Annex 1: Measurement diagrams
to T E S T R E P O R T
No.: 19-1-0134401T07a

According to:
Title 47 CFR, Chapter I
FCC Regulations, Subchapter A
§15.247(DTS)

for

Simavita (Aust) Pty Ltd

SMARTZ POD 8000
Portable Bluetooth Data Logger

FCC ID: SBG-8000-POD

Laboratory Accreditation and Listings
ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01 D-PL-12047-01-03 D-PL-12047-01-04 Accredited EMC-Test Laboratory
accredited according to DIN EN ISO/IEC 17025
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com

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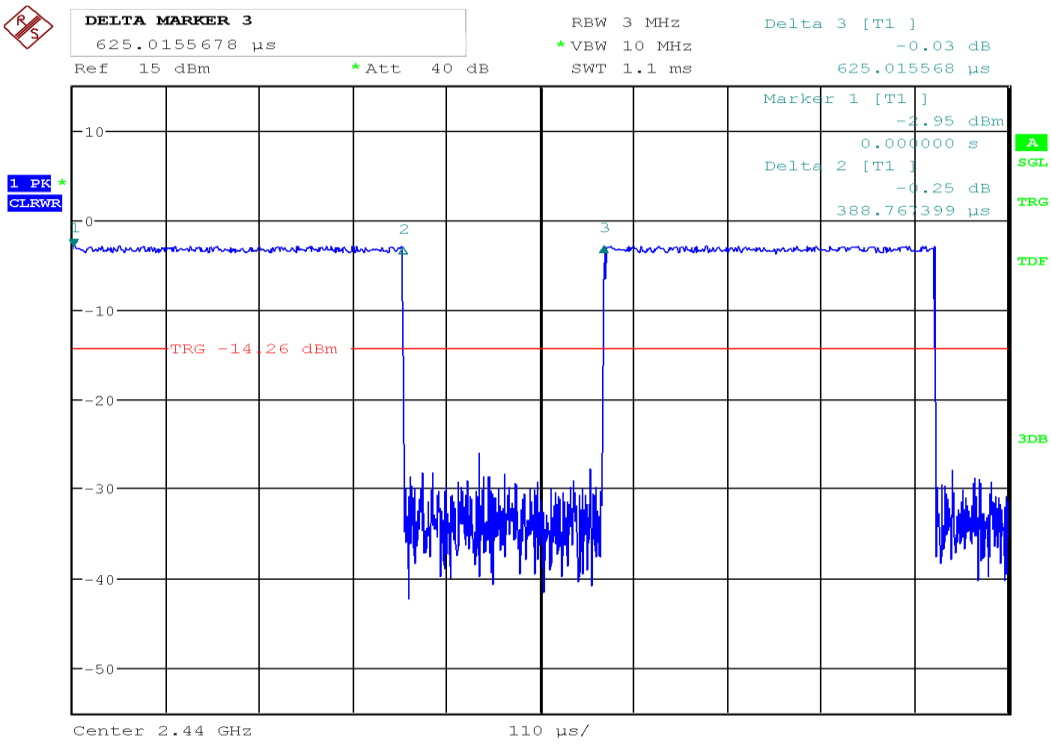
1. Conducted measurements on RF-antenna port

1.1. Duty Cycle



Duty Cycle for Channel 17 (2440 MHz)

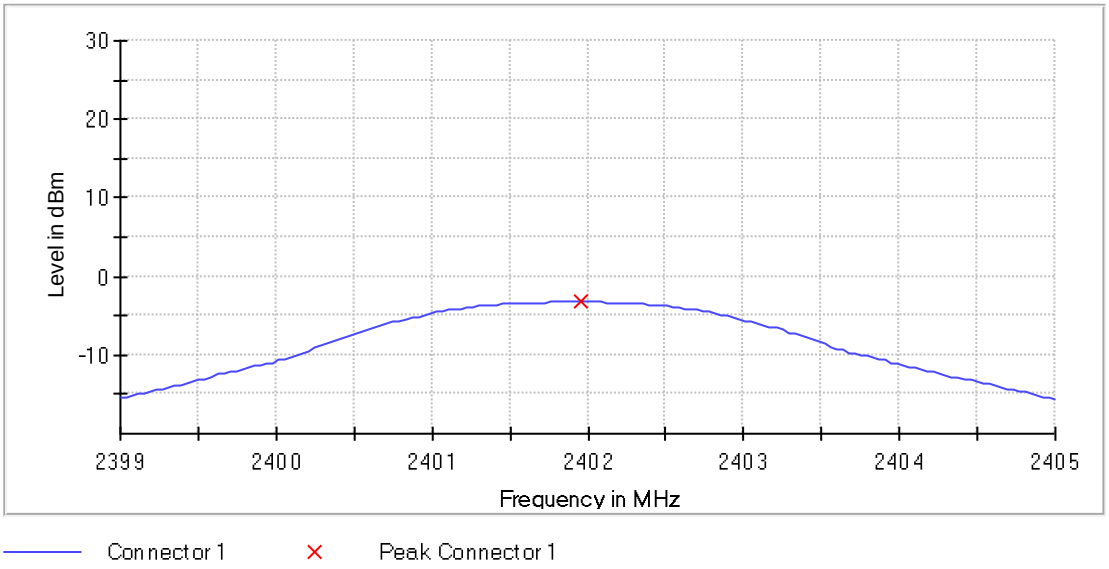
1.2. Maximum Conducted Output Power (Peak)

Peak output power (Sweep) (2402 MHz; 10 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2402.000000	-3.2	30.0	PASS



Measurement

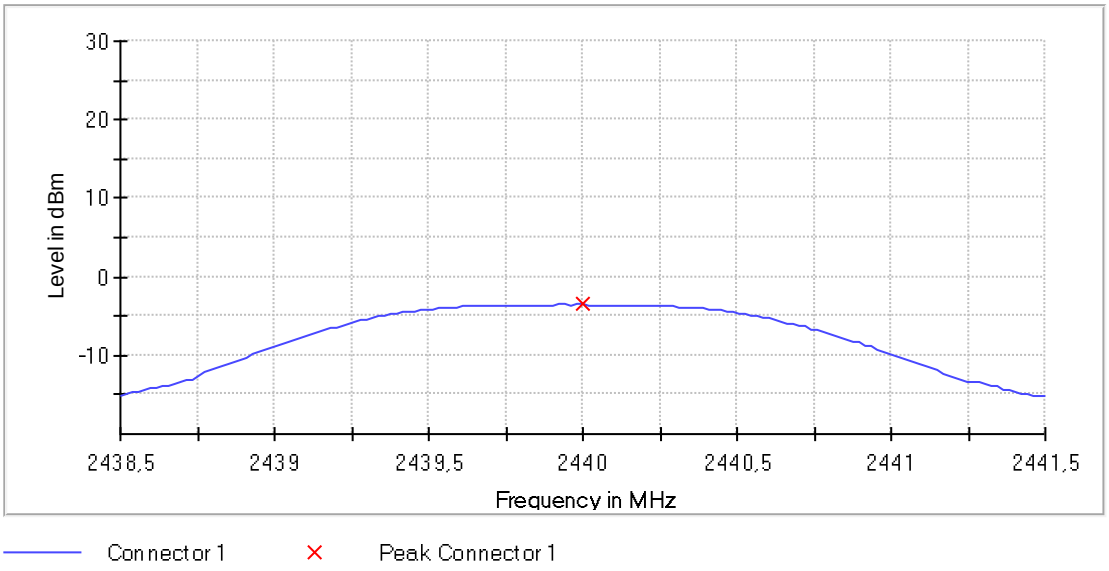
Setting	Instrument Value	Target Value
Start Frequency	2.39900 GHz	2.39900 GHz
Stop Frequency	2.40500 GHz	2.40500 GHz
Span	6.000 MHz	6.000 MHz
RBW	2.000 MHz	>= 1.000 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	155	~ 101
Sweeptime	2.500 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Peak output power (Sweep) (2440 MHz; 10 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2402.000000	-3.2	30.0	PASS



Measurement

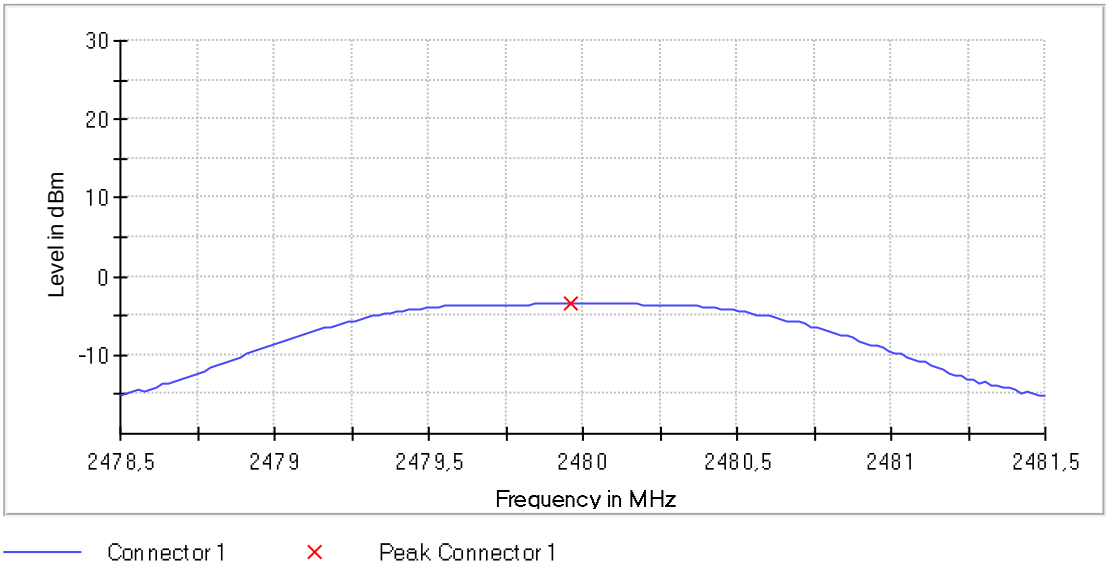
Setting	Instrument Value	Target Value
Start Frequency	2.43850 GHz	2.43850 GHz
Stop Frequency	2.44150 GHz	2.44150 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 727.273 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	155	~ 101
Sweeptime	2.500 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Peak output power (Sweep) (2480 MHz; 10 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2480.000000	-3.4	30.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47850 GHz	2.47850 GHz
Stop Frequency	2.48150 GHz	2.48150 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 740.260 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	155	~ 101
Sweeptime	2.500 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

1.3. Minimum Emission Bandwidth 6 dB
Minimum Emission Bandwidth 6 dB (2402 MHz; 10 dBm; 1 MHz)

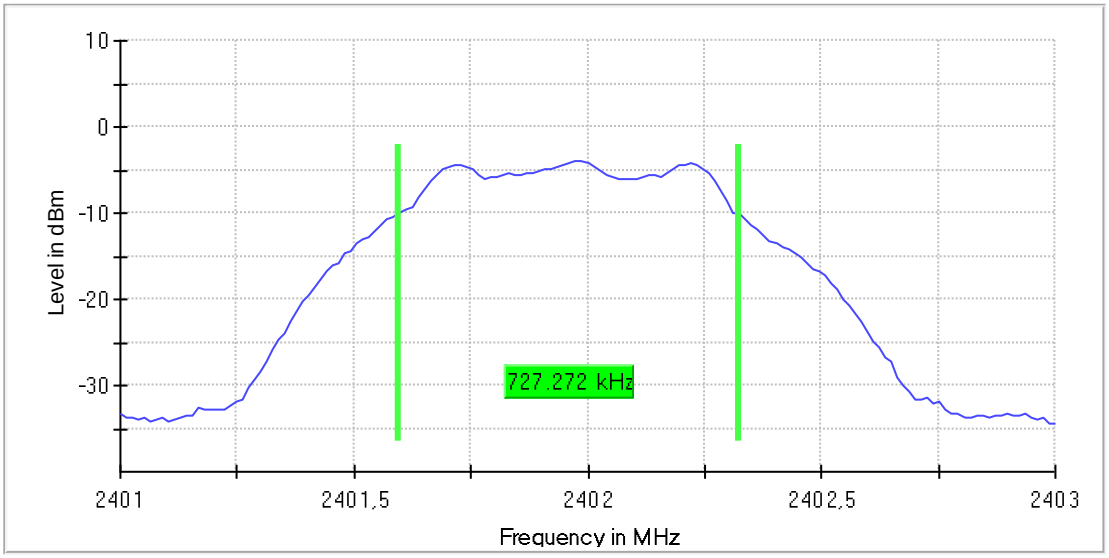
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.727272	0.500000	---	2401.597403	2402.324675

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-4.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	155	~ 40
Sweeptime	2.500 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.17 dB	0.50 dB

Minimum Emission Bandwidth 6 dB (2440 MHz; 10 dBm; 1 MHz)

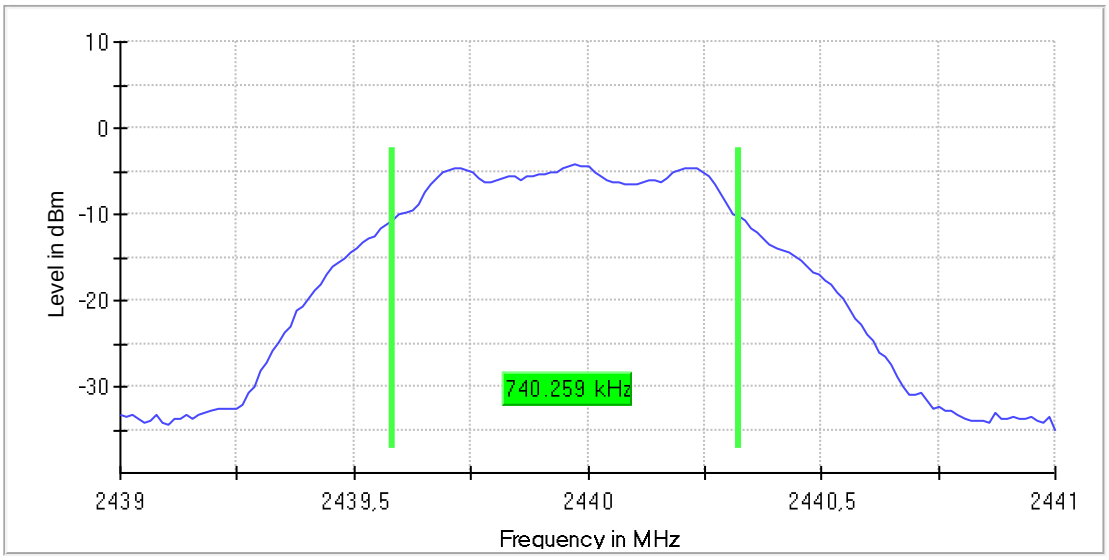
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2440.000000	0.740259	0.500000	---	2439.584416	2440.324675

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2440.000000	-4.3	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43900 GHz	2.43900 GHz
Stop Frequency	2.44100 GHz	2.44100 GHz
Span	2.000 MHz	2.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	155	~ 40
Sweeptime	2.500 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.10 dB	0.50 dB

Minimum Emission Bandwidth 6 dB (2480 MHz; 10 dBm; 1 MHz)

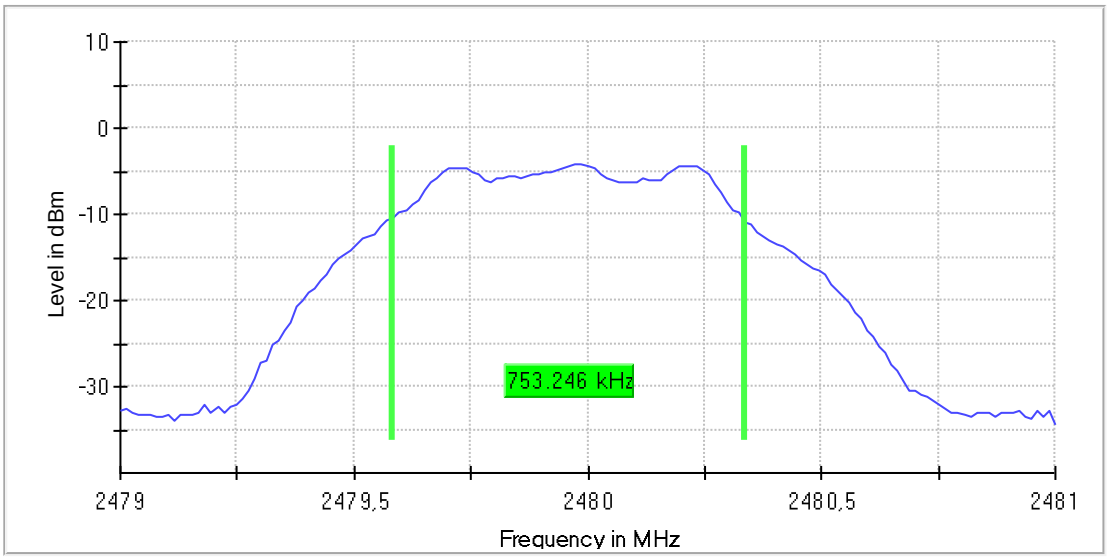
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.753246	0.500000	---	2479.584416	2480.337662

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-4.2	PASS



Measurement

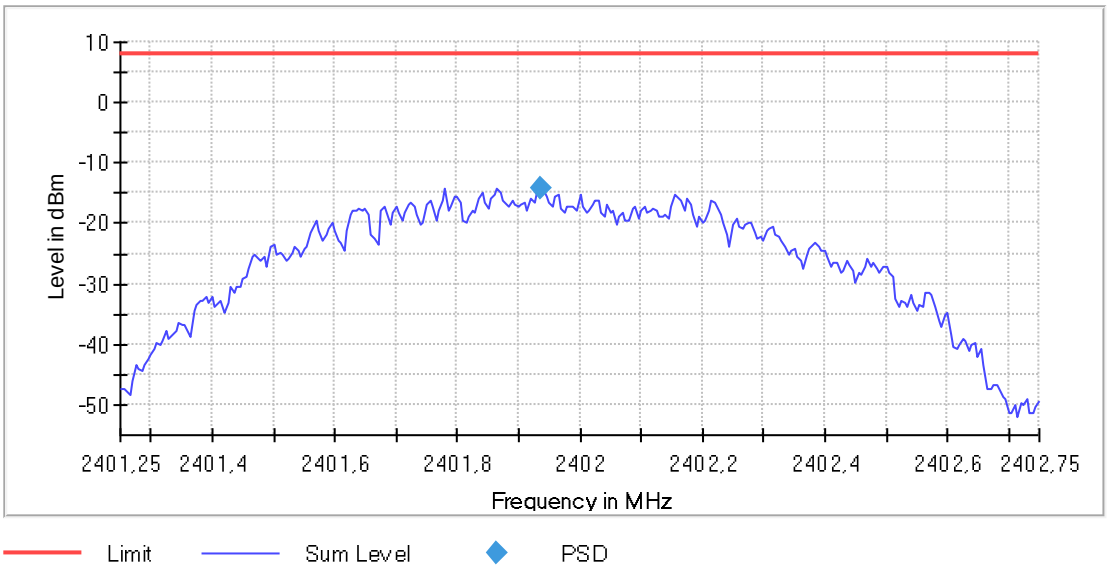
Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	155	~ 40
Sweeptime	2.500 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	6 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.26 dB	0.50 dB

1.4. Power Spectral Density
Power Spectral Density (2402 MHz; 10 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.**247**(a),(e), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2402.000000	2401.935000	-14.053	8.0	PASS



Measurement

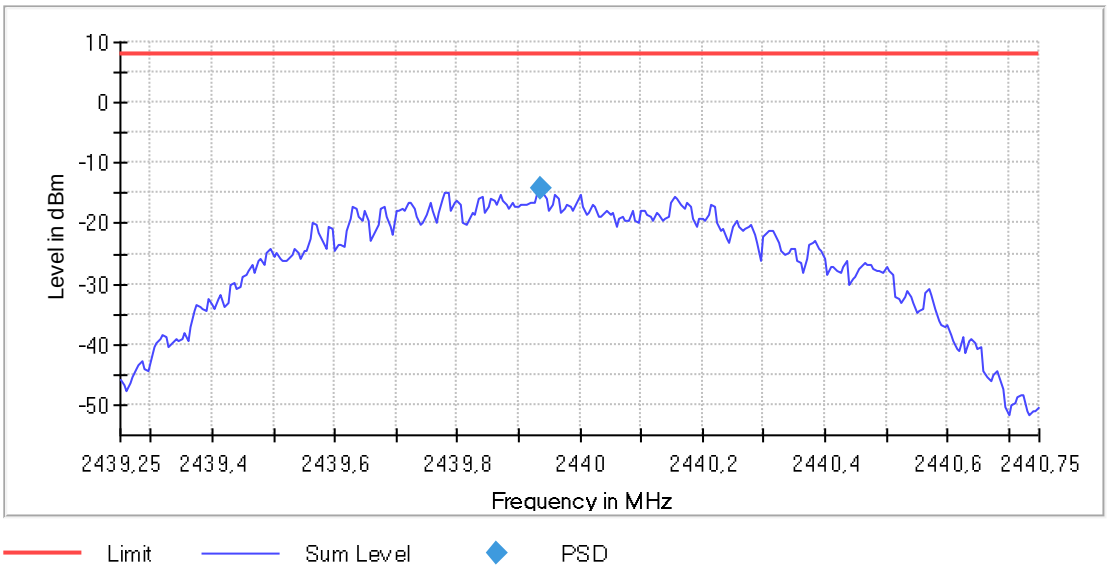
Setting	Instrument Value	Target Value
Start Frequency	2.40125 GHz	2.40125 GHz
Stop Frequency	2.40275 GHz	2.40275 GHz
Span	1.500 MHz	1.500 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	301	~ 300
Sweeptime	10.000 ms	6.020 ms
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	38 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.46 dB	0.50 dB

Power Spectral Density (2440 MHz; 10dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2440.000000	2439.935000	-14.185	8.0	PASS



Measurement

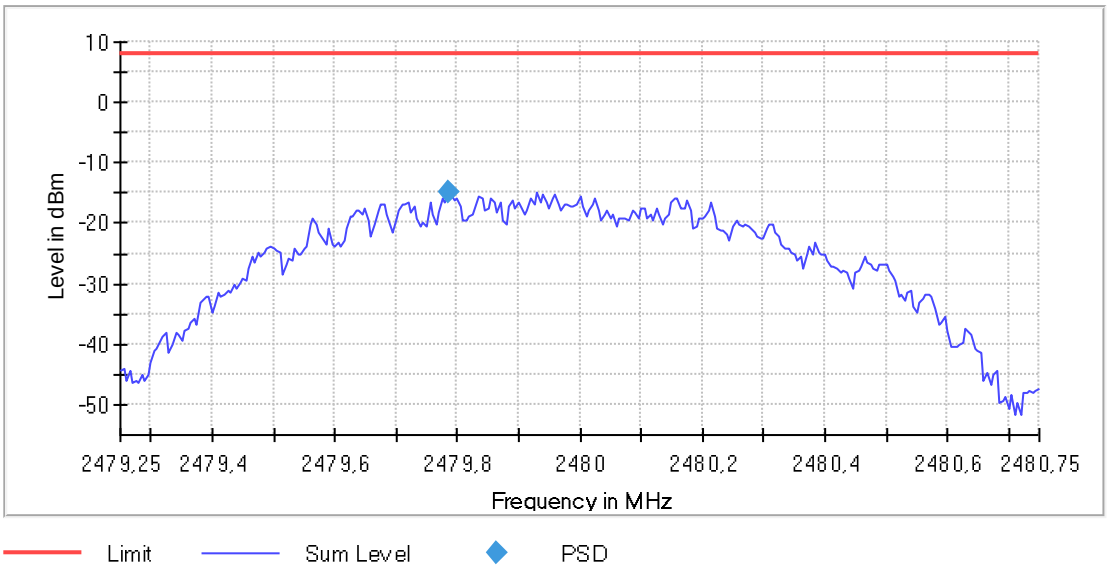
Setting	Instrument Value	Target Value
Start Frequency	2.43925 GHz	2.43925 GHz
Stop Frequency	2.44075 GHz	2.44075 GHz
Span	1.500 MHz	1.500 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	301	~ 300
Sweeptime	10.000 ms	6.020 ms
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	38 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Power Spectral Density (2480 MHz; 10 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2480.000000	2479.785000	-14.981	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47925 GHz	2.47925 GHz
Stop Frequency	2.48075 GHz	2.48075 GHz
Span	1.500 MHz	1.500 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	301	~ 300
Sweeptime	10.000 ms	6.020 ms
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	29 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

1.5. Occupied Channel Bandwidth 99%
Occupied Channel Bandwidth 99% (2402 MHz; 10 dBm; 1 MHz)

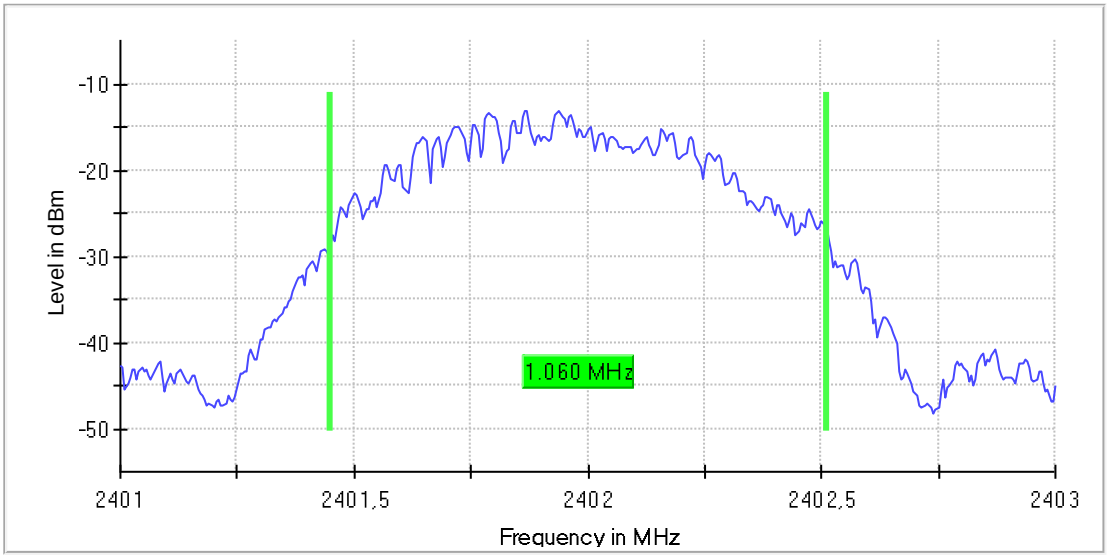
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.060000	---	---	2401.450000	2402.510000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	401	~ 400
Sweeptime	80.000 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	8 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.08 dB	0.30 dB

Occupied Channel Bandwidth 99% (2440 MHz; 10 dBm; 1 MHz)

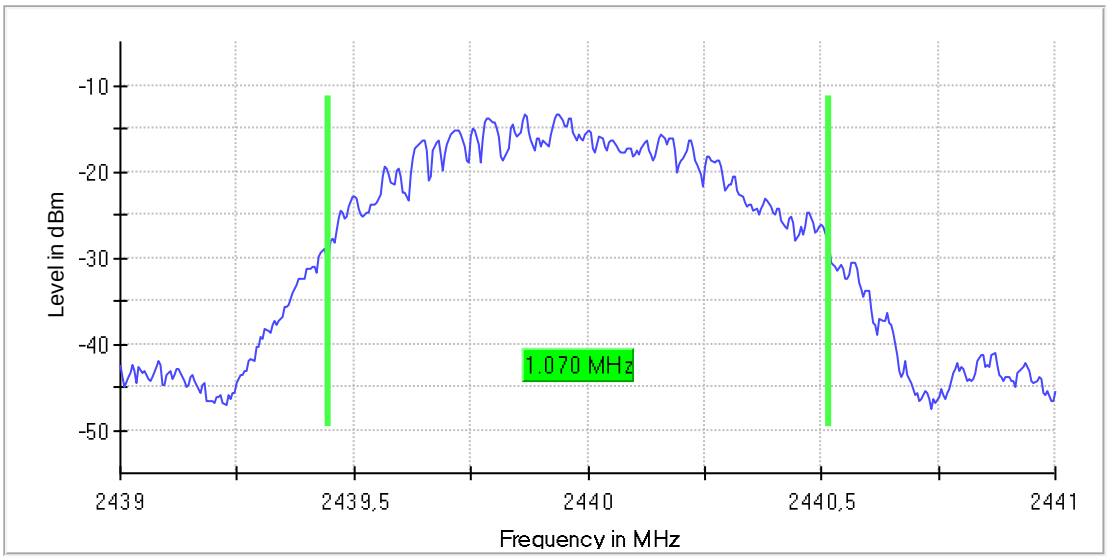
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2440.000000	1.070000	---	---	2439.445000	2440.515000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2440.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43900 GHz	2.43900 GHz
Stop Frequency	2.44100 GHz	2.44100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	401	~ 400
Sweeptime	80.000 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.19 dB	0.30 dB

Occupied Channel Bandwidth 99% (2480 MHz; 10 dBm; 1 MHz)

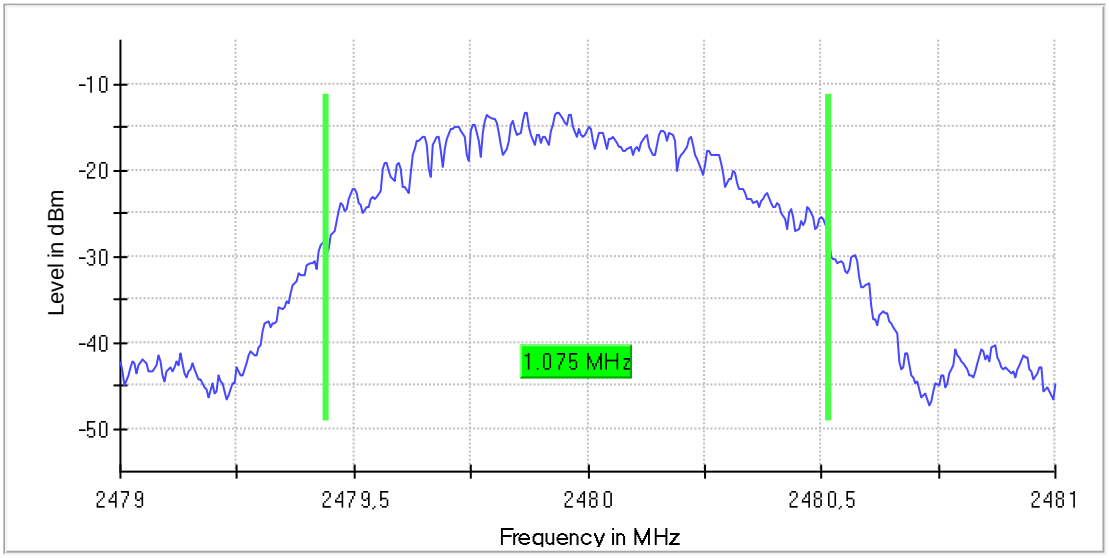
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.075000	---	---	2479.440000	2480.515000

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	401	~ 400
Sweeptime	80.000 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	9 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.28 dB	0.30 dB

1.6. 20dBc Emissions

1.6.1. Channel 01

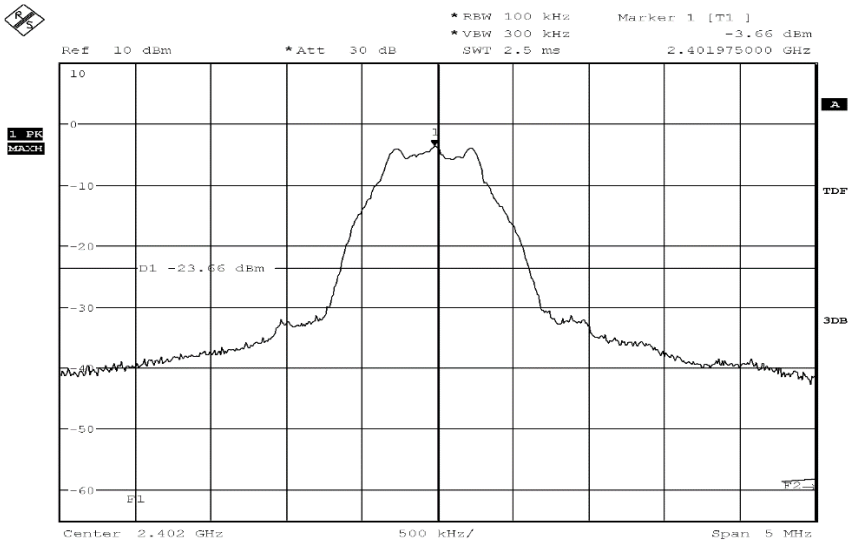


Diagram 1: 20dBc Reference

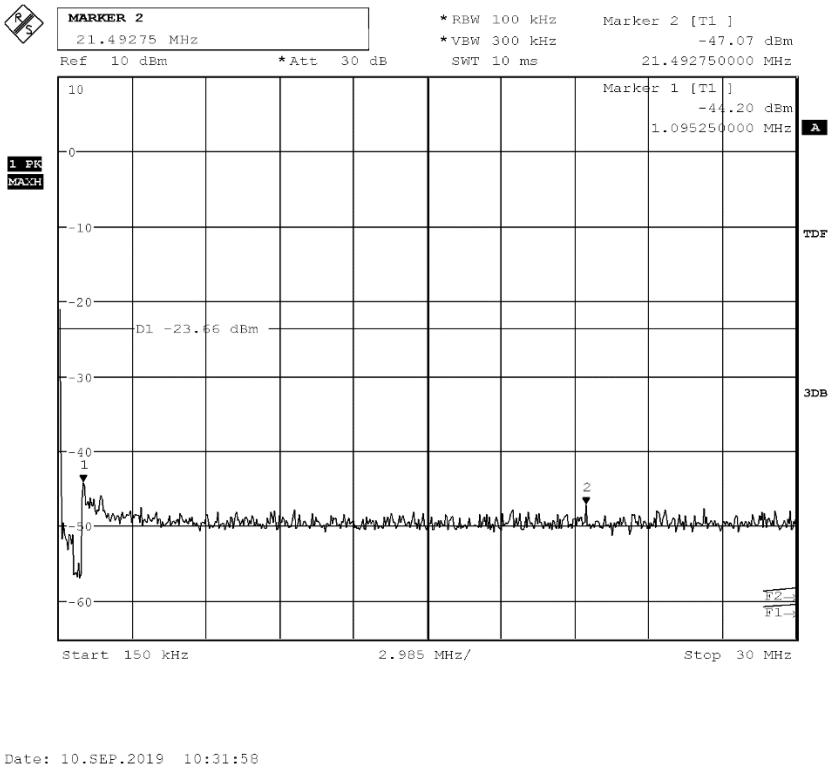


Diagram 2: 150kHz to 30MHz

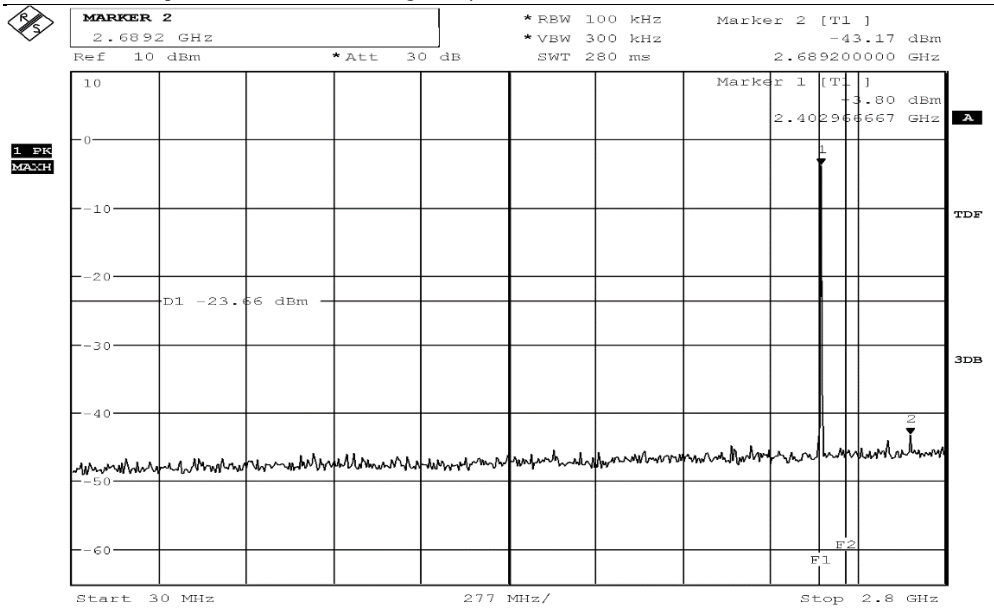


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Diagram 3: 30MHz to 2.8GHz

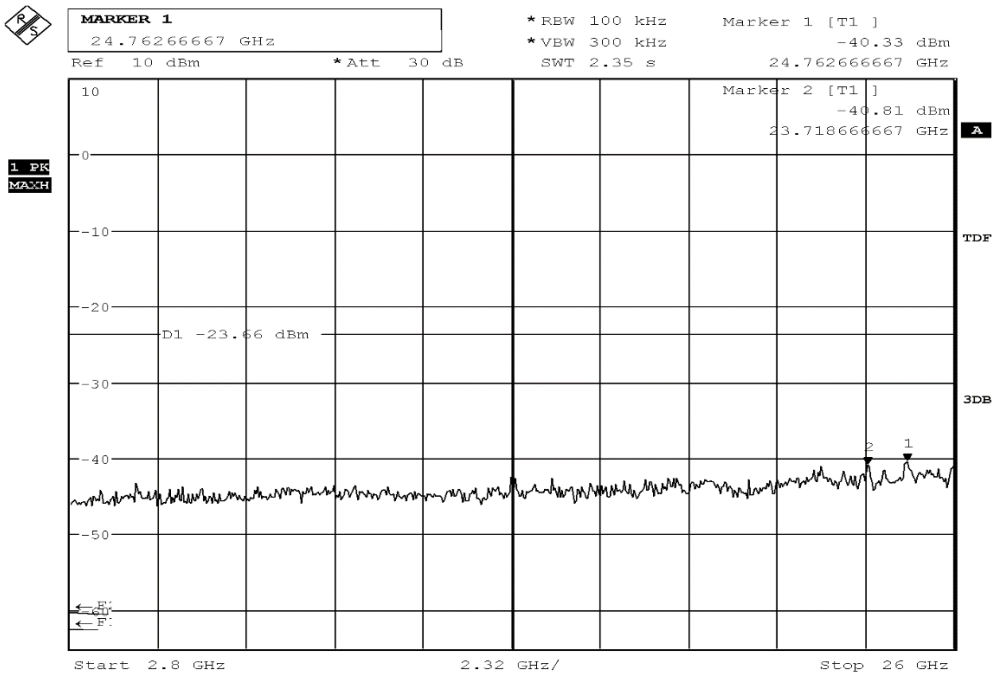

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Diagram 4: 2.8GHz to 26GHz

1.6.2. Channel 17

1.6.2.1. Reference within the band

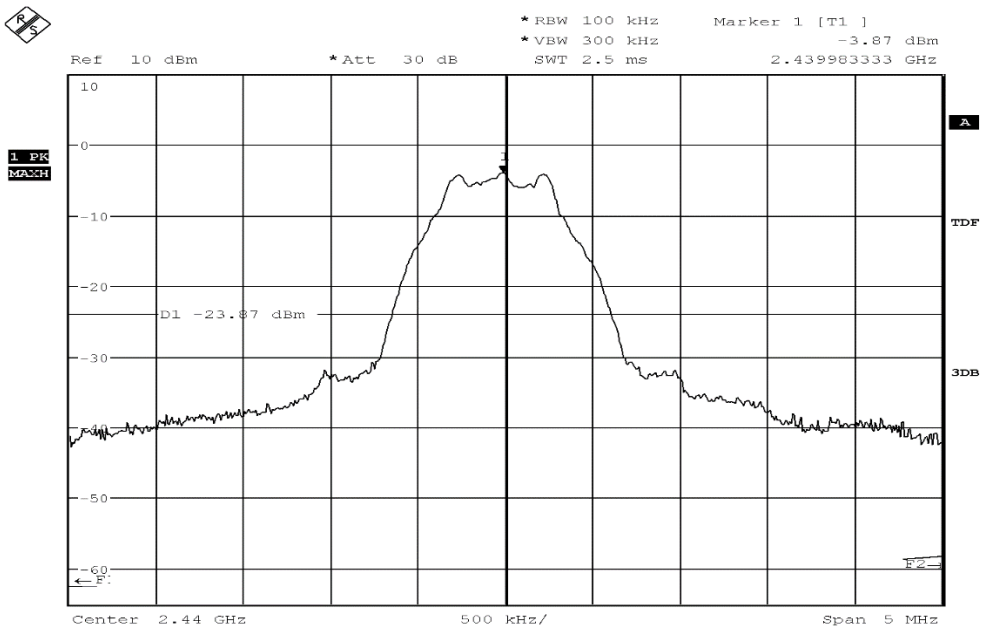

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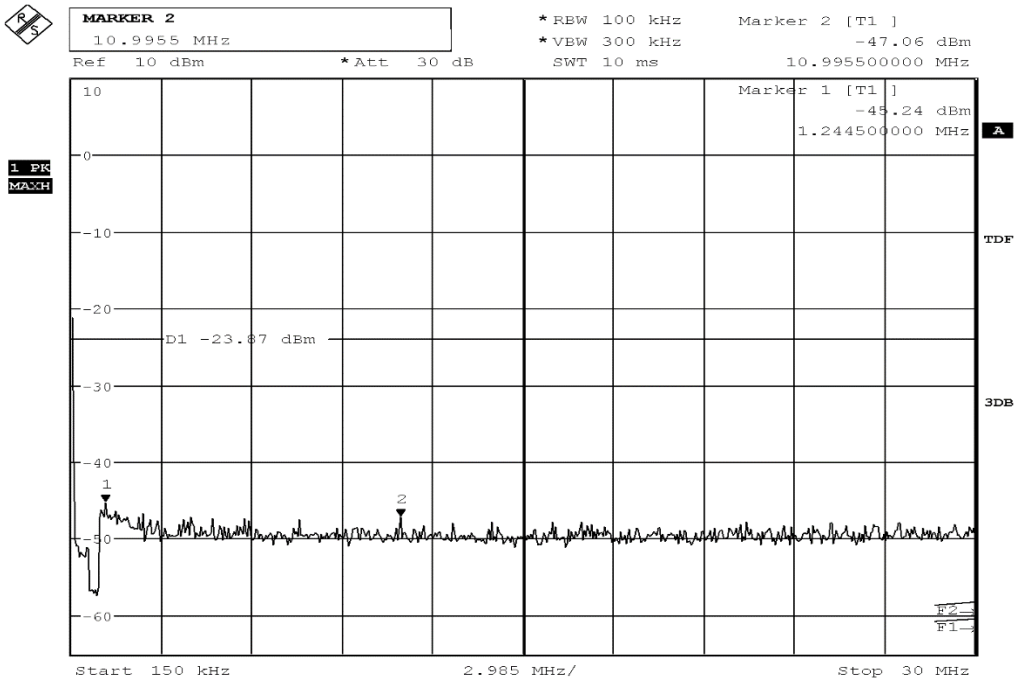
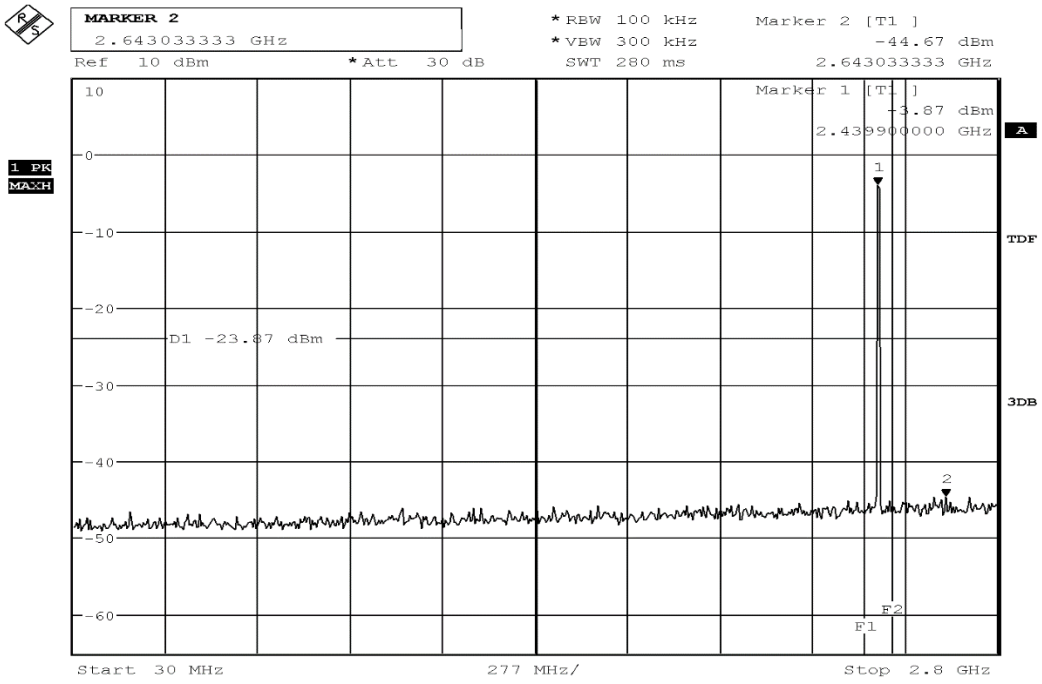
Diagram 1: 20dBc Reference



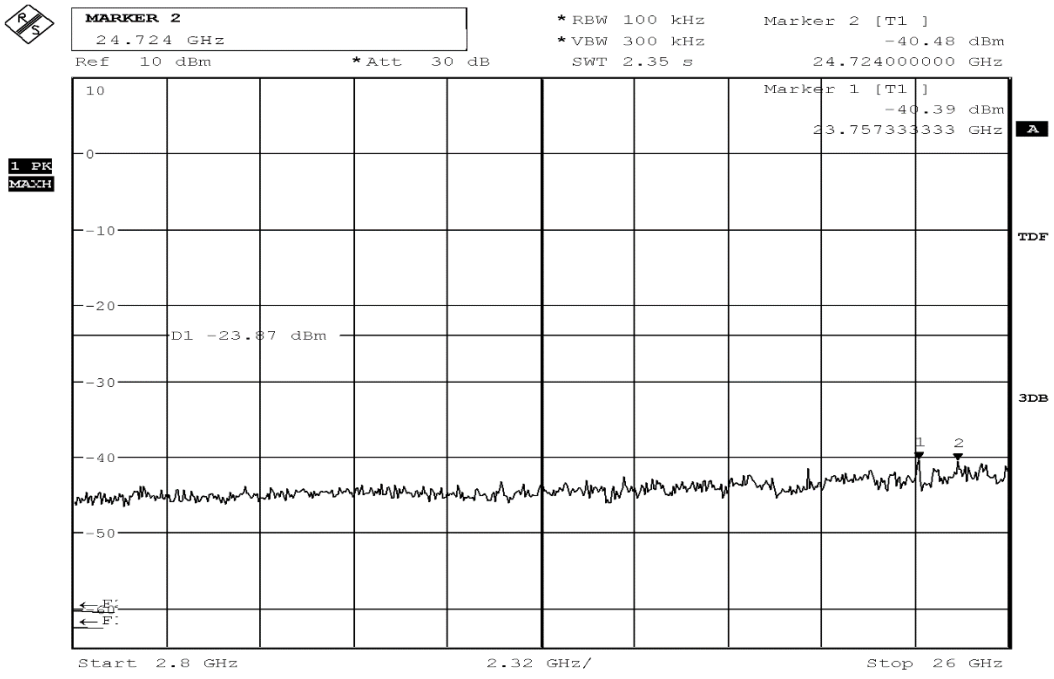
Date: 10.SEP.2019 10:42:37

Diagram 6: 150kHz to 30MHz



Date: 10.SEP.2019 10:43:47

Diagram 7: 30MGHz to 2.8GHz



Date: 10.SEP.2019 10:45:24

Diagram 8: 2.8GHz to 26GHz

1.6.3. Channel 39

1.6.3.1. Channel 39 Reference

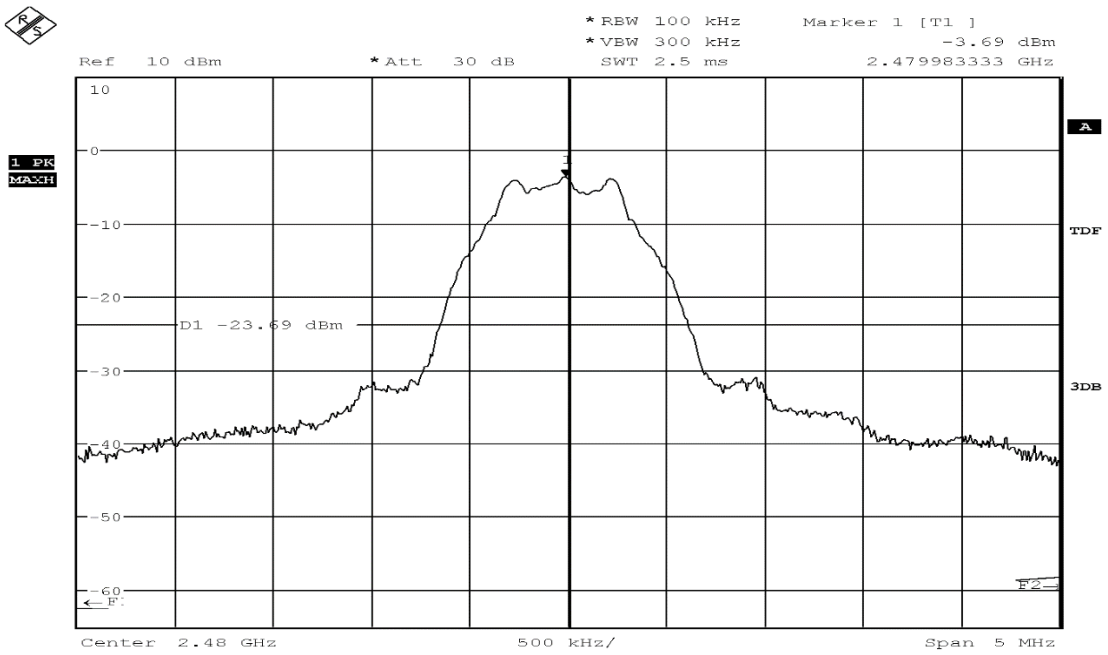


Diagram 9: 20dBc Reference

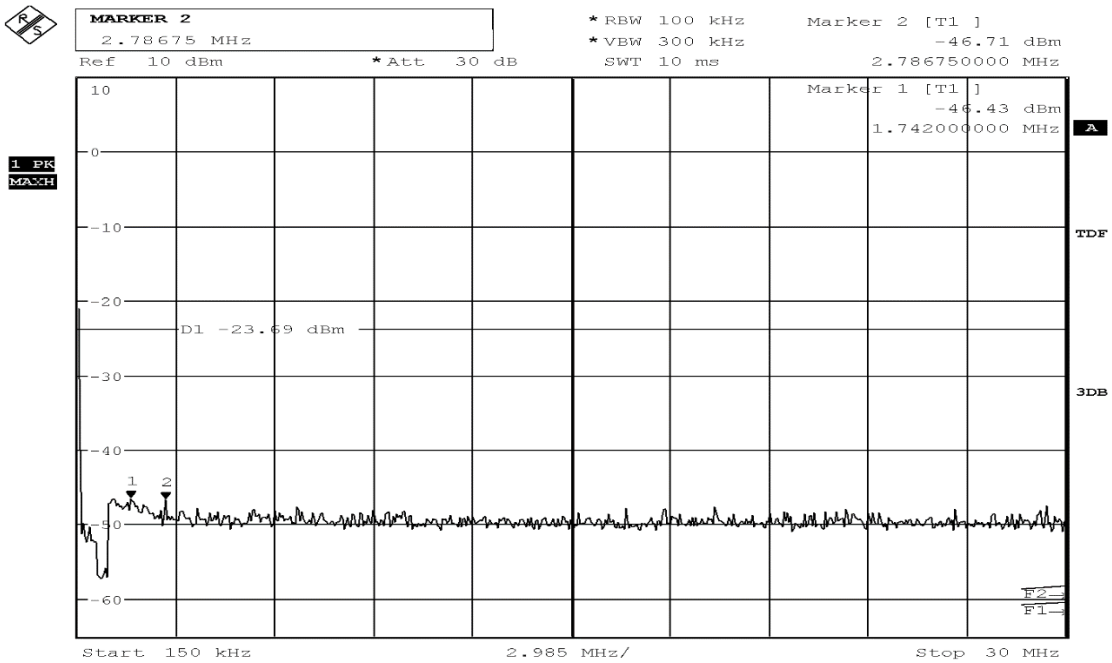


Diagram 10: 150kHz to 30MHz

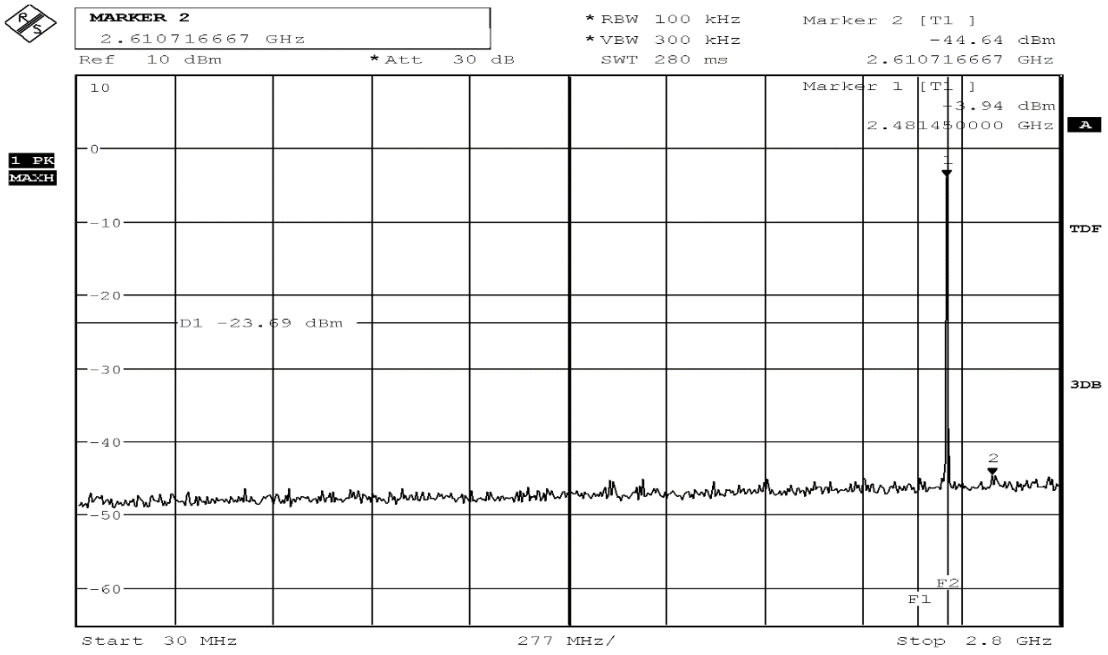


Diagram 11: 30MHz to 2.8GHz

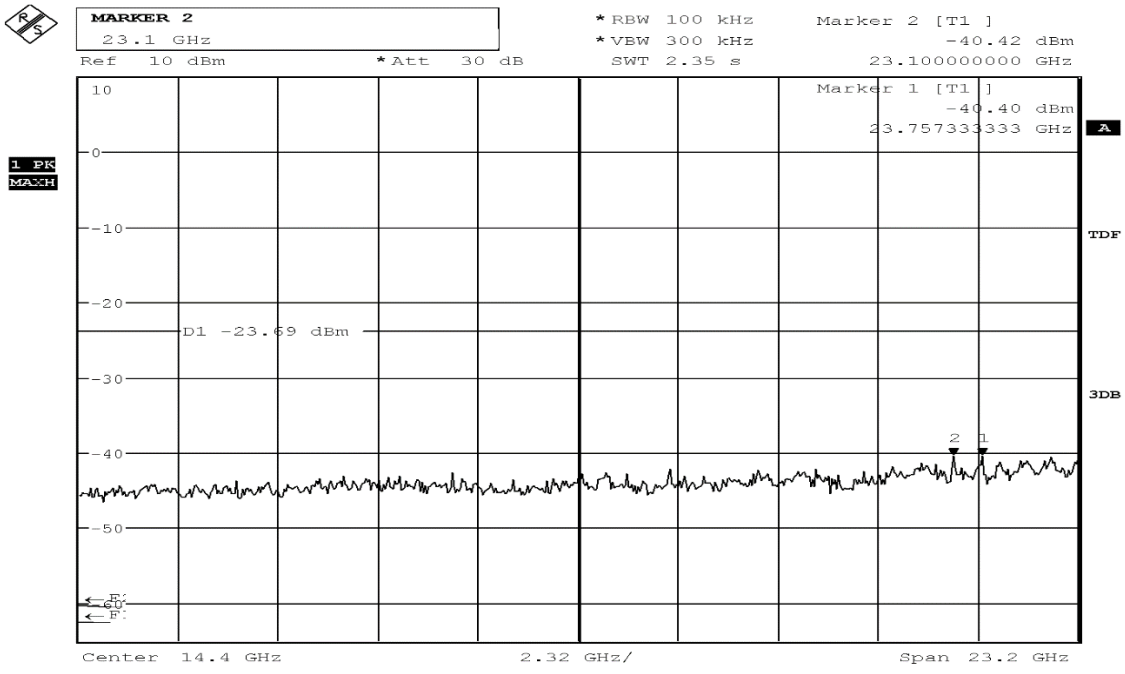


Diagram 12: 2.8GHz to 26GHz

2. Radiated field strength measurements accord. §15.209 & §15.205

2.1. Magnetic field measurements f < 30 MHz

2.01a_BT_LE_low_standing

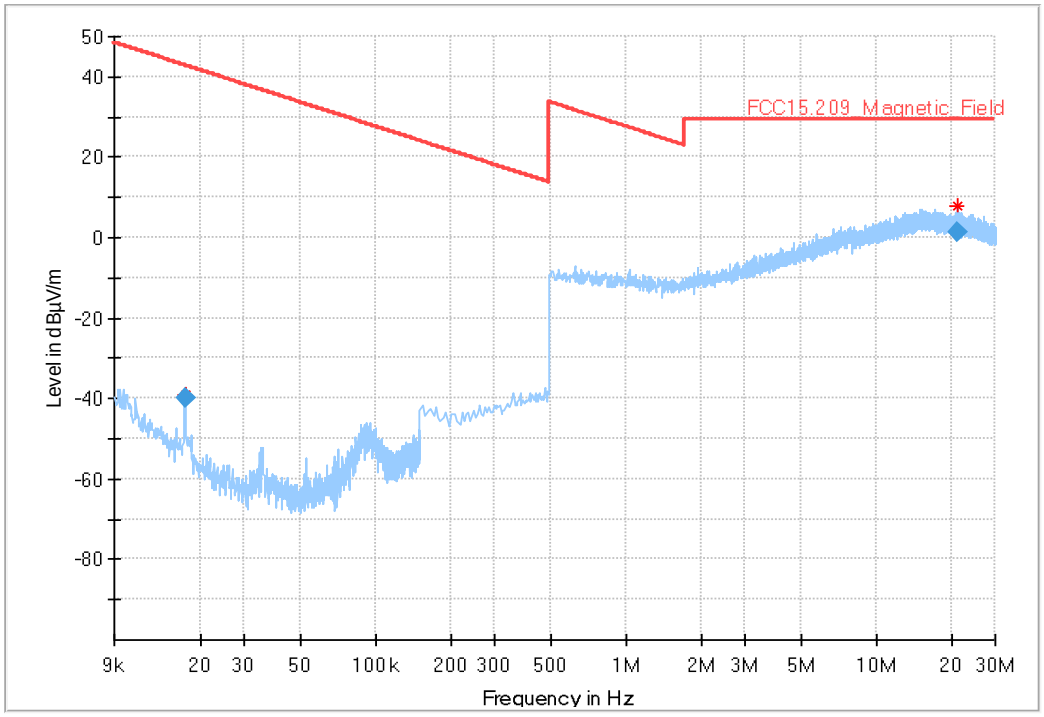
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC §15.205 §15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | low Channel 2402 MHz
Environmental Conditions::	Humidity : 51.4% rH; Temperature: 21.5° C
EUT Setup:	
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)	Comment
0.017260	-39.99	42.86	82.85	0.200	V	123.0	-73.6	19:22:48 - 24.09.2019
21.119800	1.43	29.54	28.11	9.000	V	287.0	-11.3	19:28:21 - 24.09.2019

2.01b_BT_LE_low_laying

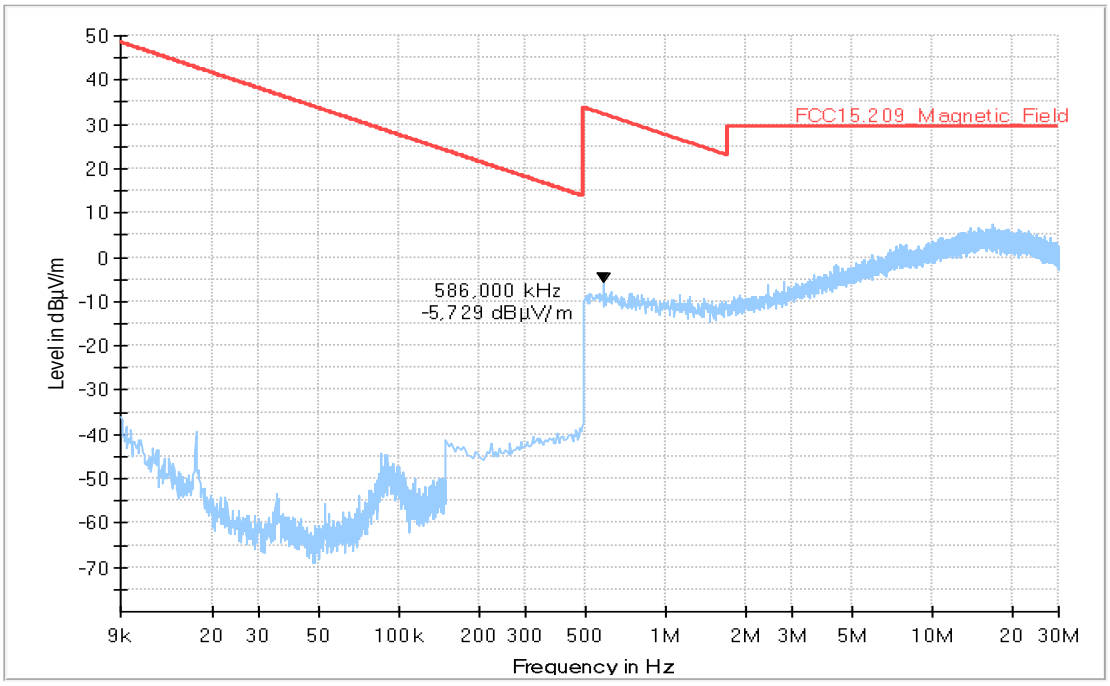
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC §15.205 §15.209
Operator:	MKh
Operating Mode:	BT-LE| GFSK | 1 MBit | Low Channel 2402 MHz
Environmental Conditions::	Humidity : 60.2% rH; Temperature: 21.1° C
EUT Setup:	laying
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



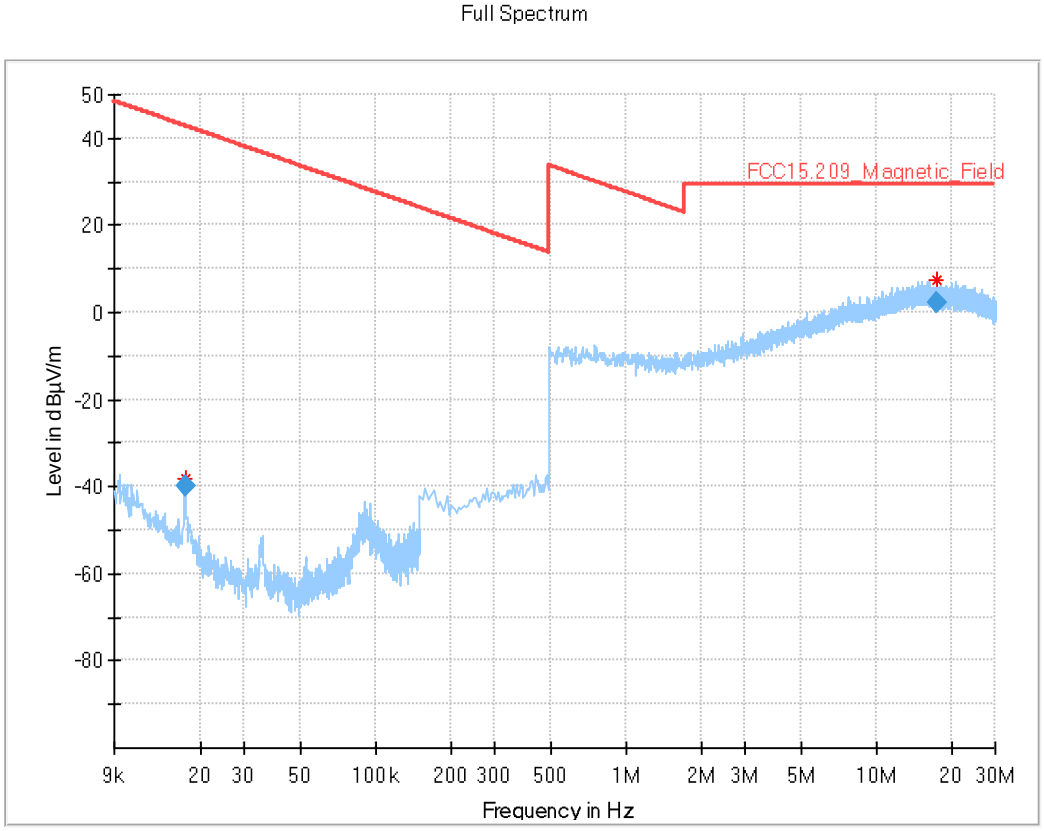
2.02a_BT_LE_mid_standing

Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC §15.205 §15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | mid Channel 2440 Mhz
Environmental Conditions::	Humidity : 51.9% rH; Temperature: 21.5° C
EUT Setup:	standing
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)	Comment
0.017260	-39.92	42.86	82.78	0.200	H	89.0	-73.6	19:58:44 - 24.09.2019
17.518200	2.14	29.54	27.40	9.000	H	115.0	-10.7	19:53:58 - 24.09.2019

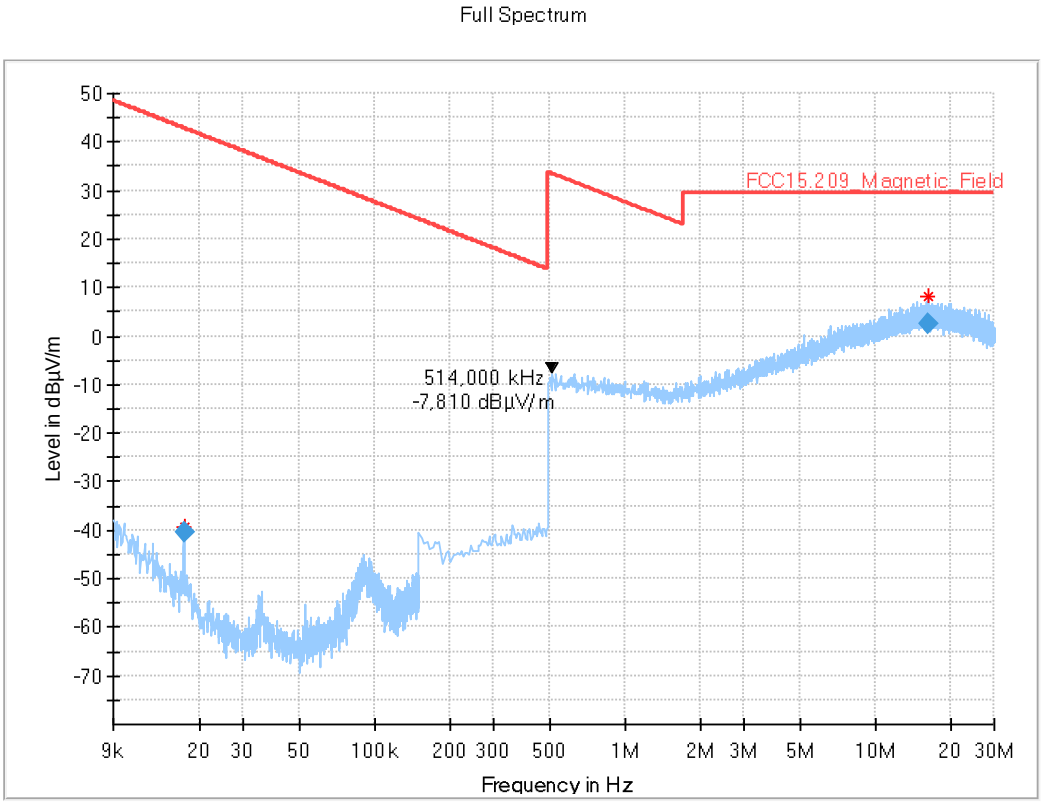
2.02b_BT_LE_mid_laying

Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC §15.205 §15.209
Operator:	MKh
Operating Mode:	BT-LE| GFSK | 1 MBit | MidChannel 2440 MHz
Environmental Conditions::	Humidity : 60.5% rH; Temperature: 21.0° C
EUT Setup:	
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)	Comment
0.017260	-40.35	42.86	83.20	0.200	V	0.0	-73.6	08:30:23 - 25.09.2019
16.268200	2.38	29.54	27.16	9.000	H	113.0	-10.4	08:26:33 - 25.09.2019

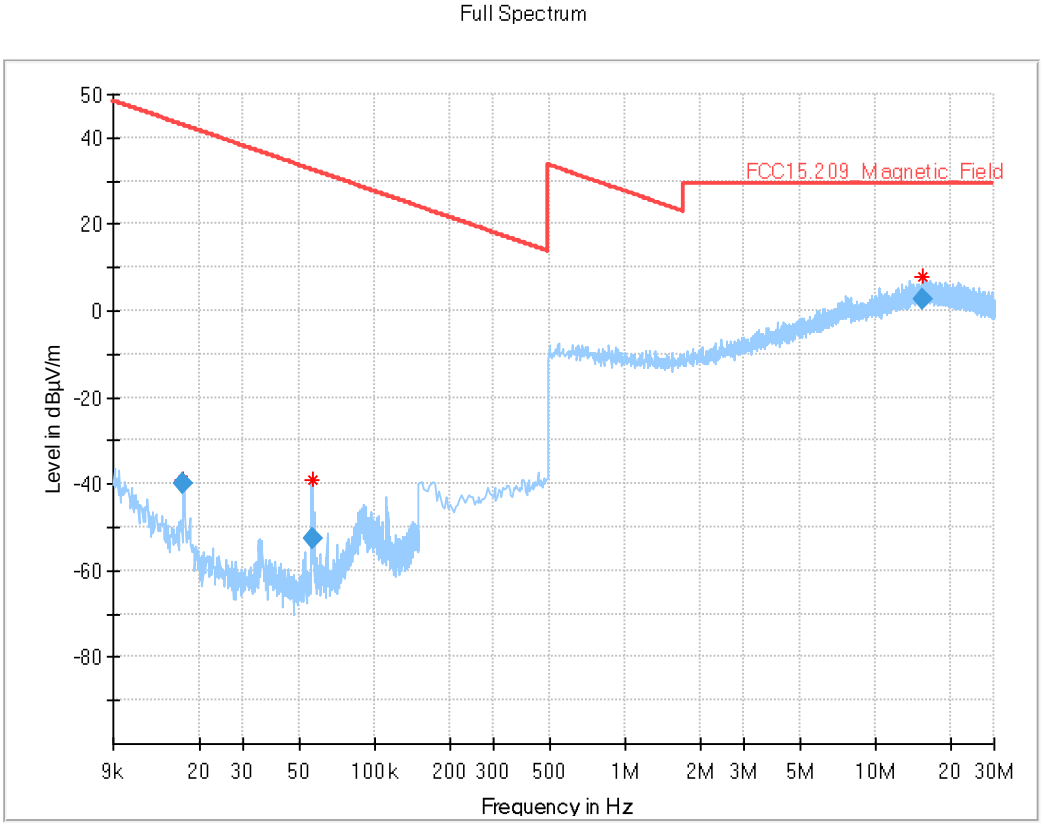
2.03a_BT_LE_high_standing

Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC §15.205 §15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | high Channel 2480 MHz
Environmental Conditions::	Humidity : 55.8% rH; Temperature: 21.0° C
EUT Setup:	
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)	Comment
0.017220	-39.94	42.88	82.81	0.200	V	220.0	-73.6	21:28:52 - 24.09.2019
0.056260	-52.84	32.60	85.44	0.200	H	101.0	-76.9	21:22:13 - 24.09.2019
15.623000	2.50	29.54	27.04	9.000	V	255.0	-10.5	21:33:31 - 24.09.2019

2.03b_BT_LE_high_laying

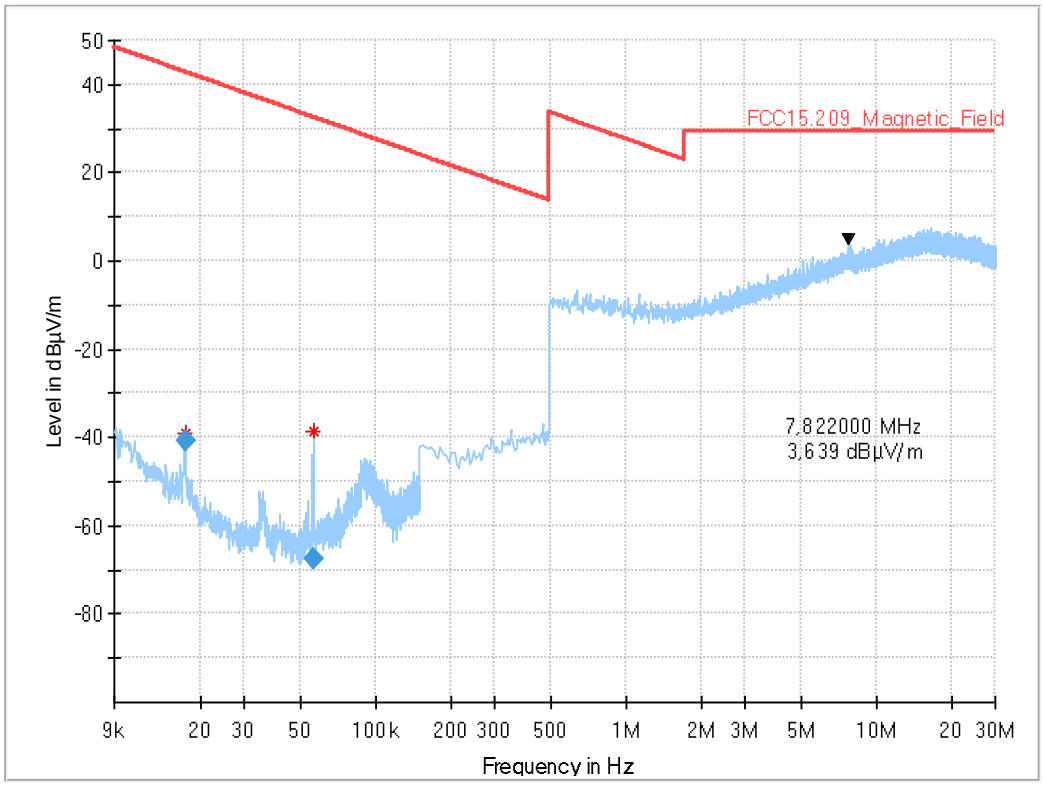
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC §15.205 §15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | high Channel 2480 MHz
Environmental Conditions::	Humidity : 56.2% rH; Temperature: 21.1° C
EUT Setup:	
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)	Comment
0.017260	-40.87	42.86	83.72	0.200	V	62.0	-73.6	22:22:24 - 24.09.2019
0.056740	-67.45	32.52	99.97	0.200	H	155.0	-76.7	22:12:49 - 24.09.2019

2.2. Field strength measurements 30 MHz < f < 1 GHz

3.01a_BT_LE_low_standing

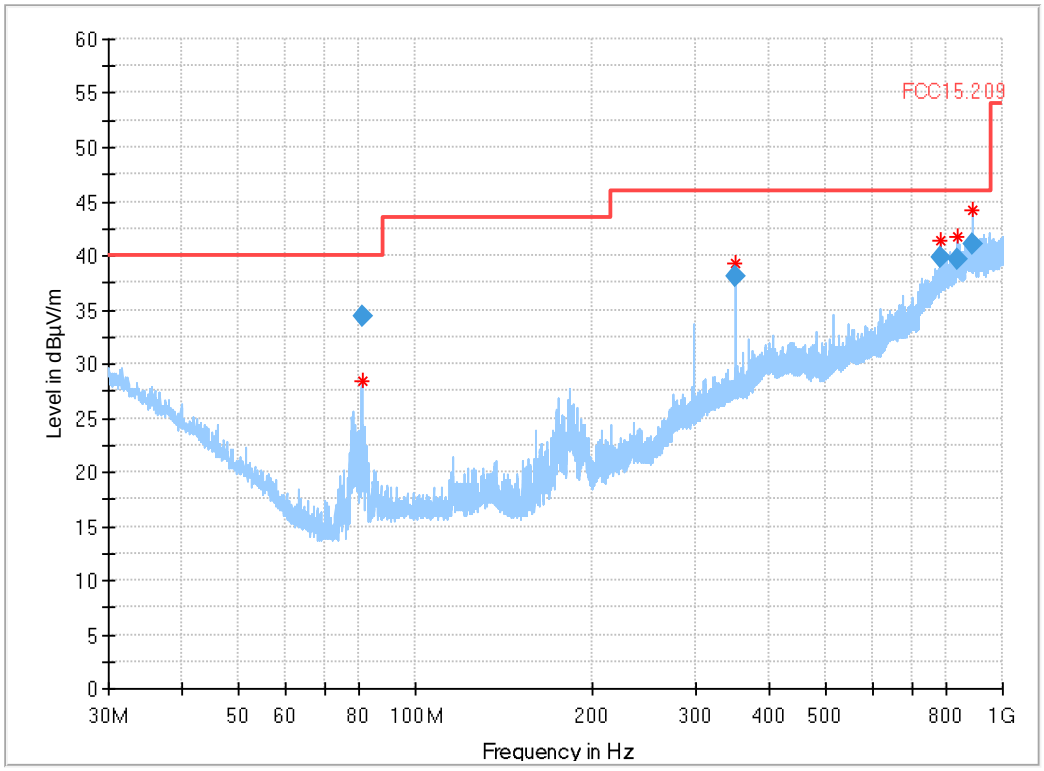
Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209
Operator:	FKA
Operating Mode:	BT-LE| GFSK | 1 MBit | low Channel 2402 MHz
Environmental Conditions::	Humidity : 50,8% rH; Temperature: 21,9° C
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
81.000000	34.39	40.00	5.61	120.000	368.0	H	27.0	7.1
350.996000	38.00	46.00	8.00	120.000	105.0	H	98.0	16.6
782.996000	39.79	46.00	6.21	120.000	178.0	H	347.0	24.9
836.992000	39.59	46.00	6.41	120.000	211.0	V	104.0	26.0
890.992000	41.11	46.00	4.89	120.000	186.0	V	101.0	26.9

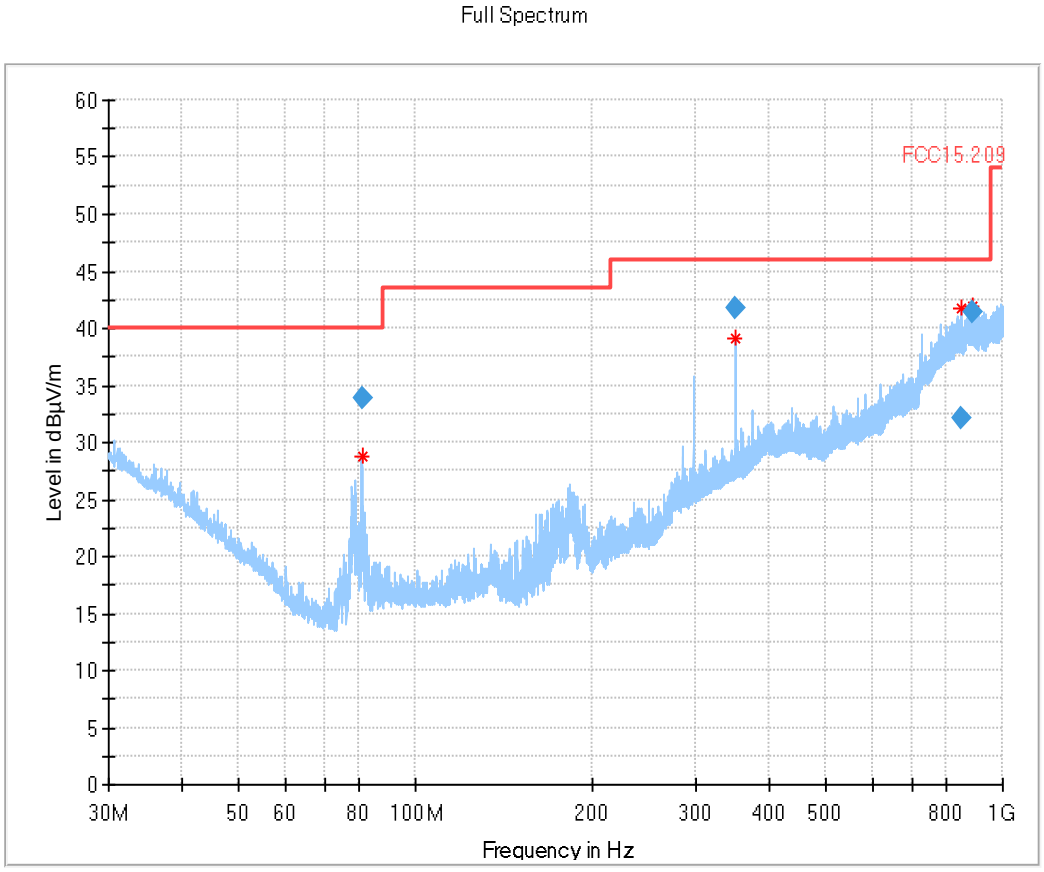
3.01b_BT_LE_low_laying

Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209
Operator:	FKA
Operating Mode:	BT-LE| GFSK | 1 MBit | low Channel 2402 MHz
Environmental Conditions::	Humidity : 50.3% rH; Temperature: 22.1° C
EUT Setup:	laying
Verdict:	Passed:

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
81.000000	33.85	40.00	6.15	120.000	362.0	H	25.0	7.1
350.996000	41.72	46.00	4.28	120.000	105.0	H	108.0	16.6
851.204000	32.03	46.00	13.97	120.000	264.0	V	82.0	26.1
890.992000	41.41	46.00	4.59	120.000	193.0	V	104.0	26.9

3.02a_BT_LE_mid_standing

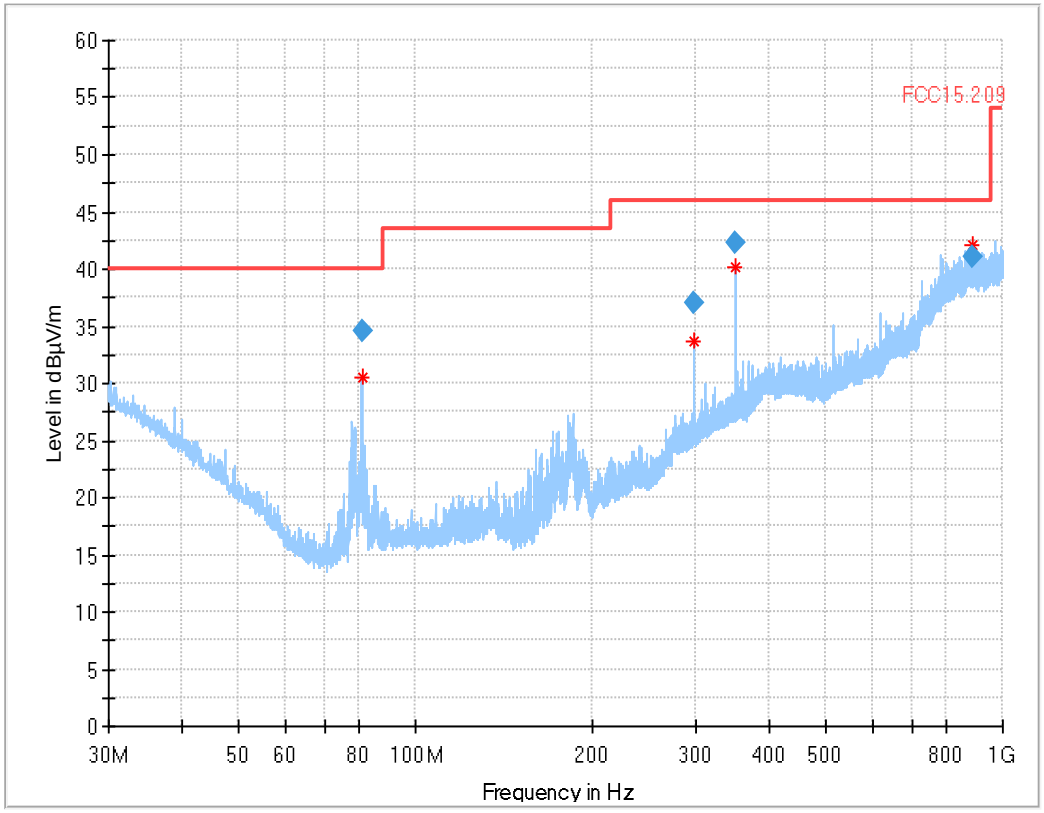
Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | mid Channel 2440 MHz
Environmental Conditions::	Humidity : 53.3% rH; Temperature: 21.7° C
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
81.000000	34.61	40.00	5.39	120.000	368.0	H	24.0	7.1
296.996000	36.94	46.00	9.06	120.000	108.0	H	121.0	15.0
350.996000	42.36	46.00	3.64	120.000	108.0	H	103.0	16.6
890.992000	41.09	46.00	4.91	120.000	174.0	V	104.0	26.9

3.02b_BT_LE_mid_laying

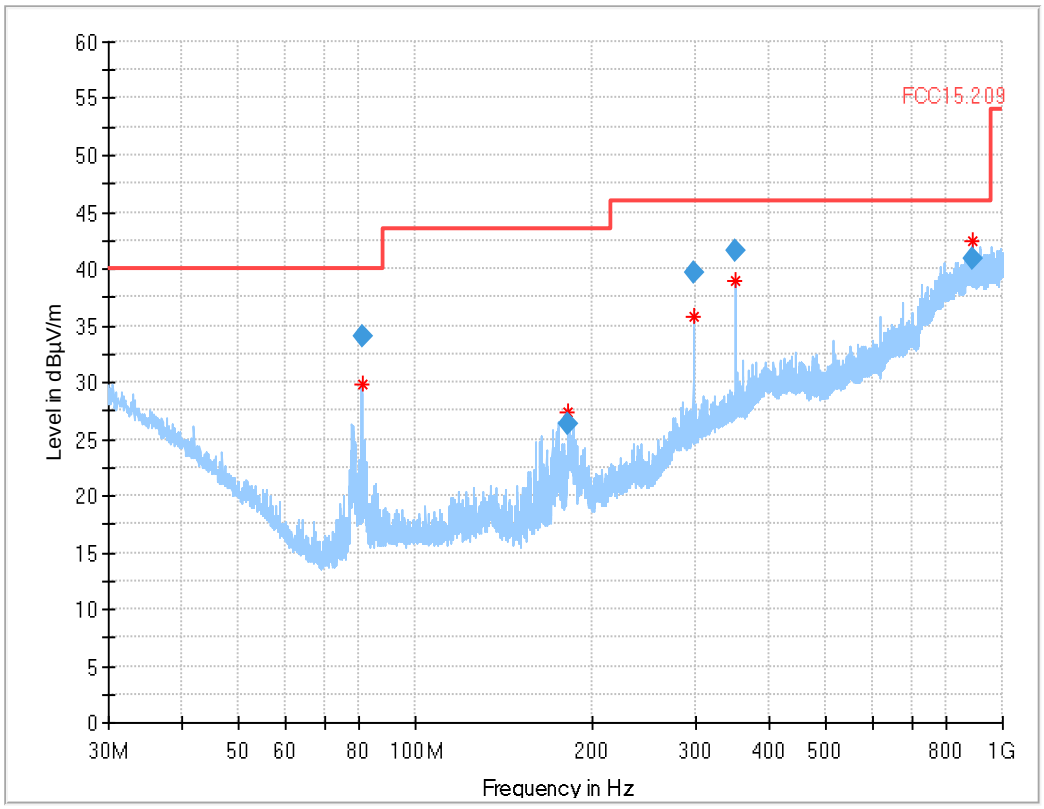
Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | mid Channel 2440 MHz
Environmental Conditions::	Humidity : 50.9% rH; Temperature: 22.2° C
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
81.000000	34.09	40.00	5.91	120.000	361.0	H	23.0	7.1
181.996000	26.25	43.50	17.25	120.000	117.0	V	188.0	10.8
296.996000	39.58	46.00	6.42	120.000	108.0	H	117.0	15.0
350.996000	41.56	46.00	4.44	120.000	108.0	H	106.0	16.6
890.992000	40.79	46.00	5.21	120.000	169.0	V	99.0	26.9

3.03a_BT_LE_high_standing

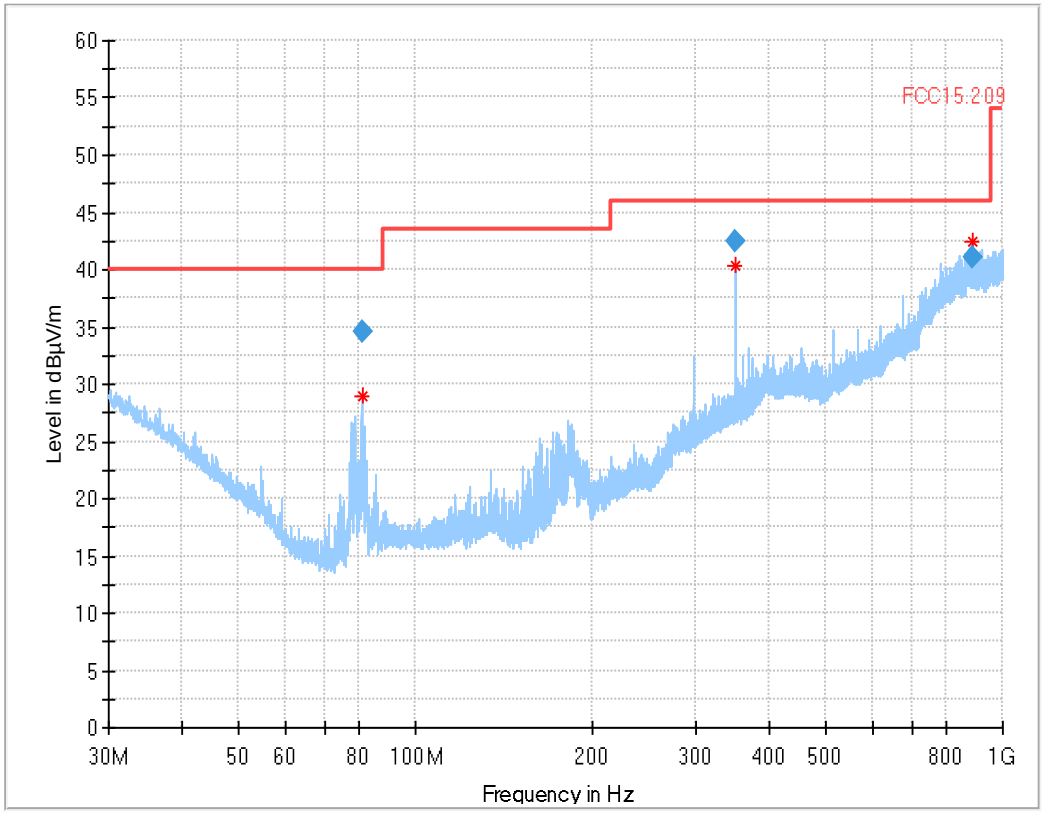
Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | high Channel 2480 MHz
Environmental Conditions::	Humidity : 51.2% rH; Temperature: 21.9° C
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
81.000000	34.53	40.00	5.47	120.000	368.0	H	38.0	7.1
350.996000	42.48	46.00	3.52	120.000	105.0	H	107.0	16.6
890.992000	40.99	46.00	5.01	120.000	185.0	V	106.0	26.9

3.03b_BT_LE_high_laying

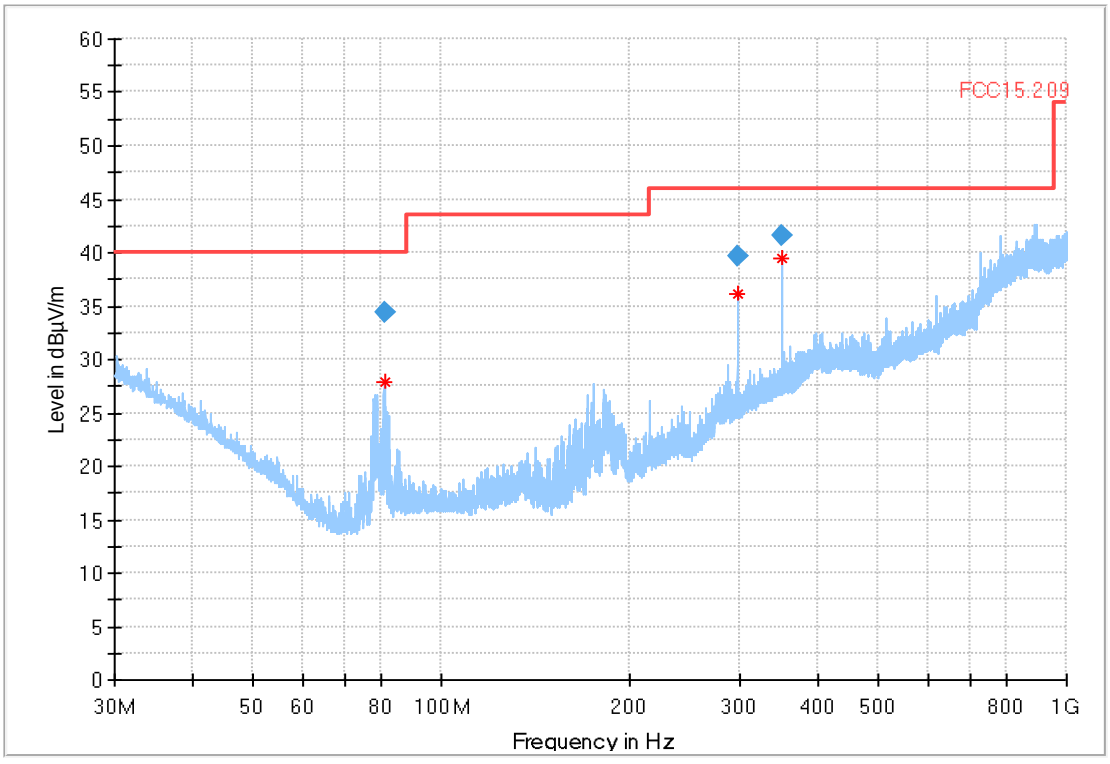
Common Information

Test Description:	Electric Field Strength Measurement
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used Filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test Standard.:	FCC 15.209
Operator:	TFra
Operating Mode:	BT-LE| GFSK | 1 MBit | high Channel 2480 MHz
Environmental Conditions::	Humidity : 51.7% rH; Temperature: 21.8° C
EUT Setup:	laying
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
81.000000	34.45	40.00	5.55	120.000	368.0	H	25.0	7.1
296.996000	39.60	46.00	6.40	120.000	105.0	H	109.0	15.0
350.996000	41.56	46.00	4.44	120.000	105.0	H	102.0	16.6

2.3. Field strength measurements 1 GHz < f < 18 GHz

4.01a_BT_LE_low

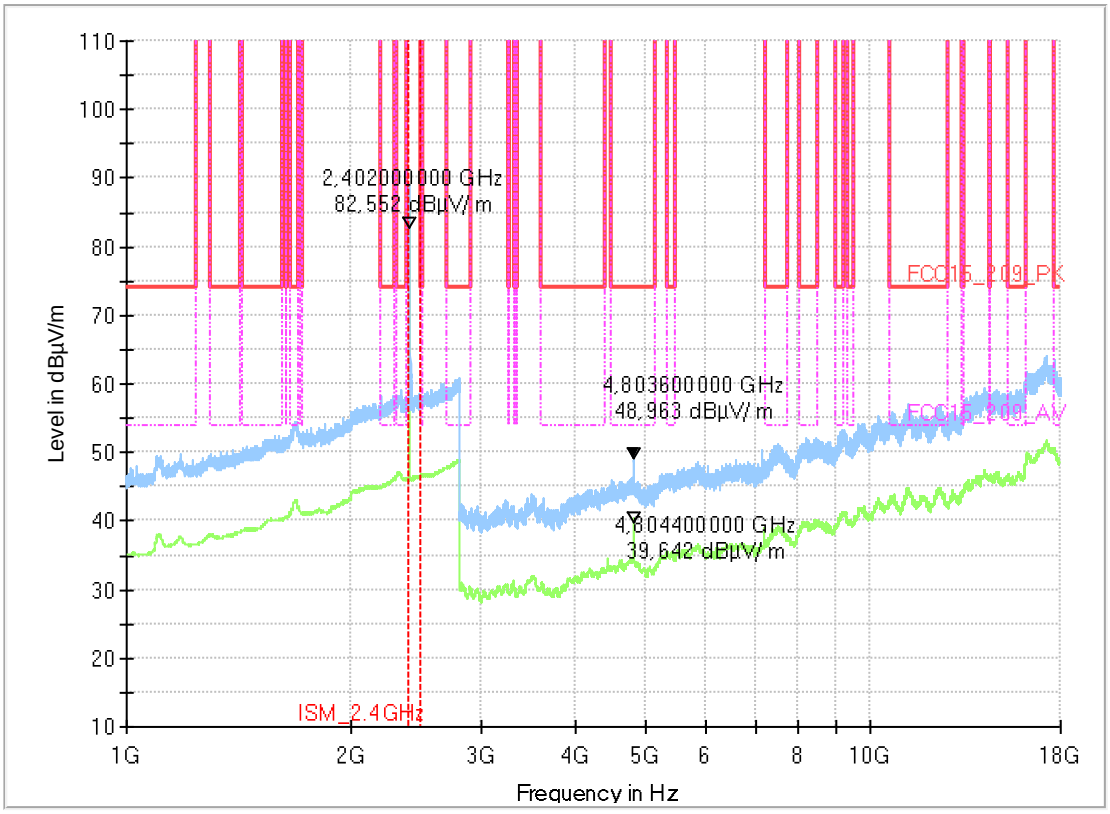
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operating Mode:	BT-LE | PRBS9 | Ch Low | 2402 MHz
Operator:	MKh/Mah
Comment:	ChannelLow-2402 MHz
Comment2:	Humidity : 55% rH; Temperature: 20° C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



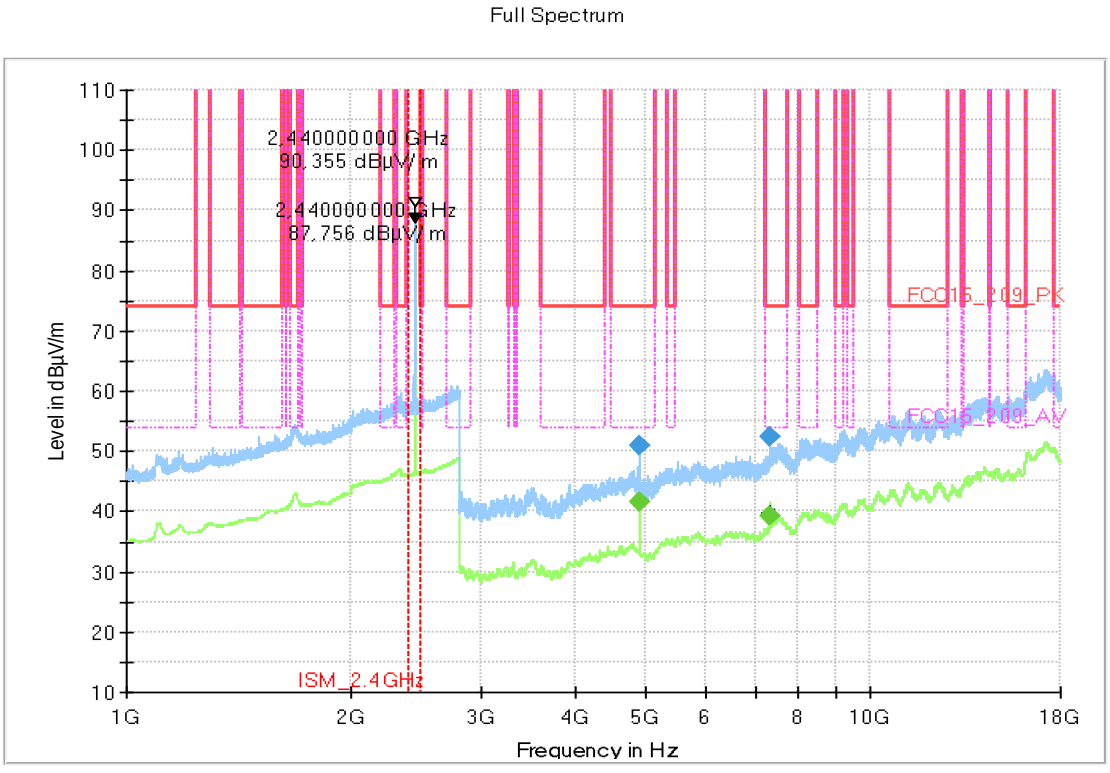
4.02a_BT_LE_mid

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator
Operating Mode:	BT-LE | PRBS9 | Ch Mid | 2440 MHz
Operator:	MKh/Mah
Comment:	Channel Mid -2440 MHz
Comment2:	Humidity : 55% rH; Temperature: 20° C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
4880.000000	---	54.00	12.51	100.0	1000.000	V	129.0	0.0	6
4880.400000	50.99	74.00	23.01	100.0	1000.000	V	127.0	0.0	6
7319.200000	52.47	74.00	21.53	100.0	1000.000	H	137.0	90.0	13
7319.600000	---	54.00	14.66	100.0	1000.000	V	232.0	90.0	13

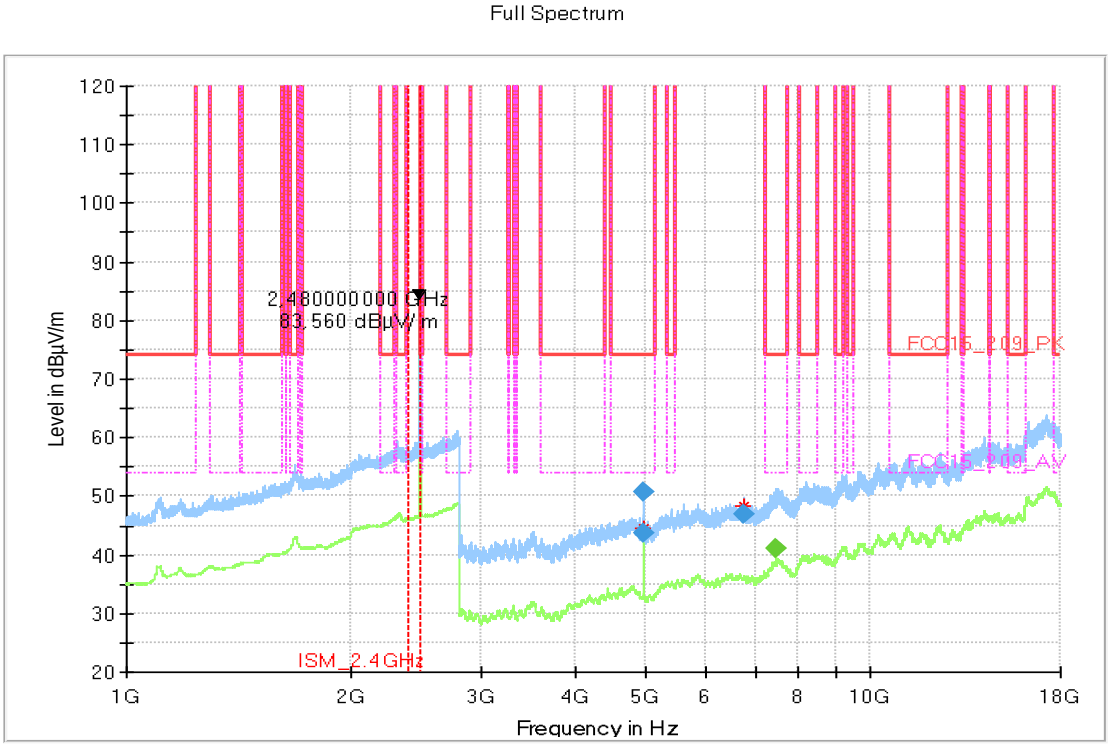
4.03a_BT_LE_high

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operating Mode:	BT-LE | PRBS9
Operator:	MKh/Mah
Comment:	Channel high-2480 MHz
Comment2:	Humidity : 55% rH; Temperature: 20° C
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

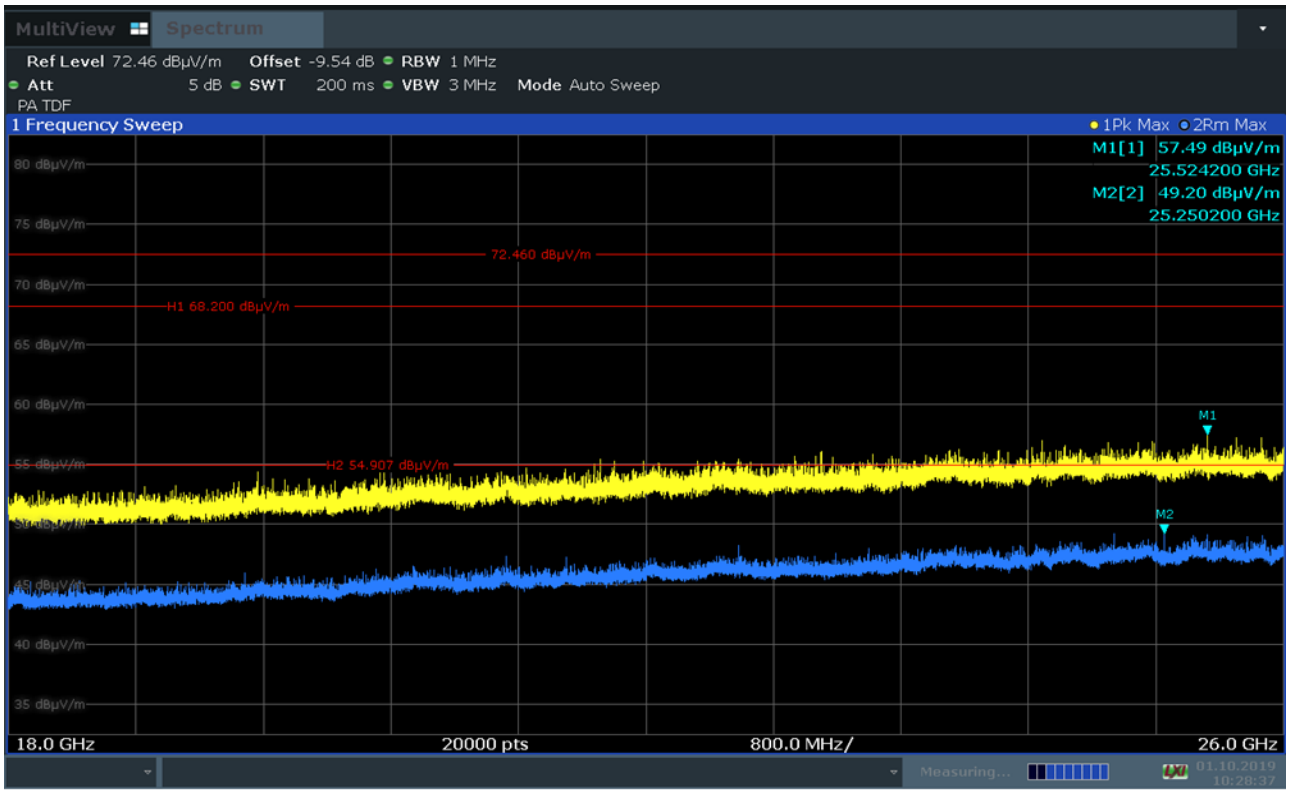


Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
4957.200000	43.71	74.00	30.29	100.0	1000.000	H	257.0	0.0	5
4959.600000	50.70	74.00	23.30	100.0	1000.000	V	150.0	0.0	5
6759.600000	46.82	150.00	103.18	100.0	1000.000	V	297.0	0.0	10
7439.200000	---	54.00	12.81	100.0	1000.000	H	322.0	90.0	13

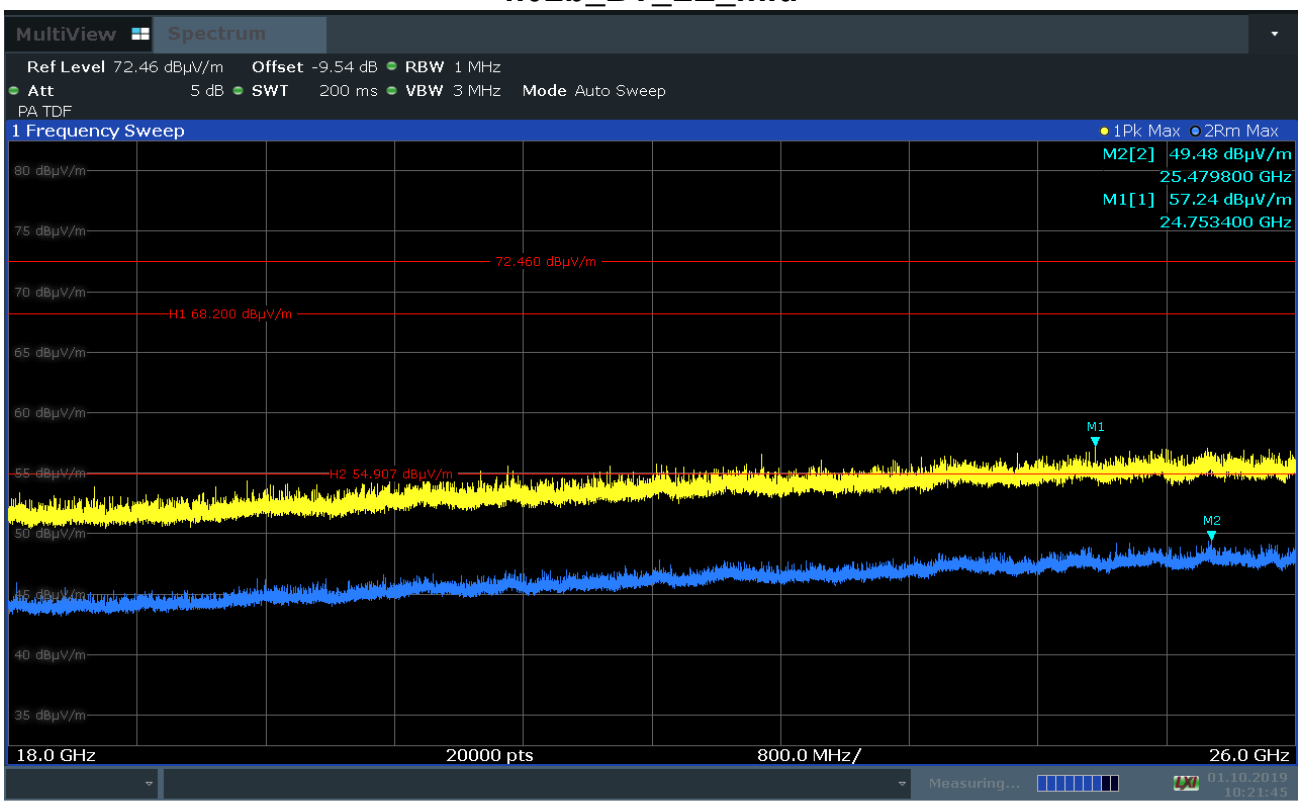
2.4 Field strength measurements 18 GHz < f < 26 GHz

4.01b_BT_LE_Low



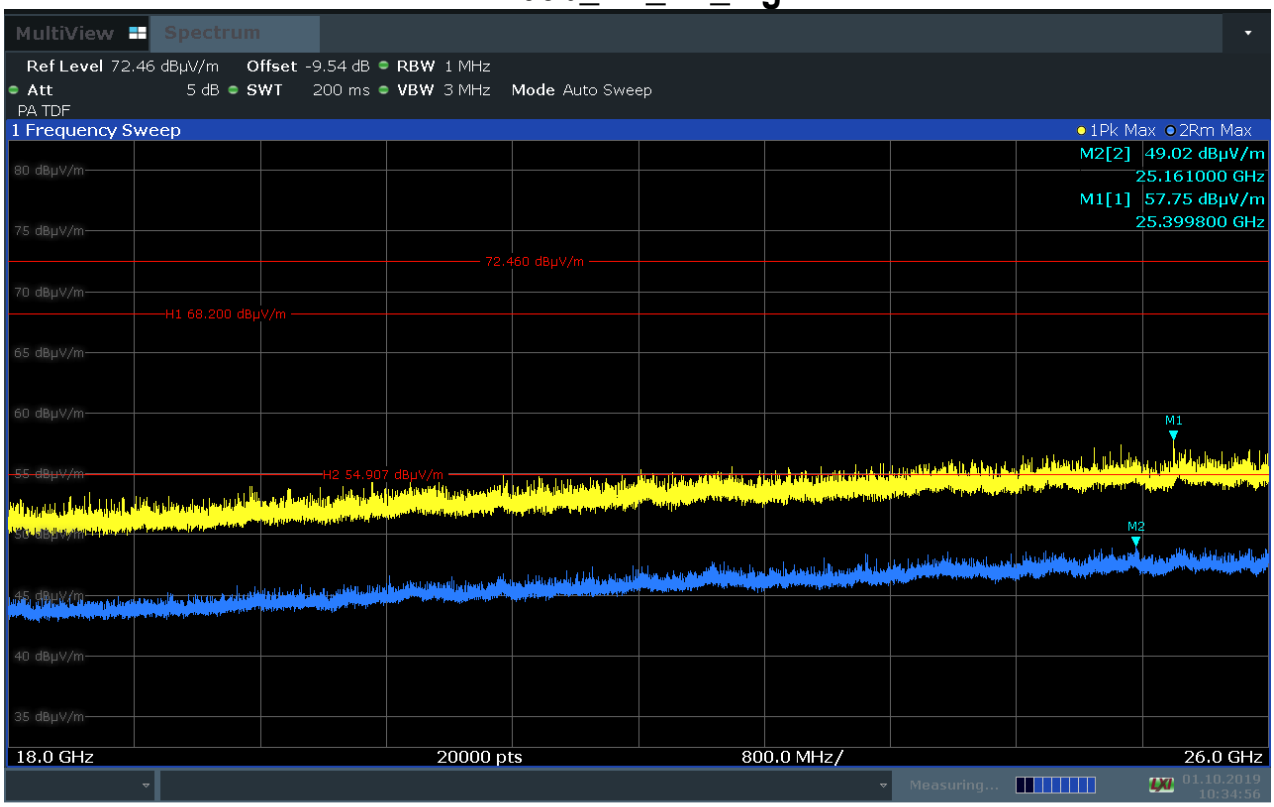
10:28:38 01.10.2019

4.02b_BT_LE_mid



10:21:45 01.10.2019

4.03b_BT_LE_high



10:34:57 01.10.2019

3. Radiated band-edge measurements accord. §15.209 & §15.205 (§15.247)

9.01_BE_BT_LE_low

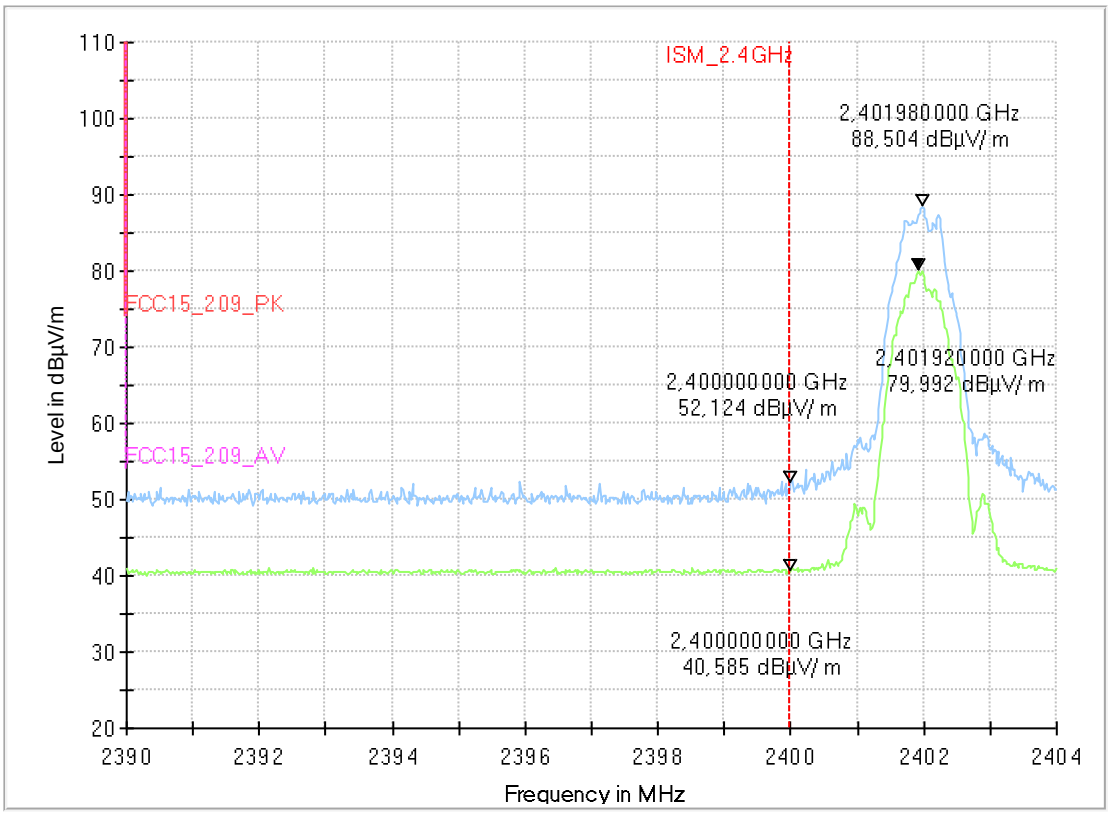
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operating Mode:	BT-LE | PRBS9_Ch_Low_2402MGH
Operator:	MKh/Mah
Comment:	Channel no. low
EUT Setup:	1

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum



9.02_BE_BT_LE_high

Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operating Mode:	BT-LE | PRBS9_ 2480 MHz
Operator:	MKh/Mah
Comment:	Channel high
Comment2:	Humidity : 55% rH; Temperature: 20° C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	19-1-01344S14
Manufacturer:	Simavita (Aust) Pty Ltd
Product:	Portable Bluetooth Data Logger
Model:	SMARTZ POD 8000
HW version:	03
SW version:	1.0.4
Connected Interfaces:	Developmet board
Power Supply:	via development board (USB)

Full Spectrum