



Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4143.799	35.36	54.00	-18.64	RMS	36	175	Vertical
4931.950	34.29	54.00	-19.71	RMS	133	400	Vertical

Table 57 - 2405 MHz (CH11), Thread, iPA, Core 2, 1 GHz to 18 GHz

No other emissions found within 20 dB of the limit.

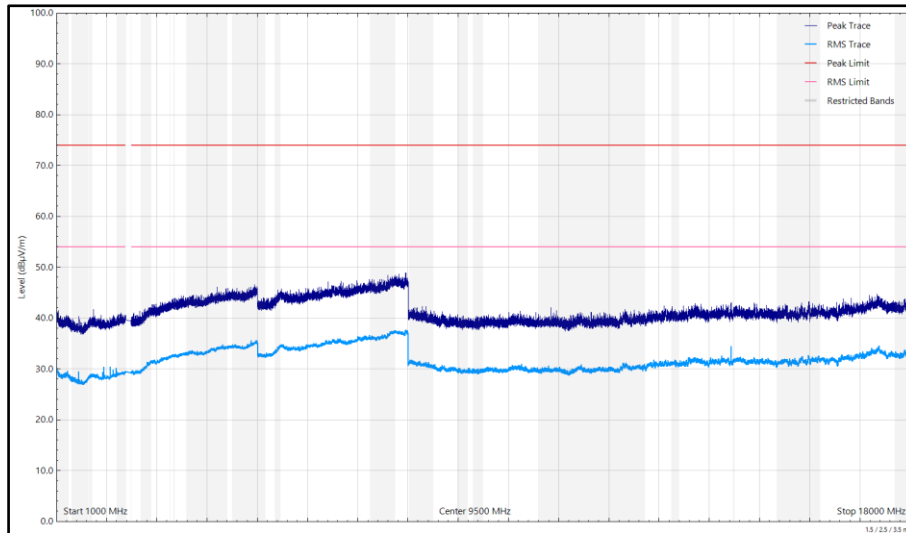


Figure 57 - 2405 MHz (CH11), Thread, iPA, Core 2, 1 GHz to 18 GHz, Horizontal

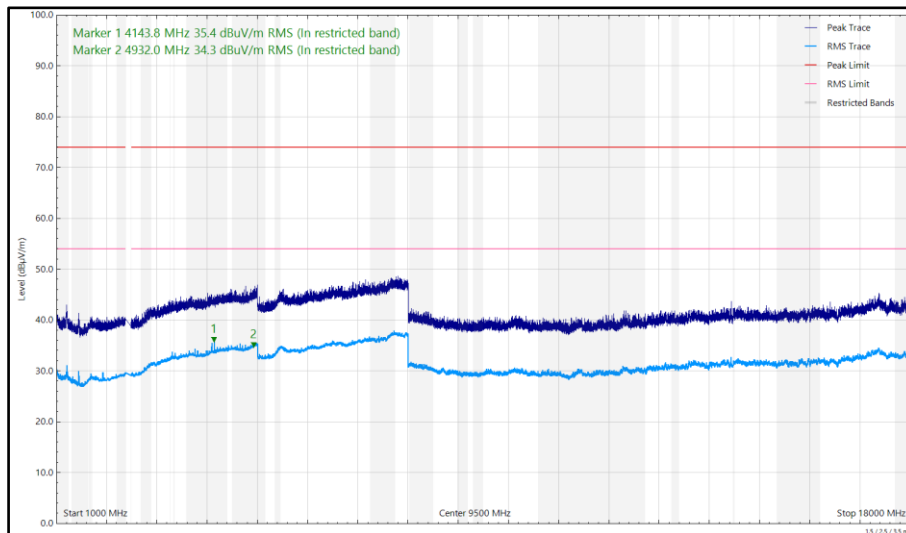


Figure 58 - 2405 MHz (CH11), Thread, iPA, Core 2, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
38.135	20.04	40.00	-19.96	Q-Peak	218	148	Horizontal
116.250	18.23	43.50	-25.27	Q-Peak	199	276	Horizontal
123.700	20.10	43.50	-23.40	Q-Peak	343	101	Vertical
130.341	18.68	43.50	-24.82	Q-Peak	351	106	Horizontal
250.554	23.52	46.00	-22.48	Q-Peak	171	112	Horizontal
4087.699	33.49	54.00	-20.51	RMS	356	390	Vertical
4637.743	33.63	54.00	-20.37	RMS	159	179	Vertical

Table 58 - 2440 MHz (CH18), Thread, iPA, Core 2, 30 MHz to 26 GHz

No other emissions found within 20 dB of the limit.

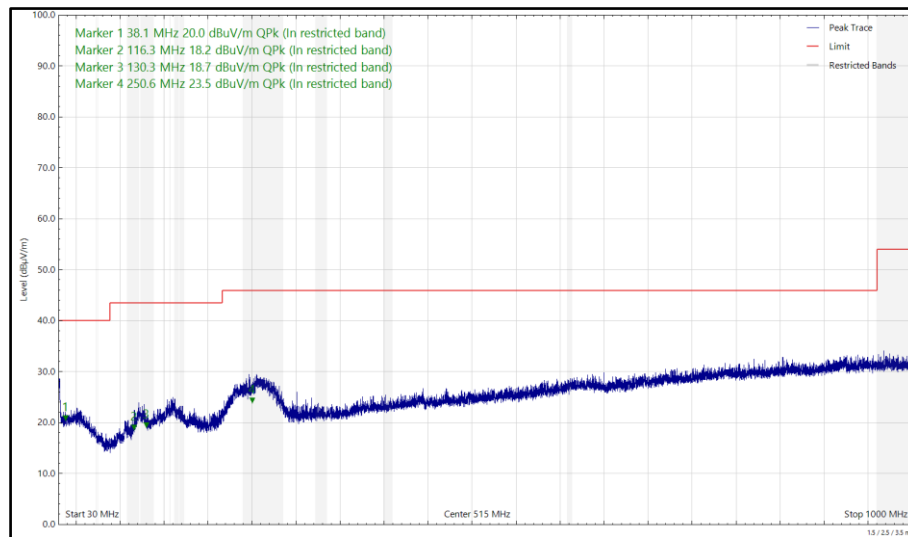


Figure 59 - 2440 MHz (CH18), Thread, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)

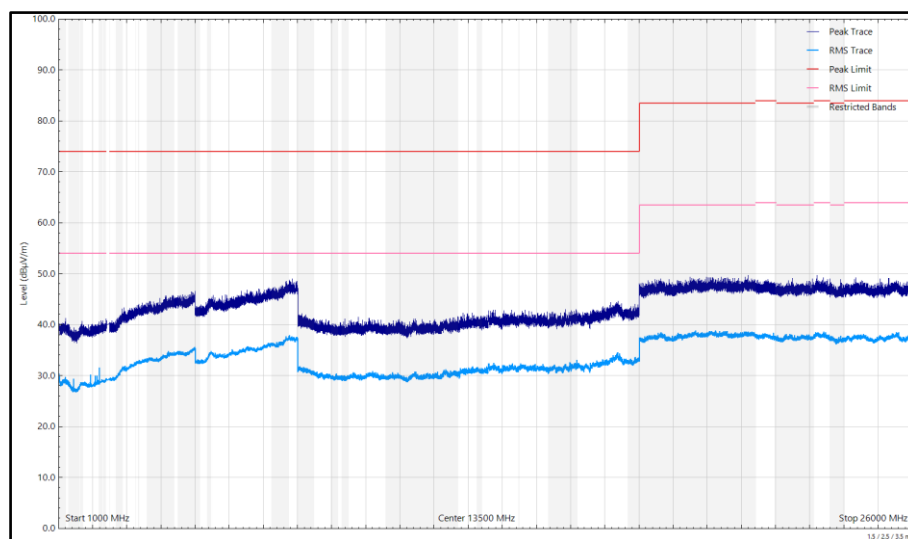


Figure 60 - 2440 MHz (CH18), Thread, iPA, Core 2, 1 GHz to 26 GHz, Horizontal

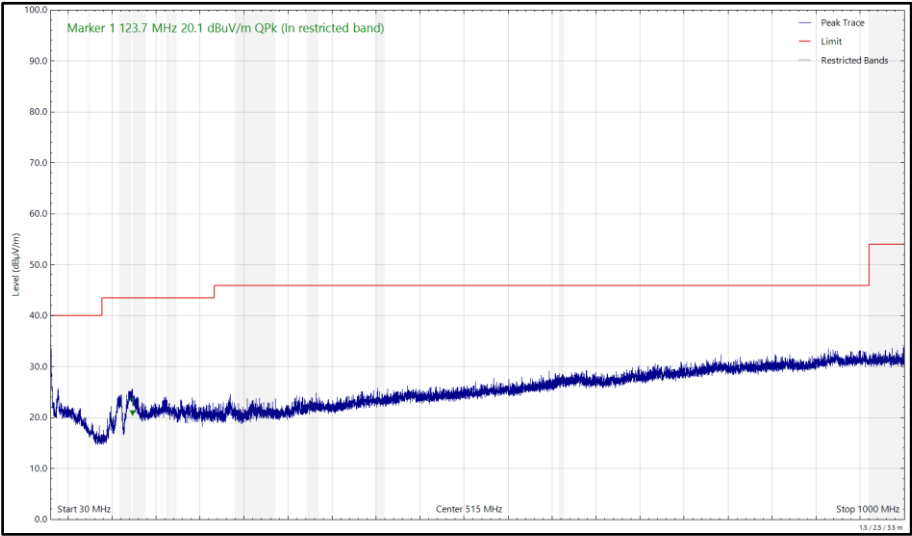


Figure 61 - 2440 MHz (CH18), Thread, iPA, Core 2, 30 MHz to 1 GHz, Vertical (Peak)

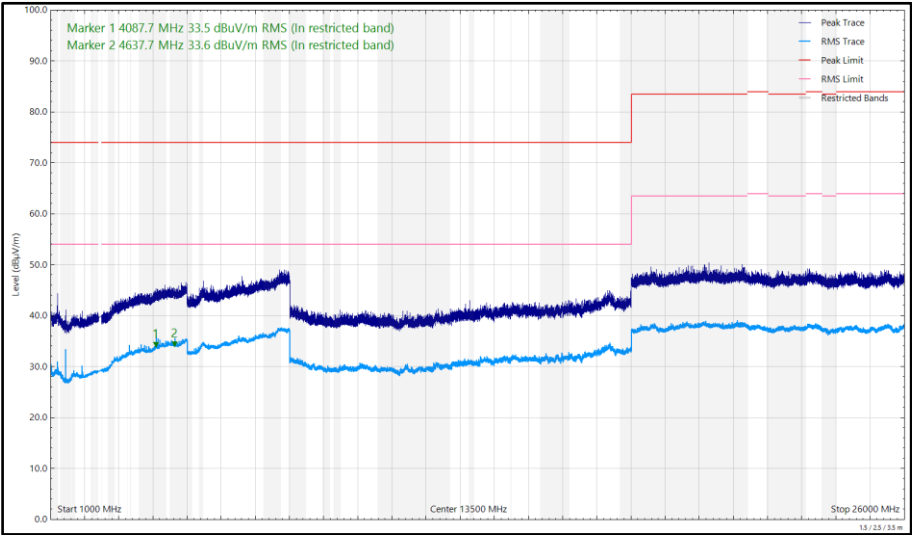


Figure 62 - 2440 MHz (CH18), Thread, iPA, Core 2, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4143.751	33.06	54.00	-20.94	RMS	150	290	Vertical
4973.947	34.32	54.00	-19.68	RMS	284	343	Vertical

Table 59 - 2475 MHz (CH25), Thread, iPA, Core 2, 1 GHz to 18 GHz

No other emissions found within 20 dB of the limit.

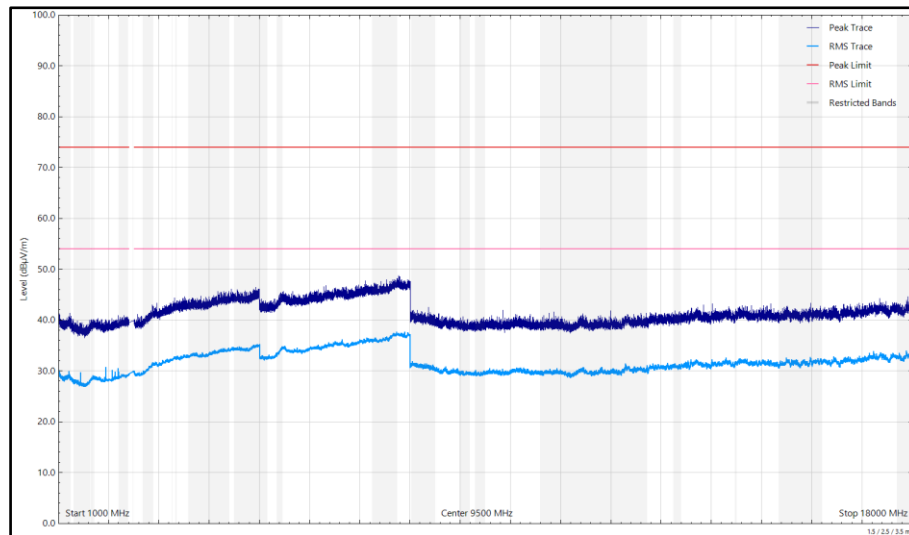


Figure 63 - 2475 MHz (CH25), Thread, iPA, Core 2, 1 GHz to 18 GHz, Horizontal

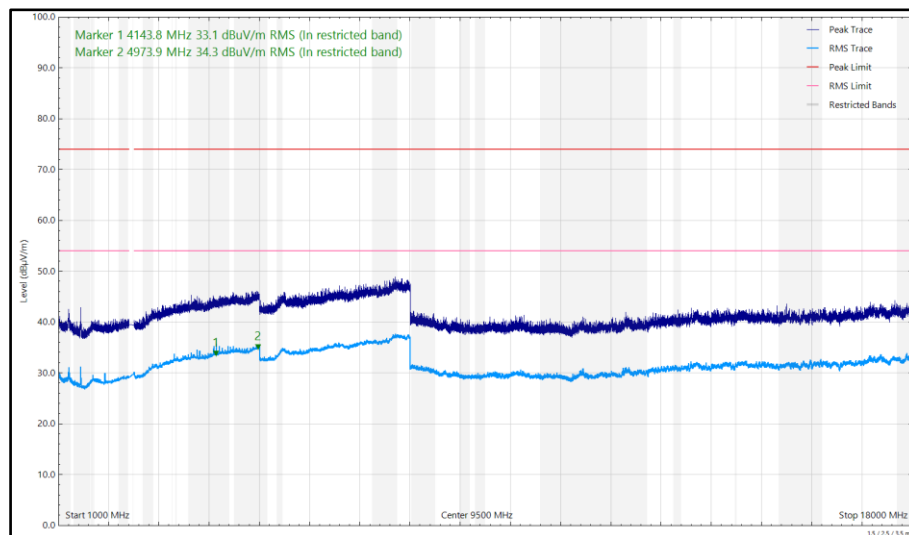


Figure 64 - 2475 MHz (CH25), Thread, iPA, Core 2, 1 GHz to 18 GHz, Vertical



2.5.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 17.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.6.3	5125	-	TU
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5940	12	23-May-2027
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5944	24	03-Jan-2027
1500W (300V 12A) AC Power Supply	iTech	IT7324	5957	-	TU
3m Semi-Anechoic Chamber, Chamber16	Albatross Projects	RF Chamber 16	5972	36	07-May-2028
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5973	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5974	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5975	-	TU
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6142	12	14-Sep-2026
Digital Multimeter	Fluke	115	6145	12	02-Jun-2027
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6189	24	26-Sep-2026
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	18-Dec-2026
8GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6195	12	23-Apr-2027
Attenuator 4dB	Pasternack	PE7074-4	6203	24	03-Jan-2027
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6214	12	23-Apr-2027
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	6323	12	27-Apr-2027
AC Power Supply	iTech	IT7324	6657	-	TU
3m Semi-Anechoic Chamber	Albatross Projects	RF Chamber 17	6658	36	07-May-2028
Mast and Turntable Controller	Maturo Gmbh	FCU3.0	6659	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	6660	-	TU
Turntable	Maturo Gmbh	TT1.5SI	6661	-	TU
EMI Test Receiver	Rohde & Schwarz	ESW44	6805	12	22-Sep-2026
Handheld Hygrometer	Fluke	971	6837	12	16-Sep-2026



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Handheld Hygrometer	Fluke	971	6838	12	16-Sep-2026
1m SMA-Type Cable	Junkosha	MWX221-01000AMSAMS/B	6844	12	06-Sep-2026
8m SMA-Type Cable	Junkosha	MWX221-08000AMSAMS/B	6849	12	06-Nov-2026
8m SMA-Type Cable	Junkosha	MWX221-08000AMSAMS/B	6851	12	06-Nov-2026
Pre Amp 8 - 18 GHz	Wright Technologies	APS06-0061	6985	12	23-Apr-2027

Table 60

TU - Traceability Unscheduled
O/P Mon - Output Monitored using calibrated equipment



2.6 Power Spectral Density

2.6.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (e)
ISED RSS-247, Clause 6.3.1
ISED RSS-GEN, Clause 6.12

2.6.2 Equipment Under Test and Modification State

A3590, S/N: FCY5FXQDLV - Modification State 0

2.6.3 Date of Test

21-May-2026 to 10-June-2026

2.6.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.10.5.

Where the EUT duty cycle was < 98 % and repeatable within 2 %, the spectrum analyser was set to trace (power) averaging and a duty cycle correction was added as calculated in the result tables below (Method AVGPSD-2).

2.6.5 Environmental Conditions

Ambient Temperature	20.9 - 23.5 °C
Relative Humidity	48.9 - 59.8 %



2.6.6 Test Results

Thread

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 6.3.1	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	Thread iPA	Duty Cycle (%):	100.0
-:	-	DCCF (dB):	0.00
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.60
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-14.77	-	-	-	-14.77	8.00	-22.77
2440	3.0	-14.78	-	-	-	-14.78	8.00	-22.78
2475	3.0	-14.96	-	-	-	-14.96	8.00	-22.96

Table 61 - Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/3 kHz)					Limit (dBm)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-14.77	-	-	-	-14.77	8.00	-22.77
2440	3.0	-14.78	-	-	-	-14.78	8.00	-22.78
2475	3.0	-14.96	-	-	-	-14.96	8.00	-22.96

Table 62 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 6.3.1	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	Thread iPA	Duty Cycle (%):	100.0
-:	-	DCCF (dB):	0.00
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.60
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-	-15.46	-	-	-15.46	8.00	-23.46
2440	3.0	-	-15.03	-	-	-15.03	8.00	-23.03
2475	3.0	-	-15.14	-	-	-15.14	8.00	-23.14

Table 63 - Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/3 kHz)					Limit (dBm)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-	-15.46	-	-	-15.46	8.00	-23.46
2440	3.0	-	-15.03	-	-	-15.03	8.00	-23.03
2475	3.0	-	-15.14	-	-	-15.14	8.00	-23.14

Table 64 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 6.3.1	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	Thread iPA	Duty Cycle (%):	100.0
-:	-	DCCF (dB):	0.00
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.00
Active Port(s):	C (Core 2)	Active Chain(s):	2

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-	-	-11.85	-	-11.85	8.00	-19.85
2440	3.0	-	-	-11.91	-	-11.91	8.00	-19.91
2475	3.0	-	-	-12.14	-	-12.14	8.00	-20.14

Table 65 - Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/3 kHz)					Limit (dBm)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-	-	-11.85	-	-11.85	8.00	-19.85
2440	3.0	-	-	-11.91	-	-11.91	8.00	-19.91
2475	3.0	-	-	-12.14	-	-12.14	8.00	-20.14

Table 66 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 6.3.1	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	Thread ePA	Duty Cycle (%):	100.0
-:	-	DCCF (dB):	0.00
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.60
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-2.86	-	-	-	-2.86	8.00	-10.86
2440	3.0	-2.95	-	-	-	-2.95	8.00	-10.95
2475	3.0	-3.12	-	-	-	-3.12	8.00	-11.12

Table 67 - Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/3 kHz)					Limit (dBm)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-2.86	-	-	-	-2.86	8.00	-10.86
2440	3.0	-2.95	-	-	-	-2.95	8.00	-10.95
2475	3.0	-3.12	-	-	-	-3.12	8.00	-11.12

Table 68 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 6.3.1	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	Thread ePA	Duty Cycle (%):	100.0
-:	-	DCCF (dB):	0.00
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.60
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-	-2.98	-	-	-2.98	8.00	-10.98
2440	3.0	-	-3.24	-	-	-3.24	8.00	-11.24
2475	3.0	-	-2.80	-	-	-2.80	8.00	-10.80

Table 69 - Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/3 kHz)					Limit (dBm)	Margin (dB)
		A	B	C	D	Σ		
2405	3.0	-	-2.98	-	-	-2.98	8.00	-10.98
2440	3.0	-	-3.24	-	-	-3.24	8.00	-11.24
2475	3.0	-	-2.80	-	-	-2.80	8.00	-10.80

Table 70 - ISED Maximum Power Spectral Density Results



FCC 47 CFR Part 15, Limit Clause 15.247 (e)

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

ISED RSS-247, Limit Clause 6.3.1

The transmitter power spectral density conducted from the transmitter to the antenna(s) shall not be greater than 8 dBm/3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of RSS-247 clause 6.3.2. The power spectral density shall be determined using the same method as is used to determine the maximum conducted output power.

2.6.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
1500VA AC Power Supply	iTech	IT7324	5907	-	O/P Mon
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5921	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5922	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5923	12	29-Nov-2026
Modular Power System Mainframe	Keysight Technologies	N6701C	5969	-	O/P Mon
DC Power Module 60V 20A 300W	Keysight Technologies	N6754A	5970	-	O/P Mon
Humidity & Temperature meter	R.S Components	1364	6148	12	28-Aug-2026
MXA Signal Analyser	Keysight Technologies	N9020B	6417	24	14-Oct-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6519	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6520	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6521	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6522	12	29-Nov-2026
Digital Thermometer	R.S Components	RS 5511	6739	12	02-Mar-2027
Multimeter	Fluke	115	7115	12	13-Aug-2026

Table 71

O/P Mon - Output Monitored using calibrated equipment

3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Restricted Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Emission Bandwidth	± 61.30 kHz
Maximum Conducted Output Power	Method PM: ± 0.65 dB Method SA: ± 1.05 dB
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Power Spectral Density	± 1.00 dB

Table 72

Measurement Uncertainty Decision Rule – Accuracy Method

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2021, Clause 4.4.3 (Procedure 2). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

Risk: The uncertainty of measurement about the measured result is negligible with regard to the final pass/fail decision. The measurement result can be directly compared with the test limit to determine conformance with the requirement (compare IEC Guide 115). The level of risk to falsely accept and falsely reject items is further described in ILAC-G8.