

8.6 TEST RESULTS

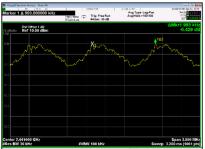
| | TX Mode_1Mbps | | | | | | |
|---------|--------------------|----------------------------|-----------------------------------|--------|--|--|--|
| Channel | Frequency (MHz) | Channel Separation(MHz) | Limit (MHz) | Result | | | |
| CH00 | 2402 | 1.002 | >(25KHz or 2/3*20dB Bandwidth) | PASS | | | |
| CH39 | 2441 | 0.993 | >(25KHz or 2/3*20dB Bandwidth) | PASS | | | |
| CH78 | 2480 | 0.996 | >(25KHz or 2/3*20dB Bandwidth) | PASS | | | |















| TX Mode_3Mbps | | | | | | |
|---------------|--------------------|----------------------------|--|--------|--|--|
| Channel | Frequency (MHz) | Channel Separation(MHz) | Limit (MHz) | Result | | |
| CH00 | 2402 | 1.005 | >(25KHz or 2/3*20dB Bandwidth) | PASS | | |
| CH39 | 2441 | 1.002 | >(25KHz or 2/3 [*] 20dB Bandwidth) | PASS | | |
| CH78 | 2480 | 0.840 | >(25KHz or 2/3*20dB Bandwidth) | PASS | | |





9BANDWIDTH TEST

9.1LIMIT

| FCC Part15, Subpart C (15.247) | | | | |
|--------------------------------|-----------|--|--|--|
| Section Test Item | | | | |
| 15.247(a)(1) | Bandwidth | | | |

9.2TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 30 kHz, VBW=100 kHz, Sweep Time = Auto.

| Spectrum Parameter | Setting |
|--------------------|-------------------------|
| Attenuation | Auto |
| Span Frequency | > Measurement Bandwidth |
| RBW | 30kHz |
| VBW | 100kHz |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

9.3MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|---------------|-------------|------------|------------------|
| 1 | Spectrum analyzer | KEYSIGHT | N9010A | MY55150427 | 2025/05/22 |
| 2 | Attenuator | Mini-Circuits | BW-S10W2 | 101109 | N/A |
| 3 | RF Cable | Mi-cable | C10-01-01-1 | 100309 | N/A |

9.4TEST SETUP

| EUT | SPECTRUM |
|-----|----------|
| | ANALYZER |

9.5EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.



9.6 TEST RESULTS

| TX Mode_1Mbps | | | | | | |
|---------------|-----------|----------------|----------------------------|--------|--|--|
| Channel | Frequency | 20dB Bandwidth | 99 % Emission Bandwidth | Result | | |
| | (MHz) | (MHz) | (MHz) | | | |
| CH00 | 2402 | 0.882 | 0.8678 | PASS | | |
| CH39 | 2441 | 0.924 | 0.8697 | PASS | | |
| CH78 | 2480 | 0.926 | 0.8688 | PASS | | |

2402MHz

2441MHz

2480MHz







Report No.: 24EFSS11090 02791

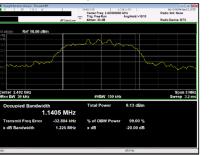


| TX Mode_3Mbps | | | | | | |
|---------------|-----------|----------------|----------------------------|--------|--|--|
| Channel | Frequency | 20dB Bandwidth | 99 % Emission Bandwidth | Result | | |
| | (MHz) | (MHz) | (MHz) | | | |
| CH00 | 2402 | 1.225 | 1.1405 | PASS | | |
| CH39 | 2441 | 1.227 | 1.1408 | PASS | | |
| CH78 | 2480 | 1.227 | 1.1423 | PASS | | |

2402MHz

2441MHz

2480MHz



| Kopsight Spectrum Analysis - Occupied BA RL R^S 50.0 AC | | Center Freg: 2.441000000 | a a/to GHz | 66-43-15 FPC an 12, 20 Radio Std: None |
|--|-------------|---------------------------------|-----------------|---|
| | AfGuinLow | Trig: Free Run #Atten: 30 dB | Avg(Hold:>10/10 | Radio Device: BTS |
| | | | | |
| 10 dB/dlv Ref 10.00 dBm | | | | |
| 0.00 | | A A.A | | |
| 10.0 | 1 | | m - | |
| 20 | 1 | | <u>\</u> | |
| | 1 | | | |
| man | · | | ~ | man an |
| ລາ | | | | |
| | | | | |
| d11 | | | | |
| Center 2.441 GHz | | | | Span 3 Mi |
| eRes BW 30 kHz | | #VBW 100 kHz | | Sweep 3.2 n |
| Occupied Bandwidt | h | Total Power | 8.86 dBm | |
| 1. | 1408 MHz | | | |
| Transmit Freq Error | -32.684 kHz | % of OBW Power | 99.00 % | |
| x dB Bandwidth | 1.227 MHz | x dB | -20.00 dB | |
| | | | | |
| | | | | |
| | | | | |

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| | | |
| | | |
| eVBW 100 ki | Hz | Span 3 M Sweep 3.2 n |
| Total Power | 8.76 dBm | |
| | | |
| Hz x dB | -20.00 dB | |
| | IZ Hz % of OBW Powe | IZ Hz % of OBW Power 99.00 % |



10MAXIMUM OUTPUT POWER

10.1LIMIT

| FCC Part15 , Subpart C (15.247) | | | | | |
|--|--|--|--|--|--|
| Section Test Item Limit | | | | | |
| 15.247(a)(1) Maximum Output Power 0.125Watt or 21dBm | | | | | |

Note:

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB band width of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

10.2TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 1MHz/3MHz, VBW= 1MHz/3MHz, Sweep time = Auto.

10.3MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|---------------|-------------|------------|------------------|
| 1 | Spectrum analyzer | KEYSIGHT | N9010A | MY55150427 | 2025/05/22 |
| 2 | Attenuator | Mini-Circuits | BW-S10W2 | 101109 | N/A |
| 3 | RF Cable | Mi-cable | C10-01-01-1 | 100309 | N/A |

10.4TEST SETUP

| EUT | SPECTRUM | Ī |
|-----|----------|---|
| | ANALYZER | |

10.5EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.



10.6 TEST RESULTS

| TX Mode_1Mbps | | | | | | | |
|---------------|---------------|--------------|--------------|--------|--|--|--|
| Channel | Frequency | Output Power | Output Power | Result | | | |
| Channel | (MHz) | (dBm) | (W) | Result | | | |
| CH00 | 2402 | 2.438 | 0.001753 | PASS | | | |
| CH39 | 2441 | 2.094 | 0.001620 | PASS | | | |
| CH78 | 2480 | 1.905 | 0.001551 | PASS | | | |
| Limit | 21dBm /0.125W | | | | | | |

CH00

CH39

CH78

| Kopsight Spectrum Amaguan Securit SA | | e 3 👪 | Koyvight Spectrum Analysis - Sweet SA | | | e 3 163 | Koysight Spectrum Analyse: Secret SA | | | e 3 🕰 |
|--|--|---|--|---|--|---|---|---|---------------------------------------|--|
| Marker 1 2.401769000000 GHz | | A.35k A/TO 09 35 25 FM Der 36, 3524 Avg Type: Log-Pwr 15k 26 PL 154 26 26 27 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Marker 1 2,440955000000 | SENGESVIT | Avg Type: Log-Pwr Avg Hold: 100/100 | 09:33:35 FM Dec 20, 2024 19400 1 2 24 4 10 1 | Marker 1 2.479892000000 G | SENSE OVT | Avg Type: Log-Par Avg Hold: 100100 | 09:33:04 FM Det 20, 2024 |
| | PRO: Love Trig: Free Run IFGainLove #Atten: 30 dB | AvgHold: 100/100 Tirts Hardon | | PND: Event Trig: Free Run If CainLow #Atten: 30 dB | Avg/Hold: 100/100 | TYPE H WAAWAA | | PRO: Lost Trig: Free Run (Coint.ow #Atter: 30 dB | Avg/Hold: 100/100 | TITE H MANDAW |
| | Il Gani,Low Avenue, 27 68 | Mkr1 2.401 769 GHz | | E Gamboo Avena, aven | | kr1 2.440 955 GHz | | Il GamiLou Avenue, aven | | kr1 2.479 892 GHz |
| 10 dB/die Ref 10.00 dBm | | 2.438 dBm | 10 dlUdie Ref 10.00 dBm | | | 2.094 dBm | 10 dil\die Ref 0ffset 1 dB Ref 10.00 dBm | | | 1.905 dBm |
| | ↓ ¹ | | C00 | ↓ ¹ | | | | ↓ ¹ | | |
| 0.00 | | | 0.00 | | | | 0.00 | | | |
| -13.3 | | | -13.7 | | | | -13.3 | | | |
| | | | | | | | | | | |
| -23.0 | | | -23.5 | | | | -20.0 | | | |
| 30.2 | | | 20.0 | | | | 20.3 | | | |
| | | | | | | | | | | |
| -0.1 | | | -0.1 | | | | -(1) | | | |
| -93 | | | 433 | | | | -53.2 | | | |
| | | | | | | | | | | |
| ຄວ | | | 600 | | | | 60.0 | | | |
| | | | | | | | 211 | | | |
| | | | | | | | | | | |
| -83.5 | | | -85.5 | | | | -83.5 | | | |
| | | | | | | | | | | |
| Center 2.402000 GHz #Res BW 3.0 MHz | #VBW 8.0 MHz | Span 3.000 MHz Sweep 1.000 ms (1001 pts) | Center 2.441000 GHz #Res BW 3.0 MHz | #VBW 8.0 MHz | Sive | Span 3.000 MHz p 1.000 ms (1001 pts) | Center 2.480000 GHz #Res BW 3.0 MHz | #VBW 8.0 MHz | Sive | Span 3.000 MHz ep 1.000 ms (1001 pts) |
| vsc | | 573795 | V56 | | 20705 | | vsc | | \$7,57,6 | |
| | | | | | | | | | | |



| TX Mode_2Mbps | | | | | | | |
|---------------|---------------|--------------|--------------|--------|--|--|--|
| Channel | Frequency | Output Power | Output Power | Result | | | |
| | (MHz) | (dBm) | (W) | Result | | | |
| CH00 | 2402 | 3.110 | 0.002046 | PASS | | | |
| CH39 | 2441 | 2.881 | 0.001941 | PASS | | | |
| CH78 | 2480 | 2.577 | 0.001810 | PASS | | | |
| Limit | 21dBm /0.125W | | | | | | |

CH00

CH39

CH78

| Koyojet Sputner Anajour Sensi SA R R R R R Sessi SA Marker 1 2:4020120000000 GHz PRD Law PRD Law | SPIGESHT ALSH ALTO Avg Type: Log-Pwr Trig: Free Run Avg/Hold: 100/100 KAtter: 30 dB | 09/35/95 FM Bet 20, 2024 | III Koviet Sectore Anger: Sect SA Sector Anger: Sect SA Sector Anger: Sector SA III A 86 26.0 AC Marker: 1 2:4409910000000 GHz Marker: 37.00 France If Katalise Katalise Katalise | 3.356 Julto 69.36 60 Febra 26, 2024 Ang Type: Log-Pair Fixed 10 FE 10 F AvgType: Log-Pair Fixed 10 FE 10 F AvgType: Log-Pair Fixed 10 FE 10 F AvgType: Log-Pair Fixed 10 F | Im Spright Sections Analysis Section Section Section Im R BP 26.5 AC Section Section Marker 1.2.4800095000000 GHz FRCL Leat | A 20% A/TO 002/45 Firlder 25, 2024 Avg Type: Log-Par 196/27 Birlder 25, 2024 Avg/Held: 100/100 017 |
|--|--|---|---|--|---|--|
| Ref Offset 1 dB | | Mkr1 2.402 012 GHz 3.110 dBm | Ref Offset 1 dB | Mkr1 2.440 991 GHz 2.881 dBm | Ref Offset 1 dB 10 clludie Ref 10.00 dBm | Mkr1 2.480 099 GHz 2.577 dBm |
| | ¢1 | | | | | |
| | | | .113 | | -112 | |
| -23.5 | | | -22.5 | | -222 | |
| 222 | | | 20.5 | | 20.0 | |
| 4.1 | | | -01 | | -0.1 | |
| <u>م</u> | | | 45.2 | | £) | |
| 655 | | | 653 | | 63.0 | |
| 411 | | | 911 | | (1) | |
| 1335 | | | | | | |
| Center 2.402000 GHz #Res BW 3.0 MHz #VE | | Span 3.000 MHz eep 1.000 ms (1001 pts) | Center 2.441000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz | Span 3.000 MHz Sweep 1.000 ms (1001 pts) | Center 2,480000 GHz #Res BW 3.0 MHz #VBW 8.0 MHz | Span 3.000 MHz Sweep 1.000 ms (1001 pts) |
| ¥56 | 57×735 | | V56 | \$7.7US | V56 | 57,4705 |



| TX Mode_3Mbps | | | | | | | |
|---------------|---------------|--------------|--------------|--------|--|--|--|
| Channel | Frequency | Output Power | Output Power | Result | | | |
| | (MHz) | (dBm) | (W) | Result | | | |
| CH00 | 2402 | 3.367 | 0.002171 | PASS | | | |
| CH39 | 2441 | 3.135 | 0.002058 | PASS | | | |
| CH78 | 2480 | 2.843 | 0.001924 | PASS | | | |
| Limit | 21dBm /0.125W | | | | | | |

CH00

CH39

CH78 Mar Mar Avg Type: Log-Par Avg Hold: 100/100 Avg Type: Log-Pwr Avg Hold: 100100 Avg Type: Log-Pwr AvgHold: 100/100 -Trig: Free Run Trig: Free Run Trig: Free Run tef Offset 1 dB Ref Offset 1 dB Ref Offset 1 dB Ref 10.00 dE Span 3.000 Center 2.441000 G #Res BW 3.0 MHz Span 3.0 1.000 ms (10 Span 3.000 1.000 ms (100 Center 2.480000 #Res BW 3.0 MH



11CONDUCTED SPURIOUS EMISSION

11.1LIMIT

For FCC

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required.

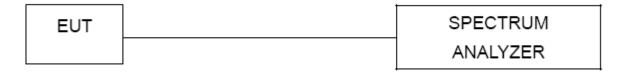
11.2TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = Auto.

11.3MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|---------------|-------------|------------|------------------|
| 1 | Spectrum analyzer | KEYSIGHT | N9010A | MY55150427 | 2025/05/22 |
| 2 | Attenuator | Mini-Circuits | BW-S10W2 | 101109 | N/A |
| 3 | RF Cable | Mi-cable | C10-01-01-1 | 100309 | N/A |

11.4TEST SETUP

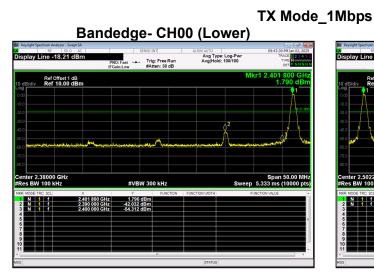


11.5EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

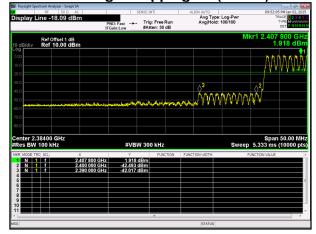




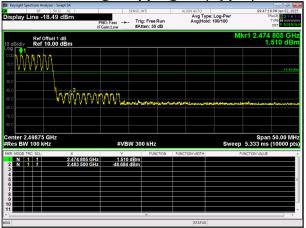


Banchedge CH78 (Upper)

Bandedge- Hopping on (Lower)



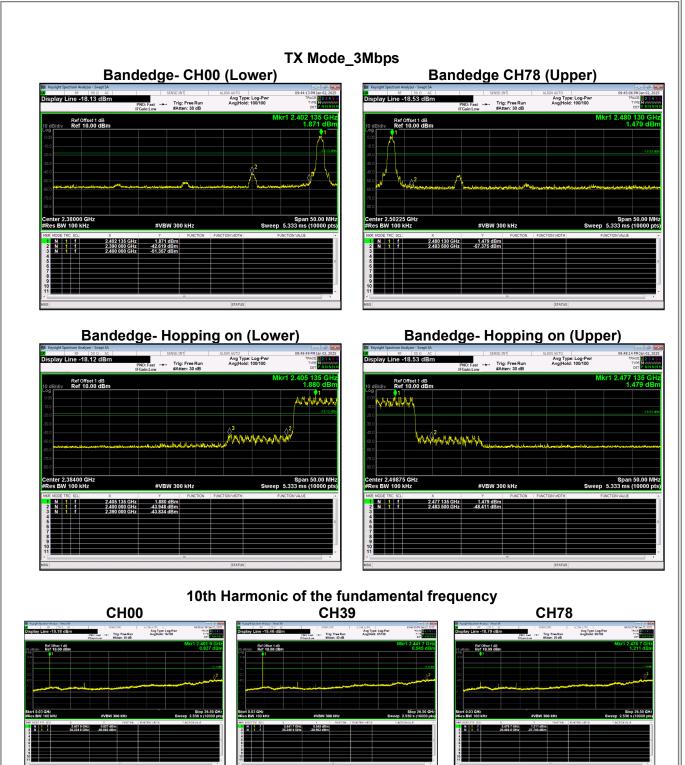
BandedgeHopping on (Upper)



10th Harmonic of the fundamental frequency







END OF TEST REPORT