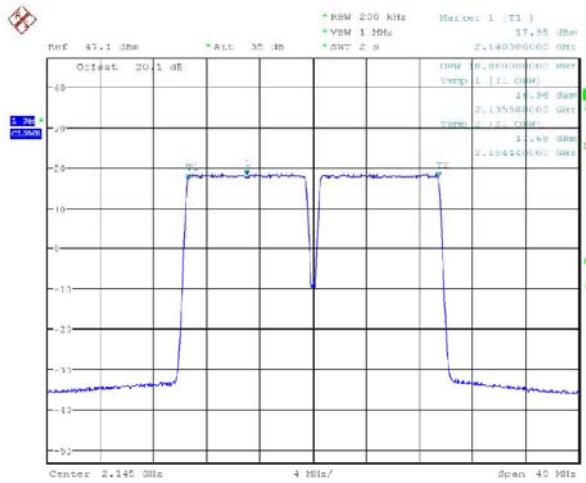
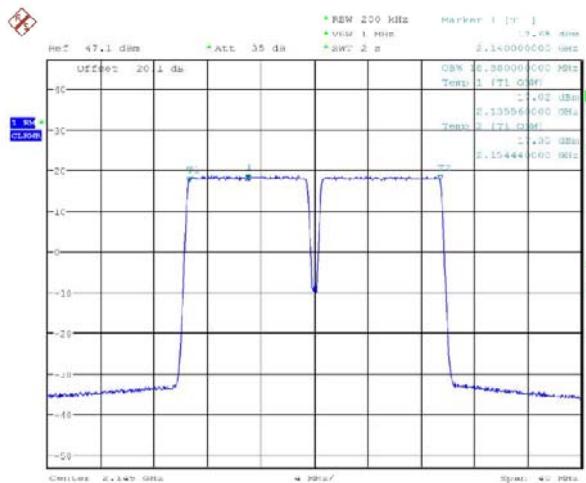




Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 2.MAY.2017 14:02:16

**Figure 55 Occupied Bandwidth – 64QAM (2140/2150 MHz) (10+10MHz Channel BW)**

Date: 2.MAY.2017 14:06:45

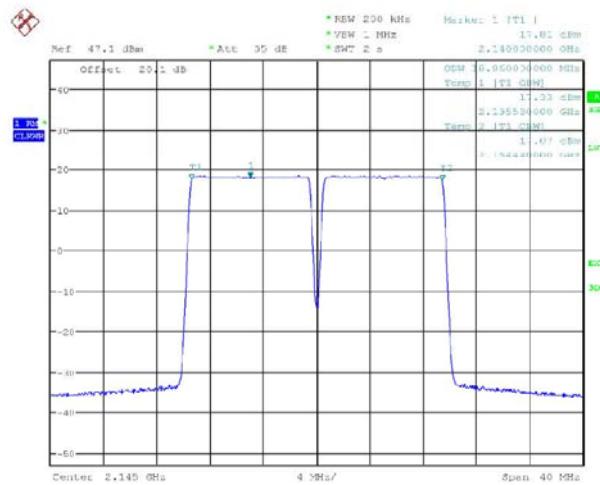
**Figure 56 Occupied Bandwidth – 256QAM (2140/2150 MHz) (10+10MHz Channel BW)**



Product Service

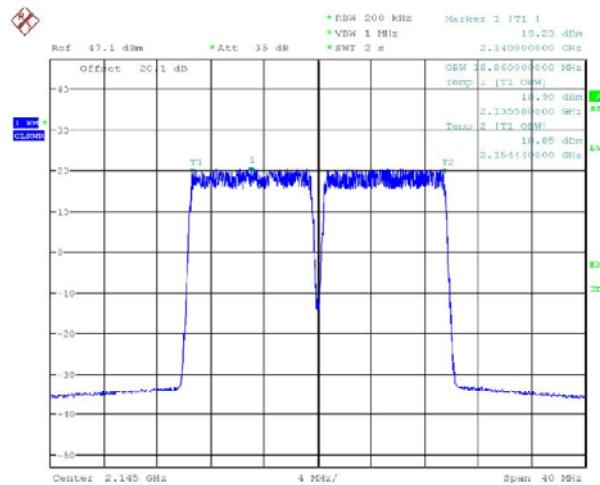
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976

**Config C ANT4:**

Date: 3.MAY.2017 08:05:30

**Figure 57 Occupied Bandwidth – QPSK (2140/2150 MHz) (10+10MHz Channel BW)**



Date: 3.MAY.2017 08:05:29

**Figure 58 Occupied Bandwidth – 16QAM (2140/2150 MHz) (10+10MHz channel BW)**

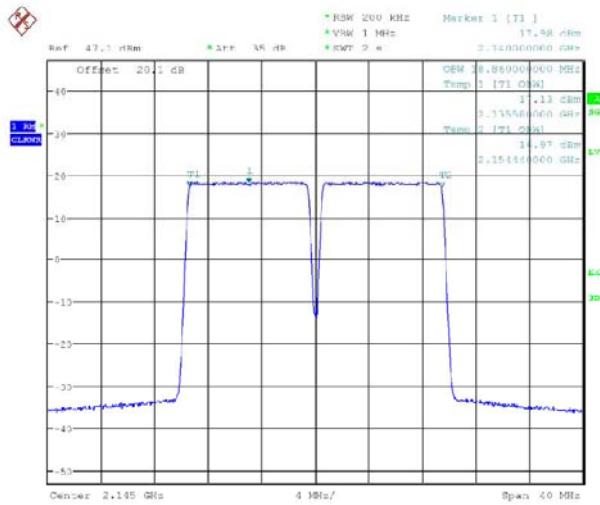
FCC 47 CFR part 27  
(2016)

16. May 2017

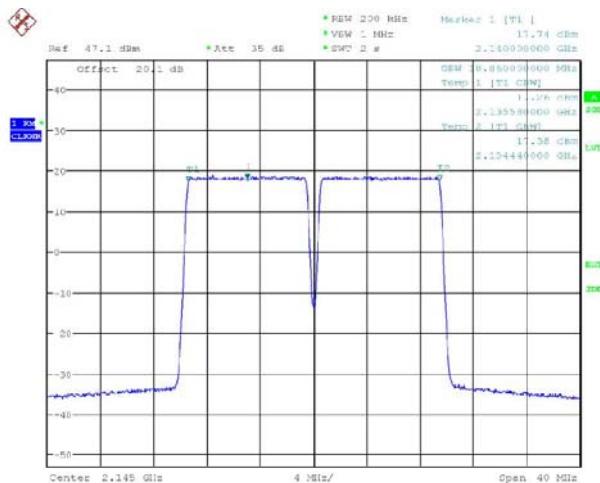
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Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 3.MAY.2017 08:09:57

**Figure 59 Occupied Bandwidth – 64QAM (2140/2150 MHz) (10+10MHz Channel BW)**

Date: 3.MAY.2017 09:14:00

**Figure 60 Occupied Bandwidth – 256QAM (2140/2150 MHz) (10+10MHz Channel BW)**



Product Service

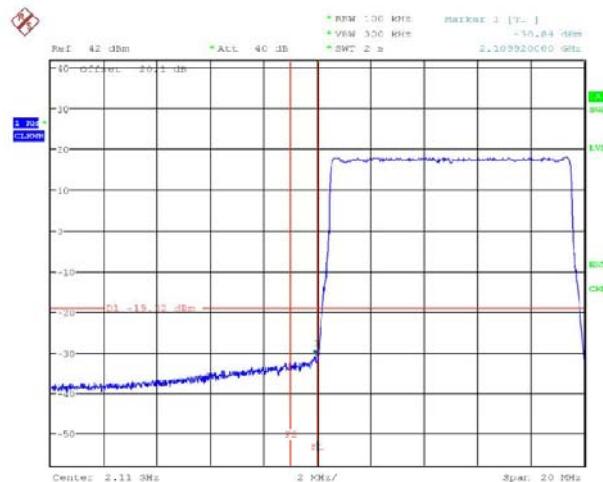
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976

### 5.2.3. Test No. 4: Spurious Emissions at the Antenna Terminals

The external attenuation (cable loss of the setup) can be seen as the ‘Offset’ value in the screenshots. The external attenuation is frequency dependant. Thus the various ‘Offset’ values in the screenshots may differ.

#### Config A ANT1:

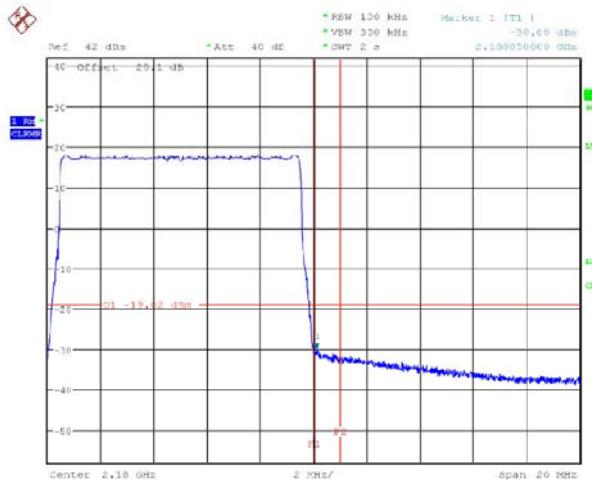


Date: 4.MAY.2017 10:10:15

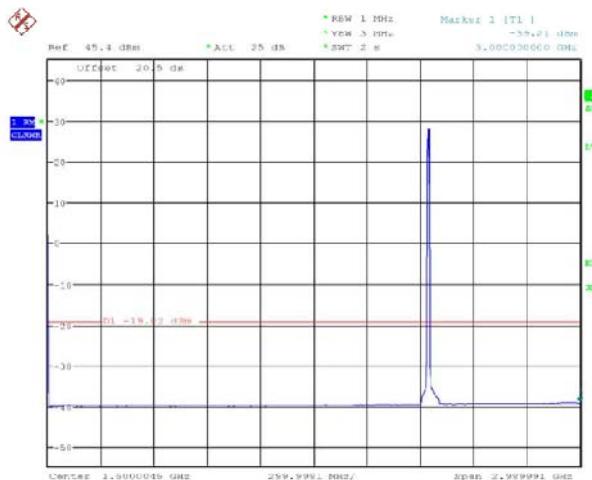
**Figure 61 Spurious Emissions (Lower Band Edge) – QPSK (2115.0 MHz)  
(10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 10:45:03

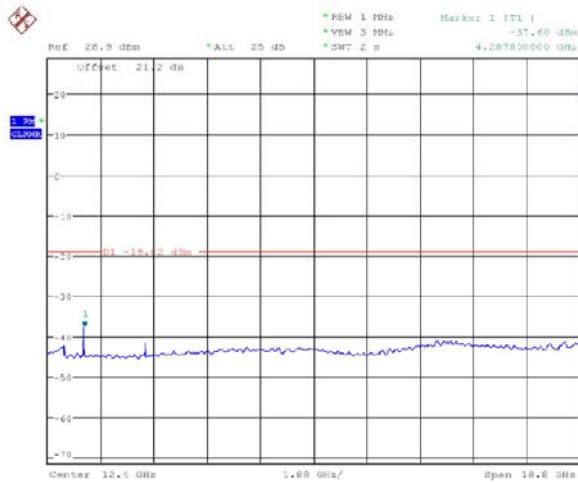
**Figure 62 Spurious Emissions (Upper Band Edge) – QPSK (2175.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 10:29:24

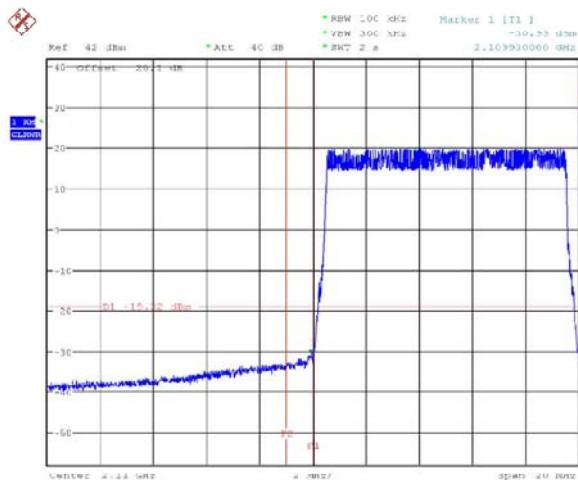
**Figure 63 Spurious Emissions (9kHz – 3GHz) - QPSK (2145.0) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 10:30:46

**Figure 64 Spurious Emissions (3GHz – 21.8GHz) – QPSK (2145.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 10:13:09

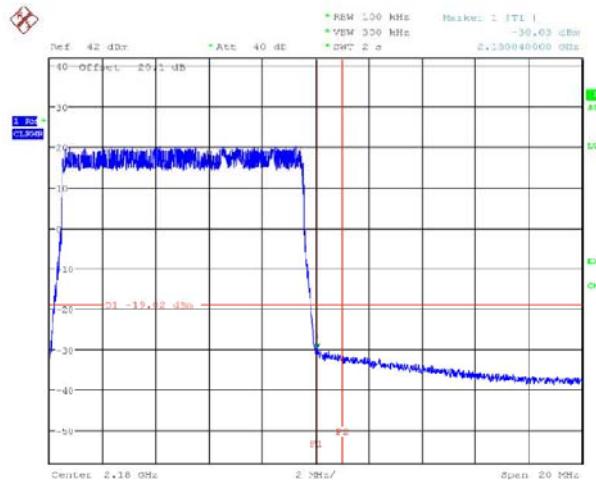
**Figure 65 Spurious Emissions (Lower Band Edge) – 16QAM (2115.0 MHz) (10MHz Channel BW)**



Product Service

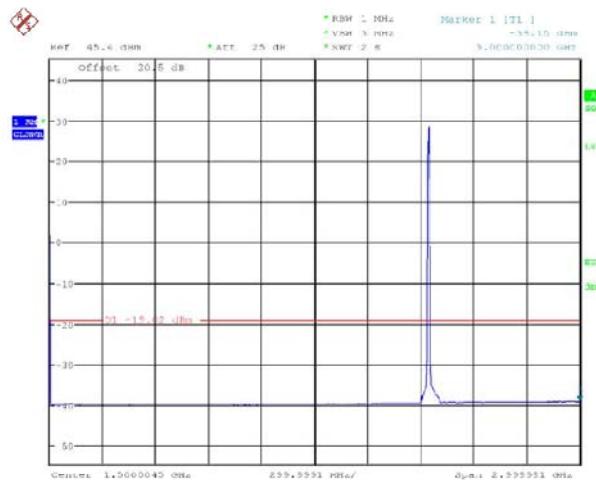
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976



Date: 4.MAY.2017 10:47:50

**Figure 66 Spurious Emissions (Upper Band Edge) – 16QAM (2175.0 MHz) (10MHz Channel BW)**



Date: 4.MAY.2017 10:23:37

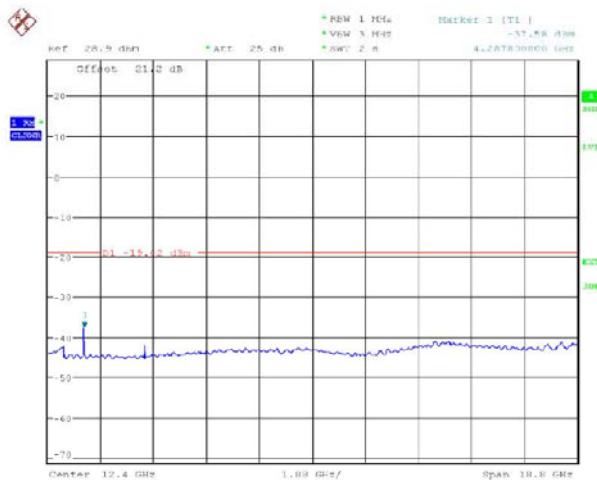
**Figure 67 Spurious Emissions (9kHz – 3GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**



Product Service

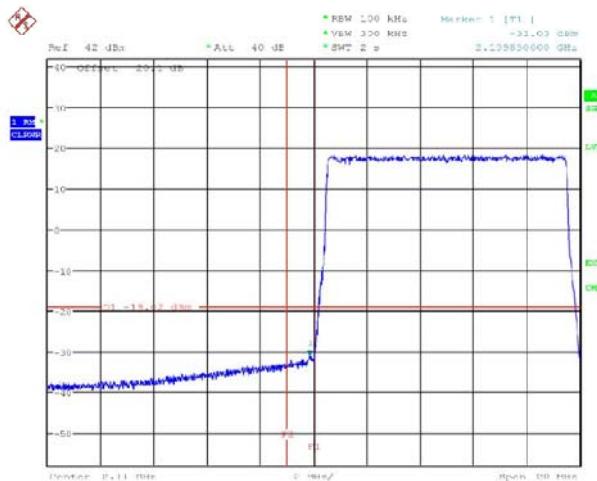
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976



Date: 4.MAY.2017 10:34:40

**Figure 68 Spurious Emissions (3GHz – 21.8GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**

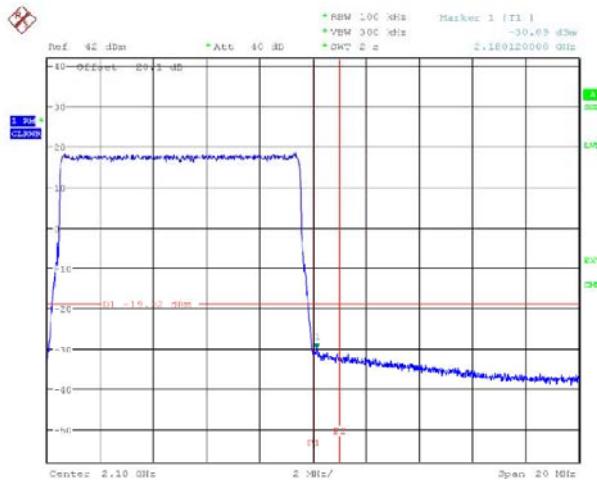


Date: 6.MAY.2017 19t.5t12

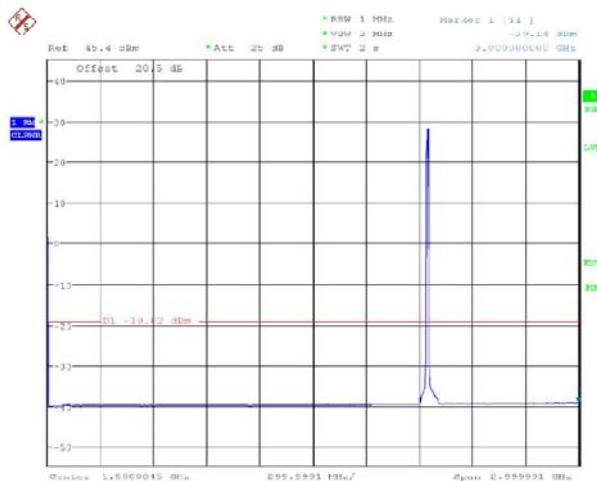
**Figure 69 Spurious Emissions (Lower Band Edge) – 64QAM (2115.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 10:50:39

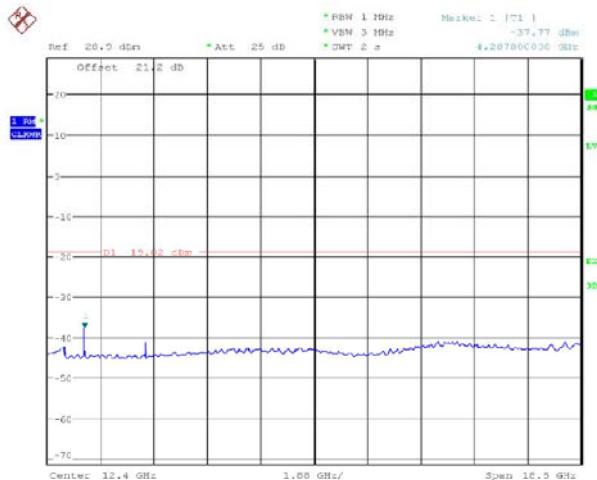
**Figure 70 Spurious Emissions (Upper Band Edge) – 64QAM (2175.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 10:37:20

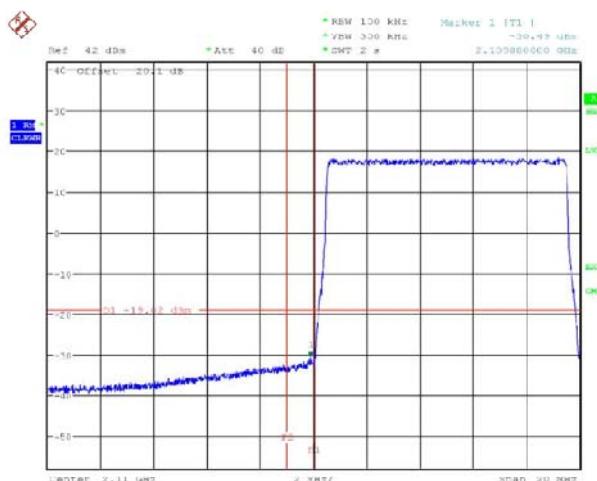
**Figure 71 Spurious Emissions (9kHz – 3GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 10:38:15

**Figure 72 Spurious Emissions (3GHz – 21.8GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 10:22:01

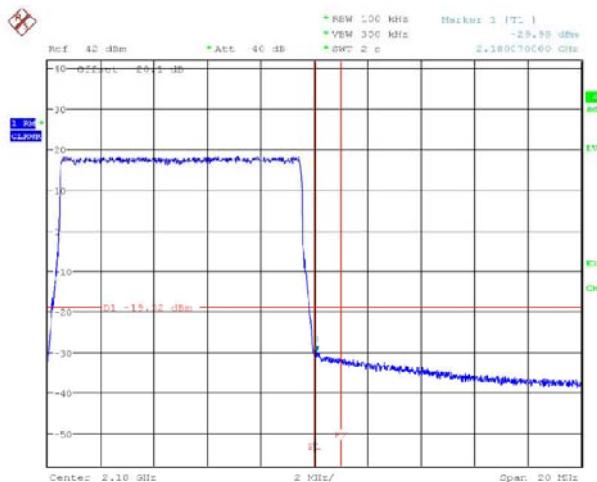
**Figure 73 Spurious Emissions (Lower Band Edge) – 256QAM (2115.0 MHz) (10MHz Channel BW)**



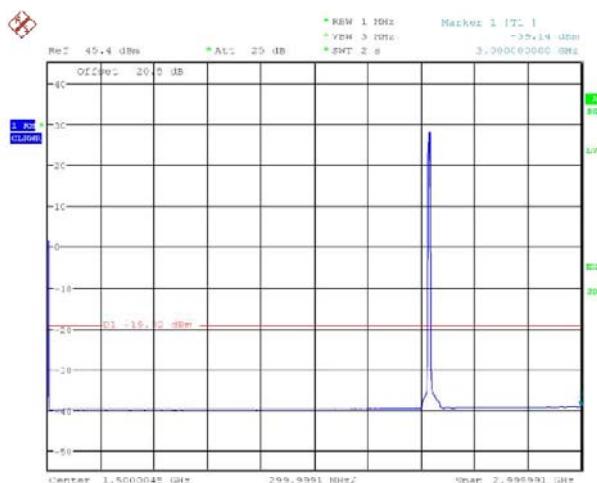
Product Service

FCC ID:  
VBNAIHIB-

Test Report No:  
D556049976



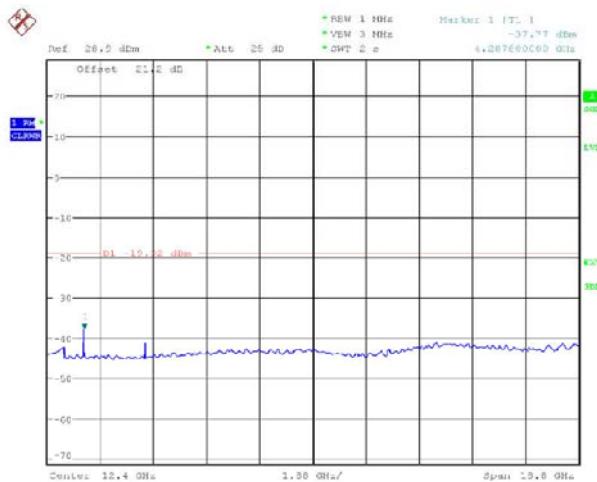
**Figure 74 Spurious Emissions (Upper Band Edge) – 256QAM (2175.0 MHz) (10MHz Channel BW)**



**Figure 75 Spurious Emissions (9kHz – 3GHz) – 256QAM (2145.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAIHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 10:41:38

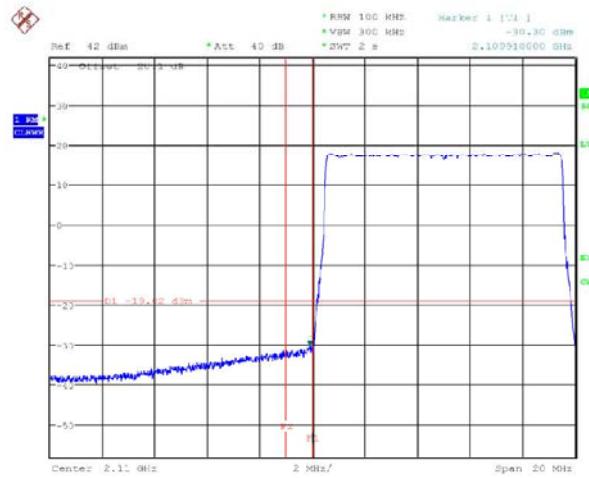
**Figure 76 Spurious Emissions (3GHz – 21.8GHz) – 256QAM (2145.0 MHz)  
(10MHz Channel BW)**



Product Service

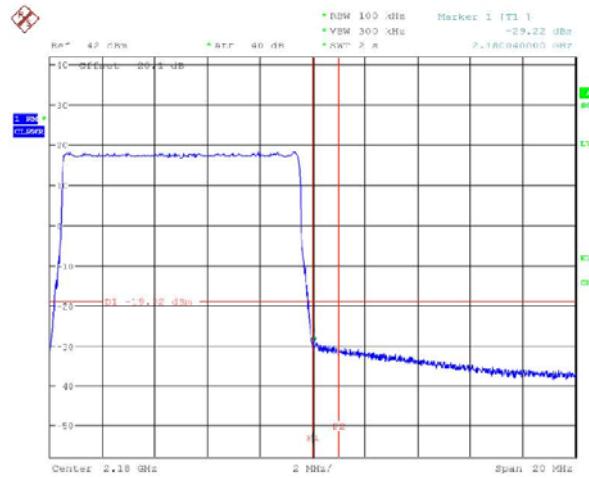
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976

**Config A ANT2:**

Date: 4.MAY.2017 09:29:14

**Figure 77 Spurious Emissions (Lower Band Edge) – QPSK (2115.0 MHz) (10MHz Channel BW)**



Date: 4.MAY.2017 09:57:16

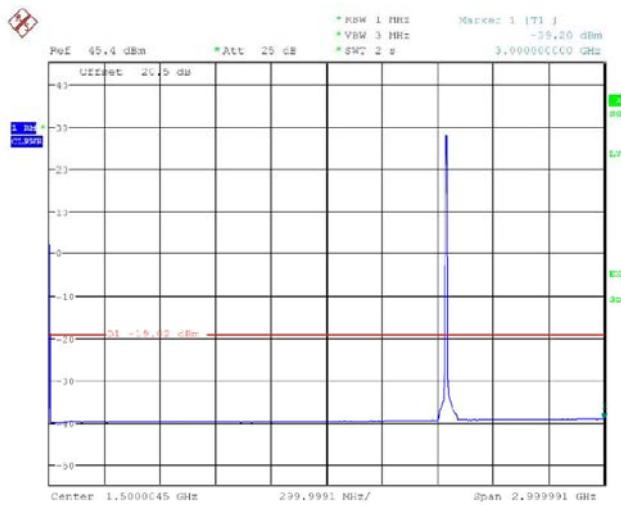
**Figure 78 Spurious Emissions (Upper Band Edge) – QPSK (2175.0 MHz) (10MHz Channel BW)**



Product Service

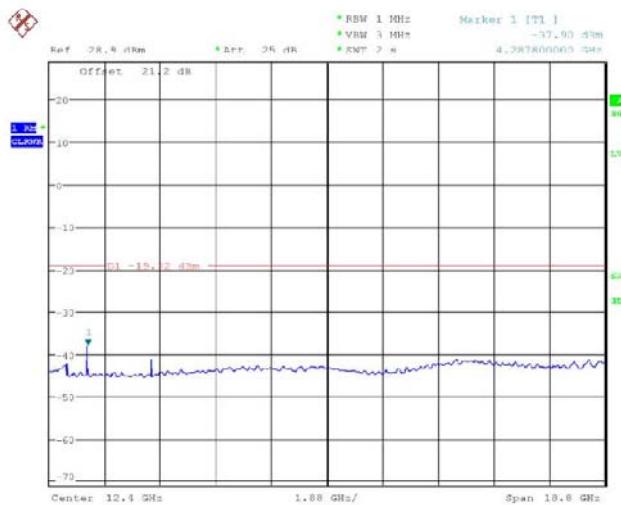
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976



Date: 4.MAY.2017 08:41:00

**Figure 79 Spurious Emissions (9kHz – 3GHz) - QPSK (2145.0) (10MHz Channel BW)**



Date: 4.MAY.2017 08:41:51

**Figure 80 Spurious Emissions (3GHz – 21.8GHz) – QPSK (2145.0 MHz) (10MHz Channel BW)**

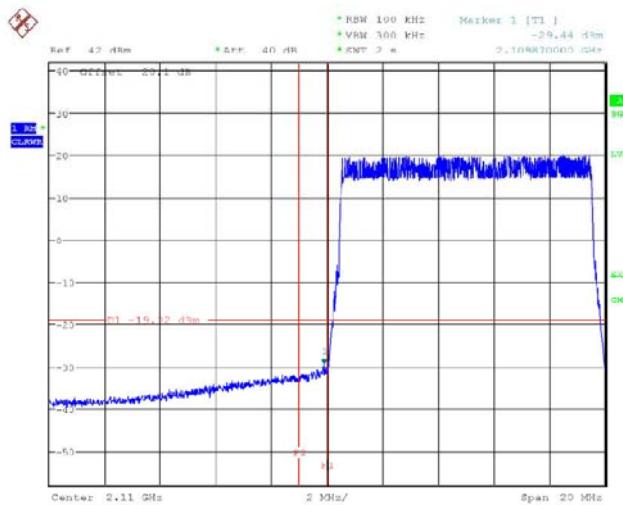
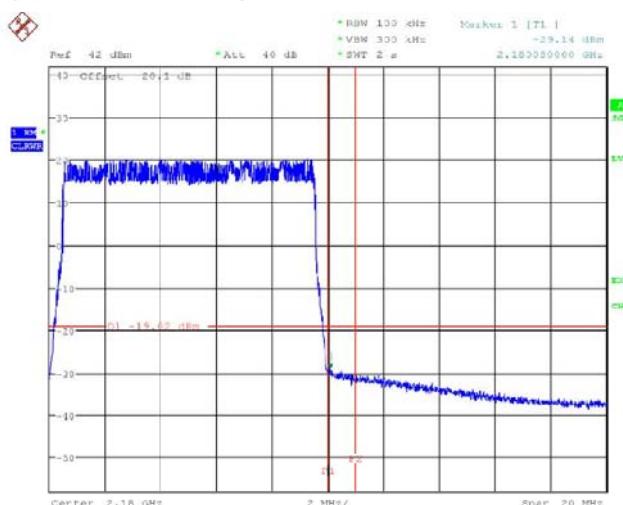
FCC 47 CFR part 27  
(2016)

16. May 2017

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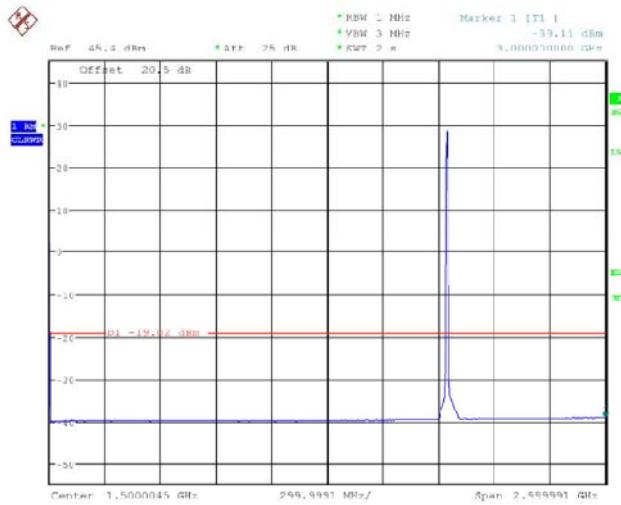


Product Service

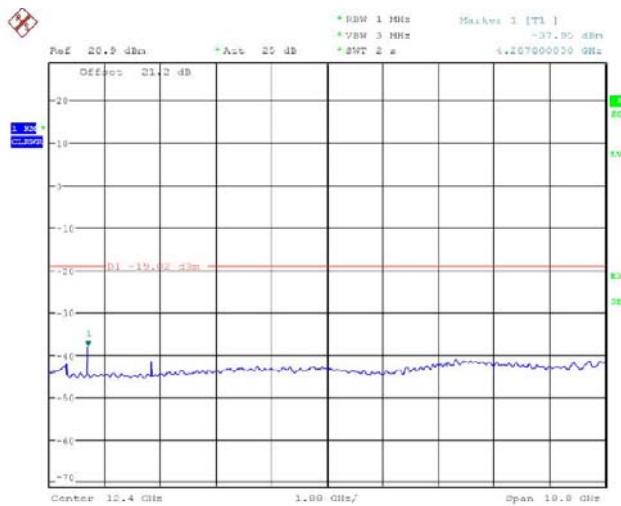
FCC ID:  
VBNAHIB-Test Report No:  
D556049976**Figure 81 Spurious Emissions (Lower Band Edge) – 16QAM (2115.0 MHz) (10MHz Channel BW)****Figure 82 Spurious Emissions (Upper Band Edge) – 16QAM (2175.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 08:45:06

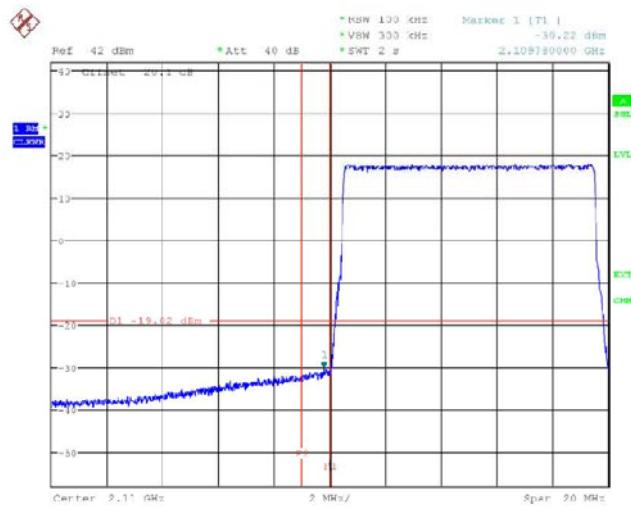
**Figure 83 Spurious Emissions (9kHz – 3GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 08:45:56

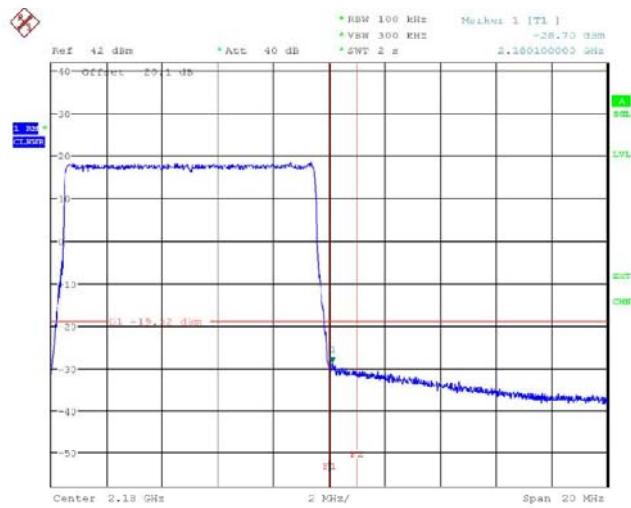
**Figure 84 Spurious Emissions (3GHz – 21.8GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 08:35:13

**Figure 85 Spurious Emissions (Lower Band Edge) – 64QAM (2115.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 09:02:34

**Figure 86 Spurious Emissions (Upper Band Edge) – 64QAM (2175.0 MHz) (10MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

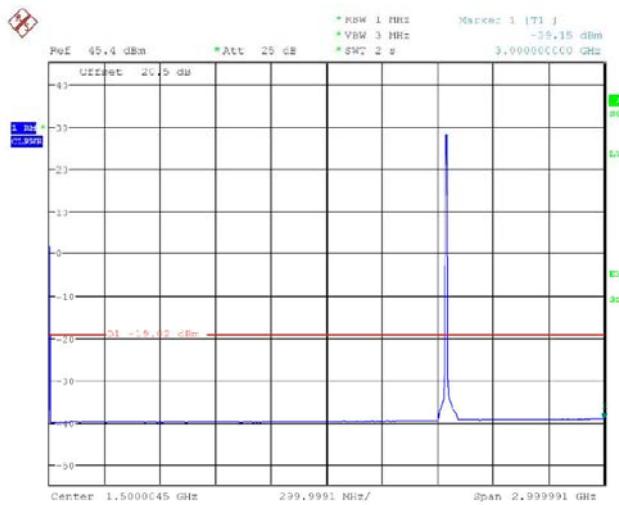
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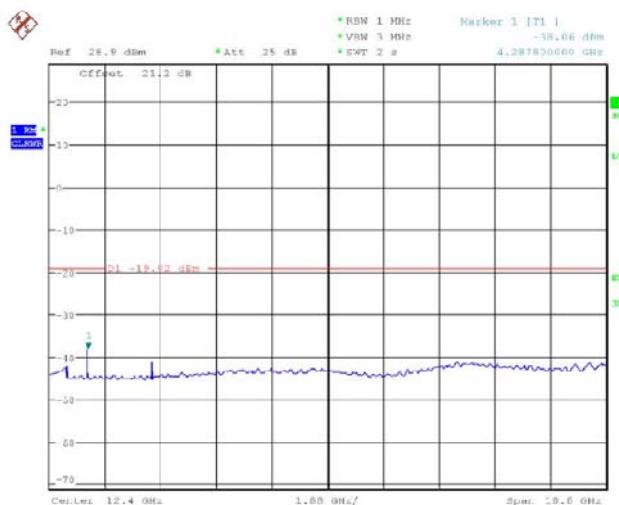
Product Service

FCC ID:  
VBNAHIB-

Test Report No:  
D556049976



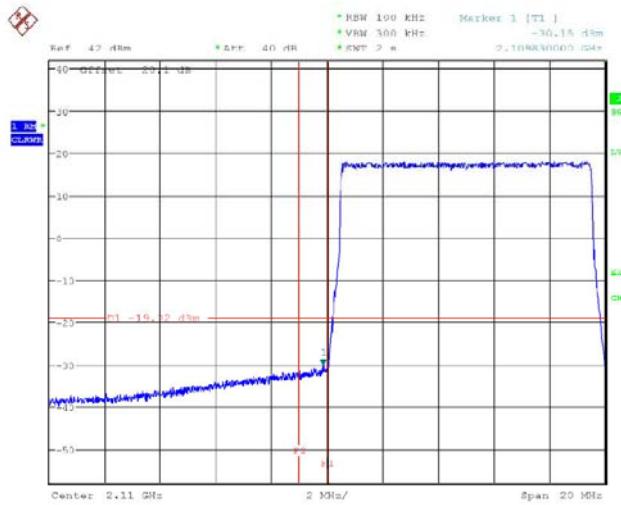
**Figure 87 Spurious Emissions (9kHz – 3GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**



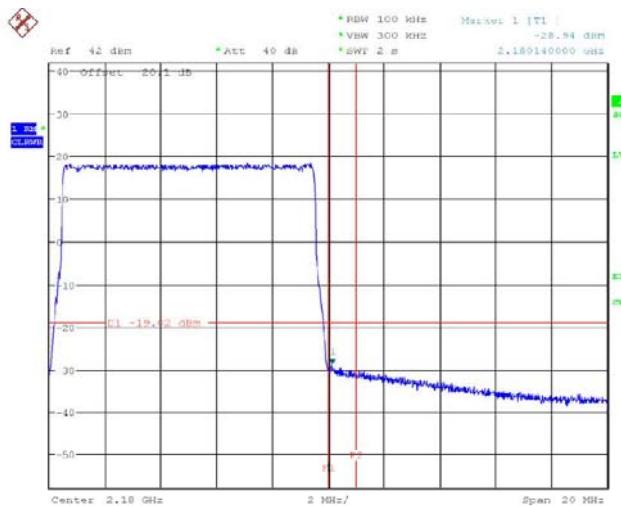
**Figure 88 Spurious Emissions (3GHz – 21.8GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 08:37:37

**Figure 89 Spurious Emissions (Lower Band Edge) – 256QAM (2115.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 09:05:11

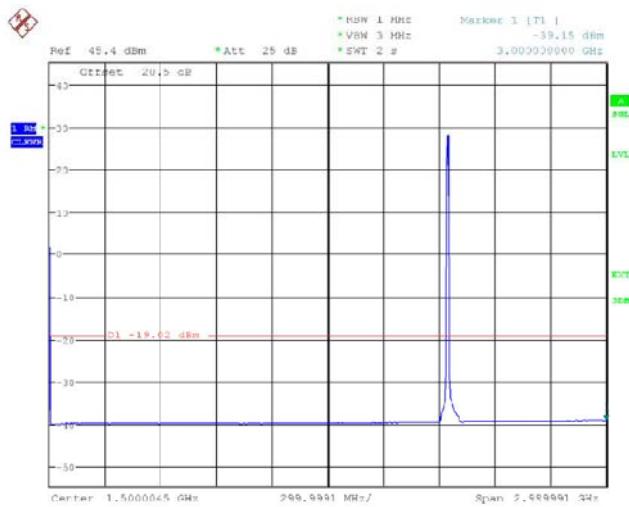
**Figure 90 Spurious Emissions (Upper Band Edge) – 256QAM (2175.0 MHz) (10MHz Channel BW)**



## Product Service

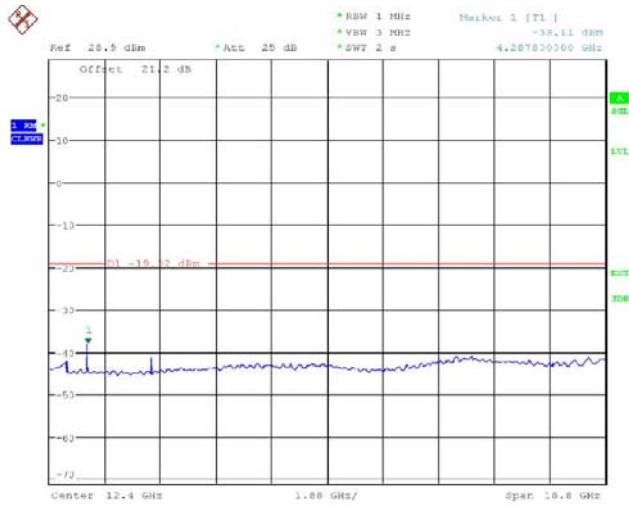
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976



Date: 4.MAY.2017 08:52:02

**Figure 91 Spurious Emissions (9kHz – 3GHz) – 256QAM (2145.0 MHz) (10MHz Channel BW)**

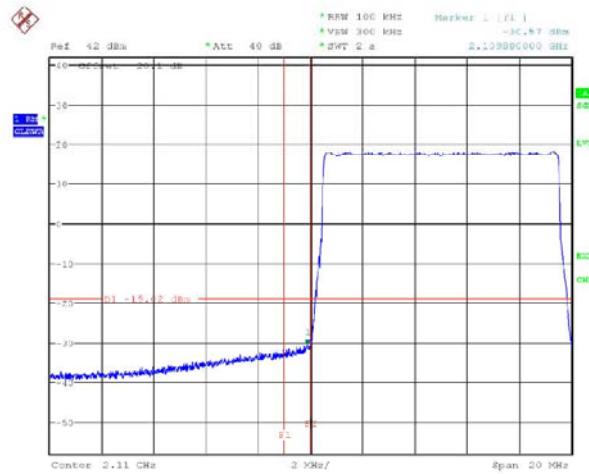
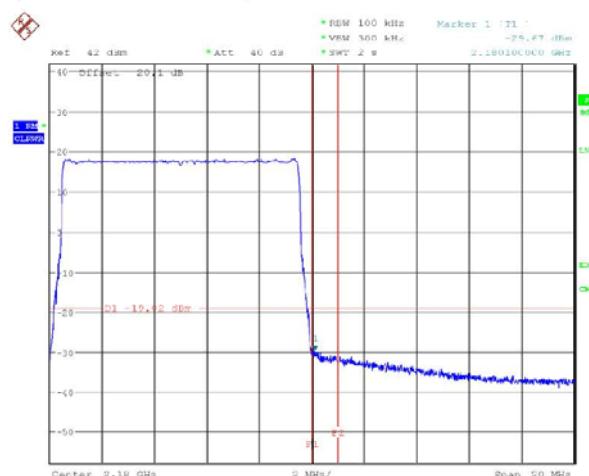


Date: 4.MAY.2017 08:53:48

**Figure 92 Spurious Emissions (3GHz – 21.8GHz) – 256QAM (2145.0 MHz) (10MHz Channel BW)**

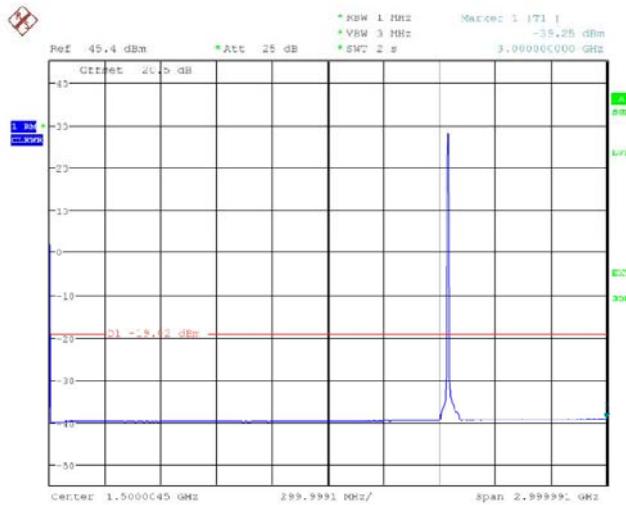
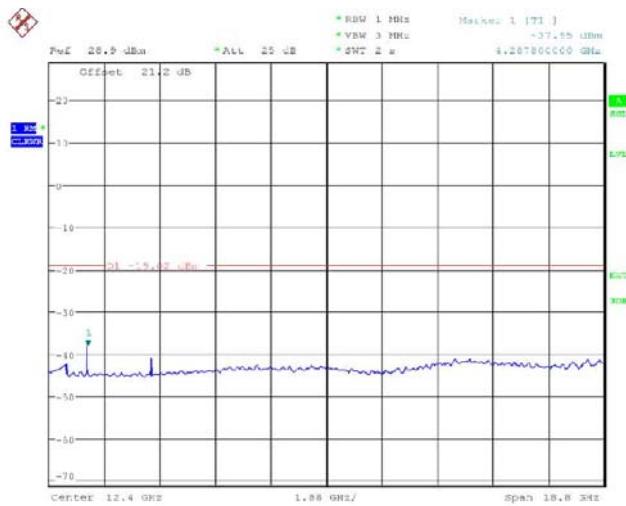


Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976**Config A ANT3:****Figure 93 Spurious Emissions (Lower Band Edge) – QPSK (2115.0 MHz) (10MHz Channel BW)****Figure 94 Spurious Emissions (Upper Band Edge) – QPSK (2175.0 MHz) (10MHz Channel BW)**

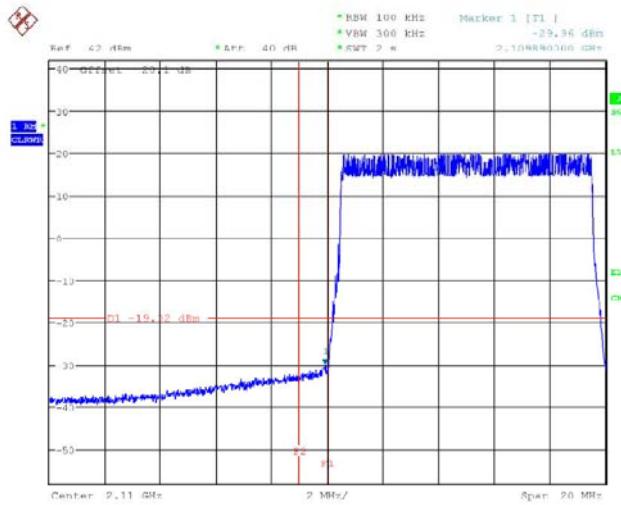


Product Service

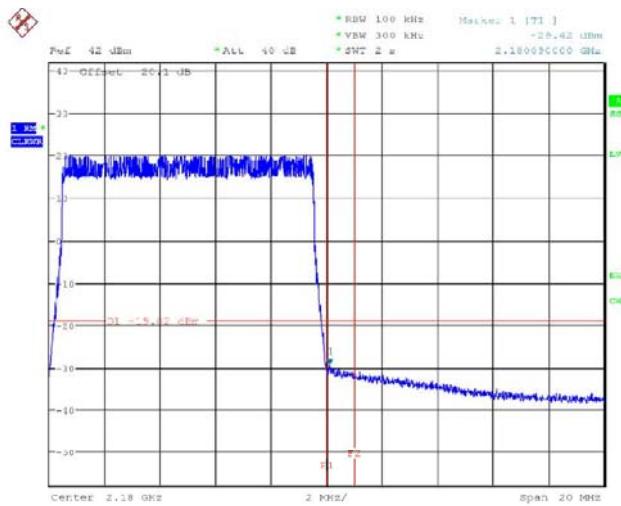
FCC ID:  
VBNAHIB-Test Report No:  
D556049976**Figure 95 Spurious Emissions (9kHz – 3GHz) - QPSK (2145.0) (10MHz Channel BW)****Figure 96 Spurious Emissions (3GHz – 21.8GHz) – QPSK (2145.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 06:53:52

**Figure 97 Spurious Emissions (Lower Band Edge) – 16QAM (2115.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 08:14:51

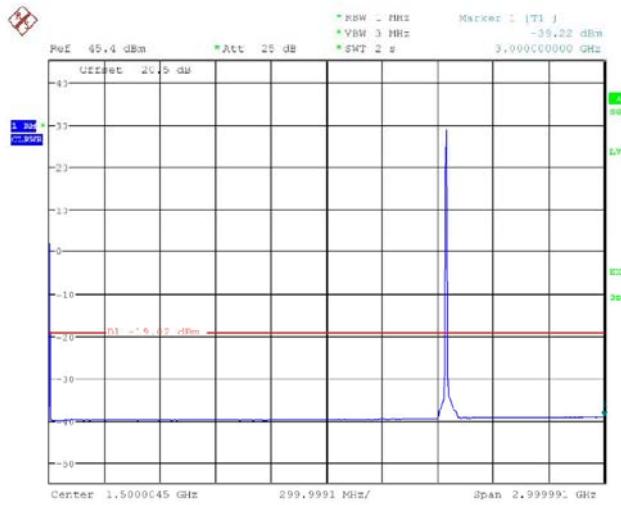
**Figure 98 Spurious Emissions (Upper Band Edge) – 16QAM (2175.0 MHz) (10MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

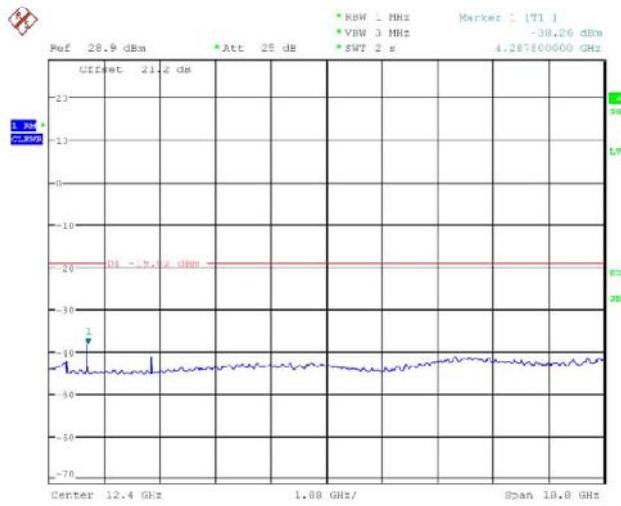
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Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 07:56:41

**Figure 99 Spurious Emissions (9kHz – 3GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 07:57:36

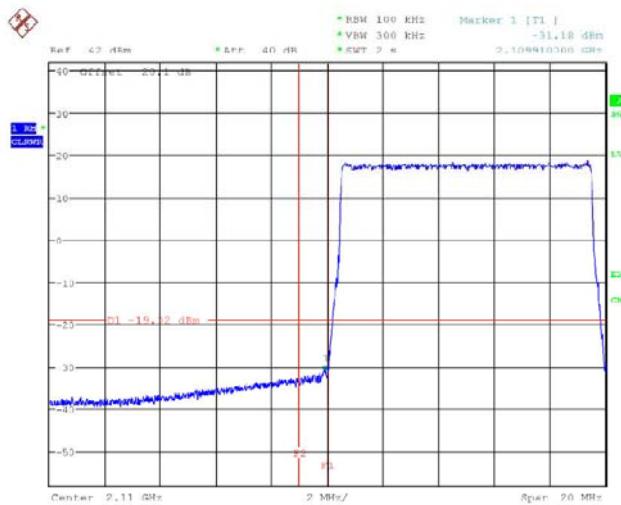
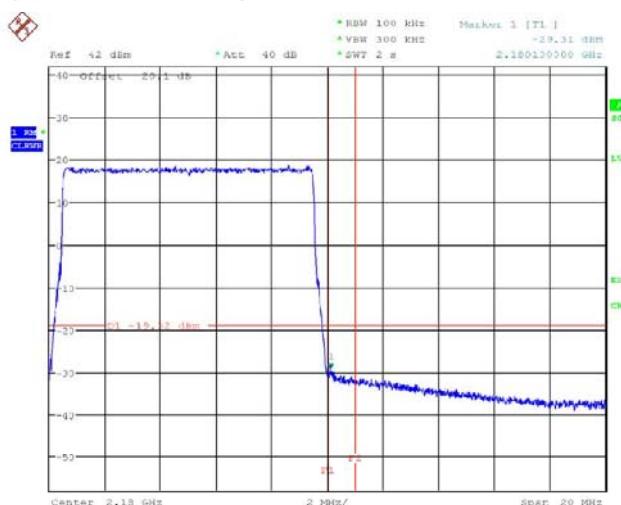
**Figure 100 Spurious Emissions (3GHz – 21.8GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**FCC 47 CFR part 27  
(2016)

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Product Service

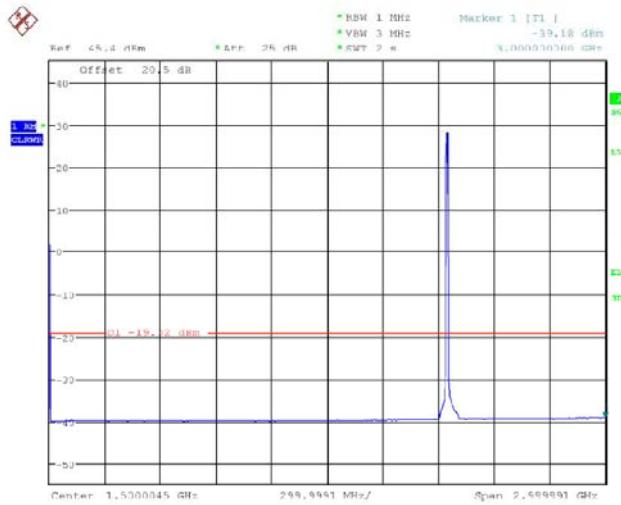
FCC ID:  
VBNAHIB-Test Report No:  
D556049976**Figure 101 Spurious Emissions (Lower Band Edge) – 64QAM (2115.0 MHz) (10MHz Channel BW)****Figure 102 Spurious Emissions (Upper Band Edge) – 64QAM (2175.0 MHz) (10MHz Channel BW)**



## Product Service

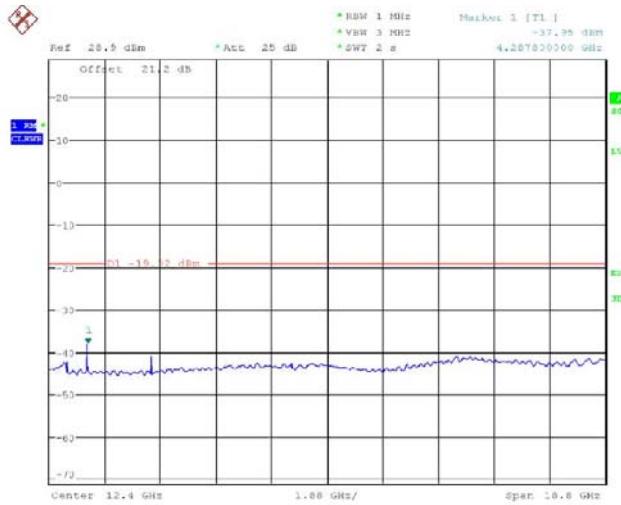
FCC ID:  
VBNAHIB-

Test Report No:  
D556049976



Date: 4.MAY.2017 08:02:09

**Figure 103 Spurious Emissions (9kHz – 3GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**

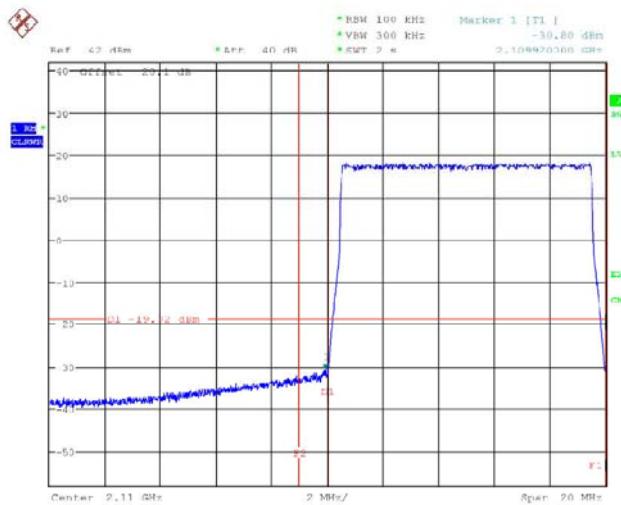


Date: 4.MAY.2017 08:02:50

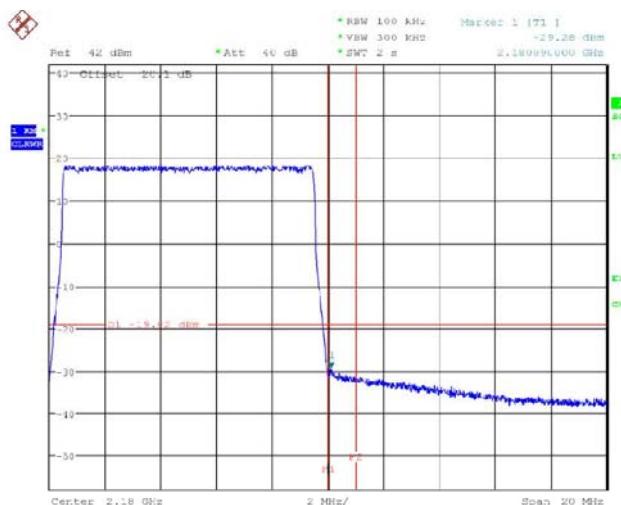
**Figure 104 Spurious Emissions (3GHz – 21.8GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 07:43:40

**Figure 105 Spurious Emissions (Lower Band Edge) – 256QAM (2115.0 MHz) (10MHz Channel BW)**

Date: 4.MAY.2017 08:21:35

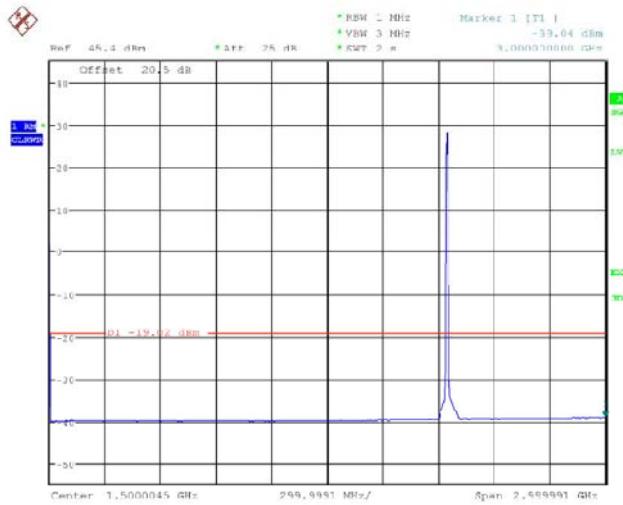
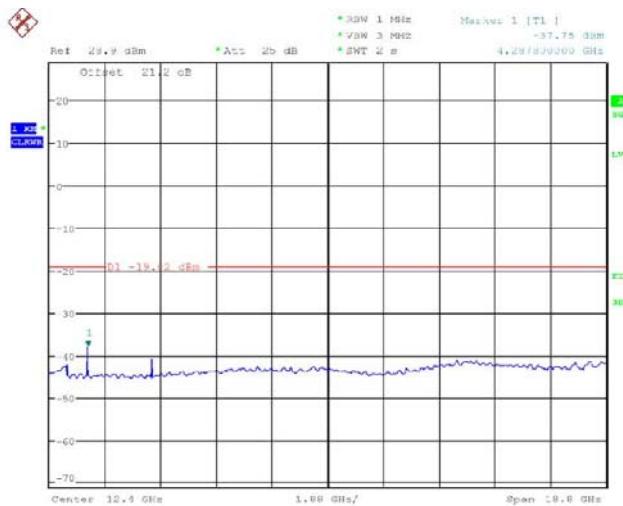
**Figure 106 Spurious Emissions (Upper Band Edge) – 256QAM (2175.0 MHz) (10MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

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Product Service

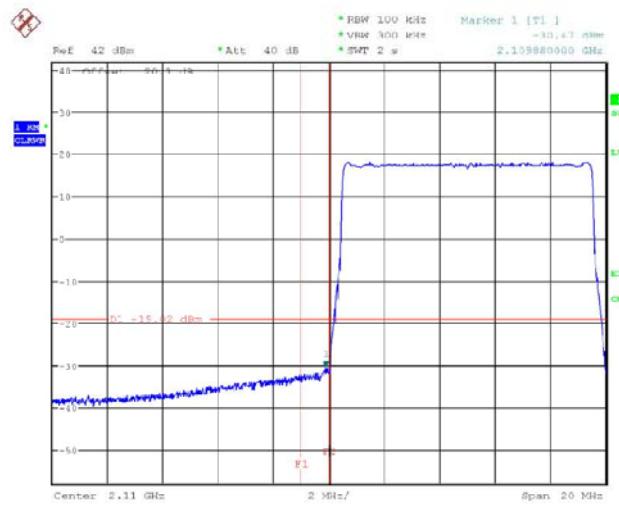
FCC ID:  
VBNAHIB-Test Report No:  
D556049976**Figure 107 Spurious Emissions (9kHz – 3GHz) – 256QAM (2145.0 MHz) (10MHz Channel BW)****Figure 108 Spurious Emissions (3GHz – 21.8GHz) – 256QAM (2145.0 MHz) (10MHz Channel BW)**



Product Service

FCC ID:  
VBNAHIB-

Test Report No:  
D556049976

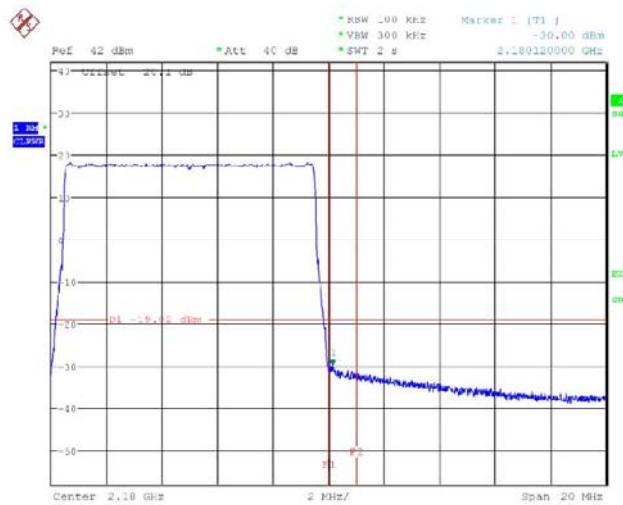
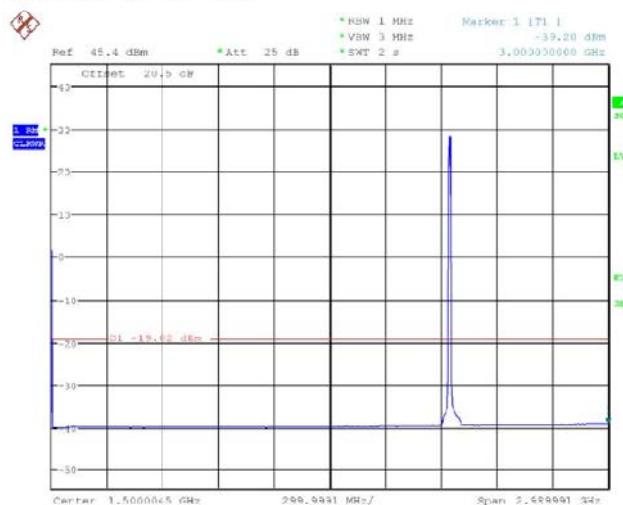
**Config A ANT4:**

Date: 3.MAY.2017 11:16:46

**Figure 109 Spurious Emissions (Lower Band Edge) – QPSK (2115.0 MHz)  
(10MHz Channel BW)**



Product Service

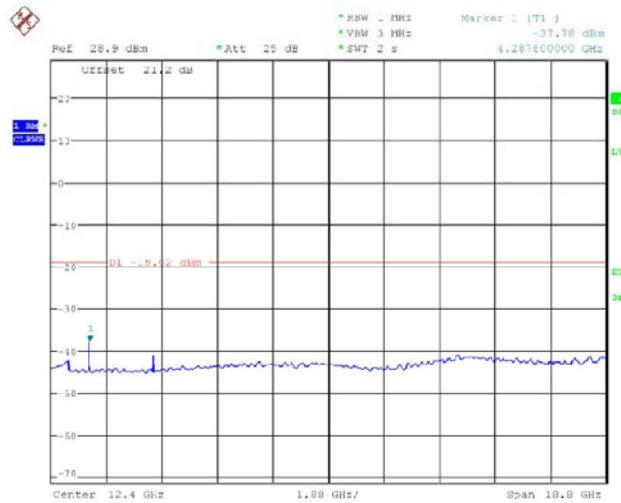
FCC ID:  
VBNAHIB-Test Report No:  
D556049976**Figure 110 Spurious Emissions (Upper Band Edge) – QPSK (2175.0 MHz) (10MHz Channel BW)****Figure 111 Spurious Emissions (9kHz – 3GHz) - QPSK (2145.0) (10MHz Channel BW)**



Product Service

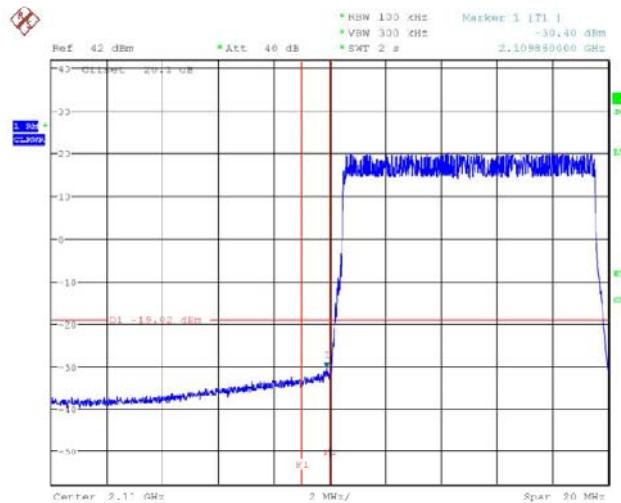
FCC ID:  
VBNAHIB-

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D556049976



Date: 3.MAY.2017 13:22:36

**Figure 112 Spurious Emissions (3GHz – 21.8GHz) – QPSK (2145.0 MHz) (10MHz Channel BW)**



Date: 3.MAY.2017 11:44:40

**Figure 113 Spurious Emissions (Lower Band Edge) – 16QAM (2115.0 MHz) (10MHz Channel BW)**

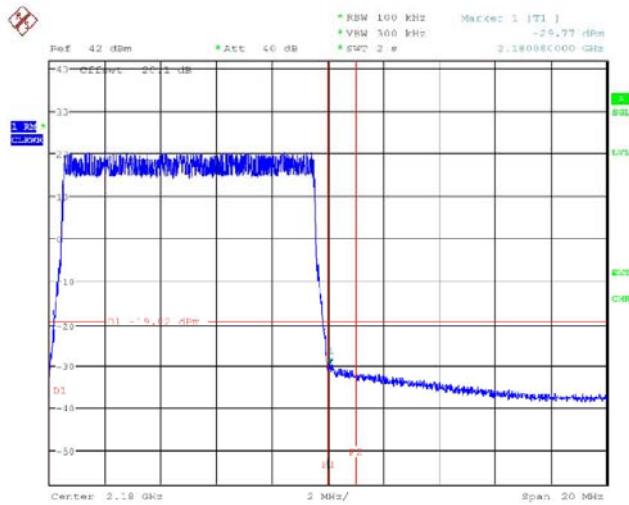
FCC 47 CFR part 27  
(2016)

16. May 2017

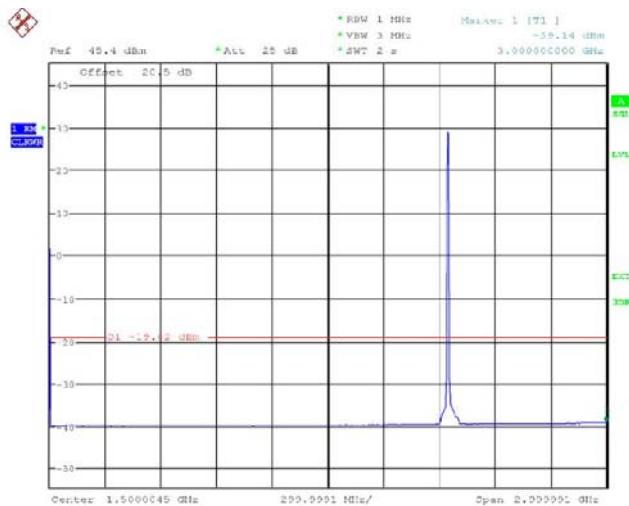
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Date: 4.MAY.2017 06:23:25

**Figure 114 Spurious Emissions (Upper Band Edge) – 16QAM (2175.0 MHz) (10MHz Channel BW)**

Date: 3.MAY.2017 13:25:31

**Figure 115 Spurious Emissions (9kHz – 3GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

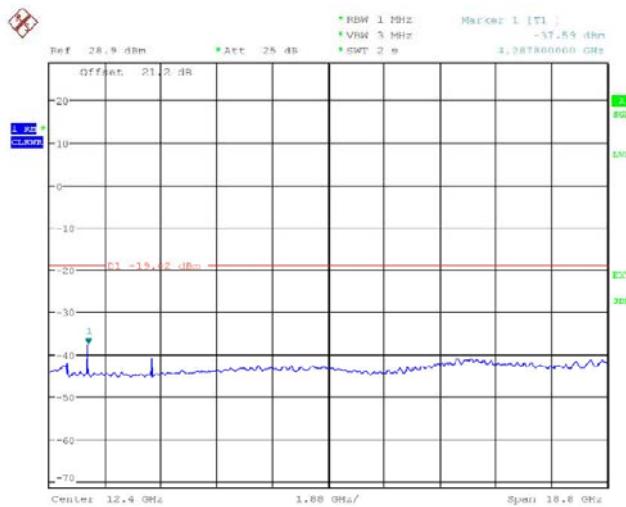
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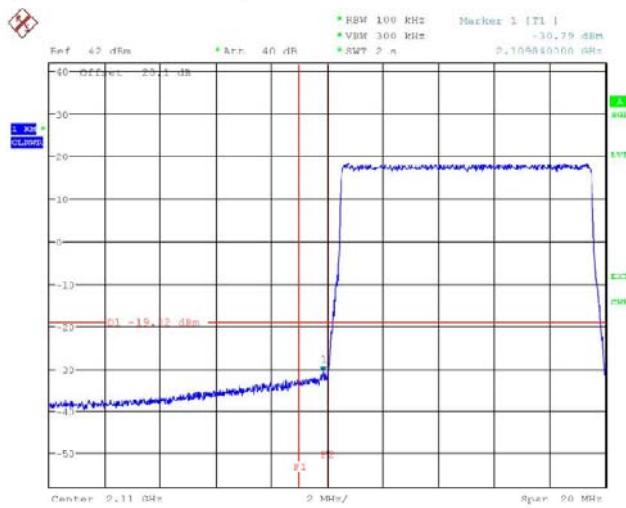
FCC ID:  
VBNAHIB-

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D556049976



Date: 3.MAY.2017 13:26:18

**Figure 116 Spurious Emissions (3GHz – 21.8GHz) – 16QAM (2145.0 MHz) (10MHz Channel BW)**



Date: 3.MAY.2017 11:47:20

**Figure 117 Spurious Emissions (Lower Band Edge) – 64QAM (2115.0 MHz) (10MHz Channel BW)**

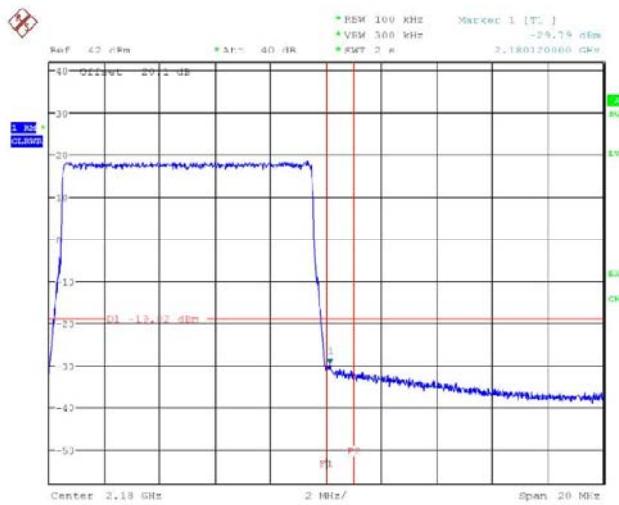
FCC 47 CFR part 27  
(2016)

16. May 2017

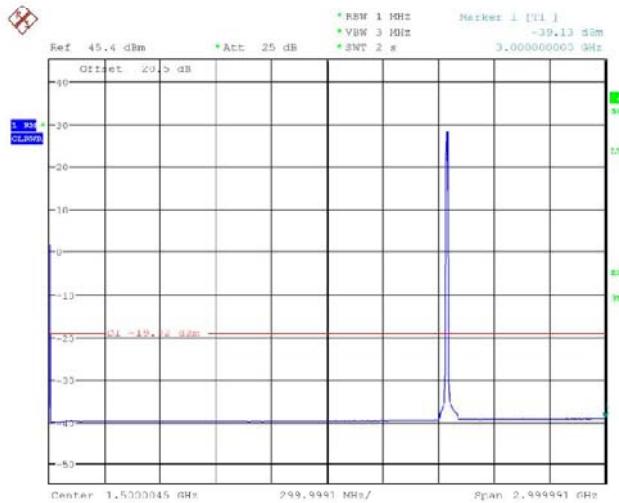
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FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 06:35:51

**Figure 118 Spurious Emissions (Upper Band Edge) – 64QAM (2175.0 MHz) (10MHz Channel BW)**

Date: 5.MAY.2017 13:28:46

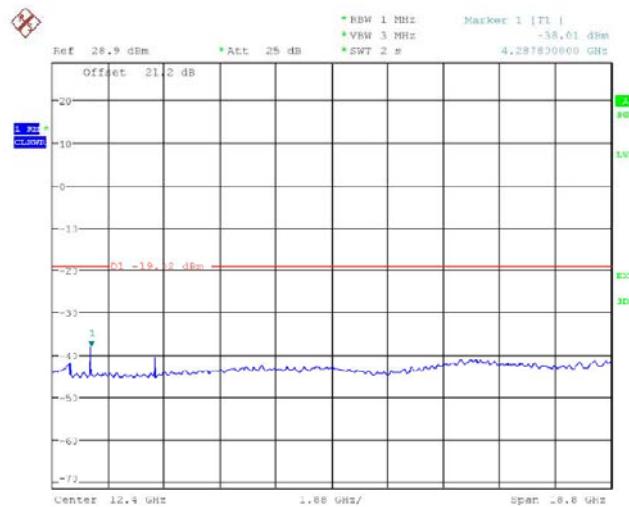
**Figure 119 Spurious Emissions (9kHz – 3GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

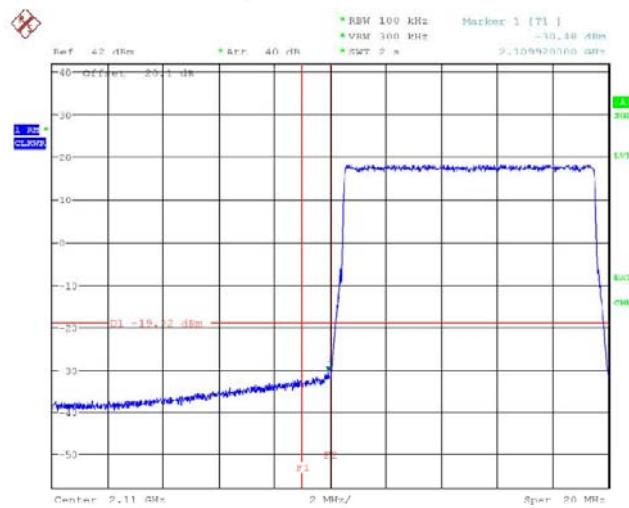
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FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 3.MAY.2017 13:29:35

**Figure 120 Spurious Emissions (3GHz – 21.8GHz) – 64QAM (2145.0 MHz) (10MHz Channel BW)**

Date: 3.MAY.2017 11:52:12

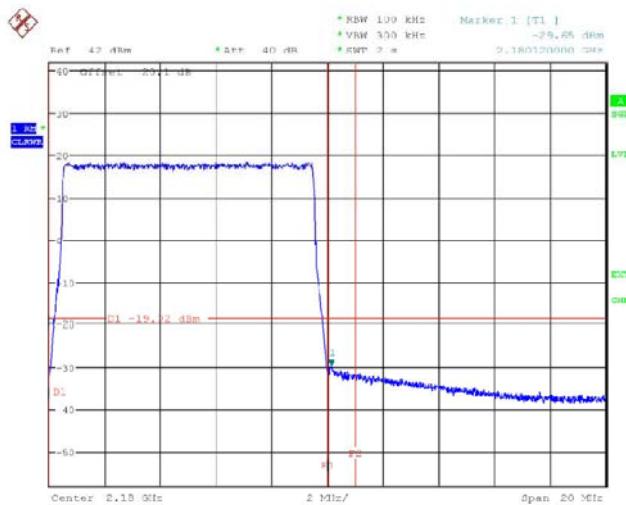
**Figure 121 Spurious Emissions (Lower Band Edge) – 256QAM (2115.0 MHz) (10MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

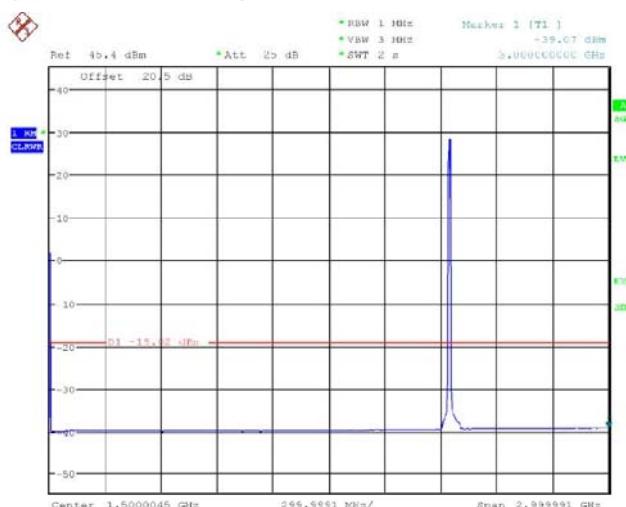
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VBNAHIB-Test Report No:  
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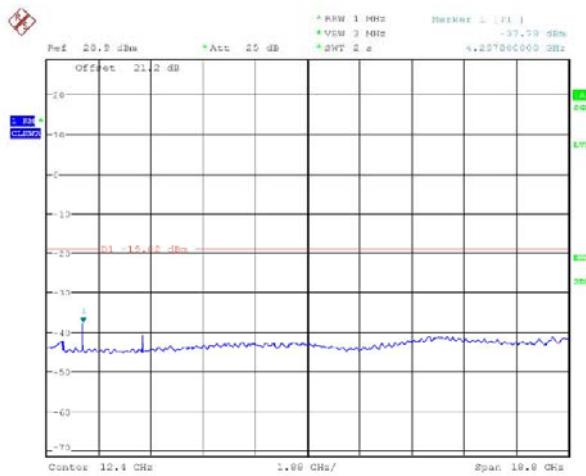
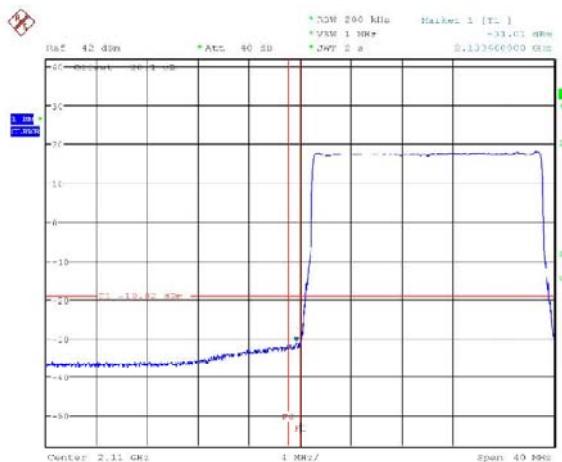
**Figure 122 Spurious Emissions (Upper Band Edge) – 256QAM (2175.0 MHz)  
(10MHz Channel BW)**



**Figure 123 Spurious Emissions (9kHz – 3GHz) – 256QAM (2145.0 MHz)  
(10MHz Channel BW)**



Product Service

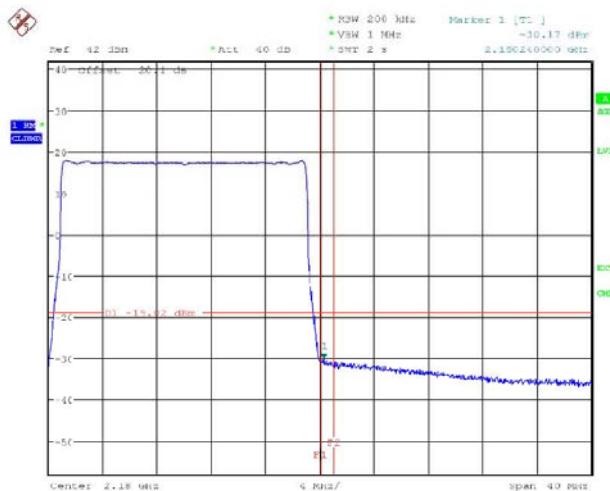
FCC ID:  
VBNAHIB-Test Report No:  
D556049976**Figure 124 Spurious Emissions (3GHz – 21.8GHz) – 256QAM (2145.0 MHz) (10MHz Channel BW)****Config B ANT1:****Figure 125 Spurious Emissions (Lower Band Edge) – QPSK (2120.0 MHz) (20MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

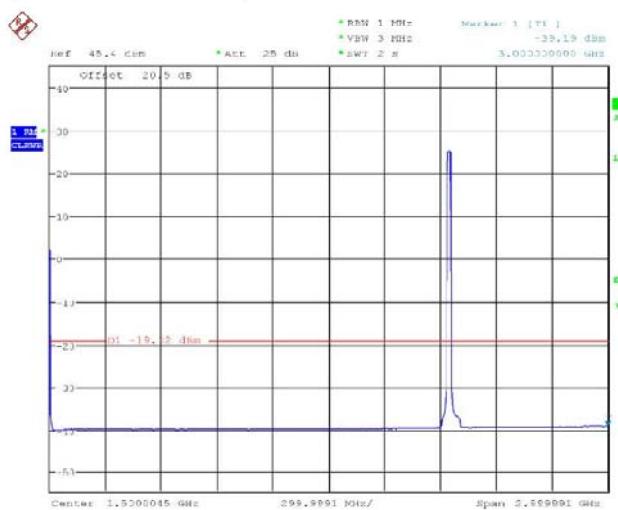
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Date: 4.MAY.2017 13:11:00

**Figure 126 Spurious Emissions (Upper Band Edge) – QPSK (2170.0 MHz) (20MHz Channel BW)**

Date: 4.MAY.2017 12:35:43

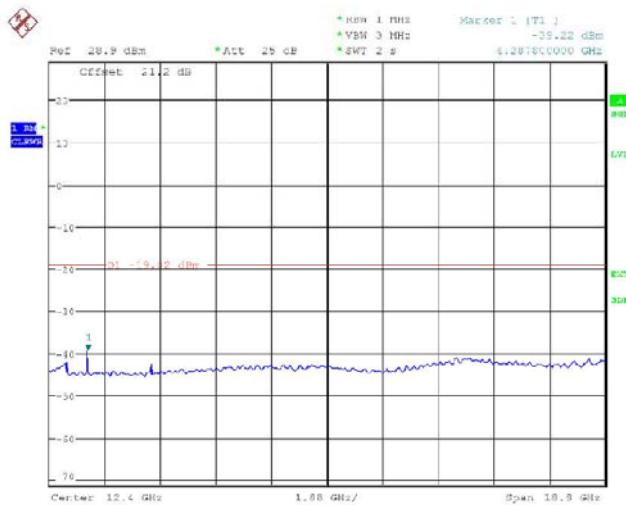
**Figure 127 Spurious Emissions (9kHz – 3GHz) - QPSK (2145.0 MHz) (20MHz Channel BW)**FCC 47 CFR part 27  
(2016)

16. May 2017

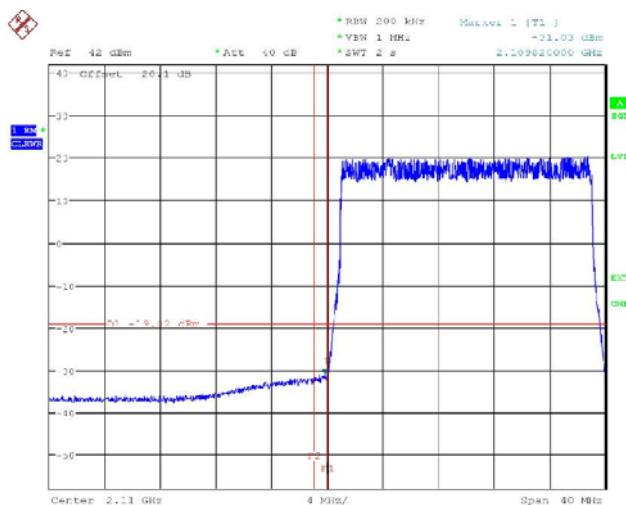
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D556049976

Date: 4.MAY.2017 12:37:21

**Figure 128 Spurious Emissions (3GHz – 21.8GHz) – QPSK (2145.0 MHz) (20MHz Channel BW)**

Date: 4.MAY.2017 11:33:41

**Figure 129 Spurious Emissions (Lower Band Edge) – 16QAM (2120.0 MHz) (20MHz Channel BW)**FCC 47 CFR part 27  
(2016)

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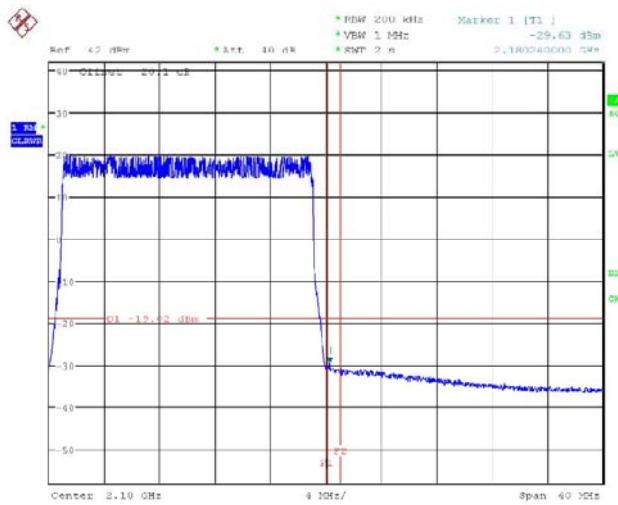
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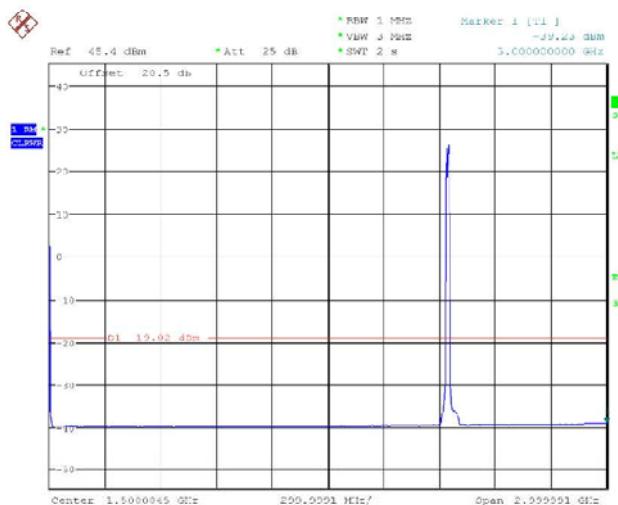
Product Service

FCC ID:  
VBNAHIB-

Test Report No:  
D556049976



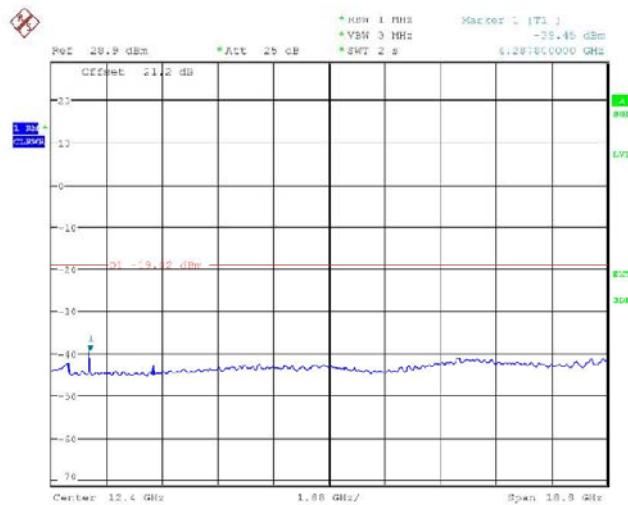
**Figure 130 Spurious Emissions (Upper Band Edge) – 16QAM (2170.0 MHz) (20MHz Channel BW)**



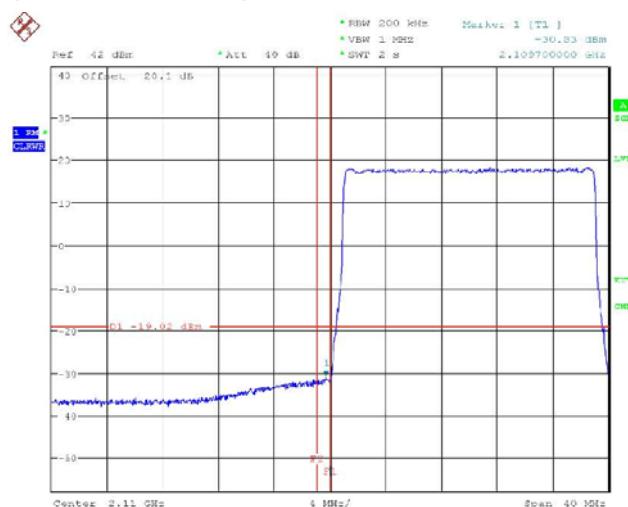
**Figure 131 Spurious Emissions (9kHz – 3GHz) – 16QAM (2145.0 MHz) (20MHz Channel BW)**



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FCC ID:  
VBNAHIB-Test Report No:  
D556049976

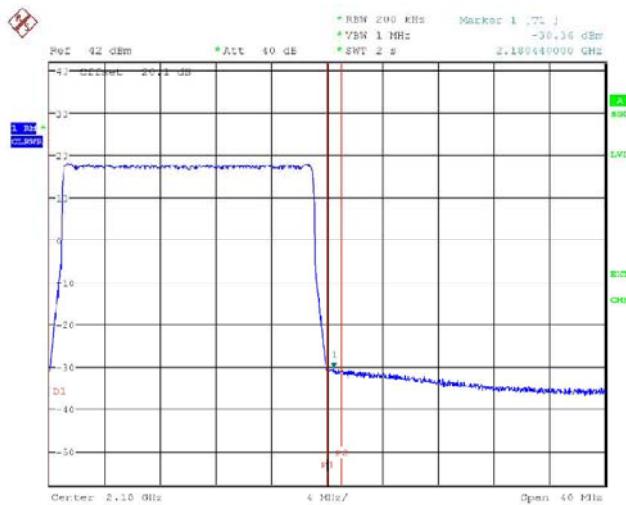
**Figure 132 Spurious Emissions (3GHz – 21.8GHz) – 16QAM (2145.0 MHz) (20MHz Channel BW)**



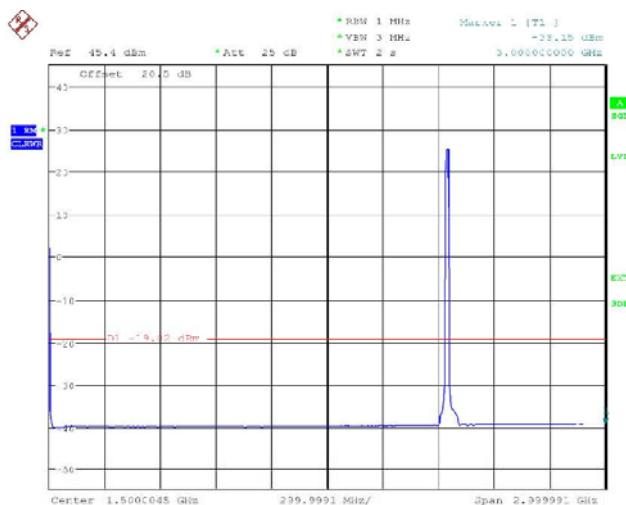
**Figure 133 Spurious Emissions (Lower Band Edge) – 64QAM (2120.0 MHz) (20MHz Channel BW)**



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FCC ID:  
VBNAHIB-Test Report No:  
D556049976

Date: 4.MAY.2017 13:32:58

**Figure 134 Spurious Emissions (Upper Band Edge) – 64QAM (2170.0 MHz) (20MHz Channel BW)**

Date: 4.MAY.2017 12:54:60

**Figure 135 Spurious Emissions (9kHz – 3GHz) – 64QAM (2145.0 MHz) (20MHz Channel BW)**FCC 47 CFR part 27  
(2016)

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