

Appendix for Test report



Appendix A: DTS (6 dB) Bandwidth

In this document, the "DTS6dBBW" refers to the measured "DTS (6 dB) Bandwidth" value. In this Appendix, the "fc(DTS6dBBW)" refers to the centre of the measured "DTS6dBBW". The introduction of the "fc(DTS6dBBW)" is due to that other measurements use it as the spectrum analyzer setting.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

| Test Mode | Test Channel | Frequency[MHz] | DTS6dBBW[MHz] | Verdict |
|-----------|--------------|----------------|---------------|---------|
| TM1 _Ch0 | L | 2402 | 0.71 | pass |
| TM1 _Ch19 | М | 2440 | 0.70 | pass |
| TM1 _Ch39 | Н | 2480 | 0.70 | pass |



Part II - Test Plots

2.1 TM1_Ch0_L





2.2 TM1_Ch19_M

| Agilent Spectrum Analyzer - Occupied E Image: Comparison of the system Image: Comparison of the sy | GHz Cente | SENSE:INT | ALIGN AUTO 12:45:06 PM Nov Radio Std: Nor : 10/10 Radio Device: | Frequency |
|--|-----------|------------------|--|--------------------------------|
| Ref Offset 1 dB 10 dB/div Ref 25.00 dBr Log | n | | | |
| 5.00 | | | | Center Freq 2.440000000 GHz |
| -5.00 | | | | |
| -25.0 -35.0 -45.0 | | | | |
| -45.0 | | | | √14~417~ |
| Center 2.44 GHz #Res BW 100 kHz | | VBW 300 kHz | Span 4 Sweep | 2 mg |
| Occupied Bandwidt | h | Total Power | 12.0 dBm | 400.000 kHz Auto Man |
| 1. | 0585 MHz | | | Freq Offset |
| Transmit Freq Error | 6.589 kHz | OBW Power | 99.00 % | 0 Hz |
| x dB Bandwidth | 704.1 kHz | x dB | -6.00 dB | |
| MSG | | | STATUS | |



2.3 TM1_Ch39_H

| Agilent Spectrum Analyzer - Occupied BW M RL RF 50 Ω AC Center Freq 2.480000000 AC AC AC AC | | | Radio St >10/10 | PMNov 15, 2017 d: None evice: BTS | Frequency |
|---|-----------|-------------|---------------------|---|-------------------------------|
| Ref Offset 1 dB 10 dB/div Ref 25.00 dBm Log | | | | | |
| 5.00 | | | | | Center Freq 2.48000000 GHz |
| -5.00 | | | | | |
| -35.0 -45.0 | | | | A | |
| -65.0 | | | | ^{Dow} t-Ash-And-Ungl | |
| Center 2.48 GHz #Res BW 100 kHz | #V | BW 300 kHz | | pan 4 MHz reep 2 ms | CF Step 400.000 kHz |
| Occupied Bandwidth | 577 MHz | Total Power | 11.5 d B m | | <u>Auto</u> Man |
| Transmit Freq Error | 4.697 kHz | OBW Power | 99.00 % | | Freq Offset 0 Hz |
| x dB Bandwidth | 703.6 kHz | x dB | -6.00 dB | | |
| MSG | | | STATUS | | |



Appendix B: Occupied Bandwidth

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

| Test Mode | Test Channel | Frequency[MHz] | Occupied Bandwidth [MHz] | Verdict |
|-----------|--------------|----------------|--------------------------|---------|
| TM1 _Ch0 | L | 2402 | 1.04 | pass |
| TM1 _Ch19 | М | 2440 | 1.04 | pass |
| TM1 _Ch39 | Н | 2480 | 1.04 | pass |



Part II - Test Plots

2.1 TM1_Ch0_L





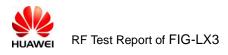
2.2 TM1_Ch19_M

| Agilent Spectrum Analyzer - Occu K RF 50 Ω Center Freq 2.440000 | AC | Center Fr | | | ALIGN AUTO | 12:45:13 PM Radio Std: Radio Dev | | Free | quency |
|---|----------|--|-----------|------|------------|--|---|-------------|----------------------------------|
| Ref Offset 1 10 dB/div Ref 25.00 Log | | | | | 1 | 1 | | | |
| 15.0 5.00 | | | | | | | | | e nter Freq 000000 GHz |
| -5.00 | / | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | 5 | | | | | |
| -35.0 | ~~~~~ | | | - Vu | Mart | | | | |
| -55.0 | | | | | | Work was | Jan Marina Ma | | |
| Center 2.44 GHz #Res BW 20 kHz | | #VE | 3W 62 kHz | | | | an 4 MHz 5 9.6 ms | 4 | CF Step 00.000 kHz |
| Occupied Bandw | | | Total Pow | ər | 11.6 | dBm | | <u>Auto</u> | Man |
| | 1.0406 N | | | | | | | Fi | req Offset |
| Transmit Freq Erro | r 13.69 | 4 kHz | OBW Pow | er | 99 | 0.00 % | | | 0 Hz |
| x dB Bandwidth | 1.262 | 2 MHz | x dB | | -26. | 00 dB | | | |
| MSG | | | | | STATUS | 3 | | | |



2.3 TM1_Ch39_H

| Agilent Spectrum Analyzer - 00 CR RL RF 50 S Center Freq 2.4800 | 2 AC | r:Low | Center Fr | | | ALIGN AUTO : 10/10 | 01:09:38 PM Radio Std: Radio Dev | | Frequ | ency |
|---|-----------------|-------------------|-----------|----------|--------|------------------------------|--|------------------------|-------------|------------------------------|
| Ref Offse 10 dB/div Ref 25.0 | | | | | | | | | | |
| Log 15.0 5.00 | | | ᠕᠕ᡐᡐ | | | | | | | t er Freq 0000 GHz |
| -15.0 -25.0 -35.0 | | | Jr | | N N | ٨٦٨ | | | | |
| -45.0 -55.0 | | | | | \/~ | | \mathcal{W} | ^{hel} Mr Ann | | |
| Center 2.48 GHz #Res BW 20 kHz | | | #VB | W 62 kHz | | | | an 4 MHz p 9.6 ms | 400 | CF Step |
| Occupied Band | dwidth 1.040 | | 1- | Total Po | wer | 11.0 |) dBm | | <u>Auto</u> | Man |
| Transmit Freq Er | | 0 IVIF 1.432 k | | OBW Po | wer | 99 | 0.00 % | | Free | q Offset 0 Hz |
| x dB Bandwidth | 1 | .263 M | Hz | x dB | | -26. | 00 dB | | | |
| MSG | | | | | | STATUS | 3 | | | |



Appendix C: Duty Cycle

Part I - Test Results

| Test Mode | TX Freq. [MHz] | Duty cycle [%] |
|-----------|----------------|----------------|
| TM1 | CH0,CH19,CH39 | 61 |

Part II - Test Plots

2.1 TM1

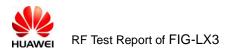
| | rum Analyzer - | | | | | | | | | |
|------------------|--------------------|-----------------|--|-------------------------|--------------------|----------|-------------------------|------------------------|----------------------------|-------------------------|
| Center F | RF 50 req 2.440 | ος ac 000000 |) GHz | | NSE:INT | Avg Typ | ALIGNAUTO e: Log-Pwr | TRA | MNov 15, 2017 CE 123456 | Frequency |
| | | | PNO: Fast ← IFGain:Low | Trig: Fre Atten: 38 | | | | T\ [| | |
| | Ref Offset | | | | | | | Mkr3 3 | .013 ms | Auto Tune |
| 10 dB/div Log | Ref 29.0 | 0 dBm | | | | | | ວ. | 77 dBm | |
| 19.0 | | | | ^· | 1 _{\(\)2} | 3 | | | | Center Freq |
| 9.00 | | , | | <u>+</u> 2 | ·Ŷ | | | 1 | | 2.440000000 GHz |
| -1.00 | | | | | | | | | | |
| -11.0 | | | | | | Í | | | | Start Freq |
| -21.0 | | | | | | | | | | 2.440000000 GHz |
| -41.0 | | ALL A | an a | Howy | WW | ۹ (| ant di | hu hanna ^{rn} | | |
| -51.0 | | | 4.or N | ւեչիսի, | * 991 | _ | "¶I ~" | WYW . | A.d. | Stop Freq |
| -61.0 | | | | | | | | | | 2.440000000 GHz |
| Center 2 | 44000000 | | | | | | | | Span 0 Hz | 05.04 |
| Res BW 3 | | GIIZ | #VB | W 8.0 MHz | 2 | | Sweep 5 | .000 ms | (1001 pts) | CF Step 3.000000 MHz |
| MKR MODE T | RC SCL | X | | Y | | CTION FL | INCTION WIDTH | FUNCTI | ON VALUE | <u>Auto</u> Man |
| 1 N 2 | <u>1 t</u> 1 t | | 2.388 ms 2.767 ms | <u>5.76 d</u> 5.68 d | | | | | | |
| 3 N ′ | 1 t | | 3.013 ms | 5.77 d | Bm | | | | | Freq Offset 0 Hz |
| 5 | | | | | | | | | | 0 Hz |
| 7 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | ~ | |
| MSG | | | | IIII | | | STATU | s | > | |
| | | | | | | | | | | |



Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

| Test Mode | Test Channel | Frequency[MHz] | Duty Cycle [%] | Power[dBm] | Verdict |
|-----------|--------------|----------------|----------------------|------------|---------|
| TM1 _Ch0 | L | 2402 | 61 | 6.07 | pass |
| TM1 _Ch19 | М | 2440 | 61 | 5.52 | pass |
| TM1 _Ch39 | Н | 2480 | 61 | 4.95 | pass |



Part II - Test Plots

2.1 TM1_Ch0_L

| Agilent Spectrum Analyzer - The duty cy | cle factor 2.15 dB add | | | 10.40.00.000 | |
|---|------------------------|------------------|---|---|--|
| Center Freq 2.402000000 | GHz | SENSE:INT | ALIGN AUTO #Avg Type: RMS Avg Hold: 500/500 | 12:40:03 PMNov 15, 2017 TRACE 1 2 3 4 5 6 TYPE A WARMAN | Frequency |
| Ref Offset 3.15 dB 10 dB/div Ref 30.00 dBm | | Atten: 38 dB | Mkr1 | 2.402 000 GHz wer 6.065 dBm | Auto Tune |
| 20.0 10.0 | | | | | Center Freq 2.402000000 GHz |
| -10.0 -20.0 -30.0 | | | | | Start Freq 2.400000000 GHz |
| -40.0 -50.0 -60.0 | | | | humm | Stop Freq 2.404000000 GHz |
| Start 2.400000 GHz #Res BW 20 kHz | #VBW 6 | 2 KHZ* | Sweep | top 2.404000 GHz 12.32 ms (601 pts) | CF Step 400.000 kHz <u>Auto</u> Man |
| 2 3 4 5 | 2 000 GHz - | 7.390 dBm Band P | ower 1.040 MHz | 6.065 dB | Freq Offset 0 Hz |
| 6 7 8 9 10 11 | | | | | |
| MSG | | | STATUS | | |



2.2 TM1_Ch19_M





2.3 TM1_Ch39_H





Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

| Test Mode | Test Channel | Frequency[MHz] | Duty Cycle [%] | PSD[dBm/10 kHz] | Verdict |
|-----------|--------------|----------------|----------------------|--------------------|---------|
| TM1 _Ch0 | L | 2402 | 61 | -8.08 | pass |
| TM1 _Ch19 | М | 2440 | 61 | -9.07 | pass |
| TM1 _Ch39 | Н | 2480 | 61 | -9.36 | pass |



Part II - Test Plots

2.1 TM1_Ch0_L





2.2 TM1_Ch19_M





2.3 TM1_Ch39_H

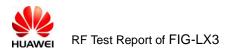




Appendix F: Band Edges Compliance

Part I - Test Results

| Test Mode | Test Channel | Frequency[MHz] | Carrier Power[dBm] | Max.Spurious Level[dBm] | Verdict |
|-----------|-----------------|----------------|-----------------------|----------------------------|---------|
| TM1_Ch0 | L | 2402 | 5.25 | -50.22 | pass |
| TM1_Ch39 | Н | 2480 | 4.31 | -51.35 | pass |



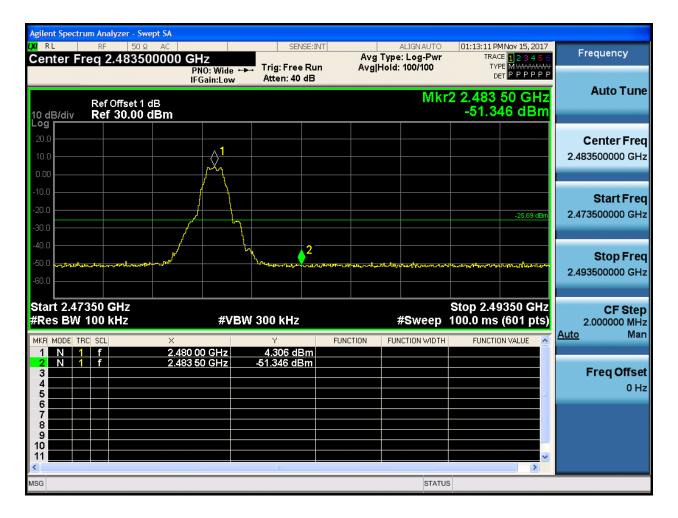
Part II - Test Plots

2.1 TM1_Ch0_L

| Agilent Spectrum Analyzer - Swept SA | | | | | |
|--------------------------------------|---|---|---------------------------|------------------------------|--------------------------|
| LX/RL RF 50Ω AC | | | | MNov 15, 2017 | Frequency |
| Center Freq 2.392500000 | | | : Log-Pwr TRA 10/10 T | | requeriey |
| | PNO: Wide +++ Irig: Free IFGain:Low Atten: 40 | | | PE MWWWWW DET P P P P P P | |
| | II OUMILON | | Mike0 0 400 | | Auto Tune |
| Ref Offset 1 dB | | | Mkr2 2.400 | 21 dBm | |
| 10 dB/div Ref 30.00 dBm | | | -50.2 | 21 авт | |
| 20.0 | | | | | 0 |
| | | | , | 1 | Center Freq |
| 10.0 | | | | | 2.392500000 GHz |
| 0.00 | | | /*** | l | |
| -10.0 | | | | \ | |
| | | | | l I | Start Freq |
| -20.0 | | | | -24.75 dBm | 2.380000000 GHz |
| -30.0 | | | | <u> </u> | |
| -40.0 | | | 2 | - b | |
| -50.0 | | | > | Landler of | Stop Freq |
| | ┪╎┶╍┍╌╍┙ [┍] ╍╼┸┲ ^{╞╋} ┵┶╢╩ <mark>╡</mark> ╋┙ ^{╋┍} ┍┺╼┲╼╌┚╖┙ [╏] ╲╡╟┉ | ๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛ | ᡯᡜᡗᢏ ᡘᢩᡍᡌᢩᡊ᠘ᡕ ᢂᢁᡘᢁ | | 2.405000000 GHz |
| -60.0 | | | | | |
| Start 2.38000 GHz | | | Stop 2.4 | 0500 GHz | |
| #Res BW 100 kHz | #VBW 300 kHz | | #Sweep 100.0 ms | 601 pts) | CF Step |
| #Res BW TOO KHZ | | | #oweep too.oms | | 2.500000 MHz Auto Man |
| MKR MODE TRC SCL X | Y | | ICTION WIDTH FUNCT | ION VALUE 🔼 | Adto |
| 1 N 1 f 2.40 2 N 1 f 2.40 | 02 25 GHz 5.247 dE 00 00 GHz -50.221 dE | Sm | | | |
| 3 | | | | | Freq Offset |
| 4 | | | | | 0 Hz |
| 5 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 11 | | | | ~ | |
| < | | | | | |
| MSG | | | STATUS | | |



2.2 TM1_Ch39_H





Appendix G: Unwanted Emissions into Non-Restricted Frequency

Bands

In this Appendix, the "Pref", which is used as the reference level, refers to the peak power level in any 100 kHz bandwidth within the fundamental emission, the "Puw" referrers to the maximum emission power in 100 kHz band segments outside of the authorized frequency band.

Considering that the higher ratio of RBW to the span for the frequency ranges below 30 MHz makes the results determination be complicated, a narrower RBW other than 100 kHz is used for these ranges. The measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] = $10 \times lg(100 \ [kHz]/narrower RBW \ [kHz])$. As to this Appendix, the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain and used as respective results for each chain, due to the relative-limit requirement.

In the result table, the "< Limit" denotes that "The Puw [dBm] is less than Pref[dBm]-30[dBm],see test plots for detailed".

| Test Mode | Test Channel | Frequency[MHz] | Pref[dBm] | Puw[dBm] | Verdict |
|-----------|--------------|----------------|-----------|--------------------------------------|---------|
| TM1_Ch0 | L | 2402 | 5.31 | <limit< td=""><td>pass</td></limit<> | pass |
| TM1_Ch19 | М | 2440 | 4.88 | <limit< td=""><td>pass</td></limit<> | pass |
| TM1_Ch39 | Н | 2480 | 4.28 | <limit< td=""><td>pass</td></limit<> | pass |

Part I - Test Results



Part II - Test Plots

2.1 TM1_Ch0_L

Pref:

| | | eRun AvgjH | ALIGNAUTO Fype: Log-Pwr Iold:>1000/1000 MIKT1 | DET | <mark>1</mark> 23456 M wwww PPPPPP | Frequency Auto Tu Center Fr 2.402000000 G |
|--|-----------------------|------------|--|------------------|---|--|
| 10 dB/div Ref Offset 1 dB Ref 20.00 dBm | PNO: Wide 😱 Trig: Fre | | | DET | PPPPP 00 GHz | Center Fr |
| 10 dB/div Ref 20.00 dBm | | 1 | Mkr1 | 2.402 00 5.31 | 00 GHz 2 dBm | Center Fr |
| 10.0 | | 1 | | | | |
| 0.00 | | | | | | |
| -10.0 | | | | | | Start Fr 2.400000000 G |
| -20.0 | | | | | | Stop Fr 2.404000000 G |
| -40.0 | | | | by - Vory | <u>ر</u> | CF St 400.000 k <u>Auto</u> M |
| -60.0 | | | | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | Freq Offs 0 |
| -70.0 Start 2.400000 GHz | | | s | top 2.404 | 000 GHz | |
| #Res BW 100 kHz | #VBW 300 kHz | | Sweep 2 | 2.000 ms (| (601 pts) | |



Puw:

| | um Analyzer - Swept SA | | | | | | | | |
|-----------------------|---|--|----------|-----------------------|------------------------|--------------------|---|-------------|-----------------------|
| | RF 50 Ω <u>A</u> DC req 79.500 kHz | PNO: Close C | NSE:INT | Avg Type Avg Hold: | | TRAC | 1Nov 15, 2017 E 1 2 3 4 5 6 E M WWWWWW T P P P P P P | F | requency |
| | | IFGain:Low #Atten: 2 | | 0. | | | | | Auto Tune |
| 10 dB/div Log | Ref Offset 1 dB Ref 0.00 dBm | | | | M | kr1 14.1 -80.38 | 170 kHz 84 dBm | | Auto Tune |
| | | | | | | | | | Center Freq |
| -10.0 | | | | | | | | | 79.500 kHz |
| 20.0 | | | | | | | | | |
| -20.0 | | | | | | | | | Start Freq |
| -30.0 | | | | | | | | | 9.000 kHz |
| | | | | | | | | | |
| 40.0 | | | | | | | -44.69 dBm | | Stop Free |
| -50.0 | | | | | | | | | 150.000 kHz |
| | | | | | | | | | |
| 60.0 | | | | | | | | | CF Step 14.100 kHz |
| | | | | | | | | <u>Auto</u> | Mar |
| 70.0 | | | | | | | | | |
| .80.0 | | | | | | | | | Freq Offset |
| ¹ (Միստույ | h_{λ} h_{λ} h_{λ} h_{λ} | hallow the and the second | | | | | | | 0 Hz |
| -90.0 | 1. A. P. B. A. L. M. | " (m) V W with a for (from a l) a for | ᡆ᠕ᢧᡣ᠋ᢆ᠕᠕ | ๛๚๚๛๛๚๚ | ᠈ᢧᠣ ^ᡀ ᠰᠰᡀᠳᢍ | ՠֈՠՠՠ | ᠧᠴ ^{ᡊᡰ} ᠘ᠴᡏᡀᡘᢑᡔᢔ | | |
| | | | | | | | · · | | |
| Start 9.00 | | | | | | Stop 15 | 0.00 kHz | | |
| #Res BW | 1.0 kHz | #VBW 3.0 kHz | | | - | | (601 pts) | | |
| MSG | | | | | STATUS | L DC Cou | pled | | |



| X/RL | RF 50 ລ. <u>14</u> DO req 15.075000 | | SENS | E:INT | Avg Type | ALIGNAUTO : Log-Pwr | TRAC | 1Nov 15, 2017 E 1 2 3 4 5 6 | Frequency |
|------------------|---|----------------------------------|--------------------------|-------|-----------------------------|--|-------------------------------|--------------------------------|--|
| Genter r | req 13.073000 | PNO: Wide G IFGain:Low | Trig: Free #Atten: 40 | | Avg Hold: | | TYP | E MWWWWW T P P P P P P | |
| 10 dB/div Log | Ref Offset 1 dB Ref 20.00 dBn | 1 | | | | MI | (r1 15.3 -63.14 | 34 MHz 42 dBm | Auto Tune |
| 10.0 | | | | | | | | | Center Freq 15.075000 MHz |
| -10.0 | | | | | | | | | Start Freq 150.000 kHz |
| -20.0 | | | | | | | | -34.69 dBm | Stop Freq 30.000000 MHz |
| -40.0 | | | | | | | | | CF Step 2.985000 MHz <u>Auto</u> Mar |
| -60.0 | hala an | yddfeladneigfeathreateaenelad ga | den si sudi si sudi | 1 | had from the first from the | a selitika (c. () – ál. () Viri kony pre gier () | a kind for die state of state | | Freq Offset 0 Hz |
| -70.0 | | | | | | | | 0.00 MHz | |
| Res BW | | #VBW | 30 kHz | | 5 | Sweep 2 | 85.4 ms (| 3001 pts) | |



| Agilent Spec | ctrum Analyzer - Swept SA | | | | | |
|---------------------|---|---|---|---|--|---|
| l XI RL | RF 50 Ω AC | | SENSE:INT | ALIGN AUTO | 12:41:43 PM Nov 15, 2017 | Frequency |
| Center | Freq 1.16500000 | PNO: Fast | Trig: Free Run #Atten: 40 dB | Avg Type: Log-Pwr Avg Hold:>50/50 | TRACE 123456 TYPE MWWWWW DET PPPPP | |
| 10 dB/div Log | Ref Offset 1 dB Ref 20.00 dBm | | | Mkr | 1 2.154 72 GHz -47.974 dBm | Auto Tune |
| 10.0 | | | | | | Center Freq 1.165000000 GHz |
| 0.00 | | | | | | Start Freq 30.000000 MHz |
| -20.0 | | | | | -24.69 dBm | Stop Freq 2.300000000 GHz |
| -40.0 | | | | | | CF Step 227.000000 MHz <u>Auto</u> Man |
| -50.0 -60.0 | ader Jong, Ala Angeler, J. H. Jong, S. H. Barley, H. K. Marana, and A starting Str. Spin system and and start of starting strength | hall and a first of a | n il das _{en e} n est est et de serve als statistical de De transmission de serve particular a serve als antes De transmission de serve particular a serve als antes antes a | ang bang ang pang pang pang pang pang pang pa | y με ματική το ματική τη του | Freq Offset 0 Hz |
| -70.0 | | | | | | |
| Start 30 #Res BV | MHz № 100 kHz | #VBW 3 | 00 kHz | Sweep 2 | Stop 2.300 GHz 17.1 ms (8001 pts) | |
| MSG | | | | STATUS | | |



| | um Analyzer - S | | | | | | | | | |
|-----------------------|-------------------------------|---------------------------|--------------------------|--------------------------|-----------------------|----------------------|--------------|--|--------------------------------|---|
| XIRL | RF 50 req 2.3500 | Ω AC | 211-7 | SEN | ISE:INT | | ALIGNAUTO | | 1Nov 15, 2017 E 1 2 3 4 5 6 | Frequency |
| | req 2.5500 | | PNO: Fast IFGain:Low | Trig: Free #Atten: 40 | | Avg Hold: | >200/200 | TYP DE | E MWWWWW T P P P P P P | |
| 10 dB/div Log | Ref Offset 1 Ref 20.00 | | | | | | Μ | 49.50 kr1 | 10 GHz 00 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Freq 2.350000000 GHz |
| -10.0 | | | | | | | | | | Start Freq 2.300000000 GHz |
| -20.0 | | | | | | | | | -24.69 dBm | Stop Freq 2.400000000 GHz |
| -40.0 | | | | | | ↓ ¹ | | | | CF Step 10.000000 MHz <u>Auto</u> Man |
| -50.0 1/1/1/4/1/1/ | hayortayaalka ka yada yada ya | kelativ ¹ etiv | Thurselly the styre have | HMMAAAMAAMA M | ay/wihightharay.nev11 | ntentralizationation | hp-on-un-lif | _เ น _{ี่ยมส} ารใหญ่ เมืองสารเป็น เป็น เมืองสารเป็น เมื่ง เป็น เมืองสารเปล้า เปล้า เมื่ง เปล้า เปล้า เมื่ง เปล้า เมื่ง เมื่ง | n-authur ha | Freq Offse 0 Hz |
| -70.0 | | | | | | | | | | |
| Start 2.30 #Res BW | 000 GHZ 100 kHz | | #VBW | 300 kHz | | | Sweep | Stop 2.40 9.600 ms (| 1000 GHz 1001 pt <u>s</u>) | |
| MSG | | | | | | | STATL | JS | | |



| | rum Analyzer - Swept | | | | | | | | | |
|-----------------------|---------------------------------|---------------------|--------------|----------------------------|--------|-----------|---|------------------------|--------------------------------|---|
| IXI RL | RF 50 Ω | | | SENSE:I | NT | Avg Type | | | 1Nov 15, 2017 E 1 2 3 4 5 6 | Frequency |
| Center F | req 2.491750 | | | ig: Free Ru tten: 40 dB | | Avg Hold: | | TYP | E MWWWWW T P P P P P P | |
| 10 dB/div | Ref Offset 1 dB Ref 20.00 dB | | | | | | Mkr1 2 | .497 305 -49.90 | 5 0 GHz 04 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Freq 2.491750000 GHz |
| -10.0 | | | | | | | | | | Start Freq 2.483500000 GHz |
| -20.0 | | | | | | | | | -24.69 dBm | Stop Freq 2.500000000 GHz |
| -40.0 | | | | | | | | ∮ ¹ | | CF Step 1.650000 MHz <u>Auto</u> Man |
| -60.0 | ᢦᢇᡗᡟᠲᠯᢇᢆ᠆ᢦ᠆᠕᠘᠆᠆ᡔᢦᠻᡘᢕᢍᡗ | ᡃᡃᢦᠧᡗᢕᢇᡅᢩᡳᡗᡌᡁᡅᠯᡃ᠇ᢇᢇ | ᠰᢉᡏᡶᠬ᠇ᡊ᠕ᡀᡘᡁᡗ | v-lut llvalare | ᠕ᡎᡵ᠕ᡃᡀ | ᡅᠬ᠕ᠬ | _Մ ու ՊԼ _ս Խ փւ.Խ՝ | ᠋ᡅᡵᡘᠧᢔᡰᡰᡒᡗᠯ᠂ᡐᡢᡗ | مالمهما کی رومی | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | |
| start 2.48 #Res BW | 3500 GHz 100 kHz | | #VBW 30 | 0 kHz | | | | Stop 2.500 1.600 ms | | |
| MSG | | | | | | | STATUS | S | | |



| Agilent Spect | rum Analyzer - Swe | ept SA | | | | | | | | |
|-----------------------|--|-----------|----------------------------------|--------------------------|---------|-----------|-------------------------|---------------------|---|---|
| LXIRL | RF 50 Ω | | | SEN | ISE:INT | | ALIGN AUTO : Log-Pwr | | 4Nov 15, 2017 E <mark>1 2 3 4 5 6</mark> | Frequency |
| Center F | req 14.5000 | P | SHZ 'NO: Fast 🖵 Gain:Low | Trig: Free #Atten: 40 | | Avg Hold: | | TYI | | |
| 10 dB/div Log | Ref Offset 1 d Ref 20.00 d | | | | | | Μ | kr1 25.5 -37.5 | 58 GHz 19 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Freq 14.500000000 GHz |
| -10.0 | | | | | | | | | | Start Freq 2.500000000 GHz |
| -20.0 | | | | | | | | | -24.69 dBm | Stop Freq 26.500000000 GHz |
| -40.0 | den vijeren gescher die ge | hile or a | اللاقر والدين وإفغار ومعادين ورو | tables and a state | | | | | | CF Step 2.40000000 GHz <u>Auto</u> Man |
| -60.0 | | | | in de a biel en anti- | | | | | | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | |
| Start 2.50 #Res BW | | | #VBW | 300 kHz | | | Sweep | Stop 2 2.294 s (| 6.50 GHz 8001 pts) | |
| MSG | | | | | | | STATUS | 3 | | |



2.2 TM1_Ch19_M

Pref:





Puw:

| Ref Offset 1 dB Avg Type: Log-Pwr Avg Hold>5000 Trac: Free Run Avg Hold>5000 Trac: Free Run -S1.756 dBm Center Freq 79.500 kHz 5000 | | um Analyzer - Swept SA | | | | | | | | |
|---|-----------|--|----------------------------|-----------------|--------------------------|---------|-------------------|-------------------|------|-------------|
| Ref Offset 1 dB (albrdiv Ref 0.00 dBm Mkr1 12.525 kHz -81.756 dBm Auto Tune 0 dB/div Ref 0.00 dBm -81.756 dBm Center Freq 79.500 kHz 0 d d d d d 0 d d d d d d 0 d d d d d d 0 d d d d d d 0 d d d d d d 0 d d d d d d 0 d d d d d d 0 d d d d d d 0 d d d d d d d 0 d d d d d d d d 0 d d d d d d d d d d d d d d d d d | Center Fi | RF 50 Ω <u>A</u> DC req 79.500 kHz | | | Avg Type: | Log-Pwr | TRAC | E 1 2 3 4 5 6 | F | requency |
| Ref Offset 1 dB HINT 1 12.025 KHz 0 dB/div Ref 0.00 dBm -81.756 dBm 0 dB/div -81.756 dBm -81.756 dBm 0 dB/div -4512em -512em 0 dB/div -4512em -4512em 0 dB/div -4512em -4512em | | | | | Avg Hold:> | ·50/50 | DE | | | |
| 100 Image: Center Freq 79.500 kHz 200 Image: Center Freq 9.000 kHz 200 Image: Center Freq 14.100 kHz 200 Image: Center Fre | 10 dB/div | | | | | М | kr1 12.{ -81.7 | 525 kHz 56 dBm | | Auto Tune |
| 200 200 200 200 200 200 200 200 | | | | | | | | | | Center Freq |
| Start Freq 9.000 kHz 40.0 50 | -10.0 | | | | | | | | | 79.500 kHz |
| Start Freq 9.000 kHz 40.0 50 | -20.0 | | | | | | | | | |
| 40.0 | | | | | | | | | | |
| 50.0 | -30.0 | | | | | | | | | 9.000 kHz |
| 50.0 | .40 0 | | | | | | | | | |
| 50.0 | 40.0 | | | | | | | -45.12 dBm | | |
| 1 | -50.0 | | | | | | | | | 130.000 KH2 |
| 1 | eo o | | | | | | | | | CF Step |
| 70.0 1 1 Freq Offset 30.0 1 1 1 1 30.0 1 1 1 1 1 30.0 1 <t< td=""><td>-60.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Auto</td><td>14.100 kHz</td></t<> | -60.0 | | | | | | | | Auto | 14.100 kHz |
| ۲۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰ ۲۰۰۰۰ ۲۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰۰ ۲۰۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰۰۰۰ ۲۰۰۰۰۰۰۰۰۰۰۰ ۲۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰ | -70.0 | | | | | | | | Auto | Mari |
| ۲۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰ ۲۰۰۰۰ ۲۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰۰ ۲۰۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰ ۲۰۰۰۰۰۰۰۰ ۲۰۰۰۰۰۰۰۰۰۰۰ ۲۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰ | | | | | | | | | | Freq Offset |
| تر معن | | <u>~ ሥ</u> ላ _እ ለግለቶኤ _በ | ስ ለ | | | | | | | |
| Res BW 1.0 kHz #VBW 3.0 kHz Sweep 134.8 ms (601 pts) | -90.0 | Դու ու ու Մ | and proved that prover the | ᡀᡗᡃᠺᢆ᠇ᢦᡗᡁᢇᡡᠣᢦᡗᡕ | ᢦᢦ ^{ᡗᡅ} ᡫᠬ᠕ᡃᡅᡘᡃ | w^{1} | ral washes | ᠕᠕ᢧᢛᢛᡒᡀᠬᠬ | | |
| Res BW 1.0 kHz #VBW 3.0 kHz Sweep 134.8 ms (601 pts) | | | | | | | | | | |
| | | | | | | 0 | Stop 15 | 0.00 kHz | | |
| | | 1.0 KHZ | #VBW 3.0 KHZ | | | _ | | | | |



| Agilen | nt Spectr | um Analy | zer - Swe | ept SA | | | | | | | | | |
|----------------|---------------|---------------|-----------------------------|---------------|-----------------------------|-------------|----------------------|---|--|----------------------|---|---|---|
| l xi ri | | RF | 50 Ω | | | | SEN | ISE:INT | | ALIGN AUTO | | 4Nov 15, 2017 | Frequency |
| Cen | iter Fi | req 15 | .0750 | | 2 PNO: Wide FGain:Low | | ig: Free tten: 40 | | Avg Type Avg Hold: | e: Log-Pwr >50/50 | TYF | Е <mark>12345</mark> 6 ЕМ ИМИМИМ ТРРРРРР | |
| 10 dE Log i | B/div | | fset1c 2 0.00 c | | | | | | | Μ | kr1 22.1 -63.0 | 59 MHz 21 dBm | Auto Tune |
| 10.0 | | | | | | | | | | | | | Center Freq 15.075000 MHz |
| 0.00 -10.0 | | | | | | | | | | | | | Start Freq 150.000 kHz |
| -20.0 -30.0 | | | | | | | | | | | | | Stop Freq 30.000000 MHz |
| -40.0 | | | | | | | | | | | | -35.12 dBm | CF Step 2.985000 MHz <u>Auto</u> Man |
| -60.0 | | | ا به میزهانه به آم ی | Walledatester | Andres and the set | ele siender | in de chatele | historia de la compaño de l | nu de la | ↓ 1 | un alla da fi alla da angla da sa | hallan ferran <mark>a</mark> alada | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | | | | |
| | t 150 s BW | KHZ 10 kHz | z | | #VE | SW 30 | kHz | | | Sweep 2 | Stop 3 285.4 ms (| 0.00 MHz 3001 pts) | |
| MSG | | | | | | | | | | STATU | s 🦺 DC Cou | ipled | |



| Agilent Spect | rum Analyzer - Swep | | | | | | | | | |
|-----------------------|---|--|----------------------------|--|---------|--|--|-----------------------|--|---|
| XIRL | RF 50 Ω | | _ | SEN | ISE:INT | | ALIGN AUTO | | INov 15, 2017 | Frequency |
| Center F | req 1.165000 | PN | Z 10: Fast 🖵 ain:Low | Trig: Free #Atten: 40 | | Avg Hold: | | TYP | E MWWWWW T P P P P P P | |
| 10 dB/div | Ref Offset 1 dB Ref 20.00 dE | | | | | | Mkr | 1 2.136 -48.83 | 56 GHz 38 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Freq 1.165000000 GHz |
| -10.0 | | | | | | | | | | Start Freq 30.000000 MHz |
| -20.0 | | | | | | | | | -25.12 dBm | Stop Freq 2.300000000 GHz |
| -40.0 | | | | | | | | | ↓ 1 | CF Step 227.000000 MHz <u>Auto</u> Man |
| -60.0 | han gilan ya jiraan Japan di kan Kangana gilan ya jiraan ya ka sa ka sa ka | i Marati (La militarini Arpani Arpani Antonia | | ne kolesisisisi Tanipan pangapitana | | 994 (1996) - 1996 - 1996 (1996) 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 | i, etilä piesi kuon ja Leo joinna mana ja Leo | | n an | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | |
| Start 30 N #Res BW | | | #VBW | 300 kHz | | | Sweep 2 | Stop 2. 17.1 ms (1 | 300 GHz 8001 pts) | |
| MSG | | | | | | | STATUS | 3 | | |



| Agilent | | Malyzer - Sv | | | | | | | | | |
|-----------------|---|---------------------------------|-----------------|--------------------------------|---|--------------------------------|------------------------|---------------|--|--------------------------------|--|
| X/RL | | | Ω AC | | SEN | ISE:INT | | ALIGNAUTO | | 4Nov 15, 2017 E 1 2 3 4 5 6 | Frequency |
| Cent | er Freq | 2.3500 | 00000 | GHZ PNO: Fast IFGain:Low | Trig: Free #Atten: 40 | | Avg Hold: | | TYP | | |
| 10 dB/ _og r | | ef Offset 1 e f 20.00 | | | | | | Μ | 49.6 [°] kr1 2.334 | 1 5 GHz 15 dBm | Auto Tune |
| 10.0 | | | | | | | | | | | Center Fred 2.350000000 GHz |
| 0.00 | | | | | | | | | | | Start Fred 2.300000000 GHz |
| -20.0 - | | | | | | | | | | -25.12 dBm | Stop Fred 2.400000000 GH2 |
| 40.0 - | | | | | | | | | | | CF Step 10.000000 MH <u>Auto</u> Mar |
| 60.0 | Ҷ╢ <mark>┢╍_{┲┲}⋫_┶⋏ыҢ</mark> | ndfulipse-af-laged | 4,00°19"Yuqlara | ๛๛๛๛๛๛๚๚๚ | https://https://https://https://https://https://https://https://https://https://https://https://https://https:/ https://https://https://https://https://https://https://https://https://https://https://https://https://https:// | ԻՆՆՆուսո <mark>սի</mark> կերել | b-01.1put/booky-obship | uendedellyger | ง _ป ะส่ง _{ไร} ระสุขาะสงสราไรขังง | l'Hydrog Verlyn | Freq Offse |
| -70.0 | | | | | | | | | | | 0 H: |
| | 2.30000 BW 100 | | | #VBW | 300 kHz | | | Sweep | Stop 2.40 9.600 ms (|)000 GHz 1001 pts) | |
| ISG | | | | | | | | STAT | JS | | |



| 0.0 | | | | | | | | Stop Fre |
|---------------|--|-----------------------------|---------------|-----------------------|---|---------------|------------------------------|------------------------|
| D.0 | | | | | | | -25.12 dBm | 2.500000000 GH |
| | | | | | | | | CF Ste |
| | | | | | | | ↓ 1 | 1.650000 MH Auto Ma |
| D.0 | para and a grant of the second se | $\mathcal{L}_{\mathcal{A}}$ | ᡃᡙᡗᡃᠾᢇᠠ᠘᠕ᠬᡅᡳᠬ | ᡅᢆᠾ᠆ᡘᢦᡁᡗᠯᢕᢇᡘᡕᡟ | ᠕ᡙᢦᡐᡨᢥᡁᢦᡐᡨᡀ | ᠕ᡙᡀᢧᠬ᠕ᡁᡔᡙᡬᡗᡃᡵ | www.andly.com | |
| ᠵ᠕ᡃᠳᡘ᠂ᢣᠬᡘ᠇᠕ᡁᡁ | ֈᡅ᠋ᡘᡊᢇ᠘ᡁᢛ᠋ᡀ᠉ᡰᡀᡢᠯ᠕ᡘ | | ካ ሀገግ እየገርገም | የምታለወኪ <u>የ</u> ርጉሪ ካ | ֊֊֊ՙֈֈֈֈ ՟՟՟ֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈֈ | | יייאי אדוקייינגעיי מרגייין מ | Freq Offse |
| D.0 | | | | | | | | - он |



| Agilent Spectr | um Analyzer - Swe | ept SA | | | | | | | | |
|-----------------------|-------------------------------|--------|--------------------------------|--------------------------|----------------------|----------------------|-------------------------|-------------------|---------------------------------------|---|
| 🗶 RL | | AC AC | | SEN | ISE:INT | | ALIGN AUTO : Log-Pwr | | MNov 15, 2017 E 1 2 3 4 5 6 | Frequency |
| Center F | req 14.5000 | Р | STIZ NO: Fast 😱 Gain:Low | Trig: Free #Atten: 40 | | Avg Hold: | | TY | | |
| 10 dB/div Log | Ref Offset 1 d Ref 20.00 d | | | | | | Μ | kr1 25.5 -37.6 | 37 GHz 75 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Freq 14.50000000 GHz |
| -10.0 | | | | | | | | | | Start Freq 2.500000000 GHz |
| -20.0 | | | | | | | | | -25.12 dBm | Stop Freq 26.500000000 GHz |
| -40.0 | sur ola state ti silim | | - Annal Contributed Data | ata da la ta d | , Josh Millington, J | asan a filadika sa k | | | | CF Step 2.40000000 GHz <u>Auto</u> Man |
| -60.0 | | | | | | | | | | Freq Offset 0 Hz |
| -70.0 Start 2.50 | CHZ | | | | | | | Ston-1 | 6 50 CH2 | |
| start 2.50 #Res BW | | | #VBW | 300 kHz | | | Sweep | 2.294 s (| 6.50 GHz 8001 pts) | |
| MSG | | | | | | | STATUS | 3 | | |



2.3 TM1_Ch39_H

Pref:





Puw:

| | um Analyzer - Swept | | | | | | | | | |
|-----------------------|--------------------------------------|------------------|--------------------------|-----------------------|-----------|------------------------|-------------------------------------|------------------------------------|-------------|---------------------------------|
| Center F | RF 50 Ω <u>1</u> ແ req 79.500 kH | | SEN | ISE:INT | Avg Type | ALIGNAUTO : Log-Pwr | TRAC | 4Nov 15, 2017 E 1 2 3 4 5 6 | F | requency |
| | | Close 😱 n:Low | Trig: Free #Atten: 26 | | Avg Hold: | | | PE MWWWWW T P P P P P P | | Auto Tune |
| 10 dB/div Log | Ref Offset 1 dB Ref 0.00 dBm | | | | | M | -79.8 | 370 kHz 06 dBm | | Auto Tune |
| | | | | | | | | | 1 | Center Freq |
| -10.0 | | | | | | | | | | 79.500 kHz |
| -20.0 | | | | | | | | | | Start Freq |
| -30.0 | | | | | | | | | | 9.000 kHz |
| -40.0 | | | | | | | | | | |
| | | | | | | | | -45.72 dBm | | Stop Freq 150.000 kHz |
| -50.0 | | | | | | | | | | |
| -60.0 | | | | | | | | | | CF Step 14.100 kHz |
| -70.0 | | | | | | | | | <u>Auto</u> | Man |
| -80.0 | ♦ ¹ | | | | | | | | | Freq Offset |
| տուս ՄՆոյուտ | War way and a way | Mary | ህም ቤር የሥ | - ა <mark>ს ით</mark> | ~ ለሔ ለ | ulun . | ֈՠ ^{ֈՠֈ} ՠֈՠֈՠ | ስለከ መሞ ነ | | 0 Hz |
| -90.0 | | | • • • • • • | - V | | | | - 011-11-04 - 11- (- 1 | | |
| Start 9.00 #Res BW | | #\/B\W | 3.0 kHz | | | Sweep | Stop 15 | 0.00 kHz (601 pts) | | |
| MSG | | <i></i> | 5.0 KHZ | | | | DC Cou | | | renantina terrationalista de |



| Agilent | t Spectrum An | | ept SA | | 0.00 | ISE:INT | | | 01,11,00 51 | May 15 2012 | |
|----------------|---|------------------------|---|--------------------------|--------------------------|----------------------|--------------------------|---|-------------------------|--------------------------------|---------------------------|
| | ter Freq | | | | | I | Avg Type | ALIGNAUTO | TRAC | 1Nov 15, 2017 E 1 2 3 4 5 6 | Frequency |
| | | | F | PNO: Wide 🖵 =Gain:Low | Trig: Free #Atten: 40 | | Avg Hold: | >50/50 | TYP DE | E M WWWWW T P P P P P P | |
| 10 dE Log r | Ref 3/div Re t | Offset1 (f 20.00 (| dB d Bm | | | | | M | kr1 13.1 -62.7 | 45 MHz 77 dBm | Auto Tune |
| | | | | | | | | | | | Center Fred |
| 10.0 | | | | | | | | | | | 15.075000 MH: |
| 0.00 | | | | | | | | | | | |
| -10.0 | | | | | | | | | | | Start Fred 150.000 kH: |
| 10.0 | | | | | | | | | | | |
| 20.0 | | | | | | | | | | | Stop Free |
| 30.0 | | | | | | | | | | | 30.000000 MH |
| | | | | | | | | | | -35.72 dBm | CF Ster |
| 40.0 | | | | | | | | | | | 2.985000 MH |
| 50.0 | | | | | | | | | | | <u>Auto</u> Mar |
| ·60.0 | | | | | 1 | | | | | | Freq Offse |
| .00.0 | aluna bashi dahad | بأوجل الأولية | وعاليه والارتقاع | er a Margaria da de la | | | atulu televiti da fa kuj | a da dia dia mandri dia kata d | and the second starters | والمتلف والمتلفين | 0 H: |
| 70.0 | and the second secon | | a production for a state of the s | | and House 10 | na ki kina ana jiri. | an she an a | an di kanadiji, d | | | |
| | | | | | | | | | | | |
| | t 150 kHz s BW 10 k | Hz | | #VBW | 30 kHz | | | Sweep 2 | Stop 30 85.4 ms (3 | 0.00 MHz 3001 pts) | |
| ISG | | | | | | | | | DC Cou | | |



| Agilent Spectr | um Analyzer - Sw | | | | | | | | | |
|-----------------------|---|-----------|--|--------------------------|--|---|---|----------------------|---|--|
| X/RL | | AC | 1_ | SEN | ISE:INT | | ALIGN AUTO | | 1Nov 15, 2017 | Frequency |
| | req 1.1650(| F | ⊣Z 'NO: Fast ⊊ Gain:Low | Trig: Free #Atten: 40 | | Avg Hold: | | TYP | E MWWWWW T P P P P P P | |
| 10 dB/div | Ref Offset 1 o Ref 20.00 o | dB dBm | | | | | Mkr | 1 2.258 -48.6 | 29 GHz 76 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Freq 1.165000000 GHz |
| -10.0 | | | | | | | | | | Start Freq 30.000000 MHz |
| -20.0 | | | | | | | | | -25.72 dBm | Stop Freq 2.300000000 GHz |
| -40.0 | | | | | | | | | | CF Step 227.000000 MHz <u>Auto</u> Man |
| -50.0 -60.0 | l i an tao kao amin'ny faritr'i Andrea (n. 1917) Ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr | | | | ang ang ang tang tang tang tang tang tan | <mark>k pliniter a po<mark>r da la kanal.</mark> Tra porto a porto a porto a porto a</mark> | ini pada Ting Kanggang Presiden Sanggang | | n an fairte an tha an an tha an | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | |
| Start 30 N #Res BW | | | #VBW | 300 kHz | | | Sweep 2 | Stop 2. (17.1 ms) | .300 GHz 8001 pts) | |
| MSG | | | | | | | STATUS | 3 | | |



| ISG | | | | | | | STAT | 118 | | |
|-----------------|----------------------------------|-------------------------------|-----------------------------|-------------------------|----------------------------|-----------------------|------------------------|----------------------|--|--------------------------------|
| | / 100 GH2 | | #VBW | 300 kHz | | | Sweep | 9.600 ms (| | |
| Start 2-3 | 0000 GHz | | | | | | | Stop 2.4(| 0000 GHz | |
| 70.0 | | | | | | | | | | |
| -70.0 | | | | | | | | | | 011 |
| 60.0 | | | | | | | | | | Freq Offse |
| -hp-la | arrend benefitised to over | h.A.Maytan, the source of the | philips for all all all all | and and a second second | apple of the second second | physican | Milliphan | addeddaaryn,14_reged | ৻ <mark>֍ՠֈ</mark> ֈֈֈֈ | |
| 50.0 | | | | | | | | | | <u>Auto</u> Mar |
| -40.0 | | | | | | | 1 | | | CF Step 10.000000 MH: |
| | | | | | | | | | | |
| 30.0 | | | | | | | | | | 2.400000000 GH |
| 20.0 | | | | | | | | | -25.72 dBm | Stop Free |
| | | | | | | | | | | |
| -10.0 | | | | | | | | | | 2.300000000 GHz |
| 0.00 | | | | | | | | | | Start Free |
| | | | | | | | | | | |
| 10.0 | | | | | | | | | | Center Fred 2.350000000 GHz |
| - ^{og} | | | | | | | | | | Contor From |
| 10 dB/div | Ref Offset 1 Ref 20.00 | | | | | | IVI | -49.4 | 30 dBm | |
| | | | IFGain:Low | #Atten: 40 | dB | | M | kr1 2.36 | | Auto Tune |
| Center | Freq 2.3500 | 00000 | GHZ PNO: Fast 🔾 | Trig: Free | | Avg Type Avg Hold: | e: Log-Pwr >200/200 | TYF | E 123456 E M WWWWW T P P P P P P | Trequency |
| KU RL | | Ω AC | | SEN | ISE:INT | | ALIGN AUTO | | 1Nov 15, 2017 | Frequency |



| | um Analyzer - Swe | | | | | | | | | |
|--|-------------------------------|------|---|--------------------------|---------------------------|---------|---------------|--|--------------------------------|---|
| XIRL Center Fi | RF 50 Ω req 2.49175 | | 47 | SEN | ISE:INT | | ALIGNAUTO | TRAC | 1Nov 15, 2017 E 1 2 3 4 5 6 | Frequency |
| Senter T | 109 2.45 17 5 | Р | NO: Wide 🖵 Gain:Low | Trig: Free #Atten: 40 | | AvgHold | | TYP | | |
| 10 dB/div _og | Ref Offset 1 d Ref 20.00 d | | | | | | Mkr1 2 | .489 660 -48.7 |) 0 GHz 11 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Fred 2.491750000 GHz |
| 0.00 | | | | | | | | | | Start Free 2.483500000 GH |
| 30.0 | | | | | | | | | -25.72 dBm | Stop Fre 2.500000000 GH |
| 40.0 | | | 1 | | | | | | | CF Stej 1.650000 MH <u>Auto</u> Ma |
| 00.0 אר^{יו}ערי 60.0 | ᠬᡁᠰᠾᡗᠼᡣ᠕ᠰᢧᢧᡅ | ᢩ᠂᠕᠕ | hold and a second start a second st | | ᢧ ^ᢔ ᡅᢧᡨ᠇ᡘᠬᠧᢩ᠕ᡝ | | kovloodoon of | h ^{ll} h- _U U-y ^{K-} Ml/4/* | ՠՠֈՠՠ | Freq Offse 0 H |
| 70.0 | | | | | | | | | | |
| Start 2.48 Res BW | 3500 GHz 100 kHz | | #VBW | 300 kHz | | | Sweep | Stop 2.500 1.600 ms | 1000 GHz (601 pts) | |
| SG | | | | | | | STATUS | 5 | | |



| | rum Analyzer - Sw | ept SA | | | | | | | | |
|-----------------------|--------------------------------------|-------------------|--------------------------------|--------------------------|---------|--|-------------------------|-------------------|---------------------------------------|---|
| LXIRL | | | | SEN | ISE:INT | | ALIGN AUTO : Log-Pwr | | MNov 15, 2017 E 1 2 3 4 5 6 | Frequency |
| Center F | req 14.5000 | Р | DFIZ NO: Fast 😱 Gain:Low | Trig: Free #Atten: 40 | | Avg Hold: | | TY | | |
| 10 dB/div Log | Ref Offset 1 (Ref 20.00 (| dB d Bm | | | | | Μ | kr1 25.5 -36.6 | 49 GHz 98 dBm | Auto Tune |
| 10.0 | | | | | | | | | | Center Freq 14.500000000 GHz |
| -10.0 | | | | | | | | | | Start Freq 2.500000000 GHz |
| -20.0 | | | | | | | | | -25.72 dBm | Stop Freq 26.50000000 GHz |
| -40.0 | | | | | | a station of the second se | | | | CF Step 2.40000000 GHz <u>Auto</u> Man |
| -60.0 | | | | | | | | | | Freq Offset 0 Hz |
| -70.0 | | | | | | | | Ctor 2 | 6 50 011- | |
| Start 2.50 #Res BW | | | #VBW | 300 kHz | | | Sweep | 2.294 s (| 6.50 GHz 8001 pts) | |
| MSG | | | | | | | STATUS | 3 | | |



Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note: We tested all modes, but the data presented below is the worst case.

Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

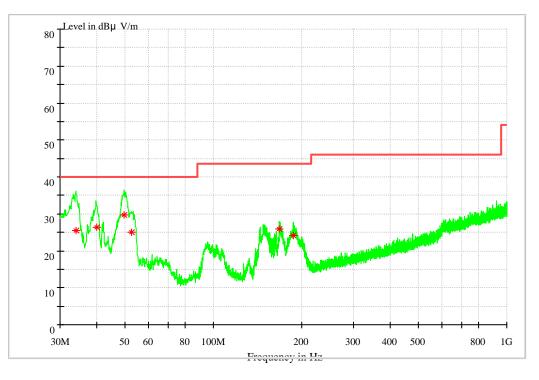


1.1 Part 1: Testing Range of "9 kHz to 30MHz"

NOTE1: No peak found in the Test Range of "9 kHz to 30MHz"

1.2 Part 2: Testing Range of "30 MHz to 1 GHz"

- Note 1: The test results and plot for testing range of "30 MHz to 1 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



| Frequency | Level | Limit | Margin | Height | Pol | Azimuth | Transd. |
|------------|----------|----------|--------|--------|-----|---------|---------|
| (MHz) | (dBµV/m) | (dBµV/m) | (dB) | (cm) | | (deg) | (dB) |
| 34.087650 | 25.42 | 40.00 | 14.58 | 100.0 | V | 25.0 | 14.5 |
| 40.095300 | 26.35 | 40.00 | 13.65 | 100.0 | V | 154.0 | 15.1 |
| 49.413700 | 29.66 | 40.00 | 10.34 | 100.0 | V | 96.0 | 15.4 |
| 52.764000 | 25.00 | 40.00 | 15.00 | 100.0 | V | 342.0 | 15.0 |
| 167.450300 | 26.01 | 43.50 | 17.49 | 100.0 | V | 250.0 | 11.0 |
| 187.842200 | 24.05 | 43.50 | 19.45 | 100.0 | V | 238.0 | 12.4 |

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain) The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

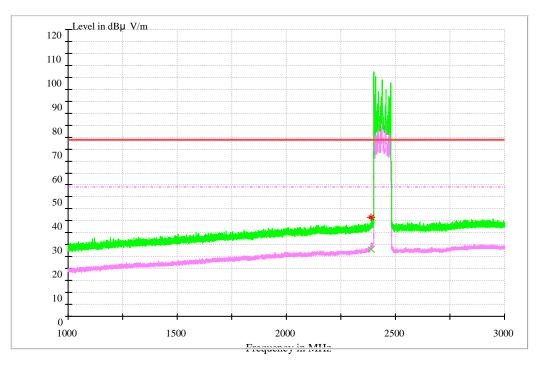


1.3 Part 3: Testing Range of "1GHz to 3GHz"

- Note 1: The testing range of "1GHz to 3 GHz" is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 $dB\mu V/m$) and Average Limit (54 $dB\mu V/m$).
- Note 3: The peak spike exceeds the limit line is EUT's operating frequency.

1.3.1Test Mode: TM1

1.3.1.1 Channel 0



MEASUREMENT RESULT: AV Detector

| Frequency (MHz) | Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Transd. (dB) |
|--------------------|-------------------|-------------------|----------------|----------------|-----|------------------|-----------------|
| 2390 | 29.99 | 54.00 | 24.01 | 150.0 | Н | 171.0 | -8.6 |
| | | | | | | | |

MEASUREMENT RESULT: PK Detector

| Frequency | Level | Limit | Margin | Height | Pol | Azimuth | Transd. |
|-----------|----------|----------|--------|--------|-----|---------|---------|
| (MHz) | (dBµV/m) | (dBµV/m) | (dB) | (cm) | | (deg) | (dB) |
| 2390 | 41.47 | 74.00 | 32.53 | 150.0 | Н | 129.0 | -8.6 |

Note:

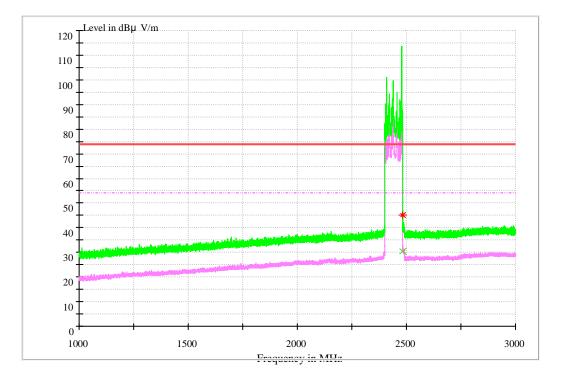
1, Level =Reading level by receiver + Transd (Antenna factor + cable loss - preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level



1.3.1.2 Channel 39



MEASUREMENT RESULT: AV Detector

| Frequency (MHz) | Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth(deg) | Transd. (dB) | | | |
|--------------------|-------------------|-------------------|----------------|----------------|-----|--------------|-----------------|--|--|--|
| 2483.5 | 30.51 | 54.00 | 23.49 | 150.0 | Н | 57.0 | -6.8 | | | |
| | | | | | | | | | | |

MEASUREMENT RESULT: PK Detector

| Frequency | Level | Limit | Margin | Height | Pol | Azimuth | Transd. |
|-----------|----------|----------|--------|--------|-----|---------|---------|
| (MHz) | (dBµV/m) | (dBµV/m) | (dB) | (cm) | | (deg) | (dB) |
| 2483.5 | 45.06 | 74.00 | 28.94 | 150.0 | Н | 72.0 | -6.8 |

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss - preamplifier gain)

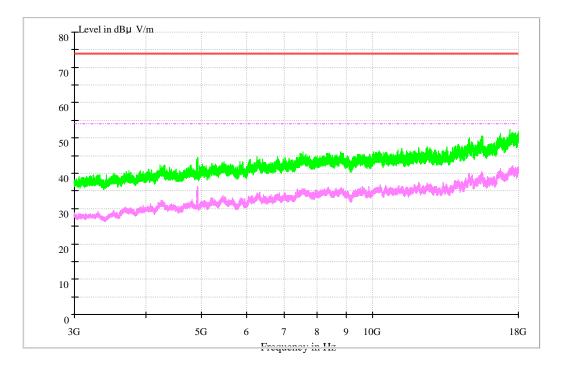
The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level



1.4 Part 4: Testing Range of "3 GHz to 18 GHz"

- Note 1: The test results and plot for testing range of "3 GHz to 18 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of "3 GHz to 18 GHz" is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 $dB\mu V/m$) and Average Limit (54 $dB\mu V/m$).



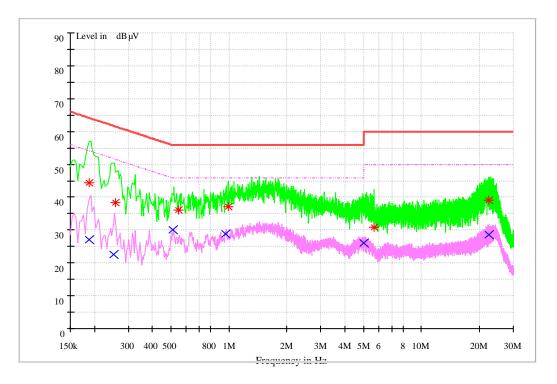
1.5 Part 5: Testing Range of "18 GHz to 26.5 GHz"

NOTE: No peak found in the Test Range of "18 GHz to 26.5GHz"



Appendix I: Conducted Emission at Power Port

Note1: RBW =9 kHz, VBW = 30 kHz



Channel 39

| Frequency | Level | Limit | Transd. | Margin | Line | DE |
|-----------|--------|--------|---------|--------|------|-----|
| (MHz) | (dBµV) | (dBµV) | (dB) | (dB) | | PE |
| 0.188628 | 27.07 | 54.09 | 9.7 | 27.02 | Ν | FLO |
| 0.250884 | 22.53 | 51.73 | 9.7 | 29.20 | Ν | FLO |
| 0.513894 | 30.08 | 46 | 9.7 | 15.92 | L1 | FLO |
| 0.963229 | 28.94 | 46 | 9.7 | 17.06 | L1 | FLO |
| 4.999996 | 25.99 | 46 | 9.8 | 20.01 | L1 | FLO |
| 22.398416 | 28.58 | 50 | 10.2 | 21.42 | L1 | FLO |

MEASUREMENT RESULT: AV Detector

MEASUREMENT RESULT: PK Detector

| Frequency (MHz) | Level (dBµV) | Limit (dBµV) | Transd. (dB) | Margin (dB) | Line | PE |
|--------------------|-----------------|-----------------|-----------------|----------------|------|-----|
| 0.187676 | 44.4 | 64.14 | 9.7 | 19.74 | Ν | FLO |
| 0.258162 | 38.33 | 61.49 | 9.7 | 23.16 | Ν | FLO |
| 0.54449 | 36.01 | 56 | 9.7 | 19.99 | L1 | FLO |
| 0.995356 | 37.08 | 56 | 9.7 | 18.92 | Ν | FLO |
| 5.647177 | 30.76 | 60 | 9.8 | 29.24 | Ν | FLO |
| 22.44987 | 39.10 | 60 | 10.2 | 20.90 | L1 | FLO |

Note2:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss - preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

END