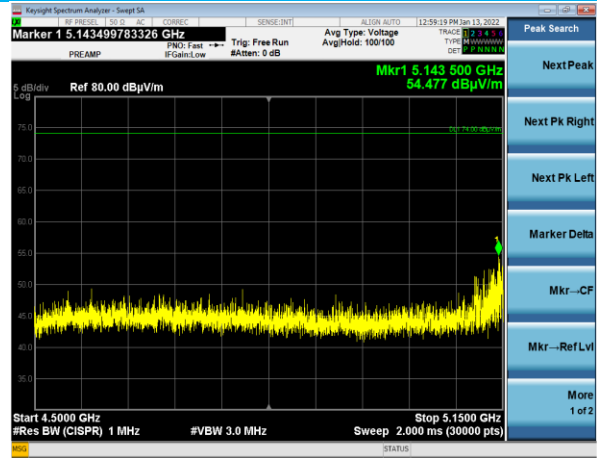


4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11n(40) MCS7, Peak, Ch 38

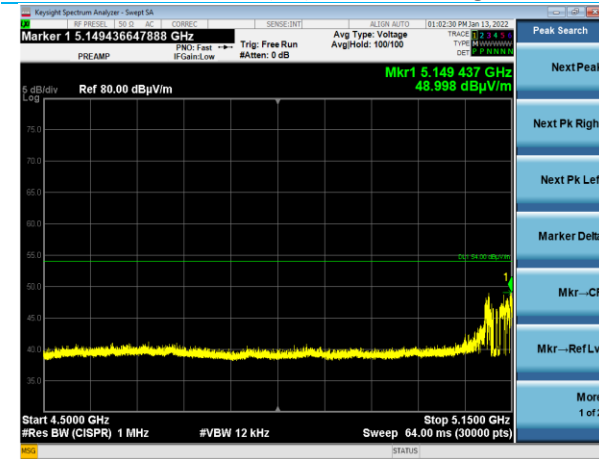
Company: 3Shape TRIOS A/S	Page 20 of 26	Name: Dental Scanner
Report: TR3547 C		Model: TRIOS 5
Quote: NBO-11-2021-004342-2		Serial: Engineering Sample



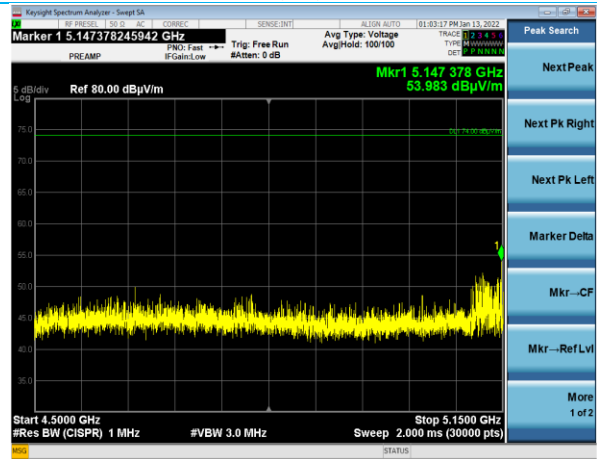
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11ac(80) MCS0, Average, Ch 42



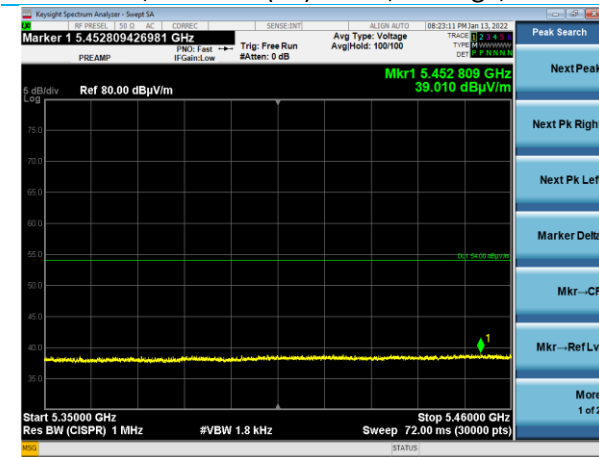
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11ac(80) MCS0, Peak, Ch 42



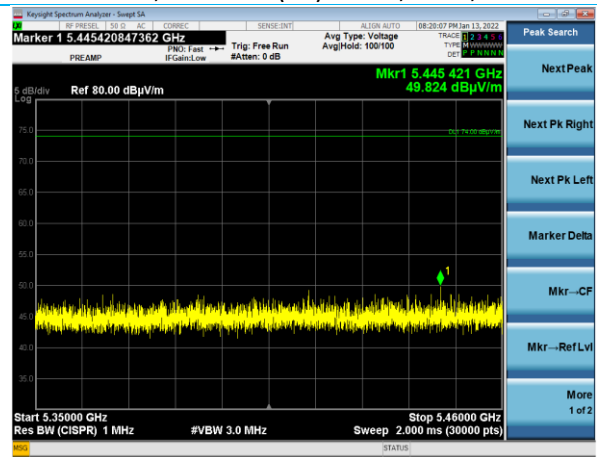
4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11ac(80) MCS9, Average, Ch 42



4500-5150 MHz, Horizontal Antenna
Flat EUT, 802.11ac(80) MCS9, Peak, Ch 42

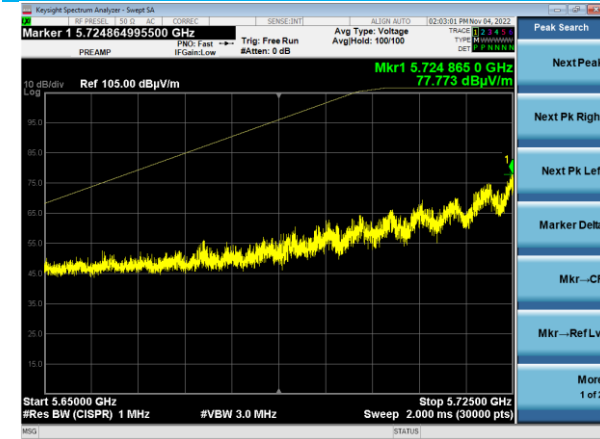


5350-5460 MHz, Horizontal Antenna
Flat EUT, 802.11ac(80) MCS0, Average, Ch 42

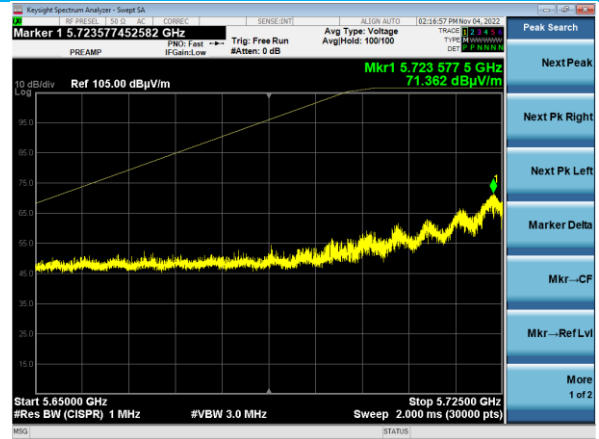


5350-5460 MHz, Horizontal Antenna
Flat EUT, 802.11ac(80) MCS0, Peak, Ch 42

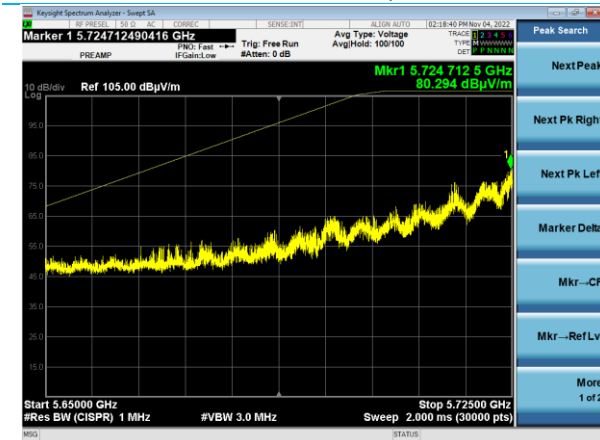
Company: 3Shape TRIOS A/S	Page 21 of 26	Name: Dental Scanner
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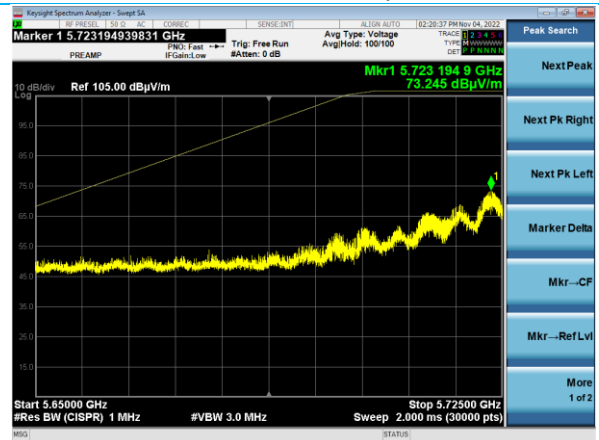
5650-5725 MHz, Horizontal Antenna
Flat EUT, 802.11a 6Mbps, Ch 149



5650-5725 MHz, Horizontal Antenna
Flat EUT, 802.11a 54Mbps, Ch 149

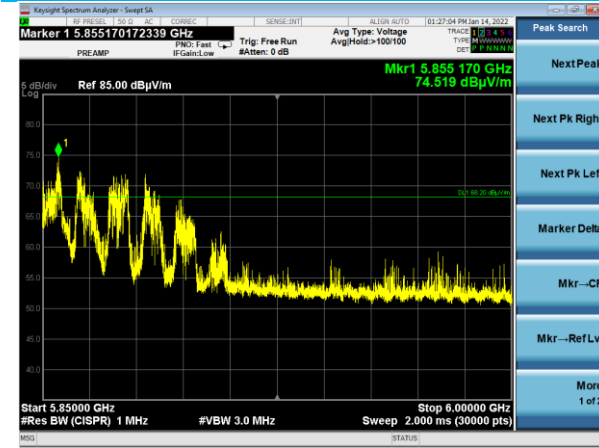


5650-5725 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS0, Ch 149

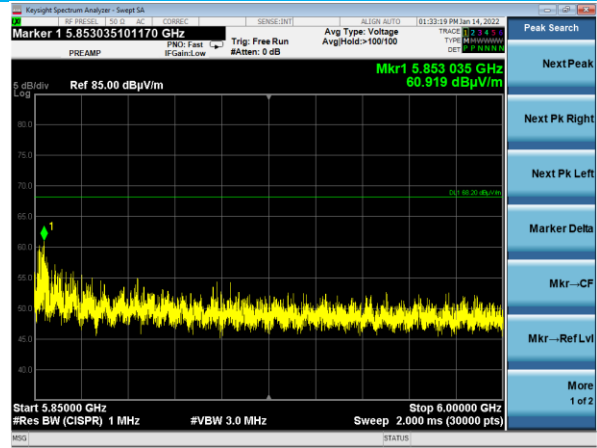


5650-5725 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS7, Ch 149

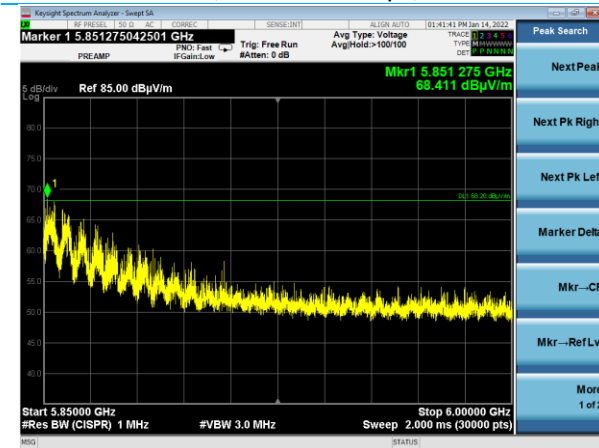
Company: 3Shape TRIOS A/S	Page 22 of 26	Name: Dental Scanner
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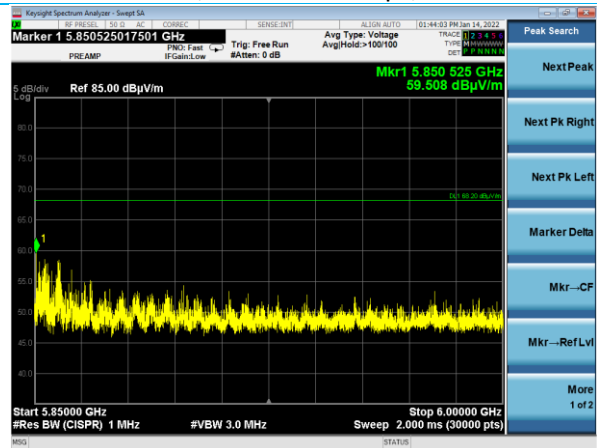
5850-6000 MHz, Horizontal Antenna
Flat EUT, 802.11a 6Mbps, Ch 161



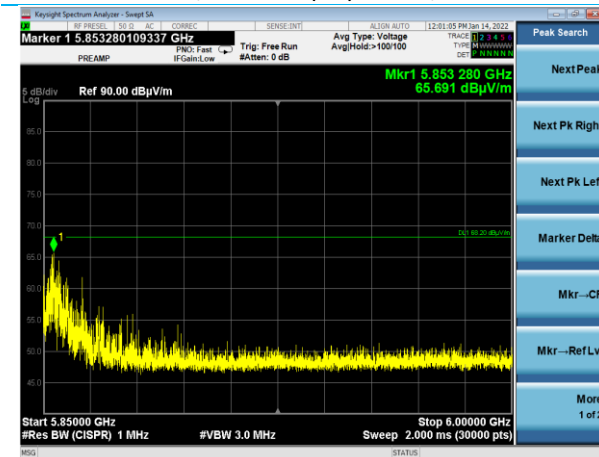
5850-6000 MHz, Horizontal Antenna
Flat EUT, 802.11a 54Mbps, Ch 161



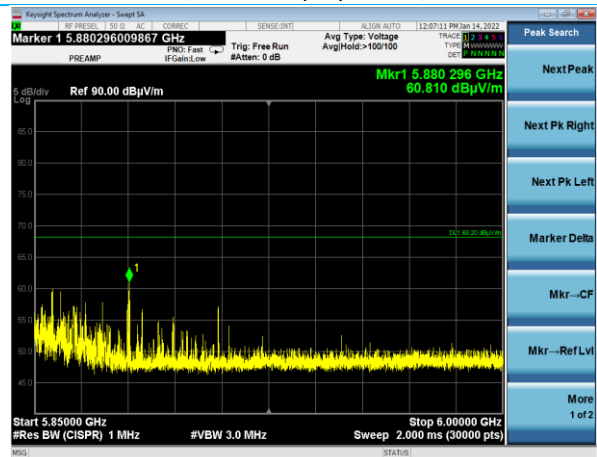
5850-6000 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS0, Ch 161



5850-6000 MHz, Horizontal Antenna
Flat EUT, 802.11n(20) MCS7, Ch 161



5850-6000 MHz, Horizontal Antenna
Flat EUT, 802.11n(40) MCS0, Ch 159

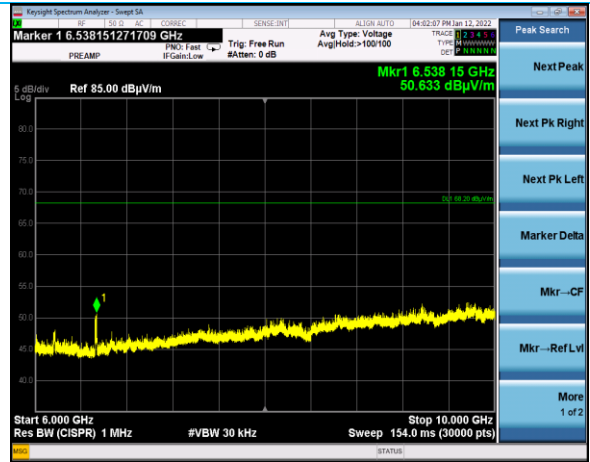


5850-6000 MHz, Horizontal Antenna
Flat EUT, 802.11ac(80) MCS0, Ch 155

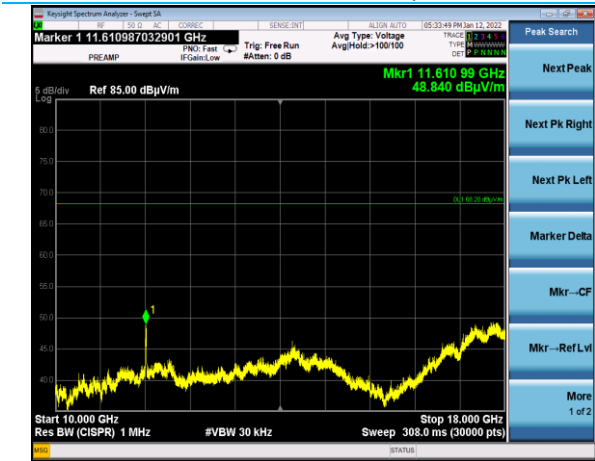
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6-10 GHz, Horizontal Antenna
Vertical EUT, 802.11a 6Mbps, Ch 161



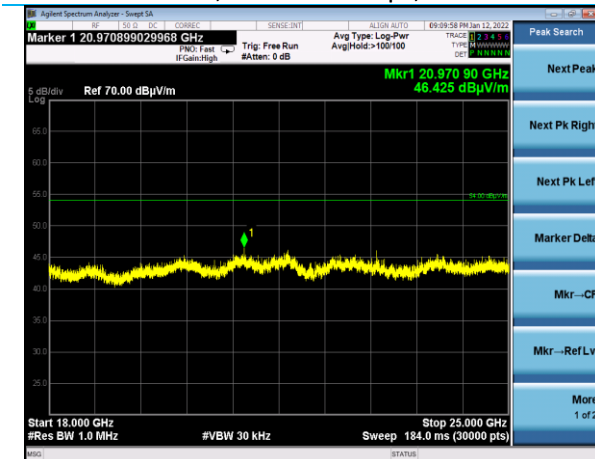
6-10 GHz, Vertical Antenna
Vertical EUT, 802.11a 6Mbps, Ch 161



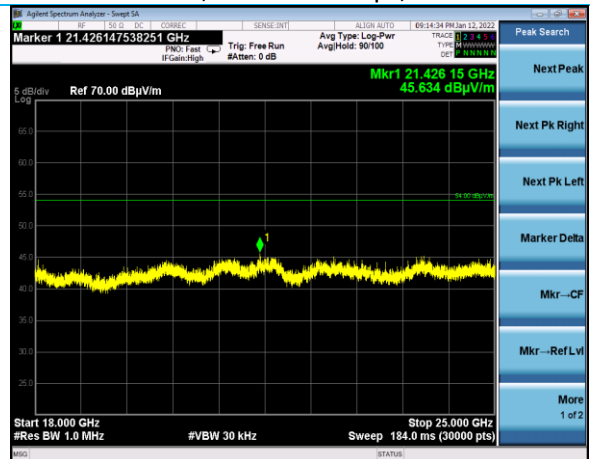
10-18 GHz, Horizontal Antenna
Flat EUT, 802.11a 6Mbps, Ch 161



10-18 GHz, Vertical Antenna
Flat EUT, 802.11a 6Mbps, Ch 161

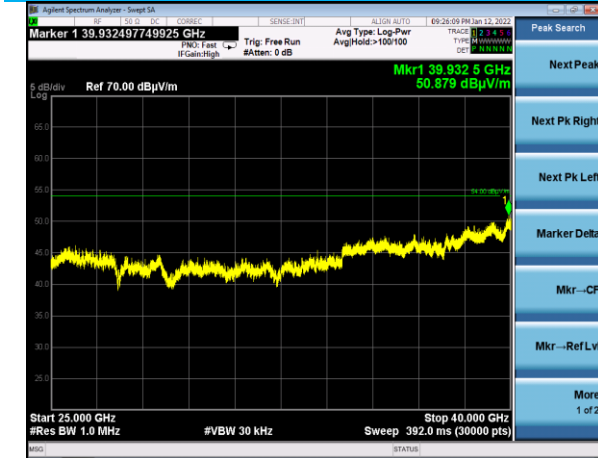


18-25 GHz, Horizontal Antenna
Vertical EUT, 802.11a 6Mbps, Ch 161

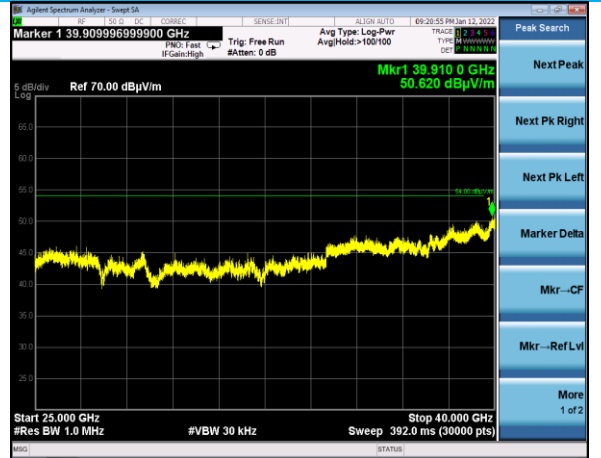


18-25 GHz, Vertical Antenna
Vertical EUT, 802.11a 6Mbps, Ch 161

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25-40 GHz, Horizontal Antenna
Vertical EUT, 802.11a 6Mbps, Ch 161



25-40 GHz, Vertical Antenna
Vertical EUT, 802.11a 6Mbps, Ch 161

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6 REVISION HISTORY

Version	Date	Notes	Person
0	2/4/2022	Initial Draft	Zach Wilson
1	8/29/2022	Final	Adam Alger
2	10/6/2022	Updated antenna gain	Adam Alger
3	11/5/2022	Added channel 149 data	Adam Alger

END OF REPORT