



Test specification:	Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	16-Dec-19	verdict.	PASS		
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC		
Remarks:	-				

Plot 7.2.51 Radiated emission measurements from 18 to 25 GHz at the mid carrier frequency

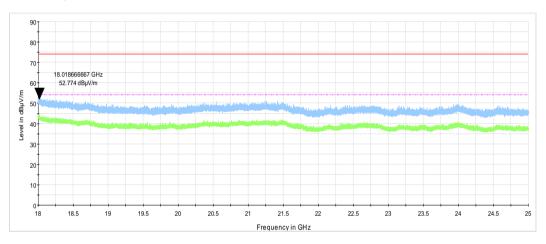
TEST SITE: Semi anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

CARRIER FREQUENCY: 2475.0 MHz

EUT TX ANTENNA: #1



Plot 7.2.52 Radiated emission measurements from 18 to 25 GHz at the mid carrier frequency

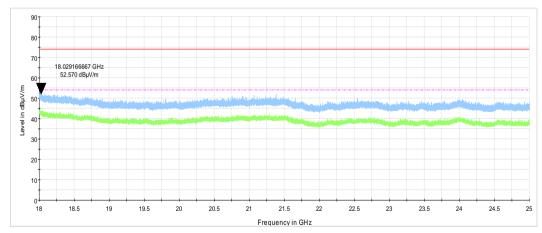
TEST SITE: Semi anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

CARRIER FREQUENCY: 2475.0 MHz

EUT TX ANTENNA: #2







Test specification:	Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions			
Test procedure:	ANSI C63.10 section 11.12.1			
Test mode:	Compliance	Verdict:	PASS	
Date(s):	16-Dec-19	verdict.	PASS	
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC	
Remarks:				

Plot 7.2.53 Radiated emission measurements from 18 to 25 GHz at the high carrier frequency

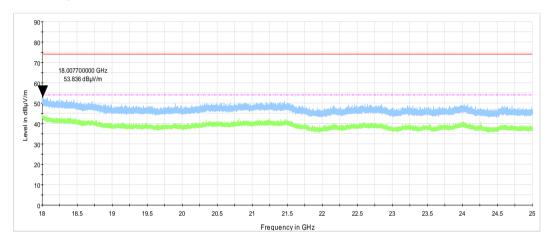
TEST SITE: Semi anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

CARRIER FREQUENCY: 2480.0 MHz

EUT TX ANTENNA: #1



Plot 7.2.54 Radiated emission measurements from 18 to 25 GHz at the high carrier frequency

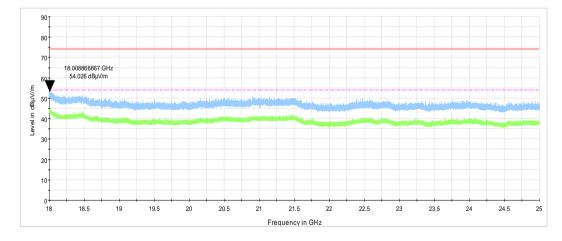
TEST SITE: Semi anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

CARRIER FREQUENCY: 2480.0 MHz

EUT TX ANTENNA: #2





Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power				
Test procedure:	ANSI C63.10 section 11.9.1.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	16-Dec-19	verdict.	PASS		
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC		
Remarks:	-				

7.3 Peak output power

7.3.1 General

This test was performed to measure the maximum peak output power radiated by transmitter. Specification test limits are given in Table 7.3.1.

Table 7.3.1 Peak output power limits

Assigned frequency	Maximum antenna	Peak output power*		Equivalent field strength
range, MHz	gain, dBi	W	dBm	limit @ 3m, dB(μV/m)**
902.0 - 928.0				
2400.0 - 2483.5	6.0	1.0	30.0	131.2
5725.0 – 5850.0				

^{*-} The limit is provided in terms of conducted RF power at the antenna connector. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power limit shall be reduced below the stated value as follows:

by 1 dB for every 3 dB that the directional gain of antenna exceeds 6 dBi for fixed point-to-point transmitters operate in 2400-2483.5 MHz band;

without any corresponding reduction for fixed point-to-point transmitters operate in 5725-5850 MHz band; by the amount in dB that the directional gain of antenna exceeds 6 dBi for the rest of transmitters.

**- Equivalent field strength limit was calculated from the peak output power as follows: E=sqrt(30×P×G)/r, where P is peak output power in Watts, r is antenna to EUT distance in meters and G is transmitter antenna gain in dBi.

7.3.2 Test procedure

- 7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and its proper operation was checked.
- 7.3.2.2 The EUT was adjusted to produce maximum available to end user RF output power.
- **7.3.2.3** The resolution bandwidth of spectrum analyzer was set wider than 6 dB bandwidth of the EUT and the field strength of the EUT carrier frequency was measured with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360⁰ and the measuring antenna height was swept in both vertical and horizontal polarizations.
- **7.3.2.4** The maximum field strength of the EUT carrier frequency was measured as provided in Table 7.3.2 and associated plots.
- **7.3.2.5** The maximum peak output power was calculated from the field strength of carrier as follows:

$$P = (E \times d)^2 / (30 \times G),$$

where P is the peak output power in W, E is the field strength in V/m, d is the test distance and G is the transmitter numeric antenna gain over an isotropic radiator.

The above equation was converted in logarithmic units for 3 m test distance:

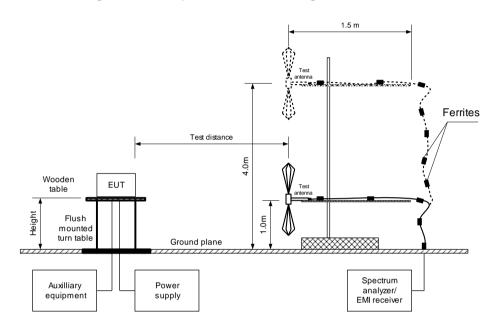
Peak output power in dBm = Field strength in dB(μV/m) - Transmitter antenna gain in dBi – 95.2 dB

7.3.2.6 The worst test results (the lowest margins) were recorded in Table 7.3.2.



Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power				
Test procedure:	ANSI C63.10 section 11.9.1.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	16-Dec-19	verdict.	PASS		
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC		
Remarks:					

Figure 7.3.1 Setup for carrier field strength measurements





Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power				
Test procedure:	ANSI C63.10 section 11.9.1.1	ANSI C63.10 section 11.9.1.1			
Test mode:	Compliance	Verdict: PASS			
Date(s):	16-Dec-19				
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC		
Remarks:	•				

Table 7.3.2 Peak output power test results

ASSIGNED FREQUENCY: 2400 -2483.5 MHz

TEST DISTANCE: 3 m

TEST SITE: Semi anechoic chamber

EUT HEIGHT: 1.5 m DETECTOR USED: Peak

TEST ANTENNA TYPE: Biconilog (30 MHz – 1000 MHz)

Double ridged guide (above 1000 MHz)

MODULATION: OQPSK
BIT RATE: 250 Kbps
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 3.0 MHz
VIDEO BANDWIDTH: 8.0 MHz
CONFIGURATION: Antenna 1

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2404.12	114.06	Vertical	1.8	-60	1.0	17.86	30.0	-12.14	Pass
2404.12	113.04	Horizontal	2.6	0	1.0	16.84	30.0	-13.16	Pass
2444.24	114.56	Vertical	2.8	-90	1.0	18.36	30.0	-11.64	Pass
2444.78	112.78	Horizontal	2.5	0	1.0	16.58	30.0	-13.42	Pass
2475.62	113.98	Vertical	2.9	-100	1.0	17.78	30.0	-12.22	Pass
2475.50	112.98	Horizontal	3.0	0	1.0	16.78	30.0	-13.22	Pass
2480.50	96.00	Vertical	2.25	-105	1.0	-0.20	30.0	-30.20	Pass
2479.38	93.99	Horizontal	2.55	0	1.0	-2.21	30.0	-32.21	Pass

CONFIGURATION: Antenna 2

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2404.50	112.28	Vertical	1.55	-60	1.0	16.08	30.0	-13.92	Pass
2404.66	115.39	Horizontal	1.05	-180	1.0	19.19	30.0	-10.81	Pass
2444.26	112.93	Vertical	1.55	-45	1.0	16.73	30.0	-13.27	Pass
2444.56	115.40	Horizontal	1.25	-180	1.0	19.20	30.0	-10.80	Pass
2474.56	111.79	Vertical	1.55	-90	1.0	15.59	30.0	-14.41	Pass
2475.54	114.89	Horizontal	1.40	-180	1.0	18.69	30.0	-11.31	Pass
2479.32	95.72	Vertical	2.00	-120	1.0	-0.48	30.0	-30.48	Pass
2480.08	99.90	Horizontal	1.2	-180	1.0	3.70	30.0	-26.30	Pass

^{*-} EUT front panel refer to 0 degrees position of turntable.

where P is the peak output power in W, E is the field strength in V/m, d is the test distance in meters and G is the transmitter numeric antenna gain over an isotropic radiator. The above equation was converted in logarithmic units for 3 m test distance: Peak output power in dBm = Field strength in $dB(\mu V/m)$ - Transmitter antenna gain in dBi - 95.2 dB***- Margin = Peak output power - specification limit.

Note: Maximum peak output power was obtained at Unom (115%Unom, 85%Unom) input power voltage.

Reference numbers of test equipment used

HL 4360 HL 3903 HL 4011 HL 5311 HL 5309 HL 4114 HL 5665 HL 537
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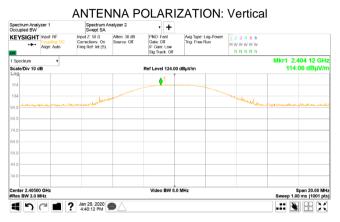
Full description is given in Appendix A.

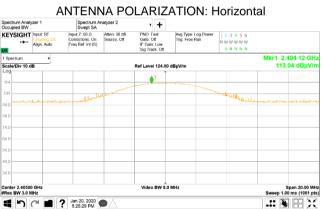
^{**-} Peak output power was calculated from the field strength of carrier as follows: $P = (E \times d)^2 / (30 \times G)$,



Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power			
Test procedure:	ANSI C63.10 section 11.9.1.1			
Test mode:	Compliance	Verdict:	PASS	
Date(s):	16-Dec-19	verdict.	PASS	
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC	
Remarks:				

Plot 7.3.1 Field strength of carrier at low frequency ch.11, Antenna 1



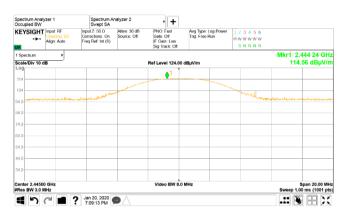


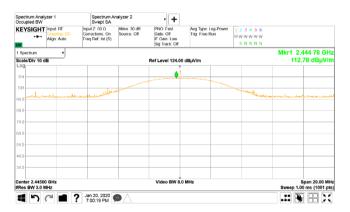


Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power			
Test procedure:	ANSI C63.10 section 11.9.1.1			
Test mode:	Compliance	Verdict:	PASS	
Date(s):	16-Dec-19	verdict.	PASS	
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC	
Remarks:				

Plot 7.3.2 Field strength of carrier at mid frequency ch.19, Antenna 1

ANTENNA POLARIZATION: Vertical







Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power			
Test procedure:	ANSI C63.10 section 11.9.1.1			
Test mode:	Compliance	Verdict:	PASS	
Date(s):	16-Dec-19	verdict.	PASS	
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC	
Remarks:				

Plot 7.3.3 Field strength of carrier at mid frequency ch.25, Antenna 1

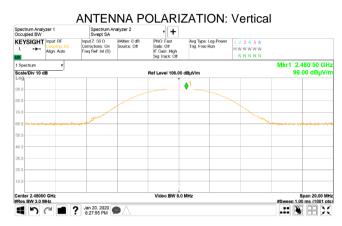


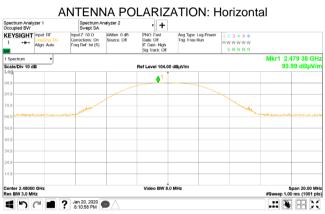




Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power					
Test procedure:	ANSI C63.10 section 11.9.1.1					
Test mode:	Compliance	Verdict:	PASS			
Date(s):	16-Dec-19	verdict.	PASS			
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC			
Remarks:						

Plot 7.3.4 Field strength of carrier at high frequency ch.26, Antenna 1



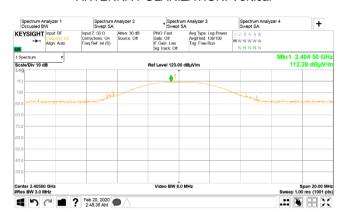


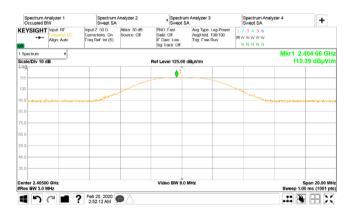


Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power					
Test procedure:	ANSI C63.10 section 11.9.1.1	ANSI C63.10 section 11.9.1.1				
Test mode:	Compliance	Verdict:	PASS			
Date(s):	16-Dec-19	verdict.	PASS			
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC			
Remarks:						

Plot 7.3.5 Field strength of carrier at low frequency ch.11, Antenna 2

ANTENNA POLARIZATION: Vertical



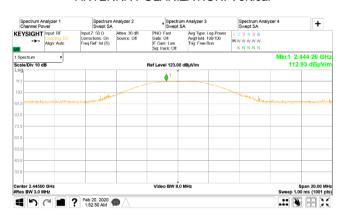


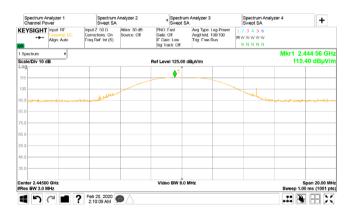


Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power					
Test procedure:	ANSI C63.10 section 11.9.1.1					
Test mode:	Compliance	Verdict:	PASS			
Date(s):	16-Dec-19	verdict.	PASS			
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC			
Remarks:						

Plot 7.3.6 Field strength of carrier at mid frequency ch.19, Antenna 2

ANTENNA POLARIZATION: Vertical



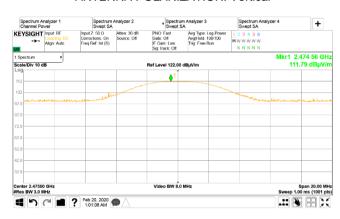


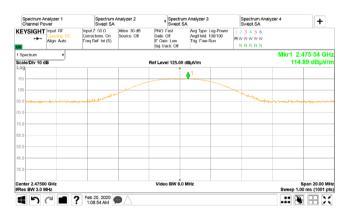


Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power					
Test procedure:	ANSI C63.10 section 11.9.1.1					
Test mode:	Compliance	Verdict:	PASS			
Date(s):	16-Dec-19	verdict.	PASS			
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC			
Remarks:						

Plot 7.3.7 Field strength of carrier at mid frequency ch.25, Antenna 2

ANTENNA POLARIZATION: Vertical

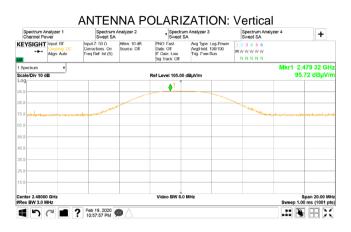


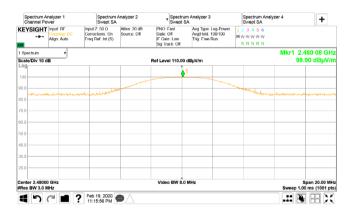




Test specification:	Section 15.247(b)3/ RSS-247 section 5.4(d), Peak output power					
Test procedure:	ANSI C63.10 section 11.9.1.1					
Test mode:	Compliance	Verdict:	PASS			
Date(s):	16-Dec-19	verdict.	PASS			
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC			
Remarks:						

Plot 7.3.8 Field strength of carrier at high frequency ch.26, Antenna 2







Test specification:	Section 15.247(d) / RSS-24	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions					
Test procedure:	ANSI C63.10 section 11.12.1						
Test mode:	Compliance	Verdict:	PASS				
Date(s):	16-Dec-19	verdict.	PASS				
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC				
Remarks:							

7.4 Band edge radiated emissions

7.4.1 General

This test was performed to measure emissions, radiated from the EUT at the assigned frequency band edges. Specification test limits are given in Table 7.4.1.

Table 7.4.1 Band edge emission limits

	Output power	Assigned frequency, MHz	Attenuation below carrier*, dBc	Field strength at 3 m within restricted bands, dB(μV/m)		
		irequericy, wiriz	carrier, abc	Peak	Average	
ſ		902.0 - 928.0				
	Peak	2400.0 - 2483.5	20.0	74.0	54.0	
		5725.0 - 5850.0				

^{* -} Band edge emission limit is provided in terms of attenuation below the peak of modulated carrier measured with the same resolution bandwidth.

7.4.2 Test procedure

- **7.4.2.1** The EUT was set up as shown in Figure 7.4.1, energized normally modulated at the maximum data rate and its proper operation was checked.
- 7.4.2.2 The EUT was adjusted to produce maximum available to end user RF output power at the lowest carrier frequency.
- **7.4.2.3** The spectrum analyzer span was set to capture the carrier frequency and associated modulation products. The resolution bandwidth was set wider than 1 % of the frequency span.
- **7.4.2.4** The spectrum analyzer was set in max hold mode and allowed trace to stabilize. The highest emission level within the authorized band was measured.
- **7.4.2.5** The maximum band edge emission and modulation product outside of the band were measured as provided in Table 7.4.2 and associated plots and referenced to the highest emission level measured within the authorized band.
- **7.4.2.6** The above procedure was repeated with the EUT adjusted to produce maximum RF output power at the highest carrier frequency.
- **7.4.2.7** The above procedure was repeated with the frequency hopping function enabled.

Figure 7.4.1 Band edge emission test setup





Test specification:	Section 15.247(d) / RSS-24	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions					
Test procedure:	ANSI C63.10 section 11.12.1						
Test mode:	Compliance	Verdict:	PASS				
Date(s):	16-Dec-19	verdict.	PASS				
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC				
Remarks:							

Table 7.4.2 Band edge emission test results

ASSIGNED FREQUENCY RANGE: 2400 - 2483.5 MHz

DETECTOR USED:

MODULATION:

BIT RATE:

TRANSMITTER OUTPUT POWER SETTINGS:

Peak
OQPSK
250 kbps
Maximum

TRANSMITTER OUTPUT POWER: 17.8 dBm at low ch.11 carrier frequency Antenna 1 17.71 dBm at mid ch.25 carrier frequency Antenna 1

-0.24 dBm at high ch.26 carrier frequency Antenna 1 19.19 dBm at low ch.11 carrier frequency Antenna 2 18.69 dBm at mid ch.25 carrier frequency Antenna 2 3.70 dBm at high ch.26 carrier frequency Antenna 2

RESOLUTION BANDWIDTH: 100 kHz VIDEO BANDWIDTH: ≥ RBW

Frequency, MHz	Band edge emission, dBuV/m	Emission at carrier, dBuV/m Attenuation below carrier		Limit, dBc	Margin, dB*	Verdict			
Antenna 1									
2404.12	55.67	114.06	58.39	20	38.39	Pass			
Antenna 2									
2404.66	63.41	115.39	51.98	20	31.98	Pass			

^{*-} Margin = Attenuation below carrier – specification limit.



Test specification:	ecification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions					
Test procedure:	ANSI C63.10 section 11.12.1					
Test mode:	Compliance	Verdict:	PASS			
Date(s):	16-Dec-19	verdict.	PASS			
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC			
Remarks:						

Table 7.4.3 Band edge emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY: 2400 - 2483.5 MHz

TEST DISTANCE:

MODULATION:

BIT RATE:

DUTY CYCLE:

TRANSMITTER OUTPUT POWER SETTINGS:

DETECTOR USED:

RESOLUTION BANDWIDTH:

3 m

OQPSK

250 kbps

100 %

Maximum

Peak / Average

1000 kHz

TEST ANTENNA TYPE: Double ridged guide

TEST / (IVI EIVIV) (TIT E:						Jubic Huge	oa galac				
F	Anteni	na	A!	Peak field s	trength(VB	W=3 MHz)	Average	field streng	th(VBW=10) kHz)	
Frequency, MHz	Polarization	Height, m	Azimuth, degrees*	Measured, dB(μV/m)	Limit, dB(µV/m)	Margin, dB**	Measured, dB(μV/m)	Calculated, dB(μV/m)	Limit, dB(µV/m)	Margin, dB***	Verdict
Antenna 1											
Low carrie	r frequency: (Channel	11								
2377.920	Vertical	1.8	-60	54.50	74.0	-19.50	41.81	41.81	54.0	-12.19	Pass
Mid carrier frequency : Channel 25											
2333.2800	Vertical	2.9	-100	57.52	74.0	-16.48	45.80	45.80	54.0	-8.20	Pass
High carrie	r frequency 1	1: Chann	el 26								
2483.5000	Vertical	2.25	-105	54.67	74.0	-19.33	43.14	43.14	54.0	-10.86	Pass
Antenna 2											
Low carrie	er frequency:	Channel	l 11								
2370.0000	Horizontal	1.05	-180	59.75	74.0	-14.25	49.12	49.12	54.0	-4.88	Pass
Mid carrier frequency 1: Channel 25											
2483.9125	Horizontal	1.40	-180	58.33	74.0	-15.67	48.28	48.28	54.0	-5.72	Pass
High carrie	r frequency 1	1: Chann	el 26	•							
2483.5000	Horizontal	1.20	-180	58.70	74.0	-15.30	47.13	47.13	54.0	-6.87	Pass

^{*-} EUT front panel refers to 0 degrees position of turntable.

where Calculated field strength = Measured field strength + average factor.

Reference numbers of test equipment used

_		•	•					
	HL 4360	HL 3903	HL 4011	HL 5311	HL 5309	HL 5665	HL 4114	HL 5376

Full description is given in Appendix A.

^{**-} Margin = Measured field strength - specification limit.

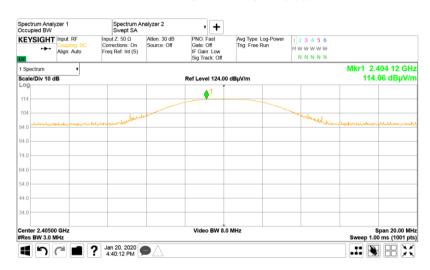
^{***-} Margin = Calculated field strength - specification limit,



Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure:	ANSI C63.10 section 11.12.1			
Test mode:	Compliance	Verdict:	PASS	
Date(s):	16-Dec-19	verdict.	FASS	
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC	
Remarks:				

Plot 7.4.1 The highest emission level within the assigned band at low carrier frequency ch.11, Antenna 1

ANTENNA POLARIZATION: Vertical



Plot 7.4.2 The highest band edge emission at low carrier frequency ch.11, Antenna 1

FREQUENCY RANGE: 2390 - 2400 MHz **TEST DISTANCE:** 3 m ANTENNA POLARIZATION: Vertical Spectrum Analyzer 5 Swept SA

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off Spectrum Analyzer 4 Swept SA

Input Z: 50 \(\Omega\) Atten: 20 d

Corrections: On
Freq Ref: Int (S) Spectrum Analyzer 1 Swept SA Spectrum Analyzer 7 Swept SA + KEYSIGHT Input: RF Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run Coupling. Align: Auto Mkr2 2.400 00 GHz 1 Spectrum Scale/Div 10 dB 55.67 dBµV/m Start 2.39000 GHz #Res BW 100 kHz Stop 2.41000 GHz Sweep 20.0 ms (1001 pts) Video BW 300 kHz

1 9 P 1 23, 2020 9 7:59:29 PM



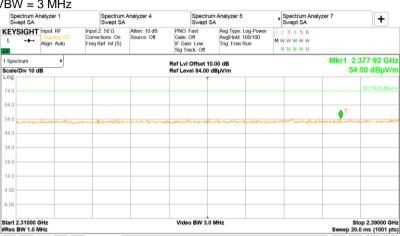
Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

Plot 7.4.3 The highest band edge emission at low carrier frequency ch.11, Antenna 1

Vertical

FREQUENCY RANGE: 2310 – 2390 MHz TEST DISTANCE: 3 m

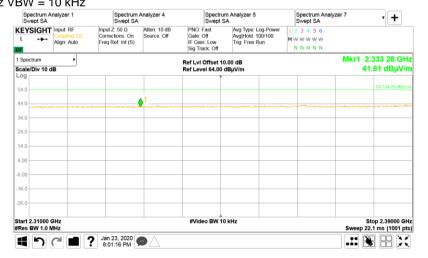
TEST DISTANCE: ANTENNA POLARIZATION: RBW = 1 MHz VBW = 3 MHz



FREQUENCY RANGE: 2310 – 2390 MHz TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical RBW = 1 MHz VBW = 10 kHz

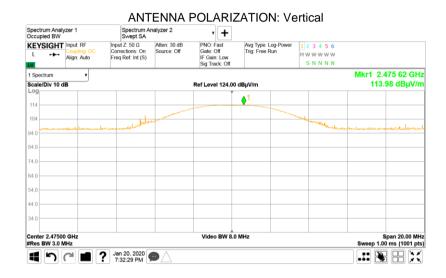
4 9 P P P Jan 23, 2020 9 8:00:25 PM





Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure:	ANSI C63.10 section 11.12.1			
Test mode:	Compliance	Verdict:	PASS	
Date(s):	16-Dec-19	verdict.	FASS	
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC	
Remarks:				

Plot 7.4.4 The highest emission level within the assigned band at mid carrier frequency ch.25, Antenna 1





Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

Plot 7.4.5 The highest band edge emission at mid carrier frequency ch.25, Antenna 1

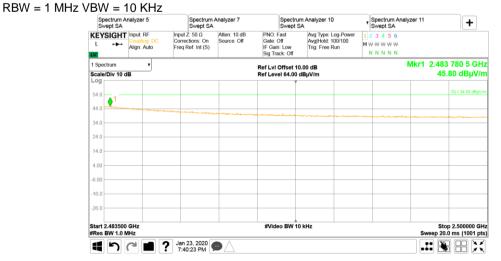
FREQUENCY RANGE: 2483.5 – 2500 MHz

TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



FREQUENCY RANGE: 2483.5 – 2500 MHz

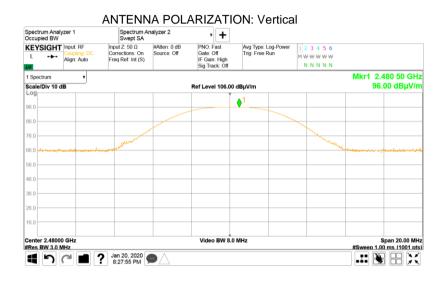
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical





Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

Plot 7.4.6 The highest emission level within the assigned band at high carrier frequency ch.26, Antenna 1





Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

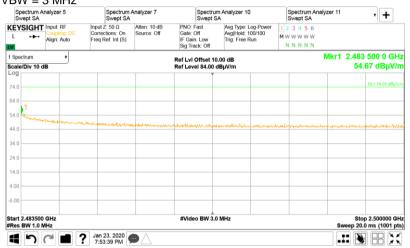
Plot 7.4.7 The highest band edge emission at high carrier frequency ch.26, Antenna 1

3 m

Vertical

FREQUENCY RANGE: 2483.5 – 2500 MHz

TEST DISTANCE: ANTENNA POLARIZATION: RBW = 1 MHz VBW = 3 MHz



FREQUENCY RANGE: 2483.5 – 2500 MHz

TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical

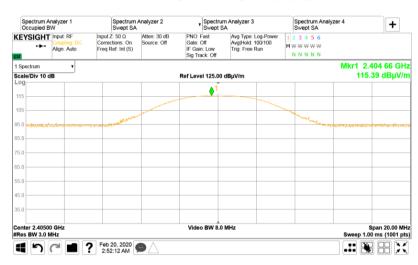




Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

Plot 7.4.8 The highest emission level within the assigned band at low carrier frequency ch.11, Antenna 2

ANTENNA POLARIZATION: Horizontal



Plot 7.4.9 The highest band edge emission at low carrier frequency ch.11, Antenna 2

FREQUENCY RANGE: 2390 - 2400 MHz **TEST DISTANCE:** 3 m ANTENNA POLARIZATION: Horizontal Spectrum Analyzer 2 Swept SA
Input Z: 50 Ω Atten: 30 Corrections: On Freq Ref: Int (S) Spectrum Analyzer 1 Swept SA + KEYSIGHT Input: RF Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run MWWWWW Align: Auto Mkr2 2.400 00 GHz Scale/Div 10 dB Ref Level 120.00 dBµV/m 63.41 dBµV/m Start 2.39000 GHz #Res BW 100 kHz Video BW 300 kHz Stop 2.41000 GHz Sweep 1.93 ms (1001 pts) Function Width Function Value

Feb 22, 2020 11:23:27 PM

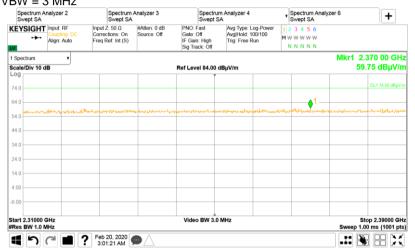


Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

Plot 7.4.10 The highest band edge emission at low carrier frequency ch.11, Antenna 2

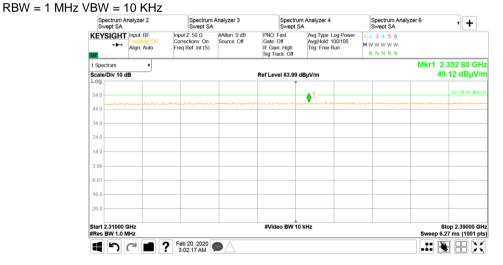
FREQUENCY RANGE: 2310 – 2390 MHz

TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
RBW = 1 MHz VBW = 3 MHz



FREQUENCY RANGE: 2310 – 2390 MHz

TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal

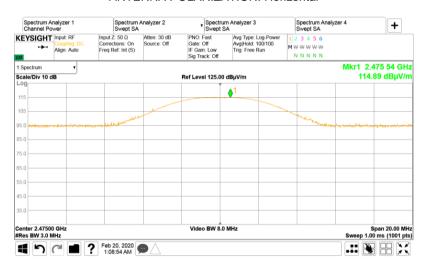






Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

Plot 7.4.11 The highest emission level within the assigned band at mid carrier frequency ch.25, Antenna 2



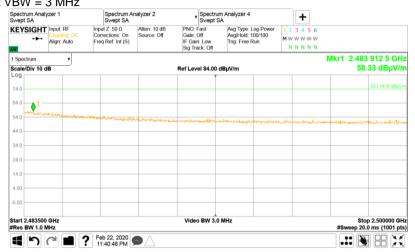


Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	Verdict: PASS	
Date(s):	16-Dec-19	verdict.	PASS
Temperature: 22 °C	Relative Humidity: 47 %	Air Pressure: 1020 hPa	Power: 3 VDC
Remarks:			

Plot 7.4.12 The highest band edge emission at mid carrier frequency ch.25, Antenna 2

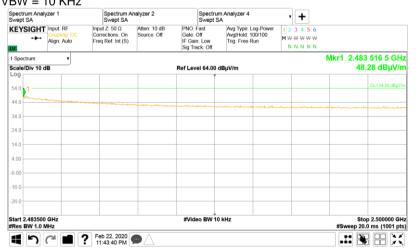
FREQUENCY RANGE: 2483.5 – 2500 MHz

TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
RBW = 1 MHz VBW = 3 MHz



FREQUENCY RANGE: 2483.5 – 2500 MHz TEST DISTANCE: 3 m

ANTENNA POLARIZATION: RBW = 1 MHz VBW = 10 KHz



Horizontal