

| Keysight S | pectrum Analyzer - Occupied | BW | | | | | | | | | |
|------------|-----------------------------|-------|-------------|---------------|--------------------------|------------|-------------|------------------|---------------|-------------------------|------------------|
| RL | RF 50 Ω DC | | | S | ENSE:INT | AL | IGN AUTO | | | 03:33:4 Radio Std: N | 7 PM Sep 22, 201 |
| enter | | | #IFGain:Low | | Trig: Free #Atten: 24 | Run dB | Avg Hold: 2 | 200/2 | 200 | Radio Devic | e: BTS |
| IO dB/div | Ref 51.35 dB | m | | | | | | | | | |
| 41.4 | | | | \rightarrow | | | | \square | | | |
| 31.4 | | | manna | - Ala | www. | mmmm | hann | | | | |
| 21.4 | | { | | \rightarrow | | | | F | \ | | |
| 11.4 | | | _ | - | | | | \vdash | <u>\</u> | | |
| 1.35 | | | | \rightarrow | | | | \vdash | 1 | | |
| 3.65 | | | _ | \rightarrow | | | | \vdash | \rightarrow | | |
| 8.7 | | | | \rightarrow | | | | \vdash | | | |
| 38.7 M | nousehown | my | | | | | | $\left \right $ | 470.04N | Man Manter | annogen. |
| 38.7 | | | | + | | | | \vdash | | | |
| enter | 874.5 MHz | | | | | | | | | Sp | an 10 MH |
| Res BV | V 51 kHz | | | | #VE | 3W 160 kHz | Z | | | S | veep 5 m |
| Occi | upied Bandwid | lth | | | Total P | ower | 53.2 di | Зm | | | |
| | 4 | .4804 | 4 MHz | | | | | | | | |
| Trans | smit Freq Error | -3 | .775 kHz | | % of O | BW Power | 99.00 | % | | | |
| x dB | Bandwidth | 4. | .781 MHz | | x dB | | -26.00 | dB | | | |
| | | | | | | | | | | | |
| G | | | | | | | STATUS | | | | |

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position M

| Keysight Spectrur | m Analyzer - Occupied | BW | | | | | | | | | 0 0 0 |
|-------------------|-----------------------|------|-------------|----------|-----------|------------|-----------|-------------|-----|-------------|------------------|
| RL | RF 50 Ω DC | | | SENSE:IN | T | ALI | GN AUTO | | | 10:25:3 | 7 AM Sep 25, 201 |
| Center Freq | 874.500000 | MHz | | Trig | Free Run | 1.500000 N | AvalHold: | 200/20 | 0 | Radio Std: | None |
| | | | #IFGain:Low | #Att | en: 24 dB | | | | 5.0 | Radio Devie | e: BTS |
| | | | | | | | | | | | |
| 10 10 11 | Dof 54 44 dE | | | | | | | | | | |
| Loa | Rel 51.11 de | 5111 | | | | | | | | - | r |
| 41.1 | | | | | | | | ++ | | | |
| 31.1 | | | man | mm | mound | renhand | man | my | | | |
| | | 1 | | | | | | A | | | |
| 21.1 | | 1 | | | | | | | | | |
| 11.1 | | ſ | | | _ | | | ++ | | | |
| 1.11 | - | | | - | | | | ++ | 1 | - | |
| -8.89 | - | | | - | | | | ++ | 1 | | |
| -18.9 | | | | | | | | \vdash | 1 | | |
| 28.9 | monorm | MAM | | | | | | | mon | mannon | manne |
| 28.0 | | | | | | | | | | | |
| -30.9 | | | | | | | | | | | |
| Center 874. | 5 MHz | | | _ | | | | | | S | an 10 MH |
| #Res BW 51 | kHz | | | | #VBW 1 | 60 kHz | | | | S | weep 5 ms |
| Occupie | d Bandwig | lth | | То | tal Powe | r | 53.2 d | Bm | | | |
| occupie | a Banama | 404 | | | | | | | | | |
| | 4 | .481 | 3 MHZ | | | | | | | | |
| Transmit | Freq Error | -4 | 1.560 kHz | % | of OBW I | Power | 99.0 | 0 % | | | |
| x dB Ban | dwidth | 4 | 807 MHz | xd | B | | -26.00 | dB | | | |
| A ab ban | | - | | ~ ~ ~ | - | | 20.00 | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| ISG | | | | | | | STATUS | | | | |
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| Keysight Spe | ectrum Analyzer - Occupied BW | / | | | | | | | | | | |
|----------------------|-------------------------------|----------|-------------|---------------|--|---------------|-------------|-----------|-----|----|-------------|--|
| RL Contor Er | RF 50 Ω DC | | | S | ENSE:INT | a: 877,500000 | IGN AUTO | | | | 03:42:2 | 3 PM Sep 22, 2017 |
| venter Fr | | | #IFGain:Low | - - - | Trig: Free #Atten: 24 | Run dB | Avg Hold: 2 | 200/2 | 200 | | Radio Devic | e: BTS |
| 10 dB/div | Ref 51.31 dBm | <u>،</u> | | | | | | | | | | |
| 41.3 | | | _ | + | | | | \square | | | | |
| 31.3 | | f | mmmm | m. | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | mm | hanne topen | h-1 | | | | |
| 21.3 | | A | _ | + | | | | \square | Ĺ | | | |
| 11.3 | | [] | _ | \rightarrow | | | | | ł | | | |
| 1.31 | | | | \rightarrow | | | | | 1 | | | |
| 8.69 | | -+ | _ | \rightarrow | | | | \square | | | | |
| 18.7 | | | _ | \rightarrow | | | | | 1 | | | |
| 28.7 | man approximation | 1000 | _ | | | | | | | mm | mannenna | WHIME'S S |
| -38.7 | | | | \rightarrow | | | | | | | | Contraction of the second seco |
| | | | | | | | | | | | | |
| Center 87 #Res BW | 77.5 MHz 51 kHz | | | | #VE | W 160 kHz | z | | | | Sp Sv | oan 10 MHz veep 5 ms |
| Occup | pied Bandwidt | h | | | Total P | ower | 53.2 di | Bm | | | | |
| | 4.4 | 4784 | 4 MHz | | | | | | | | | |
| Transn | nit Freq Error | -6 | .161 kHz | | % of O | 3W Power | 99.00 |) % | , | | | |
| x dB B | andwidth | 4. | 776 MHz | | x dB | | -26.00 | dB | • | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| ISG | | | | | | | STATUS | | | | | |

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T

| Keysight Spectrum Analyzer - Occupied BW | E | | | | | | | 00 |
|--|----------|-----------|----------------|------------------|-------------|--------------|--------------|-----------------|
| RL RF 50 Ω DC | | | SENSE:INT | ALIGN AL | ITO | | 10:43:2 | 6 AM Sep 25, 20 |
| enter Freq 877.500000 M | MHz | | Trig: Free Run | SUUUUU MHZ Av | alHold: 200 | /200 | Radio Std: I | None |
| | #15 | FGain:Low | #Atten: 24 dB | | | 10 C 10 C 10 | Radio Devic | e: BTS |
| | | | | | | | | |
| Didity Dof 51 12 dBm | | | | | | | | |
| a Rei 51.12 ubii | <u> </u> | | | - | | 1 | | - |
| 1 | | | | | | | | |
| 1 | - ma | mann | monormound | manna | mun | - | | |
| 1 | 1 | | | | | N | | |
| | / | | | | | 1 | | |
| | 1 | | | | | 1 | | 0 |
| 2 | | | | | | ++ | | |
| 3 | | | | | | ++ | | 1 |
| | | | | | | + | | |
| annon months and | w | | | | | man | mehring | Same a |
| 9 | | | | | | <u> </u> | | - vrm |
| | | | | | | | | |
| nter 877.5 MHz | | | | | | | Sp | oan 10 M |
| es BW 51 kHz | | | #VBW 10 | 60 kHz | | | S | weep 5 r |
| Occupied Rendwidt | h | | Total Power | | 3 1 dBr | n | | |
| Occupied Bandwidt | | | i otari i ower | | 0.1 001 | | | |
| 4.4 | 4794 | MHz | | | | | | |
| Fransmit Freq Error | -7.0 | 18 kHz | % of OBW P | ower | 99.00 9 | 6 | | |
| dB Bandwidth | 4 70 | | x dB | | 26 00 d | R | | |
| | 4.10 | 4 11112 | A GD | | 20.00 a | - | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |



Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position B

| Keysight Spe | ctrum Analyzer - Occupied B | N | | | | | | | | - 6 |
|--------------|-----------------------------|-------|-------------|-----------|-----------------|--------------|-------|-------|-------------------------|---------------------------|
| enter Fi | RF 50 Ω DC | MHz | | SENSE:INT | req: 874.000000 | IGN AUTO | | | 03:50:1 Radio Std: N | 8 PM Sep 22, 2017 Ione |
| | | | #IFGain:Low | #Atten: 2 | e Run 6 dB | Avg Hold: 20 | 0/200 |) | Radio Devic | e: BTS |
| 0 dB/div | Ref 51.64 dBr | n | | | | | | | | |
| .og | | | | | | | | | | |
| 31.6 | | | man | - | mannan mar | mmmm | m | | | |
| 21.6 | | | | | | | N. | | | |
| 11.6 | | } | | | | | X | | | |
| 1.64 | | | | | | | 1 | L | | |
| 3.36 | | | | | | | | | | |
| 8.4 | | | | | | | | 1 | | |
| 8.4 wmmhn | warmen when the | waav/ | | _ | | | | lbore | mon | mour |
| 38.4 | | | | | | | _ | | | |
| L anter 8 | 74 MHz | | | | | | | | Cr | an 20 MH |
| Res BW | 100 kHz | | | #V | 'BW 300 kHz | <u>.</u> | | | Sweep | o 1.933 m |
| Occup | pied Bandwid | th | | Total | Power | 53.6 dB | m | | | |
| | 8. | 9411 | 1 MHz | | | | | | | |
| Transr | nit Freq Error | 3 | .559 kHz | % of C | BW Power | 99.00 | % | | | |
| x dB B | andwidth | 9. | 599 MHz | x dB | | -26.00 d | в | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| G | | | | | | STATUS | | | | |

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position M

| Keysight Spectr | rum Analyzer - Occupied BV | V.: | | | | | | | | | | 0 |
|---------------------|----------------------------|------|-------------|-----|---------------------------------------|-----------|-----------|------|----------|----|------------|---------------------|
| RL Fro | RF 50 Ω DC | | _ | SE | Center Fre | AL | IGN AUTO | | | | Dadio Std: | 29 PM Sep 22, 21 |
| nter Fre | eq 874.500000 i | | #IFGain:Low | ••• | Trig: Free #Atten: 24 | Run dB | Avg Hold: | 200/ | 200 | | Radio Devi | ce: BTS |
| dB/div | Ref 51.67 dBn | n | | | | | v. | | | | | |
| 7 | | | | | | | | | | | | |
| 7 | | | mon | mon | mound | manne | man | m | 1 | | | |
| | | A | | | | | | | 1 | | | |
| | | 1 | | | i i i i i i i i i i i i i i i i i i i | | | | 1 | | | |
| | | | | | l. | | | | 1 | | | |
| | | 1 | | | | | - | | 1 | | | |
| | | | | | | | | | | | | |
| hann | mommen | m | | | | | | | 1 | nm | mm | |
| | | | | | | | | | | | - W.y | man |
| , | | | | | | | | | | | | |
| nter 874 es BW 1 | 4.5 MHz 100 kHz | | | | #VE | 300 kHz | 2 | | | | S Swee | pan 20 M p 1.933 |
| Occupi | ied Bandwidt | h | | | Total P | ower | 53.7 d | Bm | 1 | | | |
| | 8. | 9578 | B MHz | | | | | | | | | |
| ransmi | it Freq Error | 2 | .250 kHz | | % of O | BW Power | 99.0 | 0 % | b | | | |
| dB Ba | ndwidth | 9. | 572 MHz | | x dB | | -26.00 | dE | 3 | | | |
| | | | | | | | | | | | | |
| | | | | | | | STATUS | | | | | |



Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position T

| Keysight Spectrum Analyzer - Occupied BW | | | | - 6 |
|--|---|---|--------------------------|--|
| enter Freq 875.000000 M | IHz | Center Freq: 875.000000 Trig: Free Run | MHz Avg Hold: 200/200 | 03:58:19 PM Sep 22, 201 Radio Std: None |
| | #IFGain:Low | #Atten: 26 dB | | Radio Device: BTS |
| 0 dB/div Ref 51.63 dBm | | | | |
| og | | | | |
| 1.6 | manne | Anna and and and and and and and and and | monne | |
| 1.6 | | | | |
| 1.6 | 1 | | | |
| 1.6 | | | | |
| 63 | | | | |
| 3/ | | | | |
| | ~ | | | warman . |
| 2.4 | | | | a north and a start of the second sec |
| .4 | | | | |
| enter 875 MHz Res BW 100 kHz | | #VBW 300 kH | z | Span 20 MH Sweep 1.933 n |
| Occupied Bandwidth | <u>וווווווווווווווווווווווווווווווווווו</u> | Total Power | 53.7 dBm | |
| 8.9 | 358 MHz | | | |
| Transmit Freq Error | 4.678 kHz | % of OBW Power | r 99.00 % | |
| x dB Bandwidth | 9.647 MHz | x dB | -26.00 dB | |
| | | | | |
| | | | | |
| 3 | | | STATUS | |

Configuration B

| | | | Result | (KHz) |
|---------|------------|--------------------------|--------------------|------------------|
| Antenna | LIE | LIE Carrier Bandwidth | Channel F | Position M |
| | Woddiation | Banawiath | Occupied Bandwidth | -26 dB Bandwidth |
| A | QPSK | 1.4 MHz | 10,701.32 | 10,887.08 |
| А | QPSK | 3.0 MHz | 10,680.28 | 10,924.34 |
| A | QPSK | 5.0 MHz | 10,431.79 | 10,822.59 |



| Reysight Spectrum Analyzer - Occupied BW | | CENCE INT AL | | 04:06:18 DM See 22 |
|--|---------------------|-------------------------------------|-------------------|--------------------------|
| nter Freg 874 500000 M | AH _Z | Center Freq: 874.500000 | MHz | Radio Std: None |
| | | Trig: Free Run | Avg Hold: 200/200 | |
| | #IFGain:Low | #Atten: 22 dB | | Radio Device: BTS |
| | | | | |
| B/div Ref 48.37 dBm | 1 | | | |
| | 1 | | | |
| 4 | | | 4 | |
| ۱ <u> </u> | | | | |
| 4 | | | | |
| , | 1 | | | |
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| | - Marchart Marchart | | Ar m | |
| Manum nanador marsh | where a | and make may an a head of any south | we we | many marcenter barrenter |
| | | | | |
| nter 874.5 MHz | | | | Span 27.5 l |
| es BW 15 kHz | | #VBW 43 kHz | | Sweep 117.3 |
| Desuried Bandwidt | h | Total Power | 53.3 dBm | |
| Jecupieu Balluwiul | | | 00.0 00.0 | |
| 10 | .701 MHz | | | |
| ransmit Freg Error | -8.204 kHz | % of OBW Power | 99.00 % | |
| dB Bandwidth | 40.00 MU- | v dD | 26.00 dB | |
| | 10.69 MHZ | Xub | -20.00 dB | |
| | | | | |
| | | | | |
| | | | | |
| | | | STATUS | |

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position M

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position M

| KF 2032 DC | | SENSE:INT | AL | IGN AUTO | | 04:11: | 24 PM Sep 22, 2 |
|---|--|---|-------------------------------|---------------------------|-----------------|--------------------------|-----------------|
| nter Freq 874.500000 N | Hz #IFGain:Low | Center Free Trig: Free #Atten: 22 | q: 874.500000 Run dB | MHz Avg Hold: | 200/200 | Radio Std: Radio Devi | None ce: BTS |
| B/div Ref 47.85 dBm | | | | | | | |
| 3 | netronywerth | | | the market | | | |
| | | | | - | | | |
| | | | | | | | |
| | | Trees . | ent | | . | | - |
| have all the second and the second | NRUN CHAN | - marine | Li gollow Paralle | | "how me | Monderman | mannen |
| | | | | | | | n 27.5 M |
| es BW 30 kHz | | #VE | 3W 91 kHz | | | Swe | ep 29.2 |
| Secupied Bandwidth | <u>ו</u> | #VE Total P | 3W 91 kHz ower | 53.2 d | Bm | Swe | ep 29.2 |
| es BW 30 kHz Occupied Bandwidth 10 | י .680 MHz | #VE Total P | ower | 53.2 d | Bm | Spa Swe | ep 29.2 |
| CCUPIED Bandwidth CCCUPIED Bandwidth 10 Transmit Freq Error | 1 .680 MHz -5.329 kHz | #VE Total P % of Ol | BW 91 kHz ower BW Power | 53.2 d | Bm 0 % | Spa Swe | ep 29.2 |
| Ccupied Bandwidth | n . 680 MHz -5.329 kHz 10.92 MHz | #VE Total P % of Ol x dB | W 91 kHz ower BW Power | 53.2 d 99.00 -26.00 | Bm) % dB | Spa Swe | ep 29.2 |
| Ccupied Bandwidth | n . 680 MHz -5.329 kHz 10.92 MHz | #VE Total P % of Ol x dB | 8W 91 kHz ower BW Power | 53.2 d 99.00 -26.00 | Bm) % dB | Spa Swe | ep 29.2 |



Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position M

| Keysight Spectrum Analyzer - Occupi | ed BW | | | | | | | |
|--|----------|---------|-----------------------|---------------|------------|----------------|--------------|--------------------------|
| enter Freg 874.50000 | DO MHz | | Center Fre | q: 874.500000 | MHz | | Radio Std: N | S PM Sep 22, 201 Ione |
| · | #IFG | ain:Low | Trig: Free #Atten: 24 | Run dB | Avg Hold: | 200/200 | Radio Devic | e: BTS |
| 0 dB/div Ref 48.77 d | 1Bm | | | | | | | |
| 18.8 | | | | | | | | |
| 8.8 | - ł | man and | mannen | menter | gnwonneter | | | |
| 8.8 | 4 | | | 1 | | | | |
| .77 | 1 | | + | | | | | |
| 23 | | | + | | | | | |
| 1.2 | | | | } | | 1 | | |
| 1.2 | | | - La | W | | hursen a | | |
| 1.2 minute and and and a second second | | | | | | 1 Martin Maker | mulalmon | wheethour |
| 1.2 | + | | | | | | | - |
| enter 874.5 MHz | | | | | | | Spa | n 27.5 MH |
| Res BW 51 kHz | | | #VE | 3W 150 kH | z | | Sweep | o 10.13 m |
| Occupied Bandw | idth | | Total P | ower | 53.5 d | Bm | | |
| | 10.432 N | /Hz | | | | | | |
| Transmit Freq Error | - 31 | 88 Hz | % of O | BW Power | 99.0 | 0 % | | |
| x dB Bandwidth | 10.82 | MHz | x dB | | -26.00 | dB | | |
| | | | | | | | | |
| G | | | | | STATUS | | | |

Configuration C

| Antenna | | | Result (KHz) | | | | |
|---------|----------------|--------------------------|--------------------|------------------|--|--|--|
| | LTE Modulation | LTE Carrier Bandwidth | Channel Position M | | | | |
| | | Danowidin | Occupied Bandwidth | -26 dB Bandwidth | | | |
| A | QPSK | 1.4 MHz | 10,680.47 | 10,887.68 | | | |
| А | QPSK | 3.0 MHz | 10,645.48 | 10,924.75 | | | |



| Antenna A - LIE Modulation QPSK - LIE Carrier Bandwidth 1.4 MHZ - Channel Position M |
|--|
|--|

| 😐 Ke | ysight Spectrum A | Analyzer - Occupied | BW | | | | | | | | | |
|-------|--------------------|---------------------|-----------------------|--------|-------|--------------------------|-----------|---------|--------|----------|--------------------------|-----------------|
| XI R | L RF | 50 Ω DC | D MLI- | | | SENSE:INT | AL | IGN AUT | 0 | | 04:25:39 Radio Std: N | PM Sep 22, 2017 |
| Cer | iter Freq a | 374.50000 | J IVIAZ #IF | Gain:L | .ow 🔶 | Trig: Free #Atten: 22 | Run dB | Avg | Hold: | 200/200 | Radio Devic | e: BTS |
| 10 d | B/div F | tef 46.53 dl | Зm | | | | | | | | | |
| 36.5 | | | | | | | | | | | | |
| 26.5 | | | | any | | | | ma | preven | | | |
| 16.5 | | | | | | | | | | | | |
| 6.53 | | | | | ł | | | | 1 | | | |
| 0.55 | | | | | | | | | í | 1 | | |
| -3.47 | | | | | t | | | | • | 1 | | |
| -13.5 | | | | | | | | | | | | |
| -23.5 | distant. | | | - | hours | | | | | h., | | |
| -33.5 | Same in the Second | canage and the | adren all a forth | | | and the second | - | | | Theldygy | | |
| -43.5 | | | | - | | | | | | - | | 1. |
| Cer | ter 874.5 | MH7 | | - | | | | | | | Sna | n 27 5 MHz |
| #Re | s BW 15 k | Hz | | | | #VE | SW 43 kHz | | | | Sweep | 117.3 ms |
| c | Occupied | Bandwi | dth | | | Total P | ower | 53 | 3.4 d | Bm | | |
| | | 1 | 0.680 | MH | z | | | | | | | |
| т | ransmit F | req Error | -4.5 | 07 kl | Hz | % of O | BW Power | | 99.0 | 0 % | | |
| x | dB Band | width | 10.8 | 9 MI | Hz | x dB | | -2 | 6.00 | dB | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| ISG | | | | | | | | STA | TUS | | | |
| | | | | | | | | | | | | |

Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position M

| Keysight Sp | ectrum Analyzer - Occupied BW | | | | | | | | 0 |
|-------------|-------------------------------|----------------|-----------|------------|----------------|-----------|----------|--------------|------------------------|
| RL | RF 50 Ω DC | | | SENSE:INT | A | LIGN AUTO | | 04:32:1 | PM Sep 22, 201 |
| Center F | req 874.500000 N | IHZ | _ | Trig: Free | eq: 8/4.500000 | AvalHold: | 200/200 | Radio Std: P | lone |
| | | #IFG | ain:Low | #Atten: 2 | 4 dB | | | Radio Devic | e: BTS |
| | | | | | | | | | |
| 10 dB/div | Ref 45 94 dBm | | | | | | | | |
| Log | | <u> </u> | | | 1 | 1 | <u> </u> | | |
| 35.9 | | | | | | | - | | |
| 25.9 | | r | mulantica | | and muching | mounder | | | |
| 15.9 | | 1 | | | | | | | - |
| 5.04 | | 1 | | | 1 1/ | | 1 | | |
| 0.34 | | | | | 1 | | | | |
| 4.06 | | 1 | | | 1 | | | | - |
| -14.1 | | | | | | | | | - |
| -24.1 | | enthrout | | humbe | | | Halan | - | |
| 34.1 - | S/Paparana | | | | | | - Multu | mound | والمرادية والمرادية |
| -44.1 | | | | | | | | | |
| | | | | | | | | | |
| Center 8 | 74.5 MHZ | | | #V | | | | Spa | n 27.5 MH: n 20.2 m |
| FRES DW | JU KHZ | | | #* | DW 91KHZ | | | Swee | p 29.2 m |
| Occu | pied Bandwidth | 1 | | Total I | Power | 53.2 d | Bm | | |
| | 10 | 645 N | /Hz | | | | | | |
| | 10 | .040 1 | | | | | | | |
| Transi | nit Freq Error | -9.15 ′ | 1 kHz | % of C | BW Powe | r 99.00 | 0 % | | |
| x dB B | andwidth | 10.92 | MHz | x dB | | -26.00 | dB | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ISG | | | | | | STATUS | | | |



2.3 BAND EDGE

2.3.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051 FCC CFR 47 Part 22, Clause 22.917

2.3.2 Date of Test and Modification State

22, 26 and 27 September 2017 - Modification State 0

2.3.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.4 Environmental Conditions

| Ambient Temperature | 21.2 - 22.5°C |
|---------------------|---------------|
| Relative Humidity | 53.8 - 55.2% |

2.3.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01 Clause 6.

The EUT was connected to a Spectrum Analyser via 40 dB of attenuation. The path loss between the EUT and the Spectrum Analyser was measured using a Network Analyser. The measured path loss was entered as a Reference Level Offset in the Spectrum Analyser. All measurements were made using a RBW of <1 % of the 26 dB Bandwidth in conjunction with the Band Power function of the Spectrum Analyser. The Band Power span was configured to be at least 1 % of the 26 dB Bandwidth and was positioned in the 1MHz region above/below the band edge which gave the worst-case result. The result was an integration of the power giving the result as a value which was at least 1 % of the 26 dB Bandwidth. The display line was set to the worst case accounting for 2 Port MIMO operation in accordance with KDB 662911 D01. This equated to 43 + 10log(P) – 10log(2) = -16dBm.

Additional plots were shown for measurements from 1 - 5 MHz away from the Band Edge. A RBW of 51 kHz was used with the limit line corrected by $10\log(100 \text{ kHz} / 51 \text{ kHz}) = 3 \text{ db}$. Therefore, the limit line accounting for MIMO and the reduced RBW was set at -19 dBm.

2.3.6 Test Results

Configuration A

| Antenna | | | Band Edge (MHz) | | | |
|---------|----------------|----------------------|--------------------|--------------------|--|--|
| | LIE MODULATION | LIE Carner Bandwidth | Channel Position B | Channel Position T | | |
| A | QPSK | 1.4 MHz | 869.7 | 879.3 | | |
| A | QPSK | 3.0 MHz | 870.5 | 878.5 | | |
| A | QPSK | 5.0 MHz | 871.5 | 877.5 | | |
| В | QPSK | 5.0 MHz | 871.5 | 877.5 | | |
| А | QPSK | 10.0 MHz | 874.0 | 875.0 | | |



Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position B









































Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω DC Center Freq 880.000000 MHz 10:43:50 AM Sep 25, 2017 TRACE 1 2 3 4 5 6 TYPE WWWWW DET A NNNNN ALIG AVg Type: RMS Trig: Free Run #Atten: 18 dB PNO: Wide IFGain:Lov ----n:Low Mkr1 880.026 MHz Band Power -32.10 dBm Ref Offset 40.5 dB Ref 42.50 dBm 10 dB/div 32. 22 for share be and the second mar with 12. 2.50 -7.50 DL1 -16.01 dB -17.5 -27.5 -37.5 2 unw. *** Y WONTH IN -47.5 Center 880.000 MHz #Res BW 5.1 kHz Span 2.000 MHz #Sweep 5.000 s (1001 pts) #VBW 16 kHz* MSG STATUS Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω DC Center Freq 883.500000 MHz 10:44:04 AM Sep 25, 2017 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNN Avg Type: RMS Avg|Hold: 1/1 Trig: Free Run #Atten: 18 dB PNO: Wide IFGain:Low -Mkr1 881.050 MHz -35.699 dBm Ref Offset 40.5 dB Ref 25.98 dBm 10 dB/div 16.0 5.9 -4.02 -14.0

Antenna B - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T





Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position B





Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 10.0 MHz - Channel Position T





Configuration B

| Antonno | | LTE Carrier | Band Edge (MHz) | | | |
|---------|----------------|-------------|--------------------|--------------------|--|--|
| Antenna | LIE Modulation | Bandwidth | Channel Position B | Channel Position T | | |
| А | QPSK | 1.4 MHz | 869.7+871.1 | 877.9+879.3 | | |
| A | QPSK | 3.0 MHz | 870.5+873.5 | 875.5+878.5 | | |
| A | QPSK | 5.0 MHz | 871.5+876.5 | 872.5+877.5 | | |



Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position B





Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position T





Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position B

















Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 5.0 MHz - Channel Position T



Configuration C

| Antenna LTE Modulation | | LTE Carrier | Band Edge (MHz) | | | |
|------------------------|----------------|-------------|--------------------|--------------------|--|--|
| | LIE Modulation | Bandwidth | Channel Position B | Channel Position T | | |
| A | QPSK | 1.4 MHz | 869.7+871.1+872.5 | 876.5+877.9+879.3 | | |
| A | QPSK | 3.0 MHz | 870.5+873.5+876.5 | 871.5+874.5+877.5 | | |



Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position B





Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 1.4 MHz - Channel Position T











Antenna A - LTE Modulation QPSK - LTE Carrier Bandwidth 3.0 MHz - Channel Position T



Limit -13 dBm