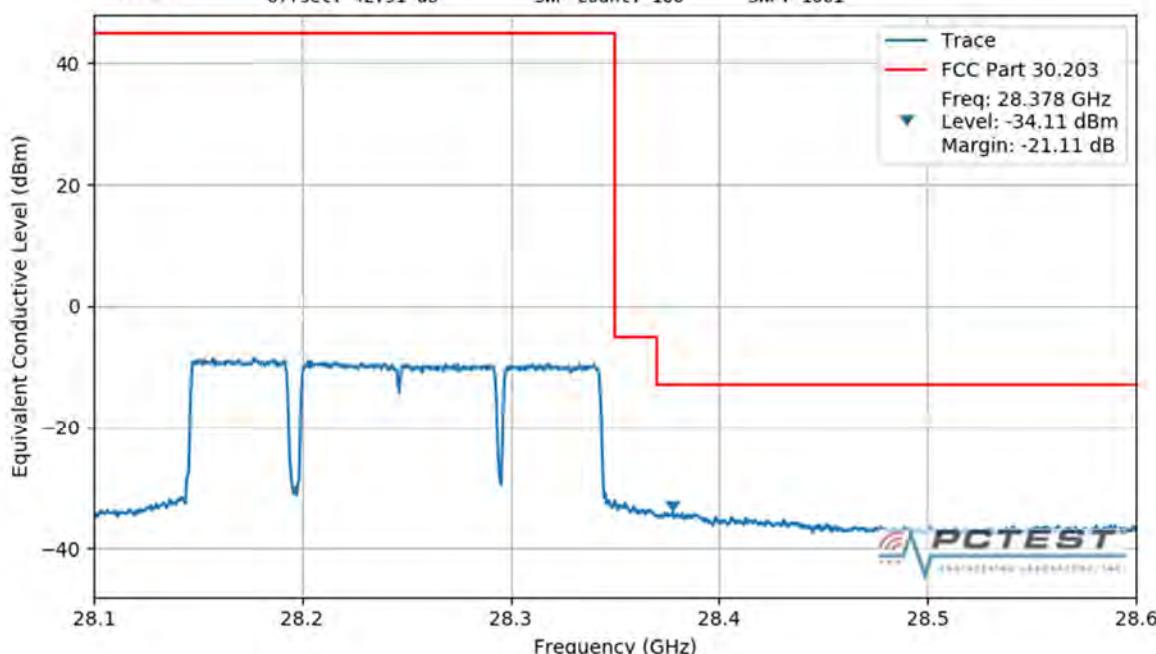
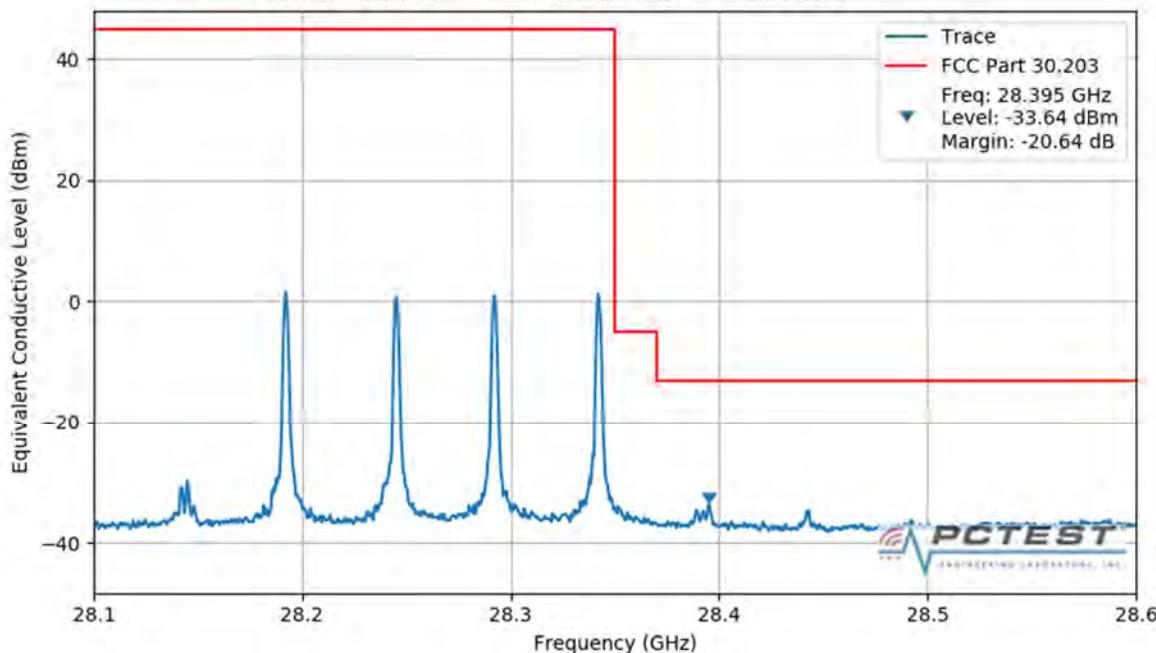


**PASS**

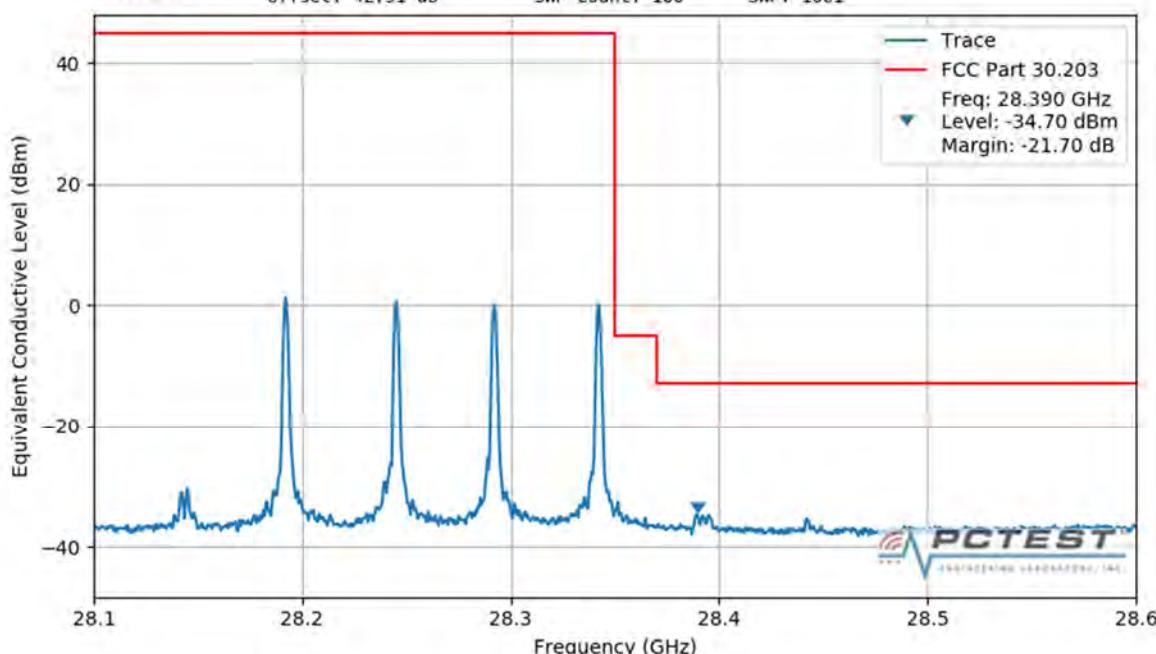
 Center Freq: 28.35 GHz    Trace: Average  
 Span: 500 MHz    Detector: Average  
 Offset: 42.31 dB    SWP Count: 100    RBW: 1 MHz  
 VBW: 3 MHz    SWP: 1001

**Plot 7-449. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)**
**PASS**

 Center Freq: 28.35 GHz    Trace: Average  
 Span: 500 MHz    Detector: Average  
 Offset: 42.31 dB    SWP Count: 100    RBW: 1 MHz  
 VBW: 3 MHz    SWP: 1001

**Plot 7-450. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)**

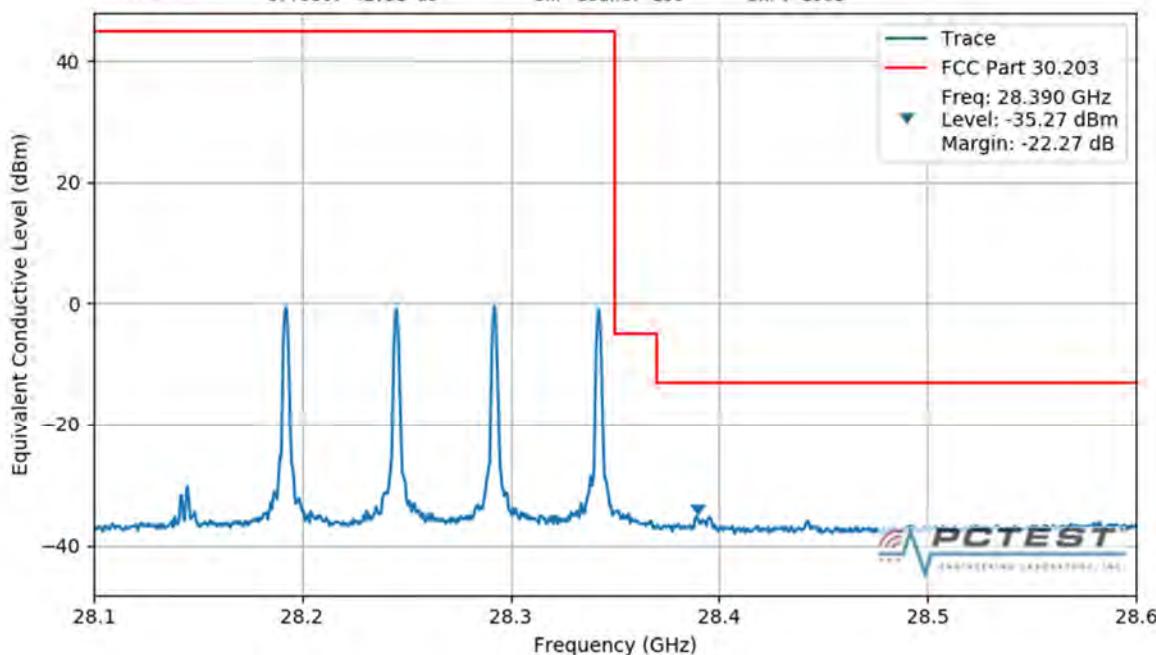
|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 263 of 371                 |

**PASS**

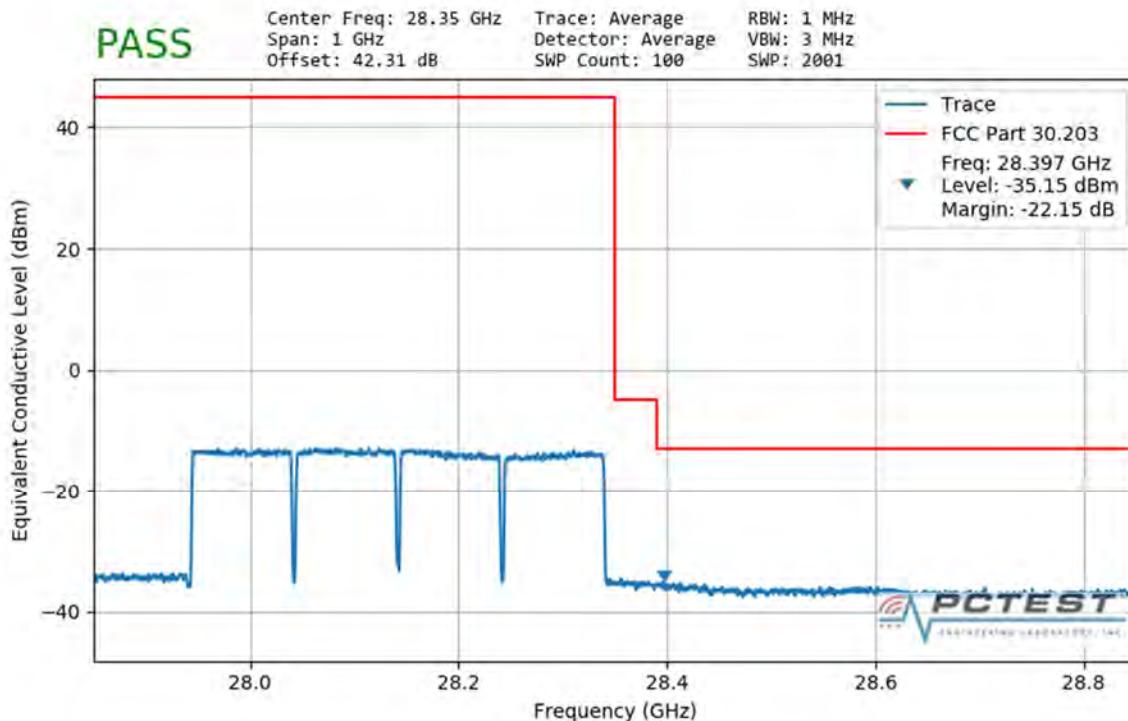
 Center Freq: 28.35 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 42.31 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 1001

**Plot 7-451. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)**
**PASS**

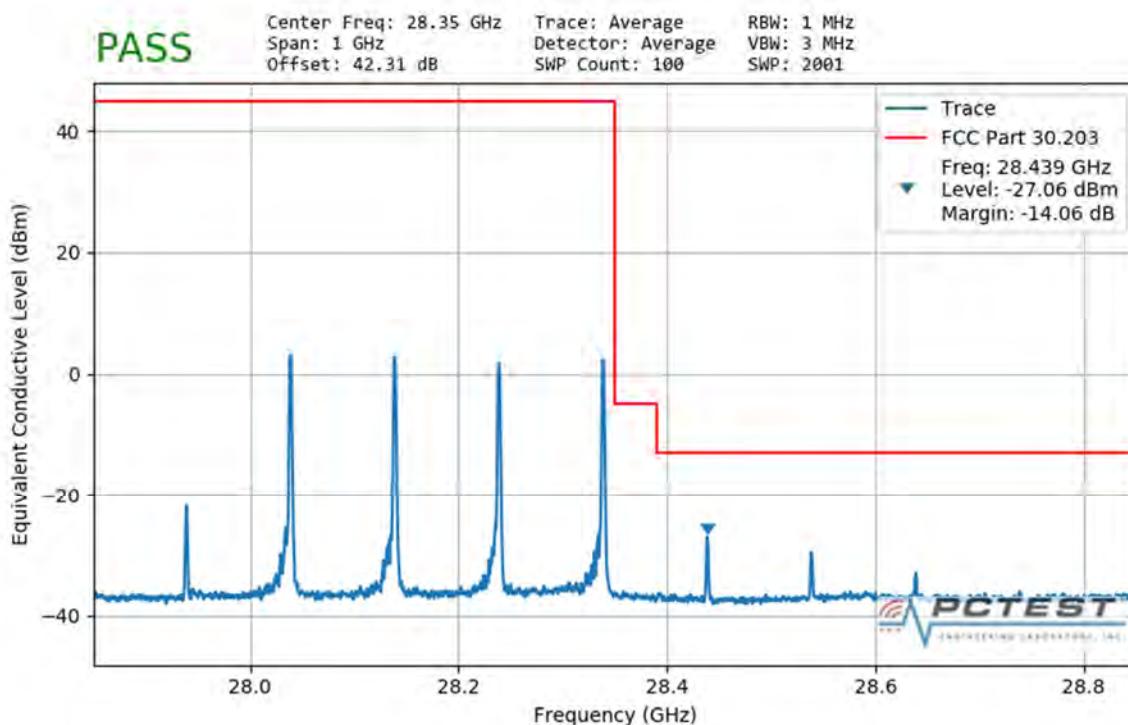
 Center Freq: 28.35 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 42.31 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 1001

**Plot 7-452. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 264 of 371                 |

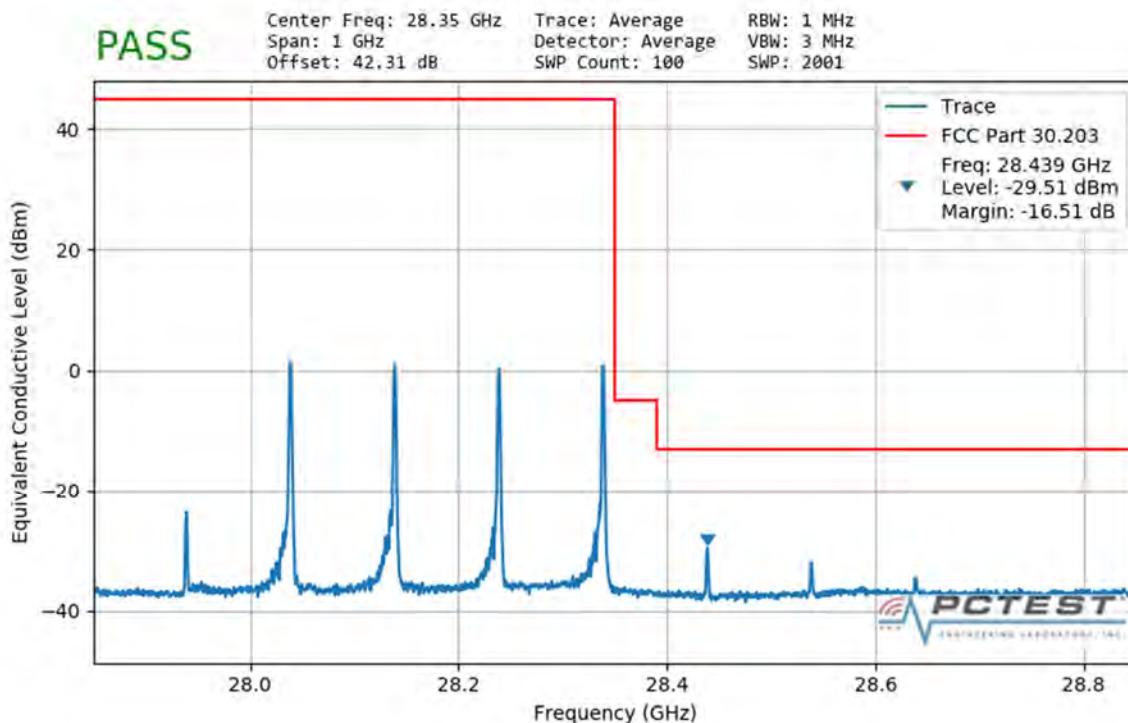


Plot 7-453. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

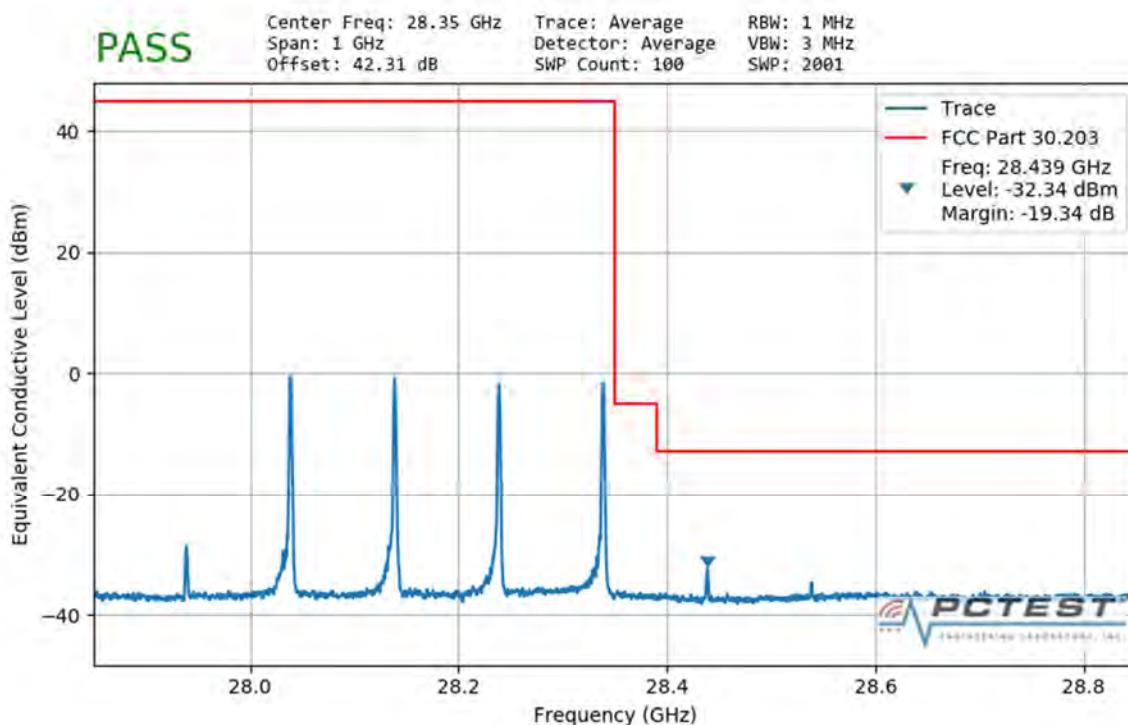


Plot 7-454. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |   |                                       |  |         |                                 |
|--|---|---------------------------------------|--|---------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |         | Page 265 of 371                 |



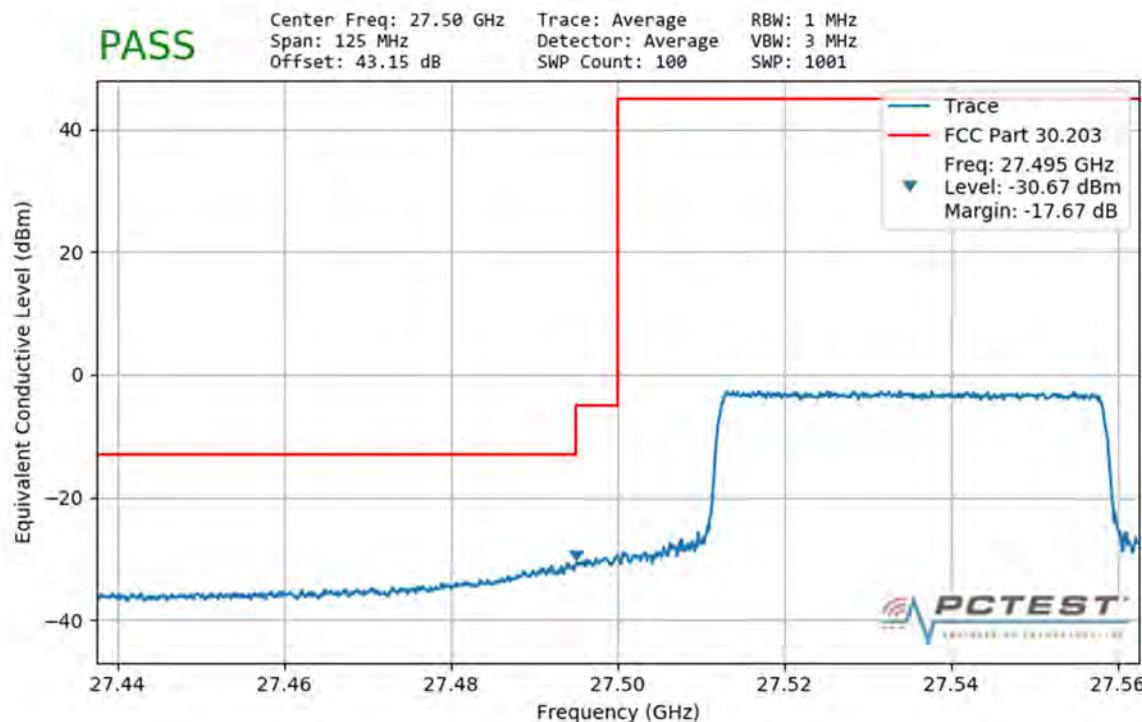
Plot 7-455. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)



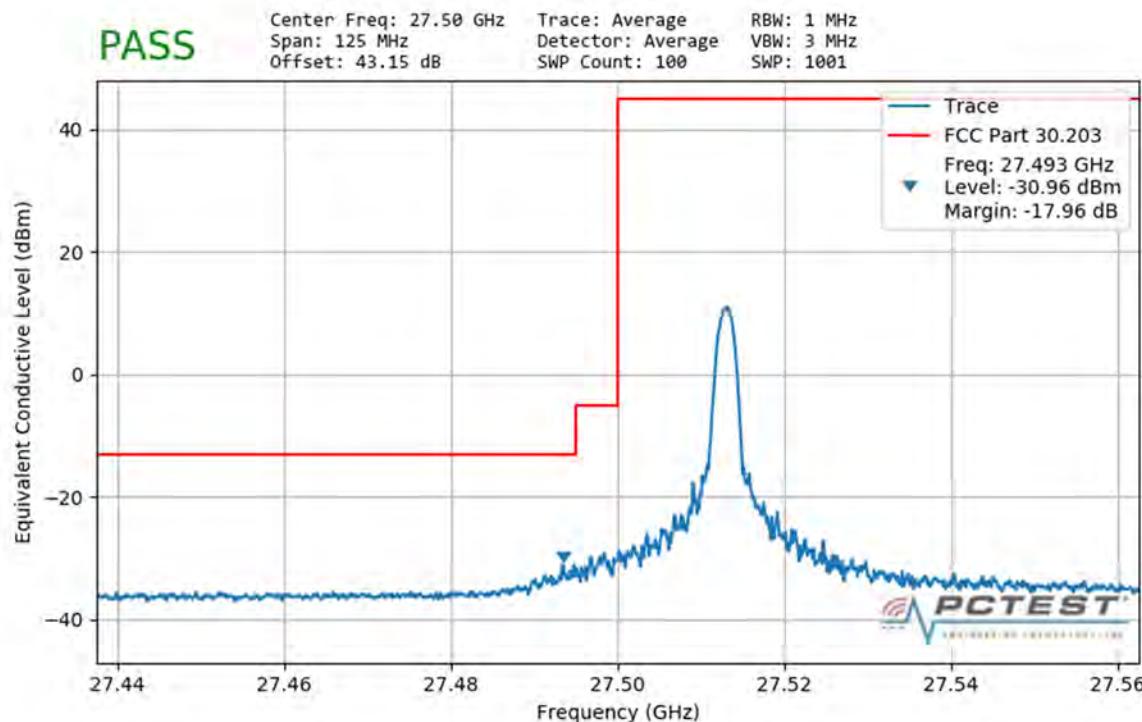
Plot 7-456. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 266 of 371                 |

## K Patch MIMO(n261)

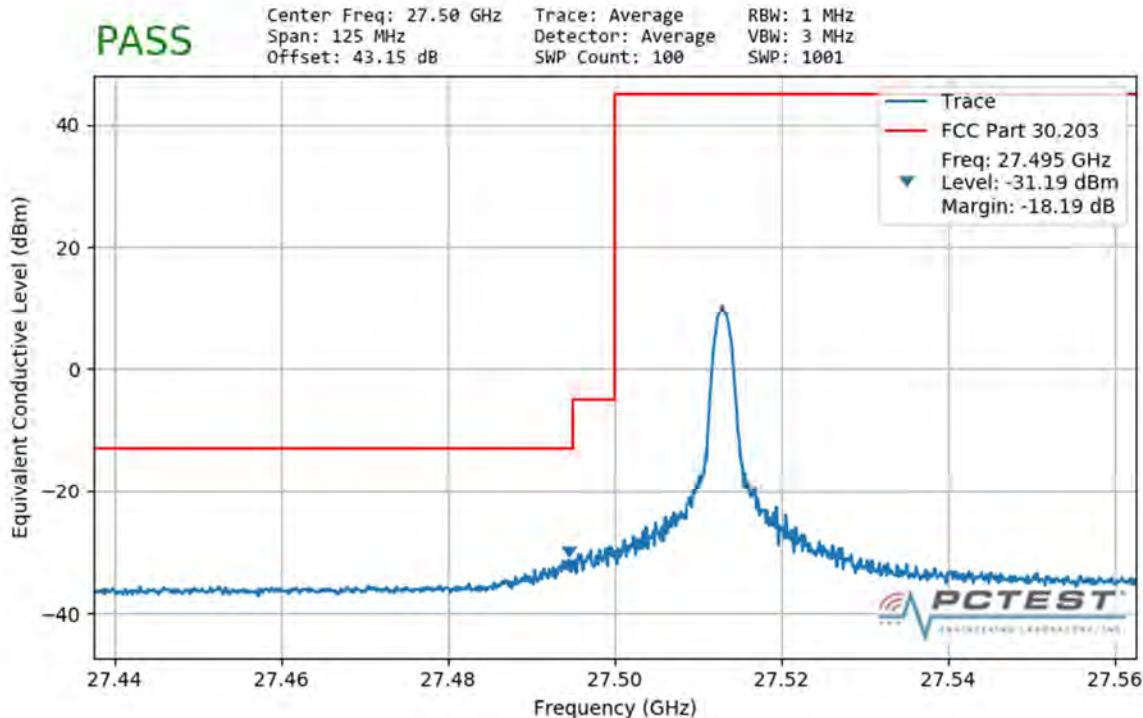


Plot 7-457. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

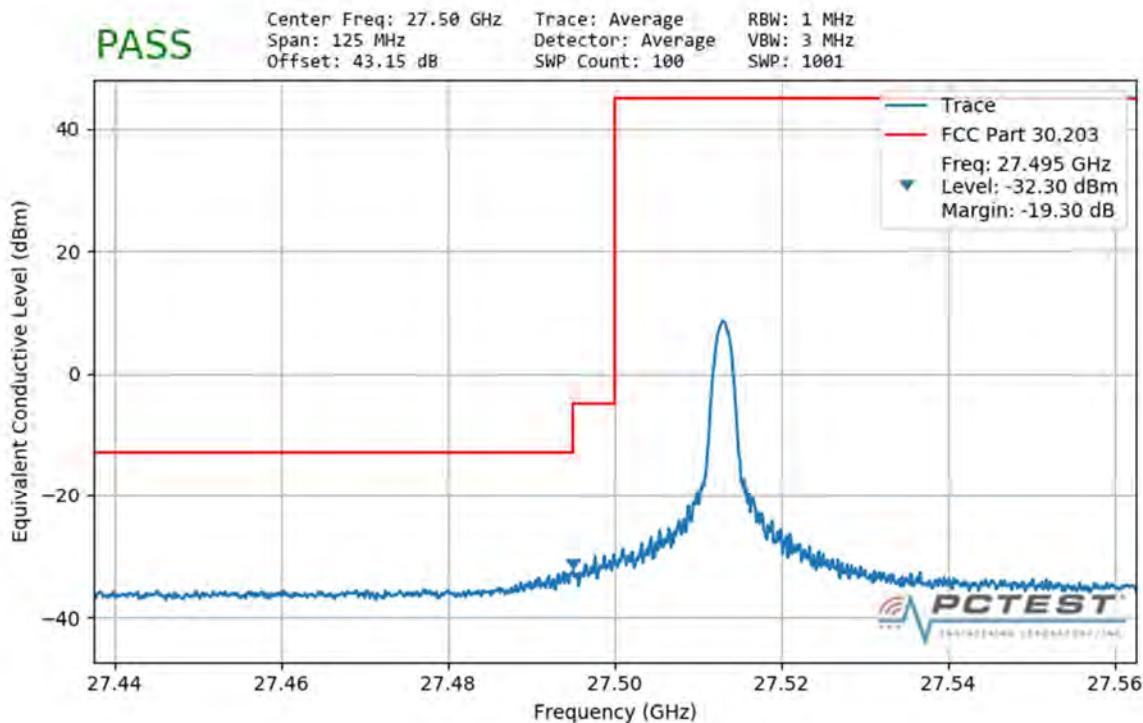


Plot 7-458. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |   |                                       |                                 |
|--|---|---------------------------------------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         | Page 267 of 371                 |

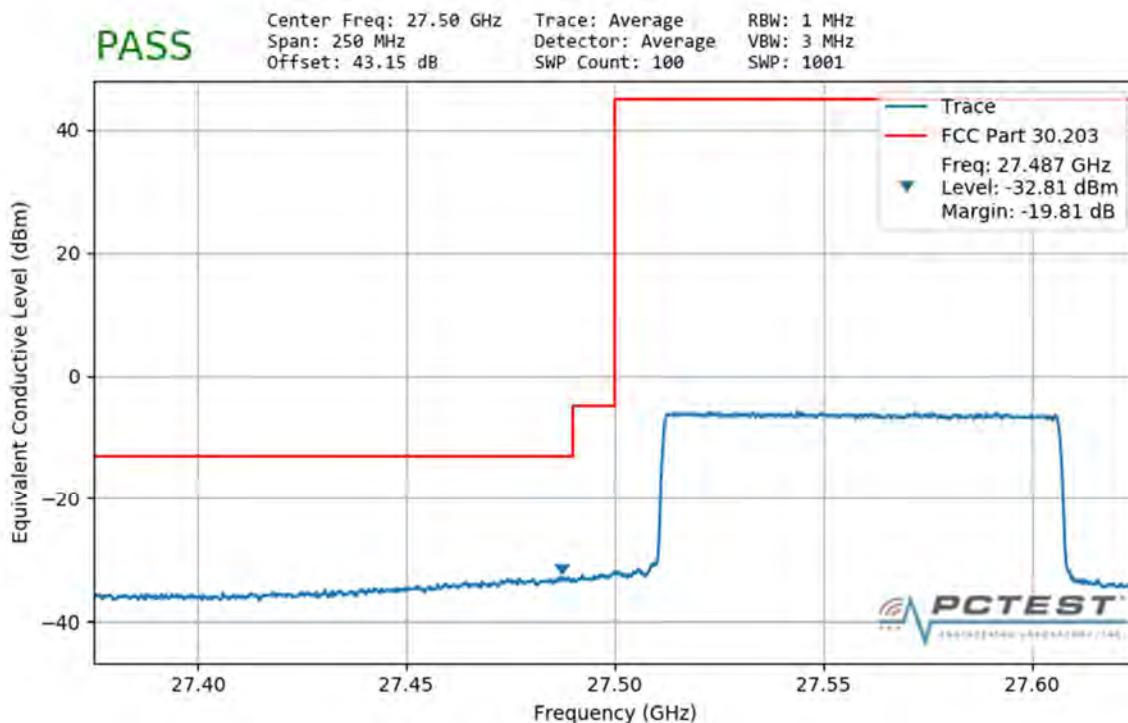


Plot 7-459. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)

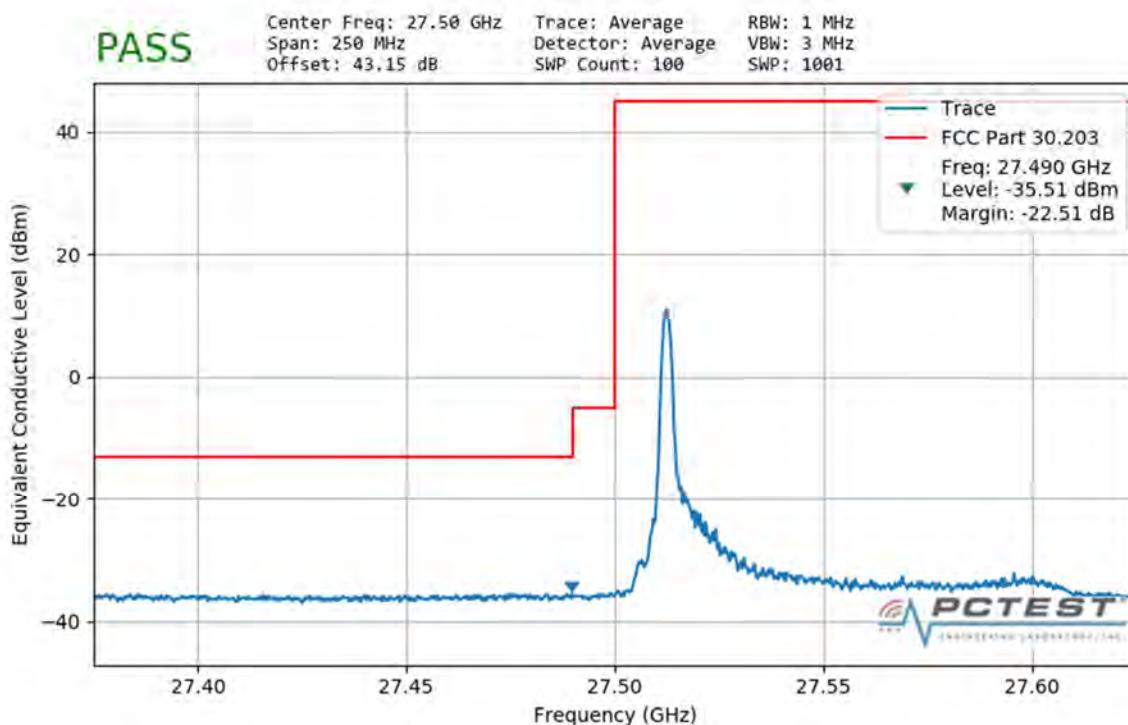


Plot 7-460. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)

|  |   |                                       |         |                                 |
|--|---|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019             | EUT Type:<br>Portable Handset         |         | Page 268 of 371                 |



Plot 7-461. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)

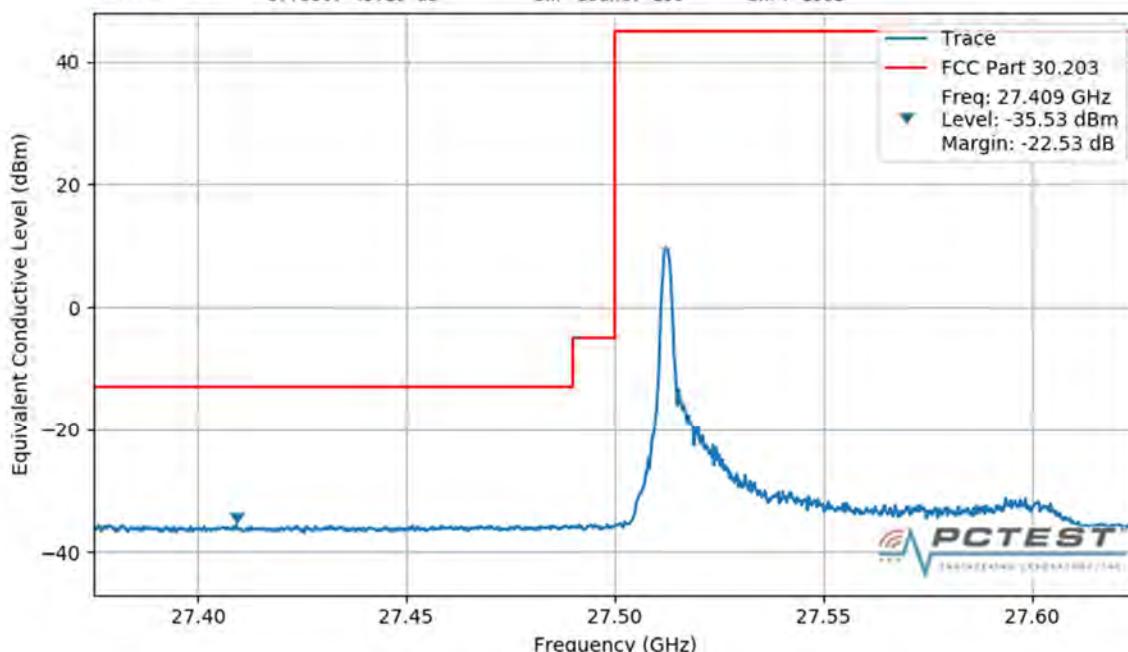


Plot 7-462. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 269 of 371                 |

**PASS**

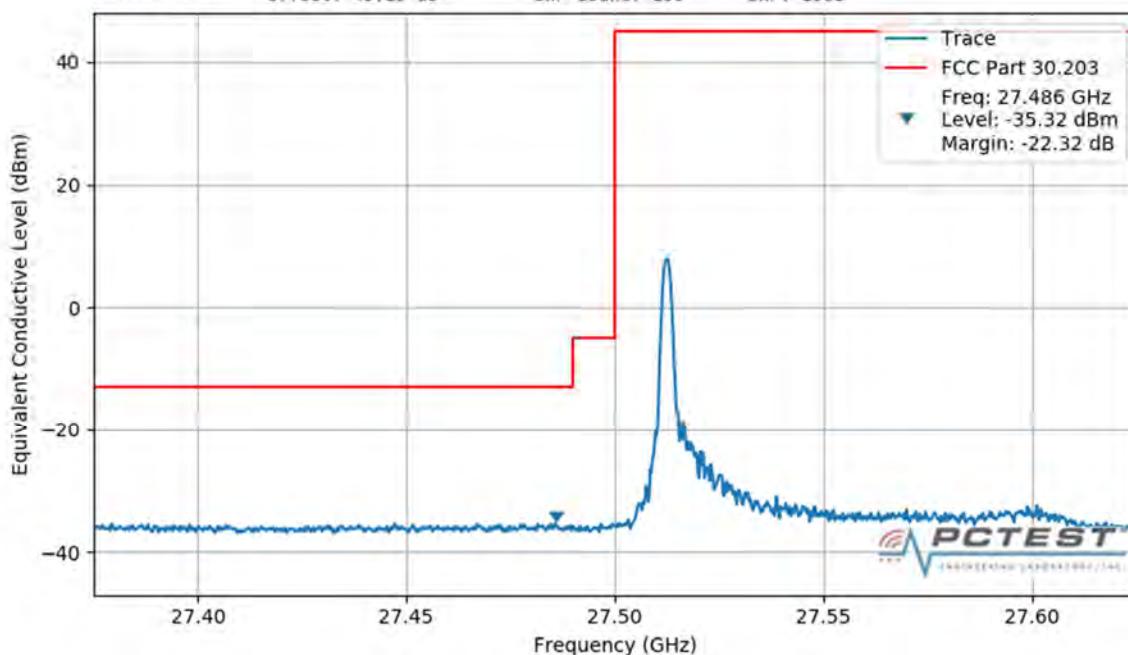
Center Freq: 27.50 GHz   Trace: Average  
Span: 250 MHz   Detector: Average  
Offset: 43.15 dB   SWP Count: 100   RBW: 1 MHz  
VBW: 3 MHz   SWP: 1001



**Plot 7-463. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**

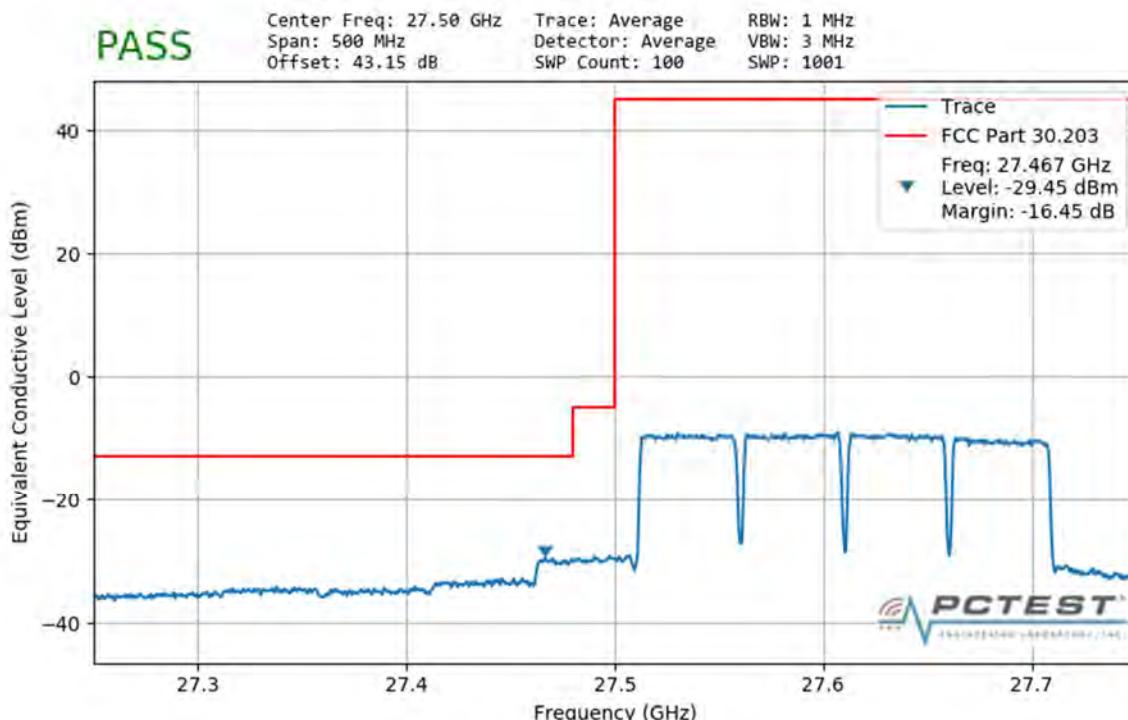
**PASS**

Center Freq: 27.50 GHz   Trace: Average  
Span: 250 MHz   Detector: Average  
Offset: 43.15 dB   SWP Count: 100   RBW: 1 MHz  
VBW: 3 MHz   SWP: 1001

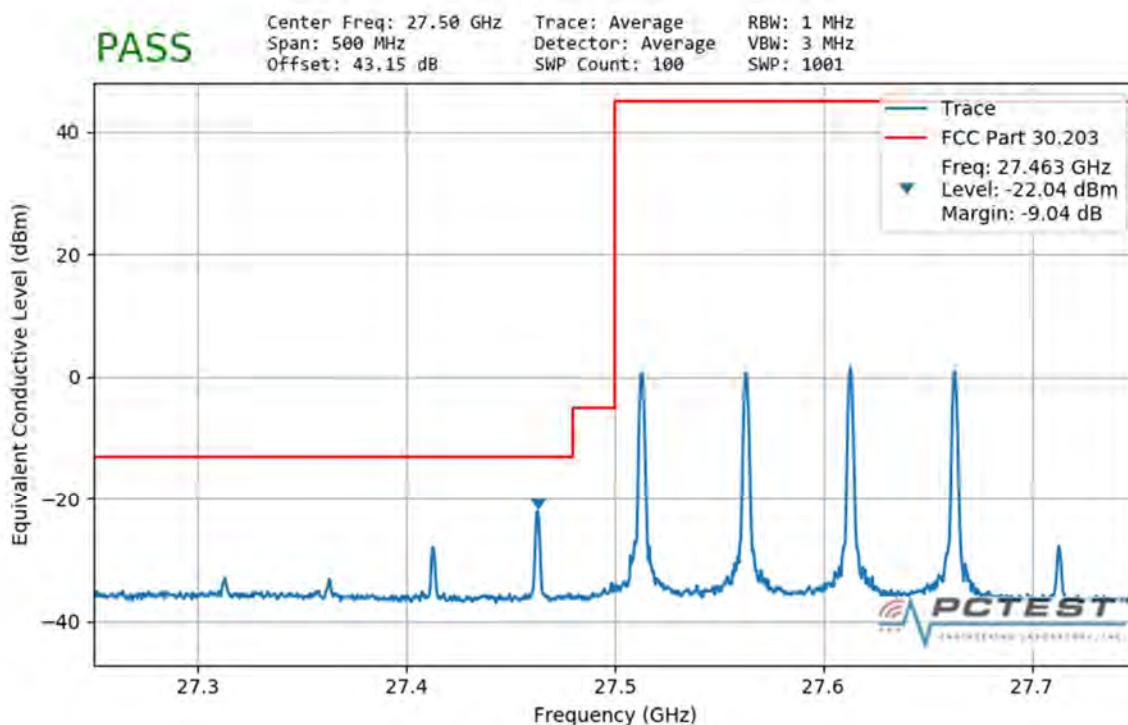


**Plot 7-464. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |                                   |                                       |   |                                 |
|--|-----------------------------------|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |   | Page 270 of 371                 |



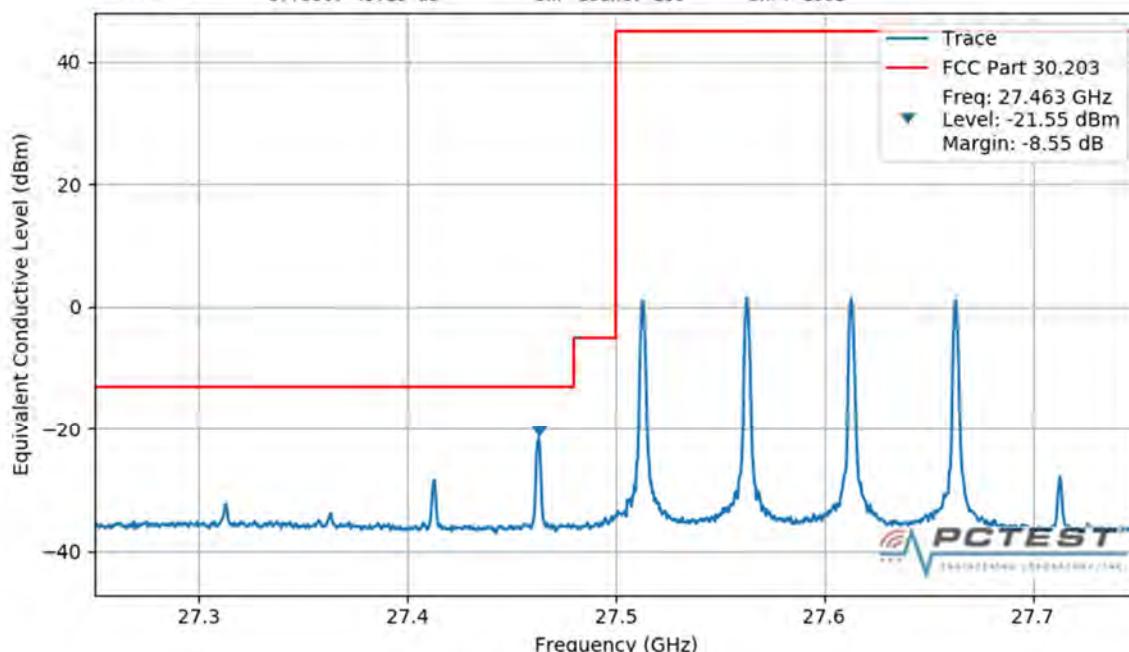
Plot 7-465. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)

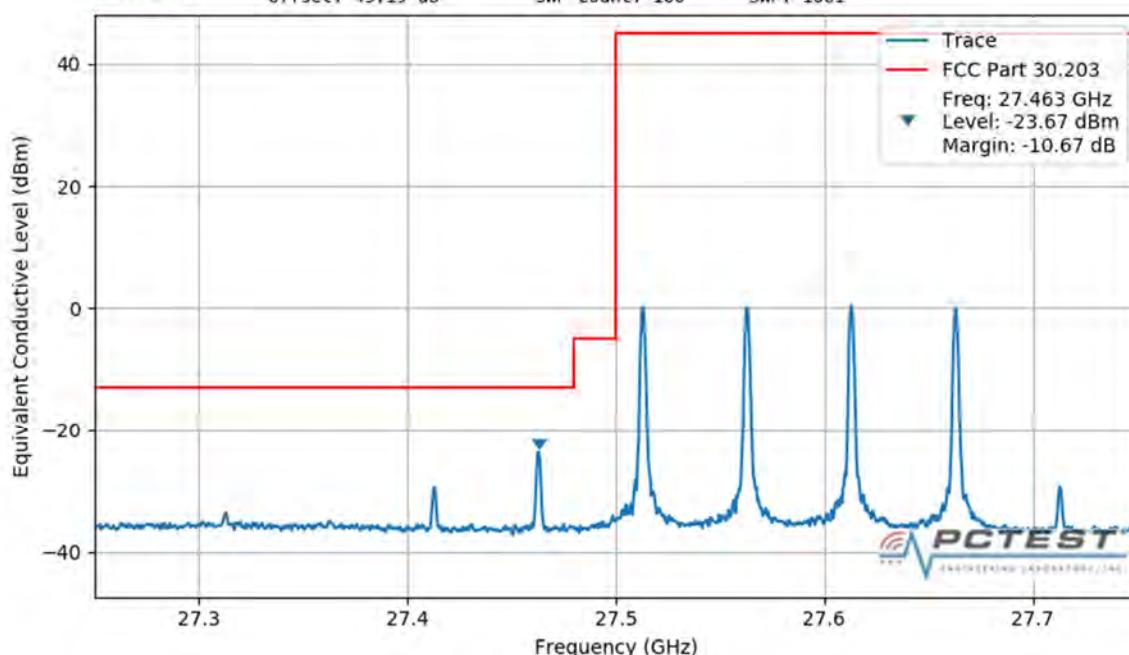


Plot 7-466. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)

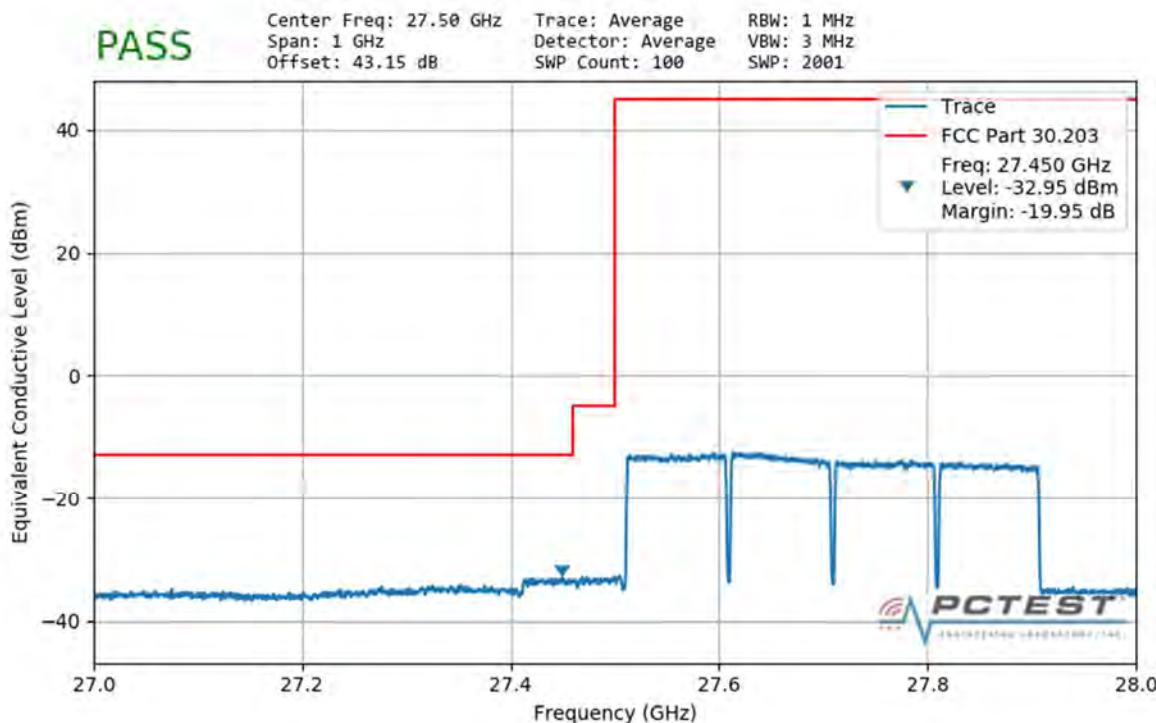
|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 271 of 371                 |

**PASS**

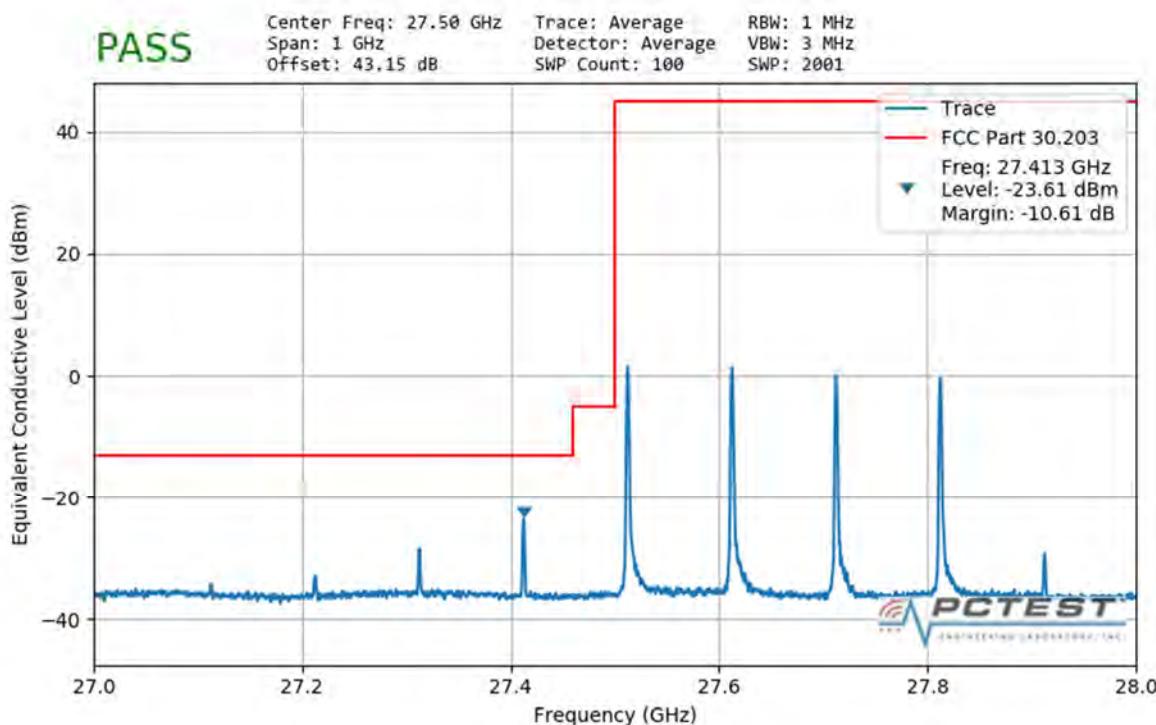
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 43.15 dB   SWP Count: 100   RBW: 1 MHz  
 VBW: 3 MHz   SWP: 1001

**Plot 7-467. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 27.50 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 43.15 dB   SWP Count: 100   RBW: 1 MHz  
 VBW: 3 MHz   SWP: 1001

**Plot 7-468. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 272 of 371                 |



**Plot 7-469. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)**

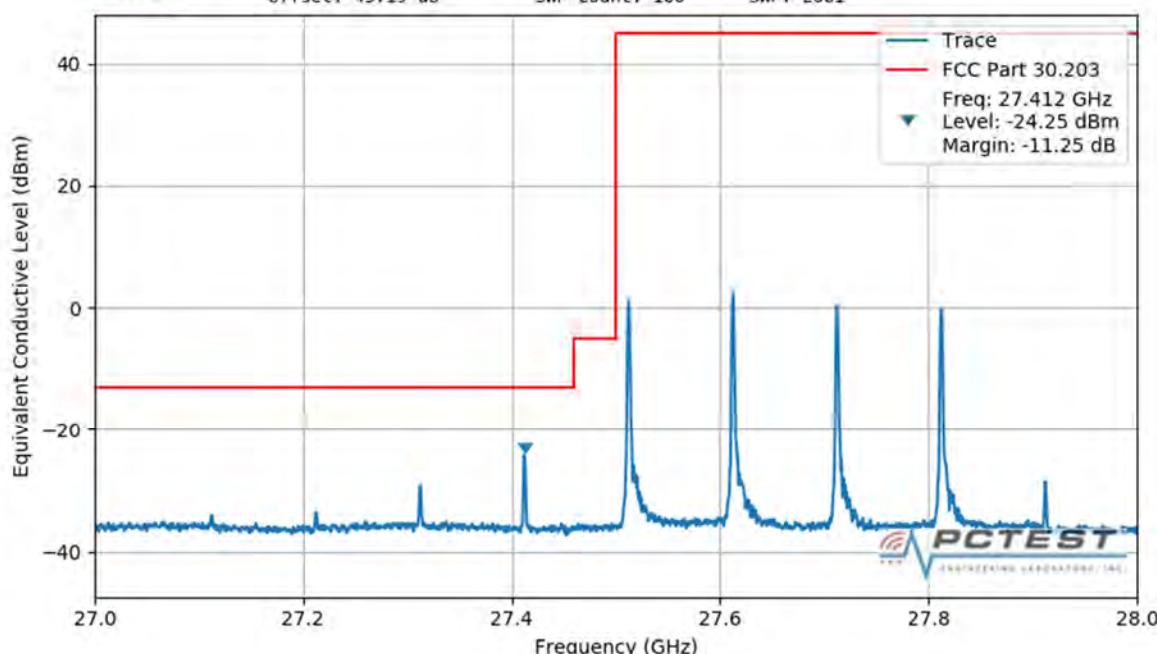


**Plot 7-470. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)**

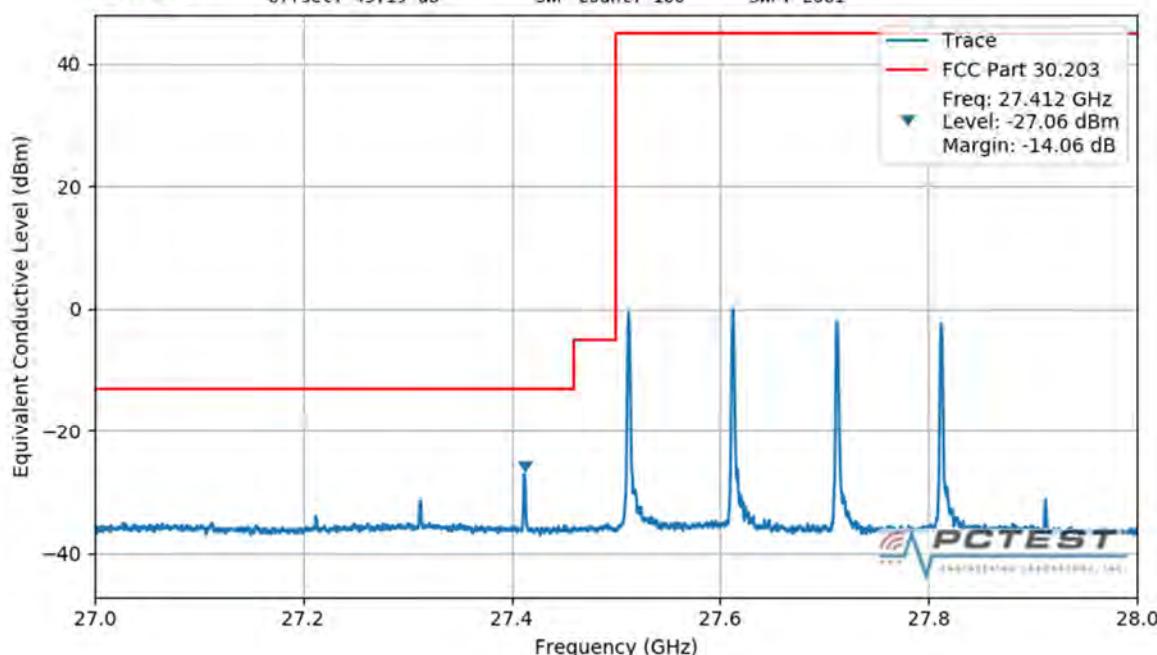
|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 273 of 371                 |

**PASS**

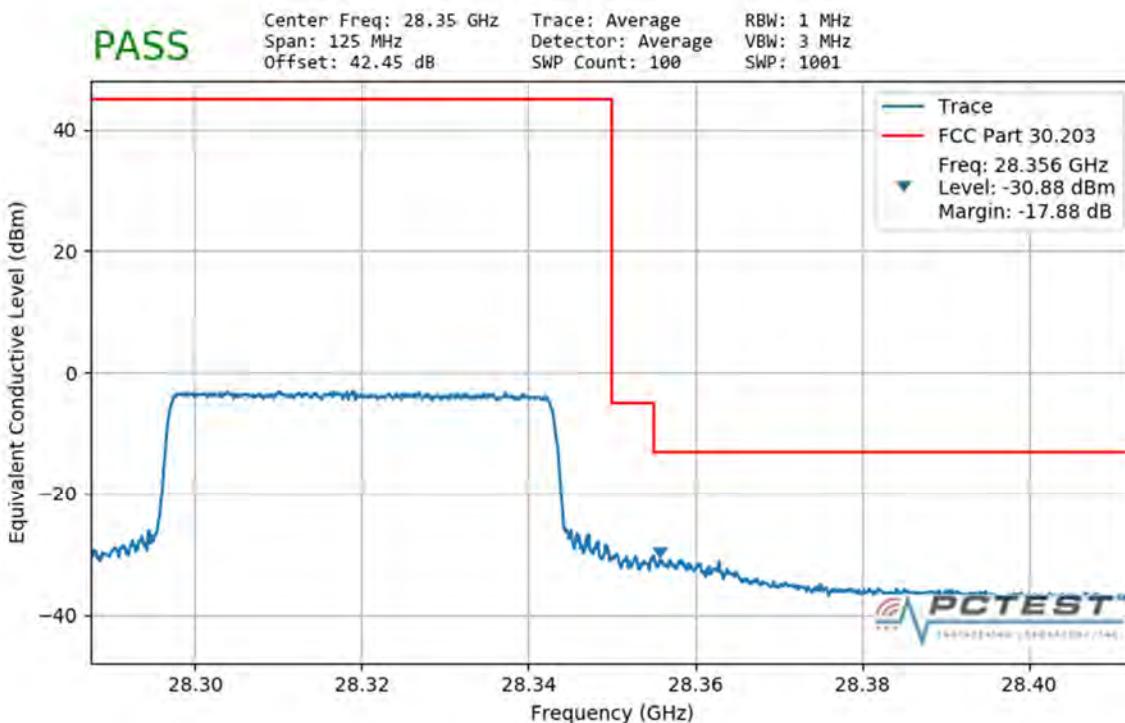
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 43.15 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-471. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**
**PASS**

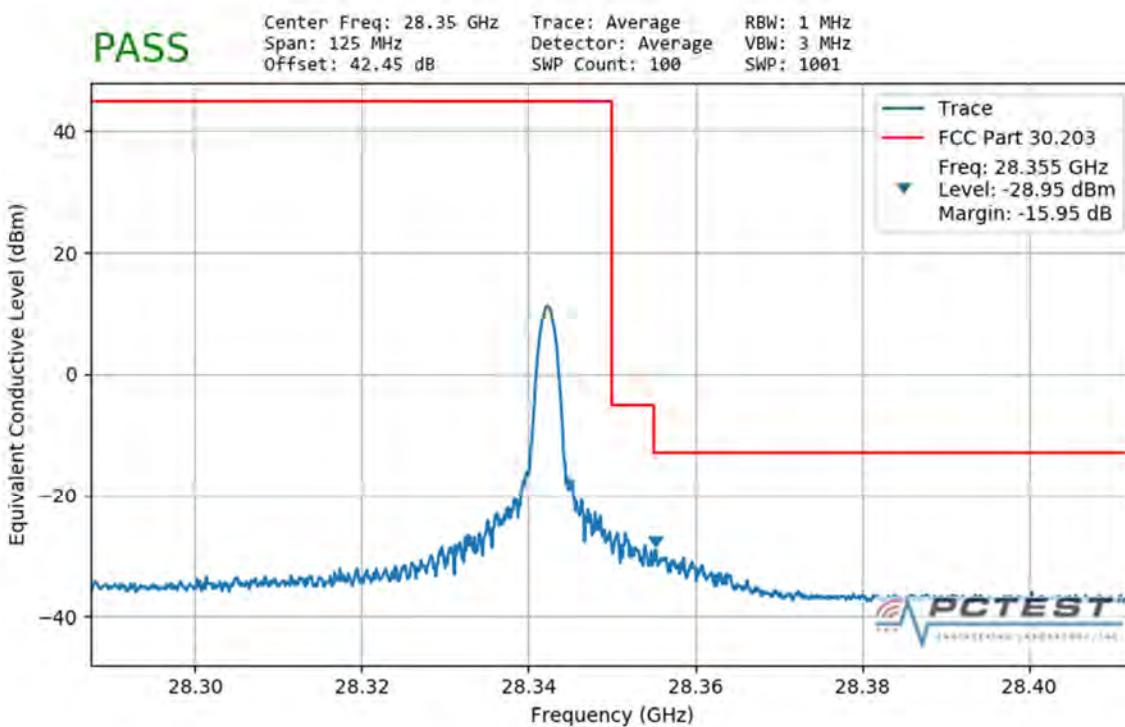
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 43.15 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-472. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 274 of 371                 |



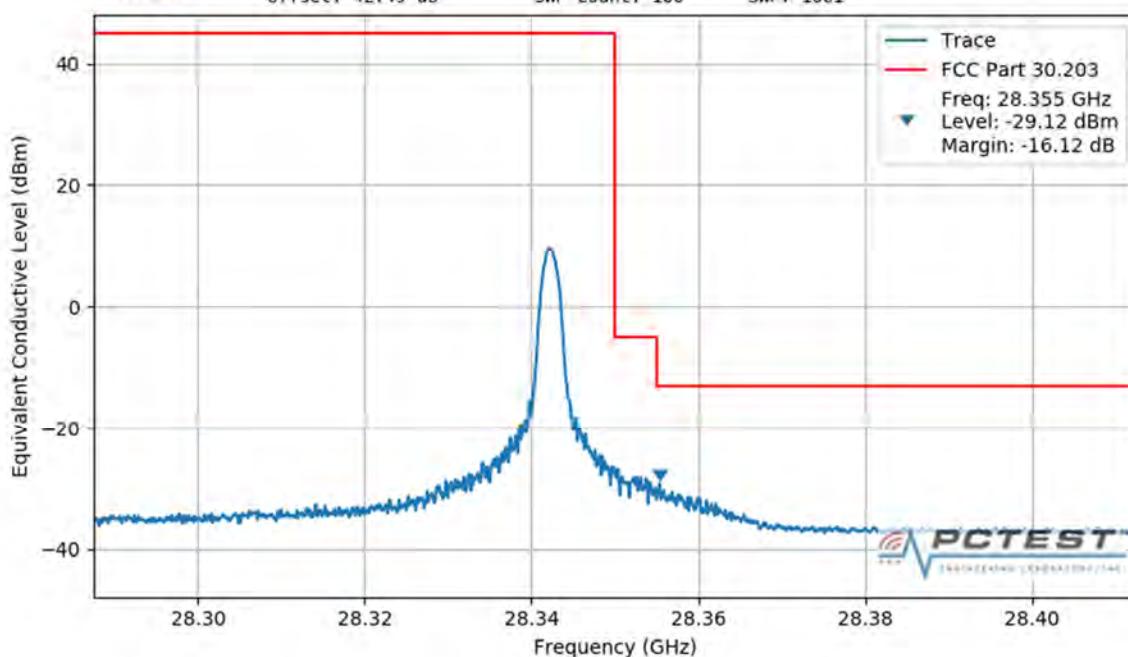
Plot 7-473. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)

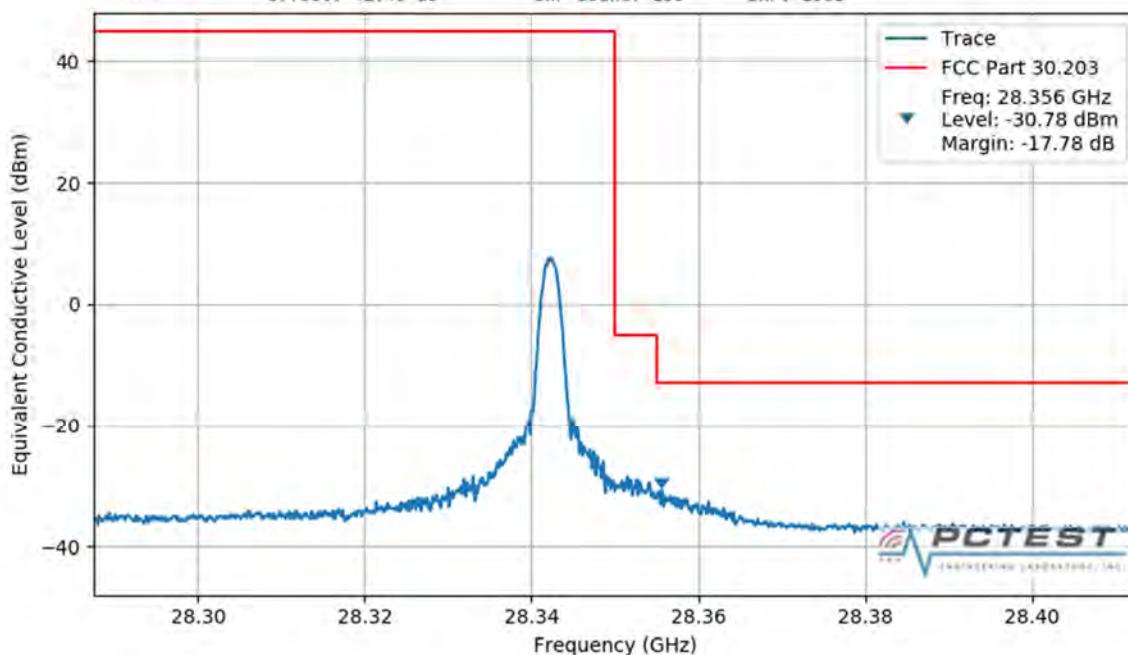


Plot 7-474. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)

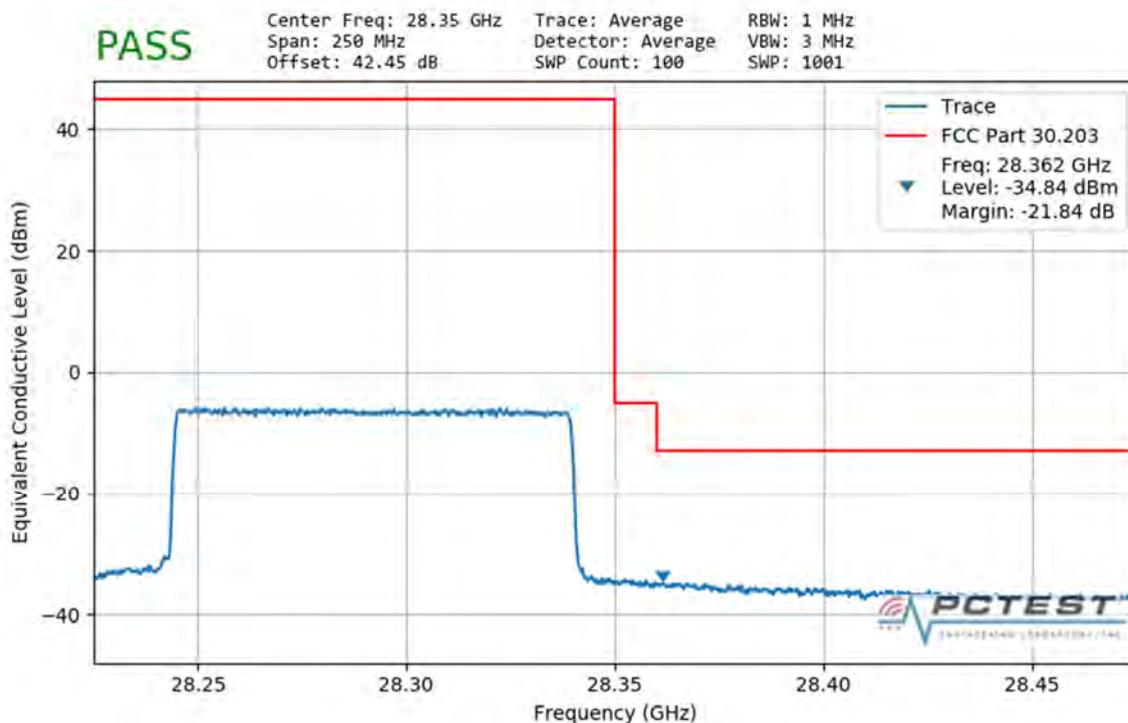
|  |   |                                       |  |         |                                 |
|--|---|---------------------------------------|--|---------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |         | Page 275 of 371                 |

**PASS**

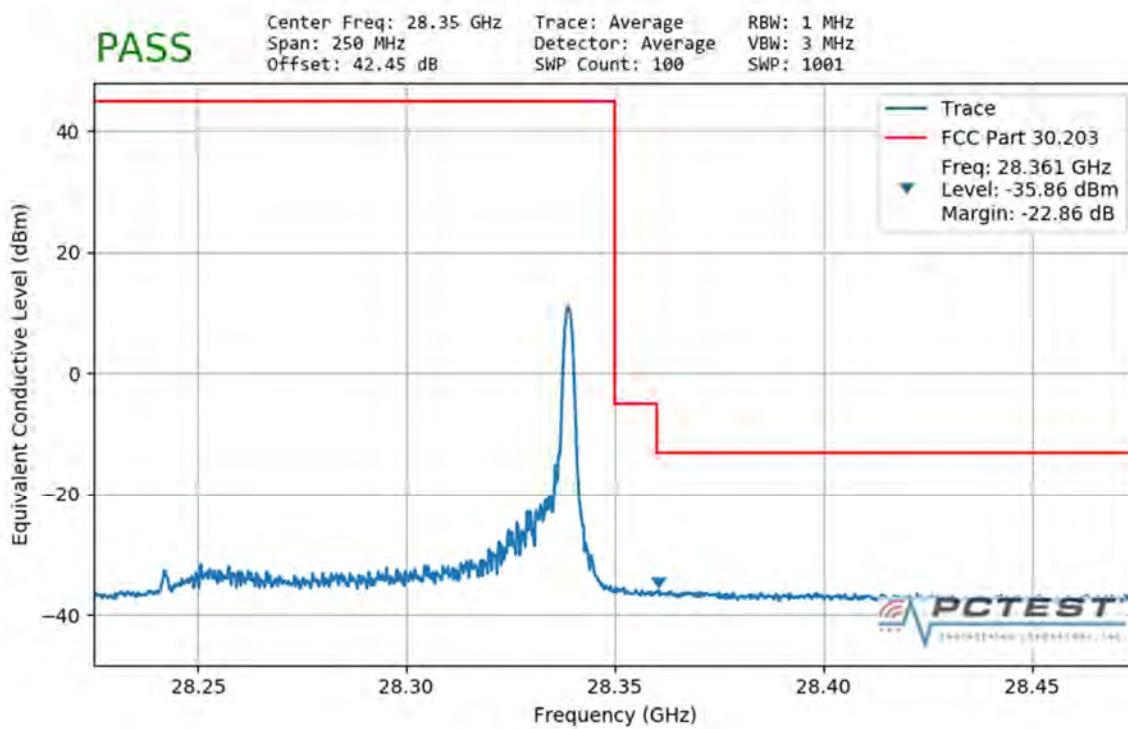
 Center Freq: 28.35 GHz  
 Span: 125 MHz  
 Offset: 42.45 dB  
 Trace: Average  
 Detector: Average  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-475. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 28.35 GHz  
 Span: 125 MHz  
 Offset: 42.45 dB  
 Trace: Average  
 Detector: Average  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-476. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 276 of 371                 |



Plot 7-477. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

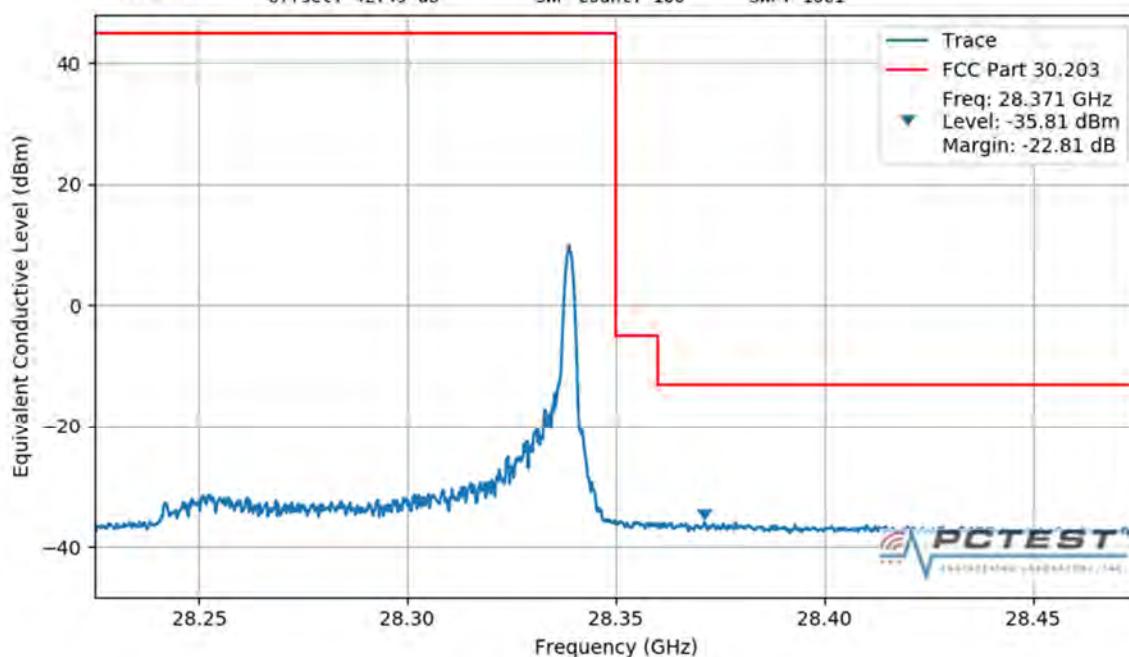


Plot 7-478. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

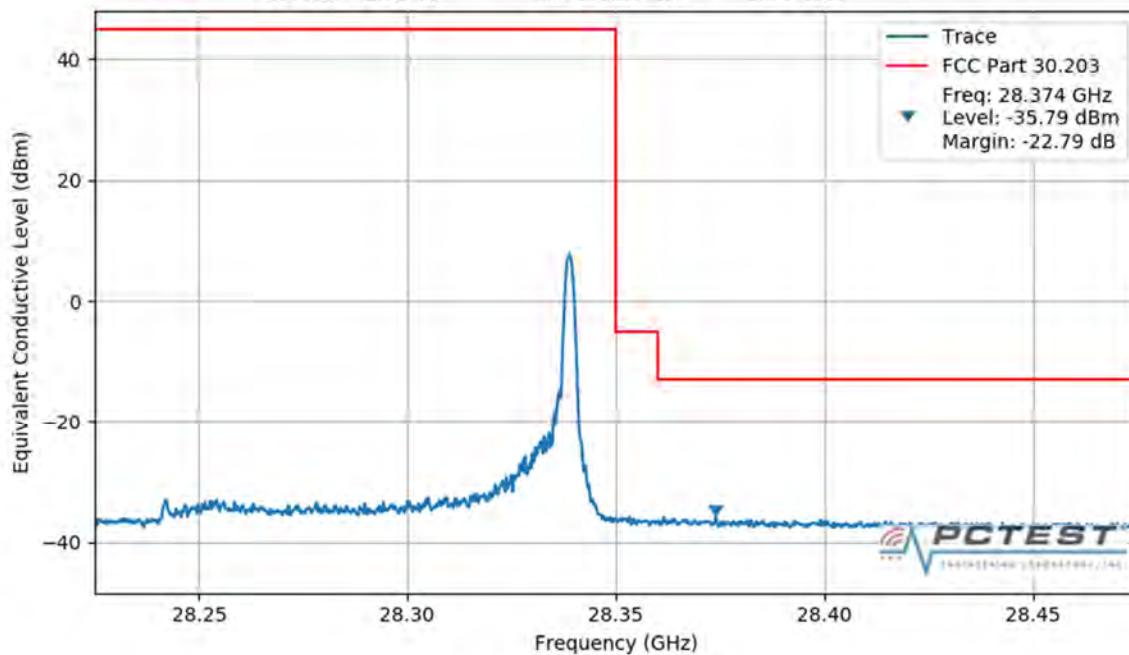
|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 277 of 371                 |

**PASS**

 Center Freq: 28.35 GHz   Trace: Average  
 Span: 250 MHz   Detector: Average  
 Offset: 42.45 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 1001

**Plot 7-479. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)**
**PASS**

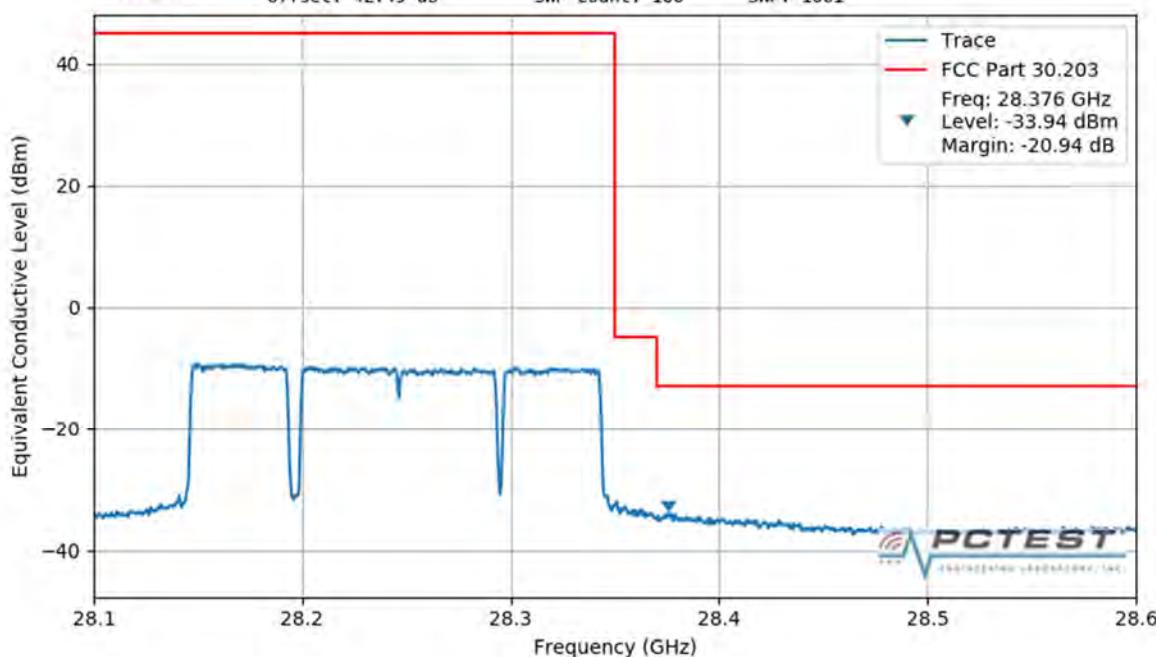
 Center Freq: 28.35 GHz   Trace: Average  
 Span: 250 MHz   Detector: Average  
 Offset: 42.45 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 1001

**Plot 7-480. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 278 of 371                 |

**PASS**

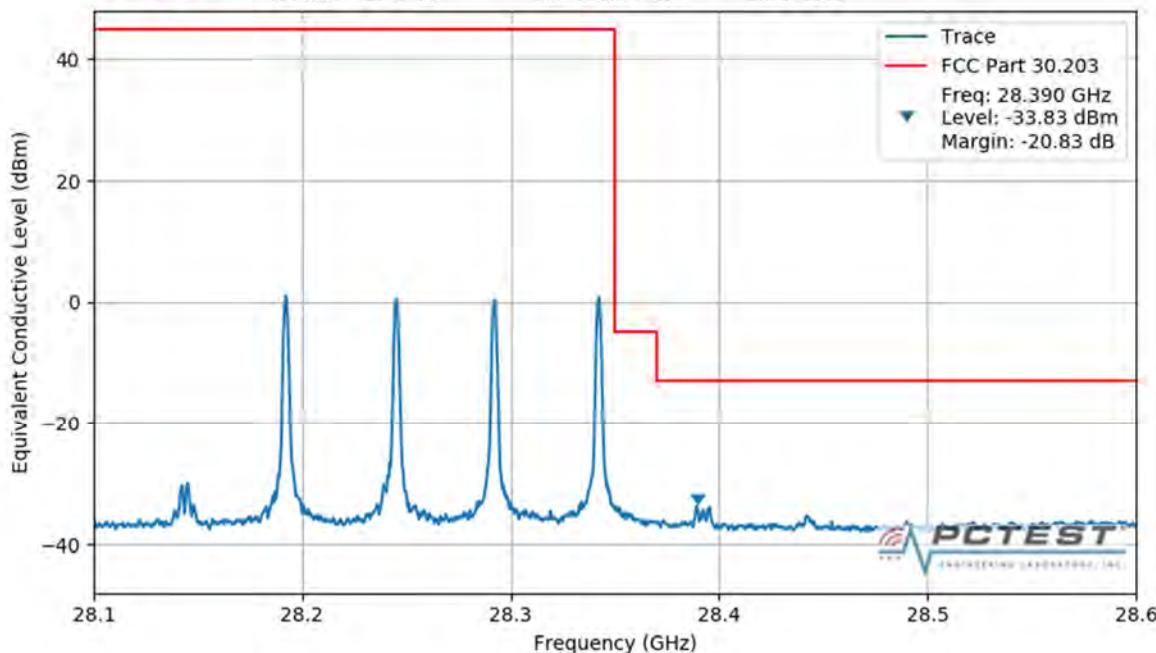
Center Freq: 28.35 GHz   Trace: Average  
Span: 500 MHz   Detector: Average  
Offset: 42.45 dB   SWP Count: 100   RBW: 1 MHz  
VBW: 3 MHz   SWP: 1001



**Plot 7-481. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)**

**PASS**

Center Freq: 28.35 GHz   Trace: Average   RBW: 1 MHz  
Span: 500 MHz   Detector: Average   VBW: 3 MHz  
Offset: 42.45 dB   SWP Count: 100   SWP: 1001

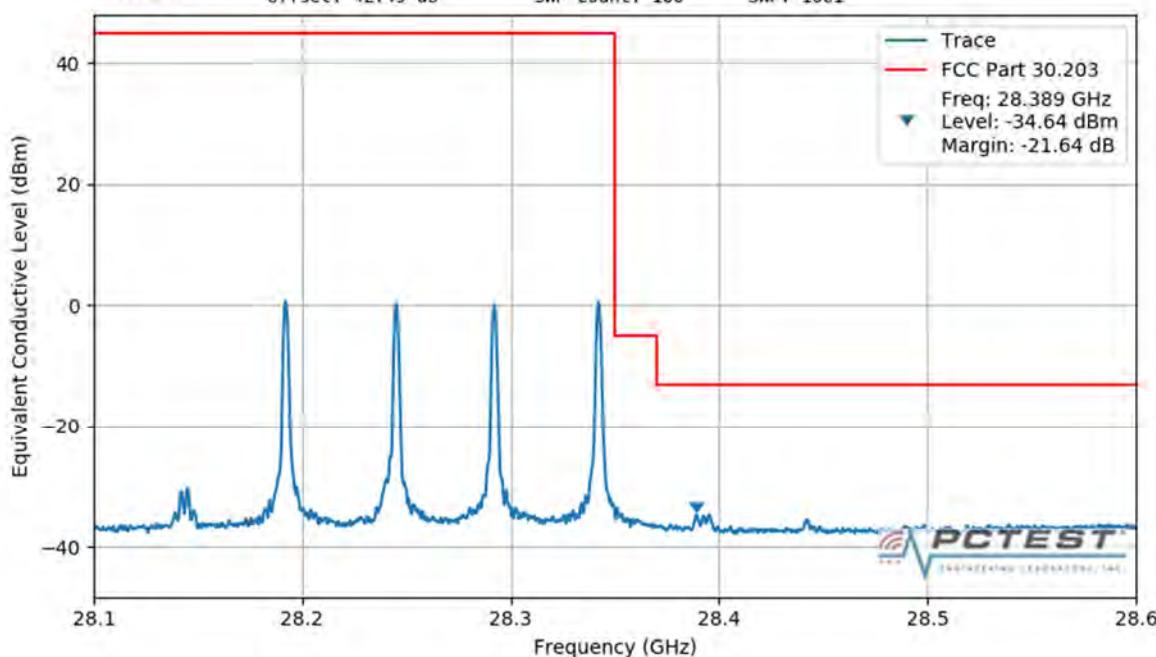


**Plot 7-482. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)**

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 279 of 371                 |

**PASS**

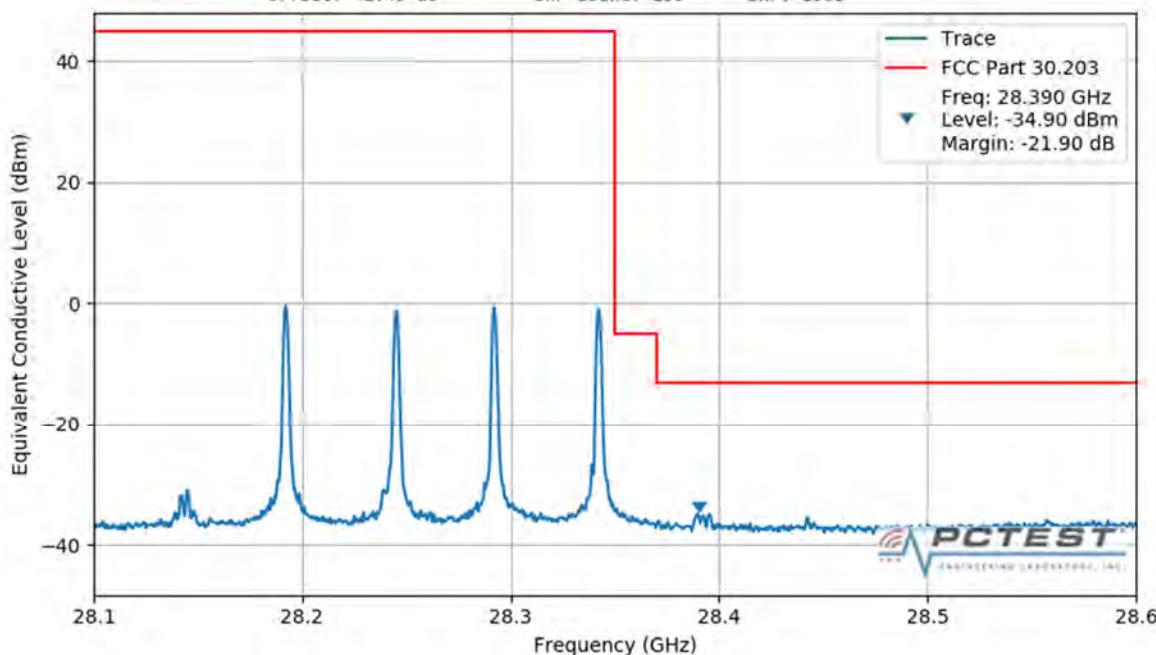
Center Freq: 28.35 GHz   Trace: Average  
Span: 500 MHz   Detector: Average  
Offset: 42.45 dB   SWP Count: 100   RBW: 1 MHz  
VBW: 3 MHz   SWP: 1001



**Plot 7-483. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

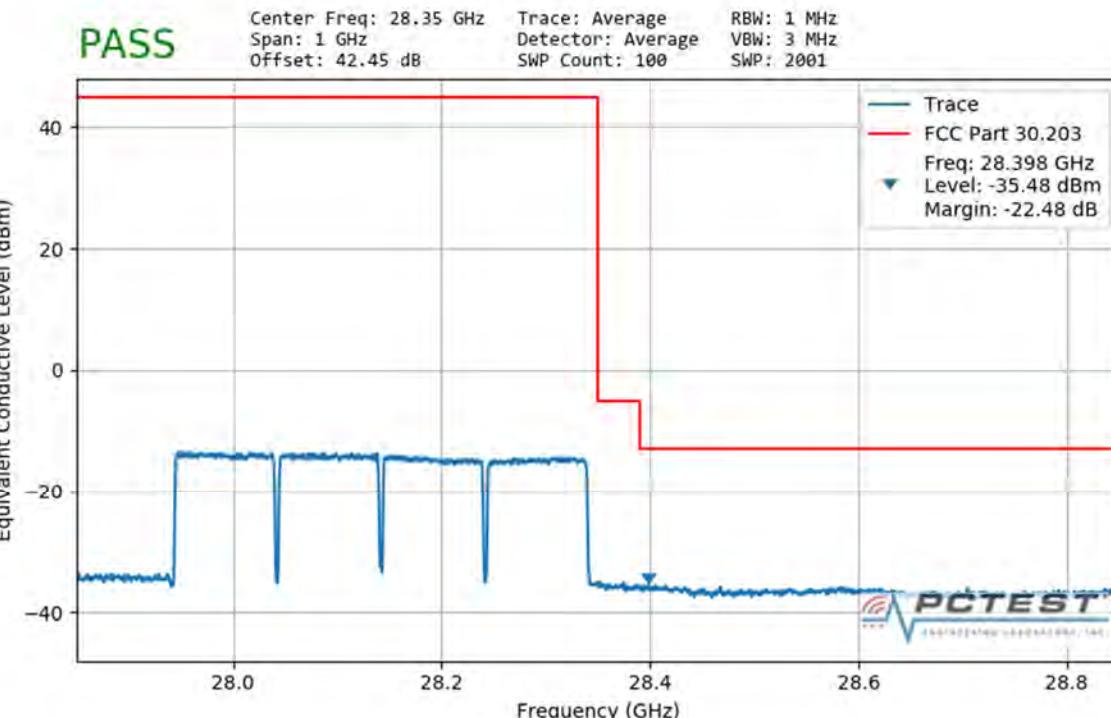
**PASS**

Center Freq: 28.35 GHz   Trace: Average   RBW: 1 MHz  
Span: 500 MHz   Detector: Average   VBW: 3 MHz  
Offset: 42.45 dB   SWP Count: 100   SWP: 1001

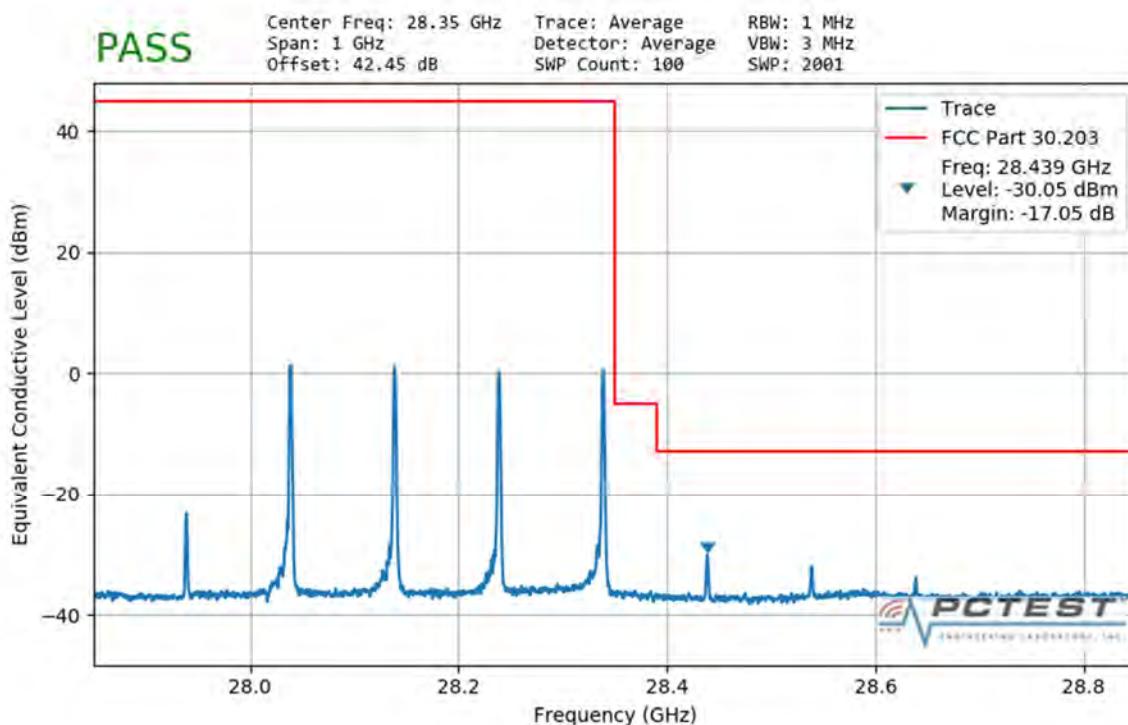


**Plot 7-484. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 280 of 371                 |

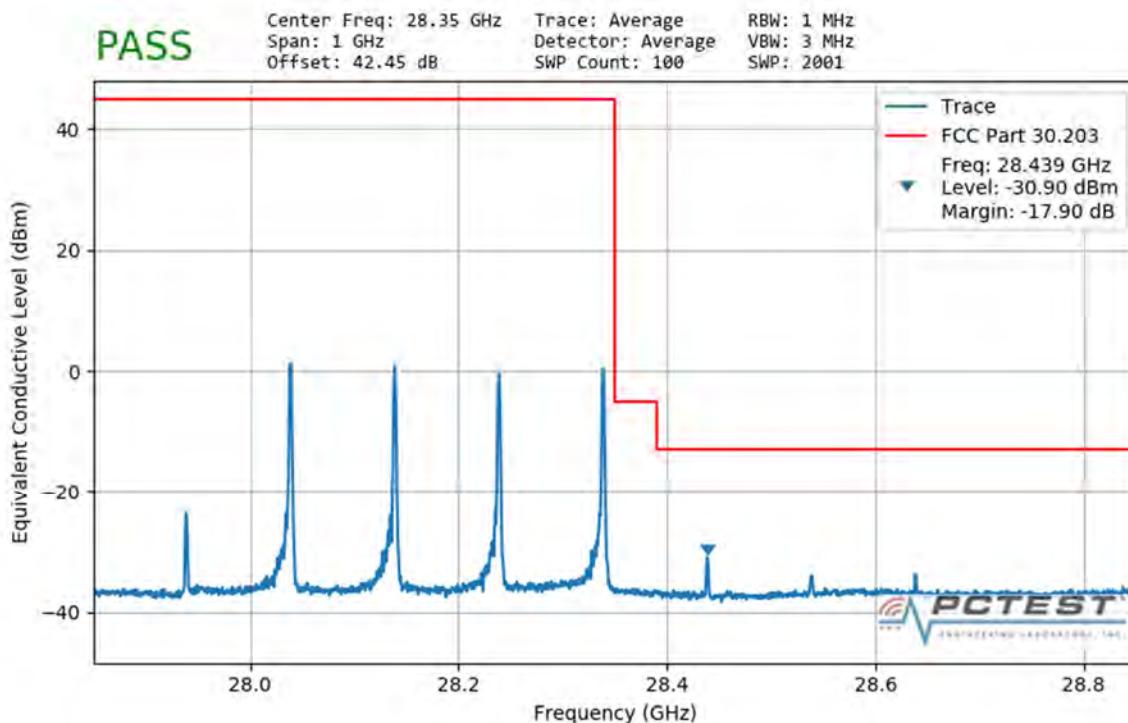


Plot 7-485. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

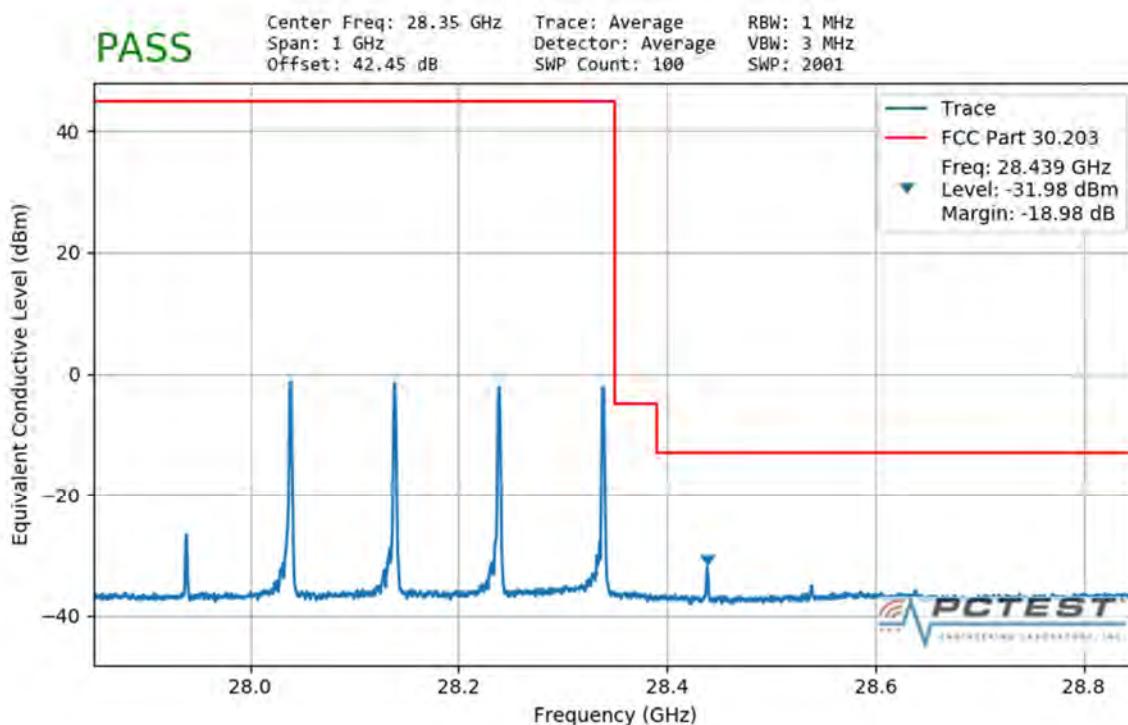


Plot 7-486. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 281 of 371                 |



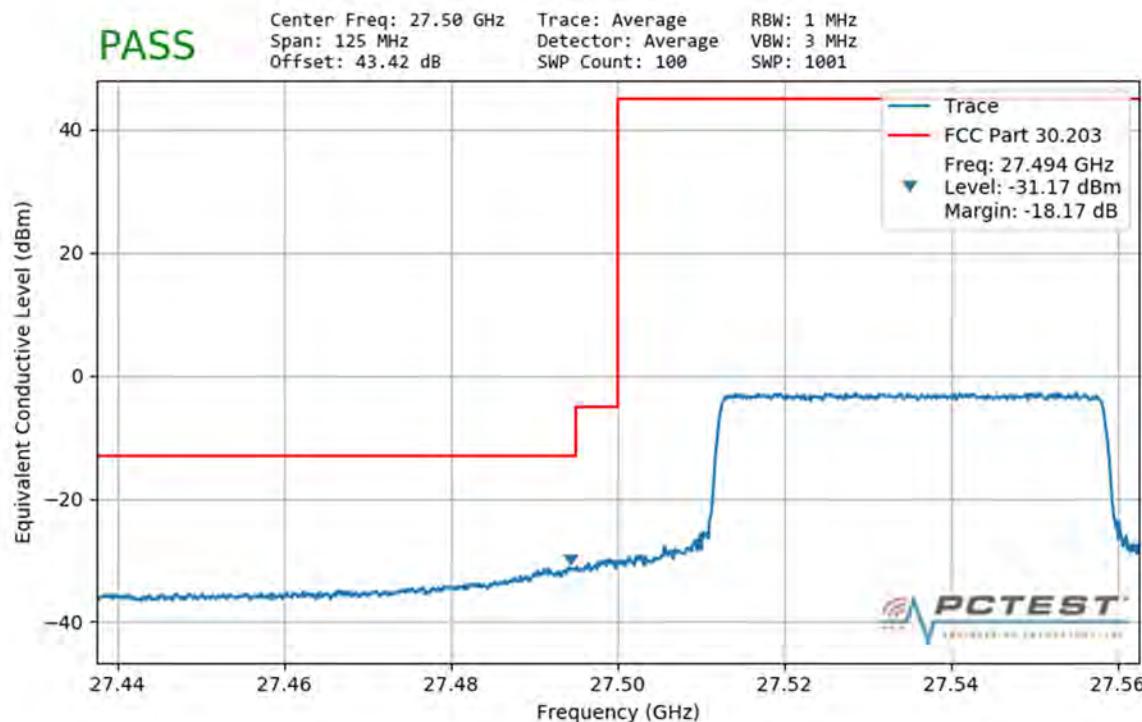
Plot 7-487. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)



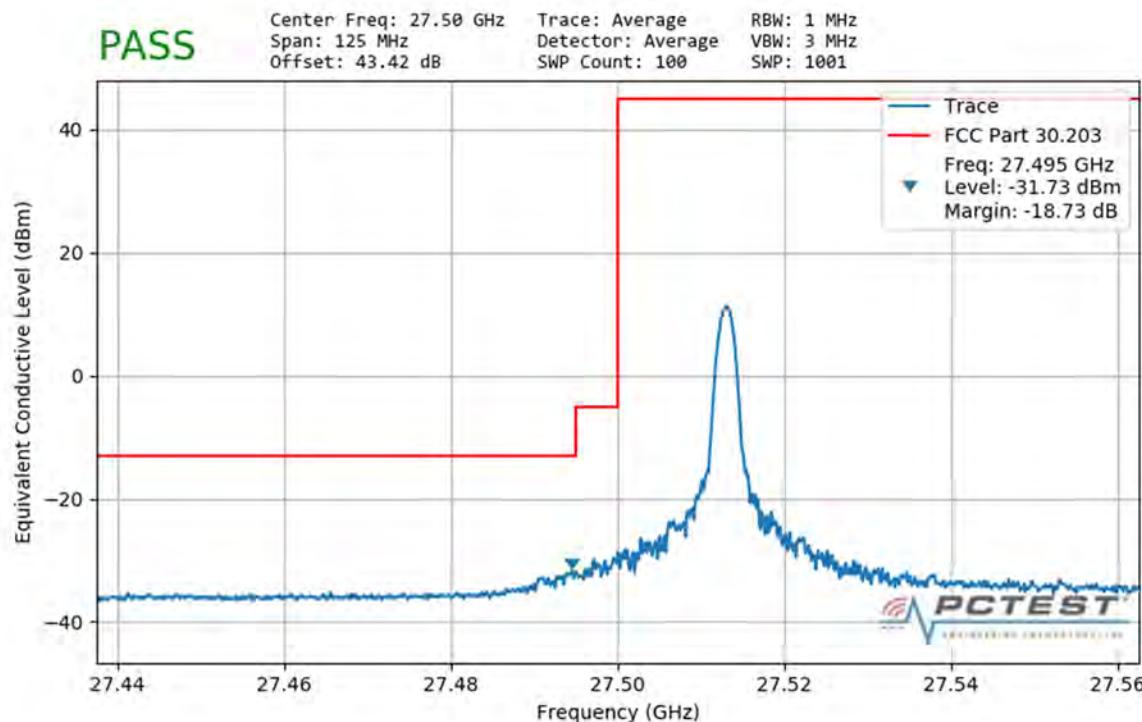
Plot 7-488. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)

|  |   |                                       |  |         |                                 |
|--|---|---------------------------------------|--|---------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |         | Page 282 of 371                 |

## L Patch MIMO(n261)

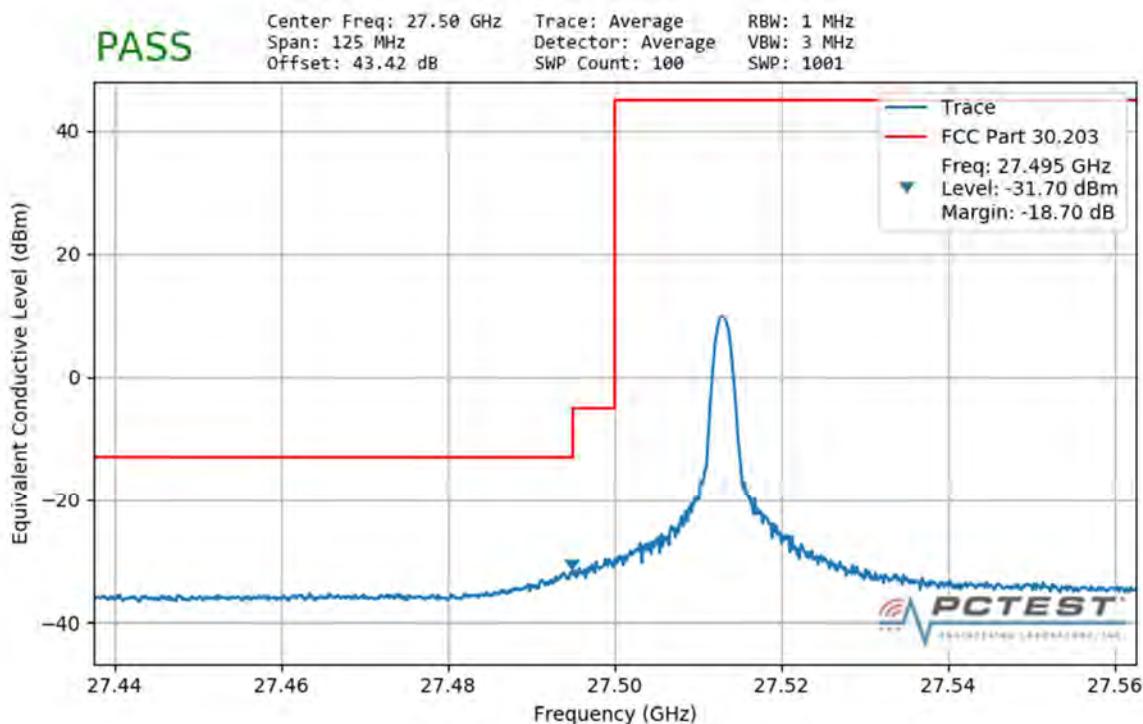


Plot 7-489. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

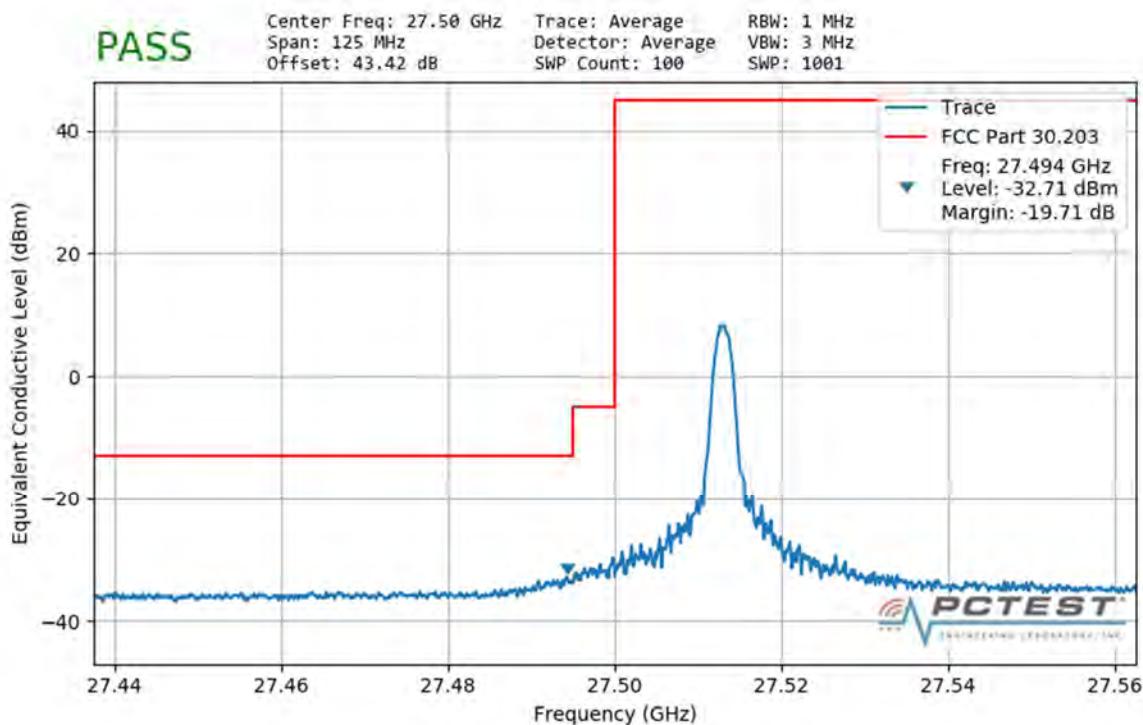


Plot 7-490. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |   |                                       |                                 |
|--|---|---------------------------------------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         | Page 283 of 371                 |

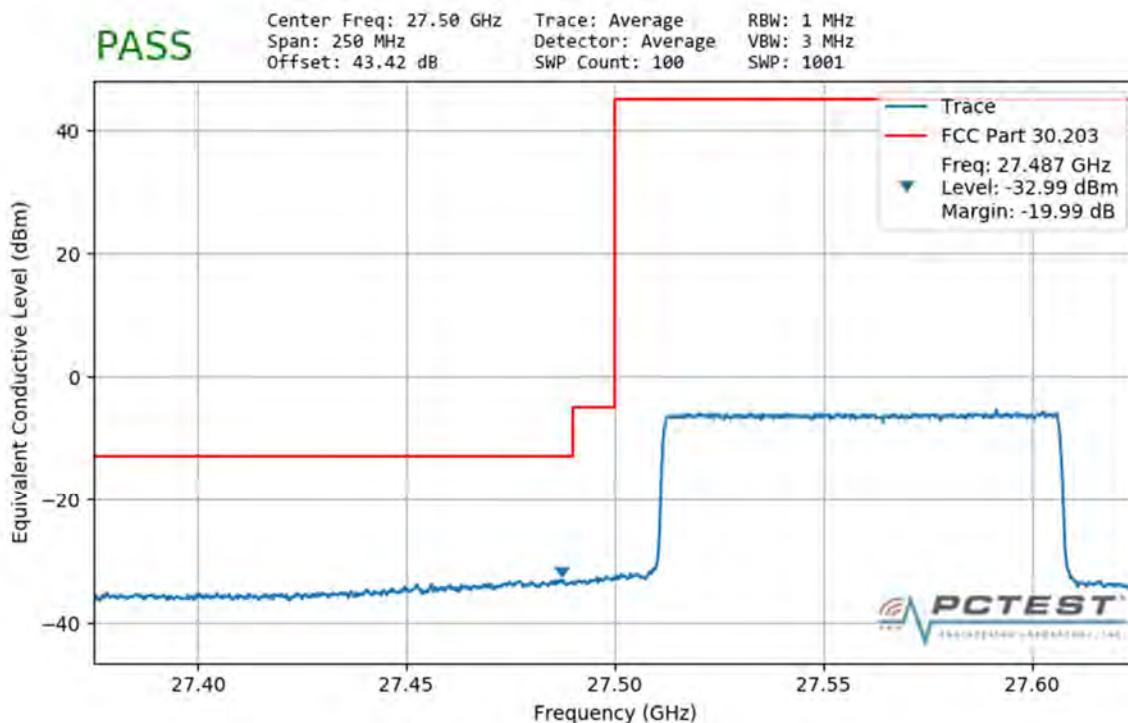


Plot 7-491. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)

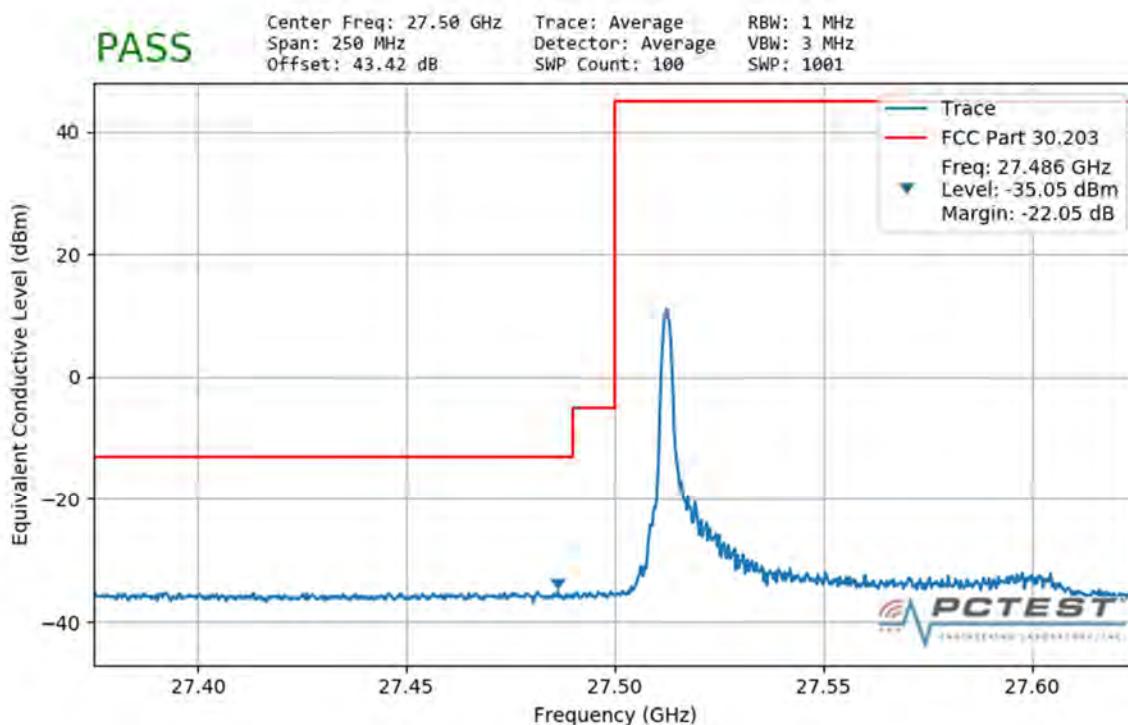


Plot 7-492. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 284 of 371                 |



**Plot 7-493. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)**

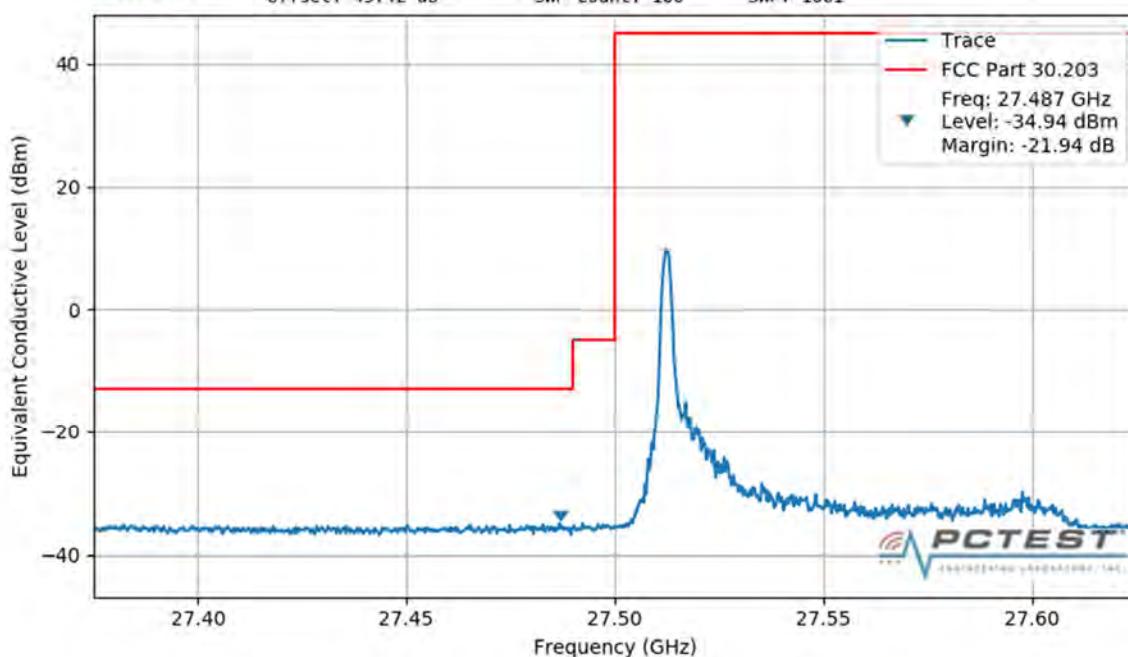


**Plot 7-494. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 285 of 371                 |

**PASS**

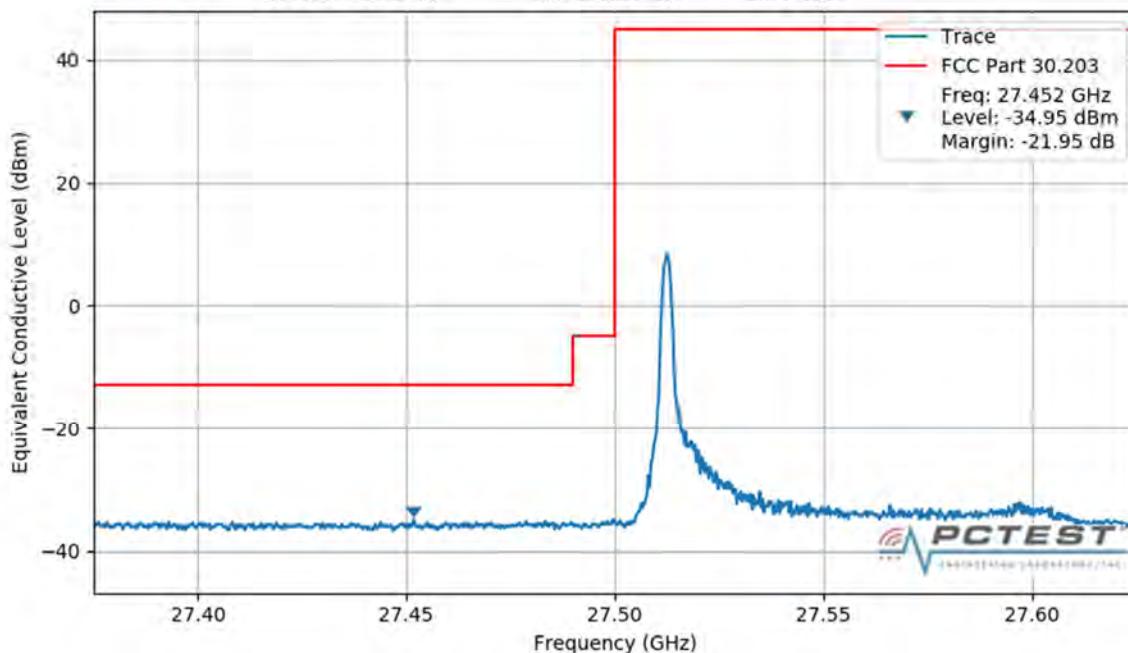
Center Freq: 27.50 GHz   Trace: Average  
Span: 250 MHz   Detector: Average  
Offset: 43.42 dB   SWP Count: 100   RBW: 1 MHz  
Vbw: 3 MHz   SWP: 1001



**Plot 7-495. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**

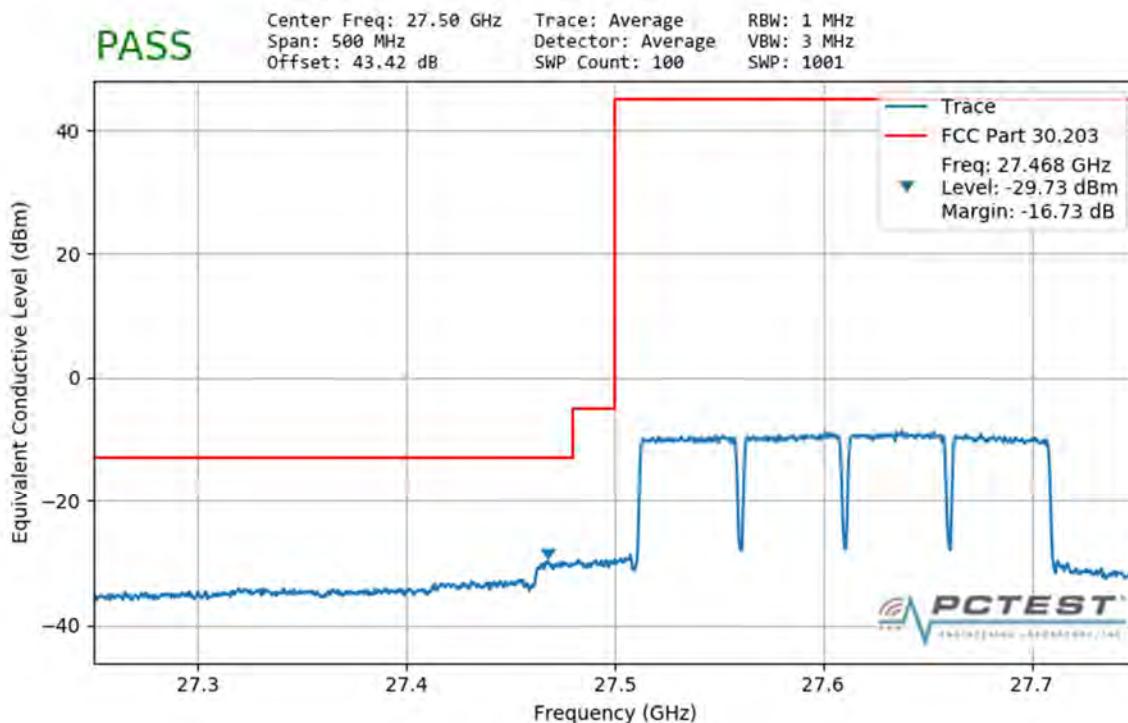
**PASS**

Center Freq: 27.50 GHz   Trace: Average  
Span: 250 MHz   Detector: Average  
Offset: 43.42 dB   SWP Count: 100   RBW: 1 MHz  
Vbw: 3 MHz   SWP: 1001

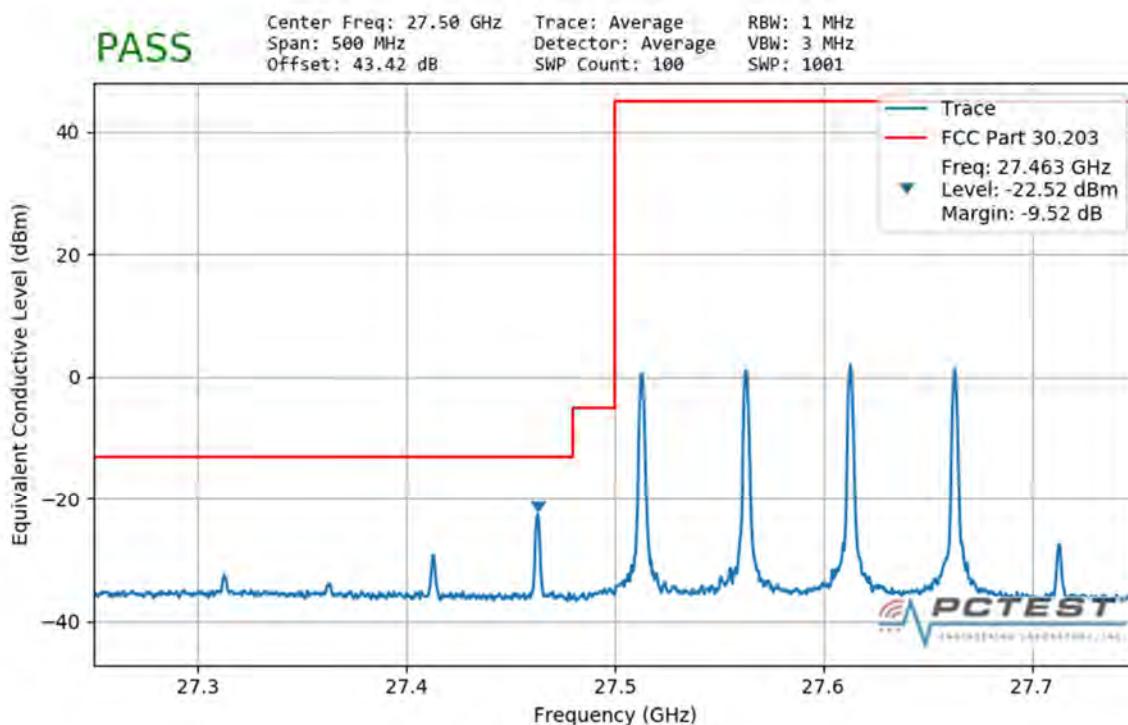


**Plot 7-496. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 286 of 371                 |

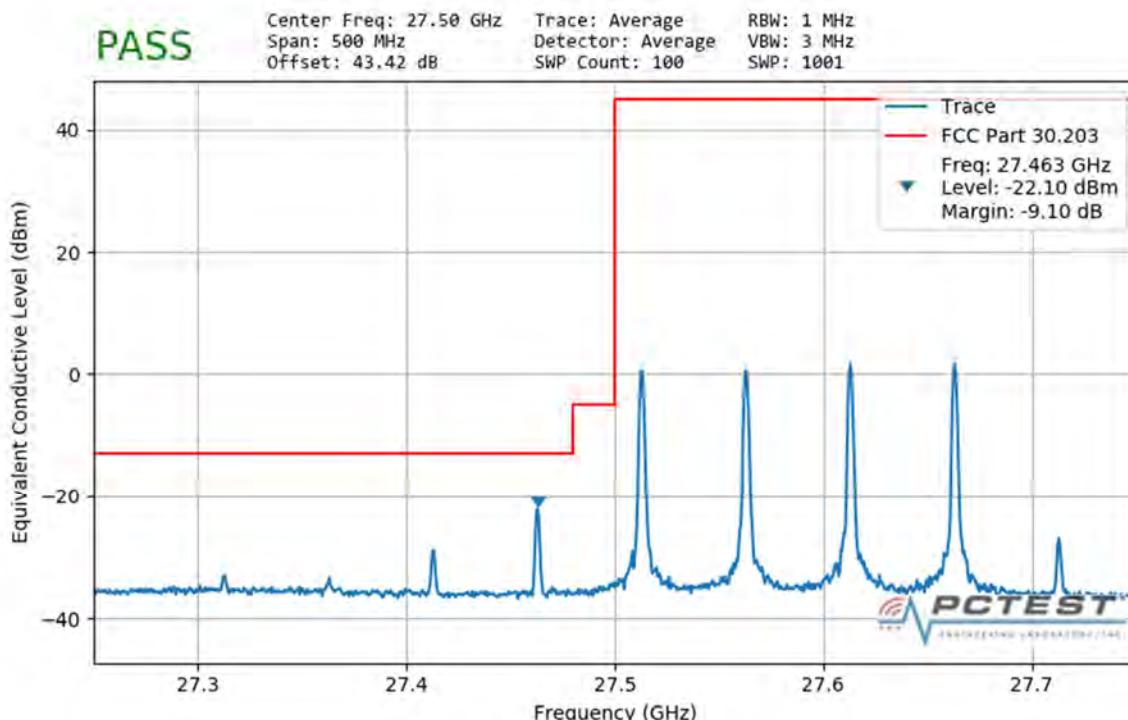


**Plot 7-497. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)**

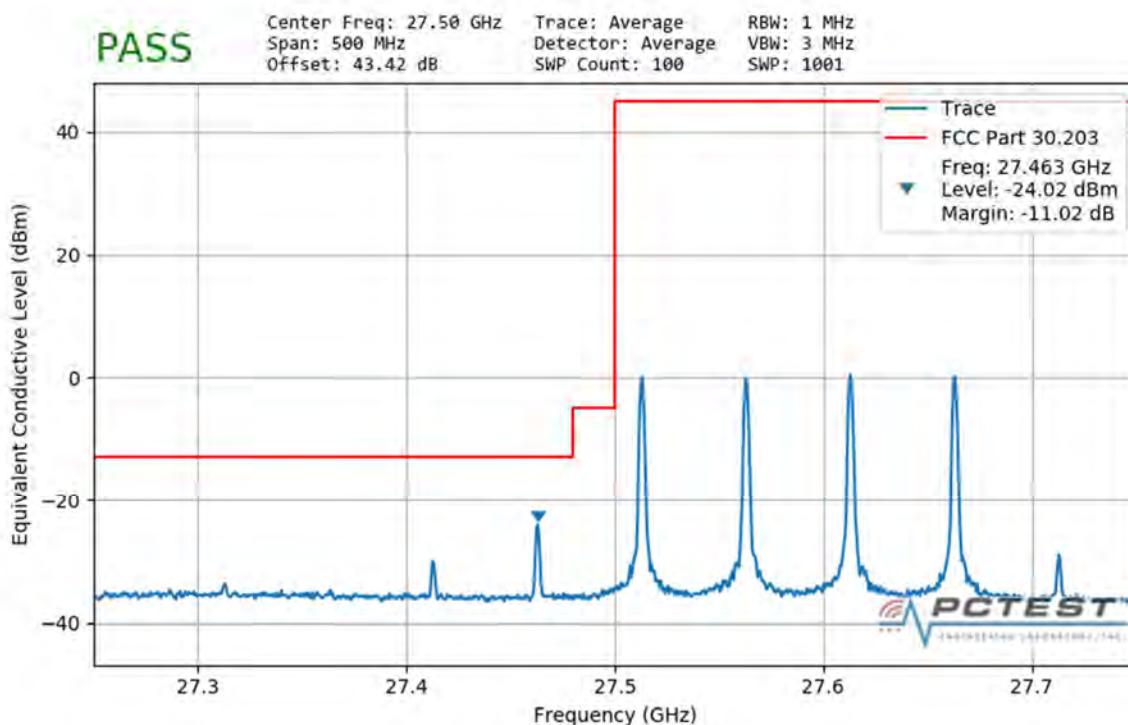


**Plot 7-498. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 287 of 371                 |



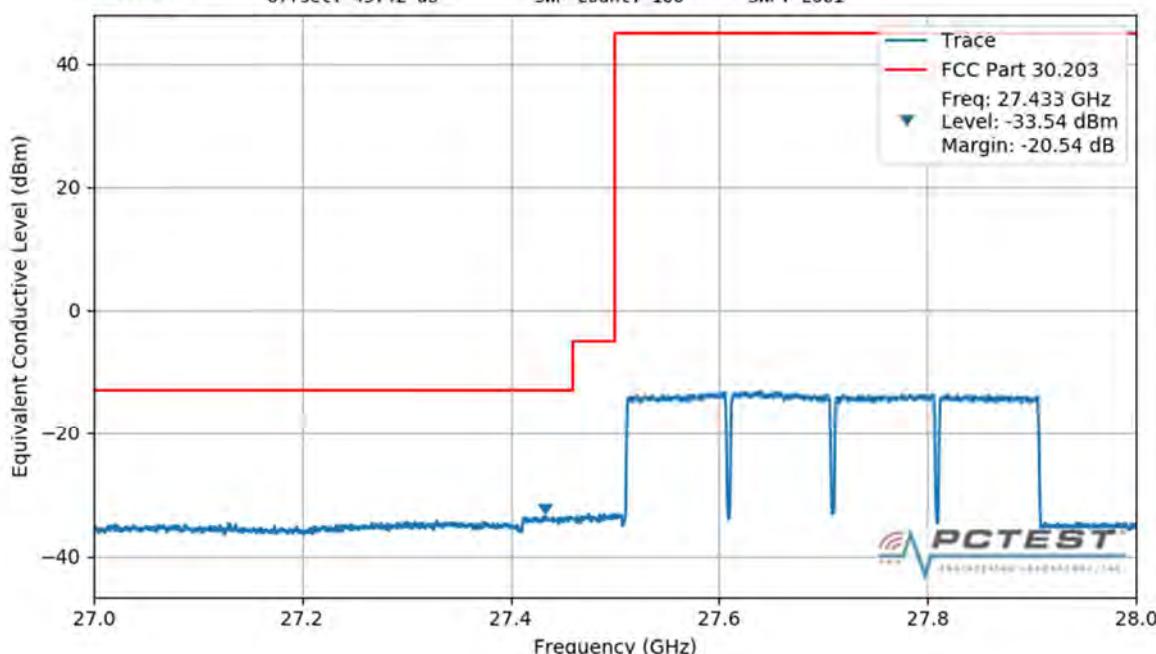
**Plot 7-499. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

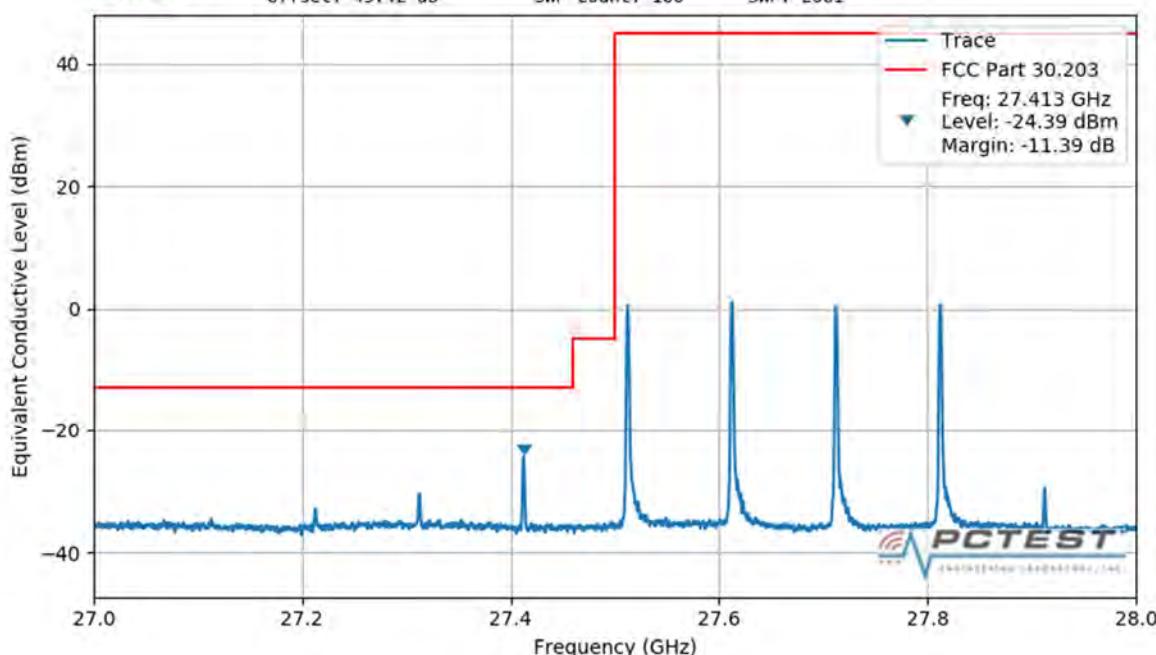


**Plot 7-500. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

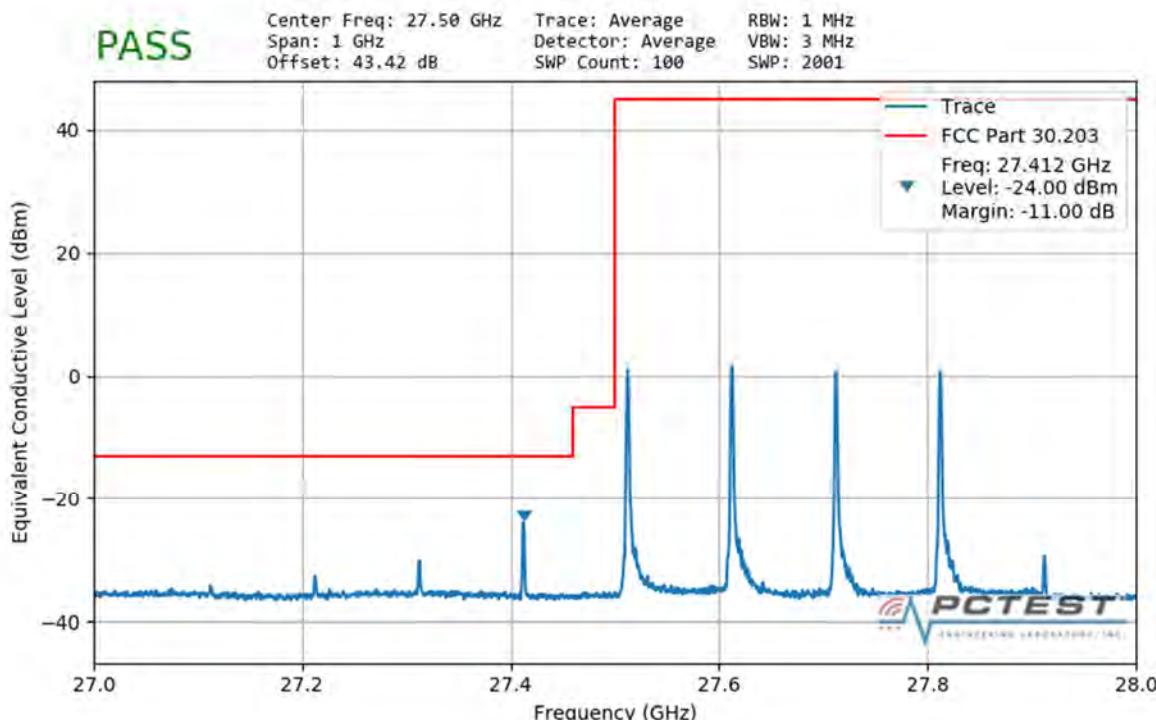
|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 288 of 371                 |

**PASS**

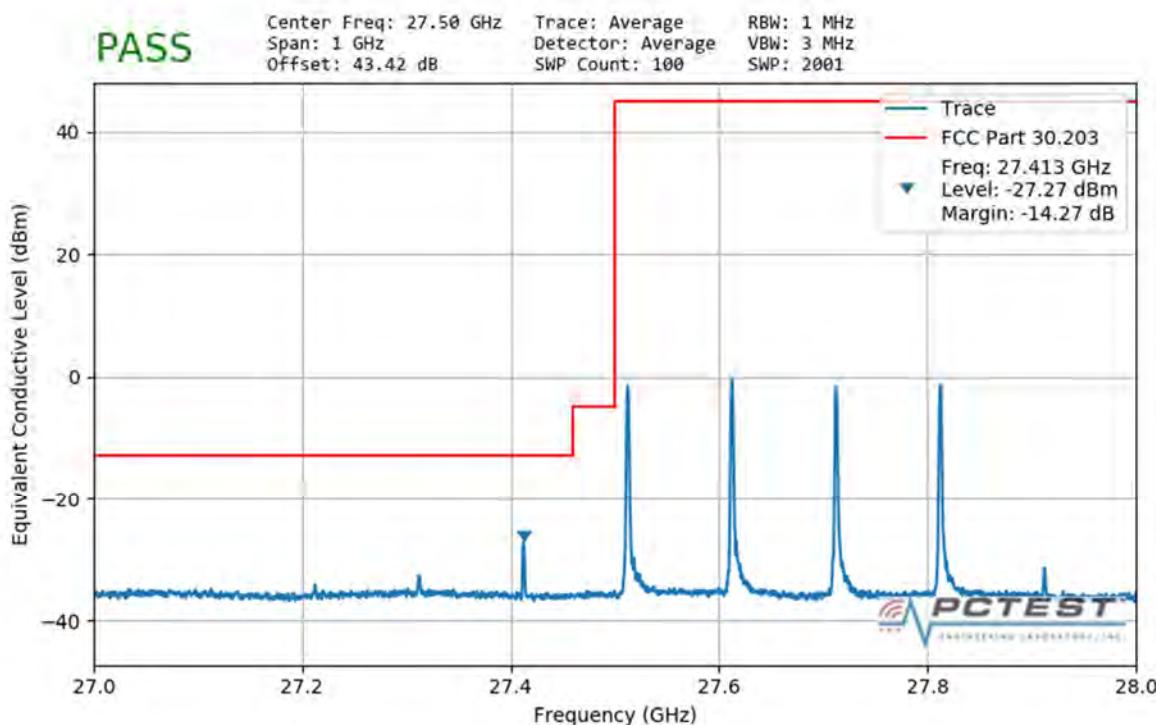
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 43.42 dB   SWP Count: 100  
 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-501. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)**
**PASS**

 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 43.42 dB   SWP Count: 100  
 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-502. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 289 of 371                 |



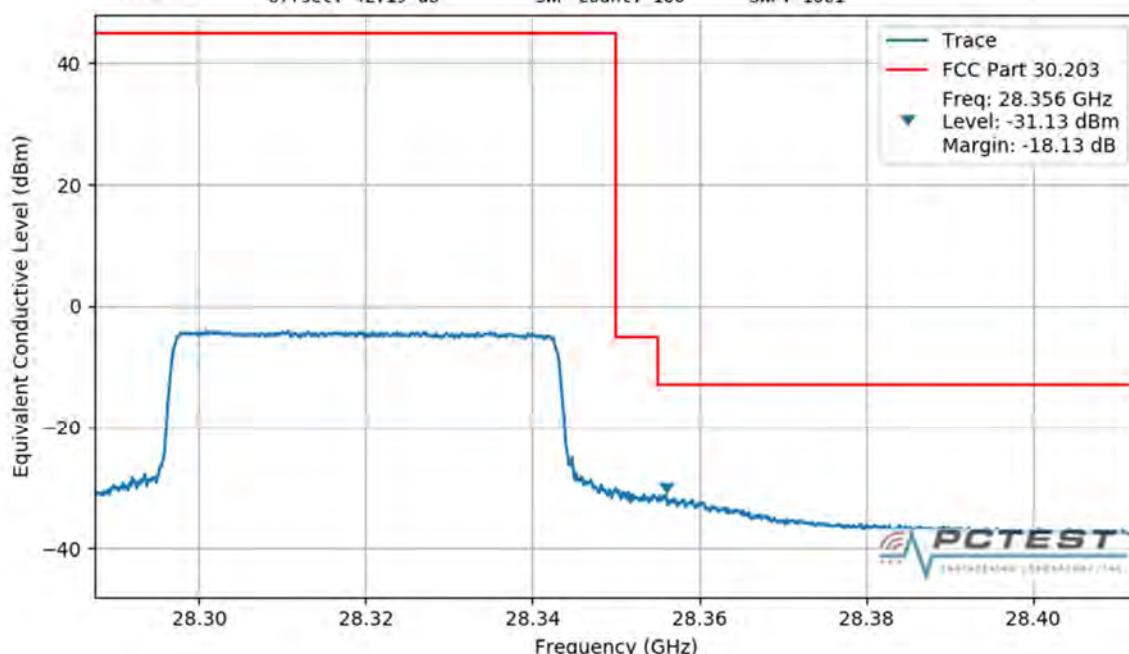
**Plot 7-503. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**

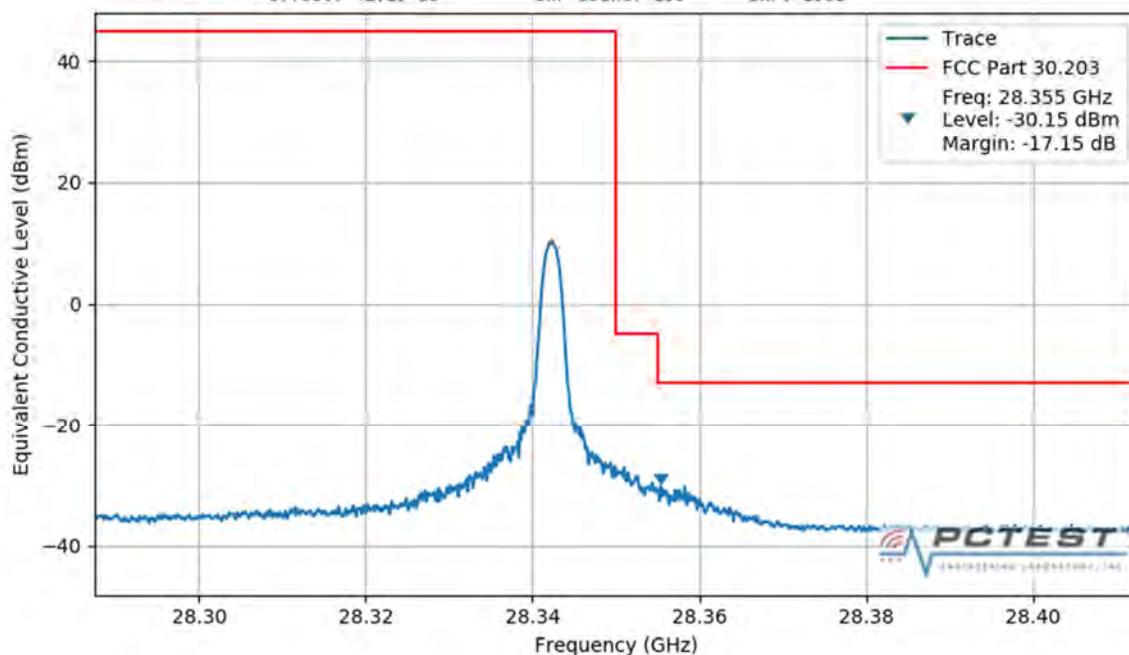


**Plot 7-504. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 290 of 371                 |

**PASS**

 Center Freq: 28.35 GHz    Trace: Average  
 Span: 125 MHz    Detector: Average  
 Offset: 42.19 dB    RBW: 1 MHz  
 SWP Count: 100    VBW: 3 MHz  
 SWP: 1001

**Plot 7-505. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)**
**PASS**

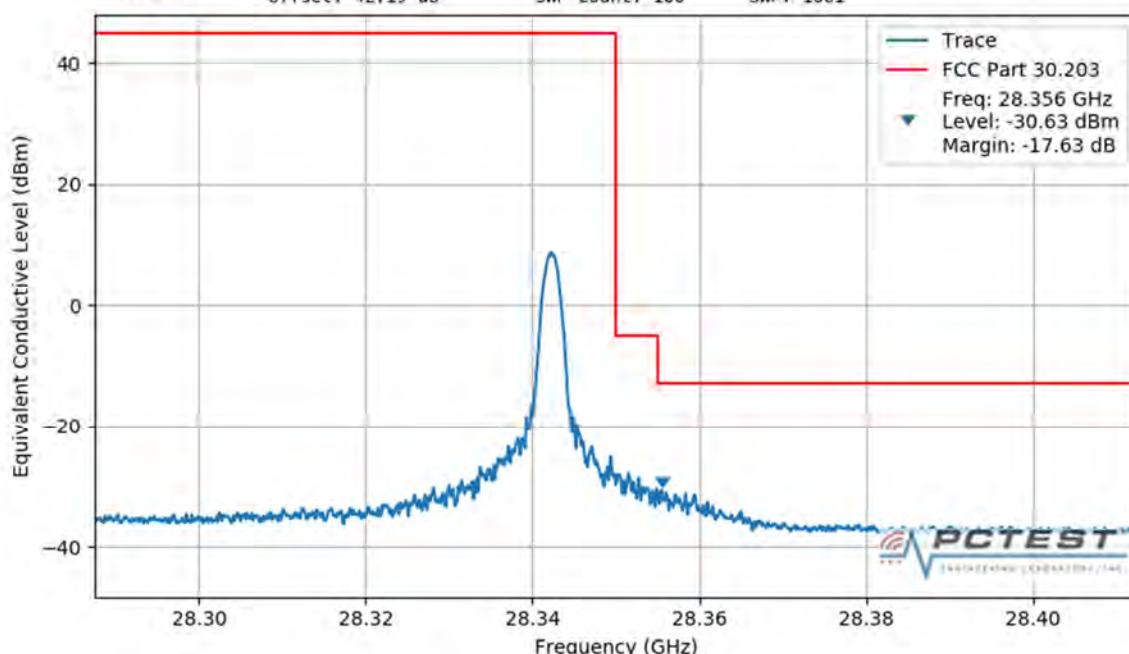
 Center Freq: 28.35 GHz    Trace: Average  
 Span: 125 MHz    Detector: Average  
 Offset: 42.19 dB    RBW: 1 MHz  
 SWP Count: 100    VBW: 3 MHz  
 SWP: 1001

**Plot 7-506. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 291 of 371                 |

**PASS**

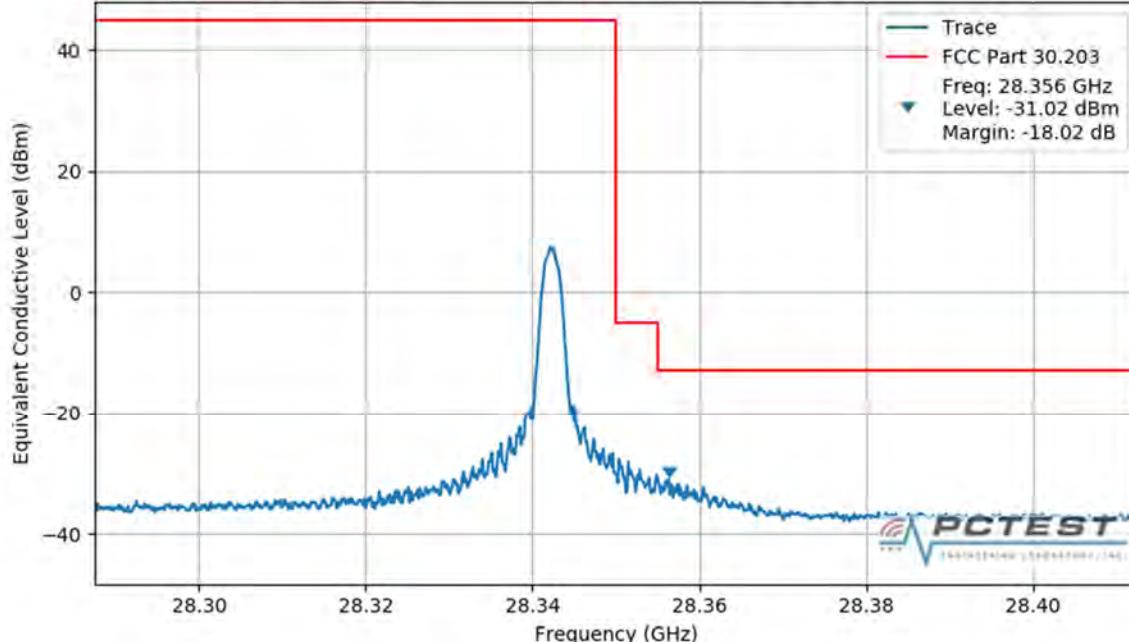
 Center Freq: 28.35 GHz  
 Span: 125 MHz  
 Offset: 42.19 dB

 Trace: Average  
 Detector: Average  
 SWP Count: 100

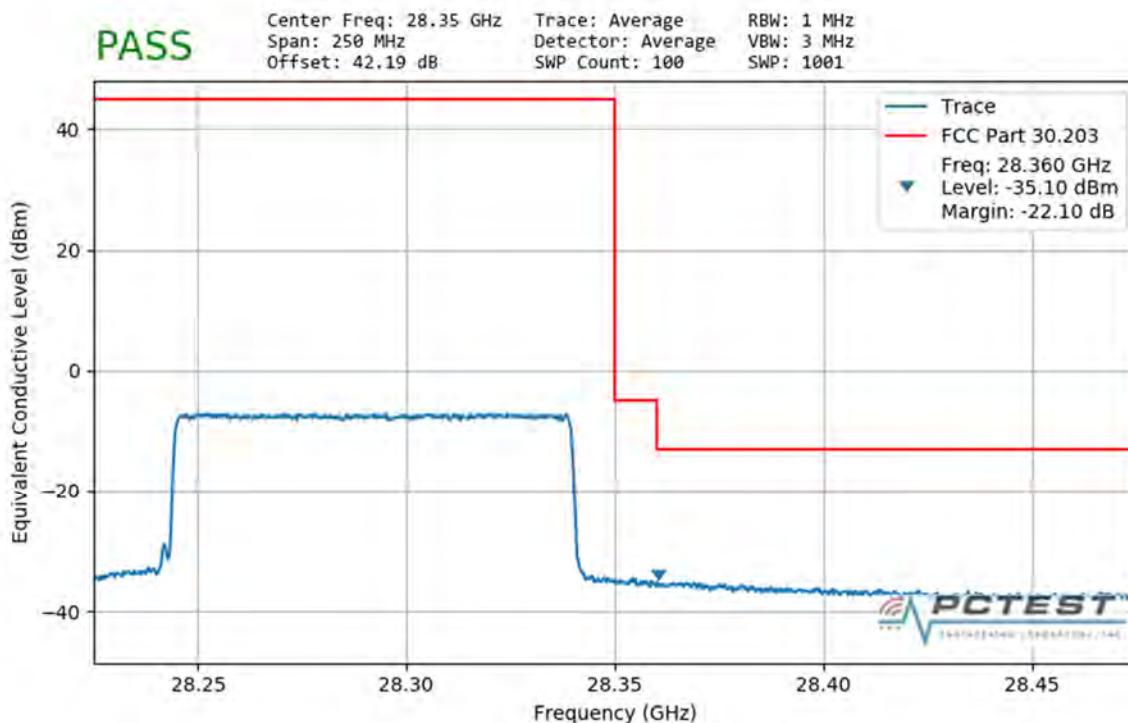
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-507. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 28.35 GHz  
 Span: 125 MHz  
 Offset: 42.19 dB

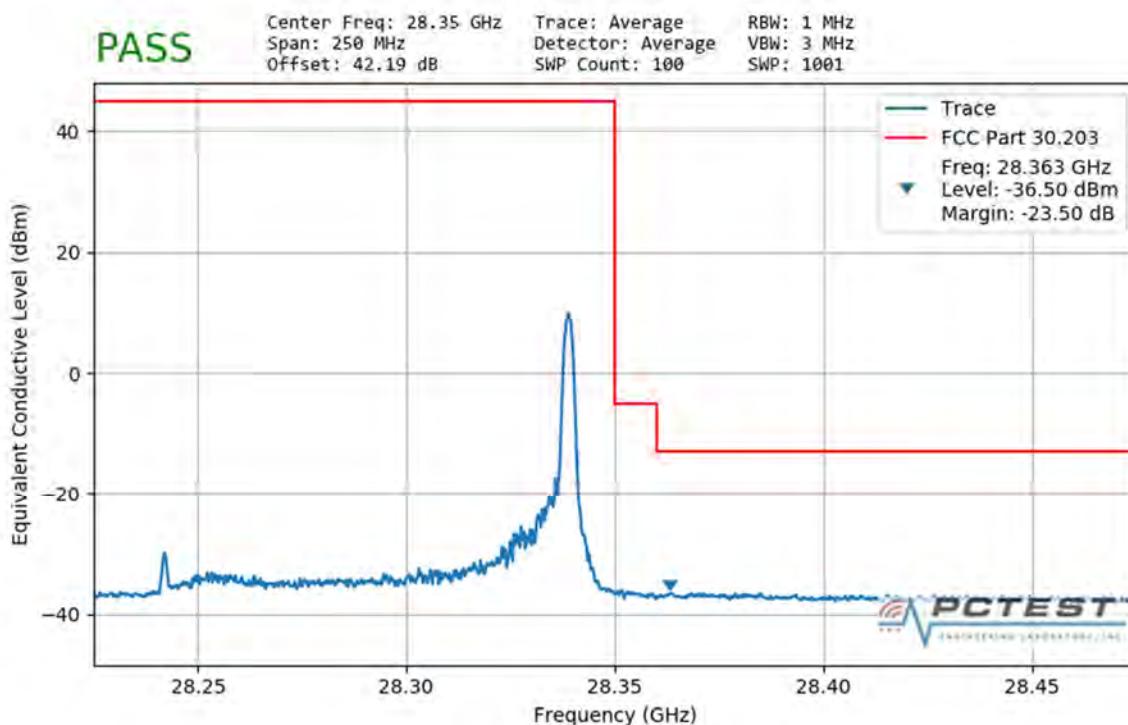
 Trace: Average  
 Detector: Average  
 SWP Count: 100

 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-508. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 292 of 371                 |



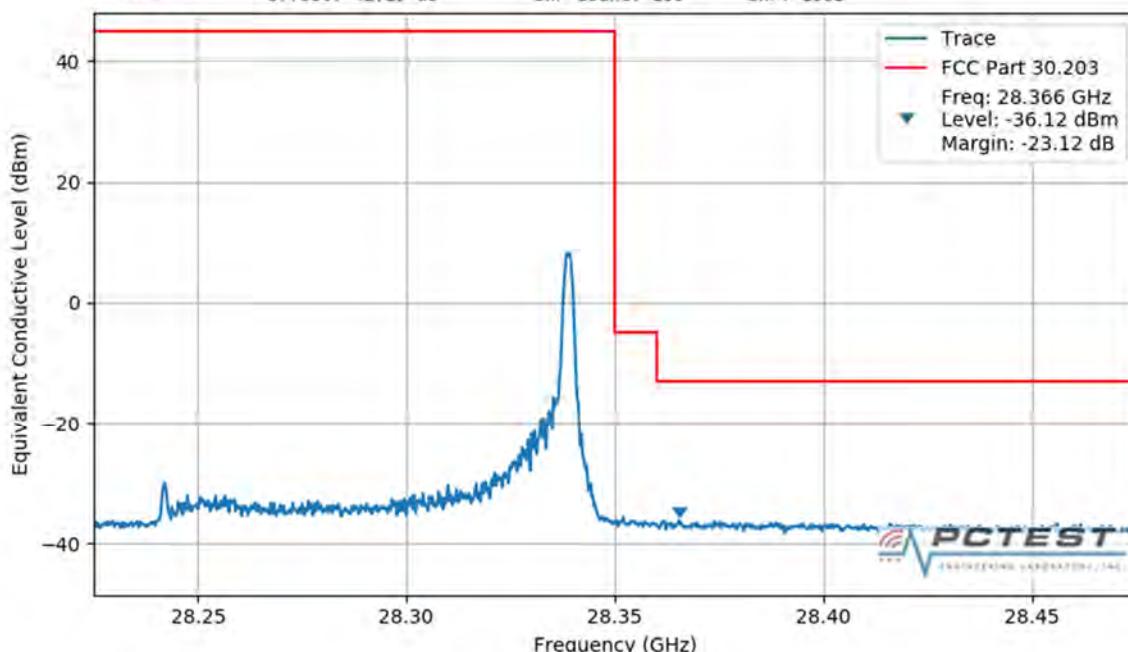
Plot 7-509. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

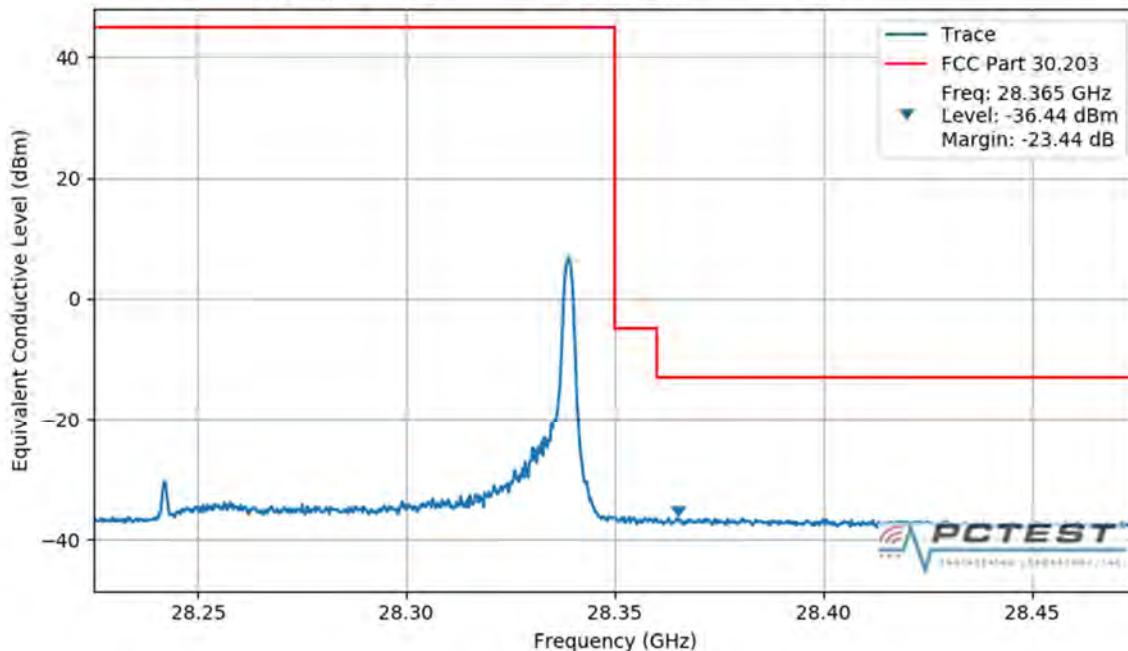


Plot 7-510. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 293 of 371                 |

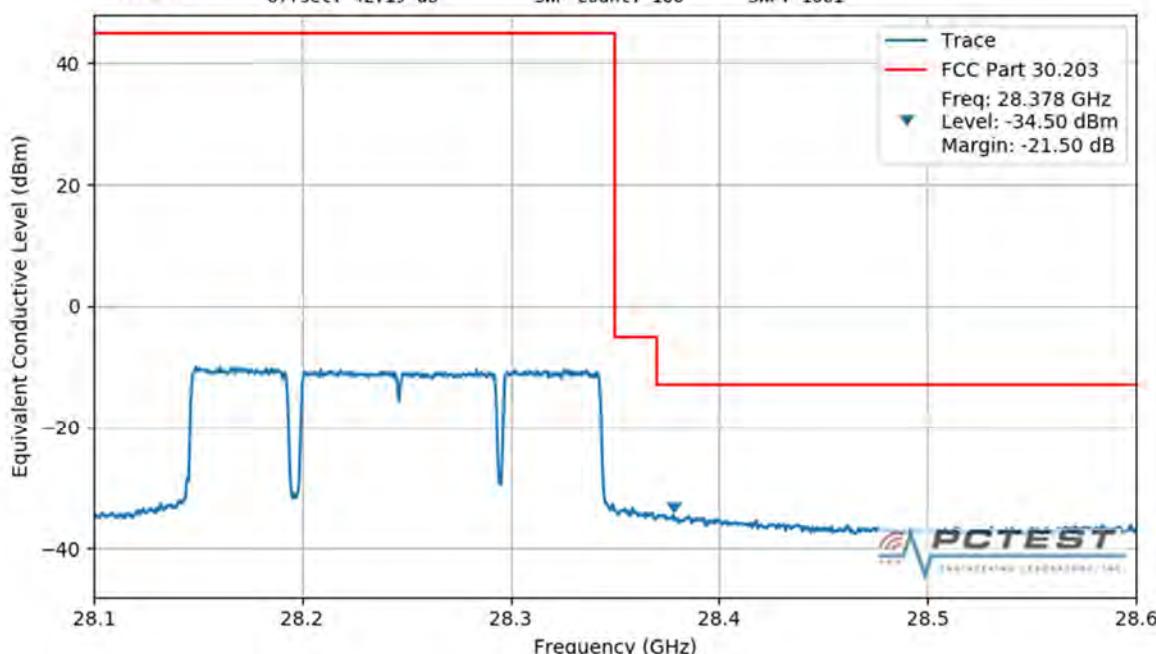
**PASS**

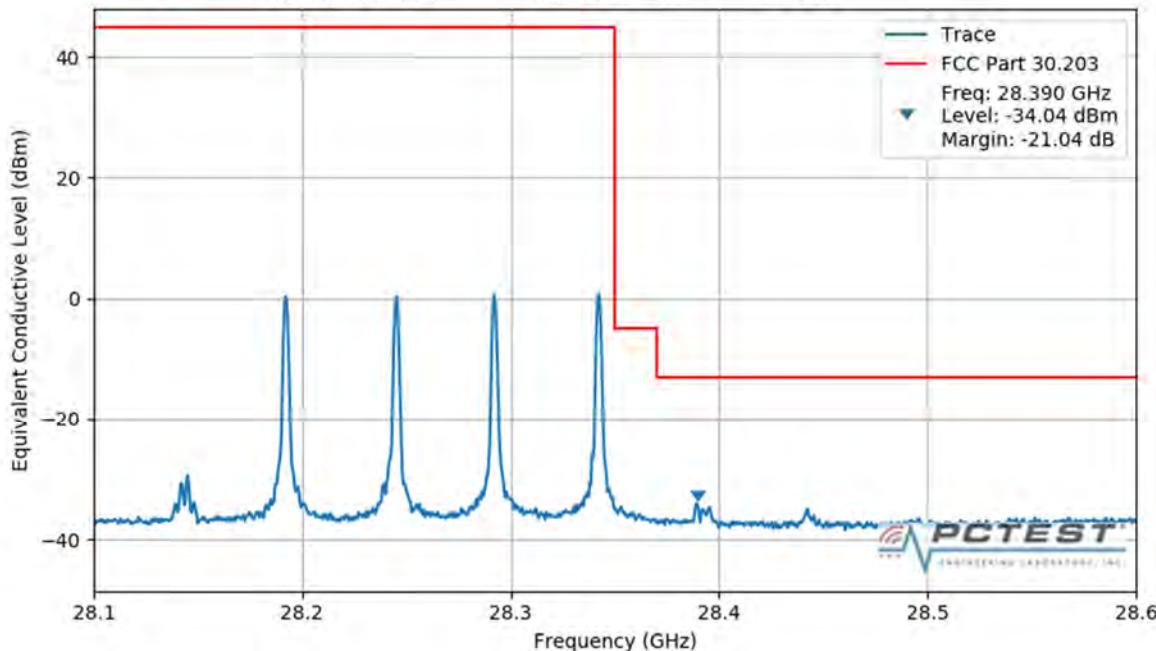
 Center Freq: 28.35 GHz Trace: Average  
 Span: 250 MHz Detector: Average  
 Offset: 42.19 dB SWP Count: 100  
 RBW: 1 MHz VBW: 3 MHz  
 SWP: 1001

**Plot 7-511. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 28.35 GHz Trace: Average  
 Span: 250 MHz Detector: Average  
 Offset: 42.19 dB SWP Count: 100  
 RBW: 1 MHz VBW: 3 MHz  
 SWP: 1001

**Plot 7-512. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 294 of 371                 |

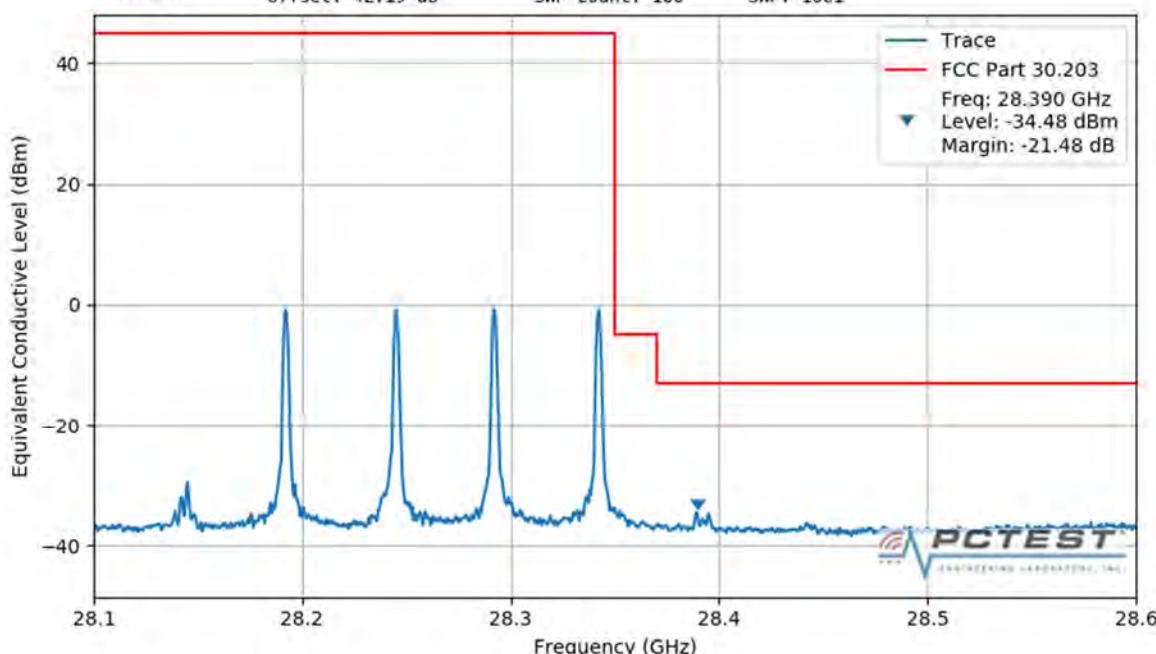
**PASS**

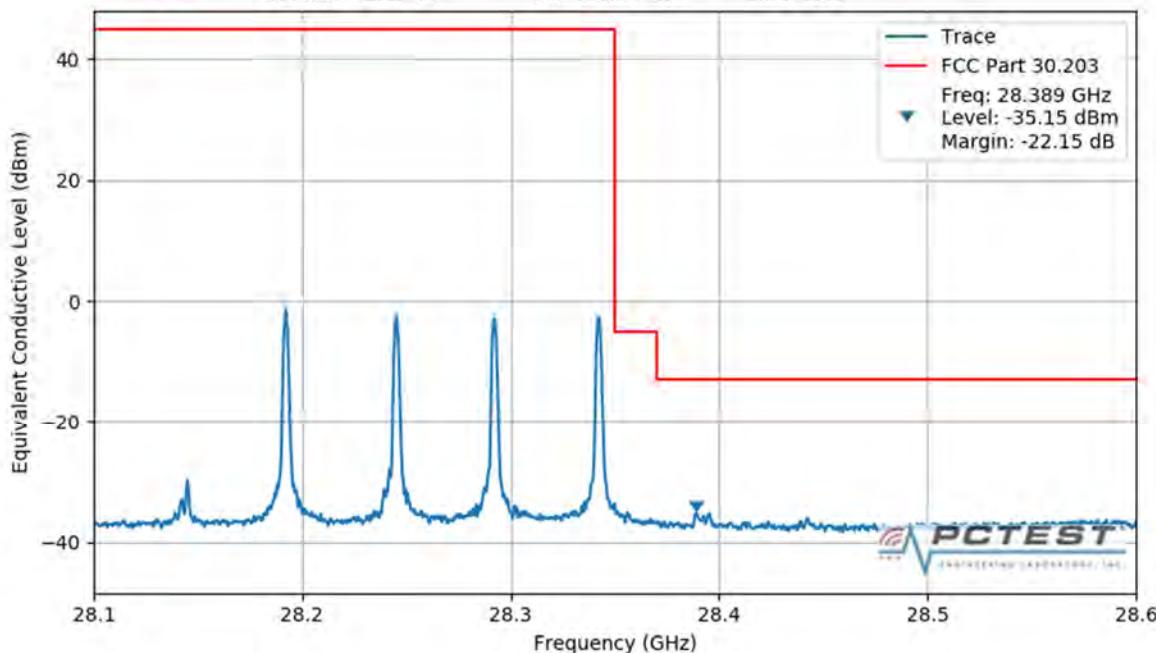
 Center Freq: 28.35 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 42.19 dB   SWP Count: 100   RBW: 1 MHz  
 VBW: 3 MHz   SWP: 1001

**Plot 7-513. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)**
**PASS**

 Center Freq: 28.35 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 42.19 dB   SWP Count: 100   RBW: 1 MHz  
 VBW: 3 MHz   SWP: 1001

**Plot 7-514. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)**

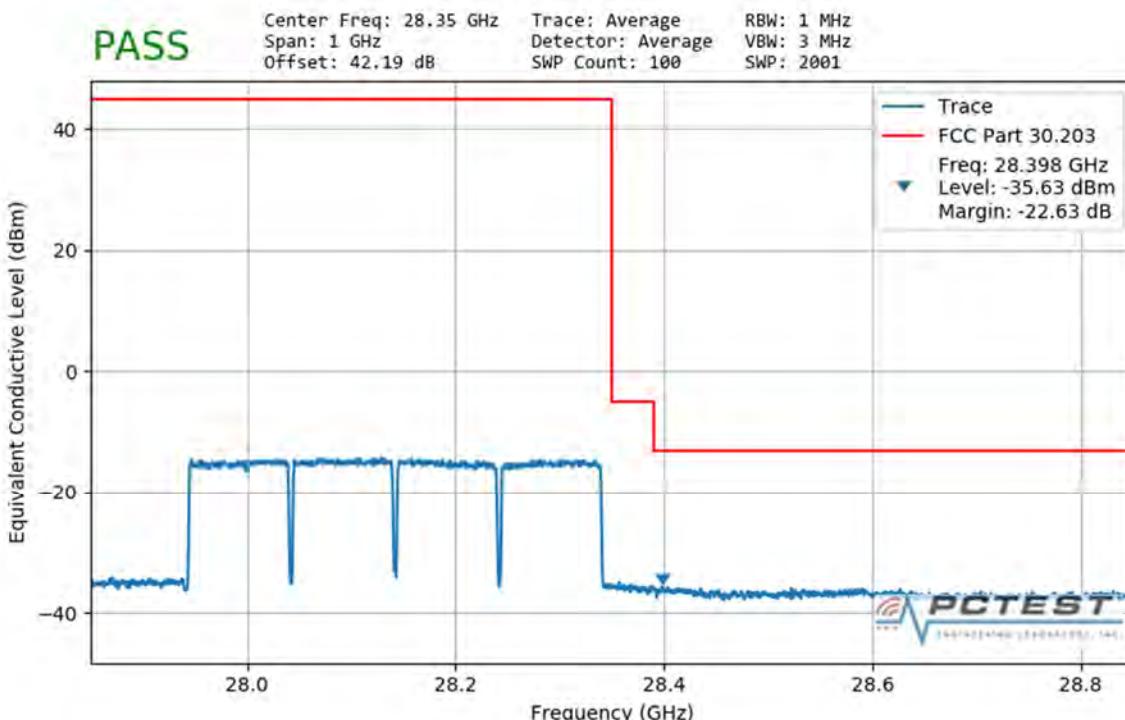
|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 295 of 371                 |

**PASS**

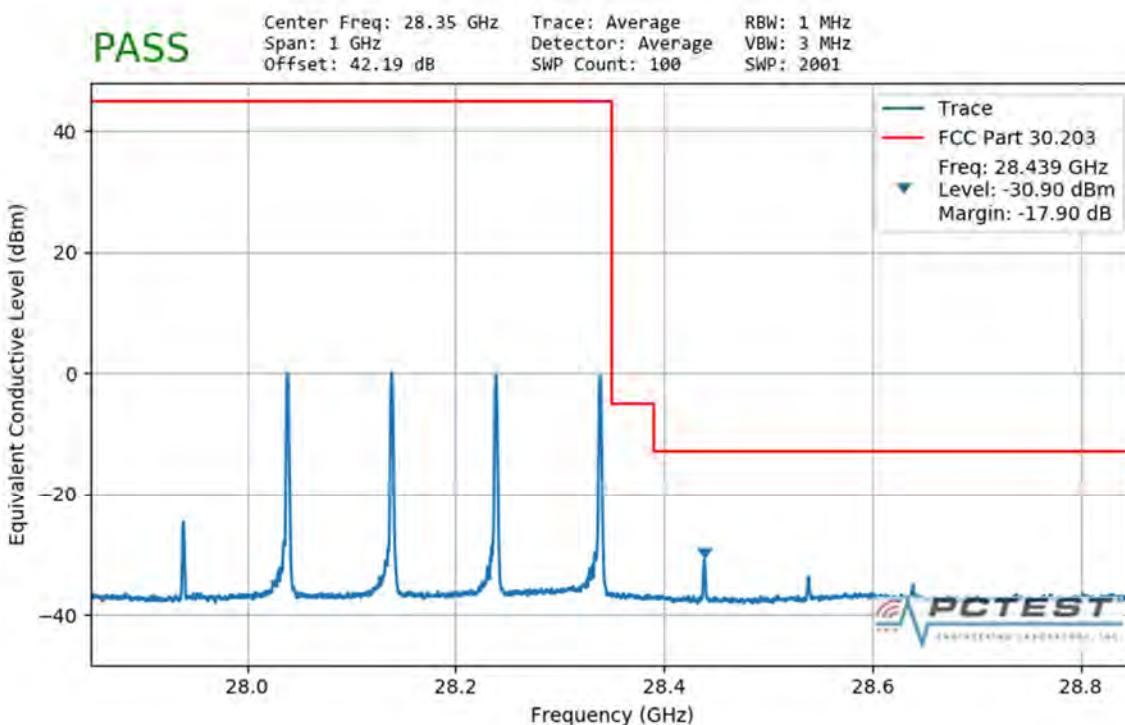
 Center Freq: 28.35 GHz    Trace: Average  
 Span: 500 MHz    Detector: Average  
 Offset: 42.19 dB    SWP Count: 100    RBW: 1 MHz  
 VBW: 3 MHz    SWP: 1001

**Plot 7-515. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 28.35 GHz    Trace: Average  
 Span: 500 MHz    Detector: Average  
 Offset: 42.19 dB    SWP Count: 100    RBW: 1 MHz  
 VBW: 3 MHz    SWP: 1001

**Plot 7-516. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |   |                                       |  |         |                                 |
|--|---|---------------------------------------|--|---------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |         | Page 296 of 371                 |

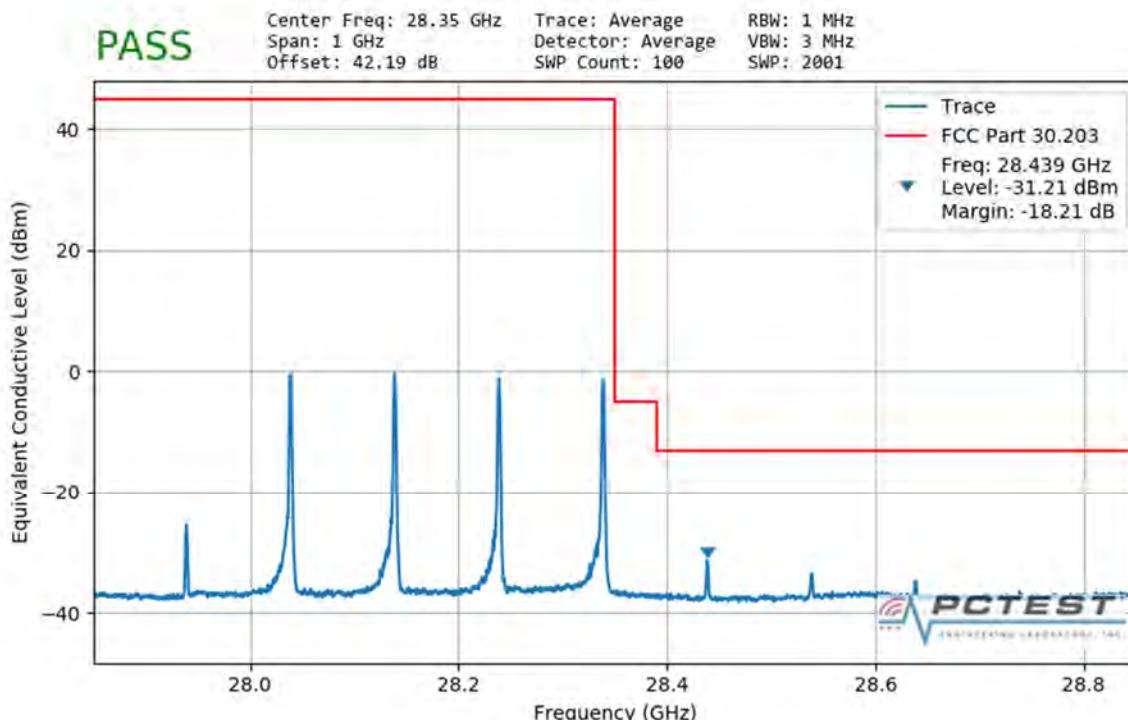


Plot 7-517. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

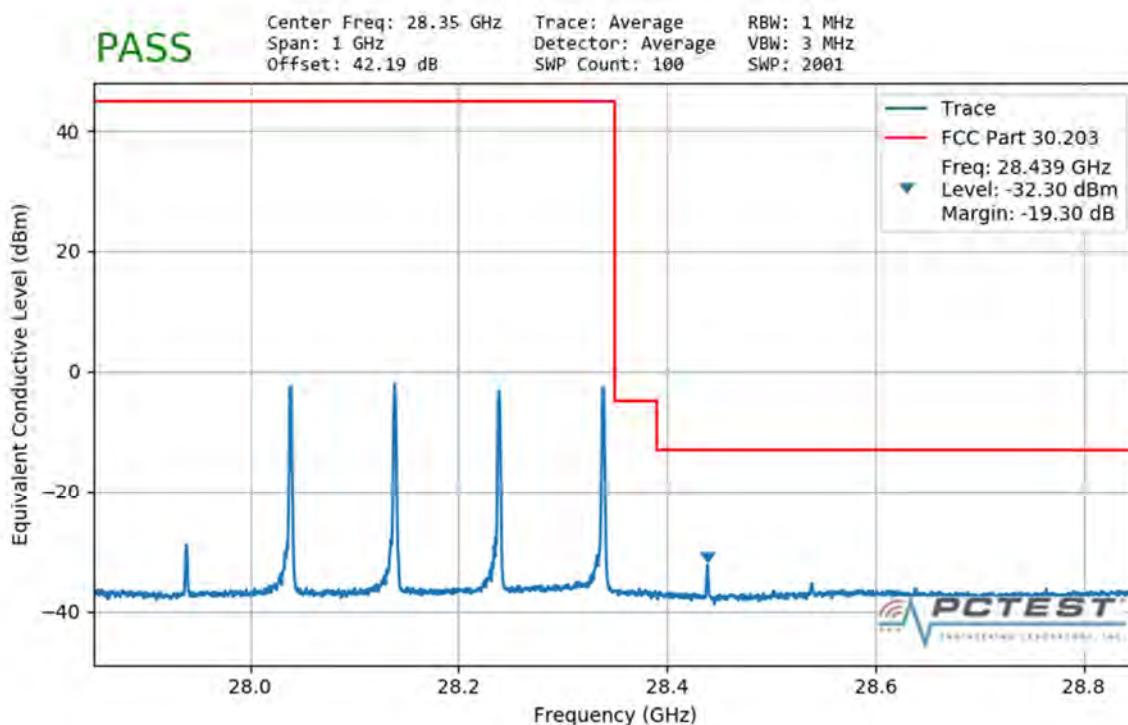


Plot 7-518. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |   |                                       |  |         |                                 |
|--|---|---------------------------------------|--|---------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |         | Page 297 of 371                 |



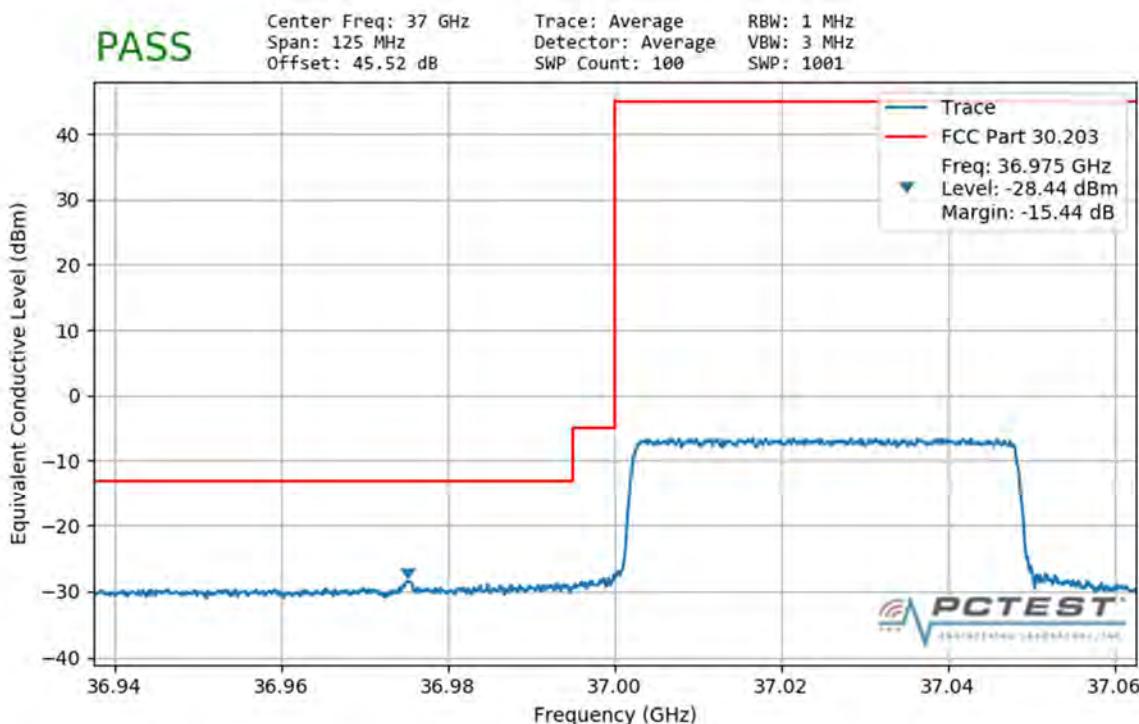
Plot 7-519. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)



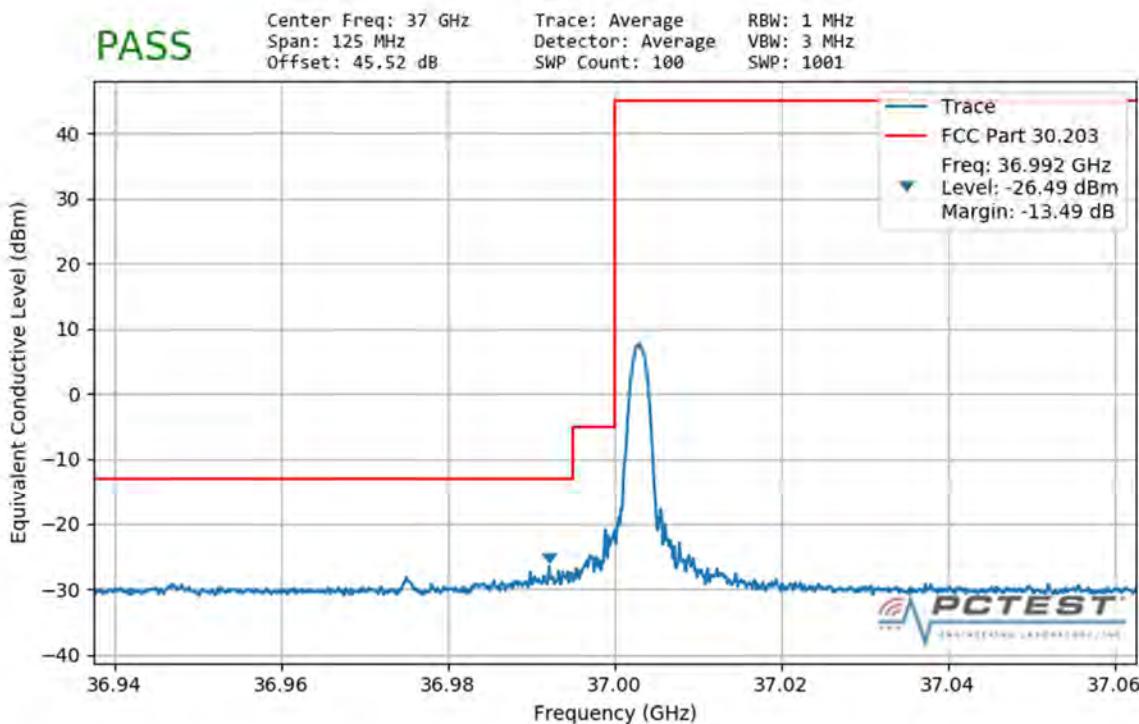
Plot 7-520. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 298 of 371                 |

### 7.5.3 n260 Band Edge J Dipole MIMO(n260)

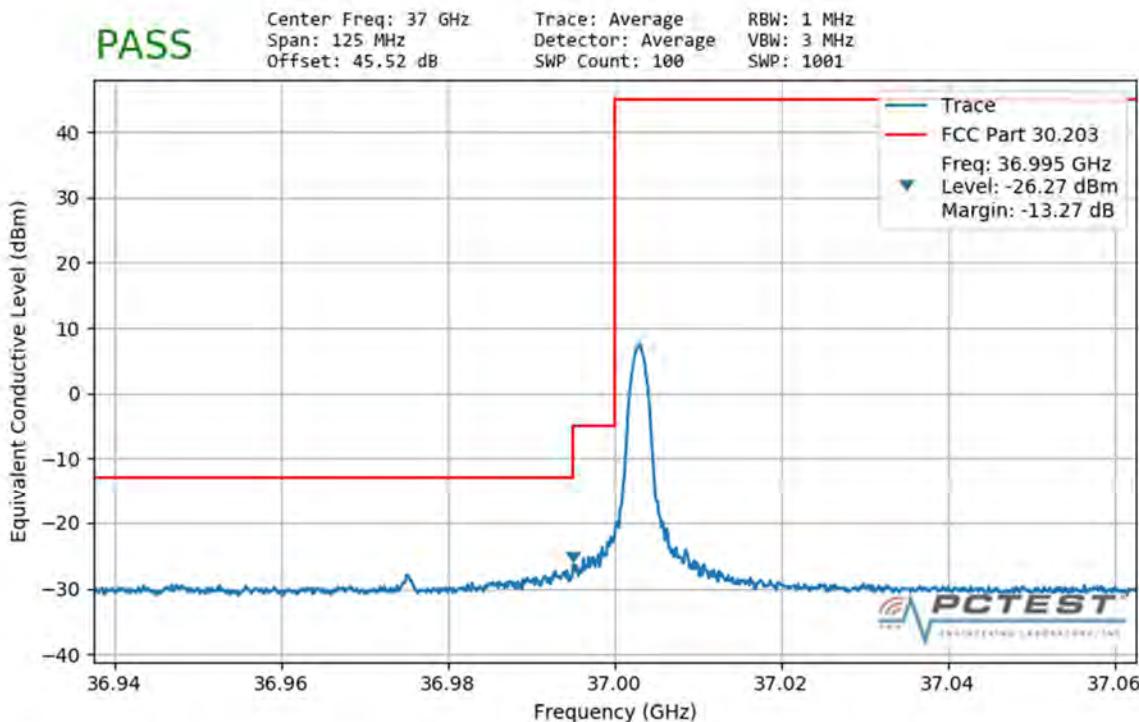


Plot 7-521. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

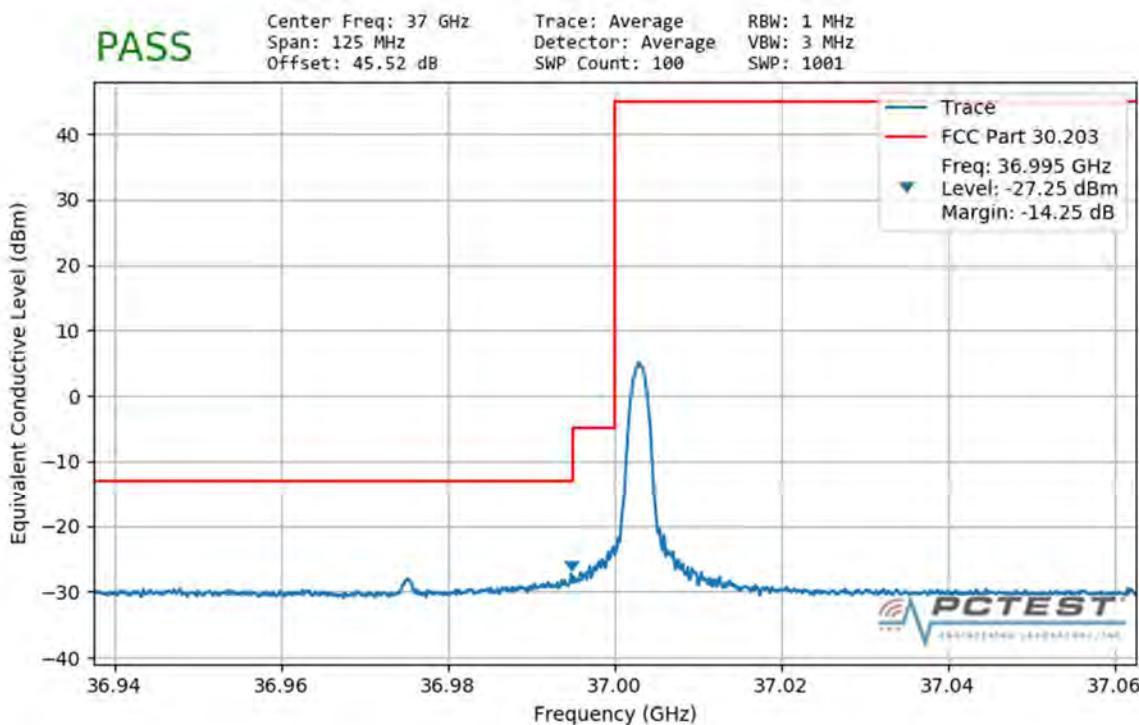


Plot 7-522. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) | Approved by:<br>Quality Manager |
|--|---|---------------------------------------|---------------------------------|
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         | Page 299 of 371                 |

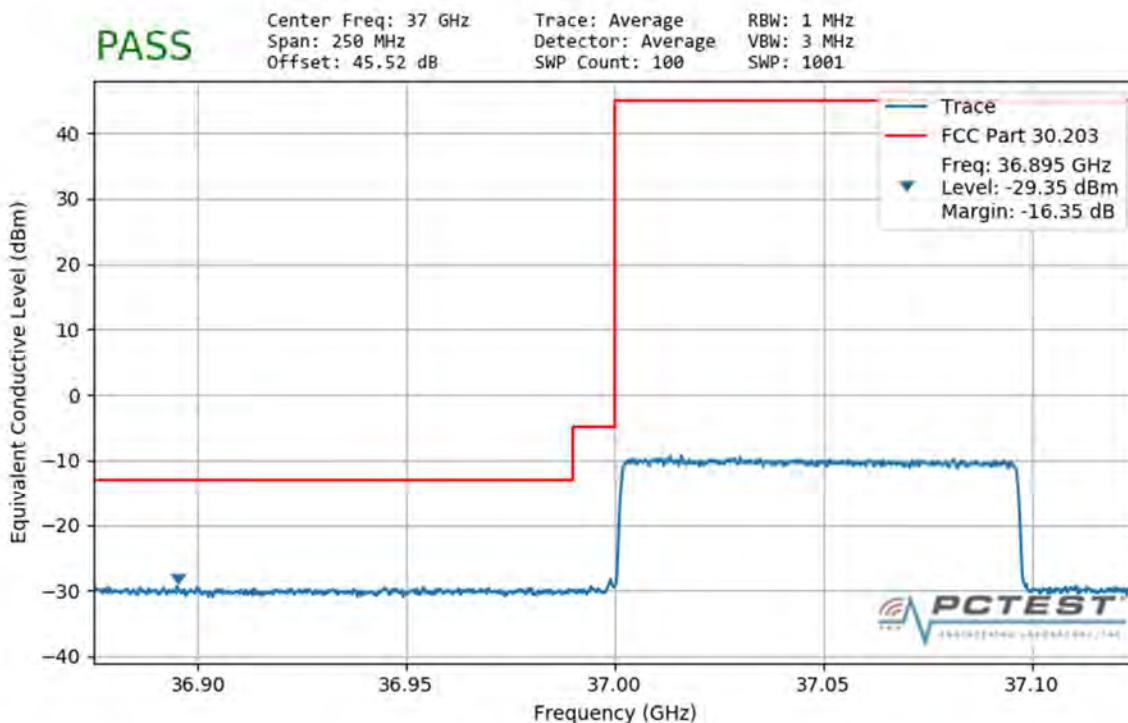


**Plot 7-523. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)**

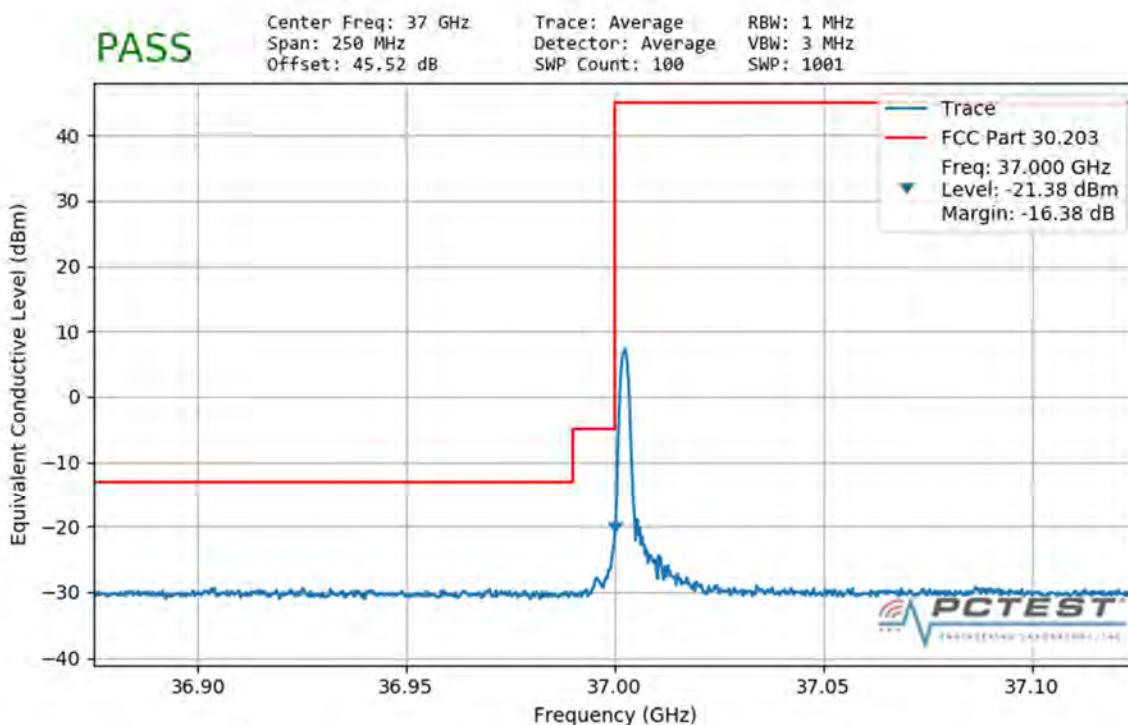


**Plot 7-524. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 300 of 371                 |

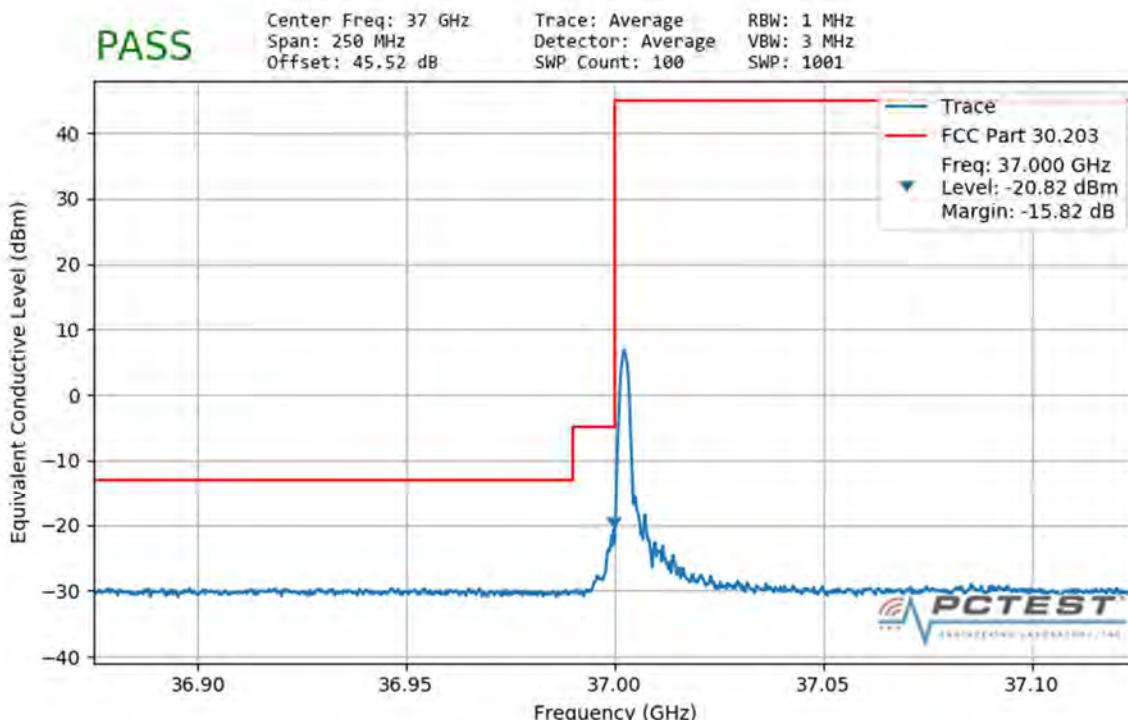


Plot 7-525. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)

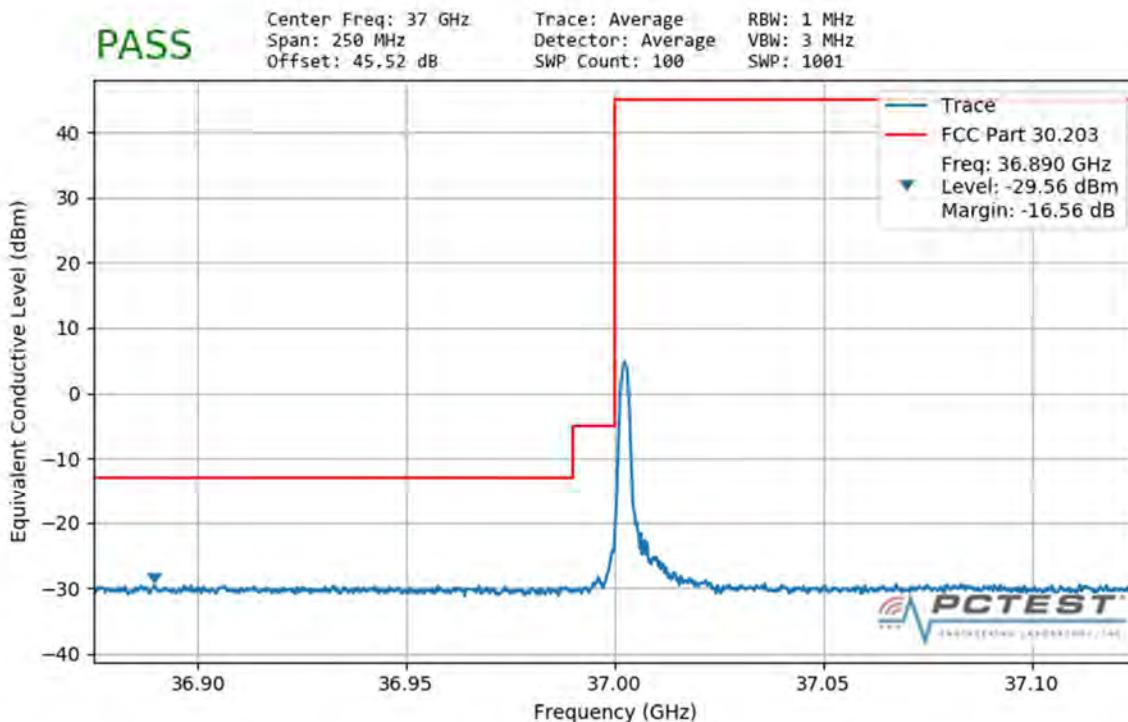


Plot 7-526. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 301 of 371                 |

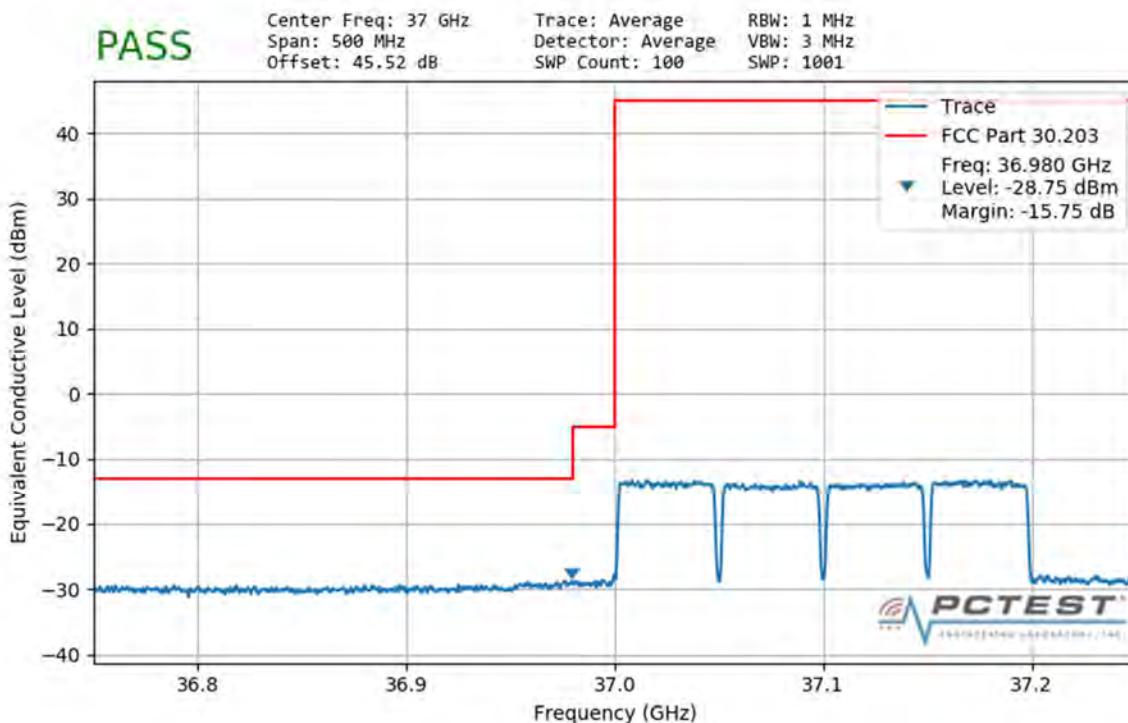


**Plot 7-527. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**

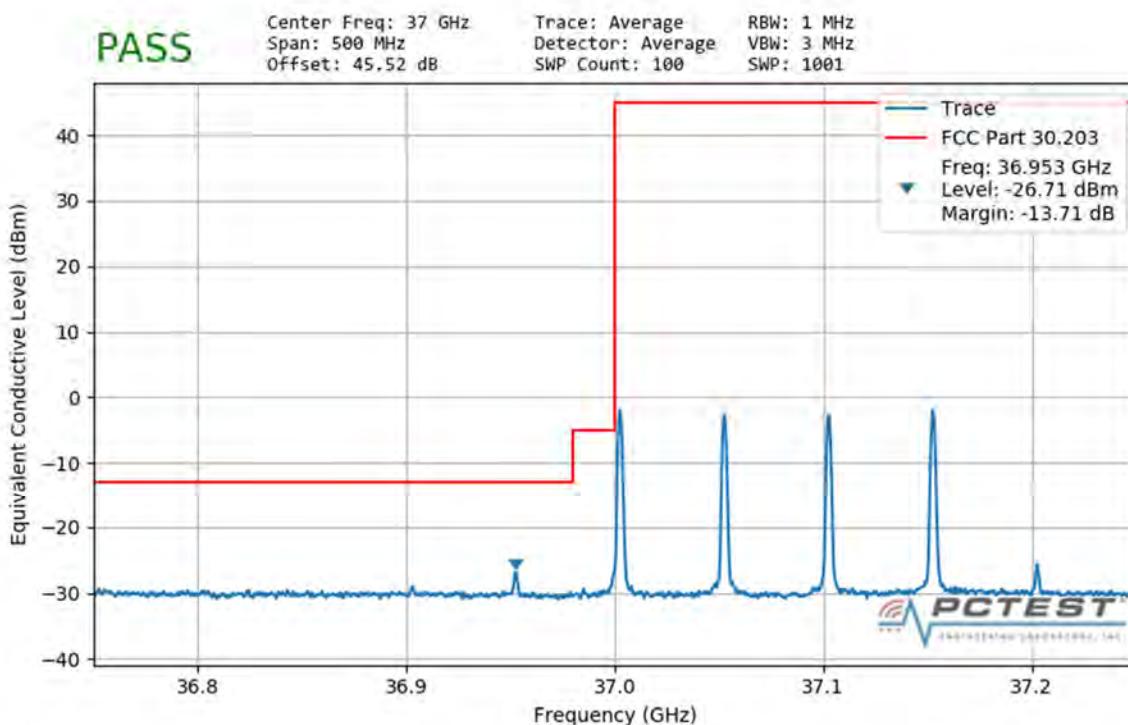


**Plot 7-528. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 302 of 371                 |

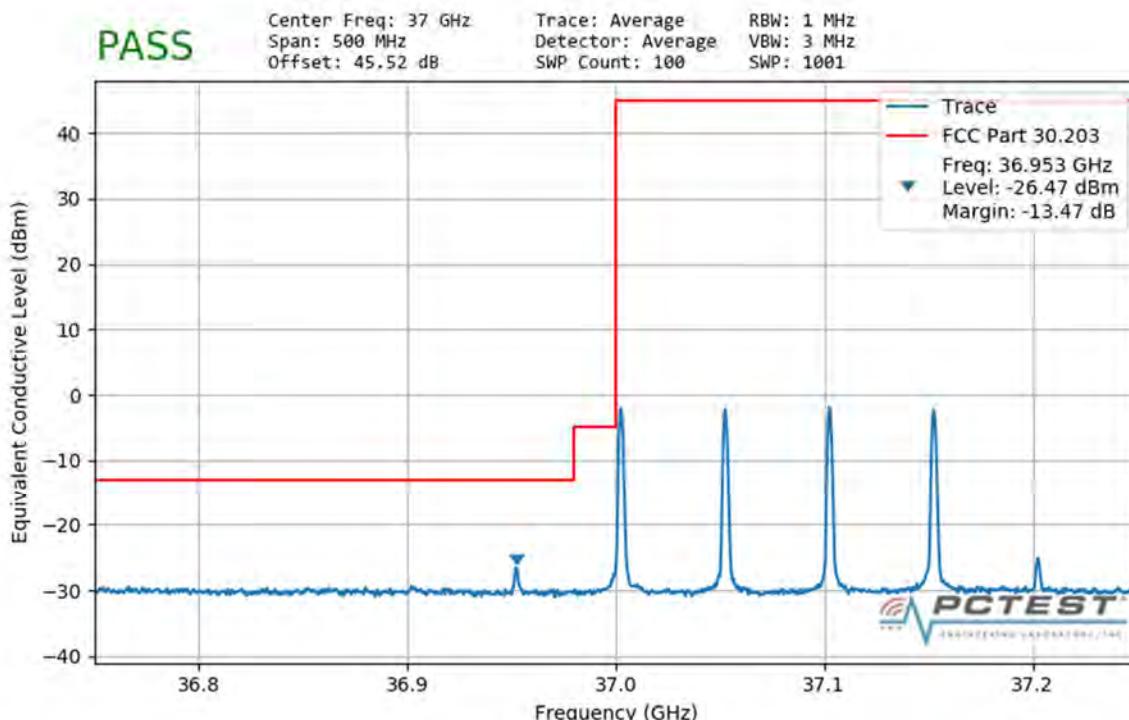


**Plot 7-529. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)**

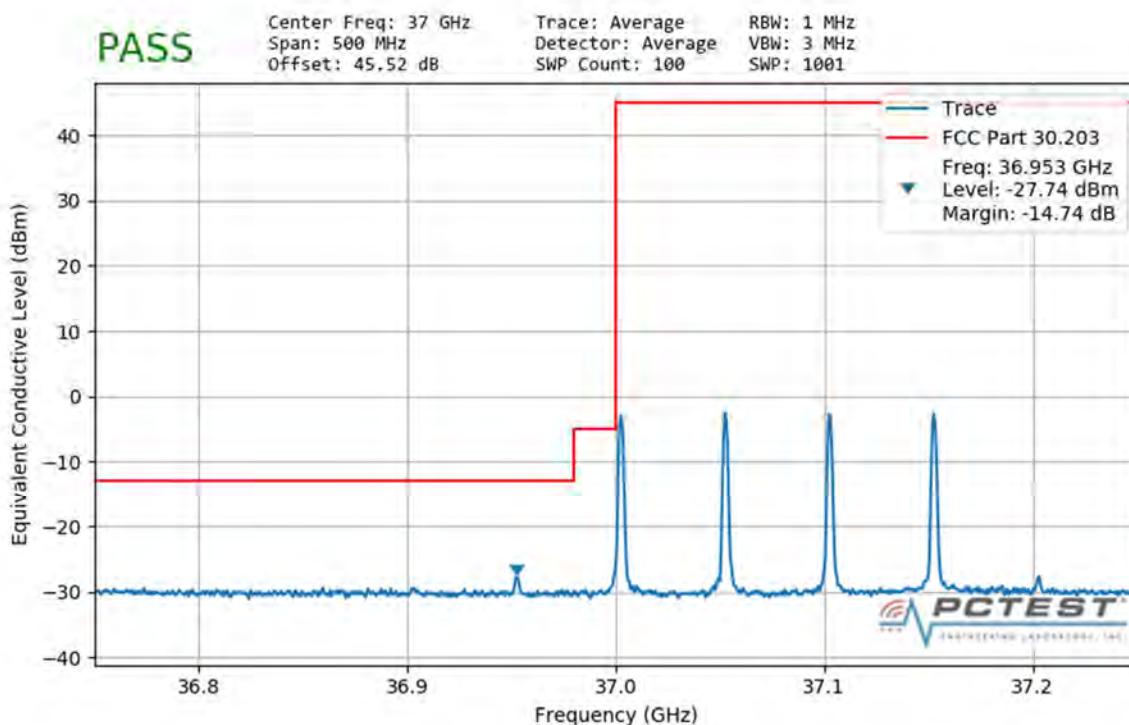


**Plot 7-530. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 303 of 371                 |

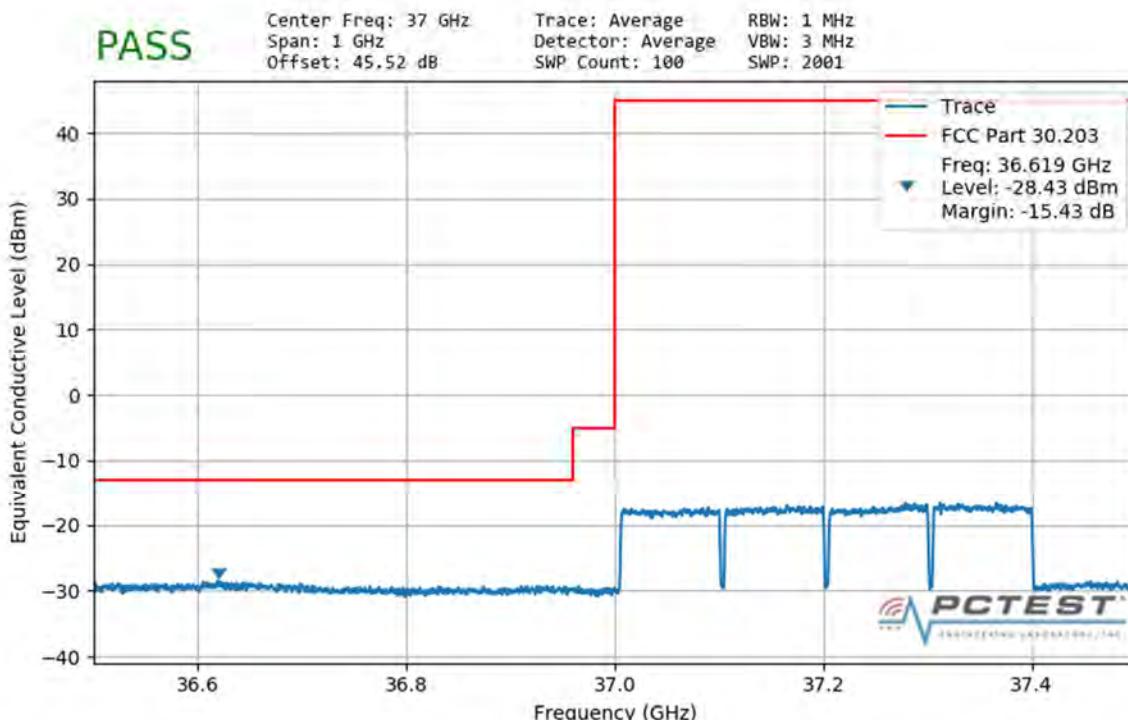


**Plot 7-531. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

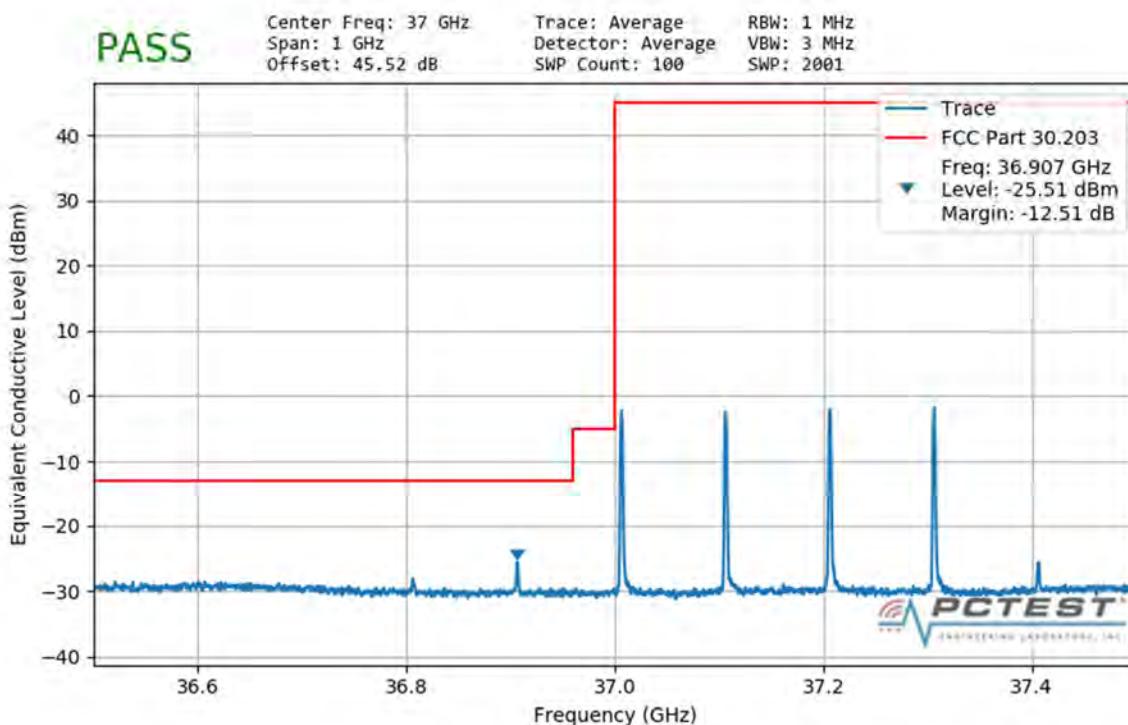


**Plot 7-532. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 304 of 371                 |

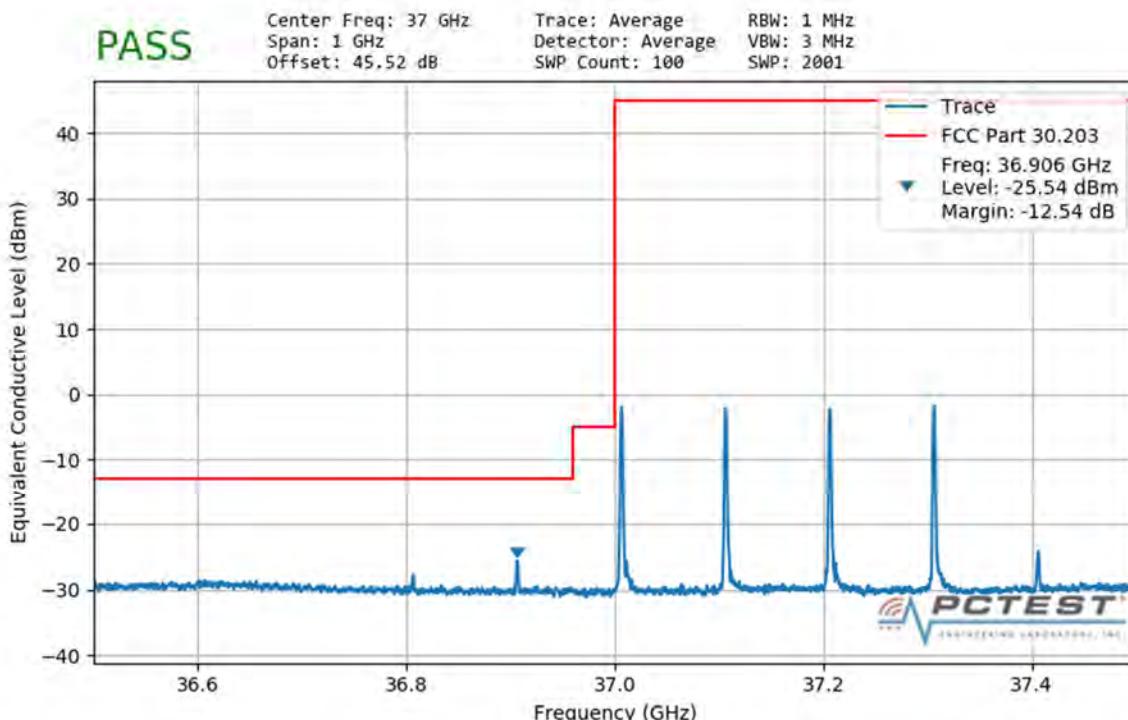


**Plot 7-533. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)**

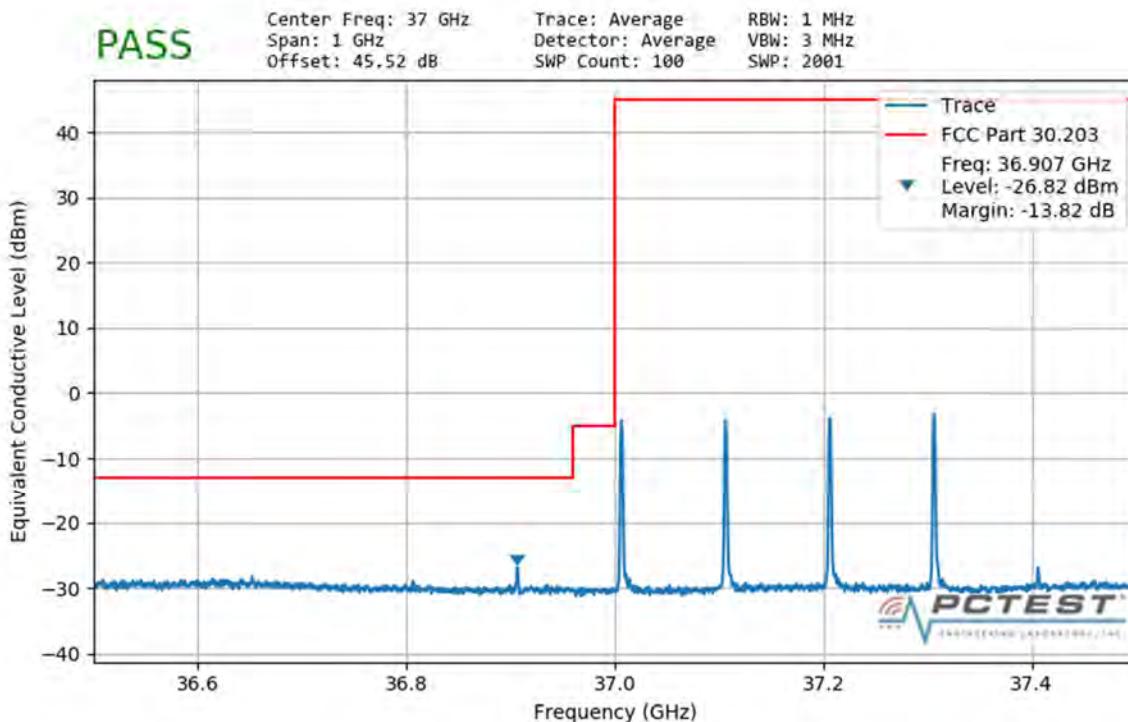


**Plot 7-534. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)**

|  |   |                                       |  |         |                                 |
|--|---|---------------------------------------|--|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | MEASUREMENT REPORT<br>(CERTIFICATION) |  | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019             | EUT Type:<br>Portable Handset         |  |         | Page 305 of 371                 |

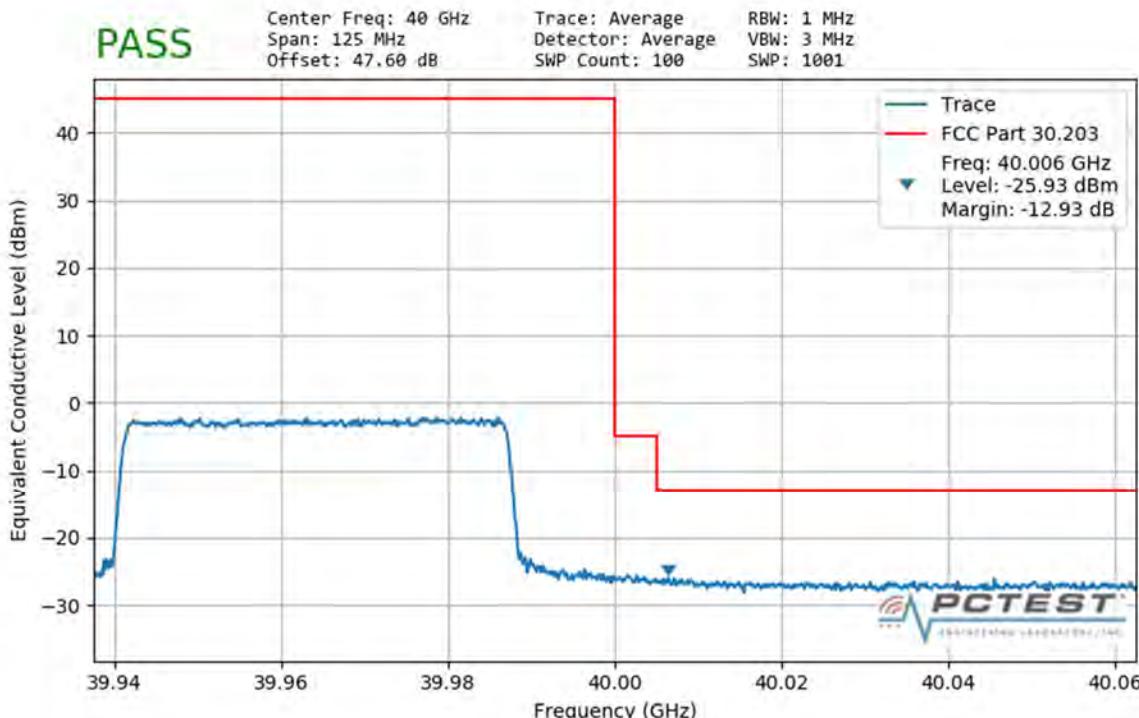


**Plot 7-535. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**

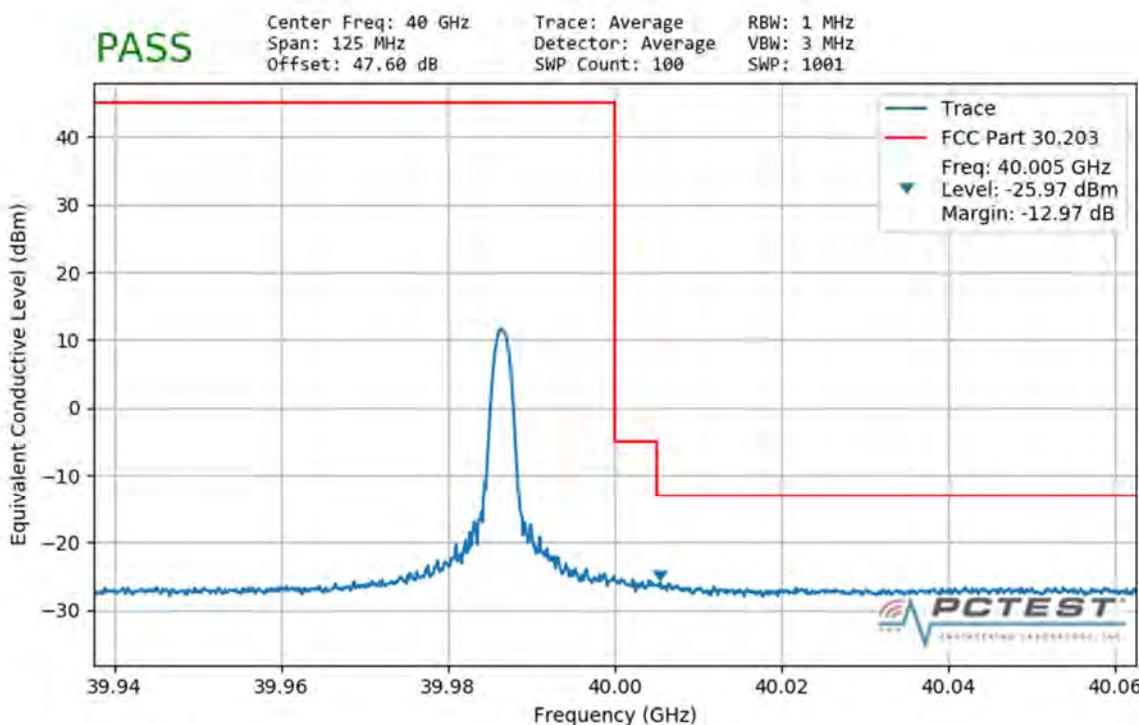


**Plot 7-536. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 306 of 371                 |

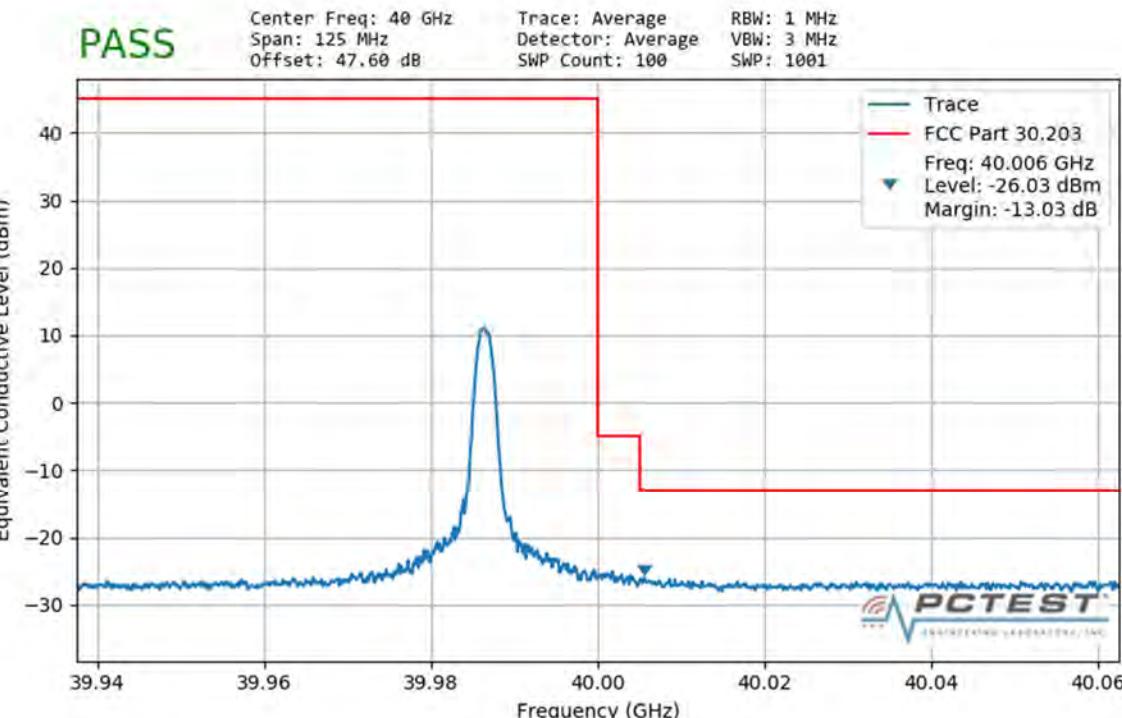


**Plot 7-537. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)**

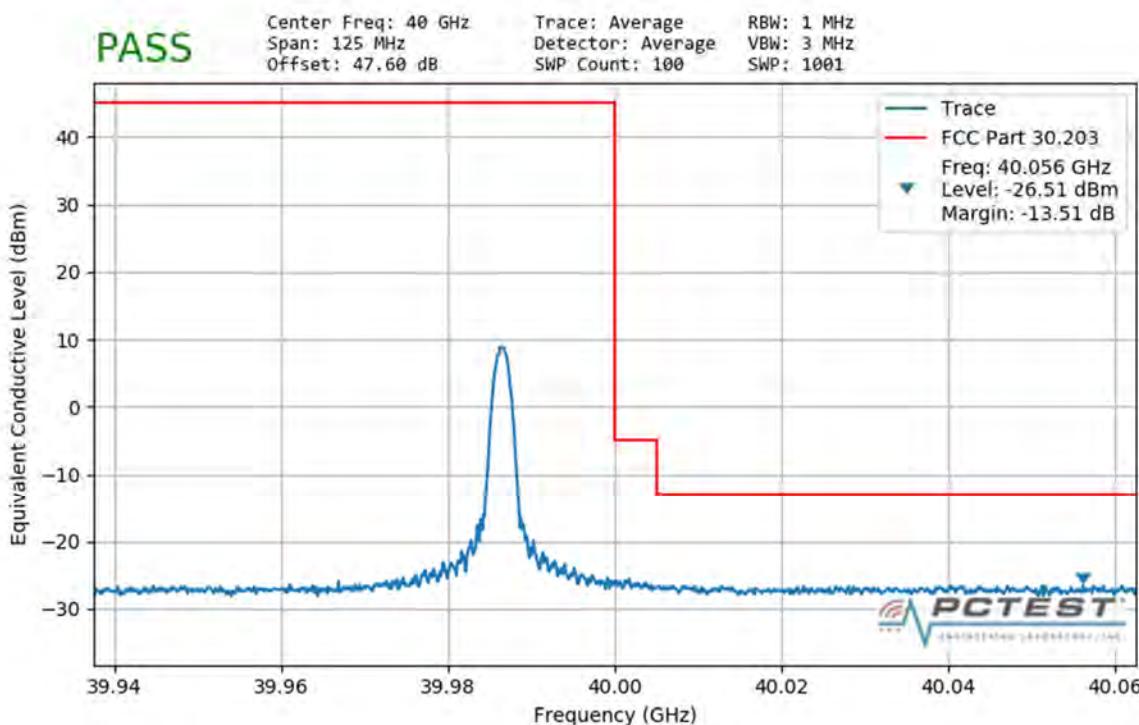


**Plot 7-538. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)**

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 307 of 371                 |

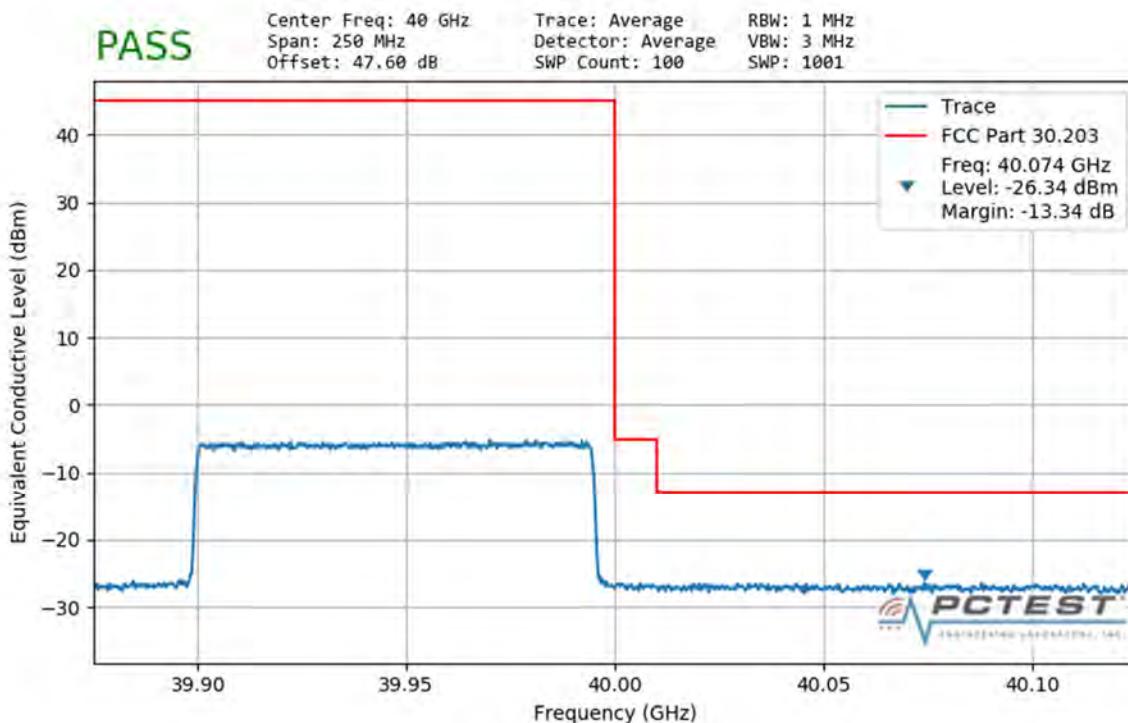


**Plot 7-539. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)**

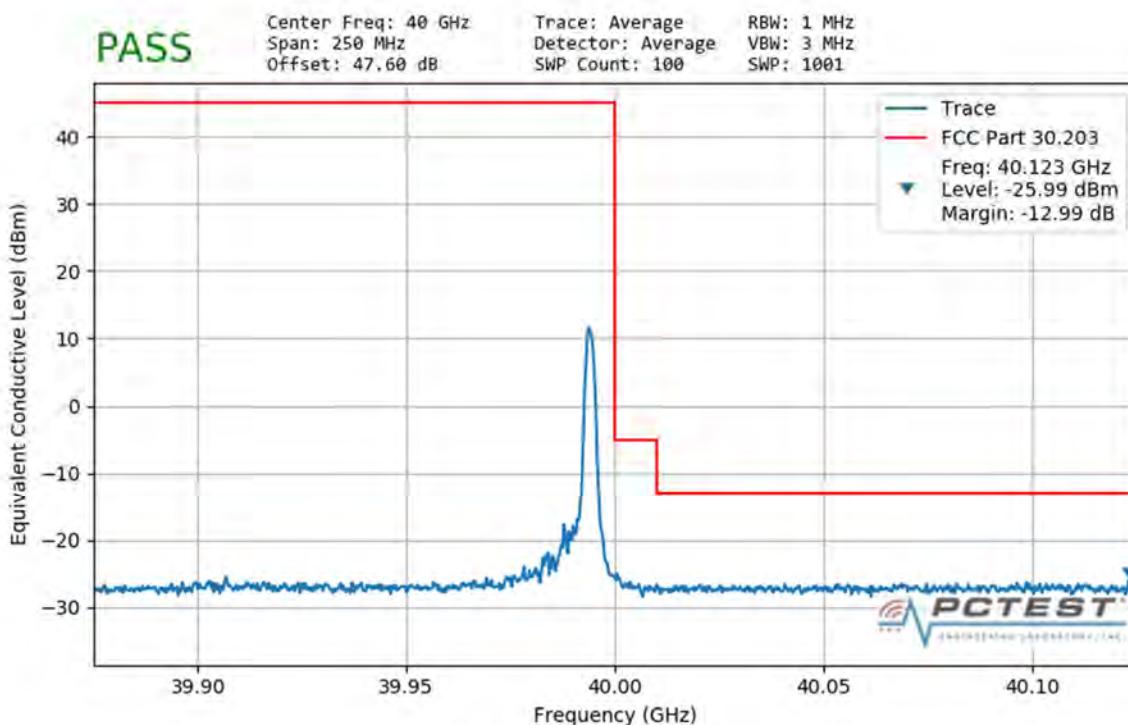


**Plot 7-540. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |   |                               |  |                                 |
|--|---|-------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset |  | Page 308 of 371                 |

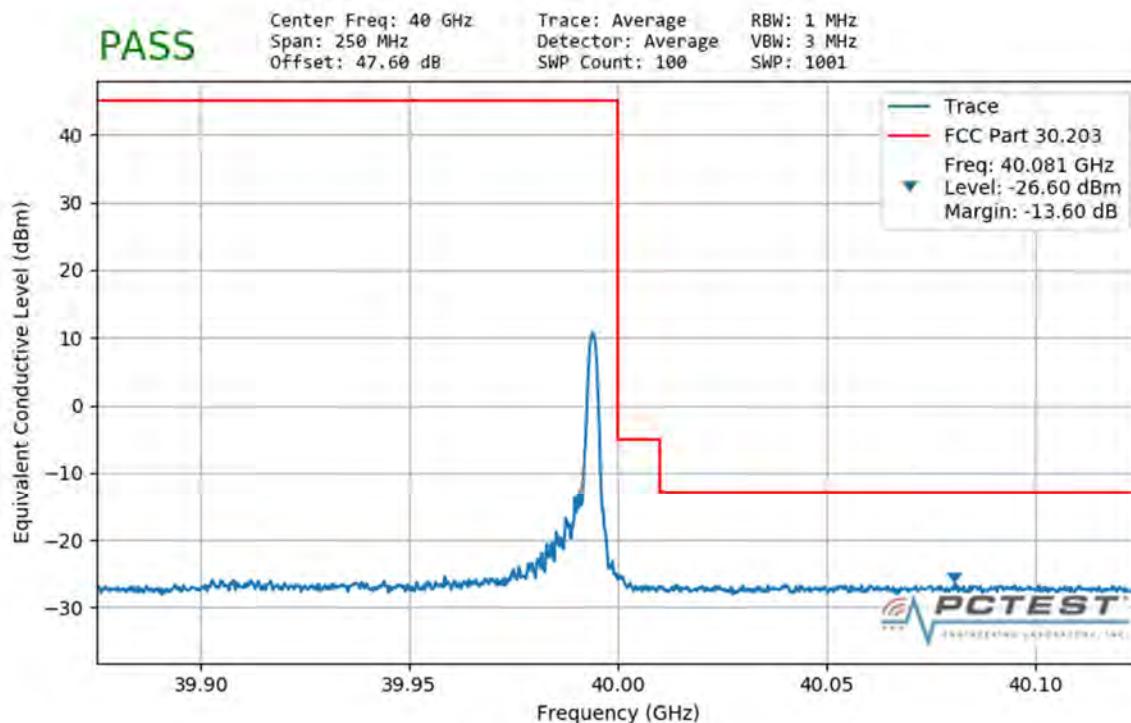


Plot 7-541. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

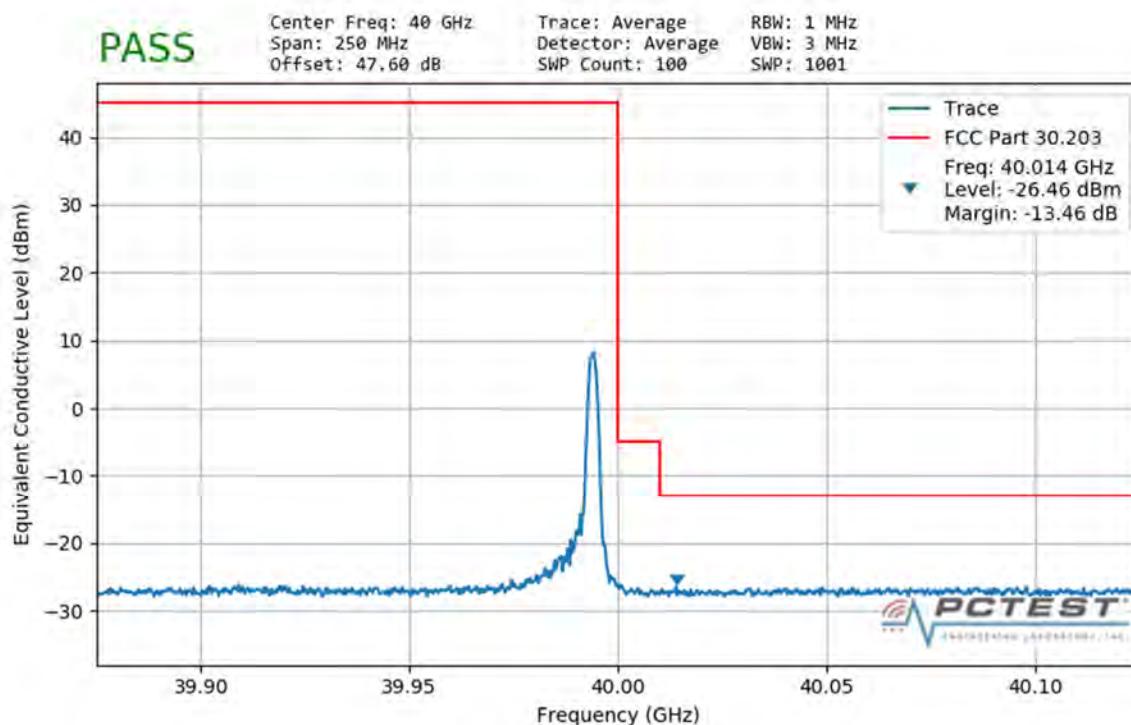


Plot 7-542. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 309 of 371                 |

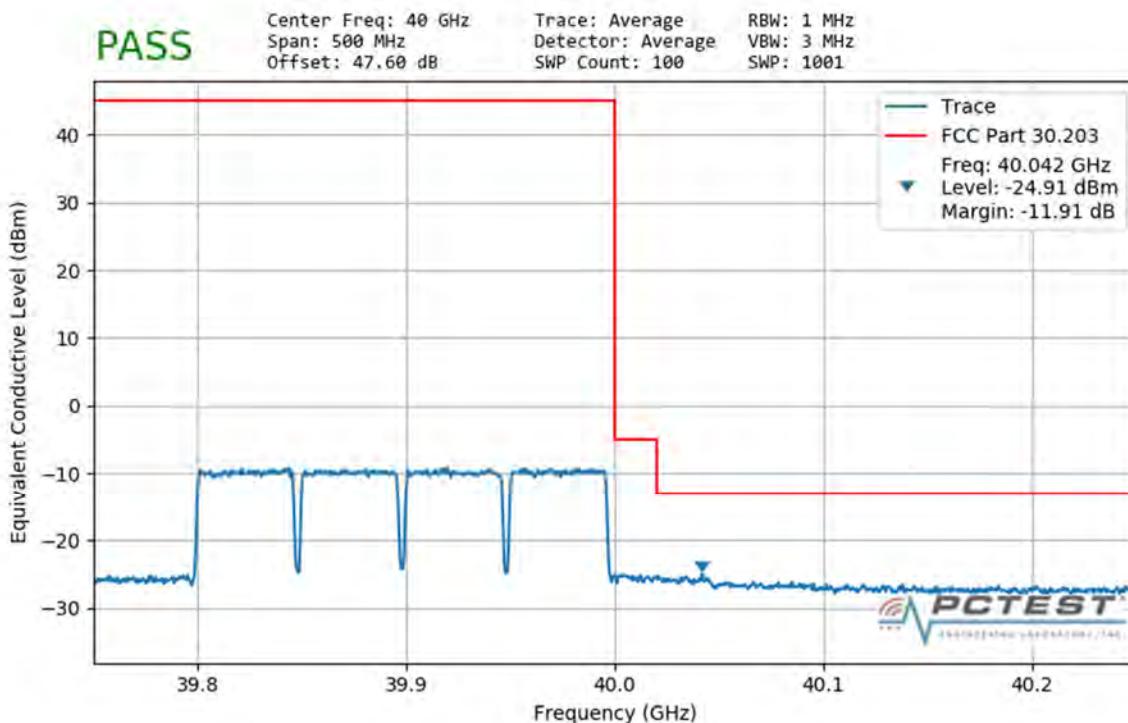


Plot 7-543. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)

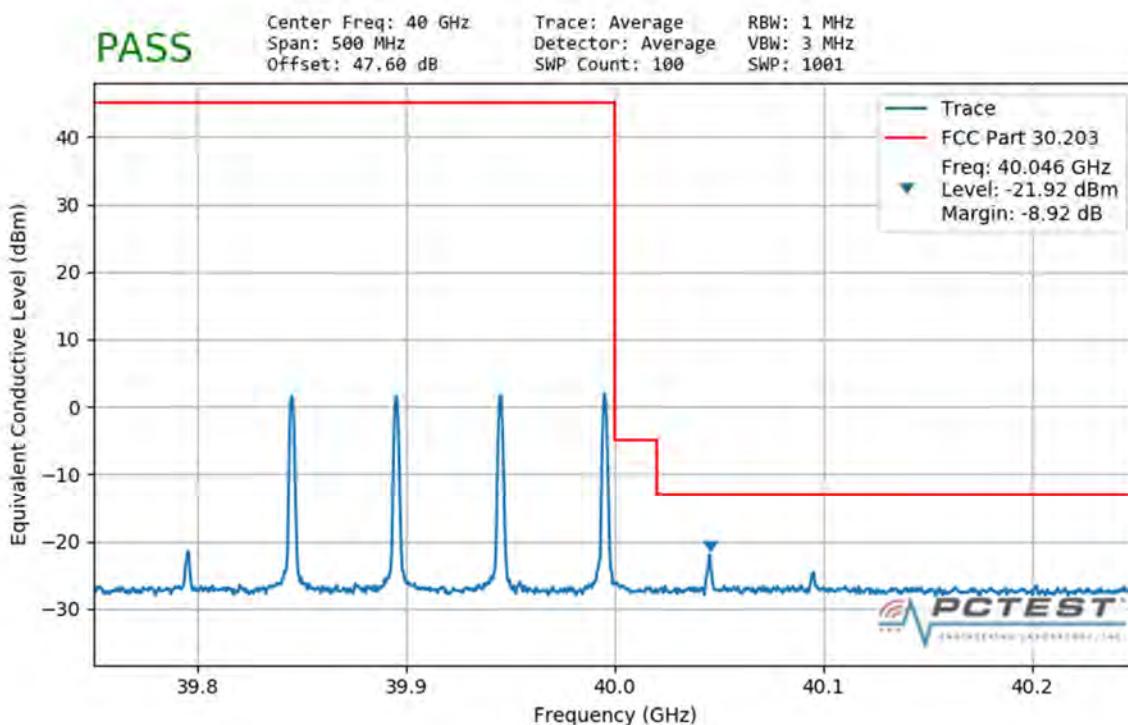


Plot 7-544. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 310 of 371                 |

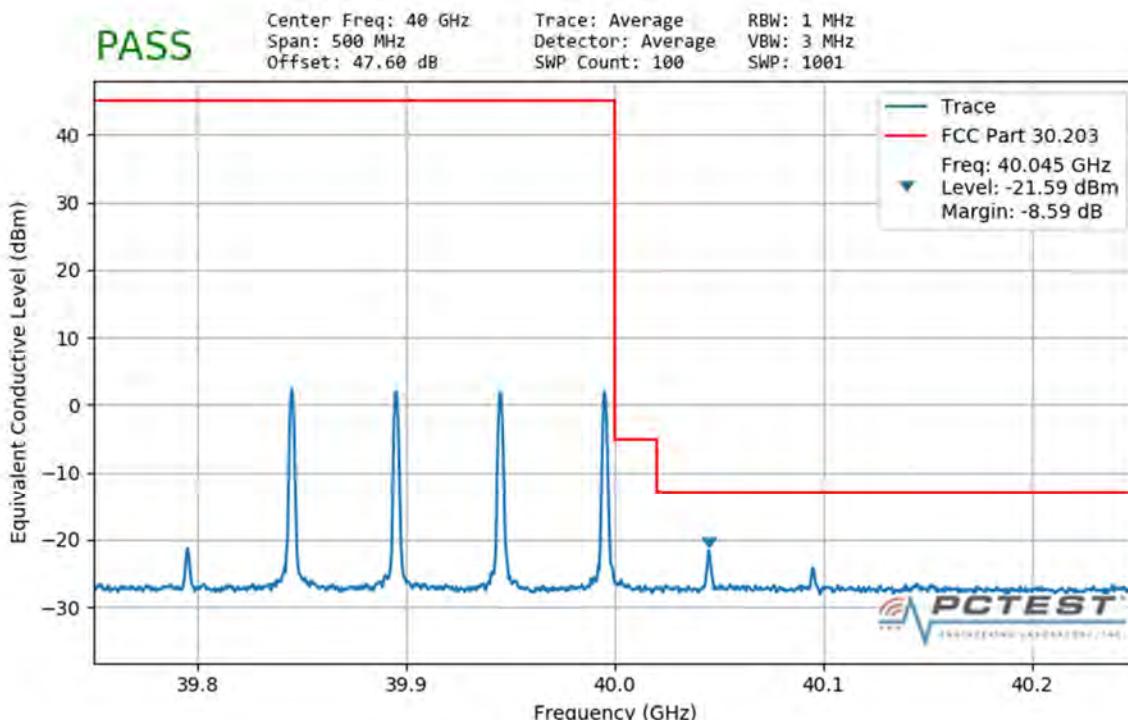


Plot 7-545. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)

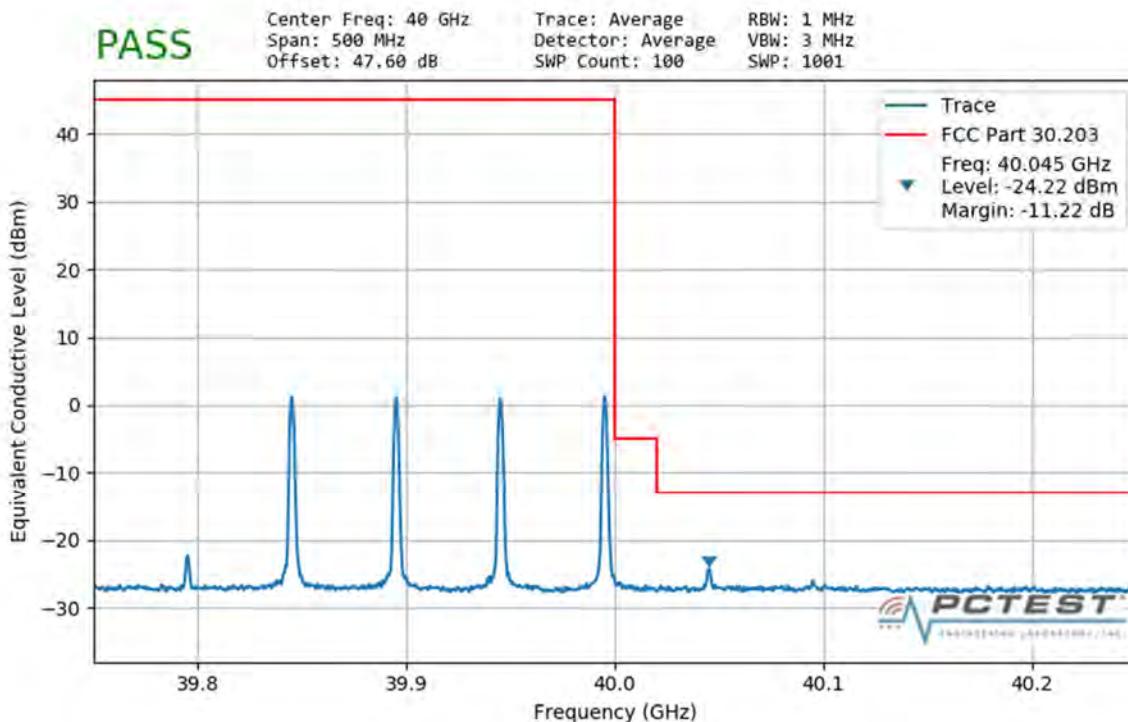


Plot 7-546. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 311 of 371                 |

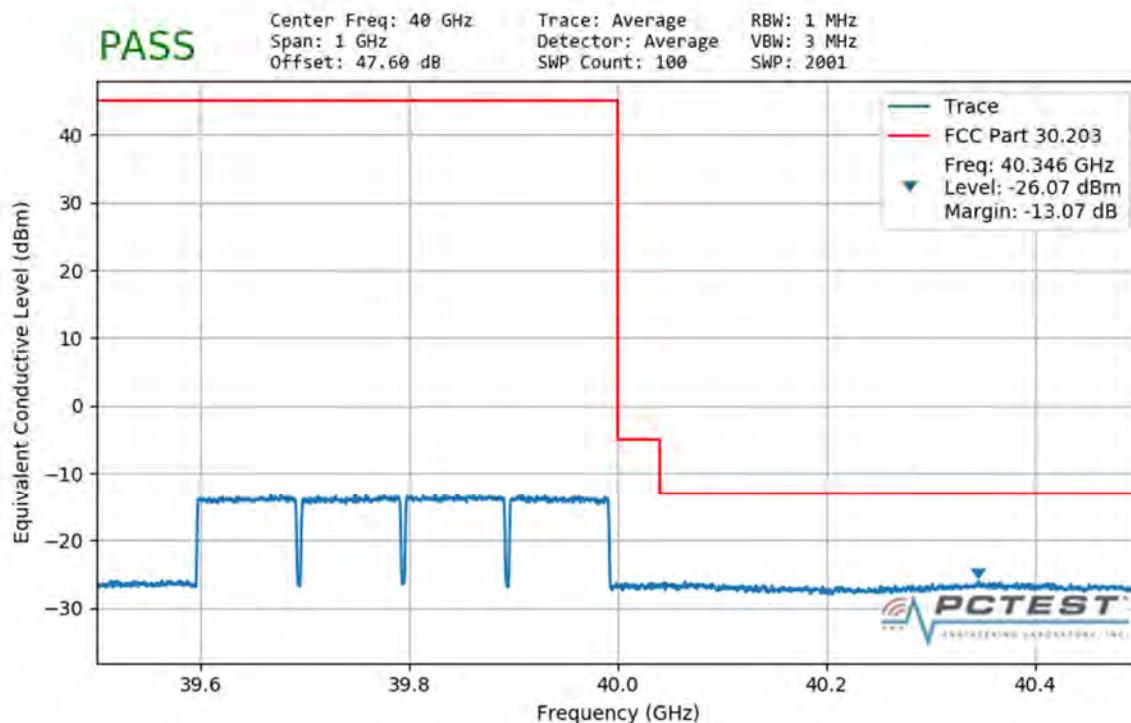


Plot 7-547. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)

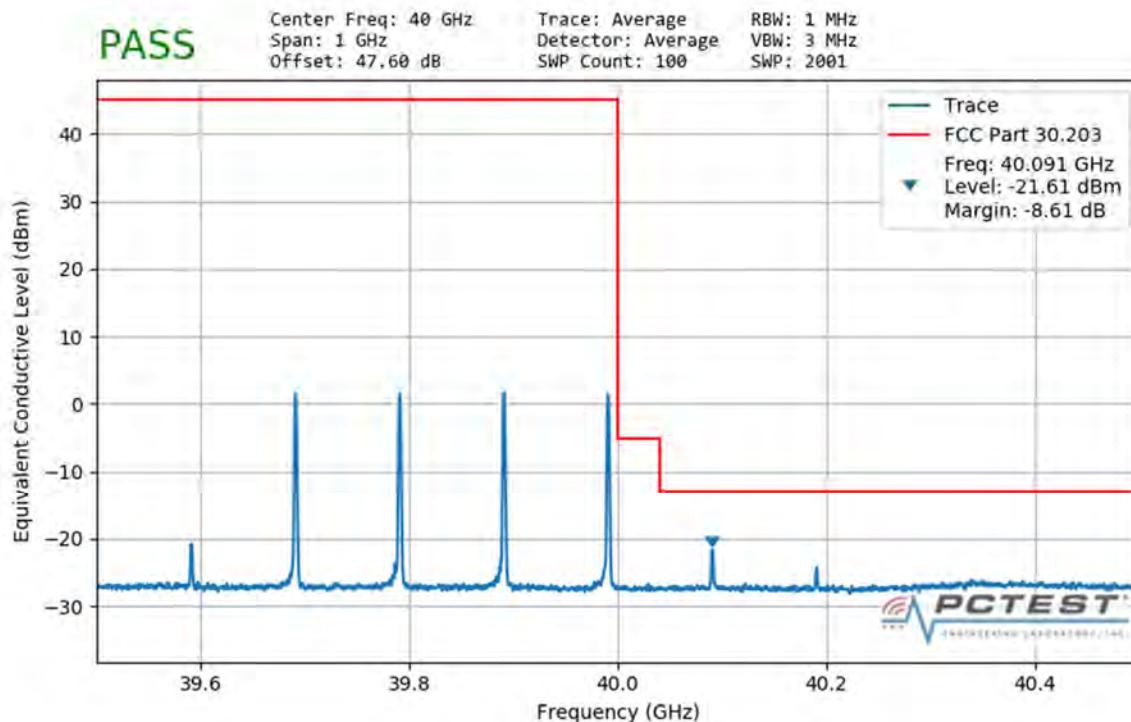


Plot 7-548. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 312 of 371                 |

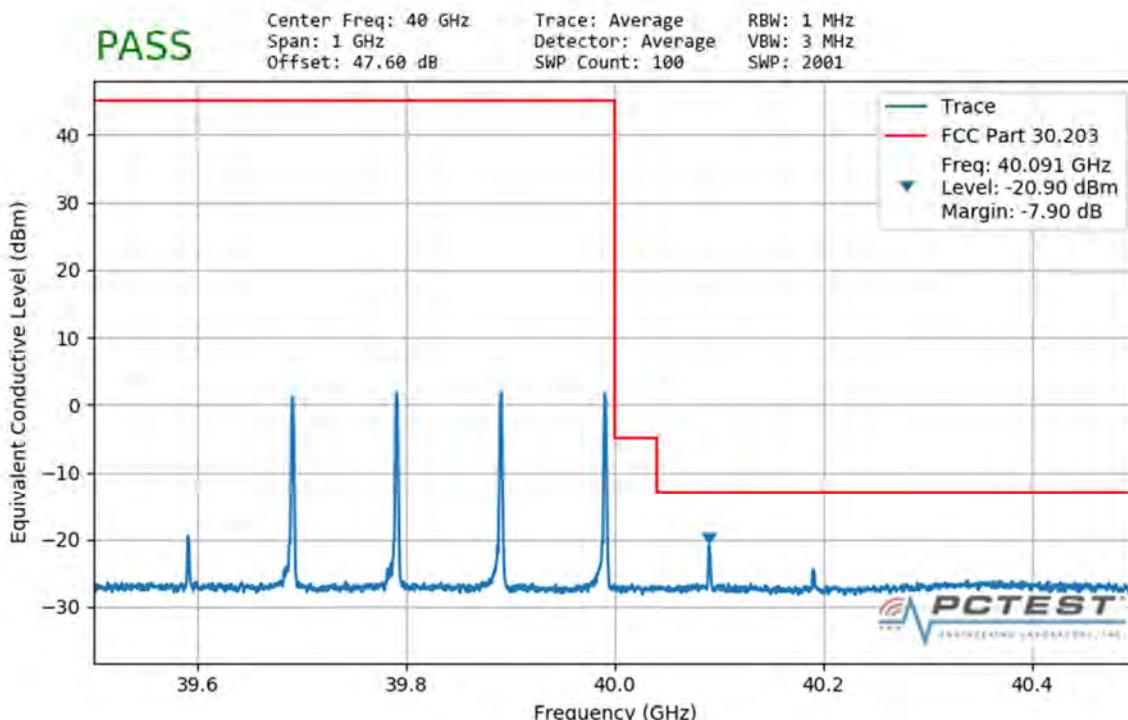


Plot 7-549. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

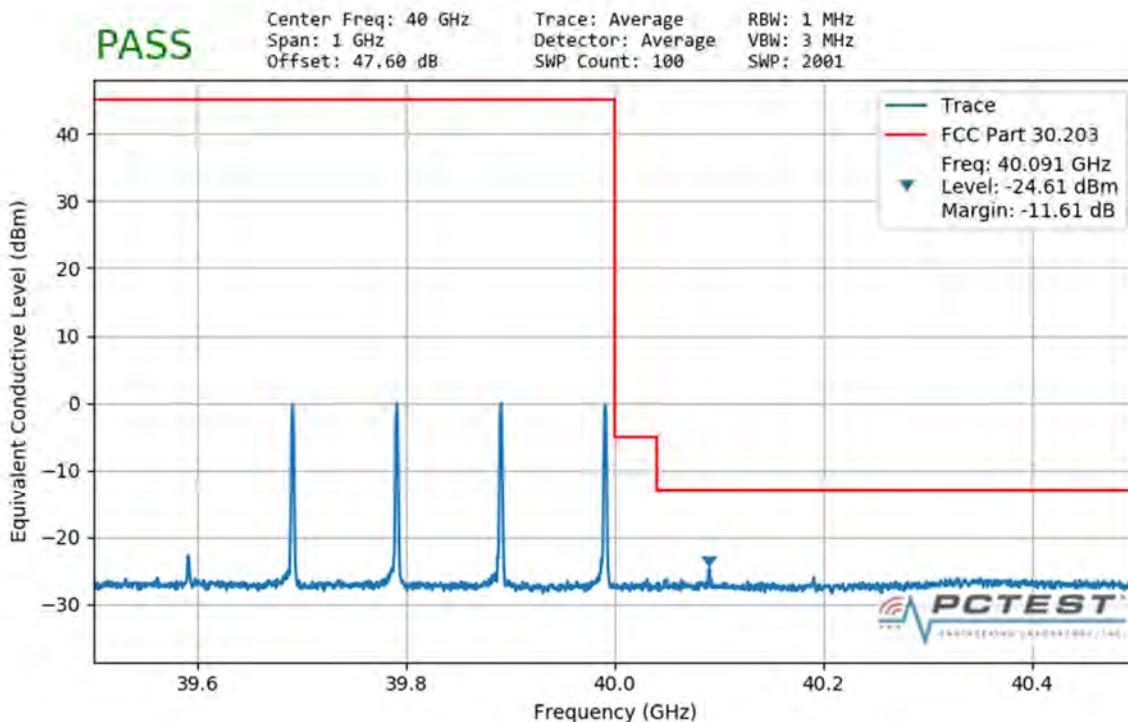


Plot 7-550. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 313 of 371                 |



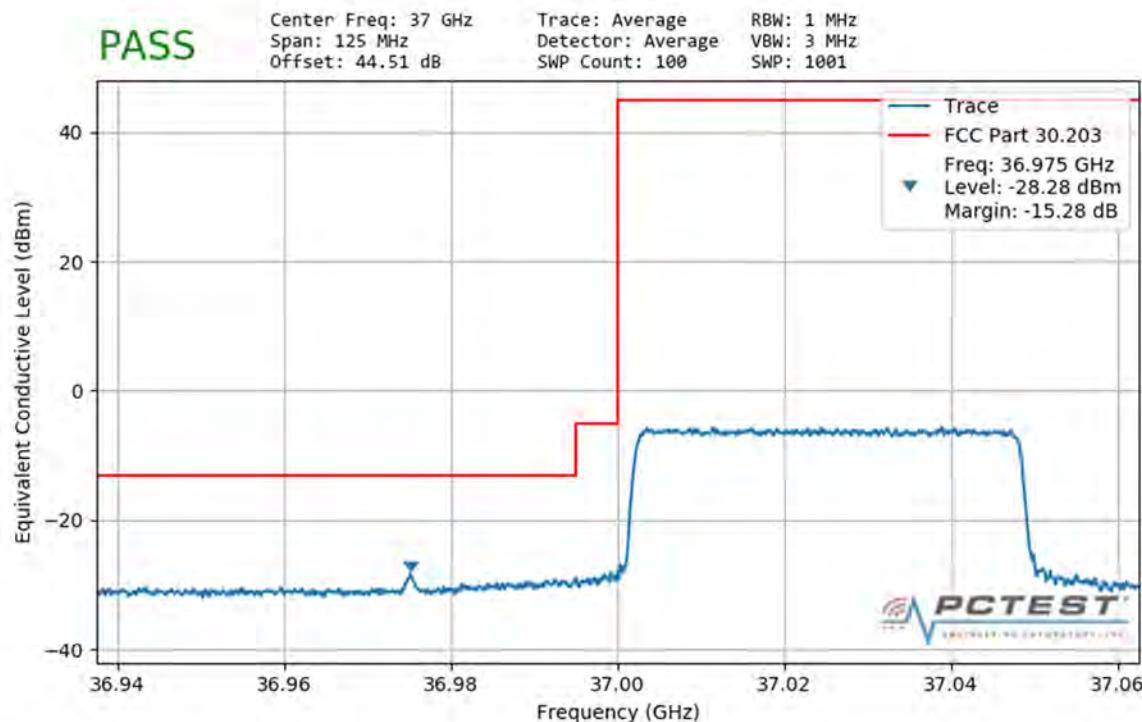
Plot 7-551. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)



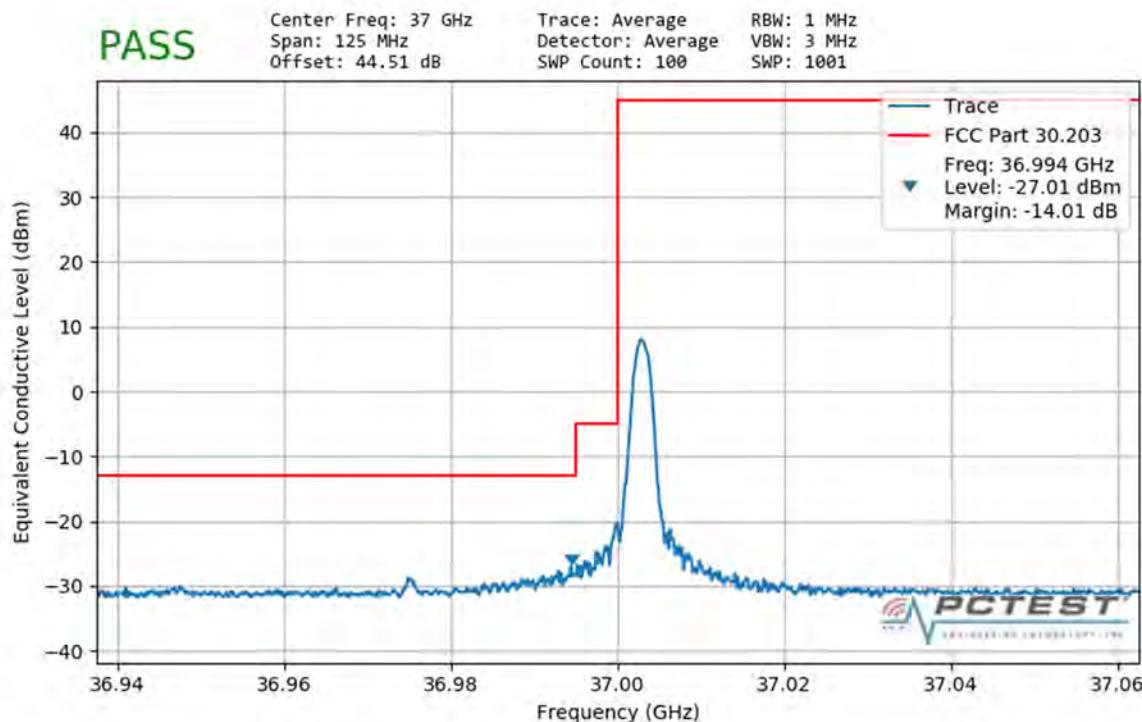
Plot 7-552. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 314 of 371                 |

## J Patch MIMO(n260)

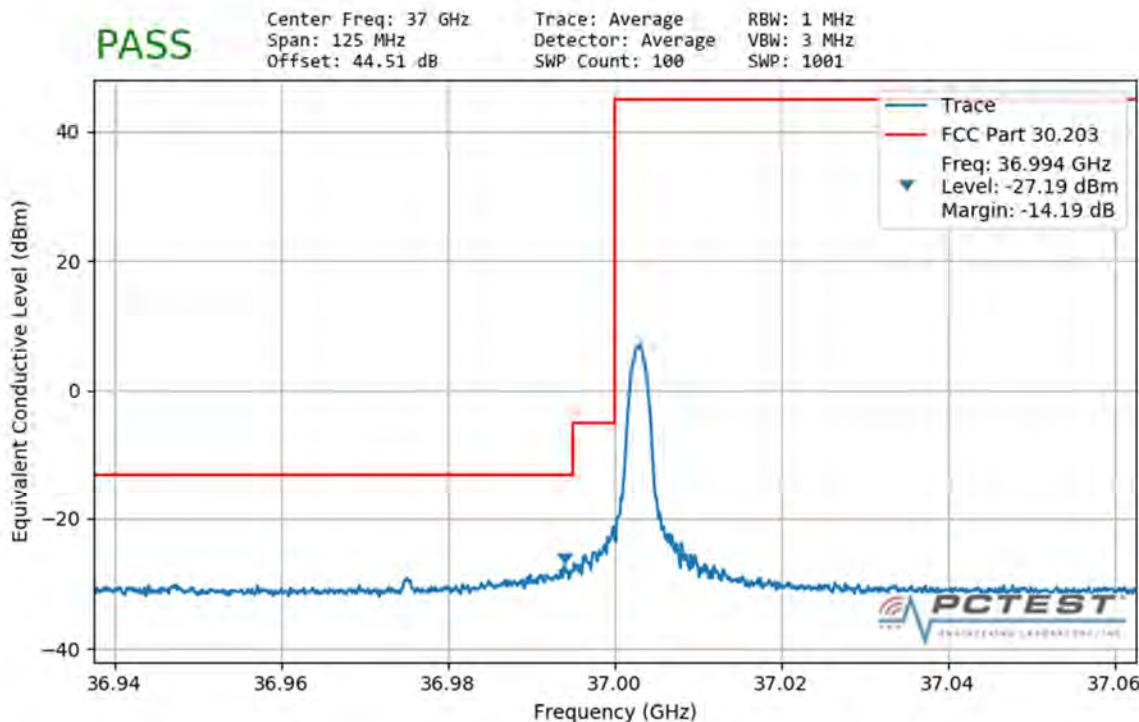


Plot 7-553. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

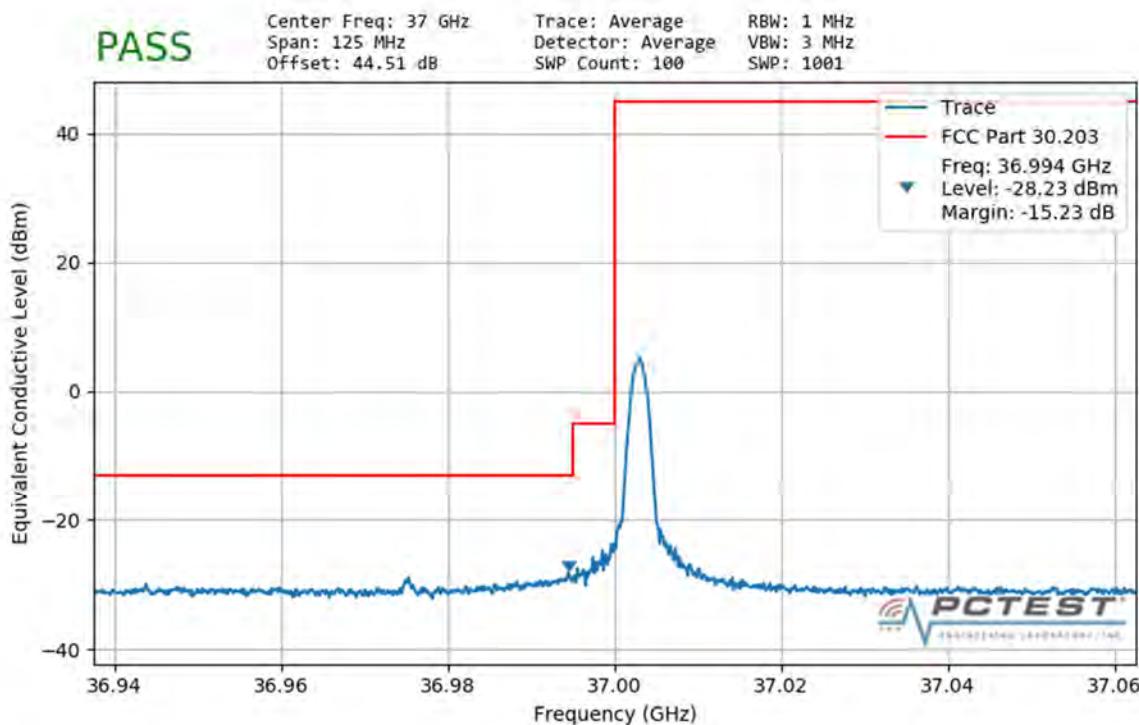


Plot 7-554. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |   |                                       |                                 |
|--|---|---------------------------------------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         | Page 315 of 371                 |

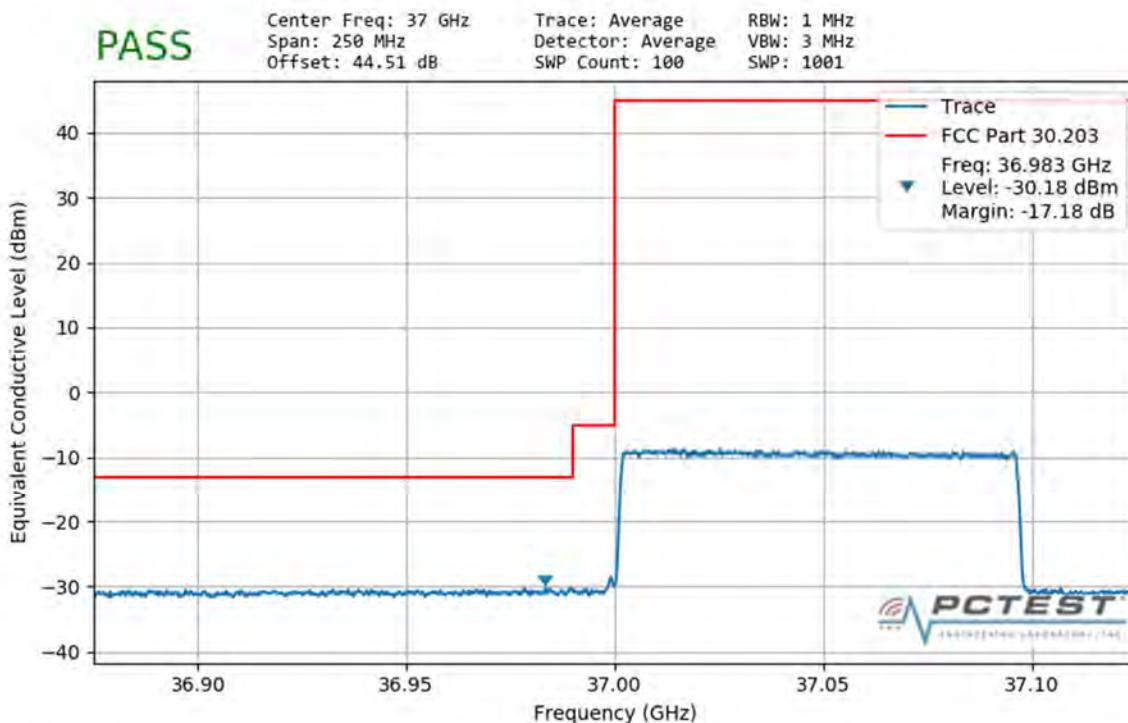


**Plot 7-555. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)**

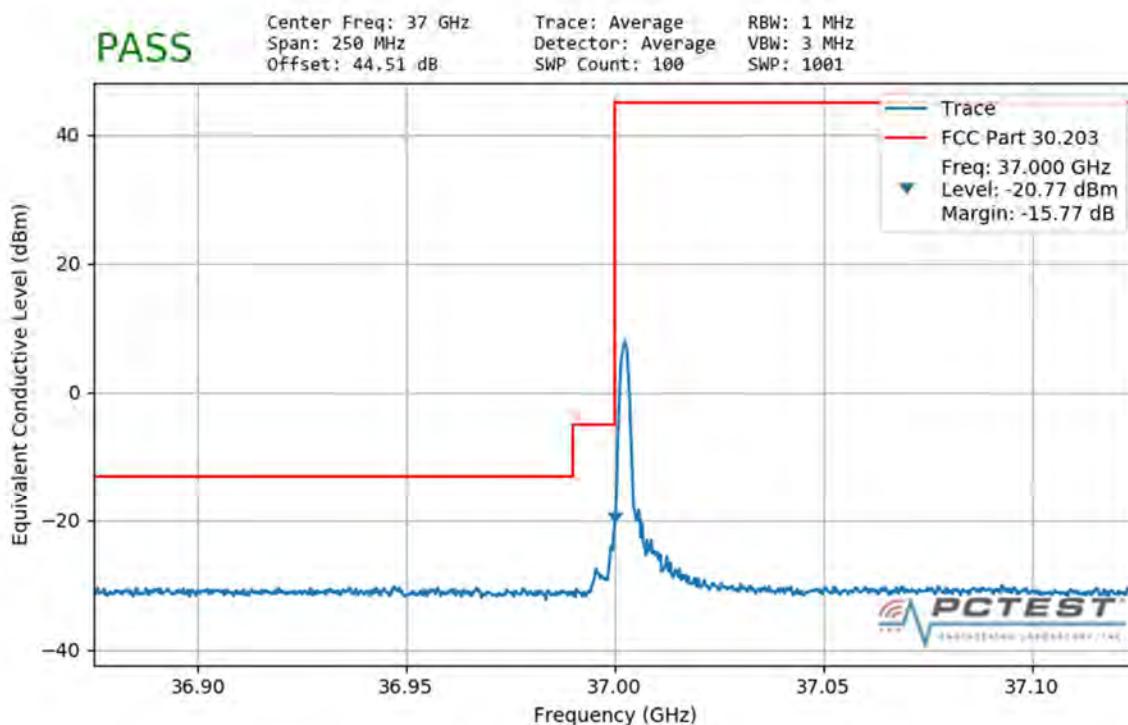


**Plot 7-556. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 316 of 371                 |

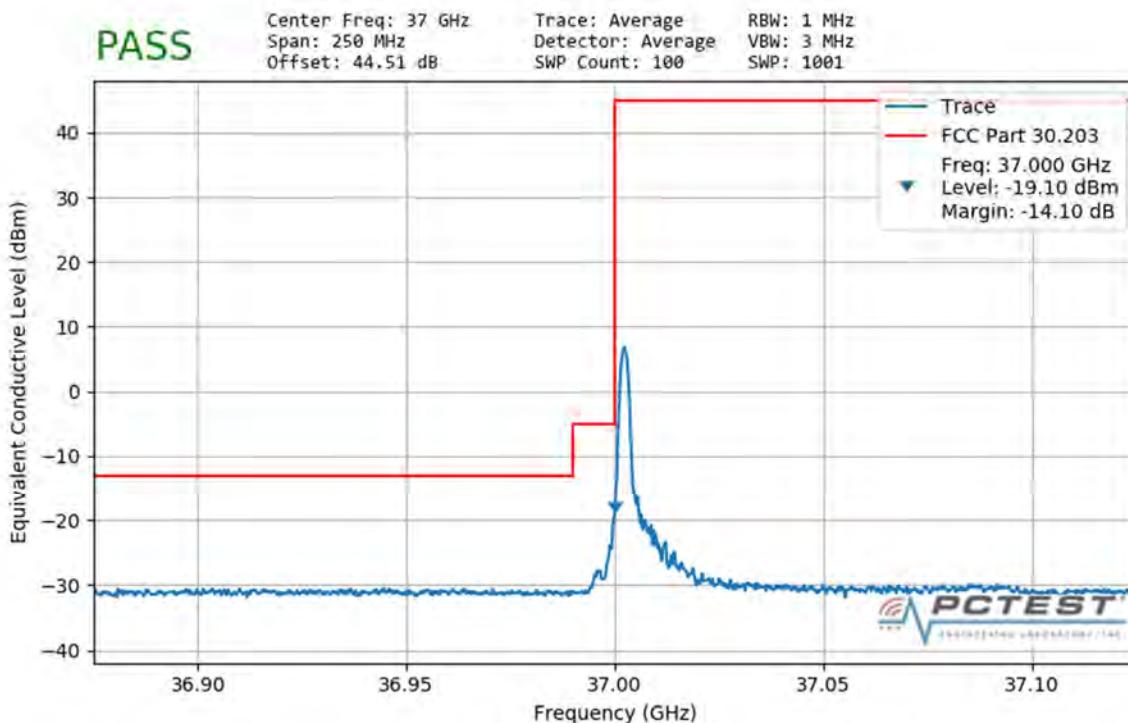


Plot 7-557. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)

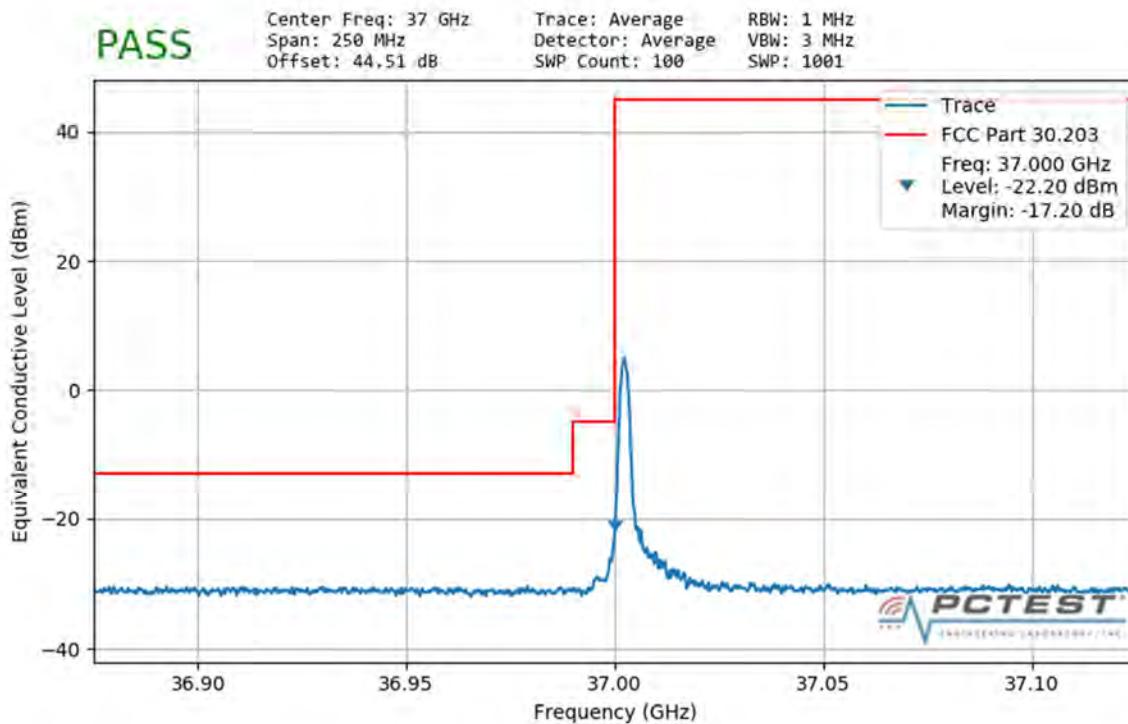


Plot 7-558. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 317 of 371                 |

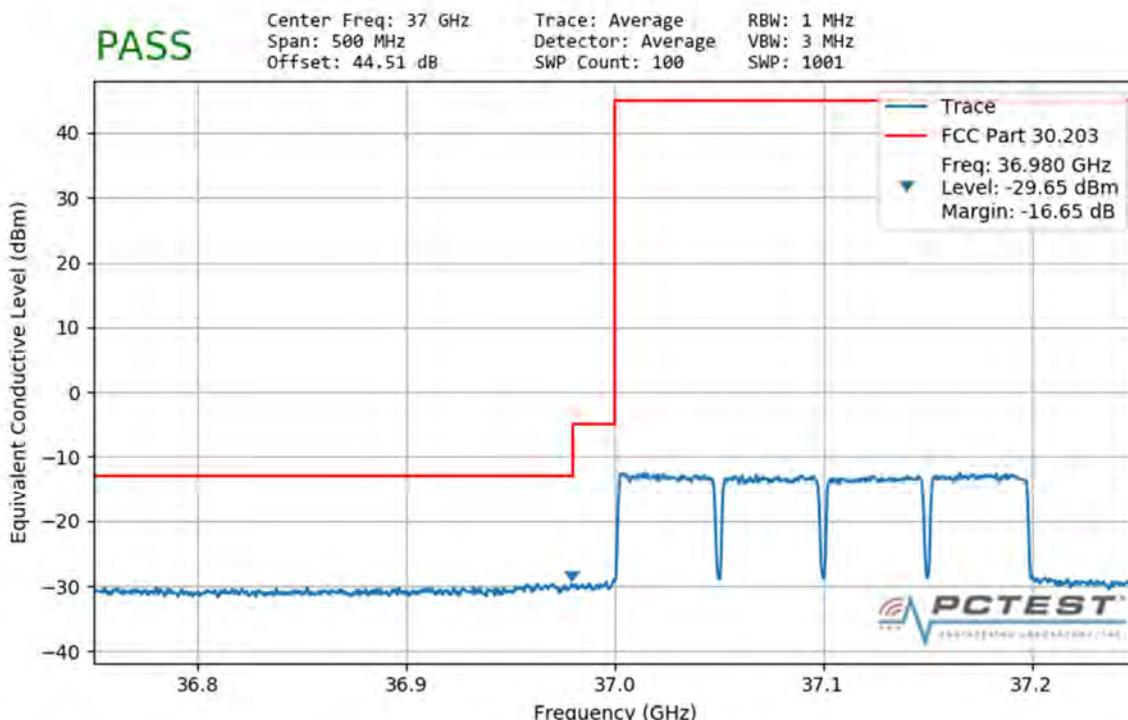


**Plot 7-559. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**

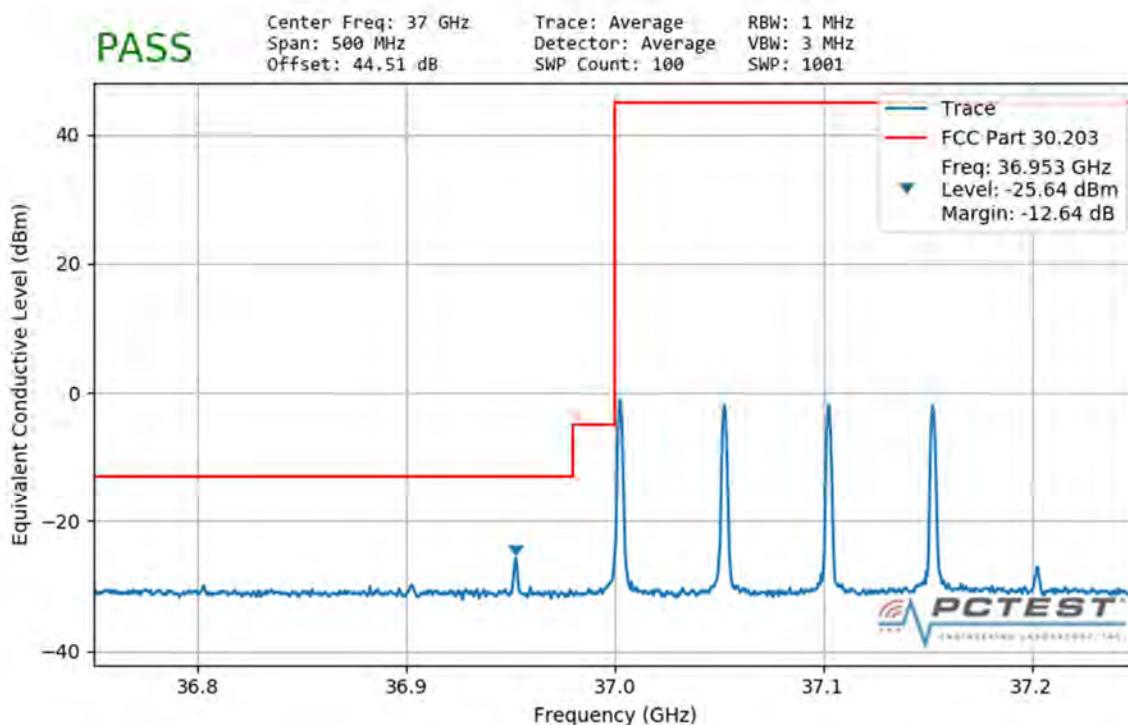


**Plot 7-560. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 318 of 371                 |

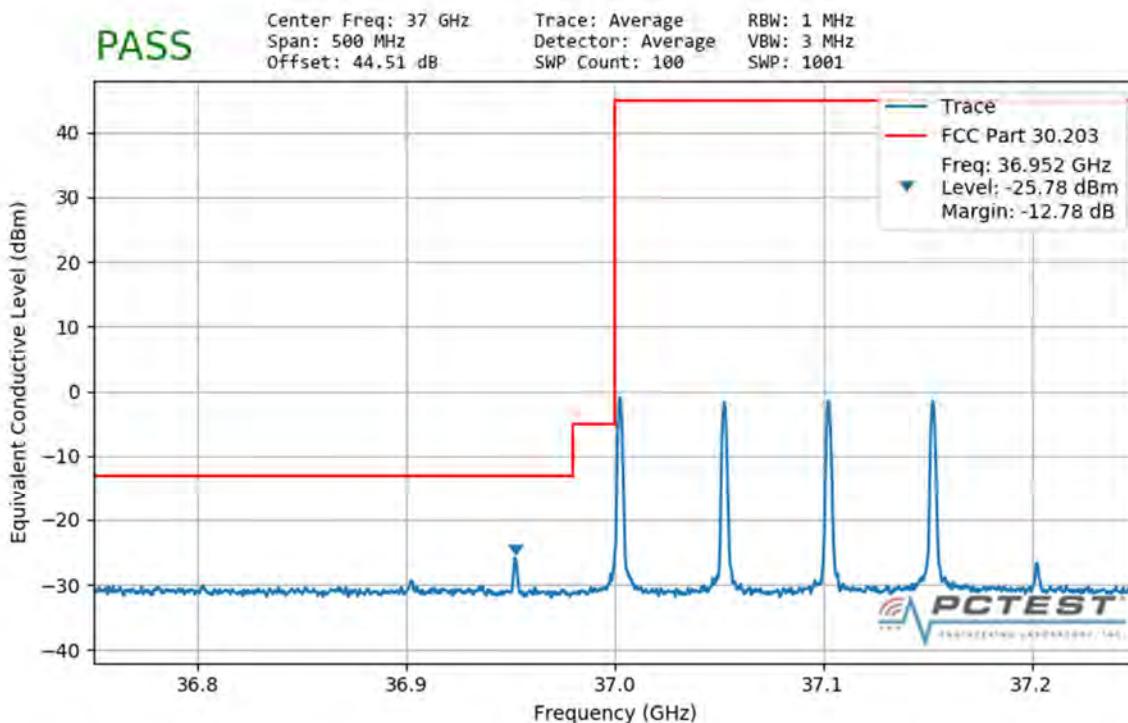


**Plot 7-561. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)**

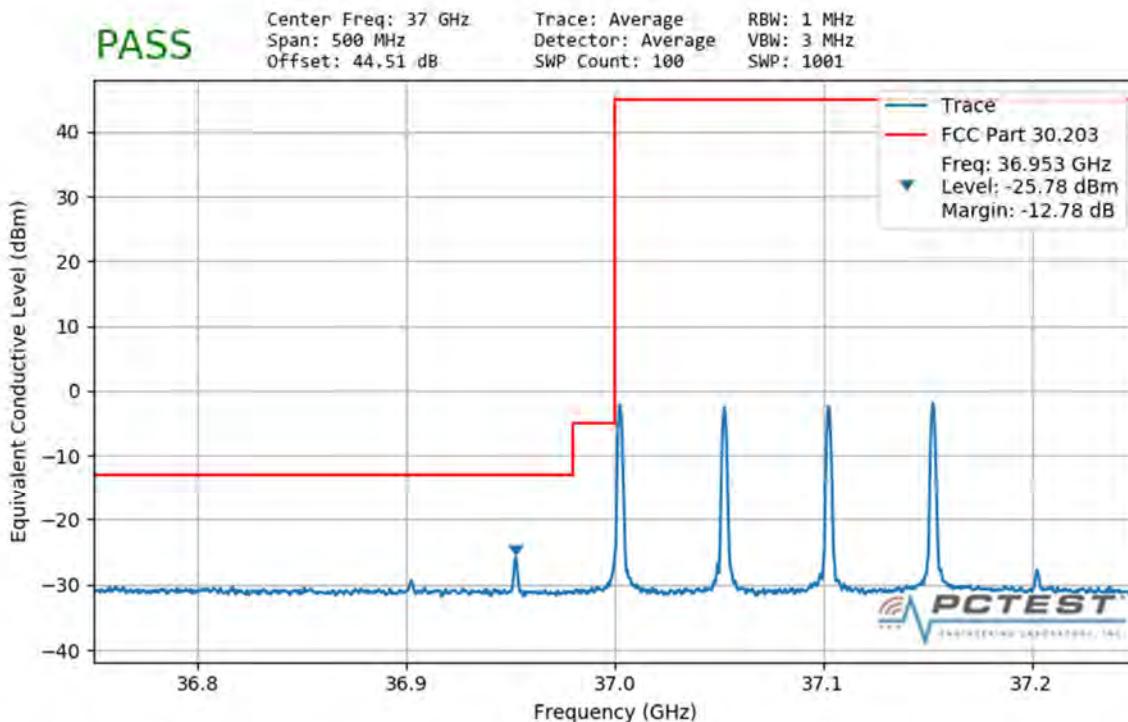


**Plot 7-562. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 319 of 371                 |

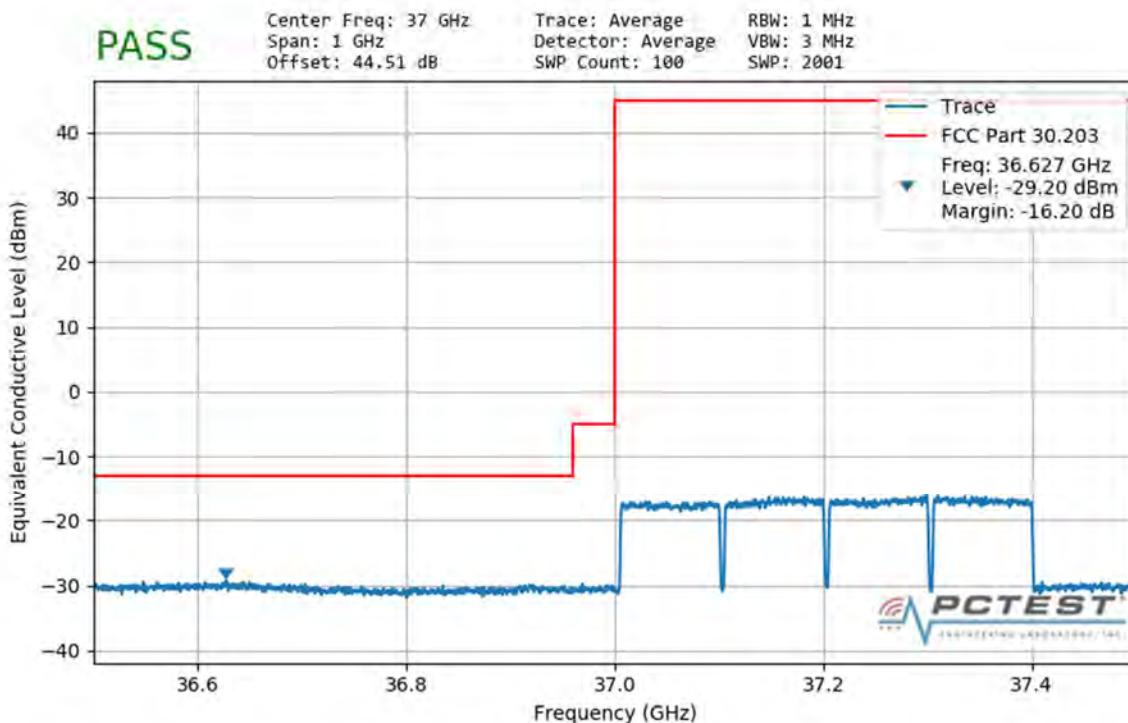


**Plot 7-563. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

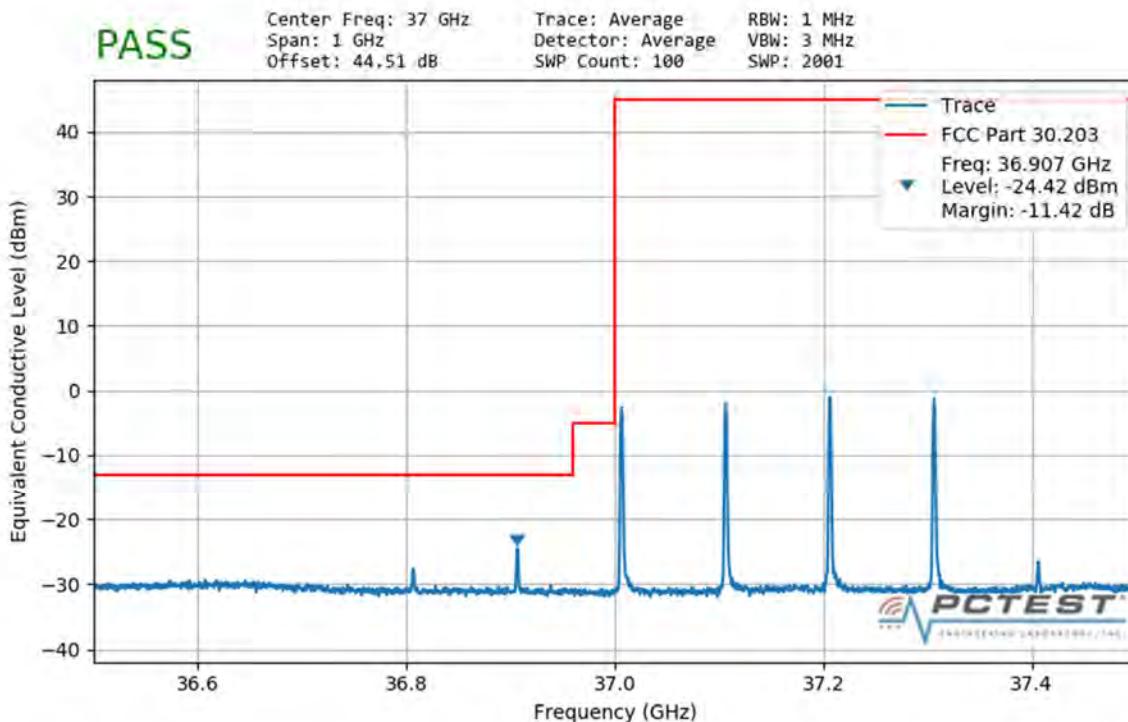


**Plot 7-564. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 320 of 371                 |

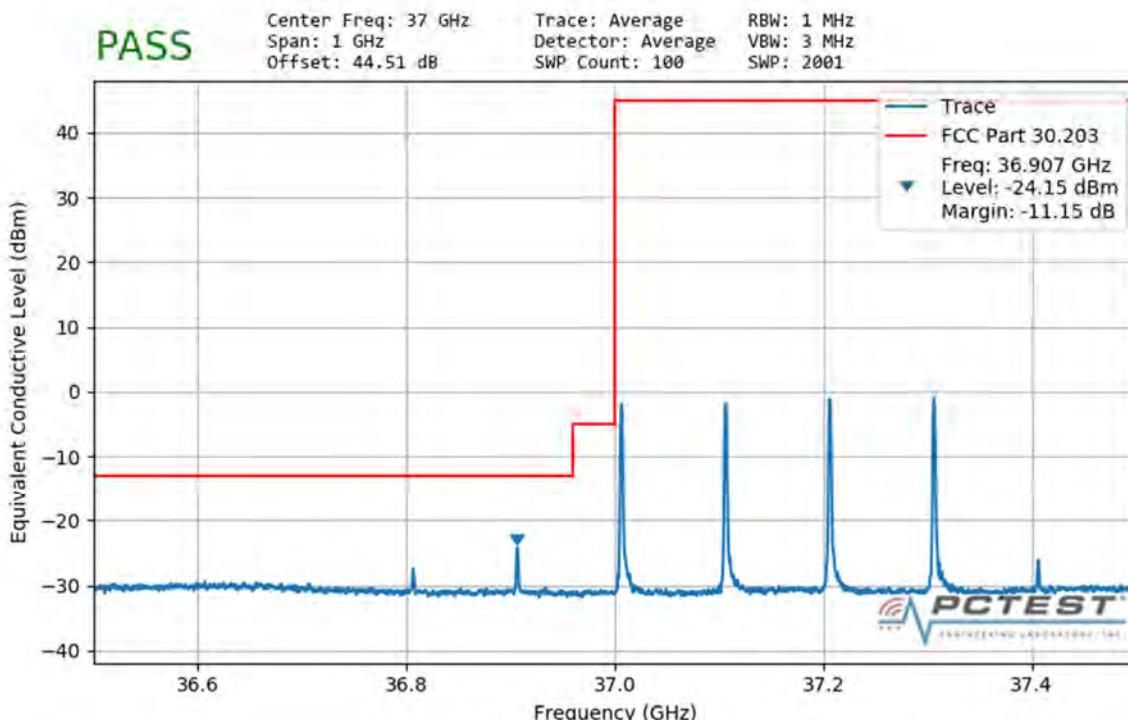


**Plot 7-565. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)**

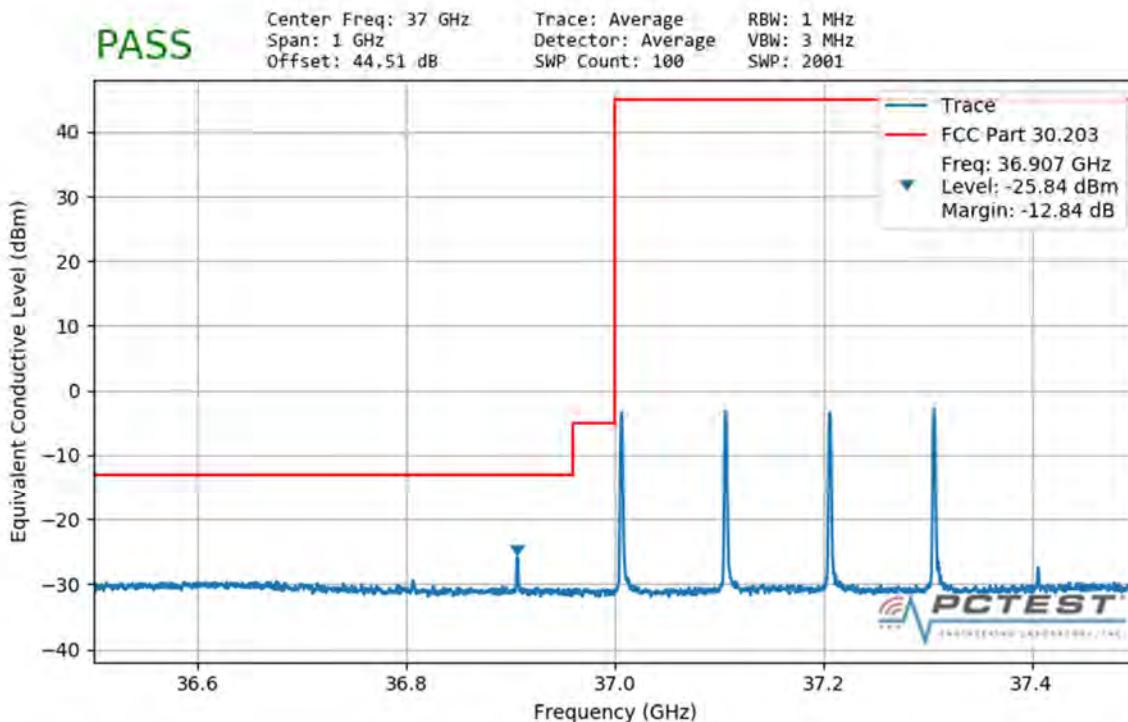


**Plot 7-566. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 321 of 371                 |

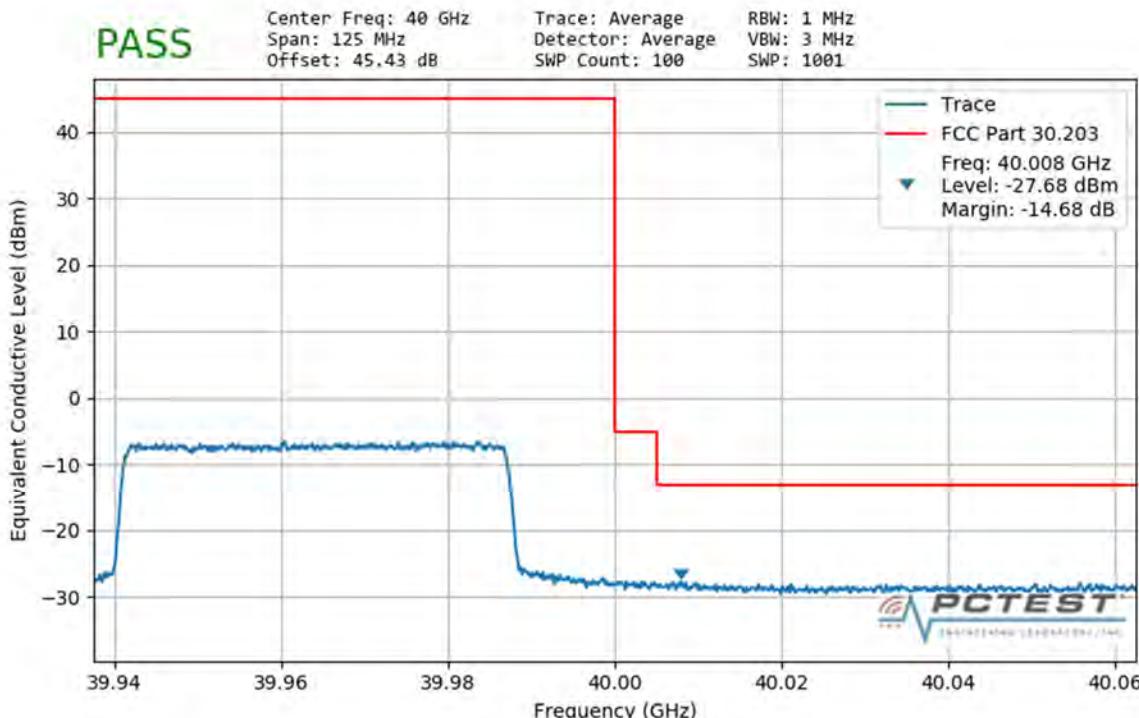


**Plot 7-567. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**

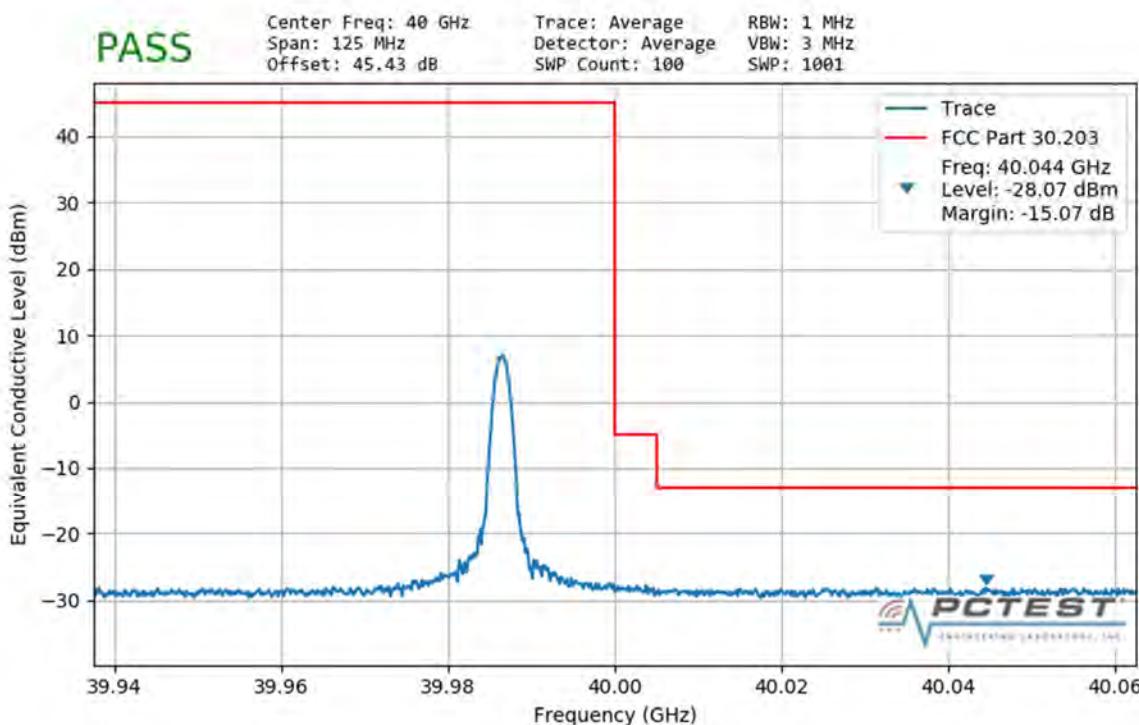


**Plot 7-568. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 322 of 371                 |



Plot 7-569. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)

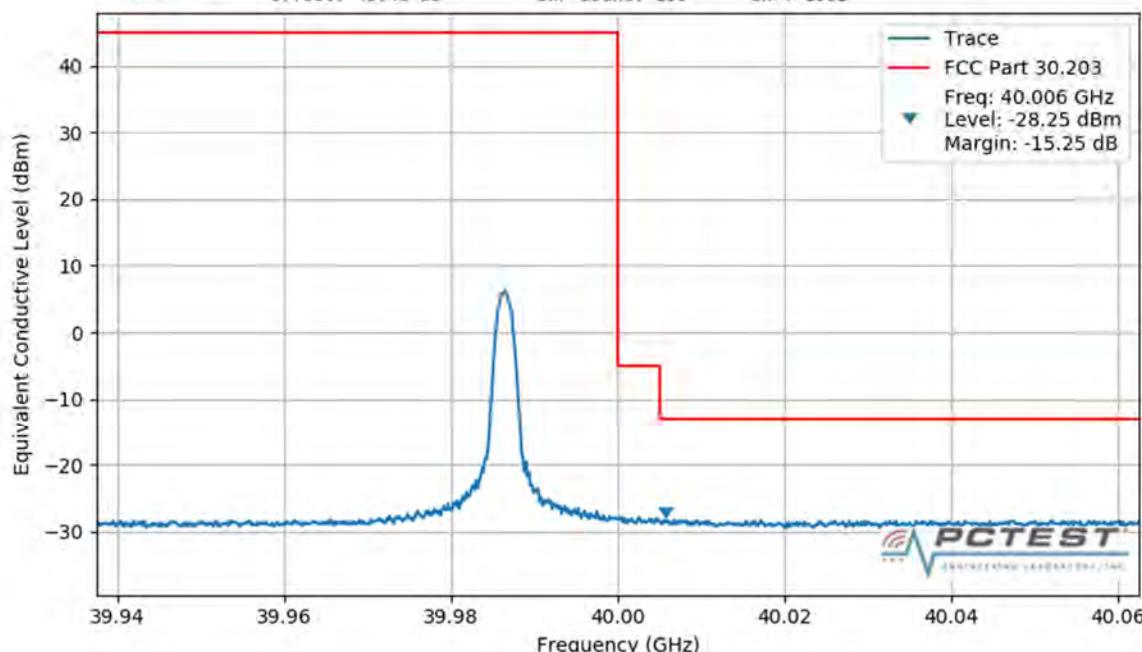


Plot 7-570. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 323 of 371                 |

**PASS**

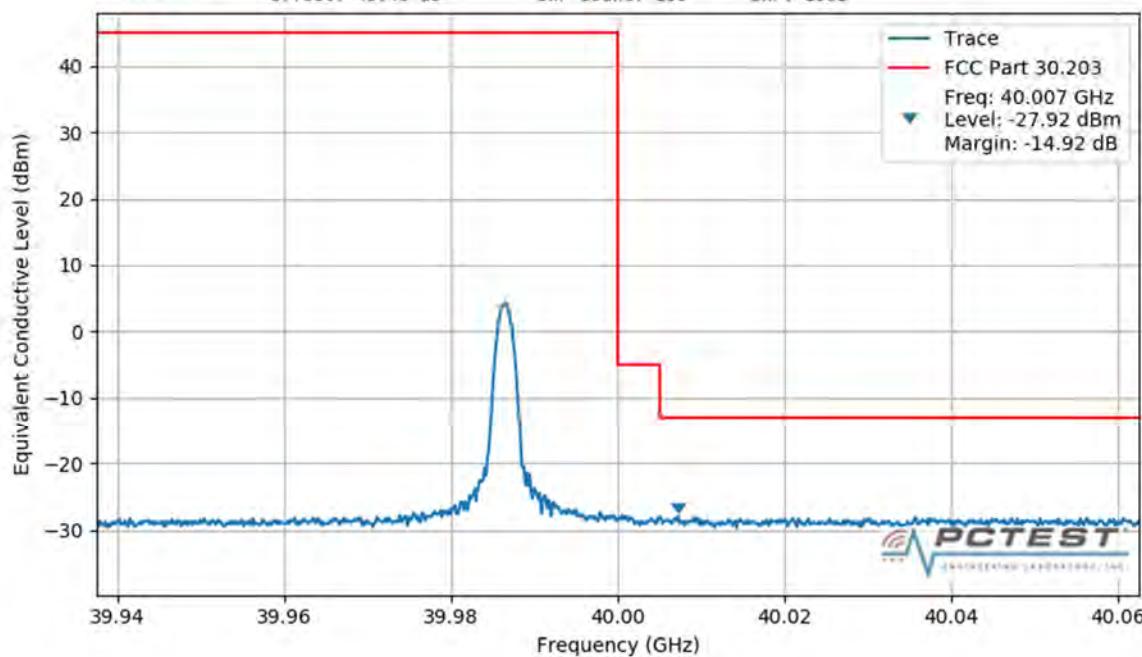
Center Freq: 40 GHz      Trace: Average  
Span: 125 MHz      Detector: Average  
Offset: 45.43 dB      RBW: 1 MHz  
                            SWP Count: 100      VBW: 3 MHz  
                            SWP: 1001



**Plot 7-571. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)**

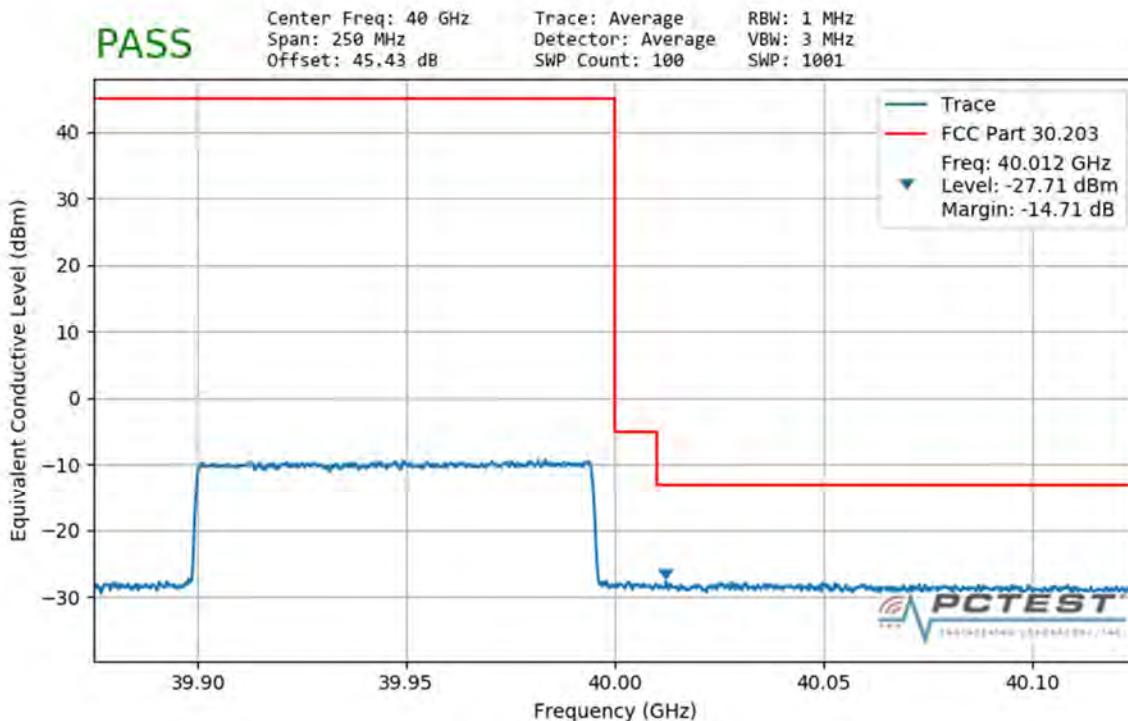
**PASS**

Center Freq: 40 GHz      Trace: Average  
Span: 125 MHz      Detector: Average  
Offset: 45.43 dB      RBW: 1 MHz  
                            SWP Count: 100      VBW: 3 MHz  
                            SWP: 1001

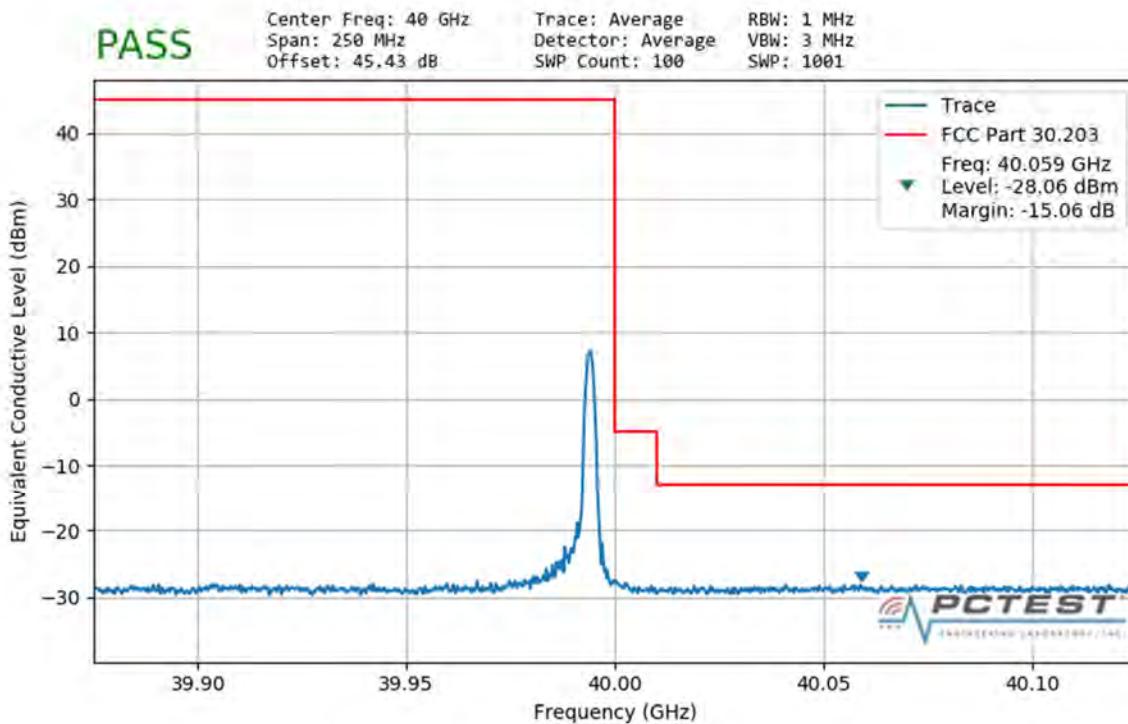


**Plot 7-572. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 324 of 371                 |

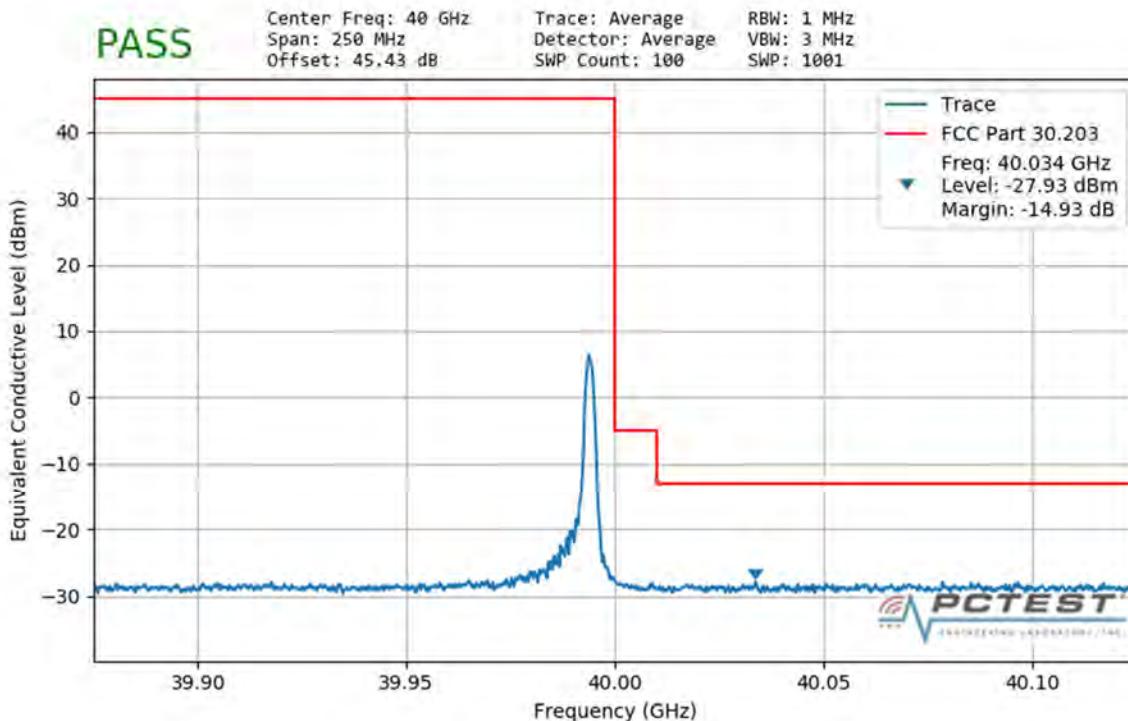


Plot 7-573. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

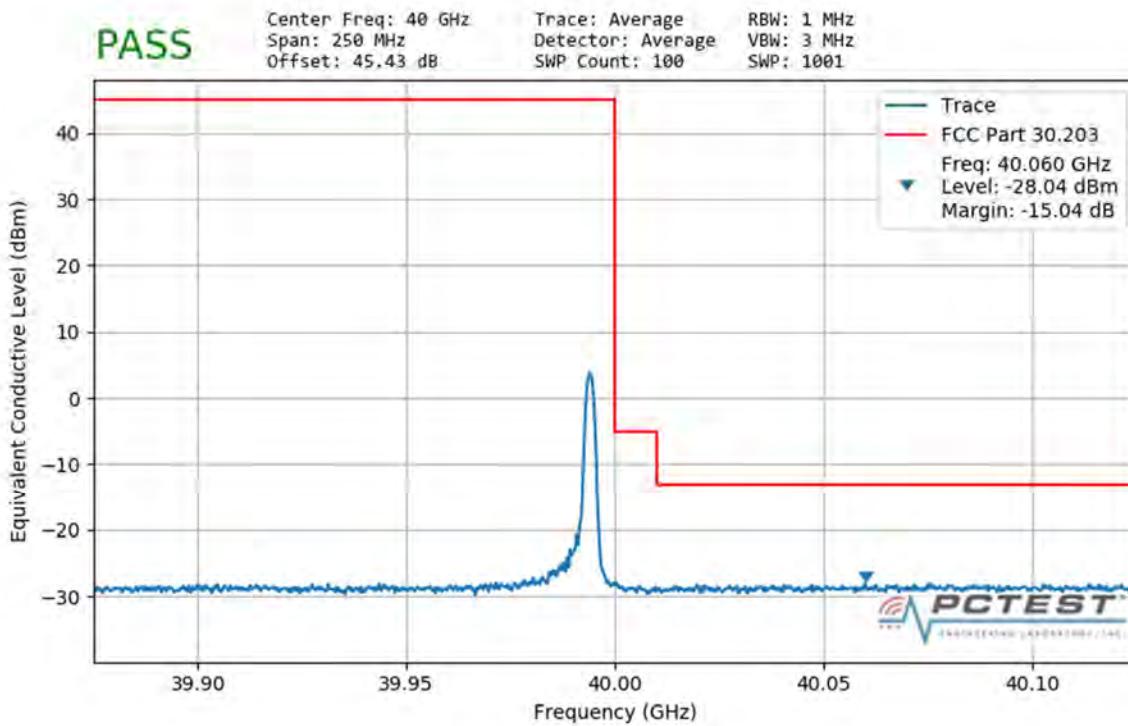


Plot 7-574. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 325 of 371                 |

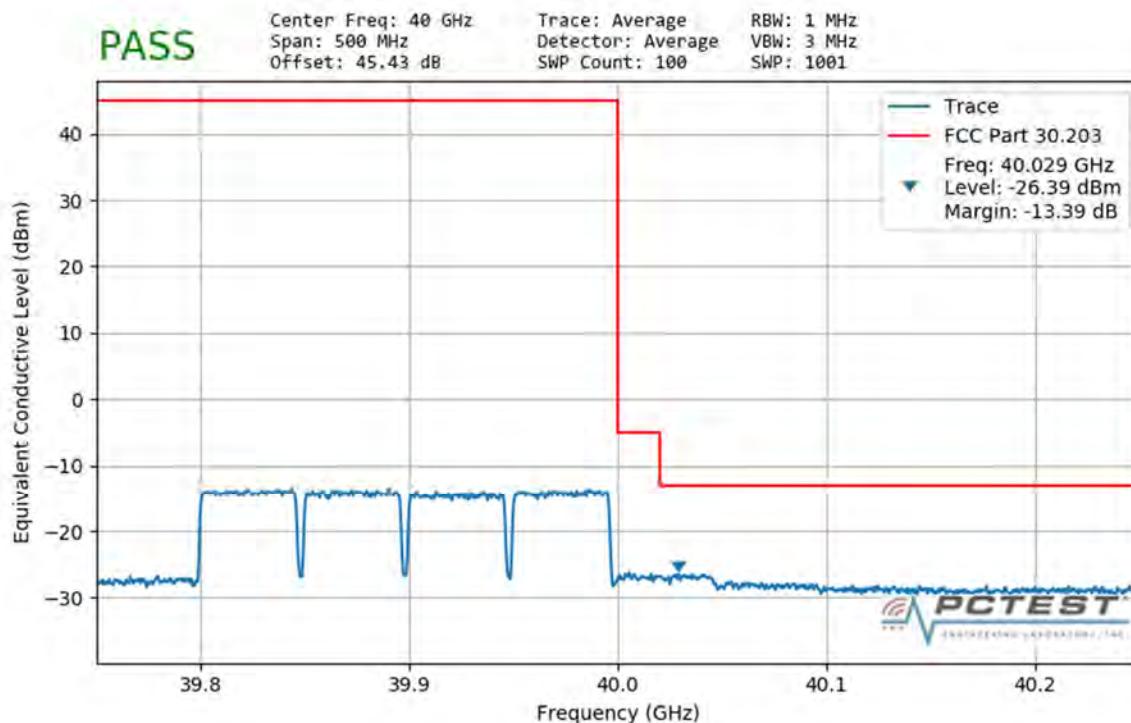


**Plot 7-575. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)**

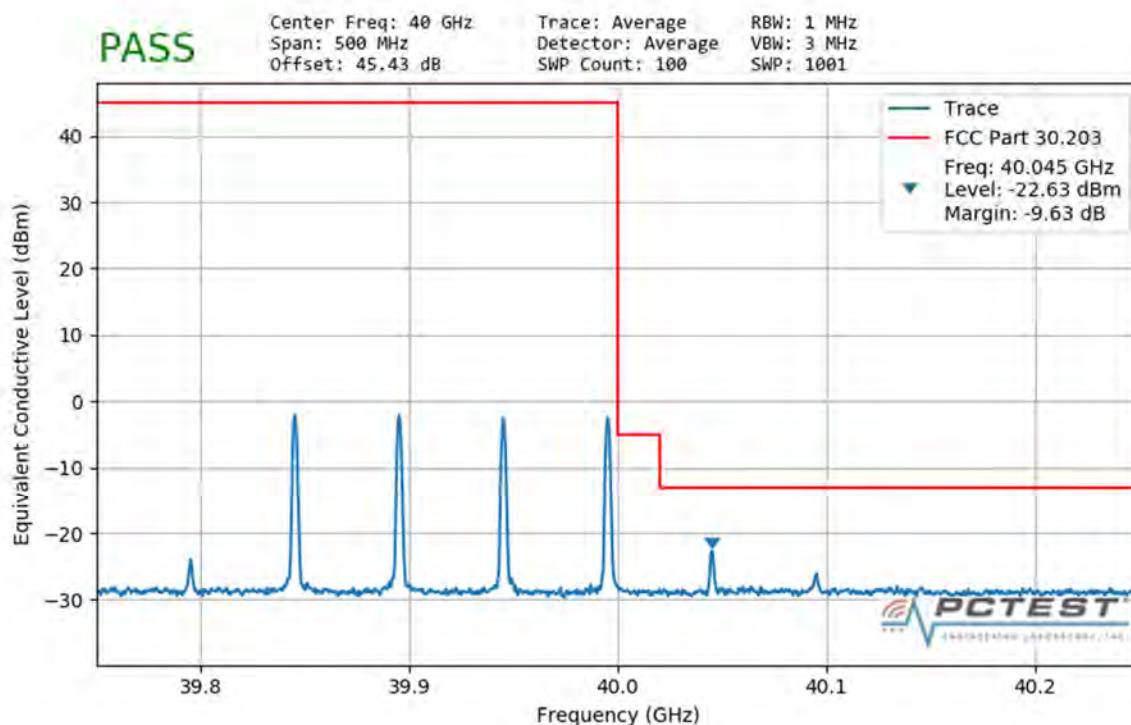


**Plot 7-576. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 326 of 371                 |

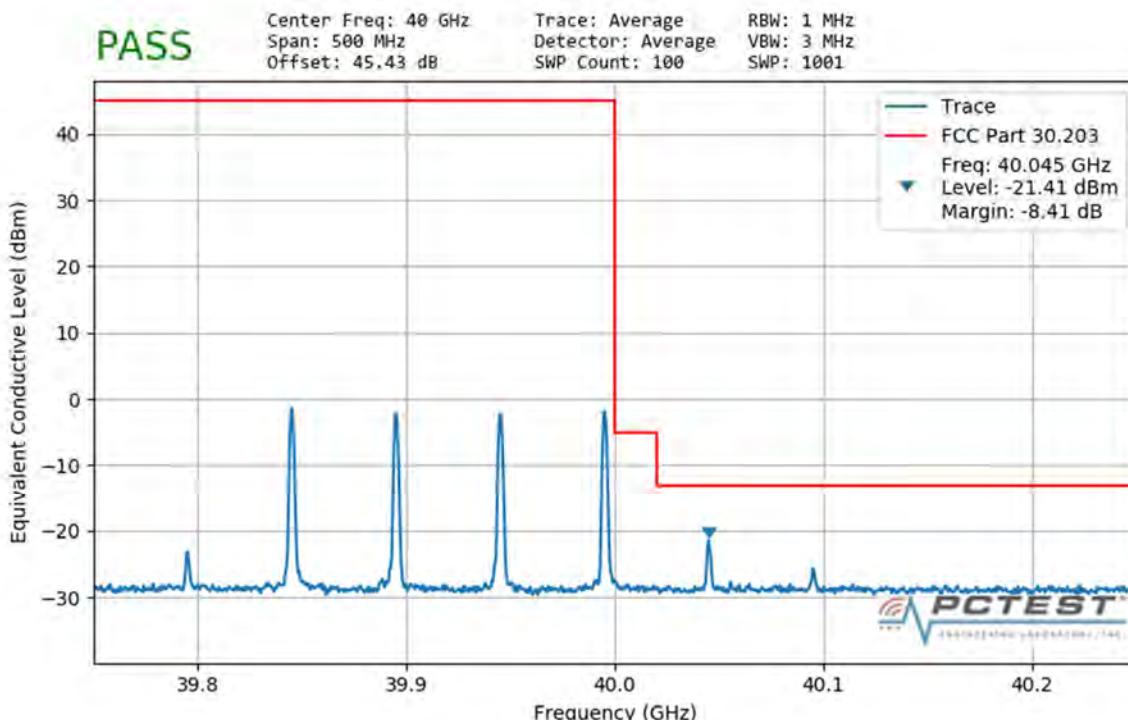


Plot 7-577. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)

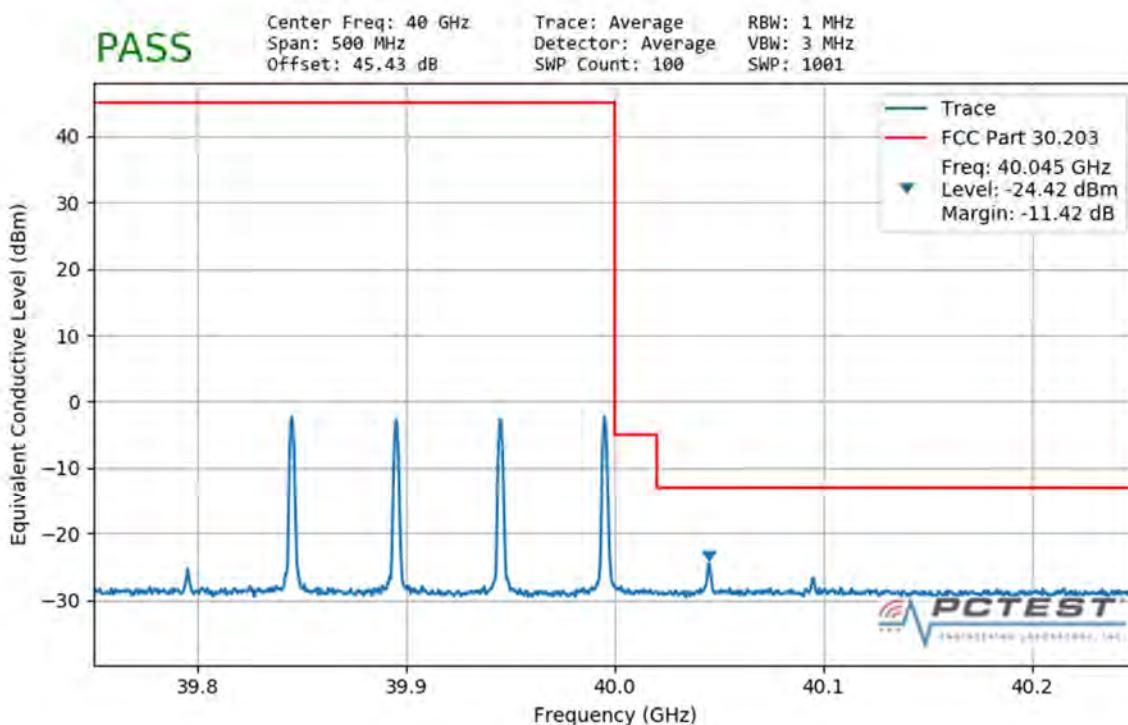


Plot 7-578. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 327 of 371                 |

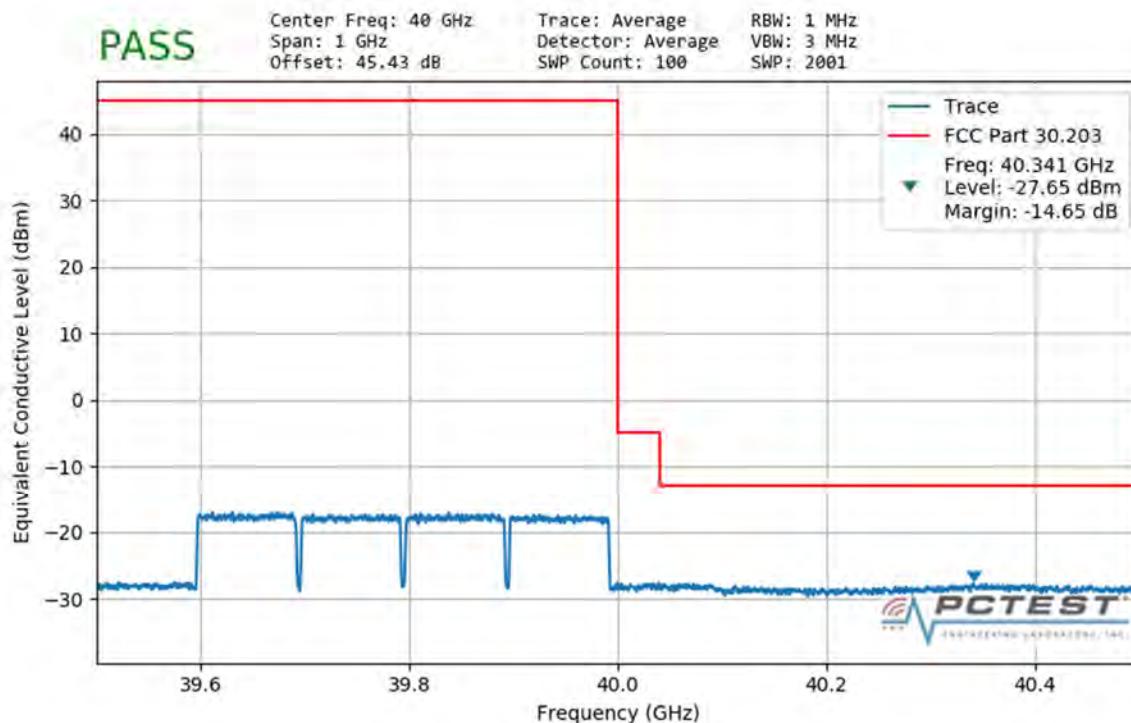


Plot 7-579. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)

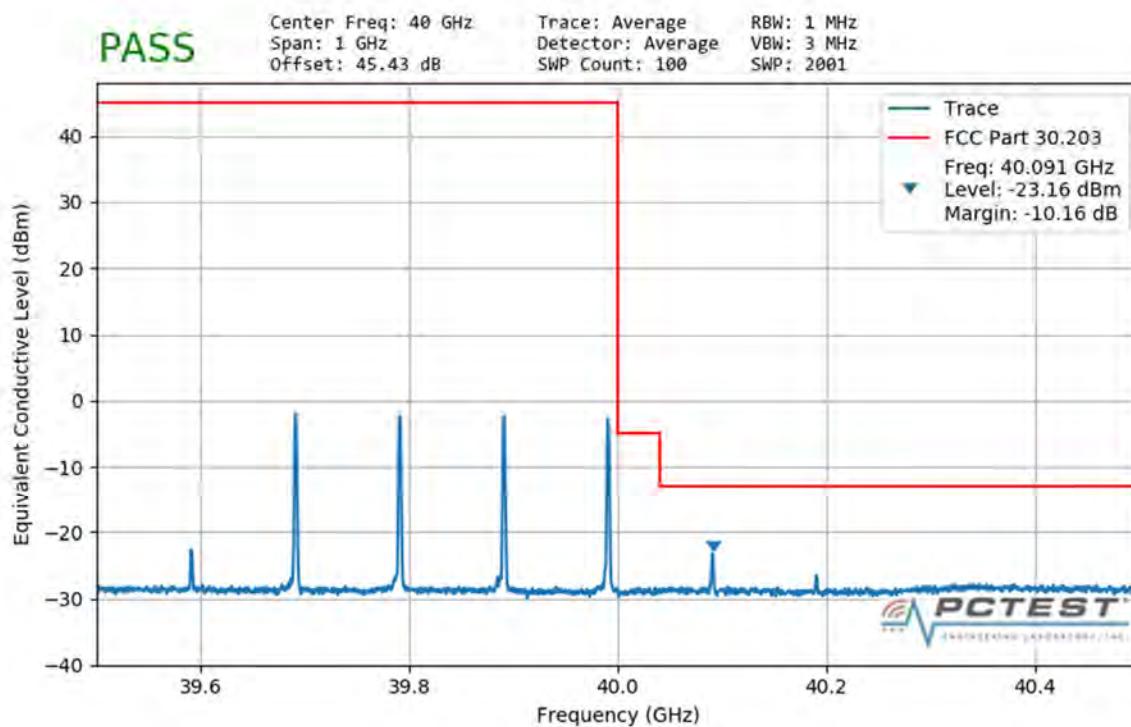


Plot 7-580. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 328 of 371                 |

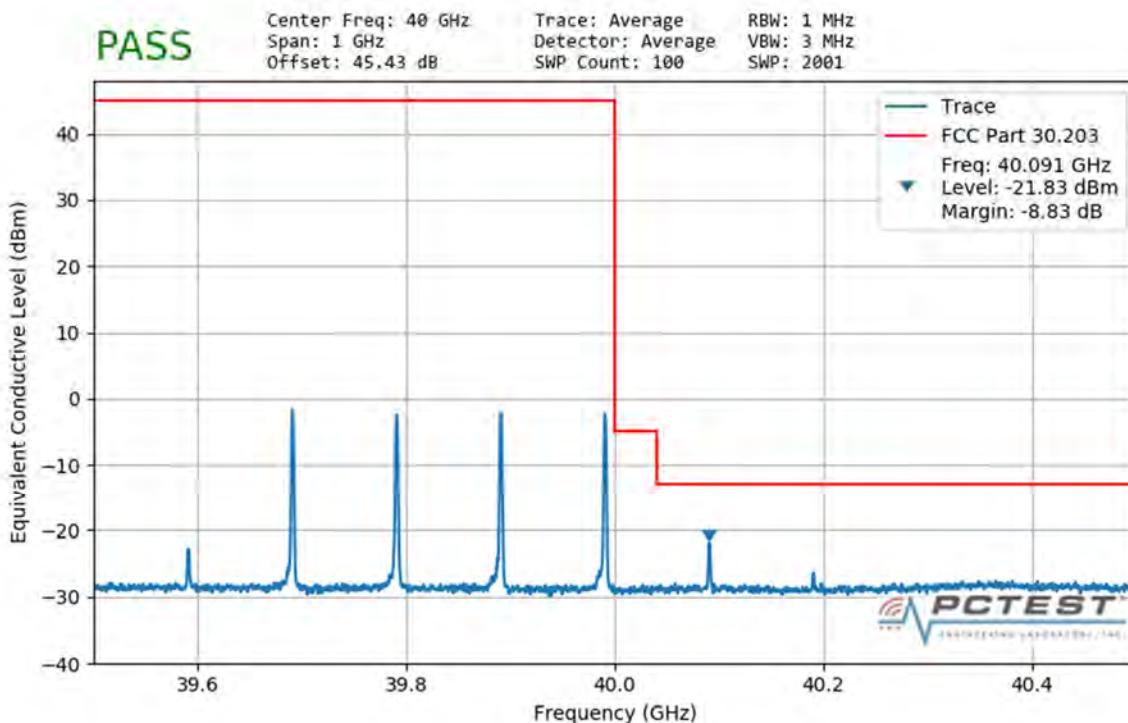


Plot 7-581. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

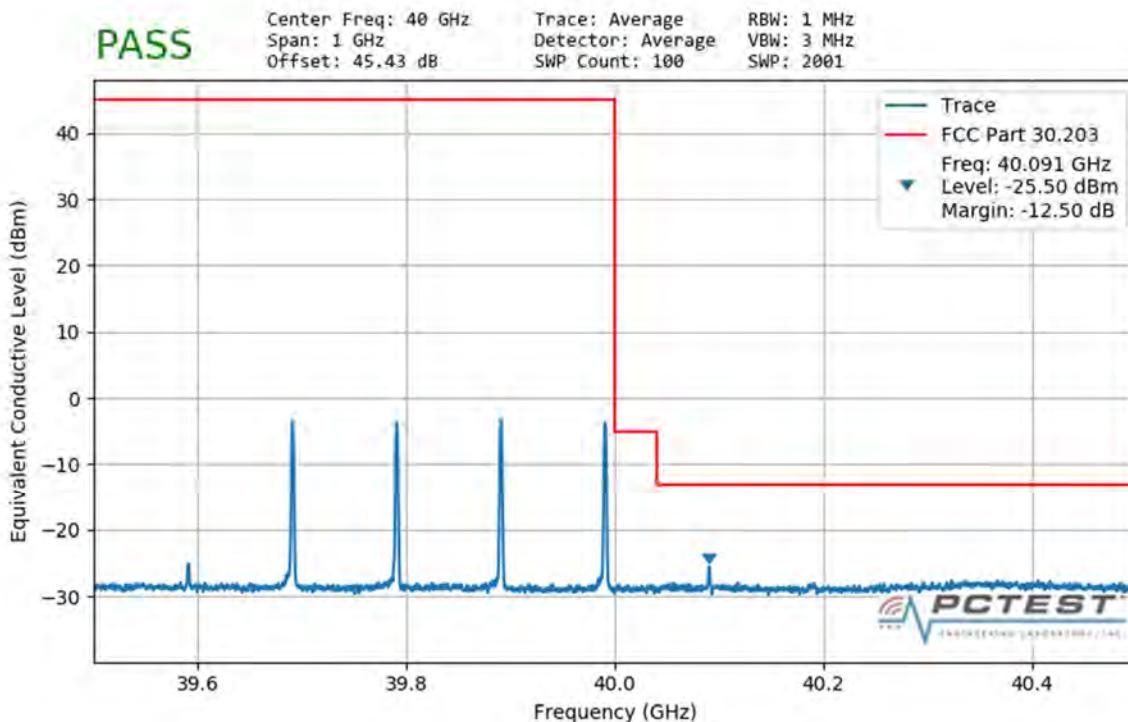


Plot 7-582. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 329 of 371                 |



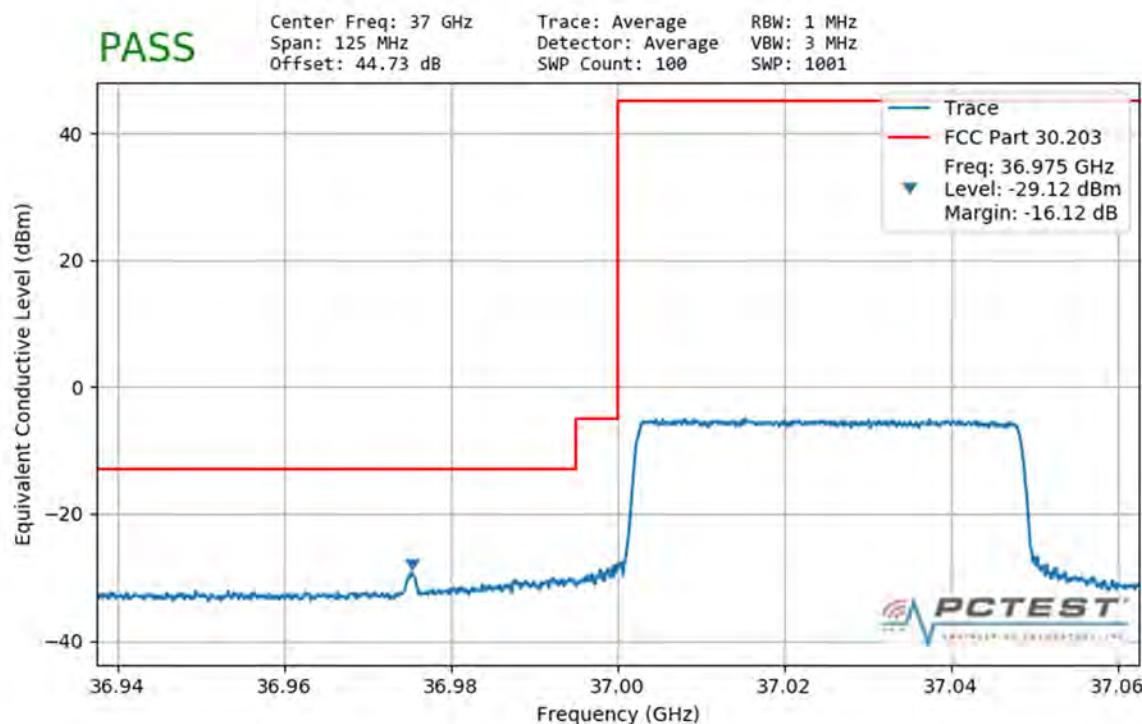
**Plot 7-583. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)**



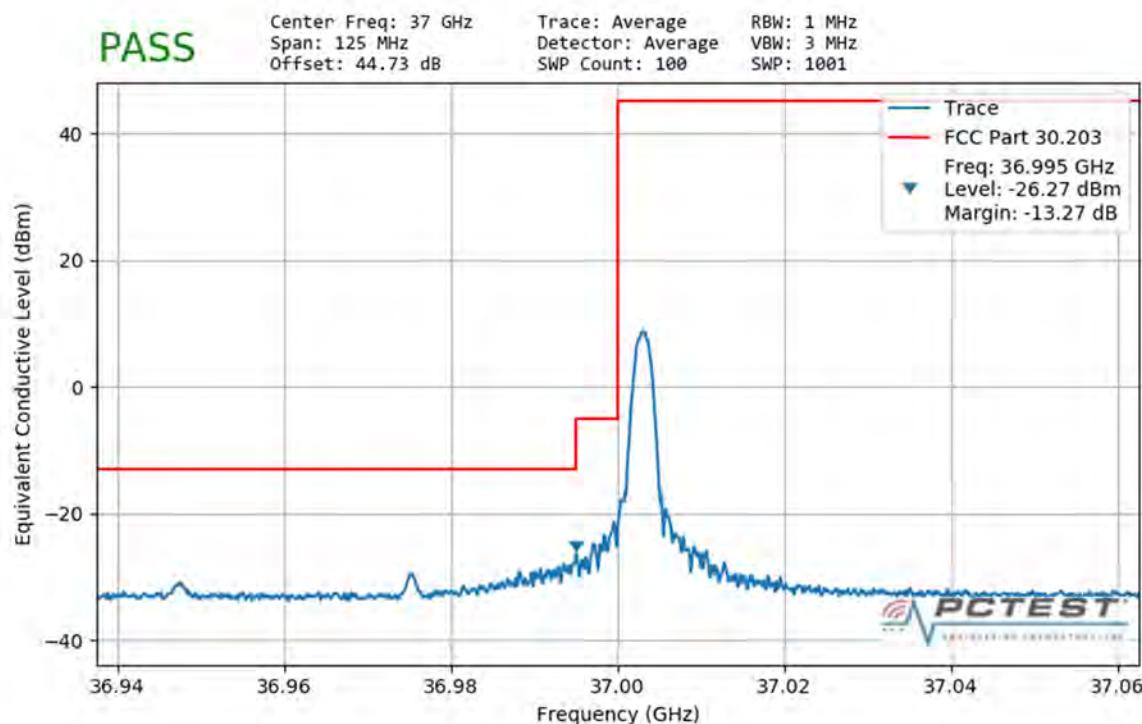
**Plot 7-584. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 330 of 371                 |

## K Patch MIMO(n260)

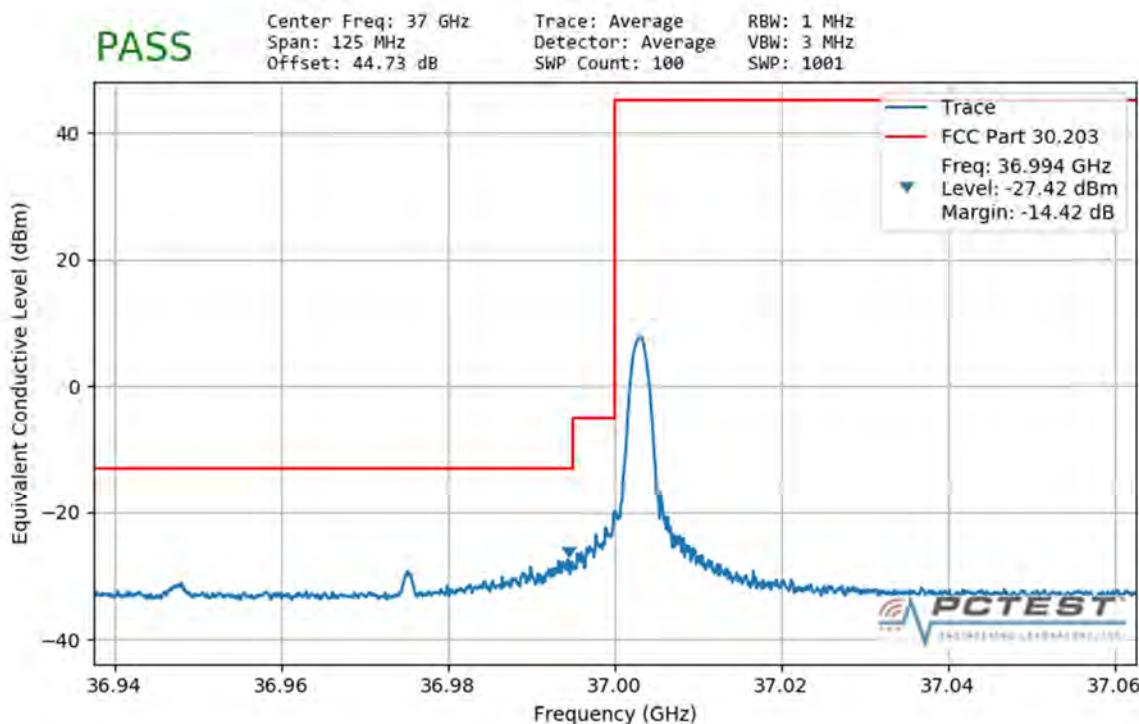


Plot 7-585. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

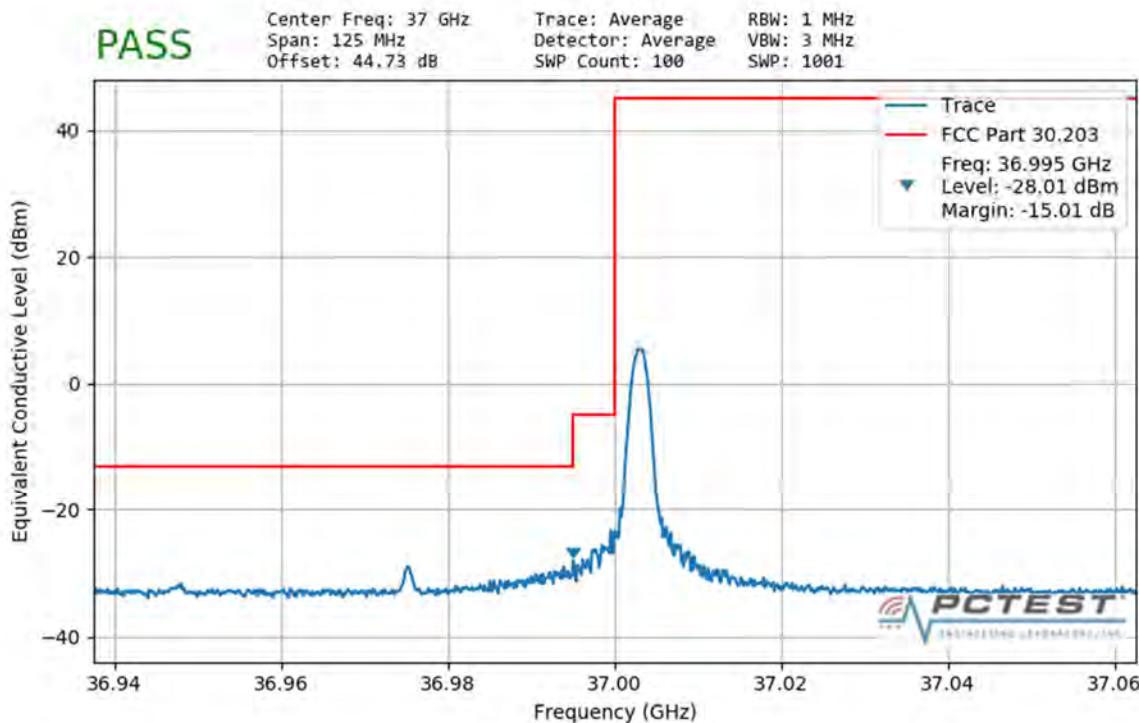


Plot 7-586. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |   |                                       |                                 |
|--|---|---------------------------------------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         | Page 331 of 371                 |



Plot 7-587. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)

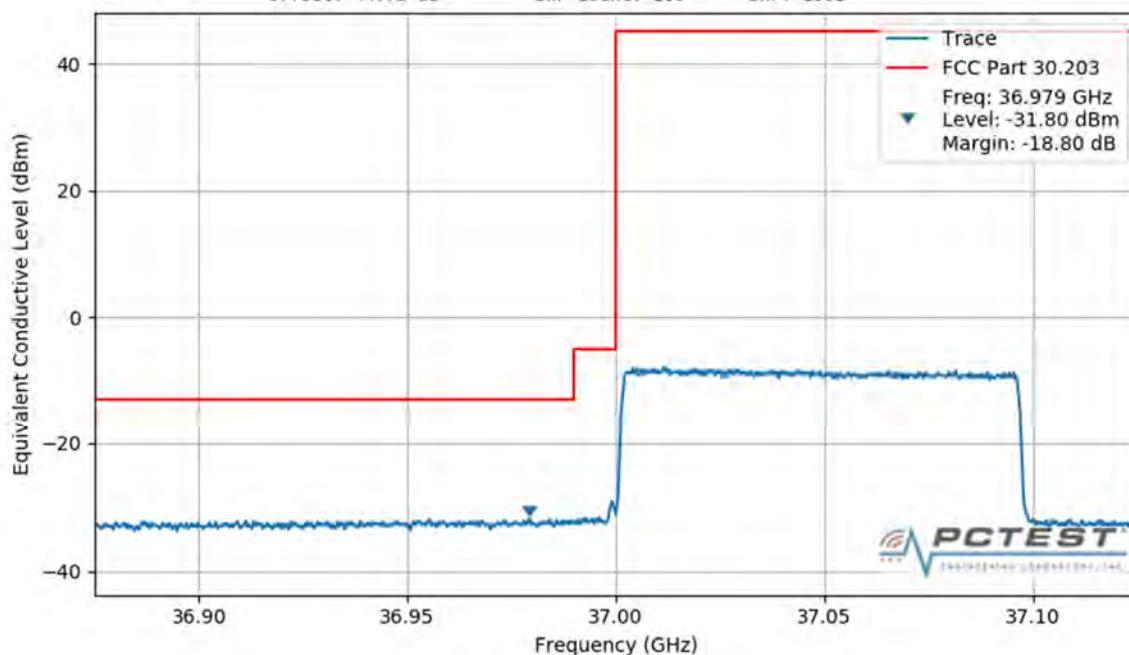


Plot 7-588. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 332 of 371                 |

**PASS**

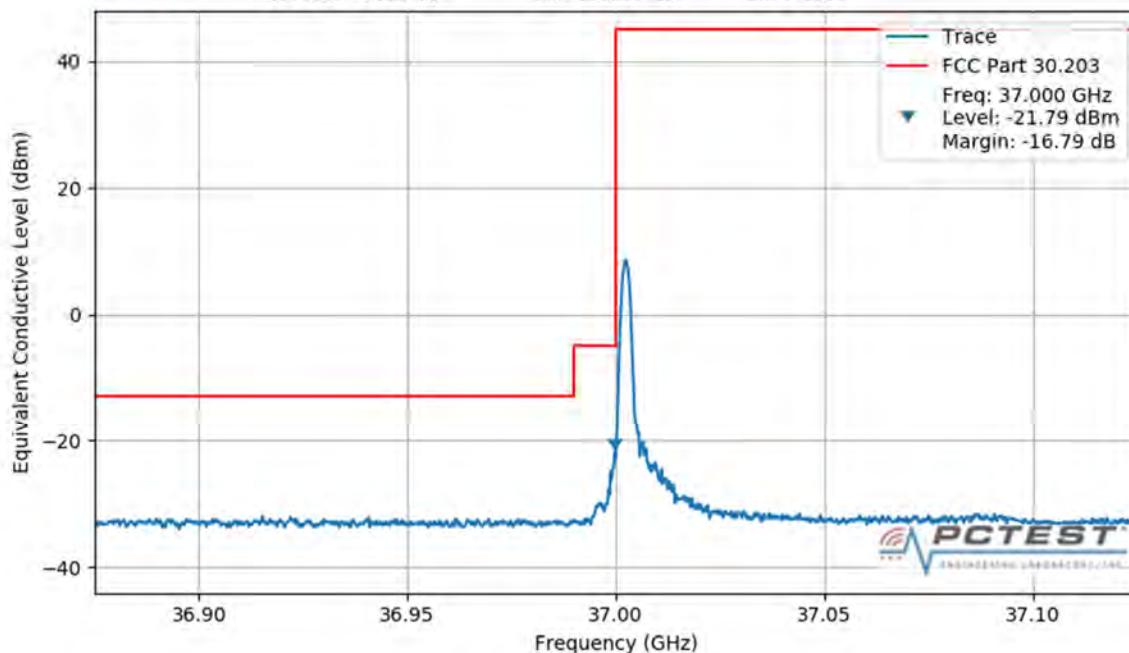
Center Freq: 37 GHz      Trace: Average  
Span: 250 MHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 1001



**Plot 7-589. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)**

**PASS**

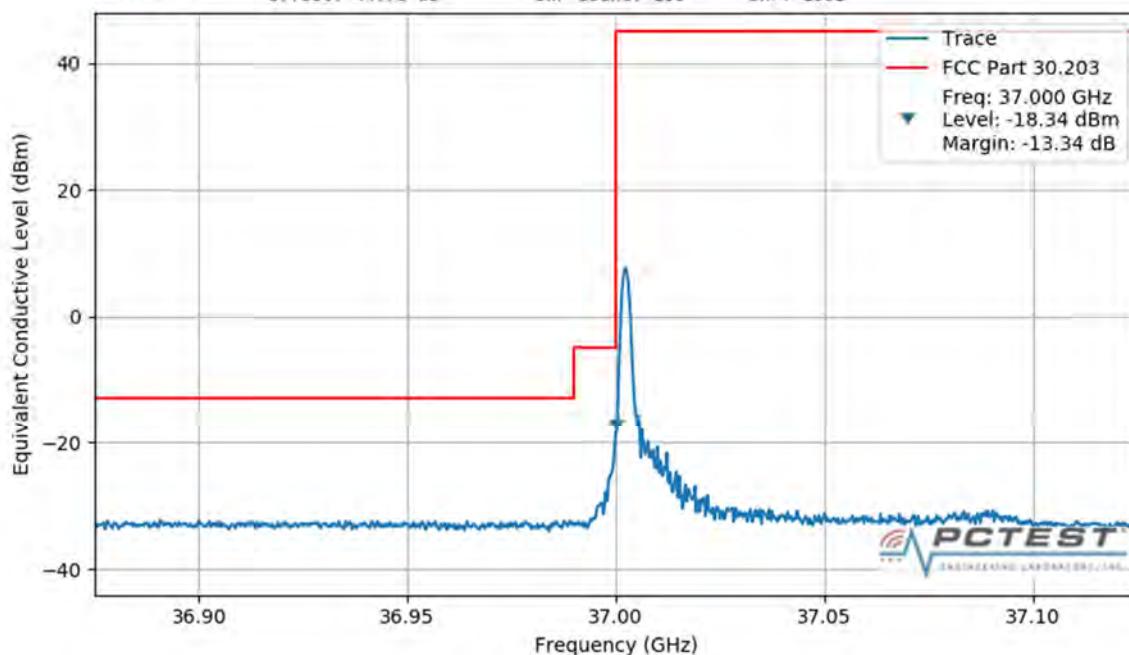
Center Freq: 37 GHz      Trace: Average  
Span: 250 MHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 1001

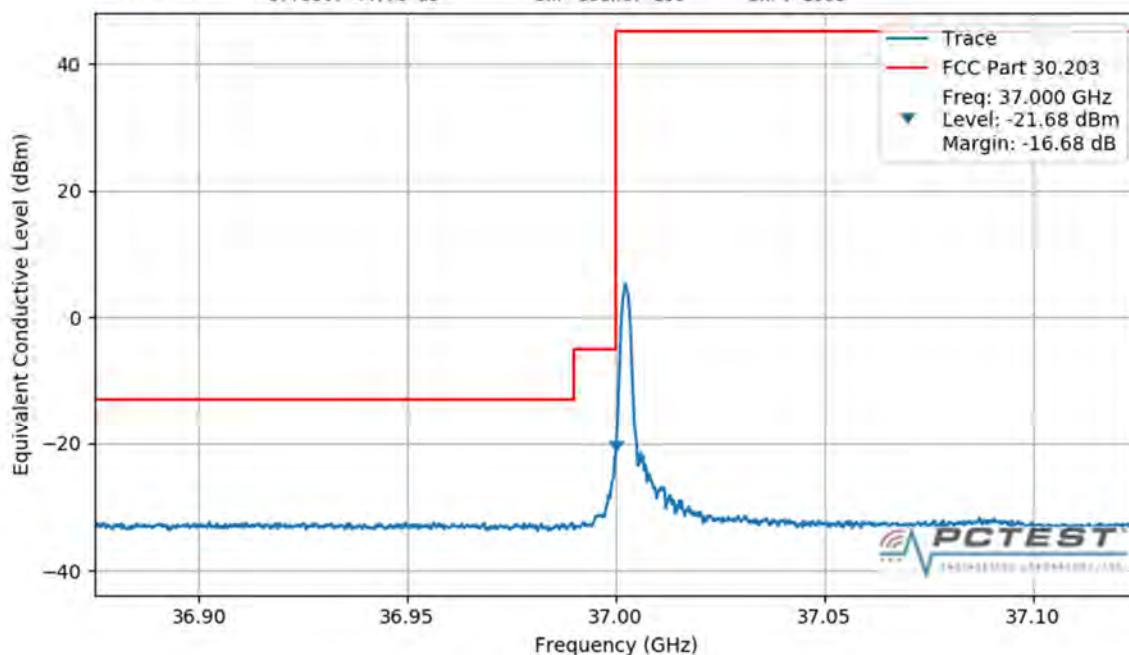


**Plot 7-590. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 333 of 371                 |

**PASS**

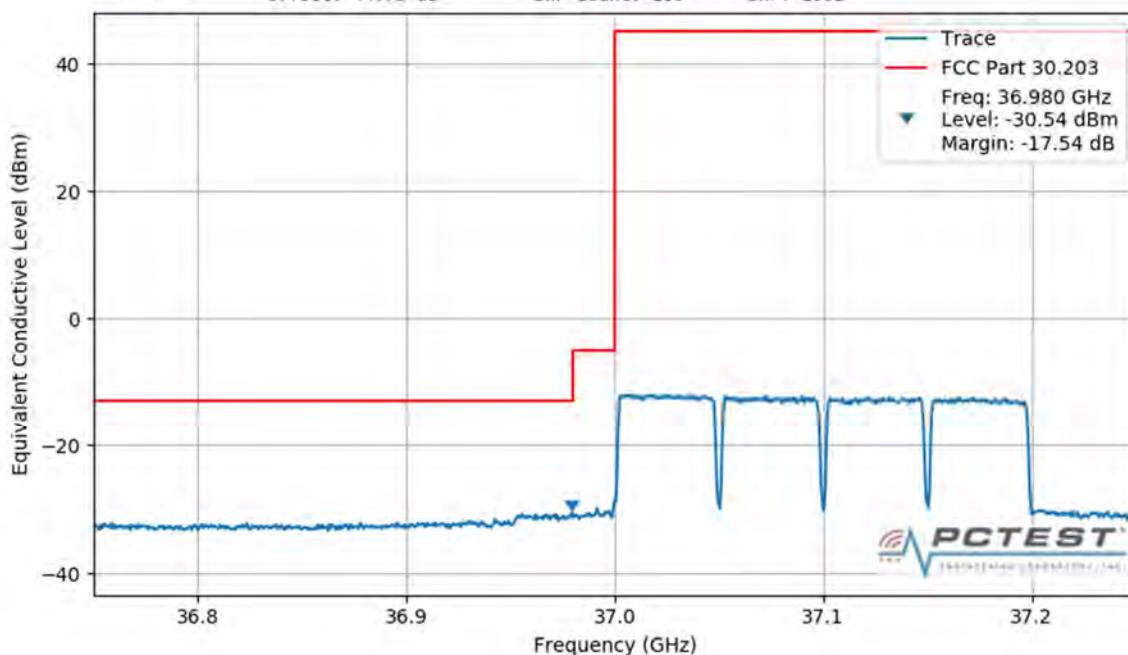
 Center Freq: 37 GHz  
 Trace: Average  
 Span: 250 MHz  
 Detector: Average  
 Offset: 44.73 dB  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-591. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 37 GHz  
 Trace: Average  
 Span: 250 MHz  
 Detector: Average  
 Offset: 44.73 dB  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-592. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 334 of 371                 |

**PASS**

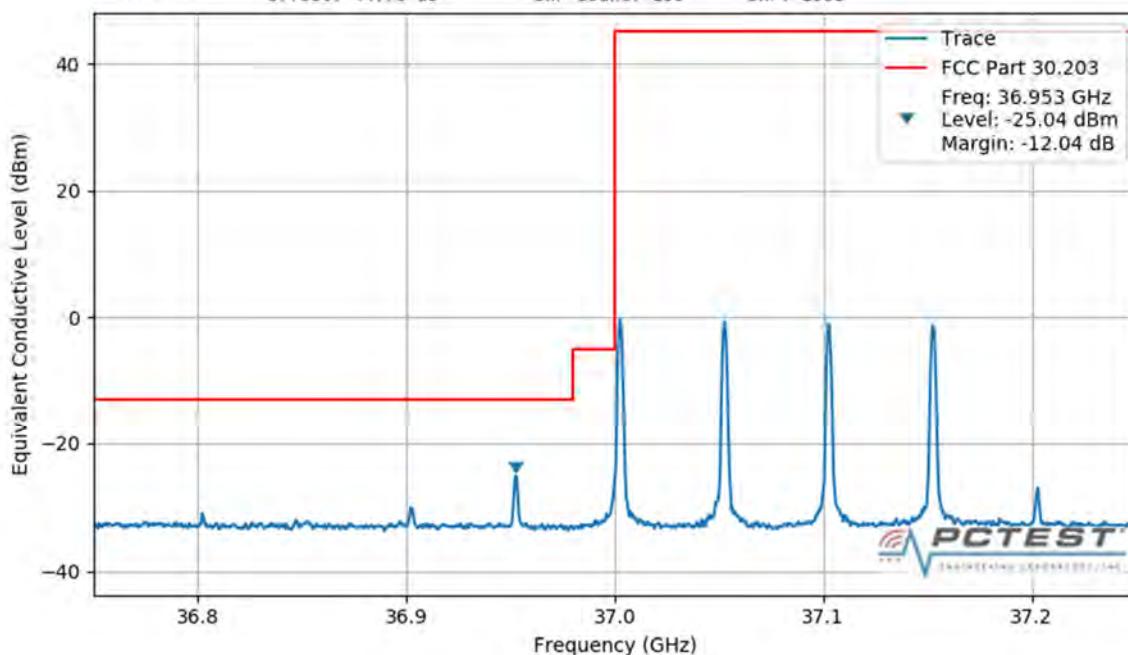
Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 1001



**Plot 7-593. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)**

**PASS**

Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 1001

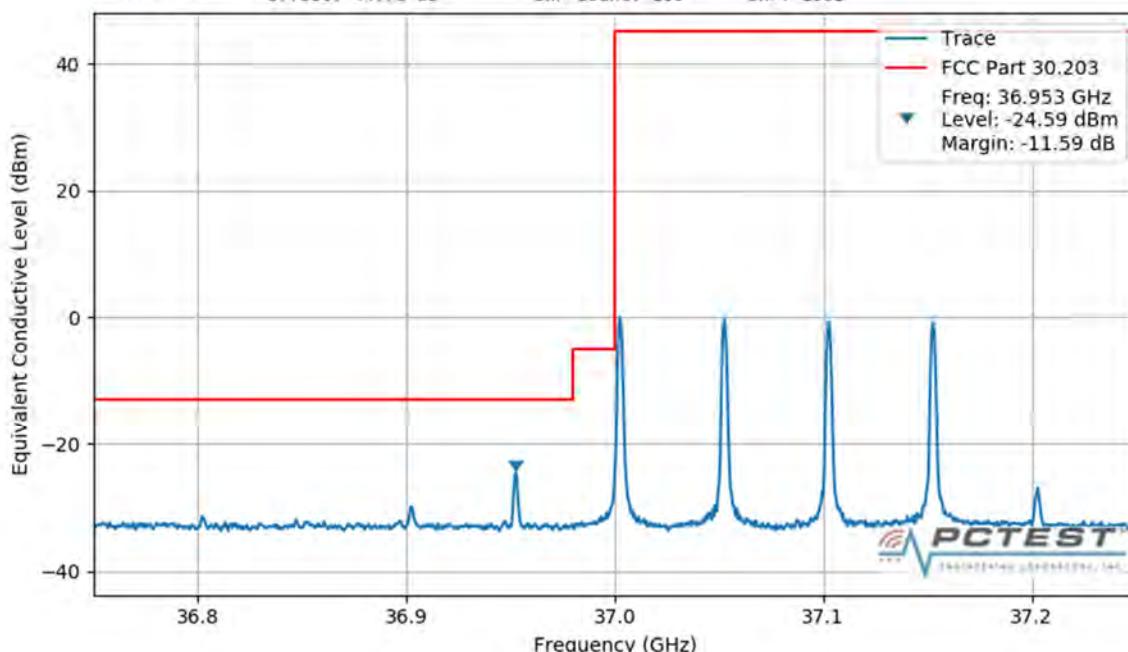


**Plot 7-594. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 335 of 371                 |

**PASS**

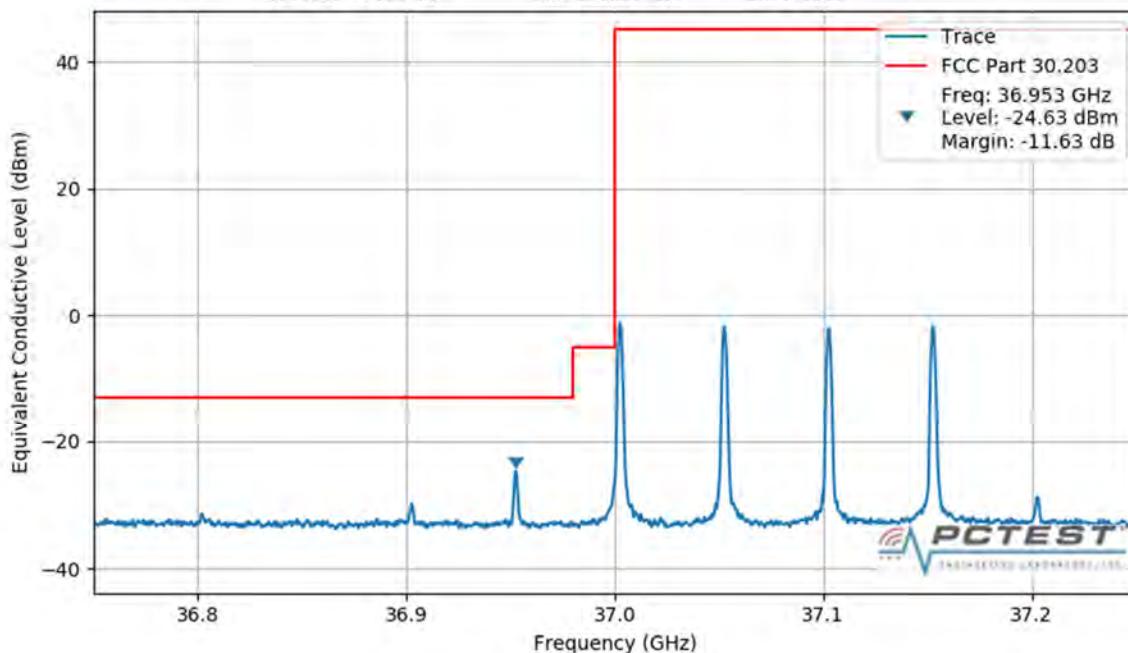
Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            SWP Count: 100      VBW: 3 MHz  
                            SWP: 1001



**Plot 7-595. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

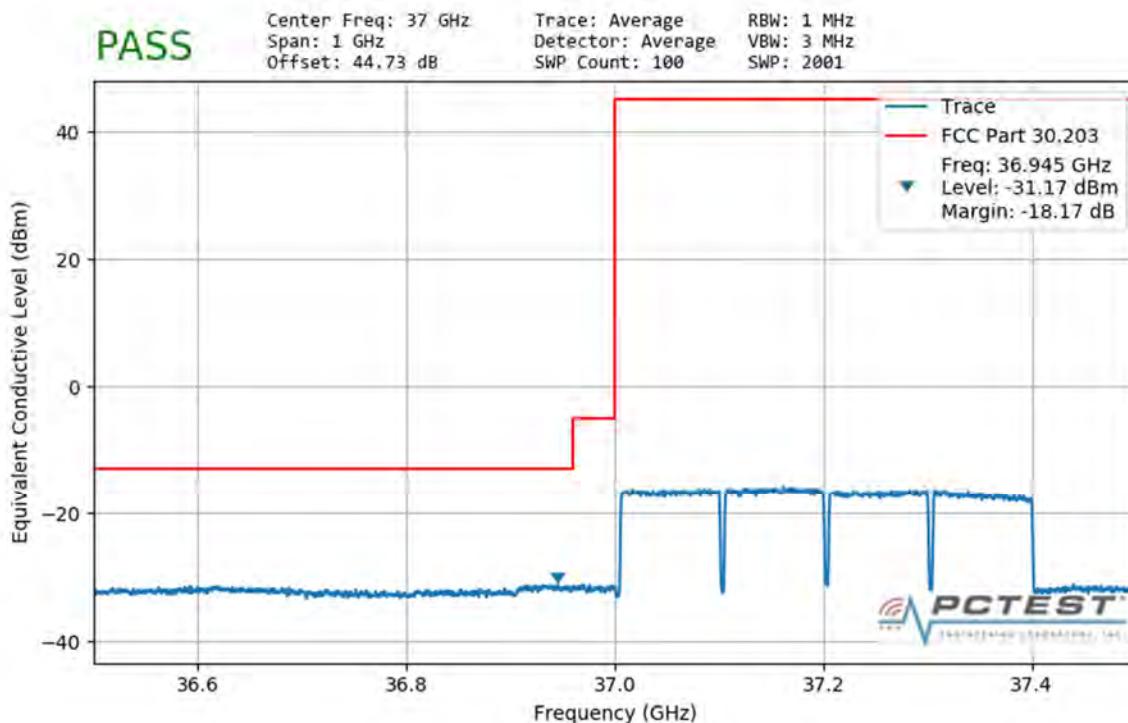
**PASS**

Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            SWP Count: 100      VBW: 3 MHz  
                            SWP: 1001

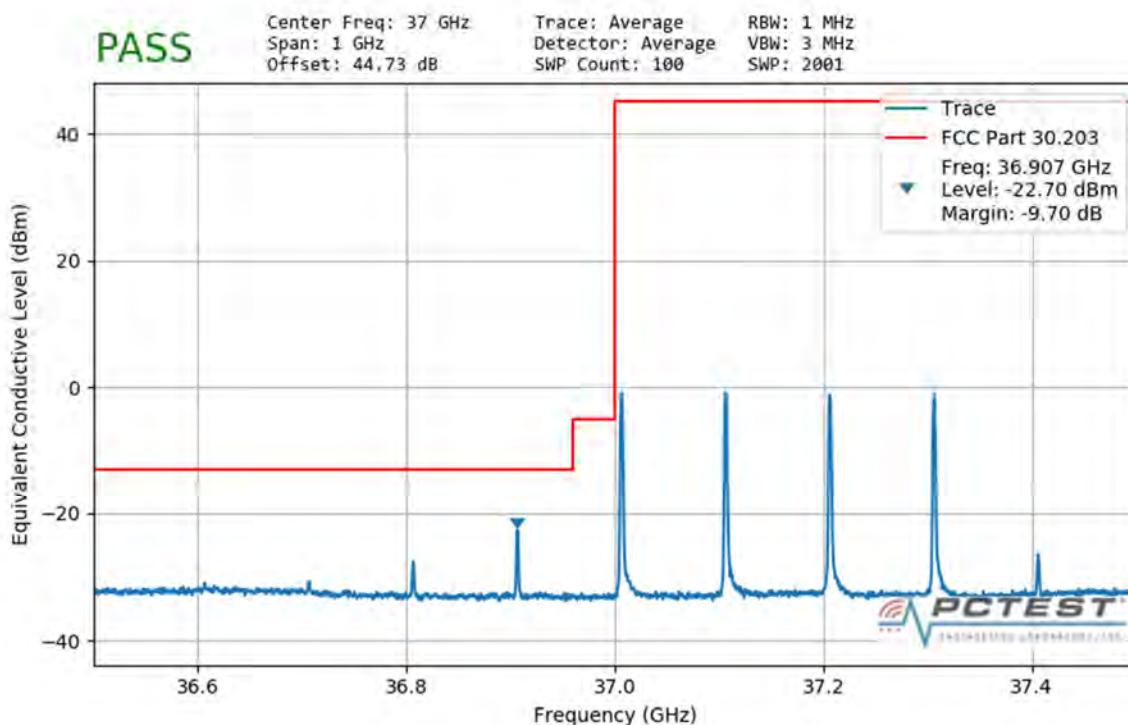


**Plot 7-596. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 336 of 371                 |



Plot 7-597. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)

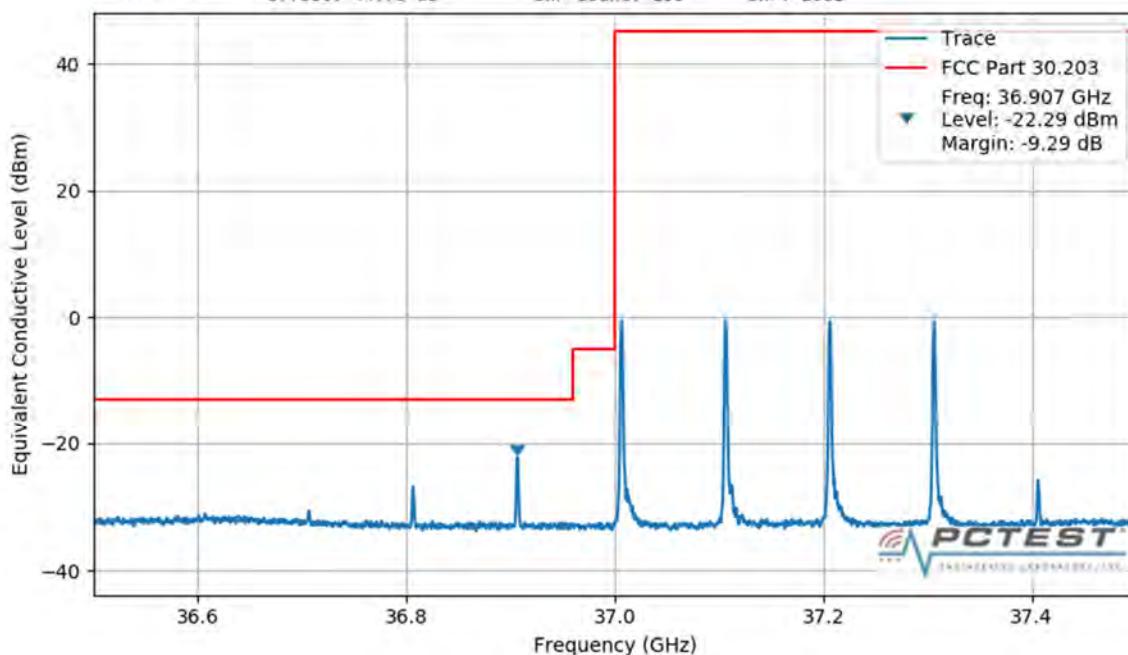


Plot 7-598. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 337 of 371                 |

**PASS**

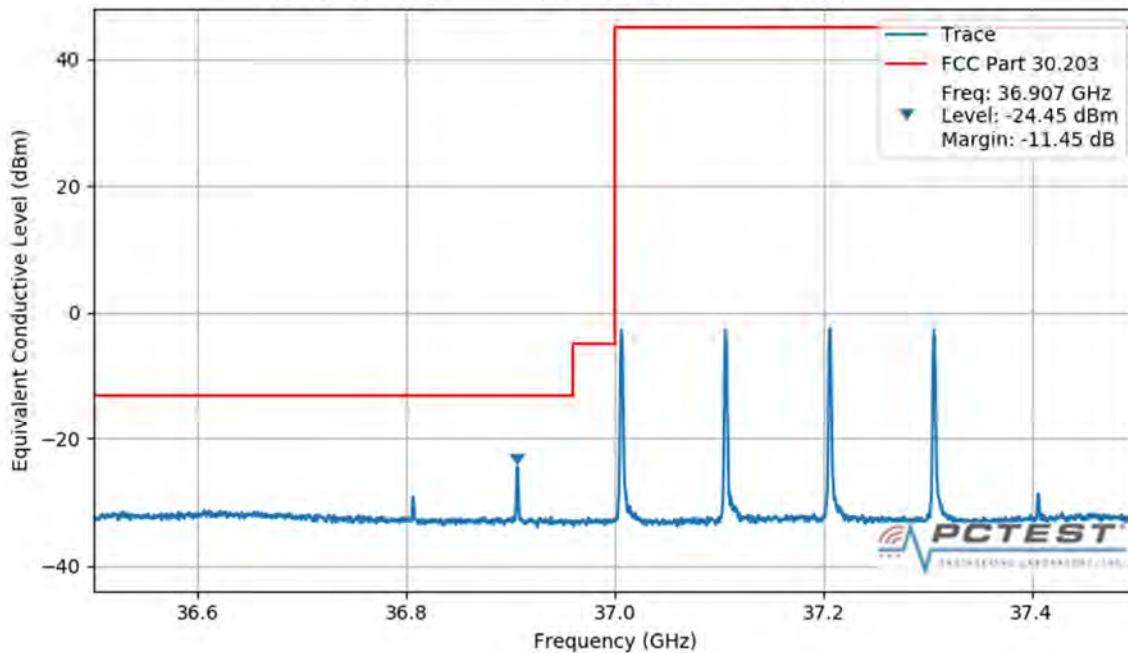
Center Freq: 37 GHz      Trace: Average  
Span: 1 GHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 2001



**Plot 7-599. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**

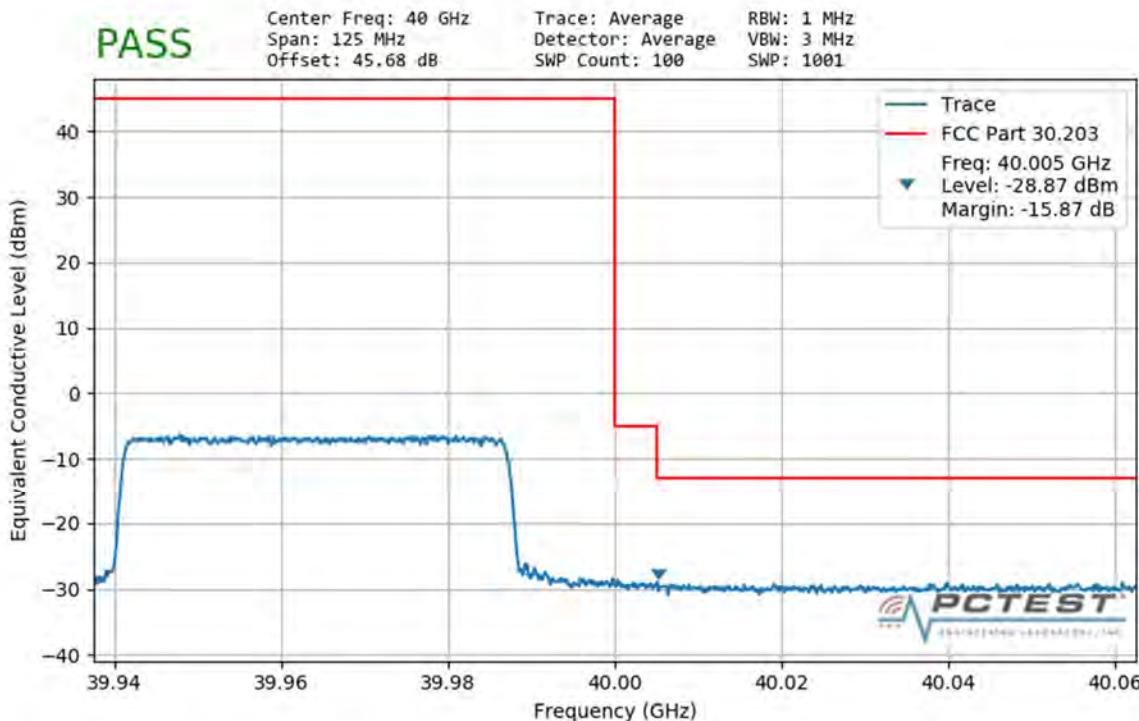
**PASS**

Center Freq: 37 GHz      Trace: Average  
Span: 1 GHz      Detector: Average  
Offset: 44.73 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 2001

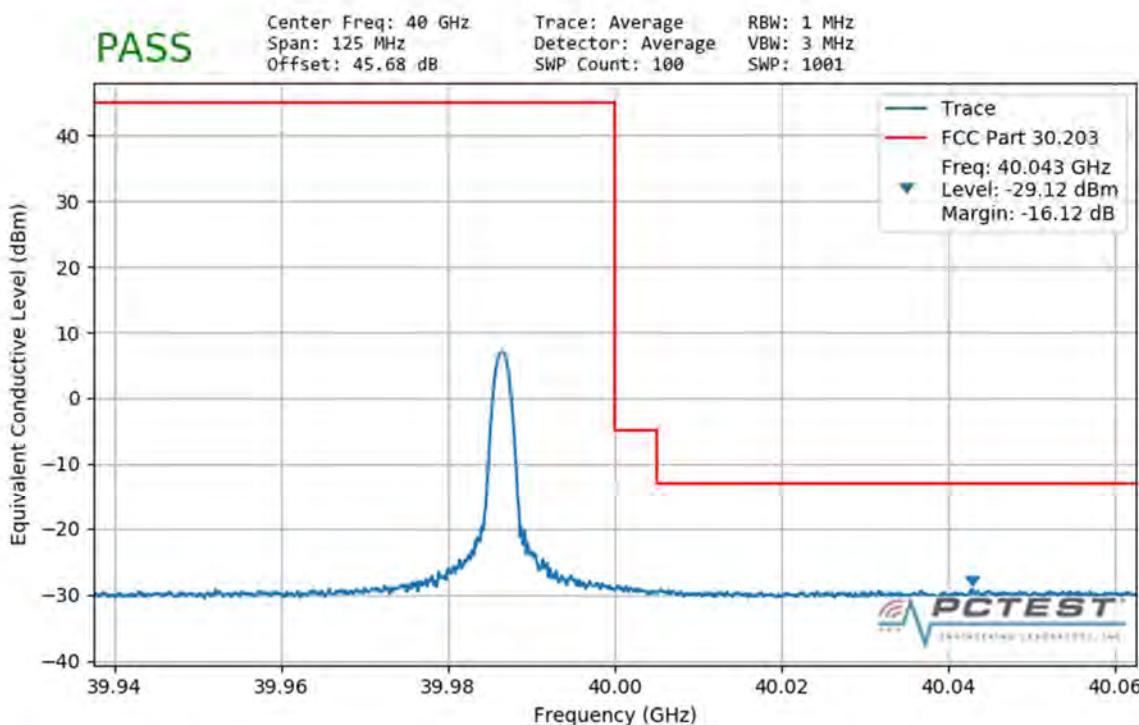


**Plot 7-600. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 338 of 371                 |

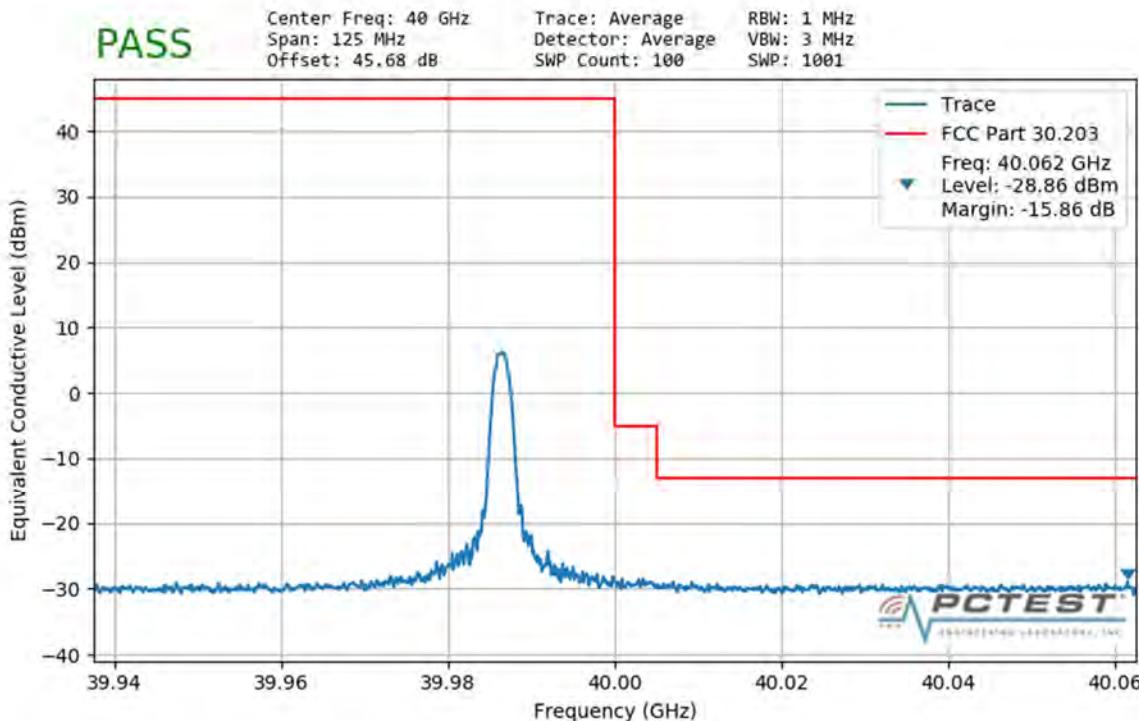


Plot 7-601. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)

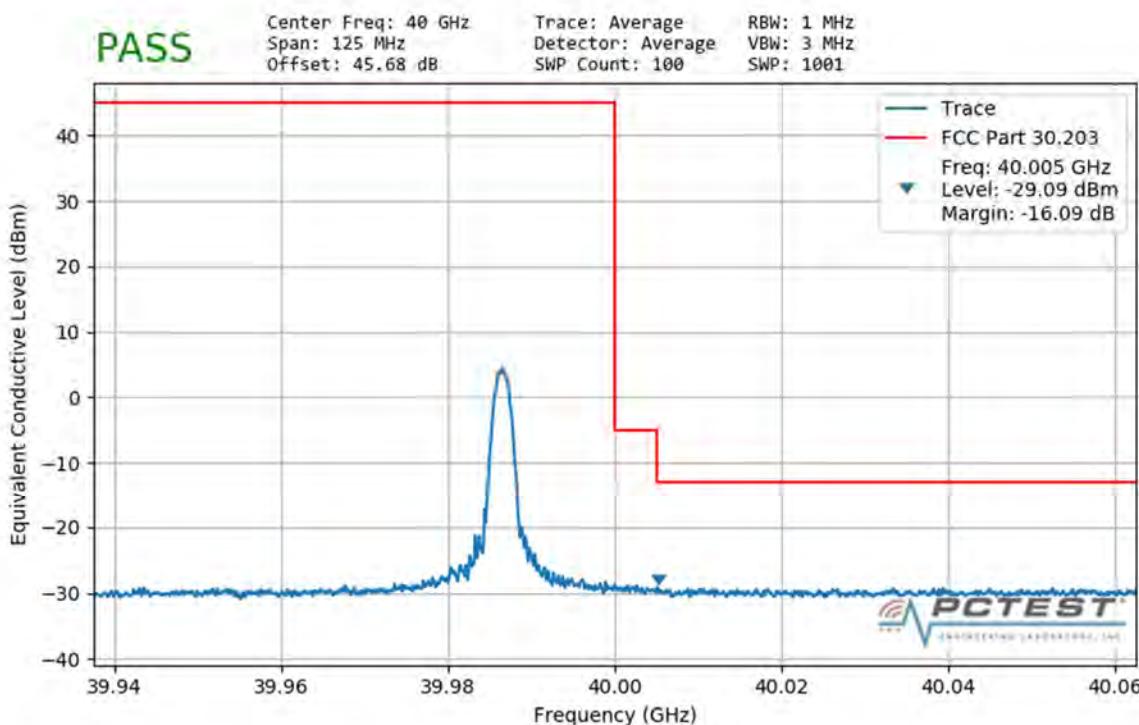


Plot 7-602. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 339 of 371                 |

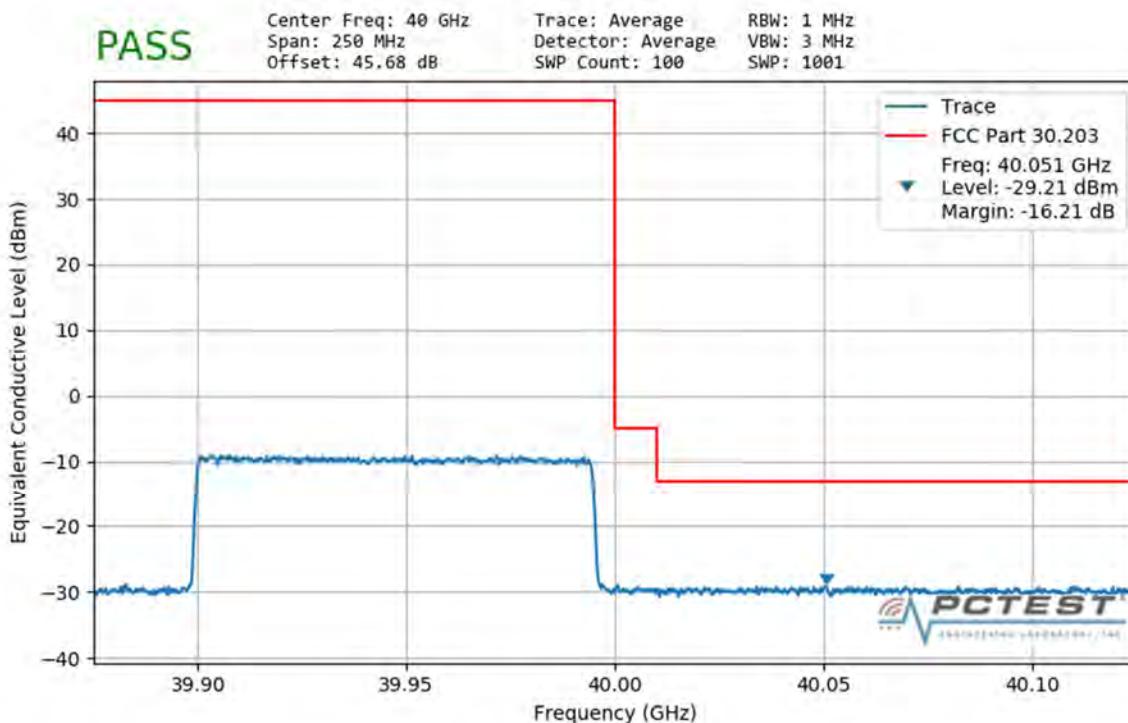


**Plot 7-603. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)**

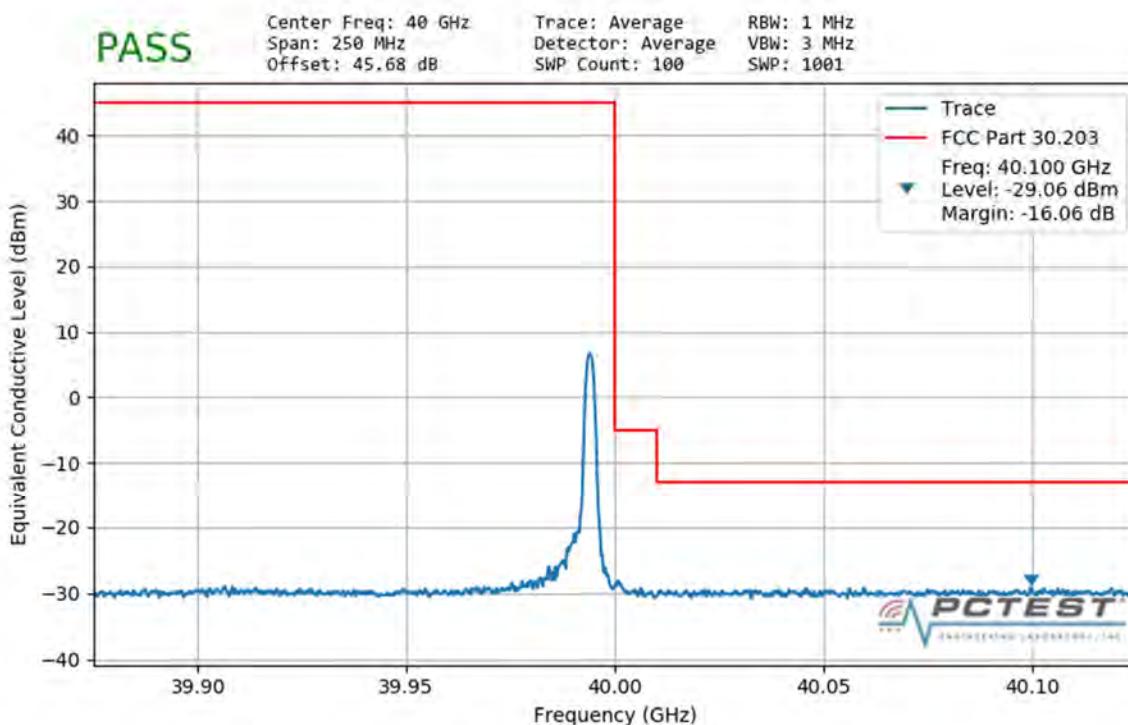


**Plot 7-604. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |                                   |                                       |  |         |                                 |
|--|-----------------------------------|---------------------------------------|--|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  |         | Page 340 of 371                 |

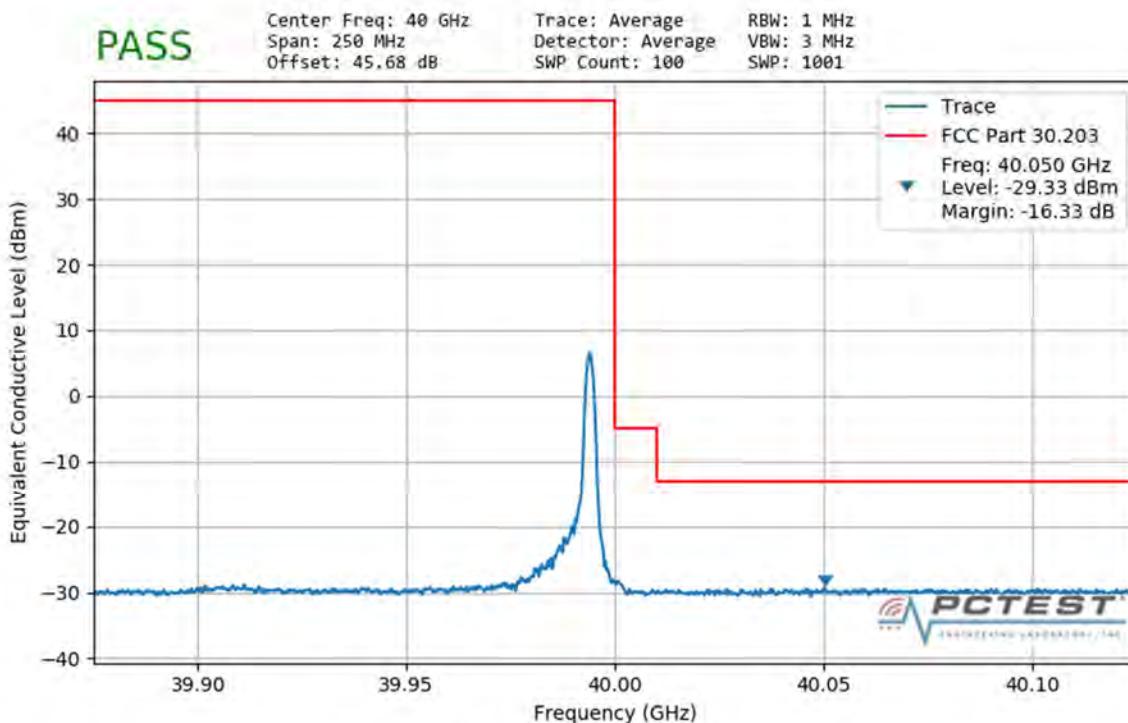


Plot 7-605. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

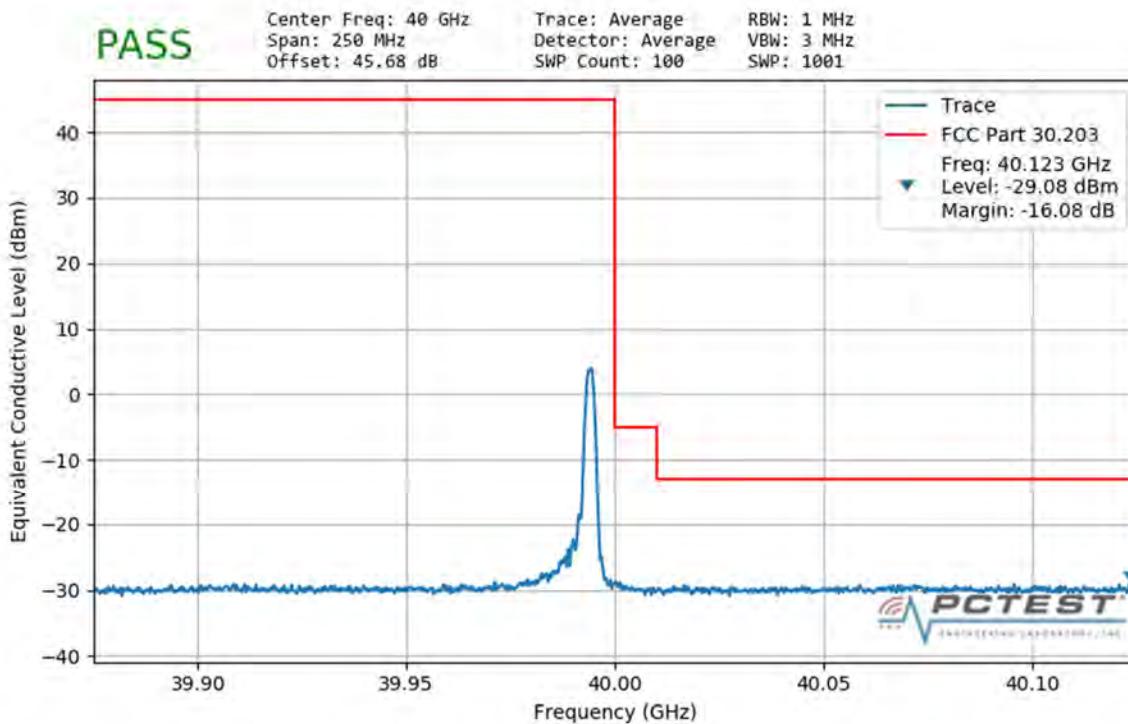


Plot 7-606. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 341 of 371                 |

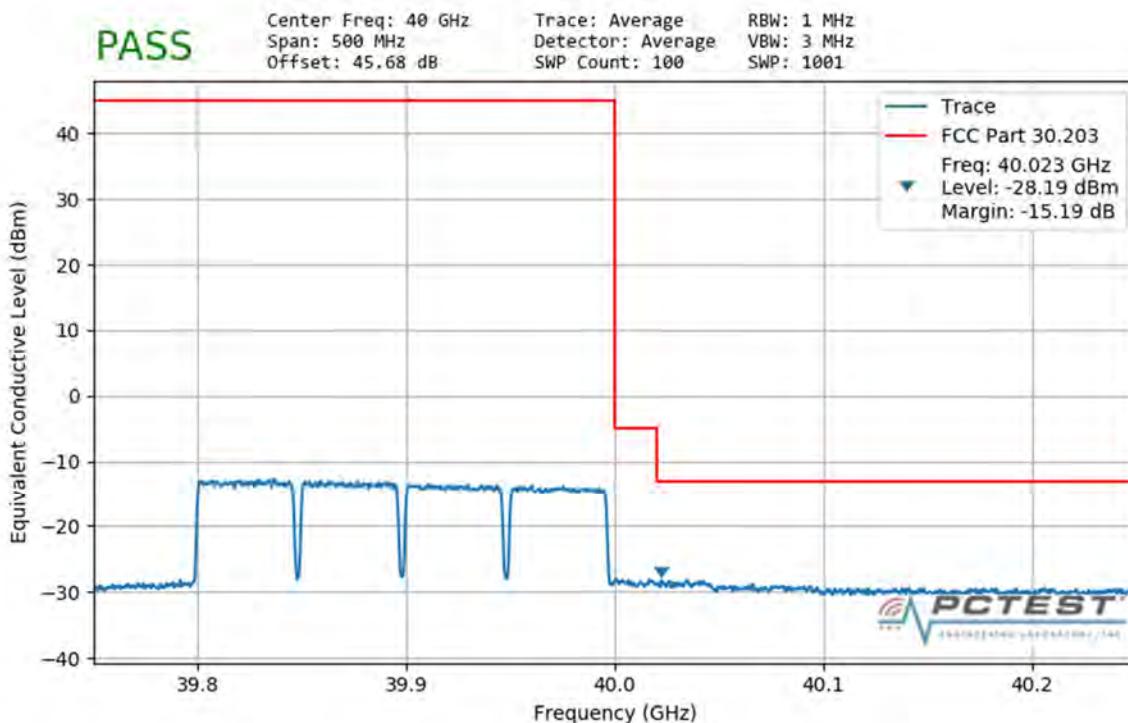


**Plot 7-607. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)**

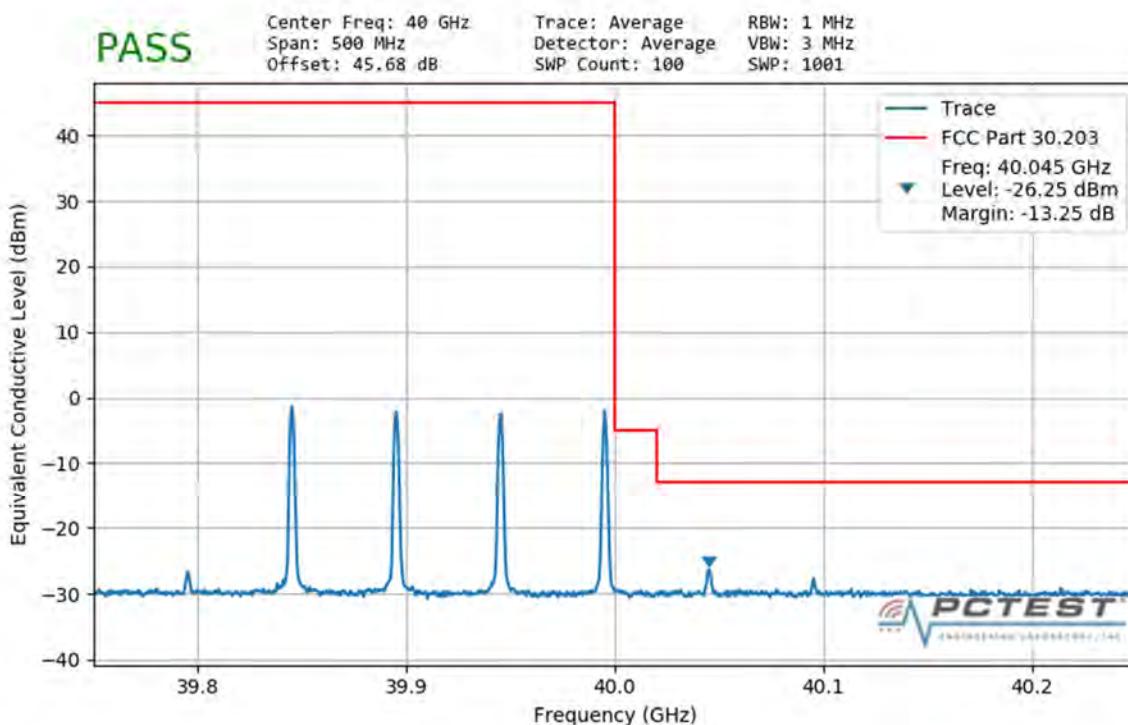


**Plot 7-608. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 342 of 371                 |

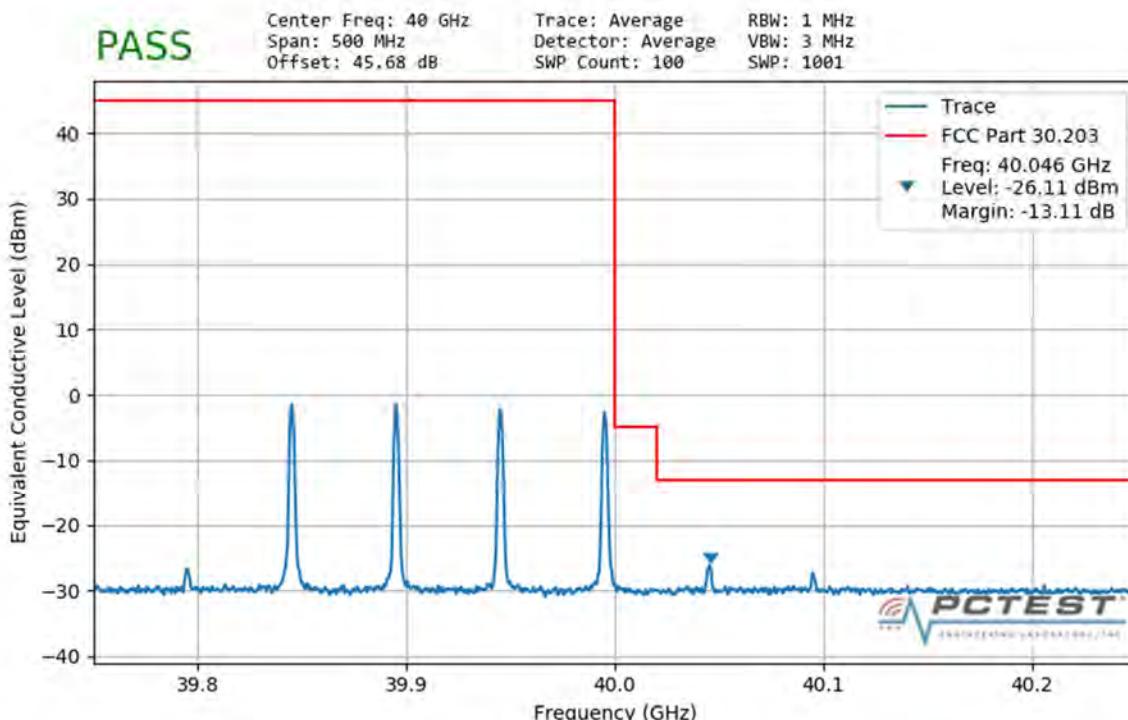


Plot 7-609. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)

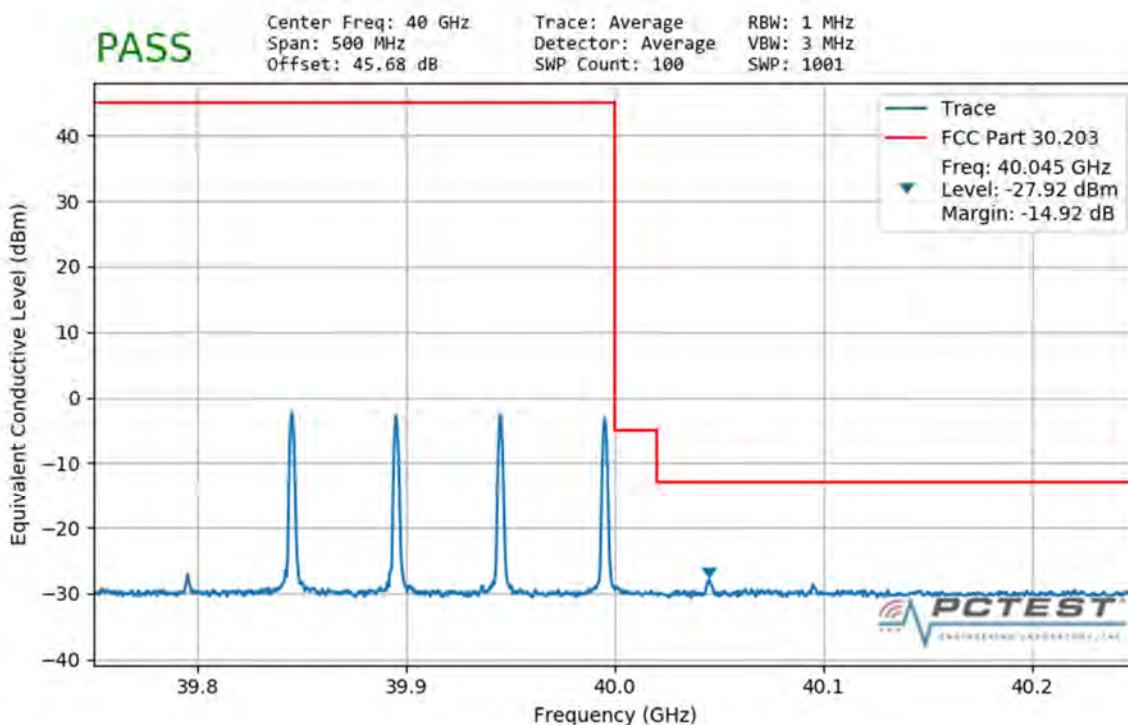


Plot 7-610. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 343 of 371                 |

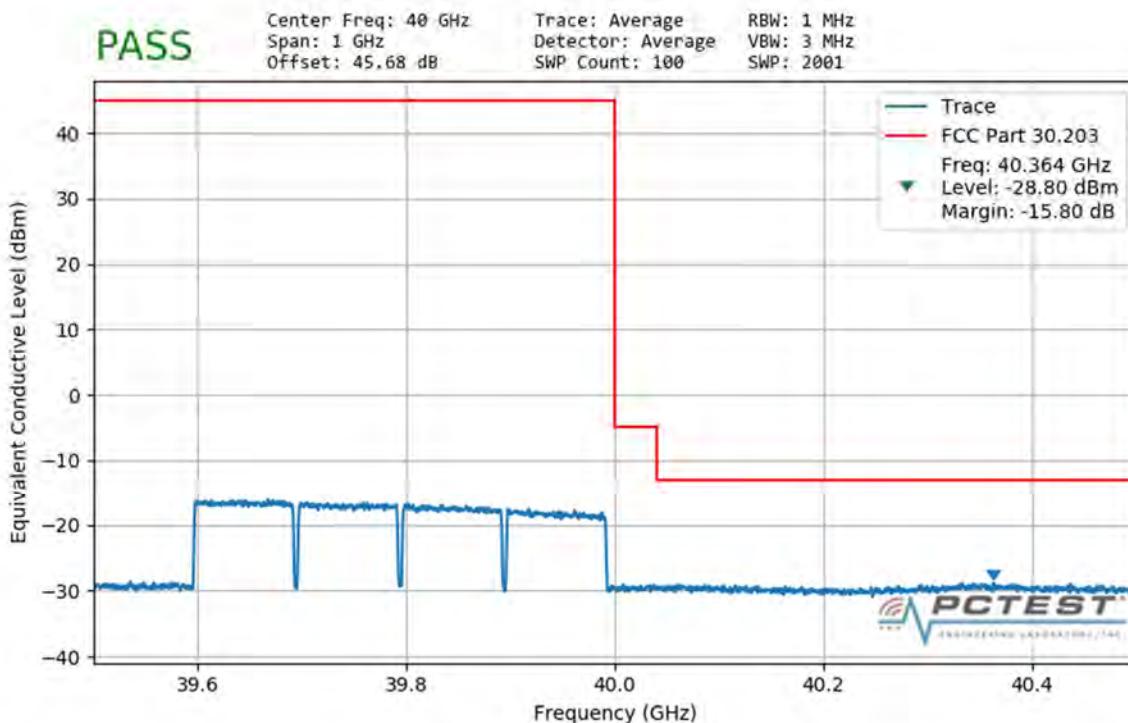


Plot 7-611. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)

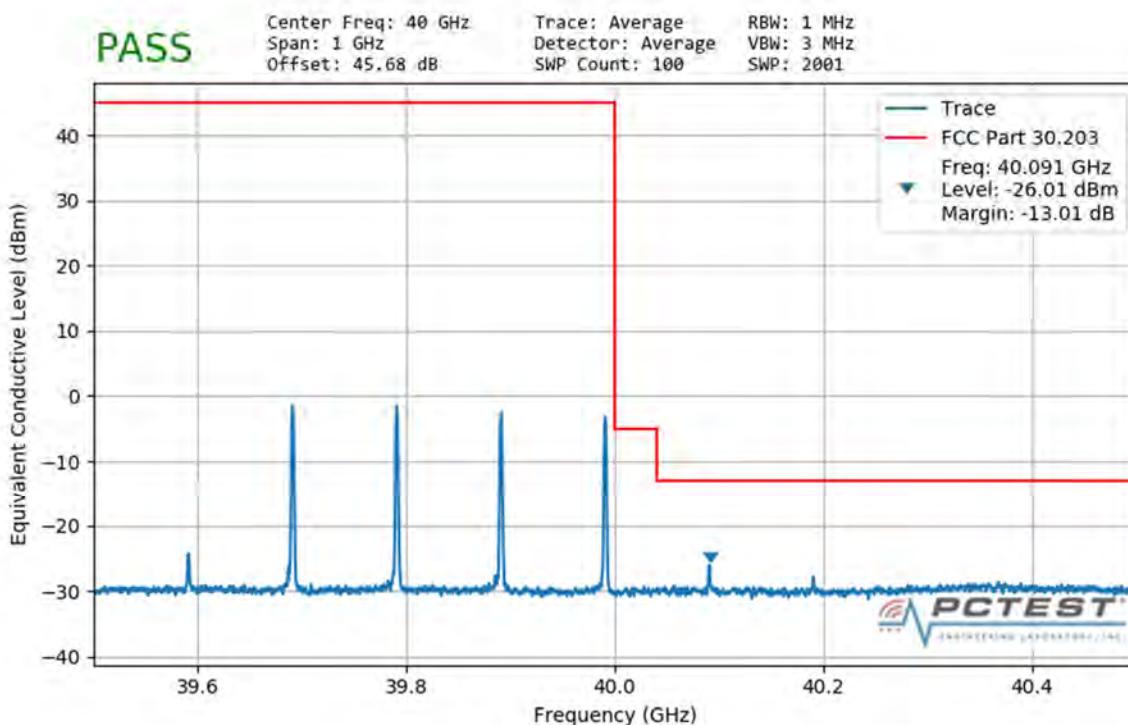


Plot 7-612. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 344 of 371                 |

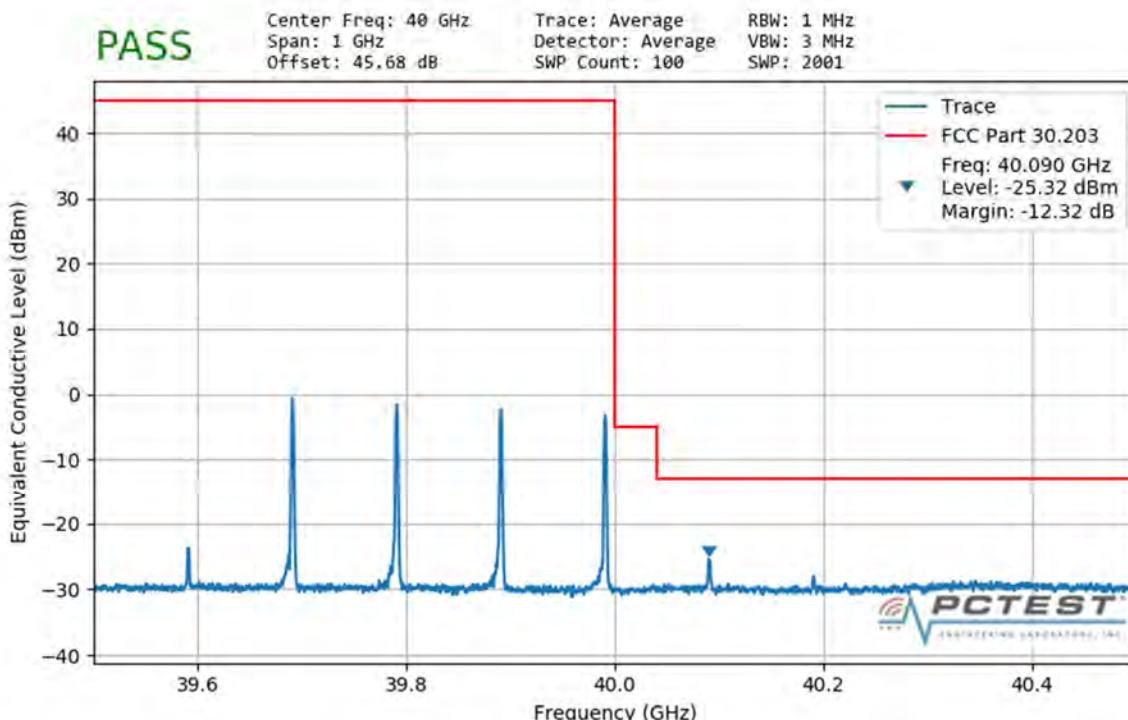


Plot 7-613. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

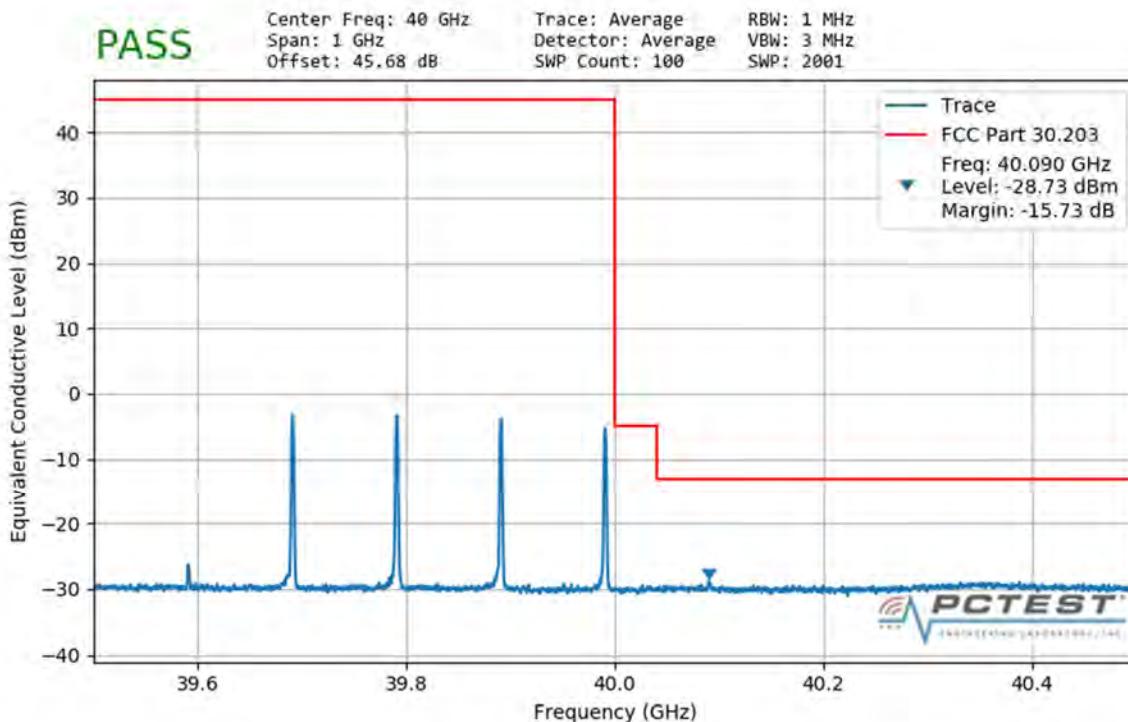


Plot 7-614. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 345 of 371                 |



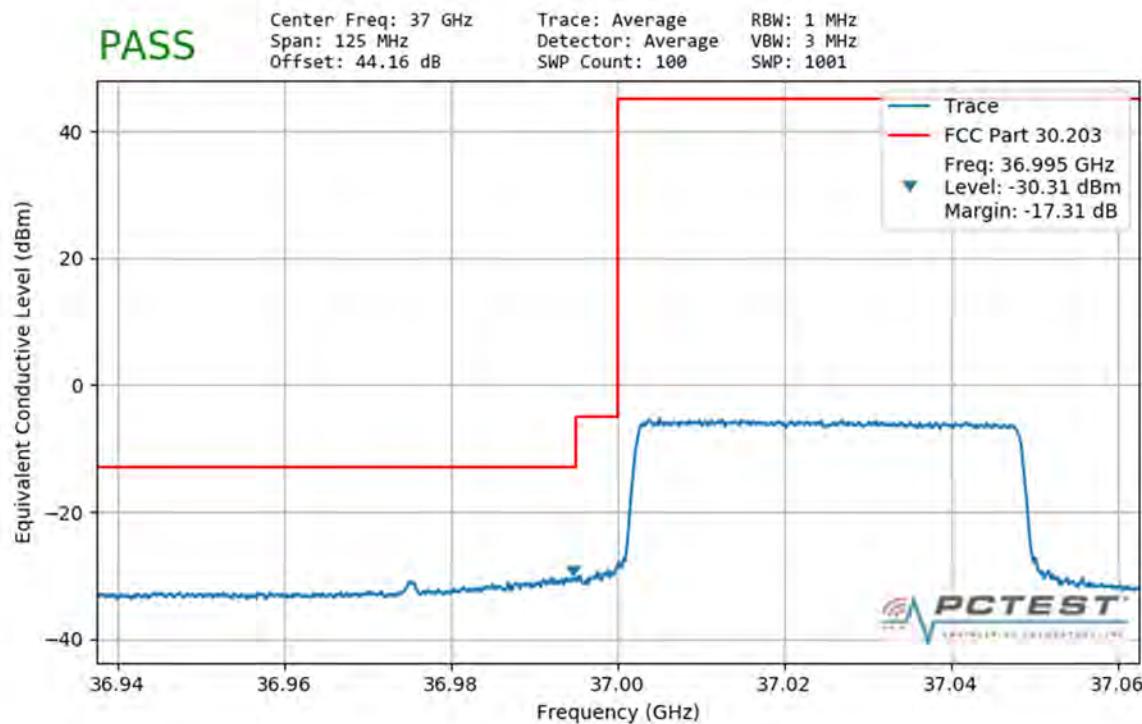
Plot 7-615. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)



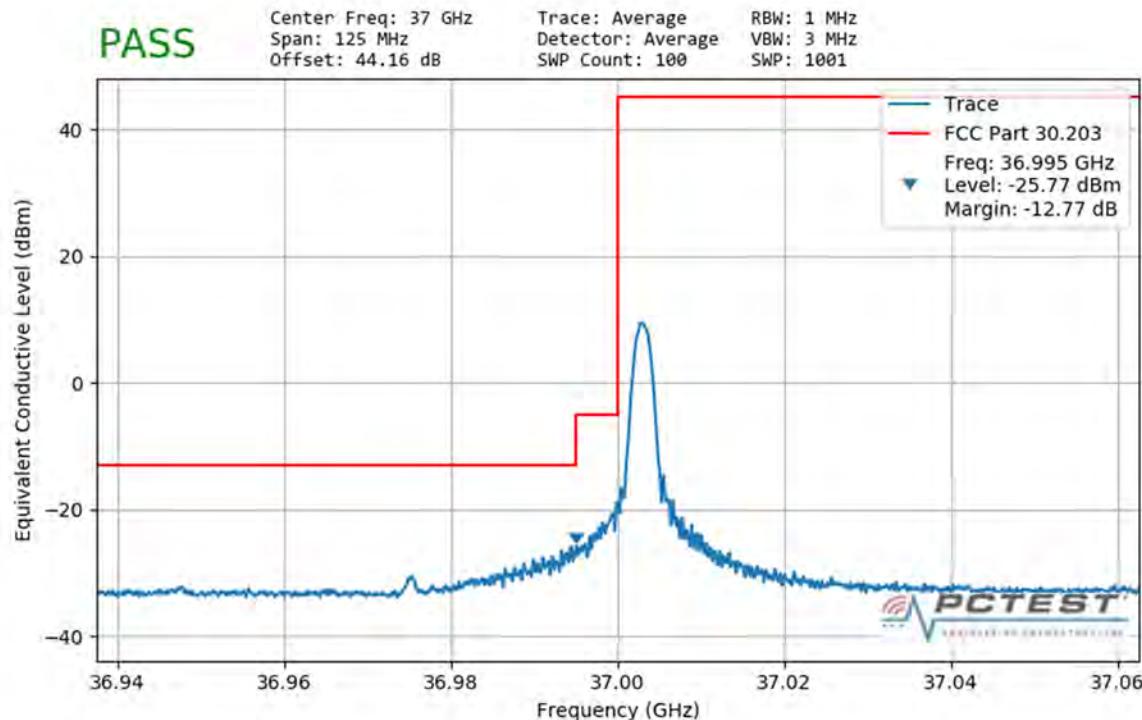
Plot 7-616. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)

|  |                                   |                                       |                                 |
|--|-----------------------------------|---------------------------------------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         | Page 346 of 371                 |

## L Patch MIMO(n260)

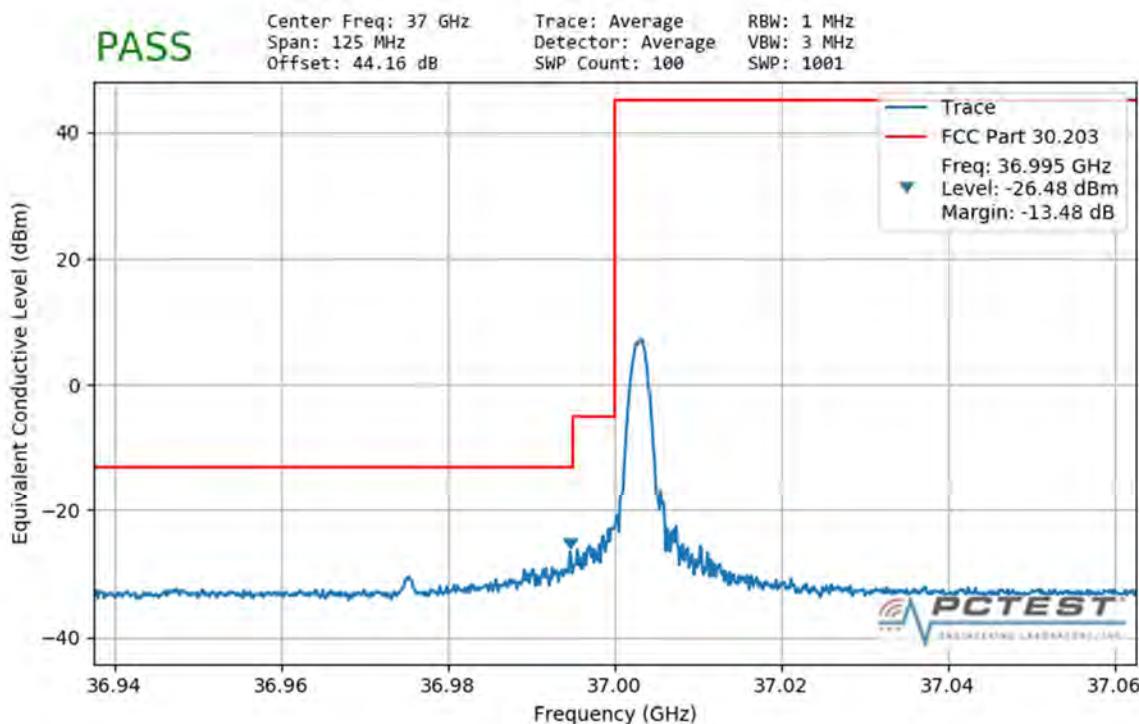


Plot 7-617. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

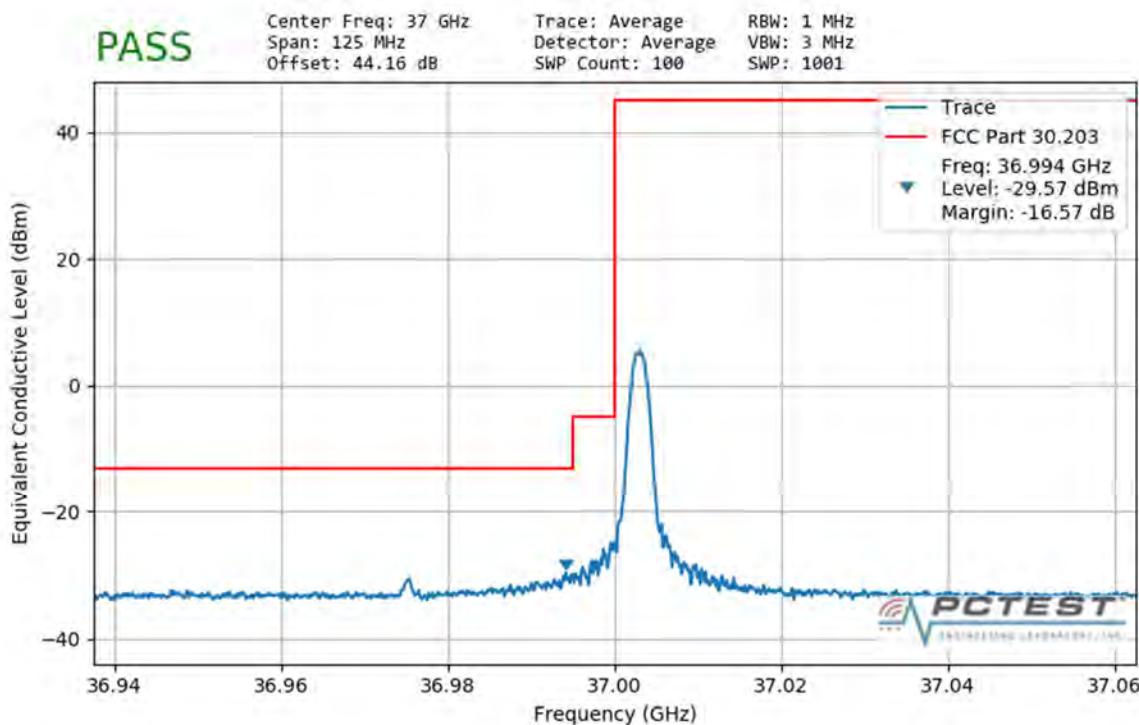


Plot 7-618. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |   |                                       |                                 |
|--|---|---------------------------------------|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         | Page 347 of 371                 |



**Plot 7-619. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)**

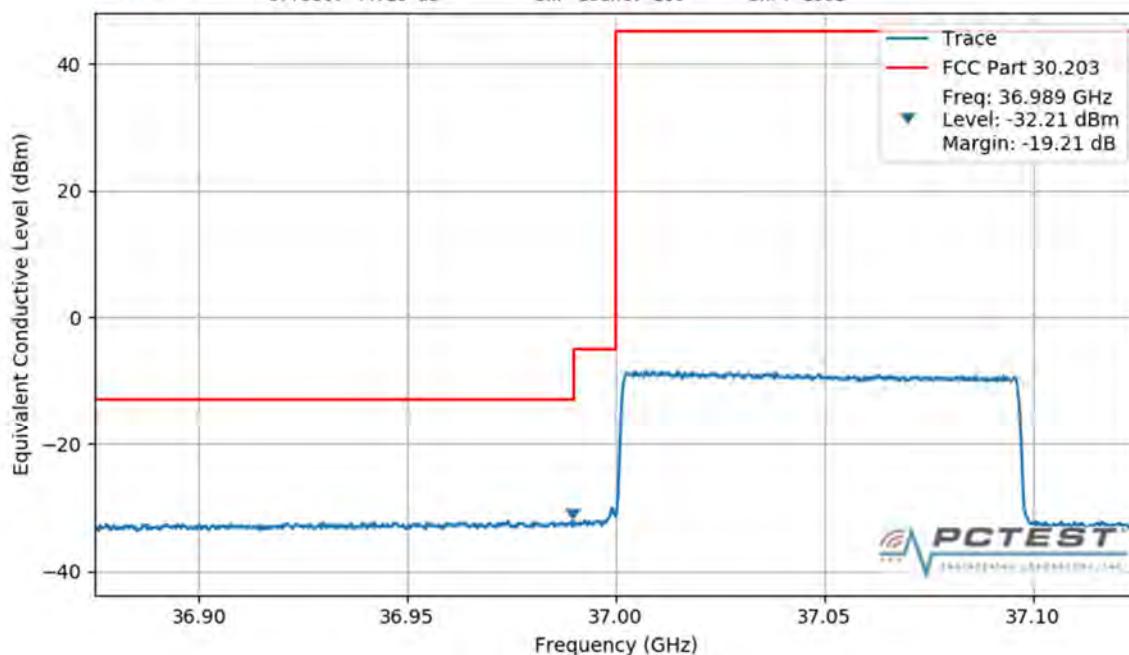


**Plot 7-620. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |   |                                       |  |                                 |
|--|---|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019             | EUT Type:<br>Portable Handset         |  | Page 348 of 371                 |

**PASS**

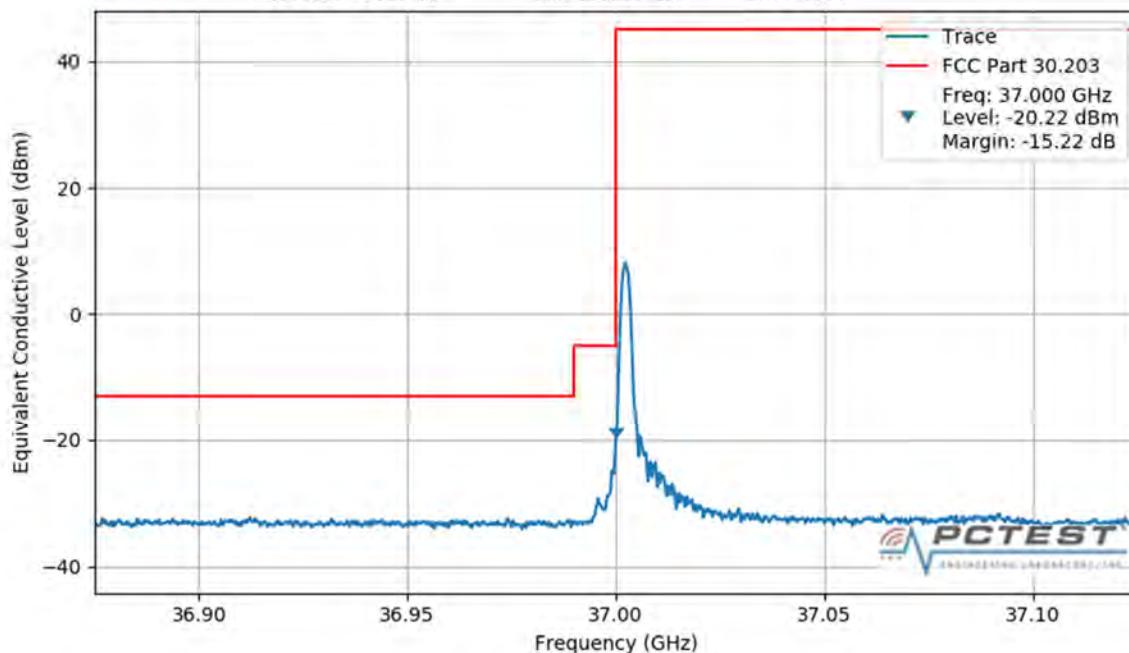
Center Freq: 37 GHz      Trace: Average      RBW: 1 MHz  
Span: 250 MHz      Detector: Average      VBW: 3 MHz  
Offset: 44.16 dB      SWP Count: 100      SWP: 1001



**Plot 7-621. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)**

**PASS**

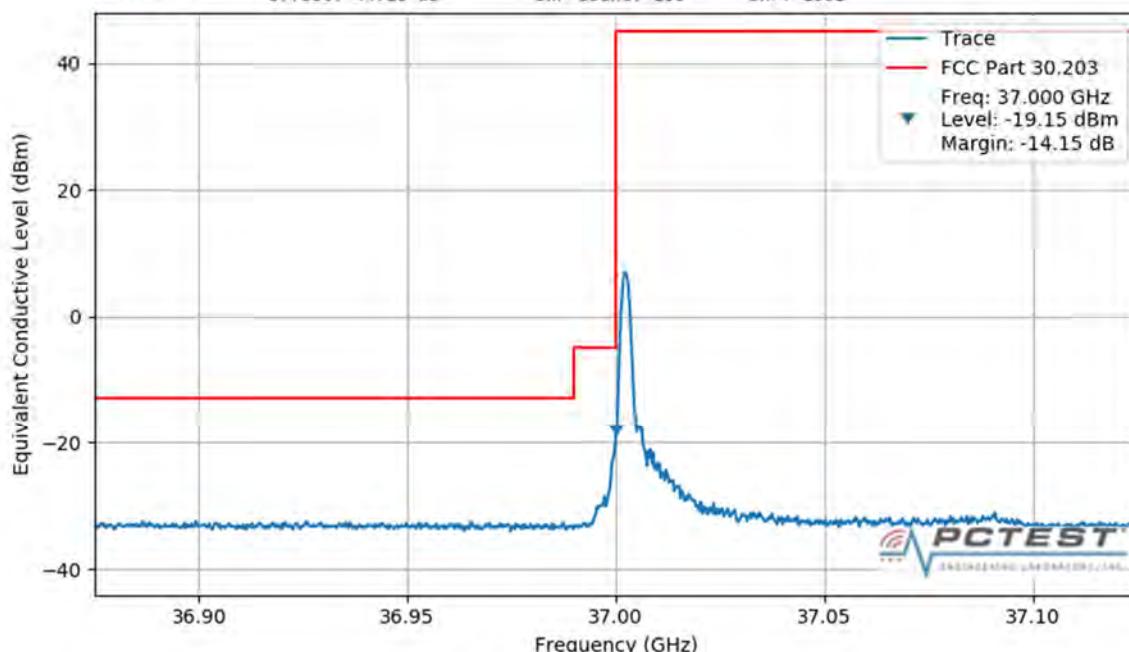
Center Freq: 37 GHz      Trace: Average      RBW: 1 MHz  
Span: 250 MHz      Detector: Average      VBW: 3 MHz  
Offset: 44.16 dB      SWP Count: 100      SWP: 1001

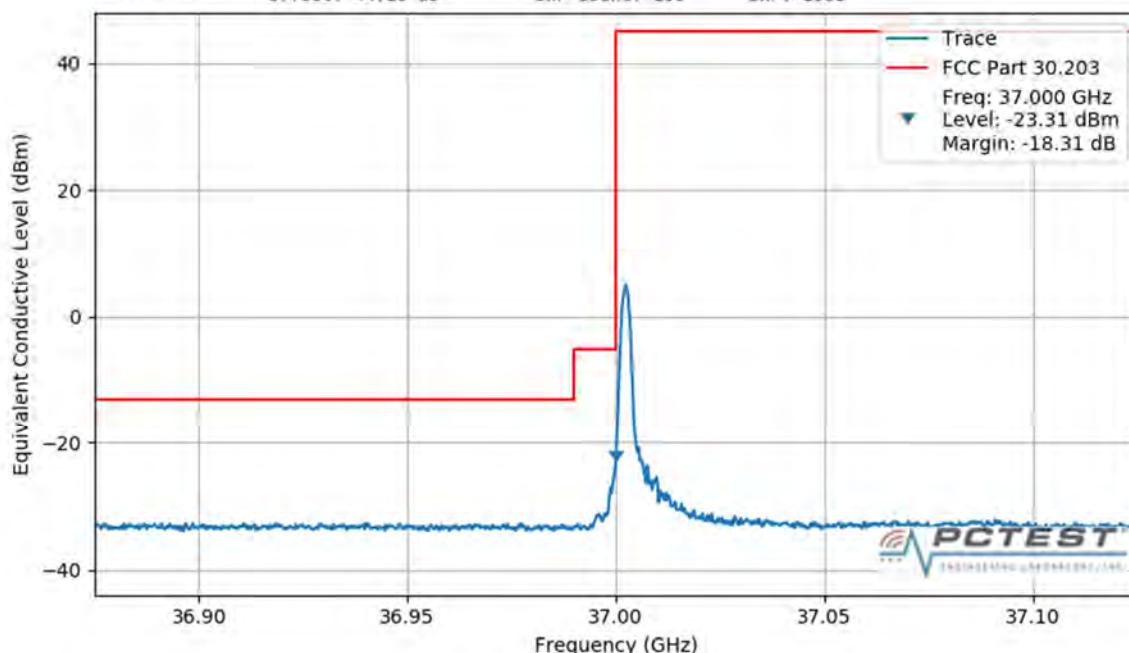


**Plot 7-622. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)**

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 349 of 371                 |

**PASS**

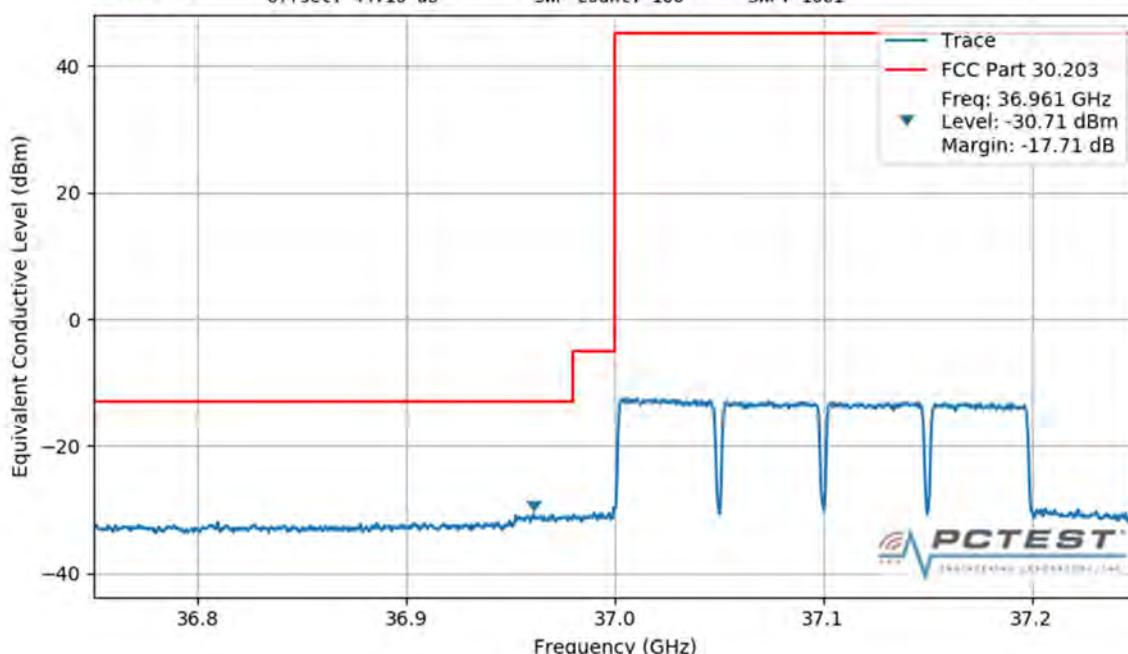
 Center Freq: 37 GHz  
 Trace: Average  
 Span: 250 MHz  
 Detector: Average  
 Offset: 44.16 dB  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-623. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 37 GHz  
 Trace: Average  
 Span: 250 MHz  
 Detector: Average  
 Offset: 44.16 dB  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-624. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 350 of 371                 |

**PASS**

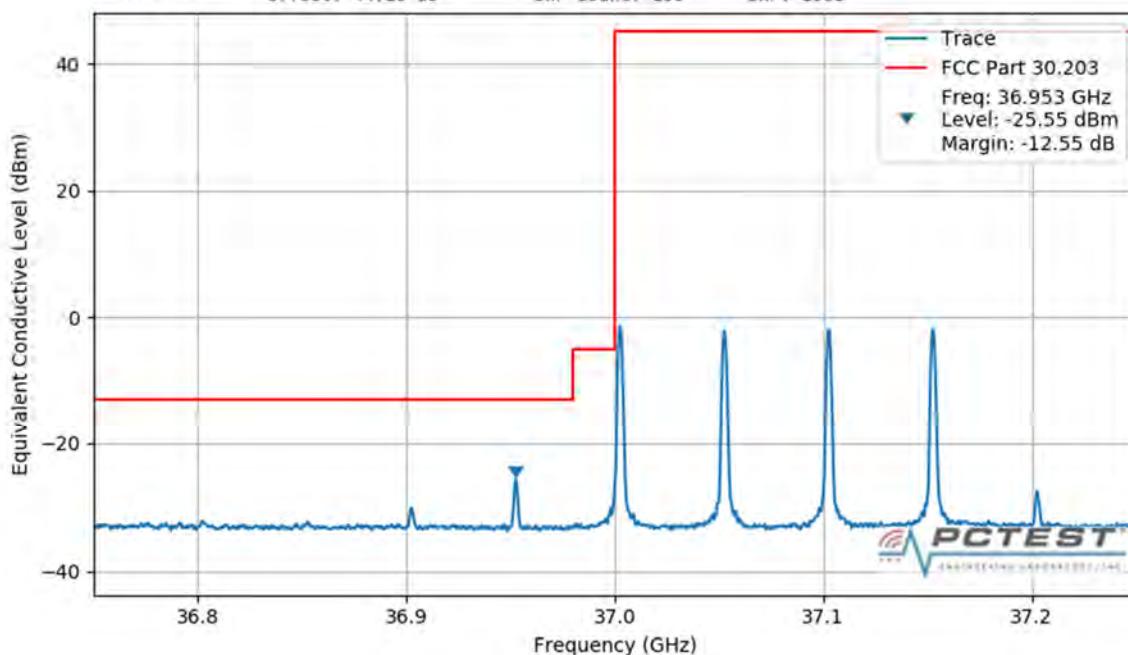
Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.16 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 1001



**Plot 7-625. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)**

**PASS**

Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.16 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 1001

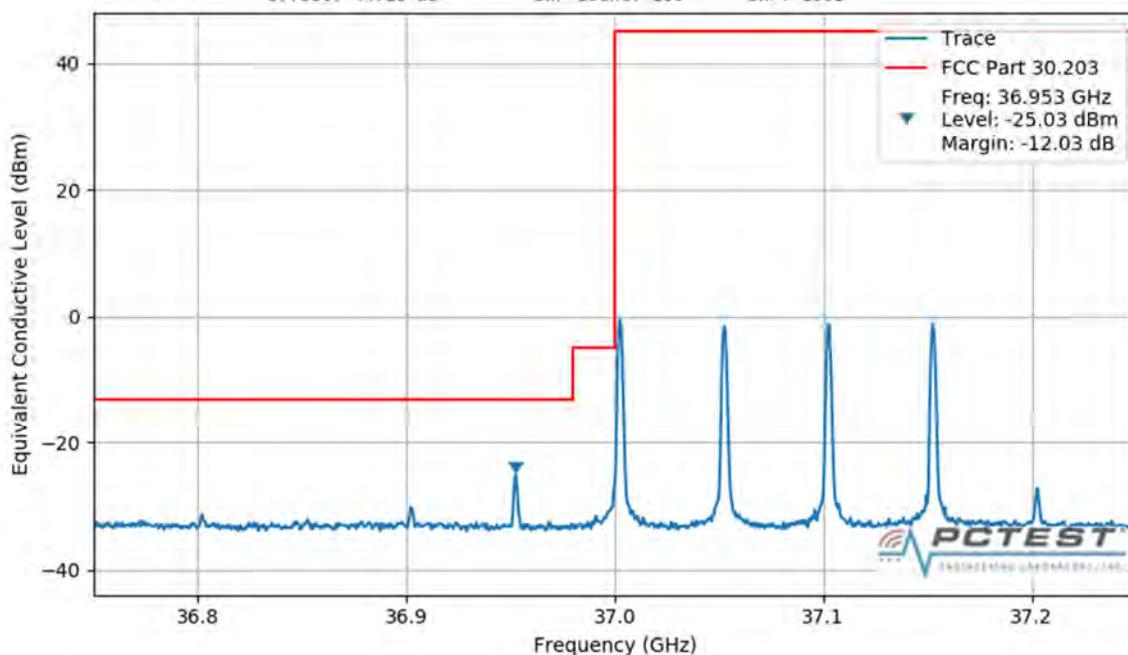


**Plot 7-626. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 351 of 371                 |

**PASS**

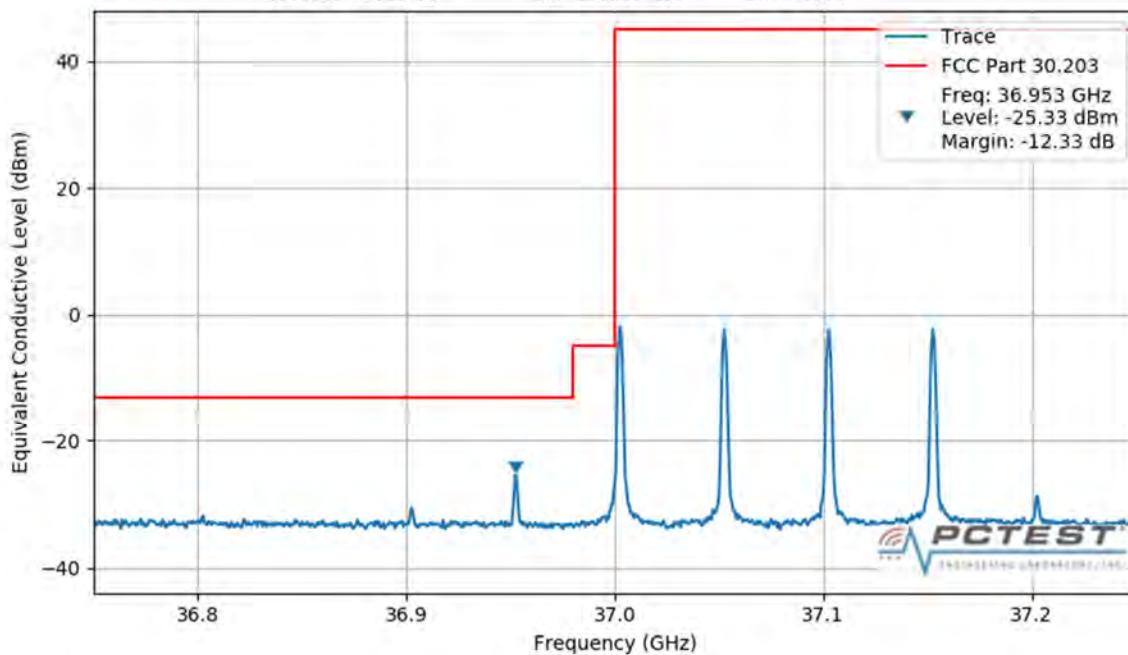
Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.16 dB      RBW: 1 MHz  
                            SWP Count: 100      VBW: 3 MHz  
                            SWP: 1001



**Plot 7-627. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

**PASS**

Center Freq: 37 GHz      Trace: Average  
Span: 500 MHz      Detector: Average  
Offset: 44.16 dB      RBW: 1 MHz  
                            SWP Count: 100      VBW: 3 MHz  
                            SWP: 1001

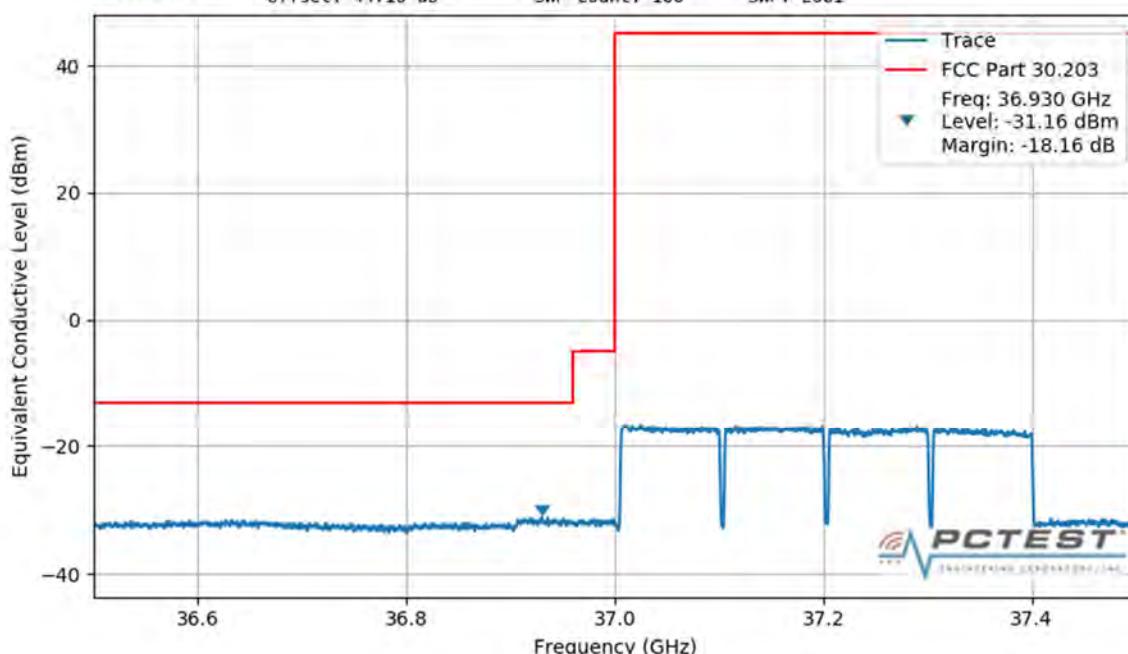


**Plot 7-628. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 352 of 371                 |

**PASS**

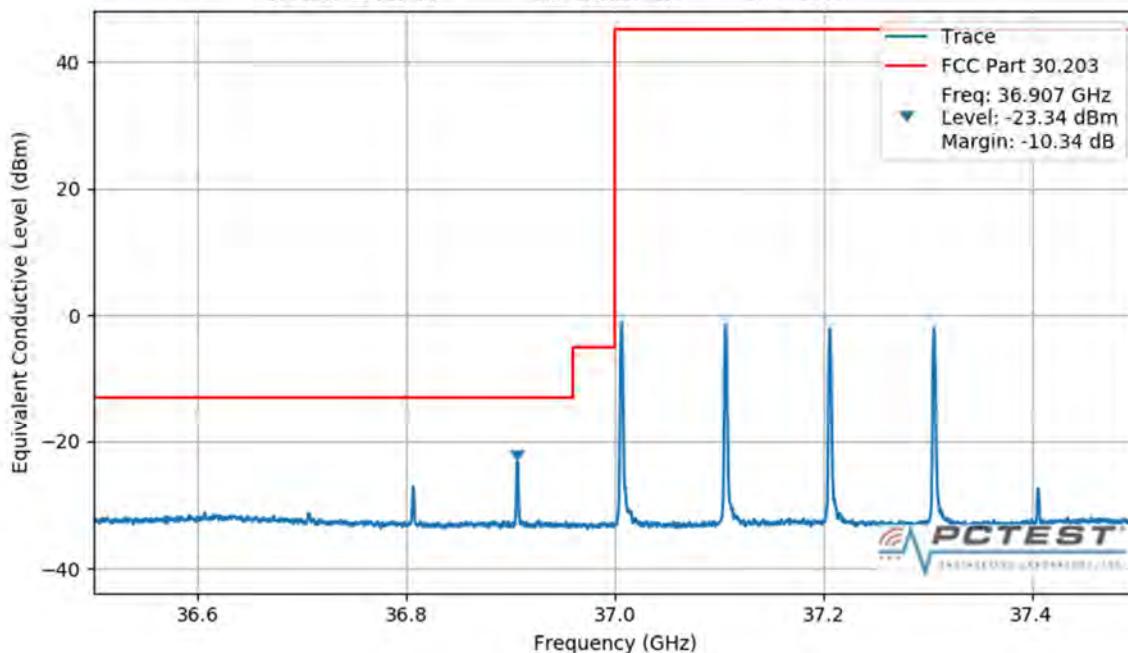
Center Freq: 37 GHz      Trace: Average  
Span: 1 GHz      Detector: Average  
Offset: 44.16 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 2001



**Plot 7-629. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)**

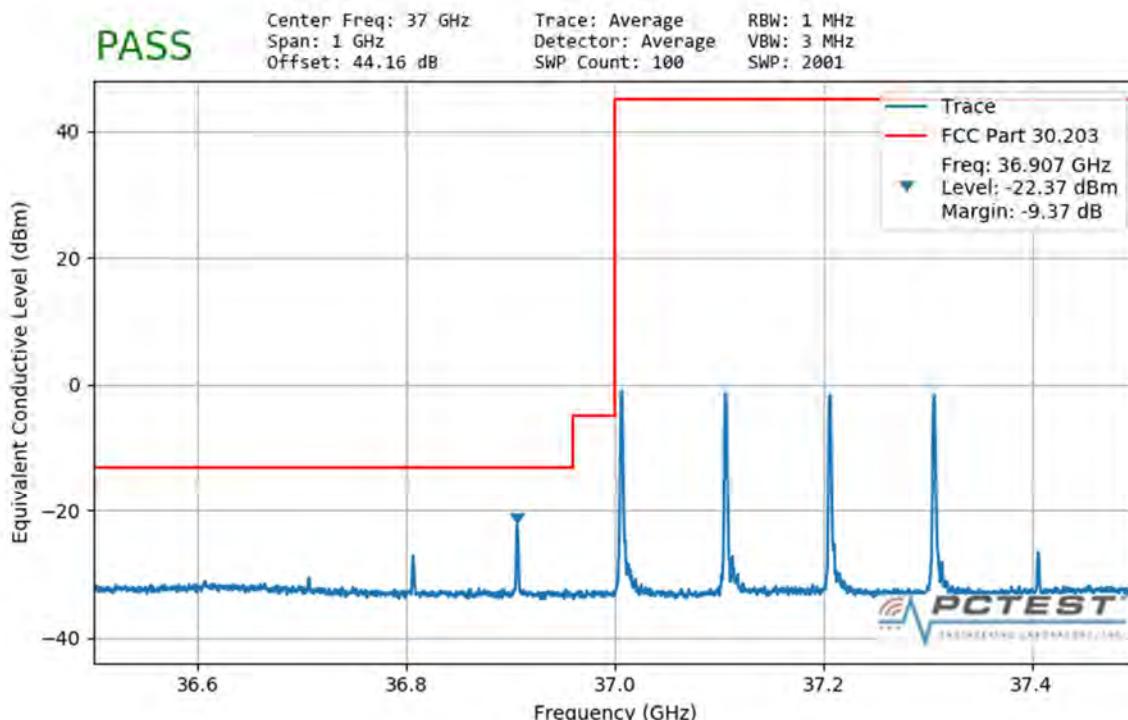
**PASS**

Center Freq: 37 GHz      Trace: Average  
Span: 1 GHz      Detector: Average  
Offset: 44.16 dB      RBW: 1 MHz  
                            VBW: 3 MHz  
                            SWP Count: 100  
                            SWP: 2001

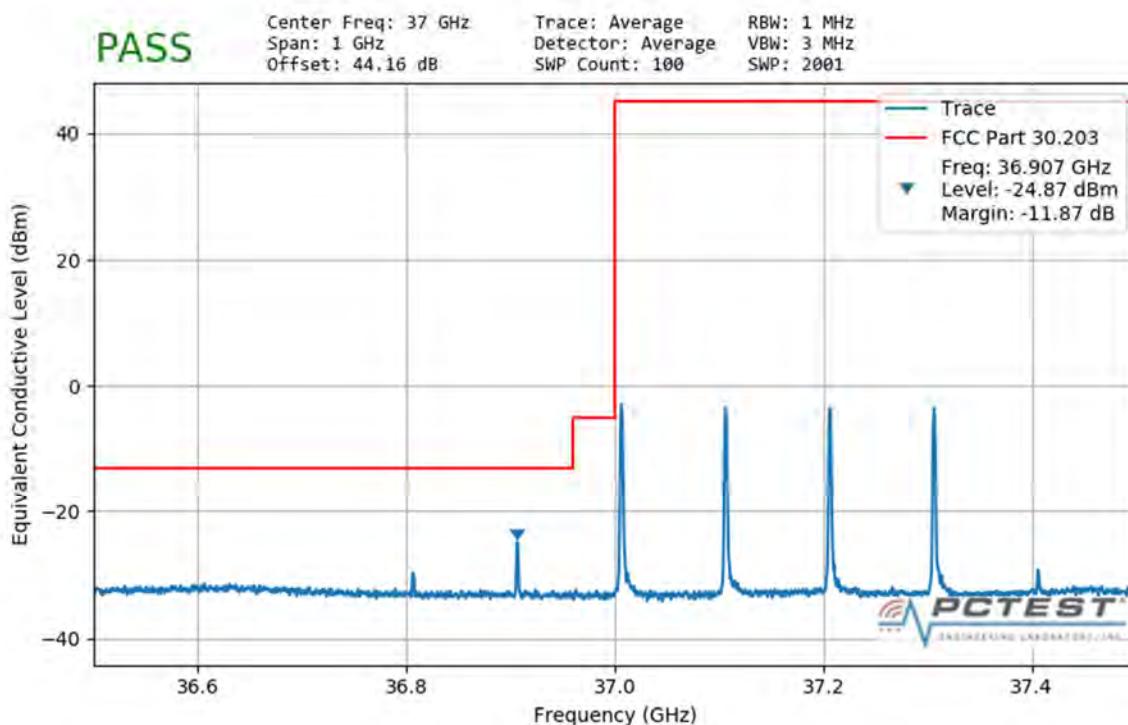


**Plot 7-630. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 353 of 371                 |

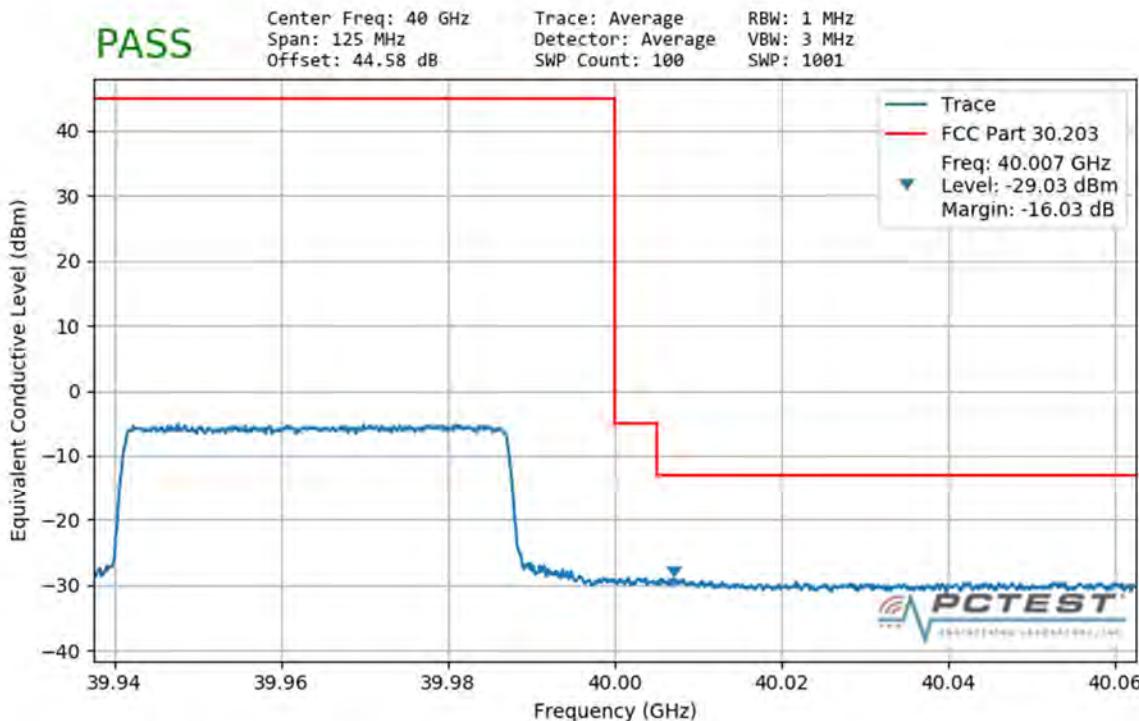


**Plot 7-631. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**

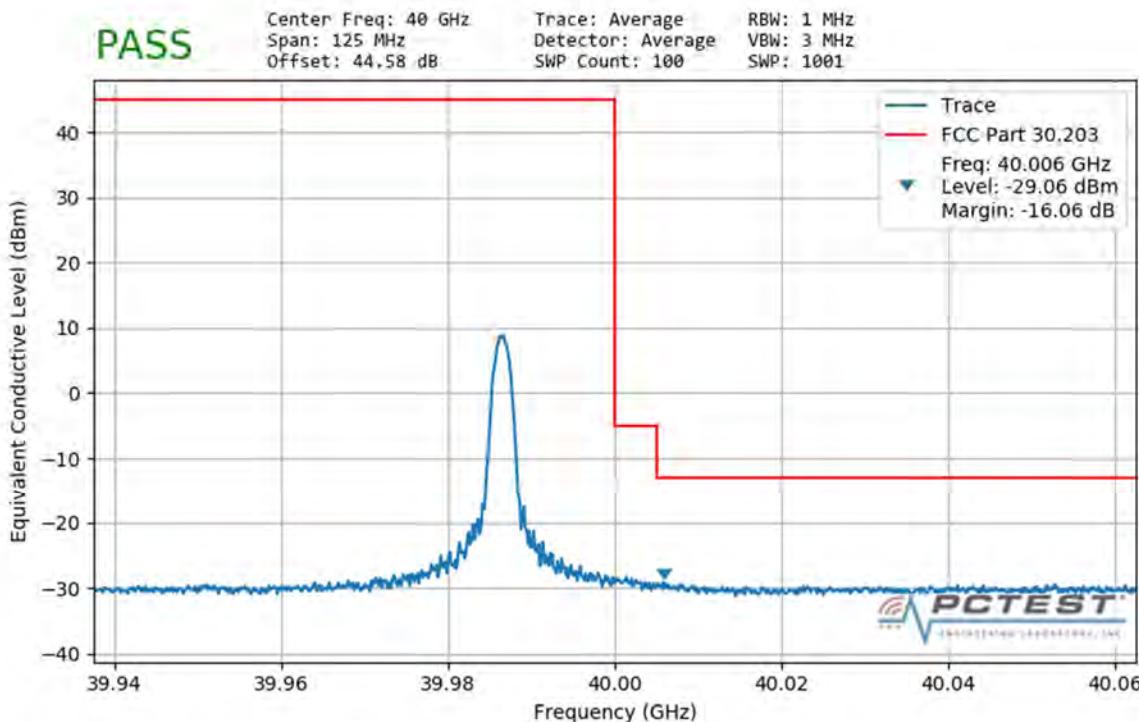


**Plot 7-632. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 354 of 371                 |

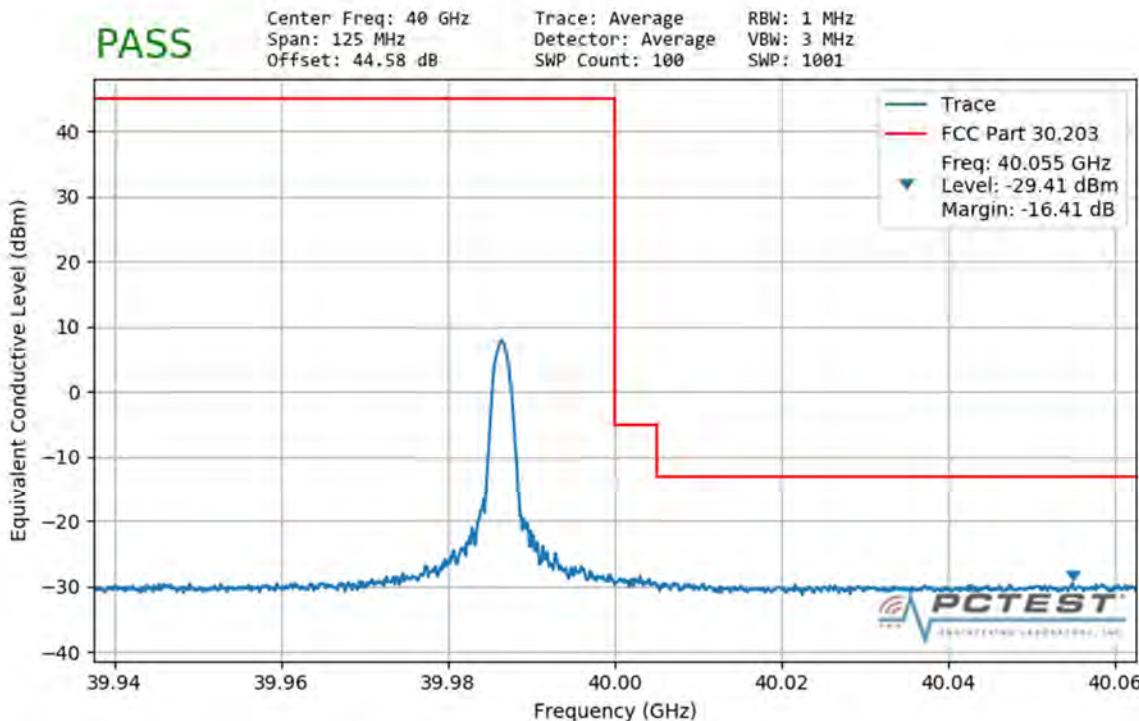


Plot 7-633. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)

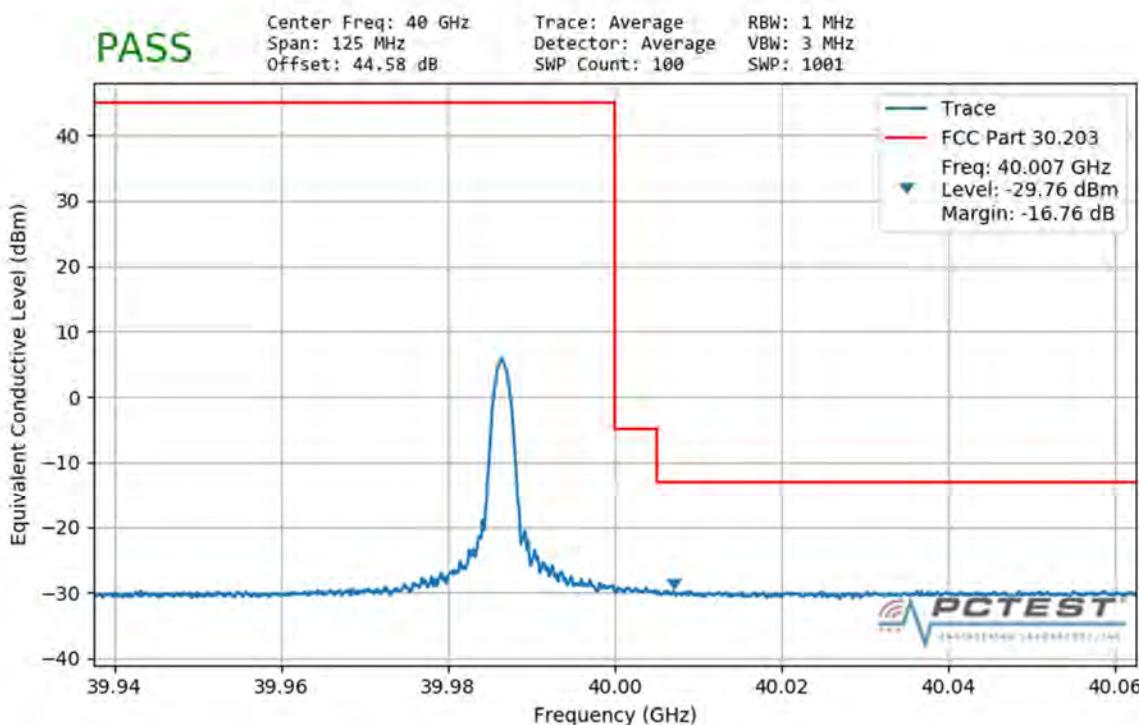


Plot 7-634. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 355 of 371                 |

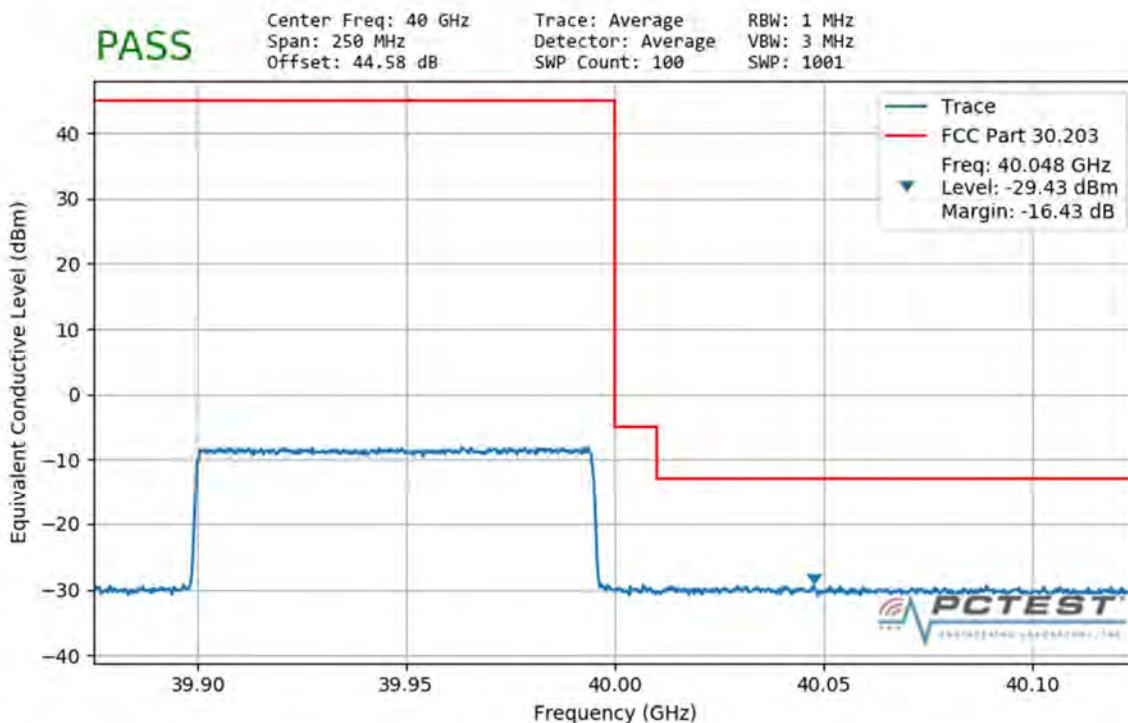


**Plot 7-635. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)**

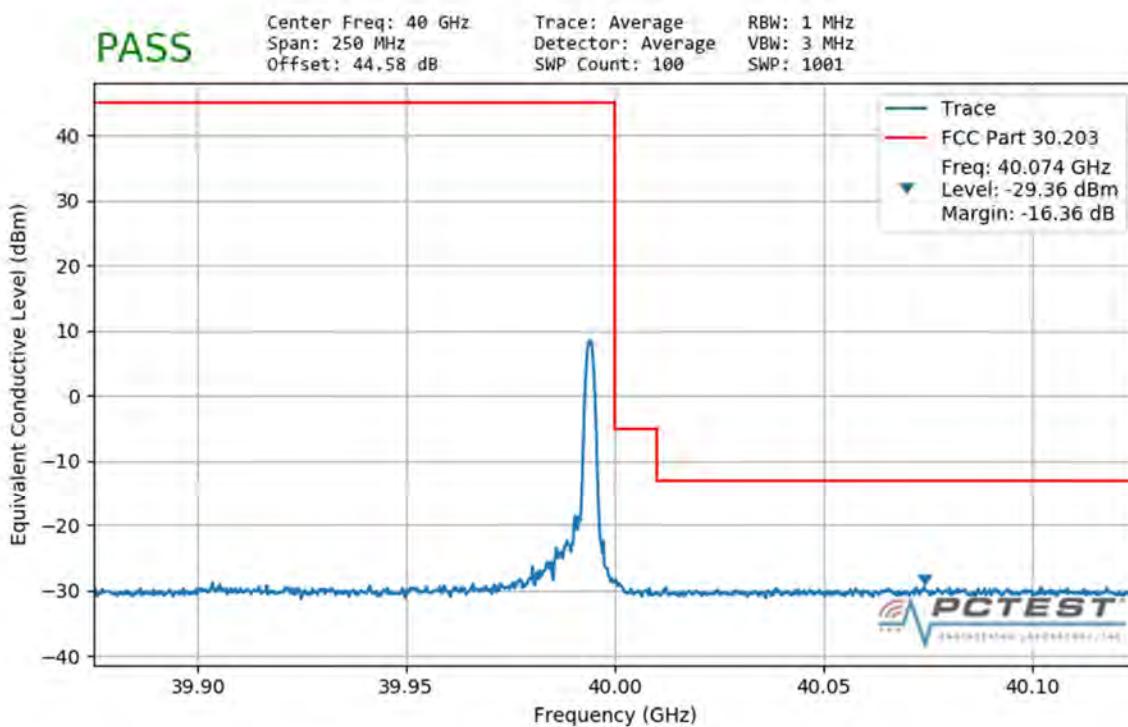


**Plot 7-636. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

|  |                                   |                                       |         |                                 |
|--|-----------------------------------|---------------------------------------|---------|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |         | Page 356 of 371                 |

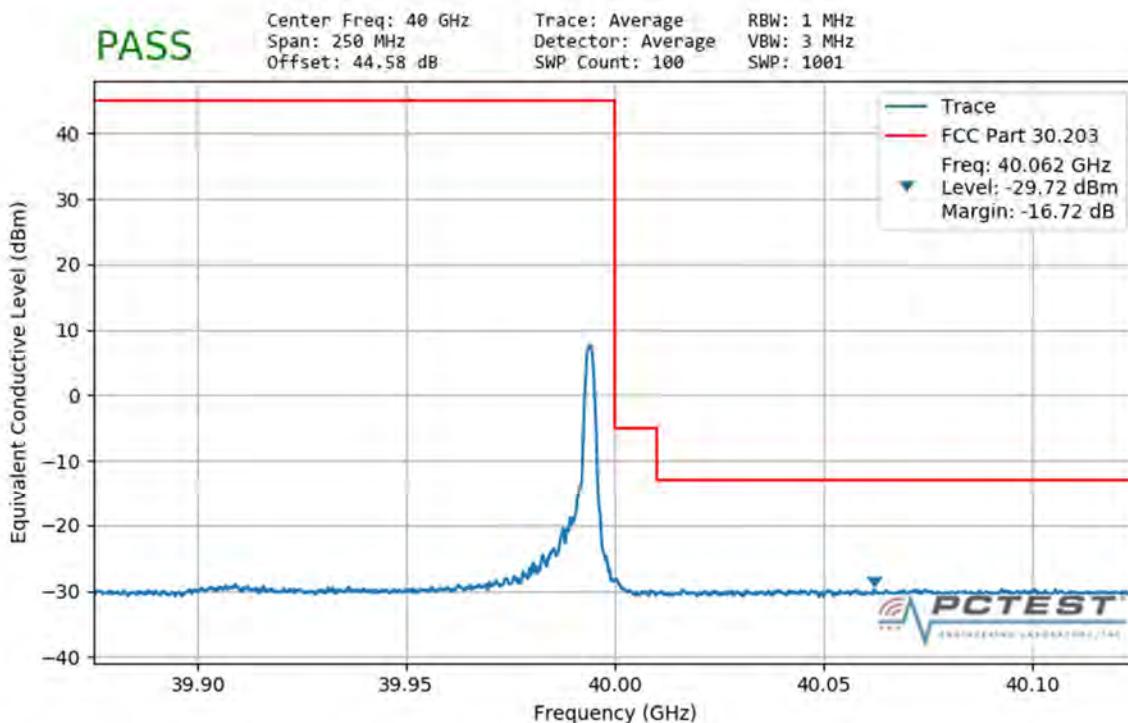


Plot 7-637. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

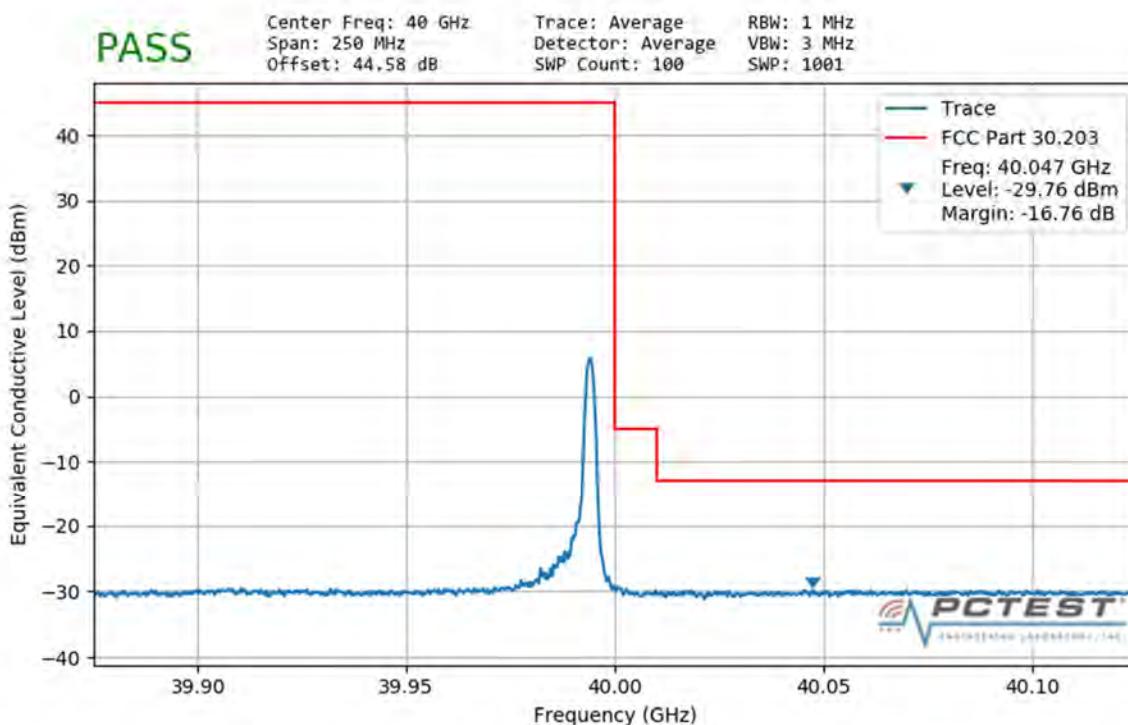


Plot 7-638. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

|  |   |                                       |  |   |                                 |
|--|---|---------------------------------------|--|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |  |   | Page 357 of 371                 |

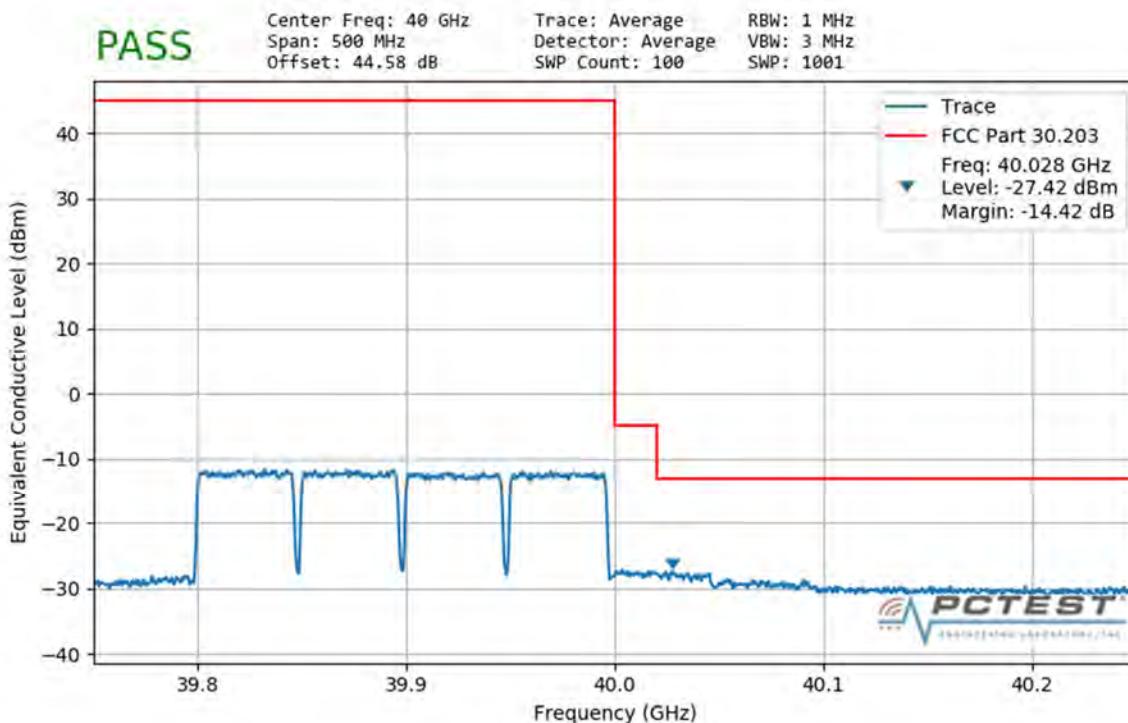


Plot 7-639. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)

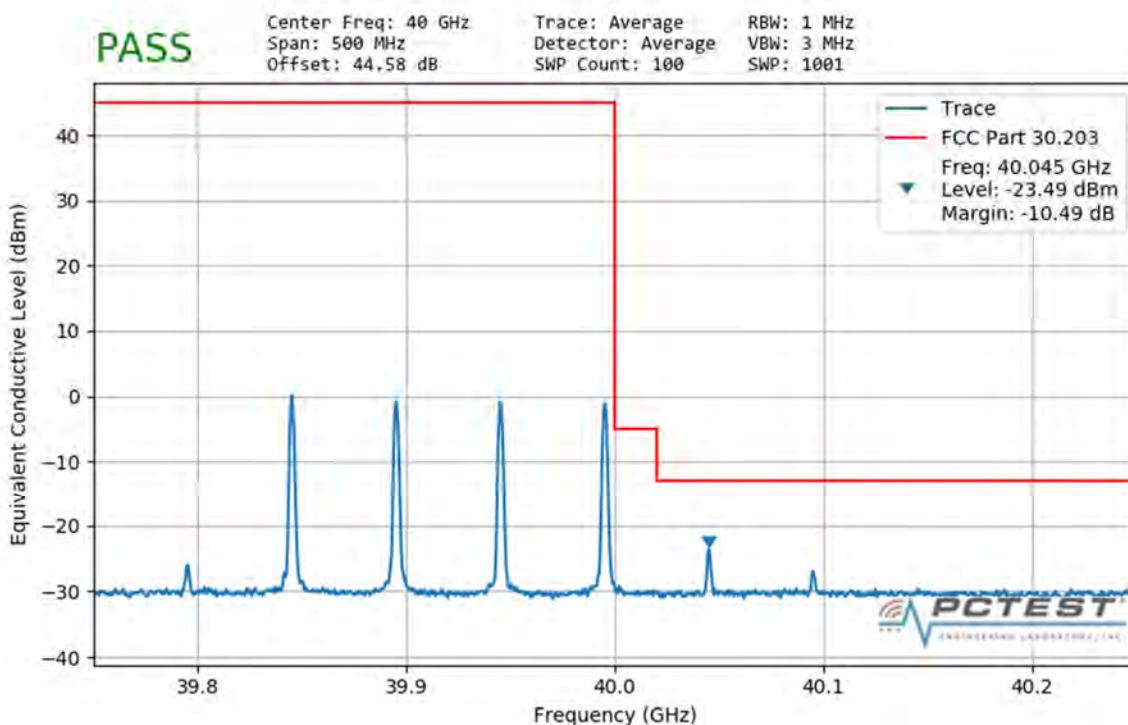


Plot 7-640. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 358 of 371                 |

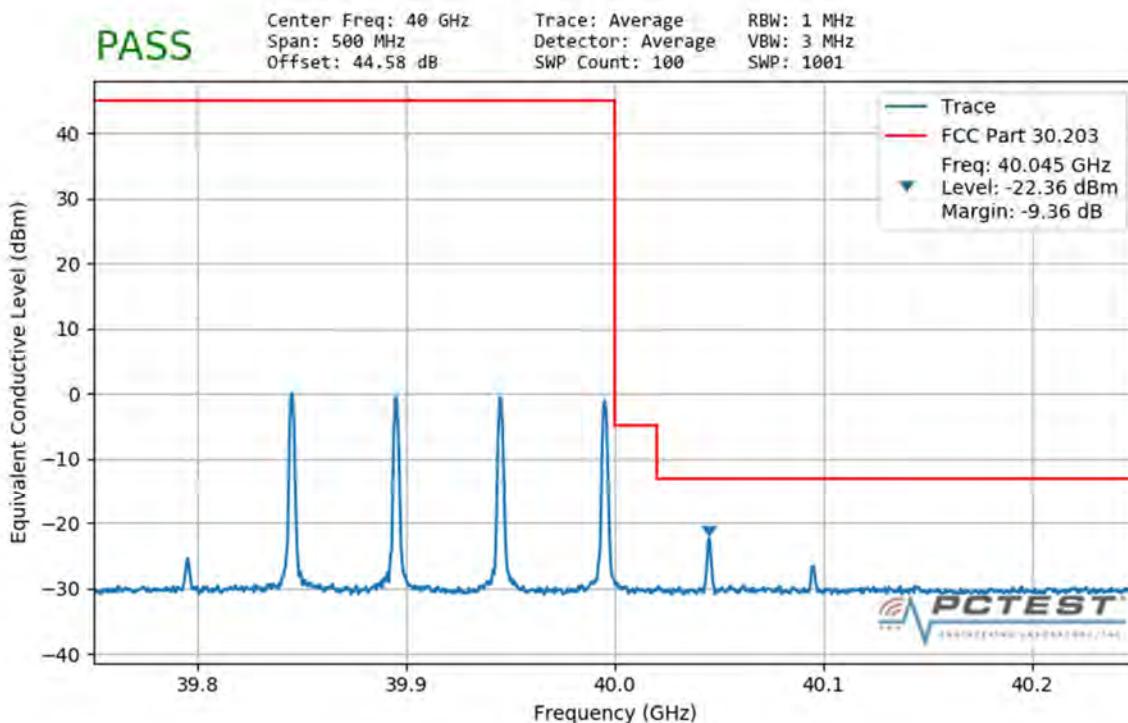


Plot 7-641. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)

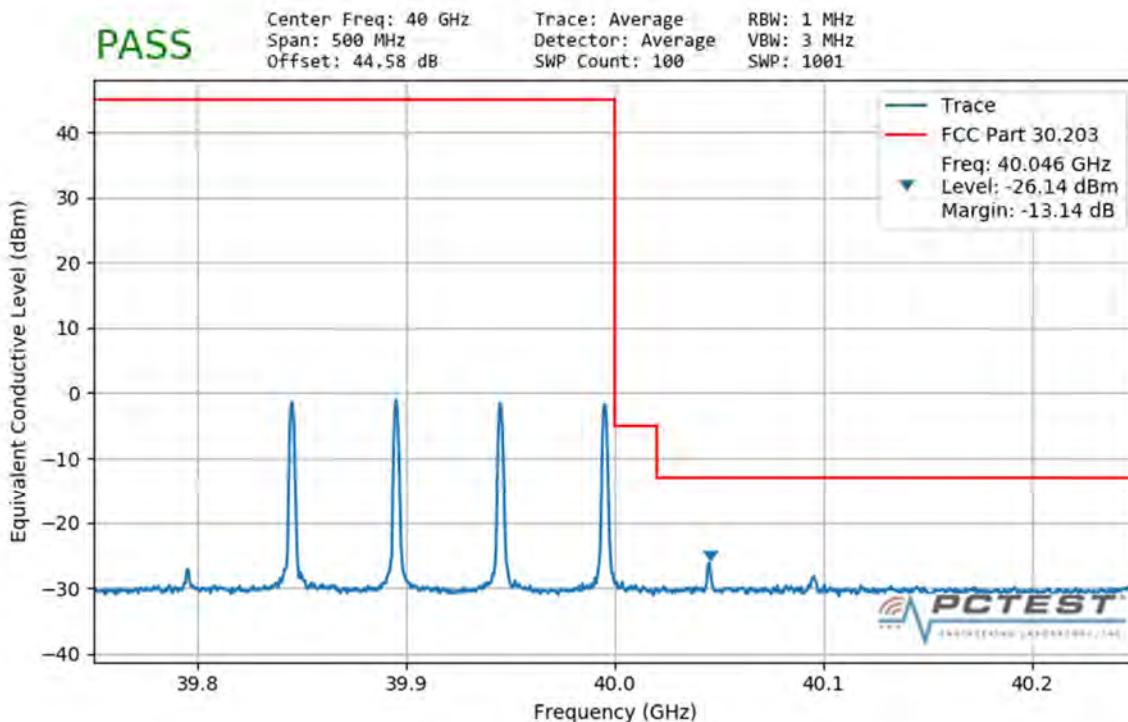


Plot 7-642. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 359 of 371                 |

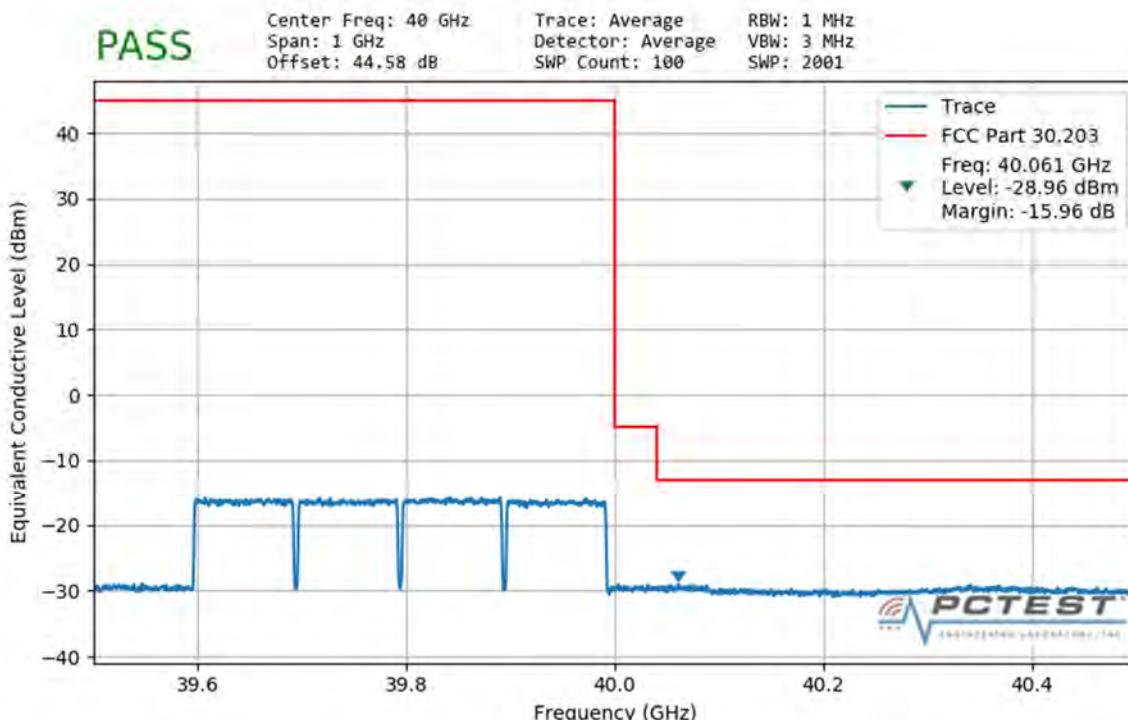


**Plot 7-643. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

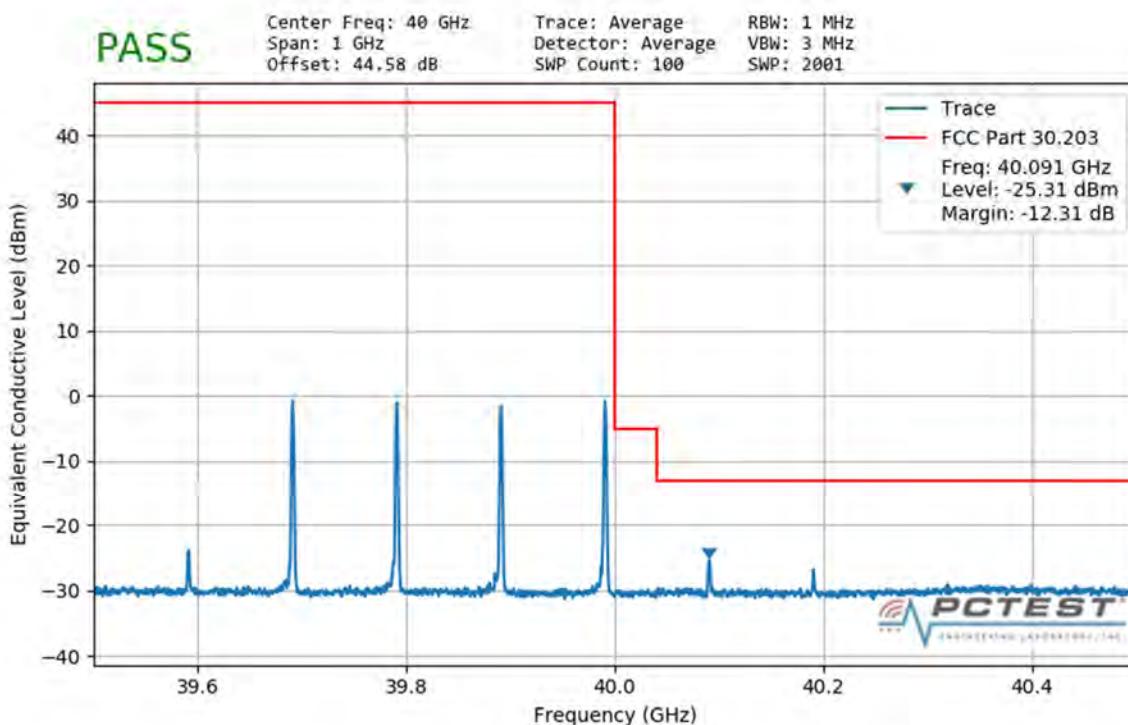


**Plot 7-644. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 360 of 371                 |

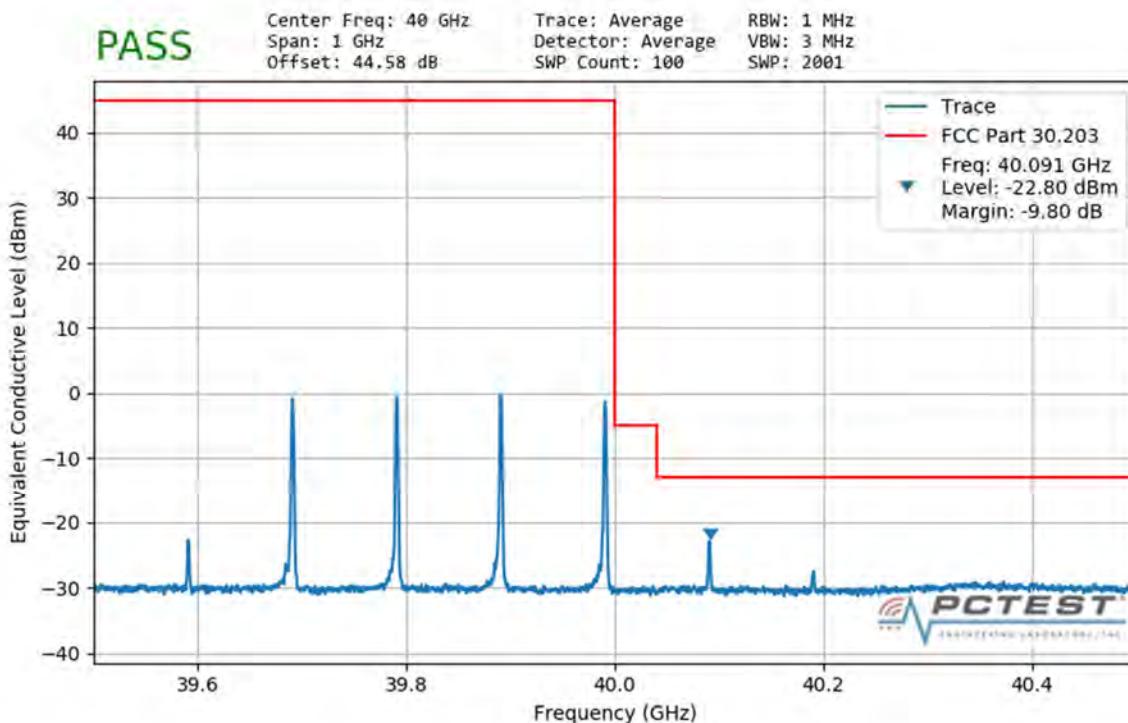


Plot 7-645. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

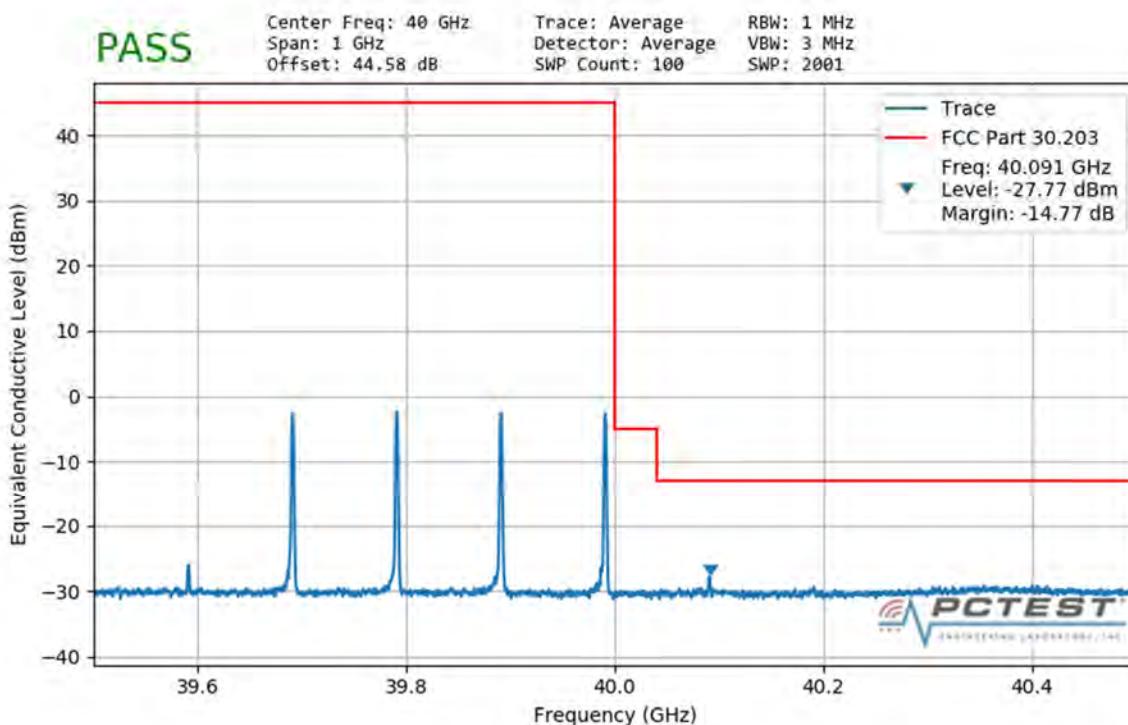


Plot 7-646. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

|  |                                   |                                       |  |                                 |
|--|-----------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN976V                         | <b>PCTEST</b>                     | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset         |  | Page 361 of 371                 |



Plot 7-647. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)



Plot 7-648. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 362 of 371                 |

## 7.6 Frequency Stability / Temperature Variation

§2.1055

### Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

### Test Procedure Used

ANSI C63.5-2015 Section 5.6  
KDB 842590 D01 v01 Section 4.5

### Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

### Test Setup

The EUT was measured using horn antenna connected to a spectrum analyzer. The EUT was placed inside an environmental chamber. Using a foam plug, the horn antenna measured the frequency of the fundamental signal.

### Test Notes

The Frequency Deviation column in the table below is the amount of deviation measured from the center frequency of the Reference measurement (first row).

| FCC ID: A3LSMN976V                         | PCTEST                            |                               | MEASUREMENT REPORT<br>(CERTIFICATION) | SAMSUNG | Approved by:<br>Quality Manager |
|--|-----------------------------------|-------------------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019 | EUT Type:<br>Portable Handset |                                       |         |                                 |

## Frequency Stability Measurements(n261)

§2.1055

OPERATING FREQUENCY: 27,922,080,000 Hz  
 CHANNEL: 2077867  
 REFERENCE VOLTAGE: 4.29 VDC

| VOLTAGE (%)    | POWER (VDC) | TEMP (°C)  | FREQUENCY (Hz)     | Freq. Dev. (Hz) | Deviation (%) |
|----------------|-------------|------------|--------------------|-----------------|---------------|
| 100 %          | 4.29        | + 20 (Ref) | 27,922,711,430,965 | 0               | 0.0000000     |
| 100 %          |             | - 30       | 27,922,849,529,522 | -138,098,557    | -0.0004946    |
| 100 %          |             | - 20       | 27,922,942,034,487 | -230,603,522    | -0.0008259    |
| 100 %          |             | - 10       | 27,922,907,487,523 | -196,056,557    | -0.0007021    |
| 100 %          |             | 0          | 27,922,886,402,221 | -174,971,256    | -0.0006266    |
| 100 %          |             | + 10       | 27,922,812,677,948 | -101,246,983    | -0.0003626    |
| 100 %          |             | + 20       | 27,922,725,217,252 | -13,786,287     | -0.0000494    |
| 100 %          |             | + 30       | 27,922,259,872,613 | 451,558,353     | 0.0016172     |
| 100 %          |             | + 40       | 27,922,590,606,660 | 120,824,305     | 0.0004327     |
| 100 %          |             | + 50       | 27,922,420,390,202 | 291,040,763     | 0.0010423     |
| BATT. ENDPOINT | 3.37        | + 20       | 27,922,631,805,398 | 79,625,567      | 0.0002852     |

Table 7-73. Frequency Stability Data(n261)

**Note:**

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|  |   |                                    |   |                                 |
|--|---|------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset      |   | Page 364 of 371                 |

## Frequency Stability Measurements(n261)

§2.1055

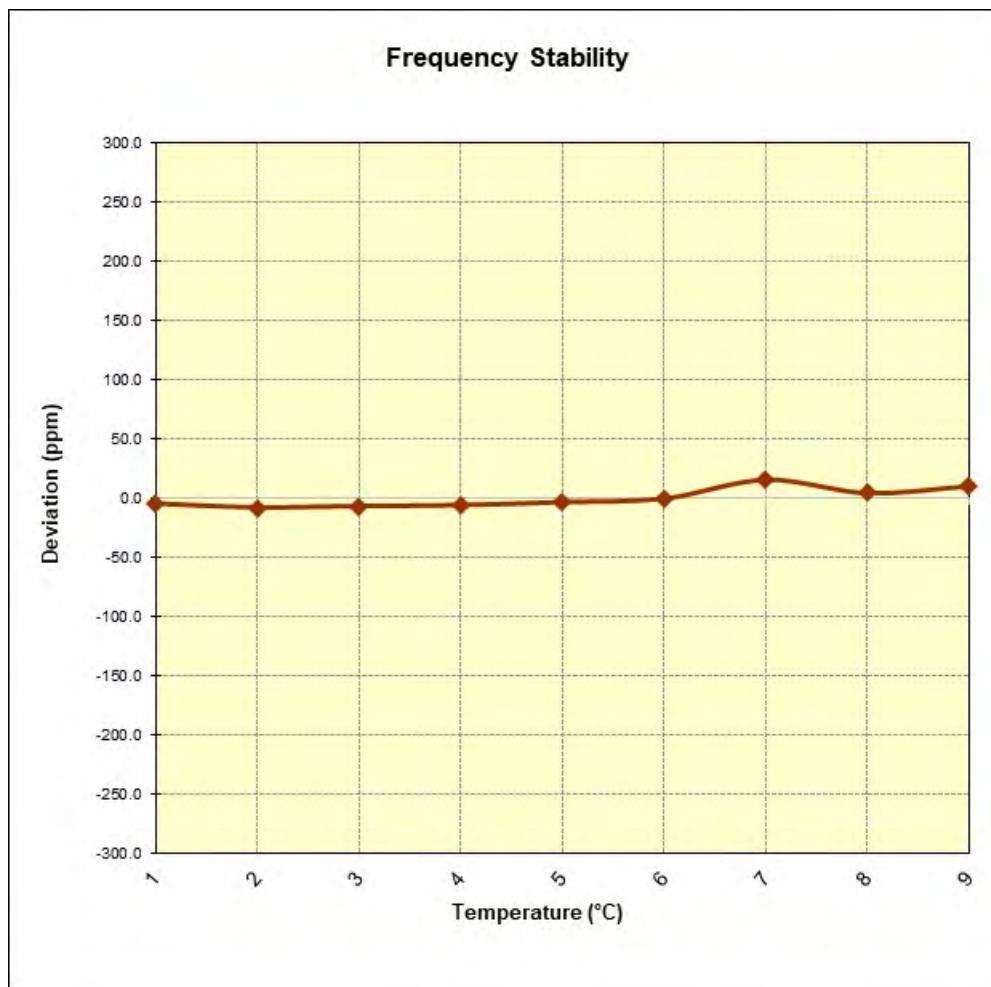


Figure 7-1. Frequency Stability Graph(n261)

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 365 of 371                 |

## Frequency Stability Measurements (n260)

§2.1055

OPERATING FREQUENCY: 38,495,520,000 Hz  
 CHANNEL: 2254091  
 REFERENCE VOLTAGE: 4.29 VDC

| VOLTAGE (%)    | POWER (VDC) | TEMP (°C)  | FREQUENCY (Hz)     | Freq. Dev. (Hz) | Deviation (%) |
|----------------|-------------|------------|--------------------|-----------------|---------------|
| 100 %          | 4.29        | + 20 (Ref) | 38,495,281,765,313 | 0               | 0.0000000     |
| 100 %          |             | - 30       | 38,495,342,349,282 | -60,583,968     | -0.0001574    |
| 100 %          |             | - 20       | 38,495,355,282,345 | -73,517,032     | -0.0001910    |
| 100 %          |             | - 10       | 38,495,513,372,892 | -231,607,579    | -0.0006017    |
| 100 %          |             | 0          | 38,495,424,265,533 | -142,500,220    | -0.0003702    |
| 100 %          |             | + 10       | 38,495,798,518,874 | -516,753,561    | -0.0013424    |
| 100 %          |             | + 20       | 38,495,255,159,026 | 26,606,287      | 0.0000691     |
| 100 %          |             | + 30       | 38,495,332,659,358 | -50,894,044     | -0.0001322    |
| 100 %          |             | + 40       | 38,495,251,232,030 | 30,533,284      | 0.0000793     |
| 100 %          |             | + 50       | 38,495,365,956,337 | -84,191,024     | -0.0002187    |
| BATT. ENDPOINT | 3.37        | + 20       | 38,495,262,110,262 | 19,655,052      | 0.0000511     |

Table 7-74. Frequency Stability Data(n260)

**Note:**

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|  |   |                                    |   |                                 |
|--|---|------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset      |   | Page 366 of 371                 |

## Frequency Stability Measurements (n260)

§2.1055

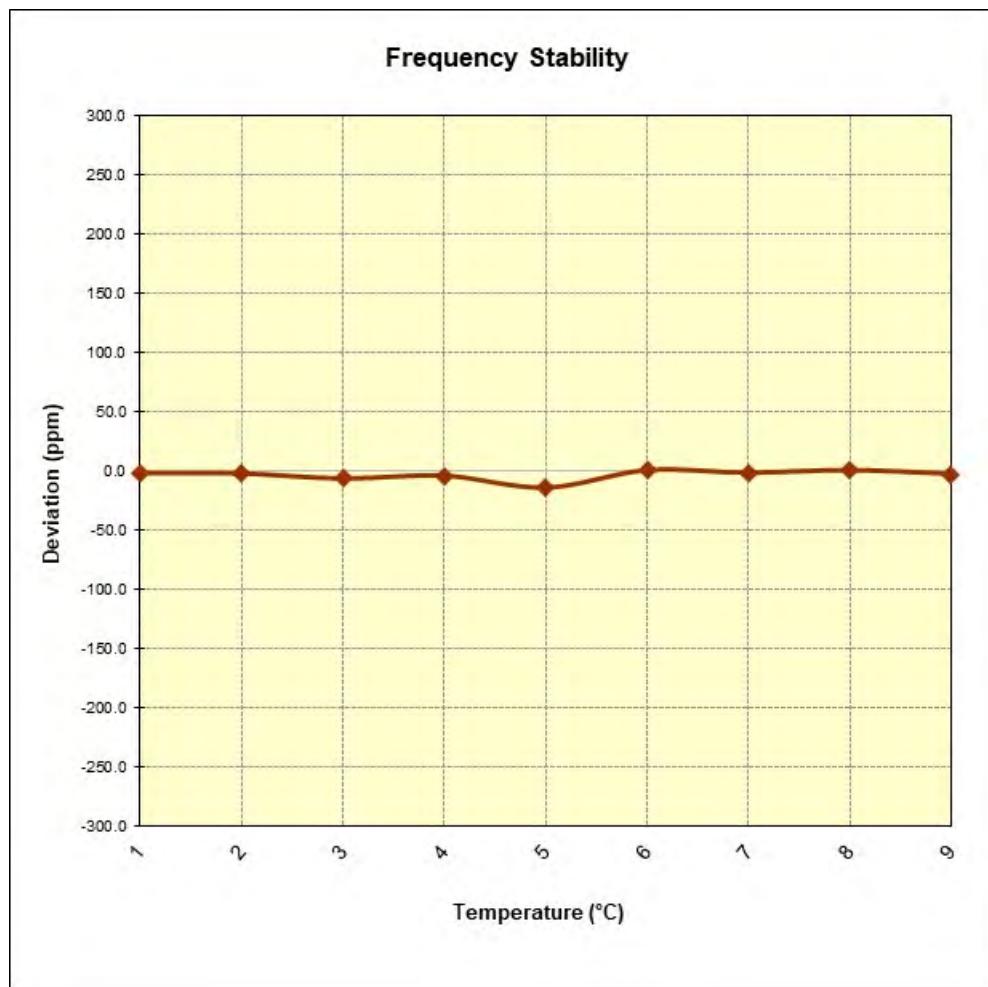


Figure 7-2. Frequency Stability Graph(n260)

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 367 of 371                 |

## 8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset** **FCC ID: A3LSMN976V** complies with all the requirements of Part 30.

|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  PCTEST <sup>®</sup> | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 368 of 371                 |

## 9.0 APPENDIX A

### 9.1 VDI Mixer Verification Certificate



#### Virginia Diodes, Inc

979 2nd St. SE  
Suite 309  
Charlottesville, VA 22902  
Phone: 434-297-3257  
Fax: 434-297-3258

#### ***Certificate of Conformance***

To: PCTEST Engineering Laboratory  
6660-B Dobbins Road  
Columbia, MD 21045  
United States

From: Virginia Diodes, Inc  
979 2nd St. SE  
Suite 309  
Charlottesville, VA 22902

Shipping Date: 05/14/18

Today's Date: 05/14/18

| Quantity | Shipped | Unit | Description  |
|----------|---------|------|--|
| 1        | EA      |      | VDIWR12.0SAX WR12SAX - Spectrum Analyzer Extension<br>Module / SN: SAX 252 |

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).



Authorized Signature  
Virginia Diodes, Inc

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|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 369 of 371                 |


**Virginia Diodes, Inc**

979 2nd St. SE  
 Suite 309  
 Charlottesville, VA 22902  
 Phone: 434-297-3257  
 Fax: 434-297-3258

***Certificate of Conformance***

**To:** PCTEST Engineering Laboratory  
 6660-B Dobbin Road  
 Columbia, MD 21045  
 United States

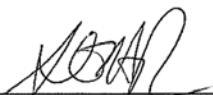
**From:** Virginia Diodes, Inc  
 979 2nd St. SE  
 Suite 309  
 Charlottesville, VA 22902

**Shipping Date:** 05/08/18

**Today's Date:** 05/08/18

| <b>Quantity</b> | <b>Shipped</b> | <b>Unit</b> | <b>Description</b>  |
|-----------------|----------------|-------------|---|
| 1               | EA             | VDIWR8.0SAX | WR8.0SAX - Spectrum Analyzer Extension Module; SN: SAX 253. |

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).



Authorized Signature  
 Virginia Diodes, Inc

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|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 370 of 371                 |


**Virginia Diodes, Inc**

979 2nd St. SE  
 Suite 309  
 Charlottesville, VA 22902  
 Phone: 434-297-3257  
 Fax: 434-297-3258

**Certificate of Conformance**

To: PCTEST Engineering Laboratory  
 6660-B Dobbin Road  
 Columbia, MD 21045  
 United States

From: Virginia Diodes, Inc  
 979 2nd St. SE  
 Suite 309  
 Charlottesville, VA 22902

Shipping Date: 05/21/18

Today's Date: 05/22/18

| Quantity | Shipped | Unit        | Description   |
|----------|---------|-------------|---|
| 1        | EA      | VDIWR5.1SAX | WR5.1SAX - Spectrum Analyzer Extension Module; SN: SAX 254. |

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).



Authorized Signature  
 Virginia Diodes, Inc

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|  |   |                                       |   |                                 |
|--|---|---------------------------------------|---|---------------------------------|
| FCC ID: A3LSMN976V                         |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M1905130071-06-R1.A3L | Test Dates:<br>05/14 - 07/12/2019   | EUT Type:<br>Portable Handset         |   | Page 371 of 371                 |