



### GCM4701NA\_LTE2\_5 M\_PAR\_Middle Channel\_64QAM\_FullRB





### GCM4701NA\_LTE2\_10 M\_PAR\_Middle Channelz\_QPSK\_FullRB





## GCM4701NA\_LTE2\_10 M\_PAR\_Middle Channel\_16QAM\_FullRB





## GCM4701NA\_LTE2\_10 M\_PAR\_Middle Channel\_64QAM\_FullRB





### GCM4701NA\_LTE2\_15 M\_PAR\_Middle Channel\_QPSK\_FullRB





### GCM4701NA\_LTE2\_15 M\_PAR\_Middle Channel\_16QAM\_FullRB





### GCM4701NA\_LTE2\_15 M\_PAR\_Middle Channel\_64QAM\_FullRB





### GCM4701NA\_LTE2\_20 M\_PAR\_Middle Channel\_QPSK\_FullRB





### GCM4701NA\_LTE2\_20 M\_PAR\_Middle Channel\_16QAM\_FullRB





### GCM4701NA\_LTE2\_20 M\_PAR\_Middle Channel\_64QAM\_FullRB





#### GCM4701NA\_LTE2\_1.4 M\_CSE(30 M-10 G)\_Lowest Channel\_QPSK\_1RB



|  | ut: RF<br>upling: DC<br>in: Auto | Input Ζ: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive  | #Atten: 20 dB<br>Preamp: Off  | PNO: Fast<br>Gate: Off<br>IF Gain: Low<br>Sig Track: Of | Ing: Free Run         | wer (RMS <mark>123456</mark><br>A <del>WW WW W</del><br>A A A A A A | Center Freque<br>5.015000000<br>Span |        |
|--|----------------------------------|--|-------------------------------|---|-----------------------|---|--------------------------------------|--------|
| pectrum<br>ale/Div 10 dB<br>g  | •<br>∧2                          |  | Ref Level 10.00               | dBm   | Mk                    | r1 8.004 5 GHz<br>-69.901 dBm                                       | 9.97000000                           | pan    |
| 0  |                                  |  |                               |   |                       |   | Full Sp                              | an     |
|  |                                  |  |                               |   |                       |   | Start Freq<br>30.000000 M            | lHz    |
|  |                                  | المحمد والمستعد والم | مسيعيدي                       |   | م<br>مران اس الرام ال | RMS   | Stop Freq<br>10.0000000              | 00 GHz |
| rt 30 MHz<br>s BW 1.0 MHz  |                                  |  | #Video BW 3.0                 | MHz   | Sweep                 | Stop 10.000 GHz<br>~18.7 ms (20001 pts)                             |                                      | UNE    |
| larker Table   | •                                |  |                               |   |                       |   | 997.000000                           | MHz    |
| Mode         Tra           1         N         1           2         N         1           3         3         1 | f                                | X<br>8.004 5 GHz<br>1.879 4 GHz  | Y<br>-69.90 dBm<br>-5.754 dBm | Function  | Function Width        | Function Value  | Man<br>Freq Offset<br>0 Hz           |        |
| 4<br>5<br>6  |                                  |  |                               |   |                       |   | X Axis Scale<br>Log<br>Lin           | Loo    |

## GCM4701NA\_LTE2\_1.4 M\_CSE(30 M-10 G)\_Middle Channel\_QPSK\_1RB



| Spectro<br>Swept           | um Anal<br>SA    | yzer 1                         | •      | +   |                              |   |   |  | \$   | Frequency              | · · · ] 景 |
|----------------------------|------------------|--------------------------------|--------|---|------------------------------|---|---|--|--|------------------------|-----------|
| KEYS<br>RL                 | SIGHT<br>++-     | Input F<br>Couplin<br>Align: A | ig: DC | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive | #Atten: 20 dB<br>Preamp: Off | PNO: Fast<br>Gate: Off<br>IF Gain: Low<br>Sig Track: Of | Ing. Free Run                                   | wer (RMS <mark>123456</mark><br>A <del>WWWW</del><br>A A A A A A | and the second s | Frequency<br>00000 GHz | Settings  |
| 1 Spec<br>Scale/<br>Log    | trum<br>Div 10 ( | dB                             | ۲      |   | Ref Level 10.00              | dBm   | Mk  | r1 8.021 0 GHz<br>-70.154 dBm                                    | 9.9700<br>Sw   | 0000 GHz<br>ept Span   |           |
| 0.00 -<br>10.0 -<br>20.0 - |                  |                                | 2<br>  |   |                              |   |   |  |  | o Span<br>ull Span     |           |
| 30.0<br>40.0<br>50.0       |                  |                                |        |   |                              |   |   |  | Start Fro<br>30.000  | eq<br>000 MHz          |           |
| 60.0<br>70.0               |                  |                                |        | a a constant a constant a constant                                | المريانة ويرون المحل         |   | المراجع والمحار والمحار والمحار والمحار والمحار | 1  | Stop Fre<br>10.000   | eq<br>000000 GHz       |           |
|                            | 0 MHz<br>3W 1.0  | MHz                            |        |   | #Video BW 3.0                | MHz   | Sweep   | Stop 10.000 GHz<br>~18.7 ms (20001 pts)                          |  | TO TUNE                |           |
|                            | er Table         |                                | •      |   |                              |   |   | (2000 Pic)   | Contract Sector 19   | 0000 MHz               |           |
|                            | Mode             | Trace                          | Scale  | X   | Y                            | Function  | Function Width                                  | Function Value   | Ma   | n                      |           |
| 1<br>2<br>3                | N<br>N           | 1                              | f      | 8.021 0 GHz<br>1.909 8 GHz  | -70.15 dBm<br>-5.476 dBm     |   |   |  | Freq Of<br>0 Hz  | set                    |           |
| 4<br>5<br>6                |                  |                                |        |   |                              |   |   |  | X Axis S<br>Lo<br>Lin  | ]                      | Loca      |
| Ð                          | ょ                | 3                              |        | May 23, 2024<br>2:45:20 PM  | $\mathbb{D}$                 |   |   |  | Signal T<br>(Span Zo   |                        |           |

# GCM4701NA\_LTE2\_1.4 M\_CSE(30 M-10 G)\_Highest Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_3 M\_CSE(30 M-10 G)\_Lowest Channel\_QPSK\_1RB





### GCM4701NA\_LTE2\_3 M\_CSE(30 M-10 G)\_Middle Channel\_QPSK\_1RB



| EYSIGHT<br>↓ +→+<br>I     | Input F<br>Couplin<br>Align: A | ig: DC     | Input Ζ: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive | #Atten: 20 dB<br>Preamp: Off  | PNO: Fast<br>Gate: Off<br>IF Gain: Low<br>Sig Track: Off | Tng: Free Run                     | wer (RMS <mark>123456</mark><br>A <del>WW WW</del> W<br>A A A A A A | 5.015                | Frequency<br>000000 GHz   | Settings |
|---------------------------|--------------------------------|------------|---|-------------------------------|--|-----------------------------------|---|----------------------|---|----------|
| spectrum<br>ale/Div 10 d  | B                              | •          |   | Ref Level 10.00               | dBm  | Mk                                | r1 9.685 9 GHz<br>-70.744 dBm                                       | 5.576                | 00000 GHz<br>vept Span<br>ero Span  |          |
| .0<br>.0                  |                                |            |   |                               |  |                                   |   |                      | Full Span   |          |
| .0                        |                                |            |   |                               |  |                                   |   | Start F<br>30.000    | req<br>0000 MHz   |          |
| ).0<br>).0<br>).0         | ales in the stand              |            | الفرد فيروسا المانت المرور ومناهد وروا                            | مر مدینان شر                  | un   | والمتعاد والمعر والمعر والمعرودية | 1.<br>مذها البيدية المتحص التي                                      | Stop Fi<br>10.000    | req<br>0000000 GHz  |          |
| art 30 MHz<br>es BW 1.0 M | 1Hz                            |            |   | #Video BW 3.0                 | MHz  | Sweep                             | Stop 10.000 GHz<br>~18.7 ms (20001 pts)                             |                      | UTO TUNE  |          |
| vlarker Table             |                                | •          |   |                               |  |                                   |   |                      | 00000 MHz<br>Jto  |          |
| Mode<br>1 N<br>2 N        | Trace<br>1                     | Scale<br>f | X<br>9.685 9 GHz<br>1.909 8 GHz                                   | Y<br>-70.74 dBm<br>-6.345 dBm | Function   | Function Width                    | Function Value  | Ma<br>Freq O         | an  |          |
| 2 N<br>3 4<br>5 6         |                                |            | 1.509 6 GHZ   | -0.543 UBIII                  |  |                                   |   | 0 Hz<br>X Axis<br>Lo | and the second se | Loc      |
| 6                         |                                |            | May 23, 2024<br>2:52:04 PM  |                               |  |                                   |   | i = ŭ                |   |          |

## GCM4701NA\_LTE2\_3 M\_CSE(30 M-10 G)\_Highest Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_5 M\_CSE(30 M-10 G)\_Lowest Channel\_QPSK\_1RB





### GCM4701NA\_LTE2\_5 M\_CSE(30 M-10 G)\_Middle Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_5 M\_CSE(30 M-10 G)\_Highest Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_10 M\_CSE(30 M-10 G)\_Lowest Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_10 M\_CSE(30 M-10 G)\_Middle Channel\_QPSK\_1RB





### GCM4701NA\_LTE2\_10 M\_CSE(30 M-10 G)\_Highest Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_15 M\_CSE(30 M-10 G)\_Lowest Channel\_QPSK\_1RB





## GCM4701NA\_LTE2\_15 M\_CSE(30 M-10 G)\_Middle Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_15 M\_CSE(30 M-10 G)\_Highest Channel\_QPSK\_1RB





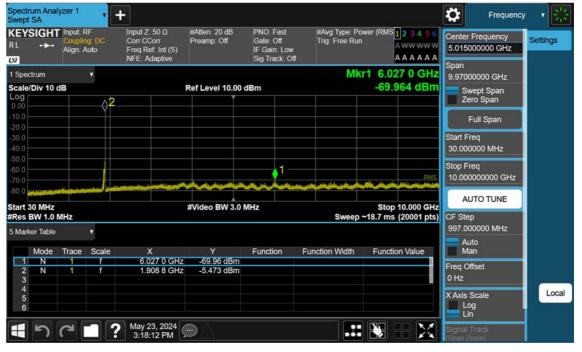
#### GCM4701NA\_LTE2\_20 M\_CSE(30 M-10 G)\_Lowest Channel\_QPSK\_1RB





#### GCM4701NA\_LTE2\_20 M\_CSE(30 M-10 G)\_Middle Channel\_QPSK\_1RB





### GCM4701NA\_LTE2\_20 M\_CSE(30 M-10 G)\_Highest Channel\_QPSK\_1RB



| Spectrum Analyzer 1<br>Swept SA<br>KEYSIGHT Input: RF<br>RL + Coupling: DC<br>Align: Auto | +<br>Input Ζ' 50 Ω #Atten: 0 dB<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off | #Avg Type: Power (RMS123456<br>Trig: Free Run<br>A & A & A & A | Frequency<br>Center Frequency<br>15.00000000 GHz                | Settings |
|---|---|---|--|---|----------|
| I Spectrum v<br>Scale/Div 10 dB   | Ref Level -20   |   | Mkr1 19.013 48 GHz<br>-87.731 dBm                              | 10.000000000112   |          |
| 40.0<br>50.0<br>60.0  |   |   |  | Start Freq<br>10.000000000 GHz<br>Stop Freq<br>20.000000000 GHz |          |
| 80.0<br>90.0  |   |   | 1  | AUTO TUNE<br>CF Step<br>1.00000000 GHz                          |          |
|   | ng tin ang ang ang ang ang ang ang ang ang an                                       |   |  | Auto<br>Man<br>Freq Offset<br>0 Hz                              |          |
| Start 10.000 GHz<br>Pres BW 1.0 MHz   | #Video BW<br>? May 23, 2024<br>2:40:58 PM   | 3.0 MHz   | Stop 20.000 GHz<br>Sweep ~20.4 ms (40000 pts)                  |   | Local    |

## GCM4701NA\_LTE2\_1.4 M\_CSE(10 G-20 G)\_Lowest Channel\_QPSK\_1RB



| KEYSIGHT     Input: RF       RL     +++     Coupling: DI       Align: Auto     Align: Auto | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive | #Atten: 0 dB<br>Preamp: Off | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off | #Avg Type: Power (RM:<br>Trig: Free Run   | S <mark>123456</mark><br>A <del>wwww</del><br>ANNNN |                                    | equency<br>0000 GHz | Settings |
|--|---|-----------------------------|---|---|---|------------------------------------|---------------------|----------|
| Spectrum v<br>Scale/Div 10 dB  |   | Ref Level -20.00            | dBm   | Mkr1 15.18<br>-87                         | 30 13 GHz<br>.223 dBm                               | 10.00000                           | t Span              |          |
| 10.0   |   |                             |   |   |   | Start Freq                         | Span<br>0000 GHz    |          |
| 0.0  |   |                             |   |   |   |                                    | 0000 GHz<br>D TUNE  |          |
| and the state state state  |   | prespublik por tradition    | 1   | 17 19 19 19 19 19 19 19 19 19 19 19 19 19 | RMS   | CF Step<br>1.000000<br>Auto<br>Man | 000 GHz             |          |
| 100 art 10.000 GHz   |   | #Video BW 3.0               | MHz   | Sto                                       | p 20.000 GHz  | Freq Offse<br>0 Hz<br>X Axis Sca   |                     | Loca     |
|  | May 23, 2024<br>2:43:44 PM  |                             | MINZ  | Sweep ~20.4 m                             |   | Log<br>Lin<br>Signal Tra           |                     |          |

# GCM4701NA\_LTE2\_1.4 M\_CSE(10 G-20 G)\_Middle Channel\_QPSK\_1RB



| Align: Auto                  | Input Z: 50 Q #Atten: 0 dB<br>Corr CCorr Preamp: Off<br>Freq Ref: Int (S)<br>NFE: Adaptive   | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off   | #Avg Type: Power (RMS 1 2 3 4 5 0<br>Trig: Free Run<br>A & W W W W<br>A A A A A A | 15.00000000 GHz                            | Settings |
|------------------------------|--|---|---|--|----------|
| Spectrum ▼<br>sale/Div 10 dB | Ref Level -20  | .00 dBm   | Mkr1 19.189 73 GH<br>-87.412 dBn  | 10.000000000112                            |          |
| 0.0                          |  |   |   | Full Span<br>Start Freq<br>10.00000000 GHz |          |
| 0.0                          |  |   |   | Stop Freq<br>20.00000000 GHz               |          |
|                              | alate and a state of a state of the state of | an af hange <sup>lan</sup> ang an langan kangan kangan pangan kangan pangan kangan kangan kangan pangan kangan pangan kang<br>Kang di kang di | 1 RMS   | CF Step                                    |          |
| 10 rt 10.000 GHz             | #Video BW  | 3.0 MHz   | Stop 20.000 GH  | Freq Offset<br>0 Hz<br>X Axis Scale        | Loca     |

# GCM4701NA\_LTE2\_1.4 M\_CSE(10 G-20 G)\_Highest Channel\_QPSK\_1RB



| Spectrum Analyzer 1<br>Swept SA<br>KEYSIGHT<br>RL + Coupling: DC<br>Align: Auto | Input Z: 50 Ω #Atten: 0 df<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive | B PNO: Fast<br>f Gate: Off<br>IF Gain: High<br>Sig Track: Off | #Avg Type: Power (RMS 1 2 3 4 5 6<br>Trig: Free Run<br>A & WW WW W<br>A A A A A A | 13.0000000 GHz                             | Settings |
|---|--|---|---|--|----------|
| Scale/Div 10 dB   | Ref Level -2   | 20.00 dBm   | Mkr1 19.040 73 GHz<br>-86.673 dBm   | 10.000000000112                            |          |
| 30.0<br>40.0<br>50.0  |  |   |   | Full Span<br>Start Freq<br>10.00000000 GHz |          |
| 60.0<br>70.0  |  |   |   | Stop Freq<br>20.000000000 GHz<br>AUTO TUNE |          |
| the same althought with the second  | an chechte anne ber te alter alter alter alter                                 | ni an                     | anterengeundersking ist Benned  | CF Step<br>1.00000000 GHz<br>Auto<br>Man   |          |
| 100   | #Video BW  | (3.0 MHz  | Stop 20.000 GH  | Freq Offset<br>0 Hz<br>X Axis Scale        | Local    |
|   | May 23, 2024           2:47:45 PM  |   | Sweep ~20.4 ms (40000 pts   |  |          |

# GCM4701NA\_LTE2\_3 M\_CSE(10 G-20 G)\_Lowest Channel\_QPSK\_1RB



| Spectrum Analy<br>Swept SA       | zer 1                                    | +  |                             |  |   |  | ₽                              | Frequency | - <b>-</b> |
|----------------------------------|--|--|-----------------------------|--|---|--|--------------------------------|-----------|------------|
| KEYSIGHT                         | Input: RF<br>Coupling: DC<br>Align: Auto | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive  | #Atten: 0 dB<br>Preamp: Off | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off  | #Avg Type: Power (RM<br>Trig: Free Run            | 1S <mark>123456</mark><br>A <del>WWWWW</del><br>AAAAAA | Center Freq<br>15.0000000      |           | Settings   |
| 1 Spectrum<br>Scale/Div 10 d     | T<br>B                                   |  | Ref Level -20.0             | 0 dBm  | Mkr1 19.4<br>-87                                  | 68 99 GHz<br>7.440 dBm                                 | Span<br>10.0000000<br>Swept \$ |           |            |
| Log                              |  |  | Ĭ                           |  |   |  | Zero Sp                        | an        |            |
| -40.0                            |  |  |                             |  |   |  | Full S<br>Start Freq           | pan       |            |
|                                  |  |  |                             |  |   |  | 10.0000000<br>Stop Freg        | 00 GHz    |            |
|                                  |  |  |                             |  |   |  | 20.000000                      |           |            |
| -70.0                            |  |  |                             |  |   |  | AUTO<br>CF Step                | TUNE      |            |
| -90.0                            |  |  | No des electro estatisti    | and the state of t | ille lader of the consettion of the second second |  | 1.00000000                     | 0 GHz     |            |
| -100                             | le, chi chi cerci                        | a piter a different a part of the second |                             | in a state and the state in the local sector of the state |   |  | Man<br>Freq Offset             |           |            |
|                                  |  |  |                             |  |   |  | 0 Hz<br>X Axis Scale           |           | Local      |
| Start 10.000 GI<br>#Res BW 1.0 M |  |  | #Video BW 3.0               | ) MHz  | Sweep ~20.4 n                                     | op 20.000 GHz<br>ns (40000 pts)                        | Log<br>Lin                     | 4         |            |
| 5                                | CD                                       | May 23, 2024<br>2:50:28 PM   |                             |  |   |  | Signal Track<br>(Span Zoom)    |           |            |

# GCM4701NA\_LTE2\_3 M\_CSE(10 G-20 G)\_Middle Channel\_QPSK\_1RB



| Coupling: DC CAlign: Auto F  | nput Ζ: 50 Ω #Atten: 0 dB<br>Corr CCorr Preamp: Off<br>Teq Ref: Int (S)<br>IFE: Adaptive | PNO: Fast #Avg Type: Pow<br>Gate: Off Trig: Free Run<br>IF Gain: High<br>Sig Track: Off              | ver (RMS 1 2 3 4 5 6<br>A WWWWW<br>A A A A A A A<br>Span | Setunds |
|--|--|--|--|---------|
| spectrum v<br>ale/Div 10 dB  | Ref Level -20.00 d   |  | 19.991 75 GHz<br>-86.852 dBm<br>Zero Sp                  | pan     |
| 0.0  |  |  | Full Sp<br>Start Freq<br>10.0000000                      |         |
| 0.0  |  |  | Stop Freq<br>20.0000000                                  |         |
| 0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0<br>0<br>0<br>0<br>0<br>0 | u, di altra di kadi listuati   | na Mira yn a Mira y Dŵynau yn yn dynaeth Mirae Aspir<br>Marwyn yn y | CF Step<br>1.00000000<br>Auto<br>Man                     | 0 GHz   |
| 10<br>11<br>10<br>10<br>10<br>10<br>10<br>000 GHz<br>es BW 1.0 MHz   | #Video BW 3.0 M  |  | Stop 20.000 GHz<br>20.4 ms (40000 pts)                   | Loca    |

# GCM4701NA\_LTE2\_3 M\_CSE(10 G-20 G)\_Highest Channel\_QPSK\_1RB



| Swept SA       KEYSIGHT       Input: RF       RL       Align: Auto | Input Z: 50 Ω #Atten: 0 dE<br>Corr CCorr Preamp: Off<br>Freq Ref: Int (S)<br>NFE: Adaptive |   | #Avg Type: Power (RMS123456<br>Trig: Free Run<br>A N N N N<br>A N N N N | 15.00000000 GHz                            | Settings |
|--|--|---|---|--|----------|
| 1 Spectrum v<br>Scale/Div 10 dB                                    | Ref Level -2   | 0.00 dBm  | Mkr1 19.543 74 GH:<br>-85.514 dBm                                       | 10.000000000112                            |          |
| 30.0<br>40.0<br>50.0   |  |   |   | Full Span<br>Start Freq<br>10.00000000 GHz |          |
| 50.0   |  |   |   | Stop Freq<br>20.000000000 GHz<br>AUTO TUNE |          |
|  |  | in and Saman Anna Composite participants and an |   | CF Step<br>1.00000000 GHz<br>Auto<br>Man   |          |
| 110<br>tart 10.000 GHz   | #Video BW  | 3.0 MHz   | Stop 20.000 GH  | Freq Offset<br>0 Hz<br>X Axis Scale<br>Log | Local    |
| Res BW 1.0 MHz   | May 23, 2024 2:54:30 PM  |   | Sweep ~20.4 ms (40000 pts   |  |          |

# GCM4701NA\_LTE2\_5 M\_CSE(10 G-20 G)\_Lowest Channel\_QPSK\_1RB



| Spectrum Analy<br>Swept SA   | zer 1                                    | ŀ   |  |  |   |   | *                                   | Frequency           | v [\$12<br>218 |
|--|--|---|--|--|---|---|-------------------------------------|---------------------|----------------|
| KEYSIGHT   | Input: RF<br>Coupling: DC<br>Align: Auto | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive   | #Atten: 0 dB<br>Preamp: Off  | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off  | #Avg Type: Power (RM:<br>Trig: Free Run | 5 <mark>123456</mark><br>Awwwww<br>AAAAAA |                                     | equency<br>0000 GHz | Settings       |
| 1 Spectrum<br>Scale/Div 10 d   | ₹<br>B                                   | F   | Ref Level -20.0  | 0 dBm  | Mkr1 19.23<br>-86                       | 37 73 GHz<br>.136 dBm                     | Swep                                | t Span              |                |
| -30.0  |  |   |  |  |   |   |                                     | Span<br>Span        |                |
| -40.0  |  |   |  |  |   |   | Start Freq<br>10.00000<br>Stop Freq | 0000 GHz            |                |
| -60.0  |  |   |  |  |   |   | 20.00000                            | 0000 GHz            |                |
| -80.0  | a star and a star of the                 | presentes ling operation large line   | ्रियम् स्टब्स् | and the second |   | 1 RMS                                     | CF Step<br>1.000000                 | 000 GHz             |                |
| and the second |  | and the second secon |  |  |   |   | Man<br>Freq Offse<br>0 Hz           | t                   |                |
| Start 10.000 GI<br>#Res BW 1.0 N   |  |   | #Video BW 3.0  | ) MHz  | Sto<br>Sweep ~20.4 m                    | p 20.000 GHz<br>s (40000 pts)             |                                     | ile                 | Local          |
| <b>ا</b> ا   | C 🗌 ?                                    | May 23, 2024<br>2:57:22 PM  |  |  | <b></b>                                 |   | Signal Tra<br>(Span Zoon            |                     |                |

# GCM4701NA\_LTE2\_5 M\_CSE(10 G-20 G)\_Middle Channel\_QPSK\_1RB



| Spectrum Analy<br>Swept SA           | zer 1                                    | +   |                             |   |  |   | \$                                    | Frequency                  | ▼ 2%     |
|--------------------------------------|--|---|-----------------------------|---|--|---|---------------------------------------|----------------------------|----------|
|                                      | Input: RF<br>Coupling: DC<br>Align: Auto | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive | #Atten: 0 dB<br>Preamp: Off | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off | #Avg Type: Power (<br>Trig: Free Run     | RMS 1 2 3 4 5 6<br>A WW WW W<br>A A A A A A A |                                       | equency<br>00000 GHz       | Settings |
| 1 Spectrum<br>Scale/Div 10 dl<br>Log | B  | F   | ef Level -20.0              | 00 dBm  |  | .908 00 GHz<br>86.733 dBm                     |                                       | 000 GHz<br>ot Span<br>Span |          |
| -30.0                                |  |   |                             |   |  |   | Start Free                            | l Span<br>00000 GHz        |          |
| -50.0                                |  |   |                             |   |  |   |                                       | 00000 GHz<br>D TUNE        |          |
| -80.0                                |  | , lastalitas, secular tita  | na fur de Christiana Alama  | a ang ang ang ang ang ang ang ang ang an                  | tig at war film reigti at war and a film | R   | CF Step                               | 0000 GHz                   |          |
| -100<br>-110<br>Start 10.000 GF      |  |   | #Video BW 3.                | 0 MHz   |  | Stop 20.000 GHz                               | Freq Offs<br>0 Hz<br>X Axis Sc        |                            | Local    |
| #Res BW 1.0 M                        |  | May 22, 2024  |                             |   |  | 4 ms (40000 pts)                              | Log<br>Lin<br>Signal Tra<br>(Span Zoo |                            |          |

# GCM4701NA\_LTE2\_5 M\_CSE(10 G-20 G)\_Highest Channel\_QPSK\_1RB



| L + Coupling: DC<br>Align: Auto                                   | Input Z: 50 Ω #Atten: 0 dB<br>Corr CCorr Preamp: Off<br>Freq Ref: Int (S)<br>NFE: Adaptive |                                      | #Avg Type: Power (RMS 1 2 3 4 5<br>Trig: Free Run A +++++++++++++++++++++++++++++++++++ | * 15.00000000 GHz                          | Settings |
|---|--|--------------------------------------|---|--|----------|
| Spectrum v<br>cale/Div 10 dB                                      | Ref Level -2   | 0.00 dBm                             | Mkr1 19.935 75 GH<br>-87.106 dB   | Z 10.0000000 GHz                           |          |
| 0.0   |  |                                      |   | Full Span<br>Start Freq<br>10.00000000 GHz |          |
| 0.0   |  |                                      |   | Stop Freq<br>20.000000000 GHz<br>AUTO TUNE |          |
| 0.0<br>0.0 <mark>10, ktor dille pike as an dia pike in dia</mark> | alta da planta da planta da p  | inilated in the part of participants |   | CF Step<br>1.000000000 GHz<br>Auto<br>Man  |          |
| 10<br>art 10.000 GHz<br>tes BW 1.0 MHz                            | #Video BW  | 3.0 MHz                              | Stop 20.000 GI<br>Sweep ~20.4 ms (40000 pt  |  | Loca     |

# GCM4701NA\_LTE2\_10 M\_CSE(10 G-20 G)\_Lowest Channel\_QPSK\_1RB



| L + Coupling: DC<br>Align: Auto  | Input Z: 50 Q #Atten: 0 dB<br>Corr CCorr Preamp: Off<br>Freq Ref: Int (S)<br>NFE: Adaptive | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off | #Avg Type: Power (RMS12345)<br>Trig: Free Run AWWWW<br>A A A A A A | 15.00000000 GHz                            | Settings |
|----------------------------------|--|---|--|--|----------|
| Spectrum v<br>cale/Div 10 dB     | Ref Level -20  | .00 dBm   | Mkr1 18.770 72 GH<br>-87.242 dBn                                   | 10.000000000112                            |          |
| 0.0                              |  |   |  | Start Freq<br>10.00000000 GHz<br>Stop Freq |          |
| 0.0                              |  |   | 1  | 20.00000000 GHz<br>AUTO TUNE<br>CF Step    |          |
|                                  |  | Normal along the second second second                     |  | Auto<br>Man<br>Freq Offset                 |          |
| art 10.000 GHz<br>tes BW 1.0 MHz | #Video BW 3  | 3.0 MHz   | Stop 20.000 GH<br>Sweep ~20.4 ms (40000 pts                        |  | Loca     |

## GCM4701NA\_LTE2\_10 M\_CSE(10 G-20 G)\_Middle Channel\_QPSK\_1RB



| Coupling: DC Coupl | orr CCorr Preamp: Off (<br>req Ref: Int (S) | PNO: Fast #Avg Type: I<br>Sate: Off Trig: Free Ri<br>F Gain: High<br>Sig Track: Off                           |                                | Center Frequency<br>15.000000000 GHz              | Settings |
|--|---|---|--------------------------------|---|----------|
| pectrum v<br>ale/Div 10 dB   | Ref Level -20.00 dB                         |   | 1 19.066 73 GHz<br>-87.291 dBm | Span<br>10.0000000 GHz<br>Swept Span<br>Zero Span |          |
| 0  |   |   |                                | Full Span<br>Start Freq<br>10.00000000 GHz        |          |
|  |   |   |                                | Stop Freq<br>20.000000000 GHz<br>AUTO TUNE        |          |
|  |   | n - Sanatan ing pulate a daga si na si nasi kabusa<br>Manatan da kabusa sa s | RMS                            | CF Step<br>1.000000000 GHz<br>Auto<br>Man         |          |
| 10<br>rt 10.000 GHz<br>as BW 1.0 MHz   | #Video BW 3.0 MH                            |   |                                | Freq Offset<br>0 Hz<br>X Axis Scale<br>Log<br>Lin | Loca     |

# GCM4701NA\_LTE2\_10 M\_CSE(10 G-20 G)\_Highest Channel\_QPSK\_1RB



| L 🔸 Align: Auto Fr                     | put Z: 50 Ω #Atten: 0 dB<br>orr CCorr Preamp: Off<br>req Ref: Int (S)<br>FE: Adaptive | PNO: Fast #Avg Type<br>Gate: Off Trig: Free I<br>IF Gain: High<br>Sig Track: Off   |                                 | Center Frequency<br>15.000000000 GHz<br>Span | Settings |
|--|---|--|---------------------------------|--|----------|
| Spectrum v<br>cale/Div 10 dB           | Ref Level -20.00  |  | r1 19.903 25 GHz<br>-86.769 dBm | 10.0000000 GHz<br>Swept Span<br>Zero Span    |          |
| 0.0                                    |   |  |                                 | Full Span<br>Start Freq<br>10.00000000 GHz   |          |
|  |   |  |                                 | Stop Freq<br>20.000000000 GHz<br>AUTO TUNE   |          |
|  | And all also see the state of the state of the  | an ya da ku sa ku sa<br>Na ku sa k | R                               | CF Step<br>1.000000000 GHz<br>Auto<br>Man    |          |
| 10<br>art 10.000 GHz<br>tes BW 1.0 MHz | #Video BW 3.0   |  |                                 | Freq Offset<br>0 Hz<br>X Axis Scale<br>Log   | Loca     |

# GCM4701NA\_LTE2\_15 M\_CSE(10 G-20 G)\_Lowest Channel\_QPSK\_1RB



| 1 Spectrum       Mkr1 18.790 72 GHz       10.000000 GHz         Scale/Div 10 dB       Ref Level -20.00 dBm       -87.322 dBm         -30.0   | Wept SA       KEYSIGHT       Input: RF       RL       Coupling: DC       Align: Auto | H<br>Input Ζ: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive |   | #Avg Type: Power (RMS 1 2 3 4 5 6<br>Trig: Free Run A WW WW W<br>A A A A A A | 13.00000000 GHz                | Settings |
|--|--|--|---|--|--------------------------------|----------|
| 100     Start Freq       10.0     Start Freq | cale/Div 10 dB   | Ref Level  | -20.00 dBm                                    |  | Swept Span<br>Zero Span        |          |
| 20.00000000 GHz<br>AUTO TUNE<br>CF Step<br>1.00000000 GHz<br>Auto<br>Man<br>Freq Offset<br>0 Hz  | 0.0  |  |   |  | Start Freq<br>10.000000000 GHz |          |
| 0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0   | 0.0  |  |   |  | 20.00000000 GHz                |          |
| 10 0 Hz  |  | er effender den filt mit offe  | a para ang ang ang ang ang ang ang ang ang an |  | 1.00000000 GHz<br>Auto<br>Man  |          |
| art 10.000 GHz #Video BW 3.0 MHz Stop 20.000 GHz<br>tes BW 1.0 MHz Sweep ~20.4 ms (40000 pts)  | art 10.000 GHz   | #Video E   | W 3.0 MHz                                     |  | 0 Hz<br>X Axis Scale<br>Log    | Loca     |

## GCM4701NA\_LTE2\_15 M\_CSE(10 G-20 G)\_Middle Channel\_QPSK\_1RB



| EYSIGHT Input: RF<br>L +++ Coupling: DC<br>Align: Auto | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Adaptive | #Atten: 0 dB<br>Preamp: Off | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off |                           | 2 3 4 5 6<br>wwwww<br>A A A A A | Center Frequency<br>15.00000000 GHz               | Settings |
|--|---|-----------------------------|---|---------------------------|---------------------------------|---|----------|
| Spectrum v<br>ale/Div 10 dB                            |   | Ref Level -20.00            | ) dBm   | Mkr1 19.511<br>-89.24     | 99 GHz<br>86 dBm                | Span<br>10.0000000 GHz<br>Swept Span<br>Zero Span |          |
| ).0  |   |                             |   |                           |                                 | Full Span   |          |
| ).0  |   |                             |   |                           |                                 | Start Freq<br>10.000000000 GHz                    |          |
| 0.0  |   |                             |   |                           |                                 | Stop Freq<br>20.000000000 GHz                     | 1        |
| 0.0  |   |                             |   |                           |                                 | AUTO TUNE   |          |
|  |   |                             |   |                           | <b>↓1</b> 15                    | CF Step<br>1.000000000 GHz                        |          |
|  | المناجر المدخلي   |                             |   |                           |                                 | Auto<br>Man                                       |          |
|  |   |                             |   |                           |                                 | Freq Offset<br>0 Hz                               |          |
| art 10.000 GHz<br>es BW 1.0 MHz                        |   | Video BW 1.0                | MHz   | Stop 2<br>Sweep ~105 ms ( | 0.000 GHz<br>40000 pts)         | X Axis Scale<br>Log<br>Lin                        | Loca     |
| - って   | <b>?</b> May 23, 2024<br>3:12:15 PM                               | $\square$                   |   |                           |                                 | Signal Track<br>(Span Zoom)                       |          |

# GCM4701NA\_LTE2\_15 M\_CSE(10 G-20 G)\_Highest Channel\_QPSK\_1RB



| KEYSIGHT     Input: RF       RL     ++     Coupling: DC       Align: Auto     Align: Auto  |                     | #Atten: 0 dB<br>Preamp: Off | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off  |                    | 1 2 3 4 5 6<br>A WW WW W<br>A A A A A A |   | equency<br>0000 GHz | Settings |
|--|---------------------|-----------------------------|--|--------------------|---|---|---------------------|----------|
| Spectrum v<br>icale/Div 10 dB  | R                   | ef Level -20.00             | dBm  | Mkr1 19.41<br>-86. | 8 49 GHz<br>345 dBm                     | 10.00000                                | t Span              |          |
| 10.0   |                     |                             |  |                    |   | Start Freq                              | Span<br>0000 GHz    |          |
| 0.0  |                     |                             |  |                    |   |   | 0000 GHz            |          |
| the state of the s | t falsetter distant |                             | an a spining a subscription of the subscription of |                    |   | CF Step                                 | 000 GHz             |          |
| 000 110 110 110 110 110 110 110 110 110  | #                   | Video BW 3.0                | MHz  |                    | 20.000 GHz                              | Freq Offse<br>0 Hz<br>X Axis Sca<br>Loq |                     | Loca     |
| Res BW 1.0 MHz   | May 23, 2024        |                             |  | Sweep ~20.4 ms     | (40000 pts)                             | Lin<br>Signal Tra                       |                     |          |

# GCM4701NA\_LTE2\_20 M\_CSE(10 G-20 G)\_Lowest Channel\_QPSK\_1RB



| Spectrum Analyzer 1<br>Swept SA             | <b>·</b> +  |  |   | Frequency                                 |          |
|---|---|--|---|---|----------|
| RL +++ Align: Auto                          | Input Z: 50 Ω #Atten: 0 dl<br>Corr CCorr Preamp: 0f<br>Freq Ref: Int (S)<br>NFE: Adaptive |  | #Avg Type: Power (RMS123456<br>Trig: Free Run<br>A WWWWW<br>A A A A A A | Center Frequency<br>15.00000000 GHz       | Settings |
| 1 Spectrum   Scale/Div 10 dB Log            | Ref Level -2  | 20.00 dBm                                      | Mkr1 19.422 74 GHz<br>-87.465 dBm                                       | 10.000000000112                           |          |
|   |   |  |   | Full Span                                 |          |
| -40.0                                       |   |  |   | Start Freq<br>10.000000000 GHz            |          |
|   |   |  |   | Stop Freq<br>20.000000000 GHz             |          |
|   |   |  |   | AUTO TUNE                                 |          |
| -80.0<br>-90.0 m an prime il an in a second |   | transferration of the provent of support party |   | CF Step<br>1.000000000 GHz<br>Auto<br>Man |          |
|   |   |  |   | Freq Offset<br>0 Hz                       |          |
| Start 10.000 GHz<br>#Res BW 1.0 MHz         | #Video BW   | / 3.0 MHz                                      | Stop 20.000 GHz<br>Sweep ~20.4 ms (40000 pts)                           | X Axis Scale<br>Log<br>Lin                | Local    |
| 1 n   | May 23, 2024 3:16:37 PM   |  |   | Signal Track<br>(Span Zoom)               |          |

## GCM4701NA\_LTE2\_20 M\_CSE(10 G-20 G)\_Middle Channel\_QPSK\_1RB



|                                   |                                      | r Preamp: Off<br>Int (S)                | PNO: Fast<br>Gate: Off<br>IF Gain: High<br>Sig Track: Off | #Avg Type: Power (RMS 1 2 3 4 5<br>Trig: Free Run<br>A WW WW<br>A A A A A | W 15.00000000 GHz             | Settings |
|-----------------------------------|--------------------------------------|---|---|---|-------------------------------|----------|
| I Spectrum<br>Scale/Div 10 dB     | •                                    | Ref Level -20.00                        | dBm   | Mkr1 19.422 74 GH<br>-86.500 dB   | Z 10.0000000 GHz              |          |
| 30.0                              |                                      |   |   |   | Full Span<br>Start Freq       |          |
| 50.0                              |                                      |   |   |   | 10.000000000 GHz<br>Stop Freq |          |
| 0.0                               |                                      |   |   |   | 20.00000000 GHz               |          |
| 0.0                               | nalita ilia kelia ada dina piata ada |   | Burnsteilig auferations                                   | same in the second state  | CF Step<br>1.000000000 GHz    |          |
| 100                               |                                      | state of the state and to extend on the |   |   | Man<br>Freq Offset            |          |
| tart 10.000 GHz<br>Res BW 1.0 MHz |                                      | #Video BW 3.0                           | MHz   | Stop 20.000 G<br>Sweep ~20.4 ms (40000 p                                  |                               | Local    |
| して                                | May 23, 3:18:36                      | 2024<br>PM                              |   |   | Signal Track<br>(Span Zoom)   |          |

## GCM4701NA\_LTE2\_20 M\_CSE(10 G-20 G)\_Highest Channel\_QPSK\_1RB



# **10. ANNEX A\_ TEST SETUP PHOTO**

Please refer to test setup photo file no. as follows;

| No. | Description         |
|-----|---------------------|
| 1   | HCT-RF-2406-FC004-P |