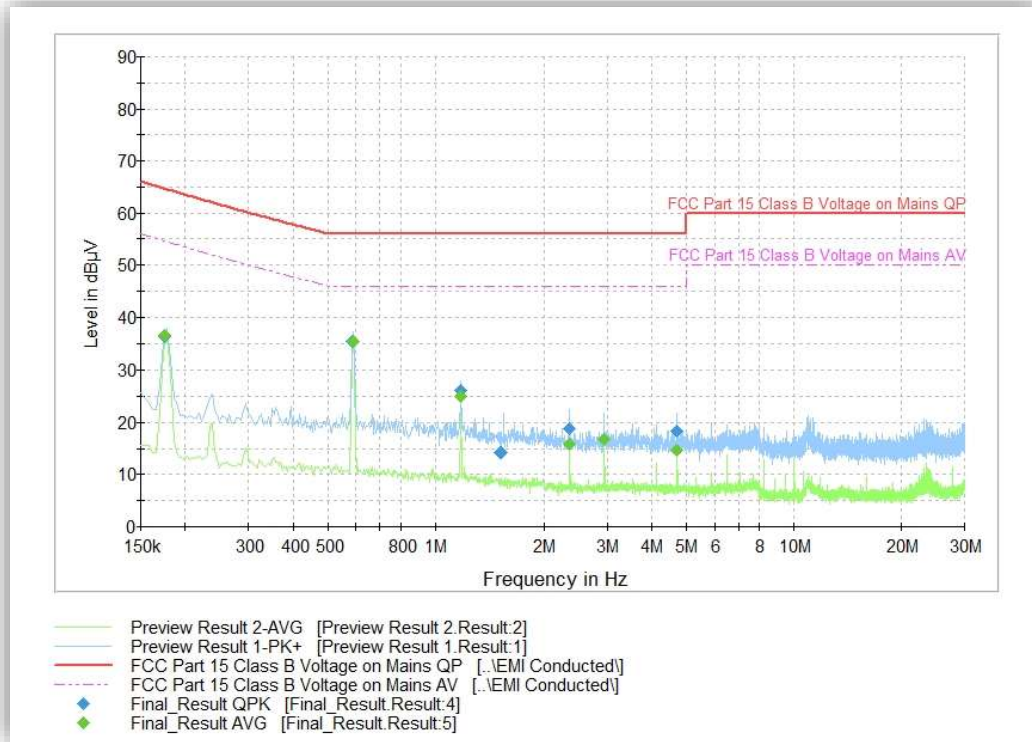


2.9.9.7 DSC 156.525MHz_2100Hz_FCC Part 15B 13.8VDC Positive



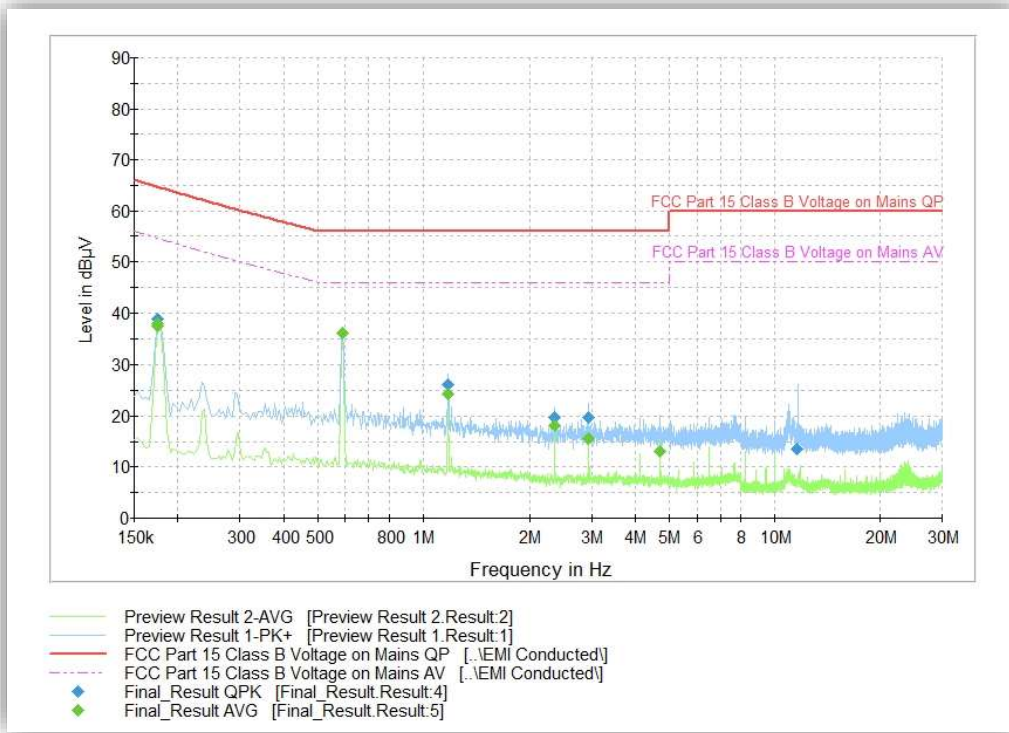
Quasi Peak Result

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.175500	36.21	64.60	28.39	1000.0	9.000	Positive	ON	9.6
0.587000	35.33	56.00	20.67	1000.0	9.000	Positive	ON	9.6
1.179500	26.27	56.00	29.73	1000.0	9.000	Positive	ON	9.6
1.523000	14.29	56.00	41.71	1000.0	9.000	Positive	ON	9.6
2.355000	18.75	56.00	37.25	1000.0	9.000	Positive	ON	9.7
4.715500	18.36	56.00	37.64	1000.0	9.000	Positive	ON	9.8

Average Result

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.175500	36.42	54.58	18.16	1000.0	9.000	Positive	ON	9.6
0.587500	35.42	46.00	10.58	1000.0	9.000	Positive	ON	9.6
1.179500	25.13	46.00	20.87	1000.0	9.000	Positive	ON	9.6
2.355500	15.85	46.00	30.15	1000.0	9.000	Positive	ON	9.7
2.947500	16.85	46.00	29.15	1000.0	9.000	Positive	ON	9.7
4.715500	14.60	46.00	31.40	1000.0	9.000	Positive	ON	9.8

2.9.9.8 DSC 156.525MHz_2100Hz_FCC Part 15B 13.8VDC Return



Quasi Peak Result

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.175500	38.77	64.60	25.83	1000.0	9.000	Return	ON	9.6
0.587500	36.00	56.00	20.00	1000.0	9.000	Return	ON	9.6
1.179500	26.19	56.00	29.81	1000.0	9.000	Return	ON	9.6
2.355500	19.73	56.00	36.27	1000.0	9.000	Return	ON	9.7
2.947500	19.65	56.00	36.35	1000.0	9.000	Return	ON	9.7
11.585500	13.49	60.00	46.51	1000.0	9.000	Return	ON	10.1

Average Result

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.175500	37.32	54.58	17.26	1000.0	9.000	Return	ON	9.6
0.175500	37.81	54.58	16.77	1000.0	9.000	Return	ON	9.6
0.587500	35.98	46.00	10.02	1000.0	9.000	Return	ON	9.6
1.179500	24.32	46.00	21.68	1000.0	9.000	Return	ON	9.6
2.355500	18.22	46.00	27.78	1000.0	9.000	Return	ON	9.7
2.947500	15.51	46.00	30.49	1000.0	9.000	Return	ON	9.7
4.715500	13.03	46.00	32.97	1000.0	9.000	Return	ON	9.8

2.10 Electromagnetic Radiation Disturbance

2.10.1 Specification Reference

RSS GEN Clause 7.4.3

2.10.2 Standard Applicable

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of emission (MHz)	Field Strength (microvolts/meter)
30-88	100
88-216	150
216-960	200
Above 960	500

2.10.3 Equipment Under Test and Modification State

Serial No: Marine: 00000051 / Default Test Configuration

2.10.4 Date of Test/Initial of test personnel who performed the test

August 2-13, 2026 / RAC

2.10.5 EUT Test Voltage

13.8VDC

2.10.6 Environmental Conditions

Ambient Temperature	25.4 °C
Relative Humidity	99.6 %
Atmospheric Pressure	44.1 kPa

2.10.7 Additional Observations

- The spectrum was searched from 30MHz to 2 GHz
- Verifications performed at 3 meters for below 1GHz and 3 meters for above 1GHz.
- Compliance with RSS Gen will comply with ICES-003.
- Measurement was done using EMC32 automated software. Reported level is the actual level with all the correction factors factored in. Correction Factor column is for informational purposes only. See Section 2.2.8 for sample computation.



2.10.8 Sample Computation (Radiated Emissions – Quasi Peak)

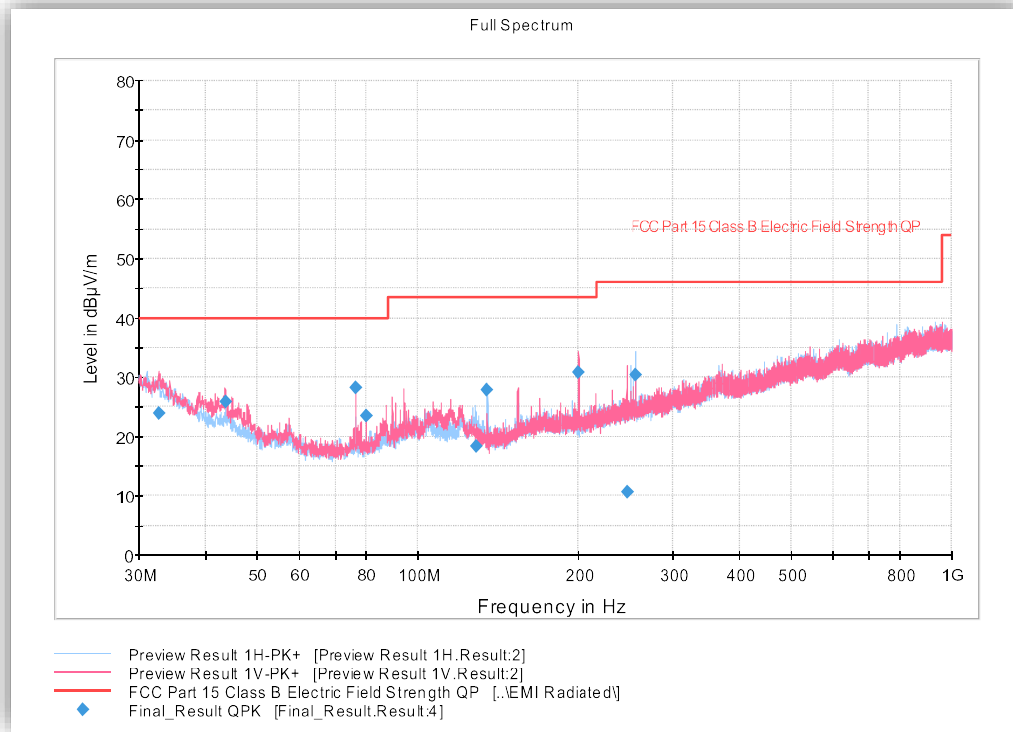
Measuring equipment raw measurement (dbμV) @ 30 MHz			24.4
Correction Factor (dB/m)	Asset# 1066 (cable)	0.3	-12.6
	Asset# 1172 (cable)	0.3	
	Asset# 1016 (preamplifier)	-30.7	
	Asset# 1175(cable)	0.3	
	Asset# 1002 (antenna)	17.2	
Reported QuasiPeak Final Measurement (dbμV/m) @ 30MHz			11.8

2.10.9 Test Results

Performance assessment of the EUT made during this test: **Pass**

Detailed results are shown below.

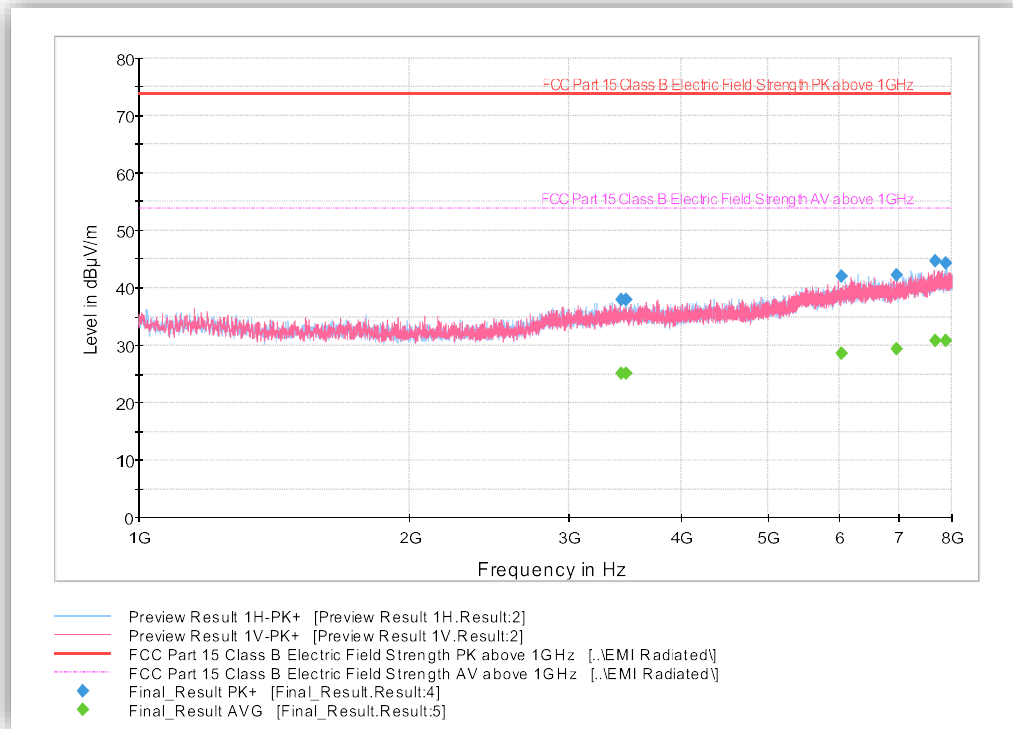
2.10.9.1 FCC Class B Below 1GHz Radiated Emissions – 13.8VDC



Quasi-Peak Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.760000	23.81	40.00	16.19	15000.	120.000	113.0	H	0.0	21
43.650667	25.89	40.00	14.11	15000.	120.000	111.0	V	354.0	16
76.438333	28.32	40.00	11.68	15000.	120.000	125.0	V	99.0	12
79.987333	23.47	40.00	16.53	15000.	120.000	125.0	V	285.0	13
128.307000	18.40	43.50	25.10	15000.	120.000	386.0	H	12.0	14
134.832333	27.76	43.50	15.74	15000.	120.000	275.0	H	66.0	14
200.016333	30.82	43.50	12.68	15000.	120.000	100.0	V	308.0	17

2.10.9.2 FCC Class B 1GHz – 8GHz Radiated Emissions – 13.8VDC



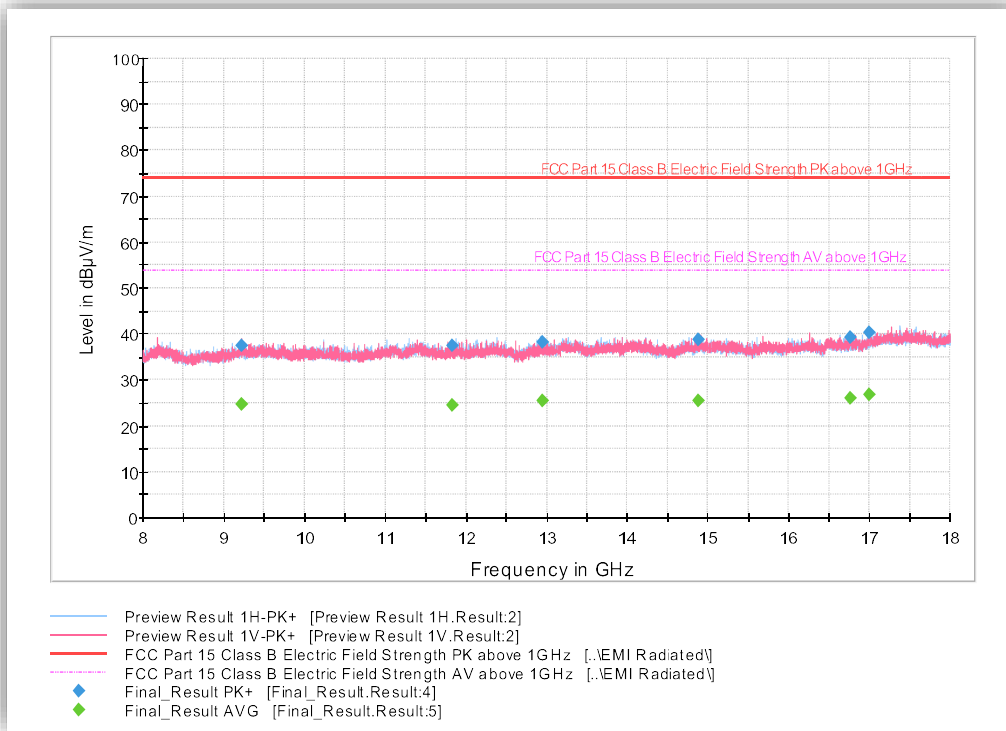
Peak Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3441.715500	37.99	73.90	35.91	1000.0	1000.000	200.0	V	153.0	-12
3482.172000	37.95	73.90	35.95	1000.0	1000.000	300.0	H	59.0	-12
6028.406000	41.97	73.90	31.93	1000.0	1000.000	102.0	V	193.0	-9
6956.545500	42.25	73.90	31.65	1000.0	1000.000	350.0	H	272.0	-9
7675.547000	44.67	73.90	29.23	1000.0	1000.000	102.0	V	189.0	-7
7888.809000	44.22	73.90	29.68	1000.0	1000.000	300.0	H	180.0	-7

Average Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3441.715500	25.10	53.90	28.80	1000.0	1000.000	200.0	V	153.0	-12
3482.172000	25.16	53.90	28.74	1000.0	1000.000	300.0	H	59.0	-12
6028.406000	28.67	53.90	25.23	1000.0	1000.000	102.0	V	193.0	-9
6956.545500	29.47	53.90	24.43	1000.0	1000.000	350.0	H	272.0	-9
7675.547000	30.84	53.90	23.06	1000.0	1000.000	102.0	V	189.0	-7
7888.809000	30.86	53.90	23.04	1000.0	1000.000	300.0	H	180.0	-7

2.10.9.3 FCC Class B 8GHz – 18GHz Radiated Emissions – 13.8VDC



Peak Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9217.273000	37.47	73.90	36.43	1000.0	1000.000	350.0	H	217.0	-7
11832.461000	37.41	73.90	36.49	1000.0	1000.000	200.0	V	37.0	-6
12951.004000	38.22	73.90	35.68	1000.0	1000.000	102.0	H	26.0	-5
14885.504000	38.75	73.90	35.15	1000.0	1000.000	350.0	V	75.0	-4
16763.118000	39.41	73.90	34.49	1000.0	1000.000	350.0	V	214.0	-3
16994.602000	40.33	73.90	33.57	1000.0	1000.000	200.0	H	120.0	-2

Average Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9217.273000	24.81	53.90	29.09	1000.0	1000.000	350.0	H	217.0	-7
11832.461000	24.42	53.90	29.48	1000.0	1000.000	200.0	V	37.0	-6
12951.004000	25.39	53.90	28.51	1000.0	1000.000	102.0	H	26.0	-5
14885.504000	25.55	53.90	28.35	1000.0	1000.000	350.0	V	75.0	-4
16763.118000	26.08	53.90	27.82	1000.0	1000.000	350.0	V	214.0	-3
16994.602000	26.77	53.90	27.13	1000.0	1000.000	200.0	H	120.0	-2



SECTION 3

3 TEST EQUIPMENT USED

3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No	TM-ID	Calibration Period	Calibration Expires
Transmitter Power					
Pulse Wireless Power Head	DARE	RPR3006W	30206	1 year	07-Nov-2026
N-Type Attenuator, 30dB	RF Precisions Cables	ATX3396-30	30474	2 years	08-May-2028
10dB Attenuator	RF Precisions Cables	ATX3396-10	30504	2 years	08-May-2028
Function Generator	Agilent	33220A	30211	1 year	13-April-2027
OBW Emissions Mask / Spurious Emissions at Antenna Port / Suppression of Interference Aboard Ships					
Signal & Spectrum Analyzer	Rohde & Schwarz	FSW26	30188	1 year	20-Feb-2027
N-Type Attenuator, 30dB	RF Precisions Cables	ATX3396-30	30474	2 years	08-May-2028
10dB Attenuator	RF Precisions Cables	ATX3396-10	30504	2 years	08-May-2028
Function Generator	Agilent	33220A	30211	1 years	13-April-2027
Frequency Stability					
Signal & Spectrum Analyzer	Rohde & Schwarz	FSW26	30188	1 year	20-Feb-2027
N-Type Attenuator, 30dB	RF Precisions Cables	ATX3396-30	30474	2 years	08-May-2028
10dB Attenuator	RF Precisions Cables	ATX3396-10	30504	2 years	08-May-2028
Environmental Chamber	Espec	ESL-4CA	47031	1 year	27-Jan-2027
Field Strength Spurious Emissions					
EMI Test Receiver	Rohde & Schwarz	ESW44	68302	1 year	17-Feb-2027
BiConiLog Antenna	ETS Lindgren	3142C	31446	1 year	24-Nov-2026
1-10 GHz Broad-Band Horn Antenna	Schwarzbeck Mess-Elektronik	BBHA 9120 B	69563	2 years	16-Dec-2027
TUV SSU 010 PLC US	TUV SUD UK	TUV SSU 010 PLC US	74136	1 year	04-April-2027



AC Mains Conducted Emissions					
LISN	Fischer Custom Communications	FCC-LISN-50-25-2	30087	1 year	29-April-2027
N-Type Attenuator, 30dB	RF Precisions Cables	ATX3396-30	30474	2 years	08-May-2028
10dB Attenuator	RF Precisions Cables	ATX3396-10	30504	2 years	08-May-2028
Two-Line Network	Rohde & Schwarz	ENV-216	65161	1 year	24-August-2026
EMI Test Receiver	Rohde & Schwarz	ESU40	30216	1 year	08-August-2026
AUDIO FREQUENCY RESPONSE / MODULATION CHARACTERISTICS AND MODULATION LIMITS					
Signal & Spectrum Analyzer (AM/FM/PM Modulation Analysis)	Rohde & Schwarz	FSW26	30188	1 year	20-Feb-2027
N-Type Attenuator, 30dB	RF Precisions Cables	ATX3396-30	30474	2 years	08-May-2028
10dB Attenuator	RF Precisions Cables	ATX3396-10	30504	2 years	08-May-2028
Audio Analyzer	Rohde & Schwarz	UPV	39205	2 years	29-July-2028
Miscellaneous					
DC Power Supply	Xantrex	HPD-60-5	28078	-	NCR
True RMS Multimeter	Fluke	85 III	43003	1 year	07-Oct-2026
Barometric Pressure/Humidity/ Temp.	Extech Instruments	SD700	68516	1 year	09-Sep-2026
DC Power Supply	NANKADF	WPS3010H	-	-	NCR

NCR: NO Calibration Required.

3.2 MEASUREMENT UNCERTAINTY

Calculation of Measurement Uncertainty per CISPR 16-4-2:2011 with Corr. 1

3.2.1 AC Conducted Emissions (150kHz to 30MHz)

	Input Quantity (Contribution) X_i	Value	Prob. Dist.	Divisor	$u_i(x)$	$u_i(x)^2$
1	Receiver reading	0.10 dB	Normal, k=1	1.000	0.10	0.01
2	LISN-receiver attenuation	0.10 dB	Normal, k=2	2.000	0.05	0.00
3	LISN voltage division factor	0.25 dB	Normal, k=2	2.000	0.13	0.02
4	Receiver sinewave accuracy	0.08 dB	Normal, k=2	2.000	0.04	0.00
5	Receiver pulse amplitude	1.50 dB	Rectangular	1.732	0.87	0.75
6	Receiver pulse repetition rate	1.50 dB	Rectangular	1.732	0.87	0.75
7	Noise floor proximity	0.00 dB	Rectangular	1.732	0.00	0.00
8	AMN VDF frequency interpolation	0.10 dB	Rectangular	1.732	0.06	0.00
9	Mismatch	0.07 dB	U-shaped	1.414	0.05	0.00
10	LISN impedance	2.65 dB	Triangular	2.449	1.08	1.17
11	Effect of mains disturbance	0.00 dB			0.00	0.00
12	Effect of the environment					
Combined standard uncertainty				Normal	1.65 dB	
Expanded uncertainty				Normal, k=2	3.29 dB	

3.2.2 Radiated Emission Measurements (30MHz to 1GHz)

	Input Quantity (Contribution) X_i	Value	Prob. Dist.	Divisor	$u_i(x)$	$u_i(x)^2$
1	Receiver reading	0.10 dB	Normal, k=1	1.000	0.10	0.01
2	Attenuation: antenna-receiver	0.20 dB	Normal, k=2	2.000	0.10	0.01
3	Antenna factor AF	0.58 dB	Normal, k=2	2.000	0.29	0.08
4	Receiver sinewave accuracy	0.15 dB	Normal, k=2	2.000	0.08	0.01
5	Receiver pulse amplitude	1.50 dB	Rectangular	1.732	0.87	0.75
6	Receiver pulse repetition rate	1.50 dB	Rectangular	1.732	0.87	0.75
7	Noise floor proximity	0.50 dB	Rectangular	1.732	0.29	0.08
8	Mismatch: antenna-receiver	0.95 dB	U-shaped	1.414	0.67	0.45
9	AF frequency interpolation	0.30 dB	Rectangular	1.732	0.17	0.03
10	AF height deviations	0.10 dB	Rectangular	1.732	0.06	0.00
11	Directivity difference at 3 m	3.12 dB	Rectangular	1.732	1.80	3.24
12	Phase center location at 3 m	1.00 dB	Rectangular	1.732	0.58	0.33
13	Cross-polarization	0.90 dB	Rectangular	1.732	0.52	0.27
14	Balance	0.00 dB	Rectangular	1.732	0.00	0.00
15	Site imperfections	3.99 dB	Triangular	2.449	1.63	2.65
16	Separation distance at 3 m	0.30 dB	Rectangular	1.732	0.17	0.03
17	Effect of setup table material	0.57 dB	Rectangular	1.732	0.33	0.11
18	Table height at 3 m	0.10 dB	Normal, k=2	2.000	0.05	0.00
19	Near-field effects	0.00 dB	Triangular	2.449	0.00	0.00
20	Effect of ambient noise on OATS	0.00 dB				0.00
Combined standard uncertainty				Normal	2.97 dB	
Expanded uncertainty				Normal, k=2	5.94 dB	

3.2.3 Radiated Emission Measurements (Above 1GHz)

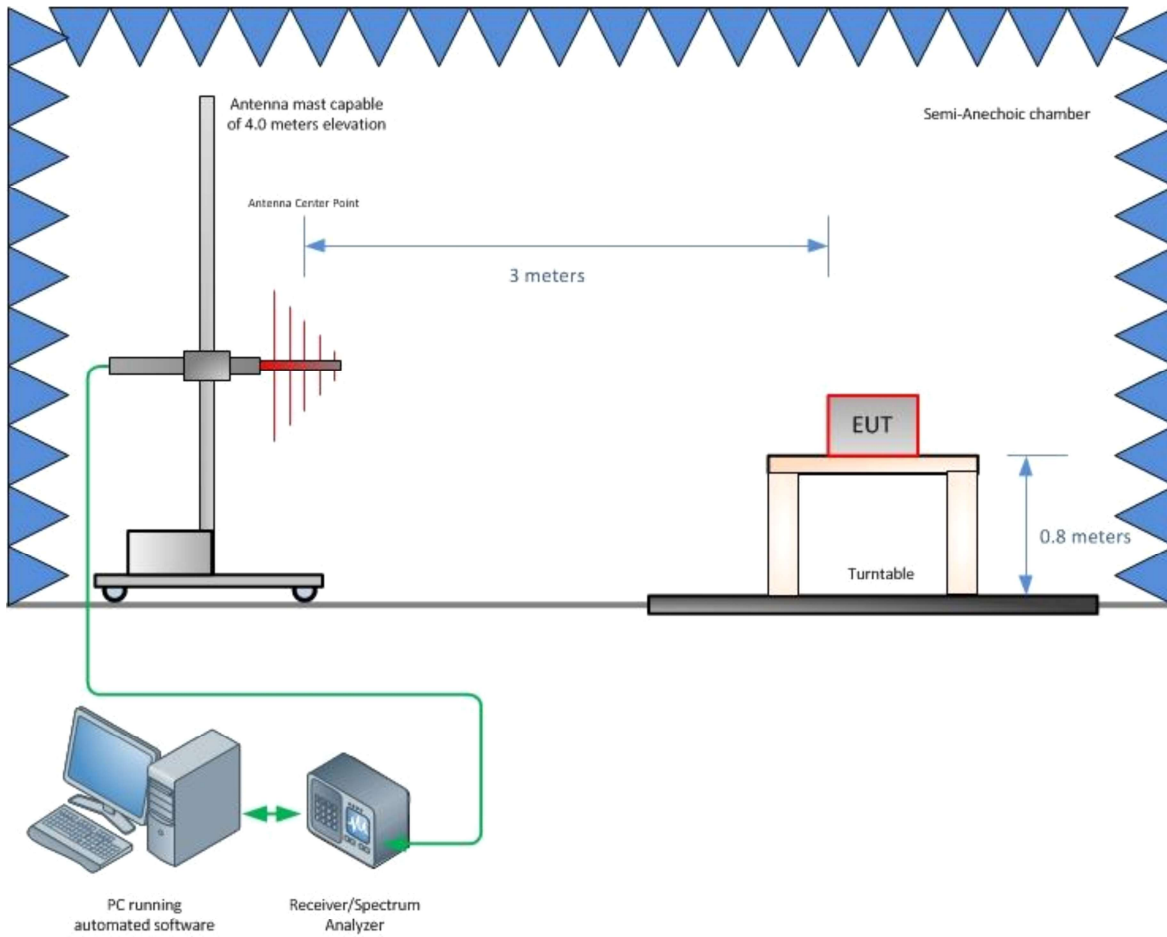
	Input Quantity (Contribution) X_i	Value	Prob. Dist.	Divisor	$u_i(x)$	$u_i(x)^2$
1	Receiver reading	0.10 dB	Normal, k=1	1.000	0.10	0.01
2	Attenuation: antenna-receiver	0.30 dB	Normal, k=2	2.000	0.15	0.02
3	Preamplifier Gain	0.20 dB	Normal, k=2	2.000	0.10	0.01
4	Antenna factor AF	0.47 dB	Normal, k=2	2.000	0.24	0.06
5	Sinewave accuracy	0.15 dB	Normal, k=2	2.000	0.08	0.01
6	Instability of preamp gain	1.21 dB	Rectangular	1.732	0.70	0.49
7	Noise floor proximity	0.70 dB	Rectangular	1.732	0.40	0.16
8	Mismatch: antenna-preamplifier	1.41 dB	U-shaped	1.414	1.00	0.99
9	Mismatch: preamplifier-receiver	1.30 dB	U-shaped	1.414	0.92	0.85
10	AF frequency interpolation	0.30 dB	Rectangular	1.732	0.17	0.03
11	Directivity difference at 3 m	1.50 dB	Rectangular	1.732	0.87	0.75
12	Phase center location at 3 m	0.30 dB	Rectangular	1.732	0.17	0.03
13	Cross-polarisation	0.90 dB	Rectangular	1.732	0.52	0.27
14	Site imperfections VSWR (Method 2)	5.53 dB	Triangular	2.000	4.89	1.13
15	Effect of setup table material	1.57 dB	Rectangular	1.732	0.91	0.82
16	Separation distance at 3 m	0.30 dB	Rectangular	1.732	0.17	0.03
17	Table height at 3 m	0.00 dB	Normal, k=2	2.000	0.00	0.00
Combined standard uncertainty				Normal	2.38 dB	
Expanded uncertainty				Normal, k=2	4.76 dB	



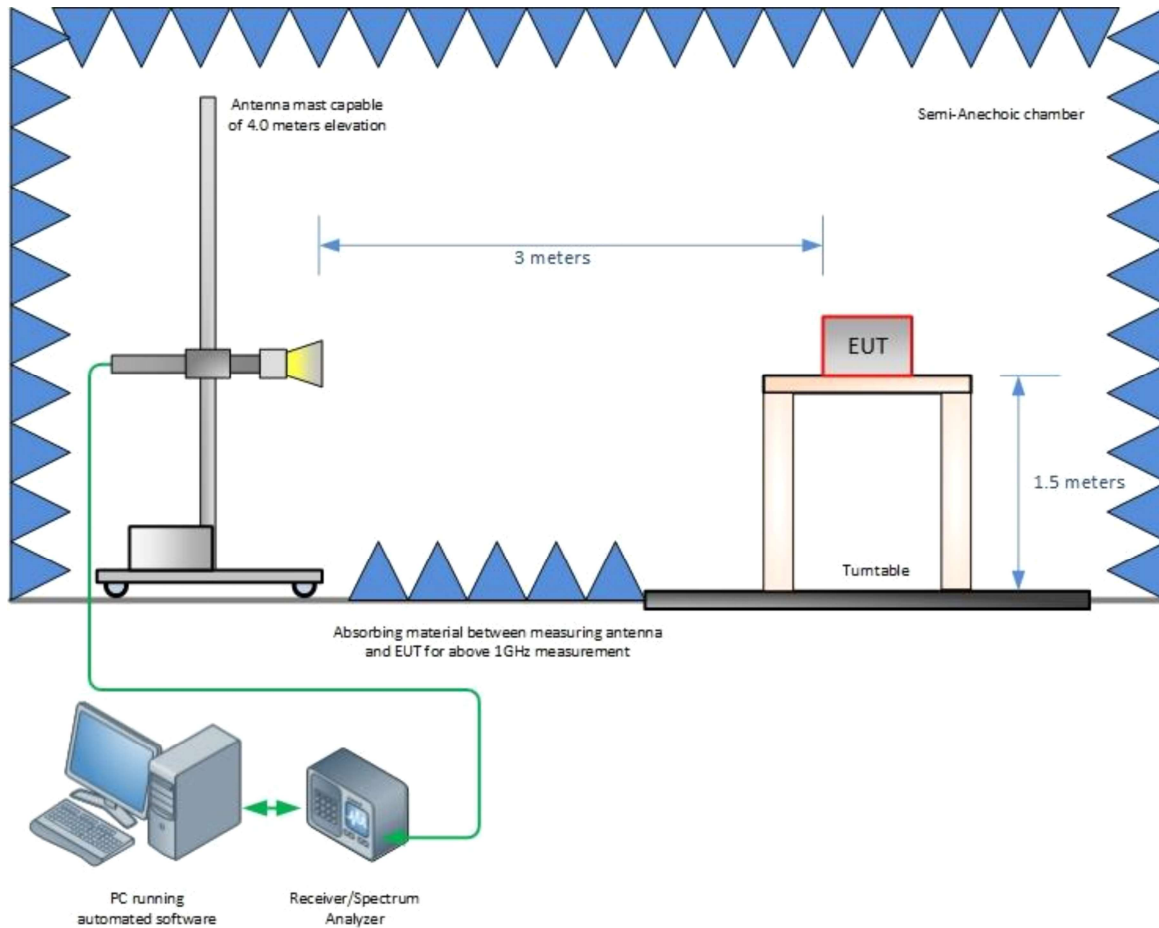
SECTION 4

4 DIAGRAM OF TEST SETUP

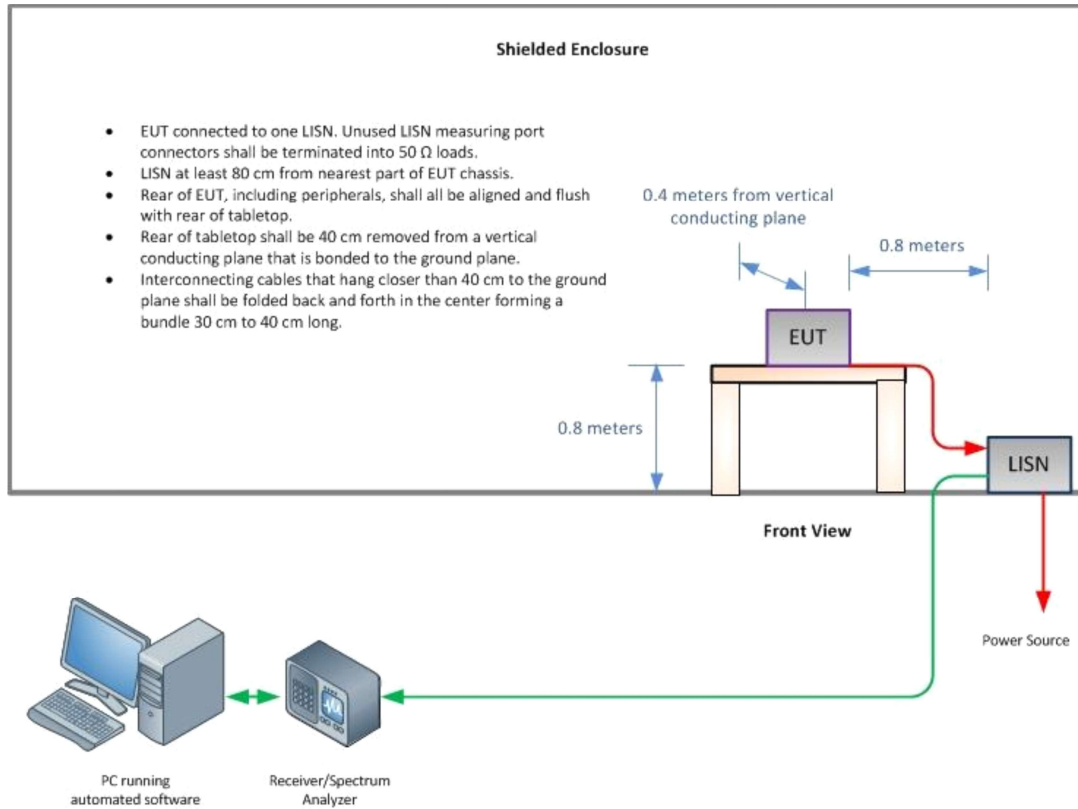
4.1 TEST SETUP DIAGRAM



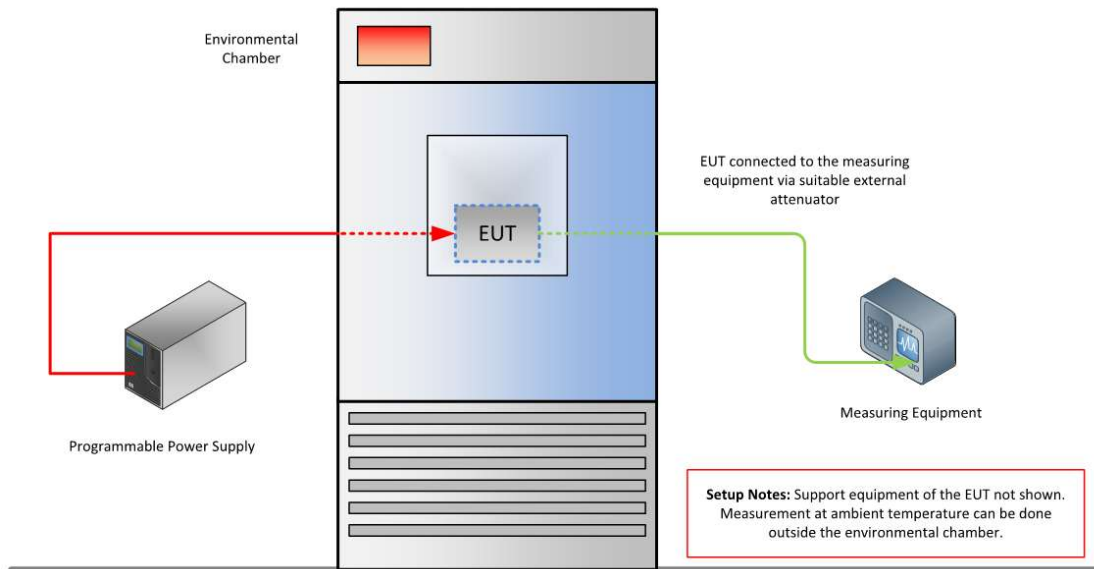
Radiated Emission Test Setup (Below 1GHz)



Radiated Emission Test Setup (Above 1GHz)



Conducted Emission Test Setup



Frequency Stability



SECTION 5

5 ACCREDITATION, DISCLAIMERS AND COPYRIGHT



5.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

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