



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

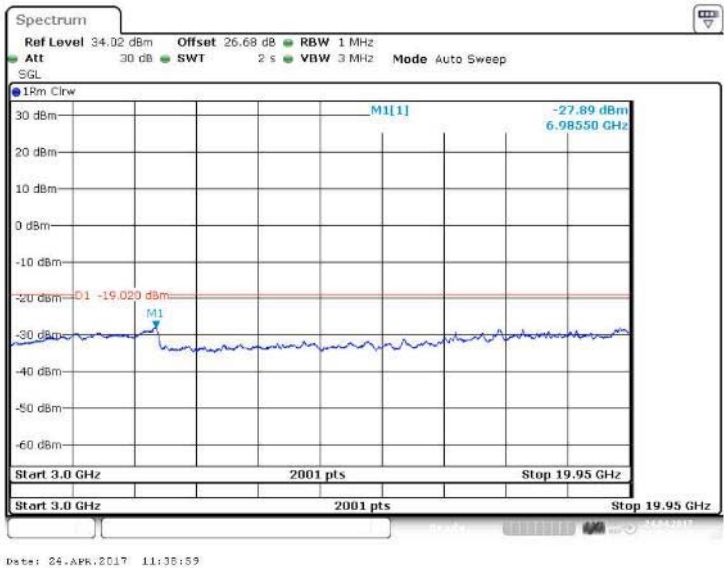


Figure 51 Spurious Emissions (9kHz – 3GHz) – 16QAM (1962.5 MHz) (20MHz Channel BW)

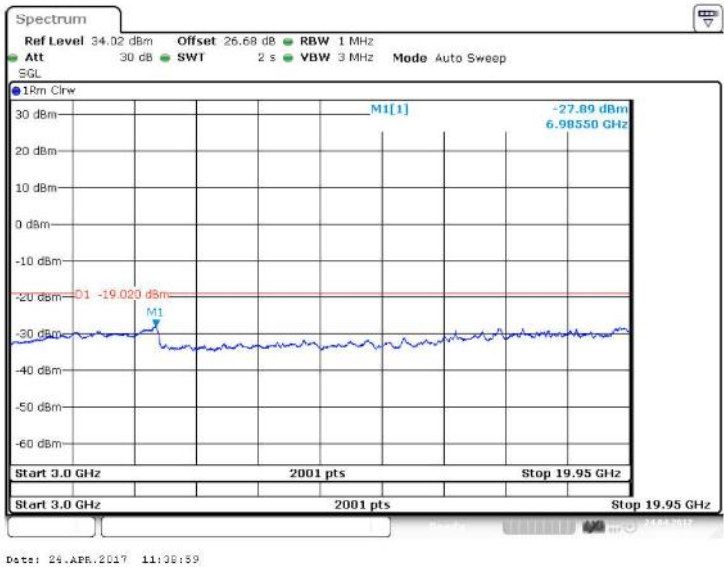


Figure 52 Spurious Emissions (3GHz – 19.950GHz) – 16QAM (1962.5 MHz) (20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

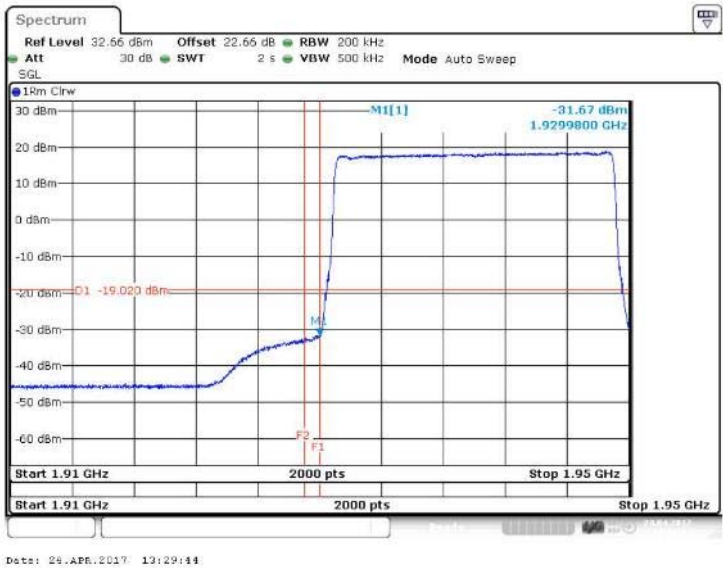


Figure 53 Spurious Emissions (Lower Band Edge) – 64QAM (1962.5 MHz)
(20MHz Channel BW)

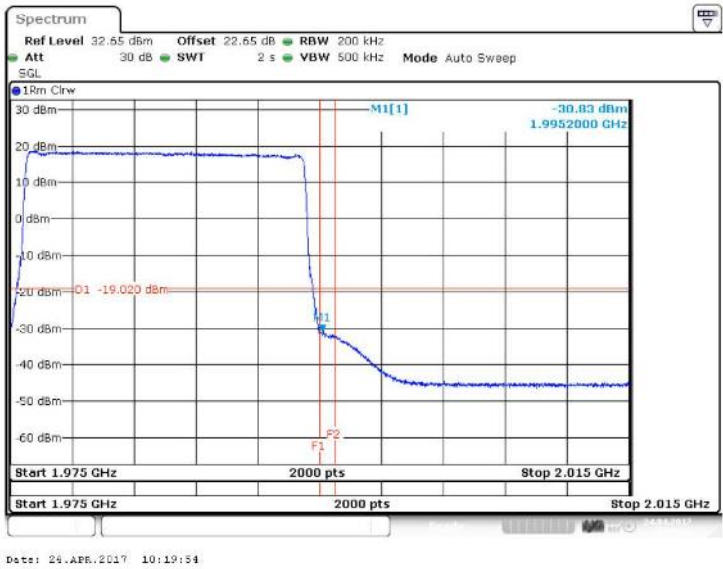


Figure 54 Spurious Emissions (Upper Band Edge) – 64QAM (1985.0 MHz)
(20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

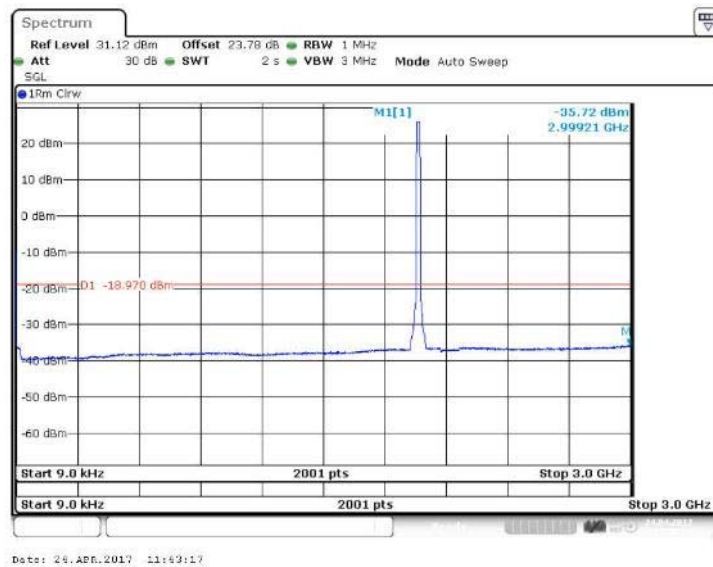


Figure 55 Spurious Emissions (9kHz – 3GHz) – 64QAM (1962.5 MHz) (20MHz Channel BW)

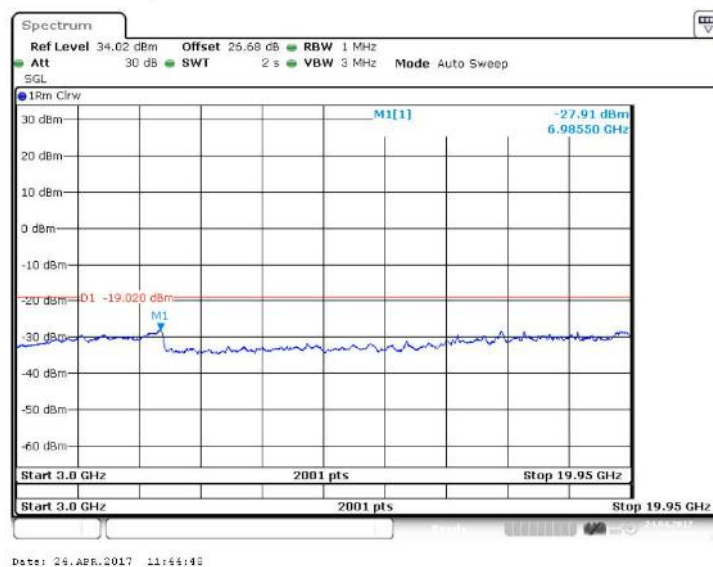


Figure 56 Spurious Emissions (3GHz – 19.950GHz) – 64QAM (1962.5 MHz) (20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

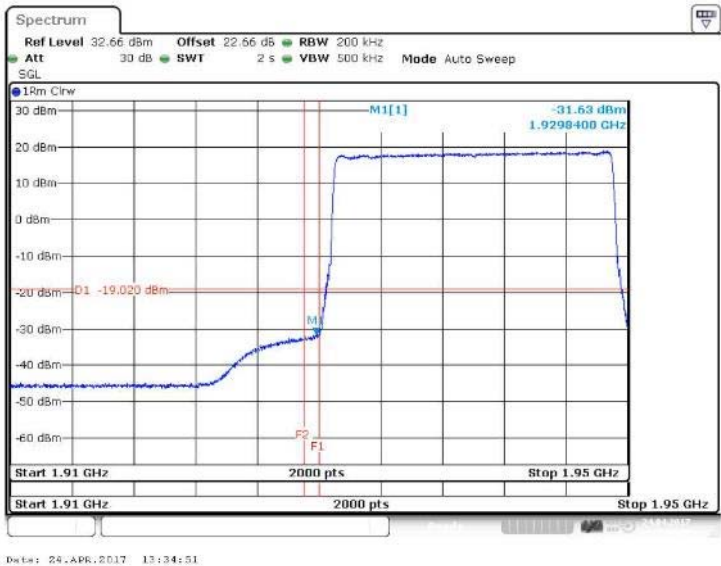


Figure 57 Spurious Emissions (Lower Band Edge) – 256QAM (1940.0 MHz)
(20MHz Channel BW)

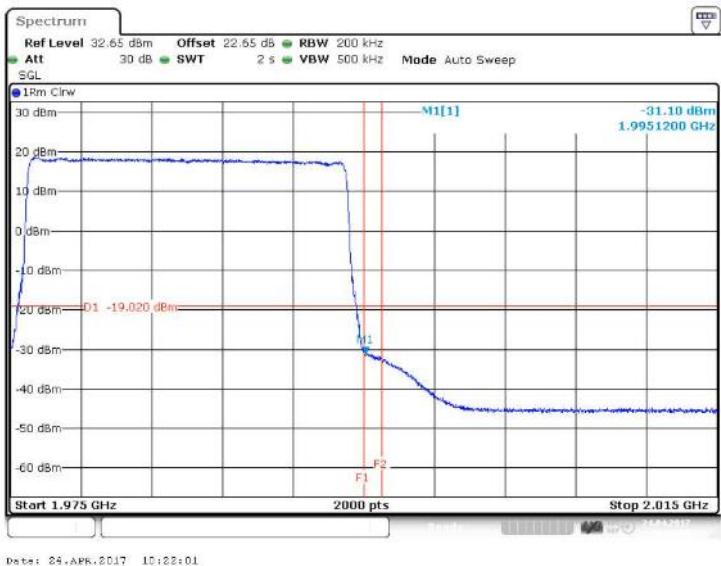


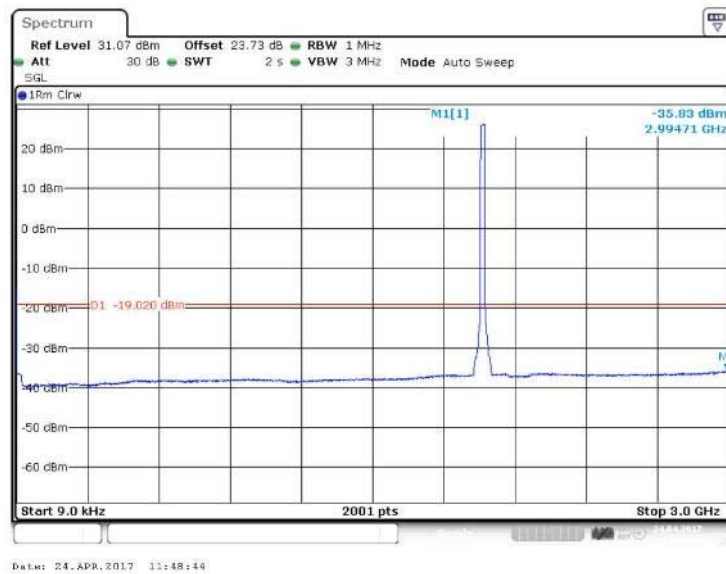
Figure 58 Spurious Emissions (Upper Band Edge) – 256QAM (1985.0 MHz)
(20MHz Channel BW)



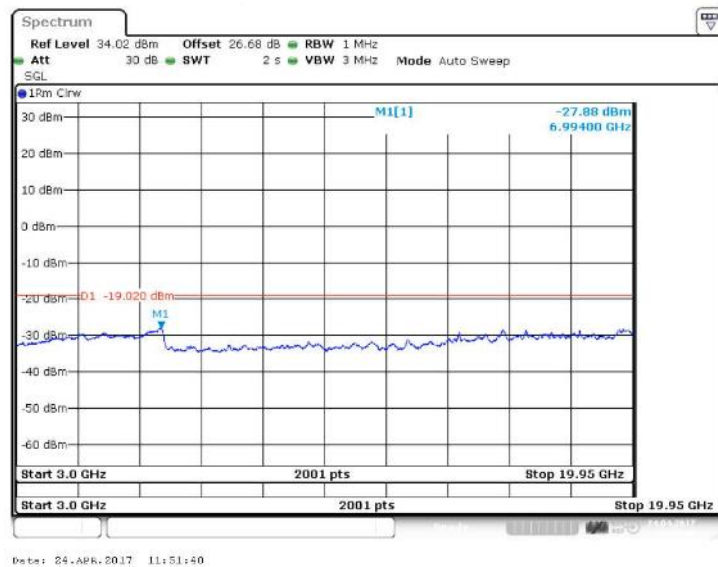
Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



**Figure 59 Spurious Emissions (9kHz – 3GHz) – 256QAM (1962.5 MHz)
(20MHz Channel BW)**



**Figure 60 Spurious Emissions (3GHz – 19.950GHz) – 256QAM (1962.5 MHz)
(20MHz Channel BW)**

FCC 47 CFR part 24
(2016)

02. May 2017

Page 65 of 124



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

Config A ANT3:

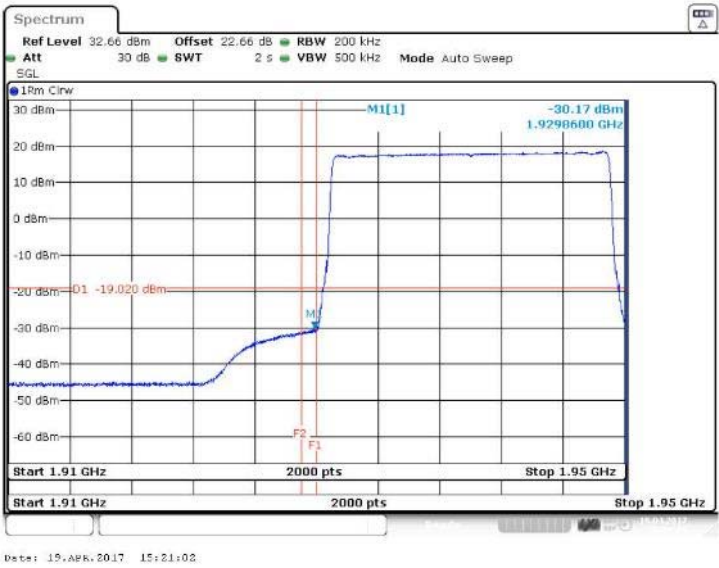


Figure 61 Spurious Emissions (Lower Band Edge) – QPSK (1940.0 MHz)
(20MHz Channel BW)

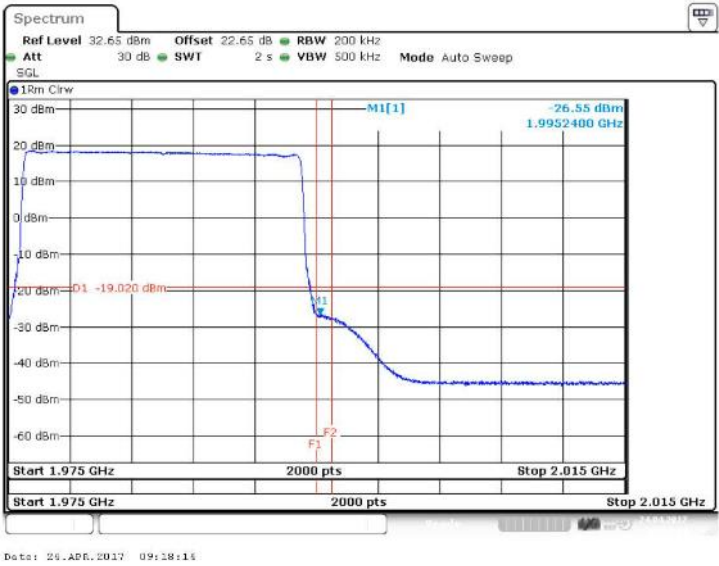


Figure 62 Spurious Emissions (Upper Band Edge) – QPSK (1985.0 MHz)
(20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

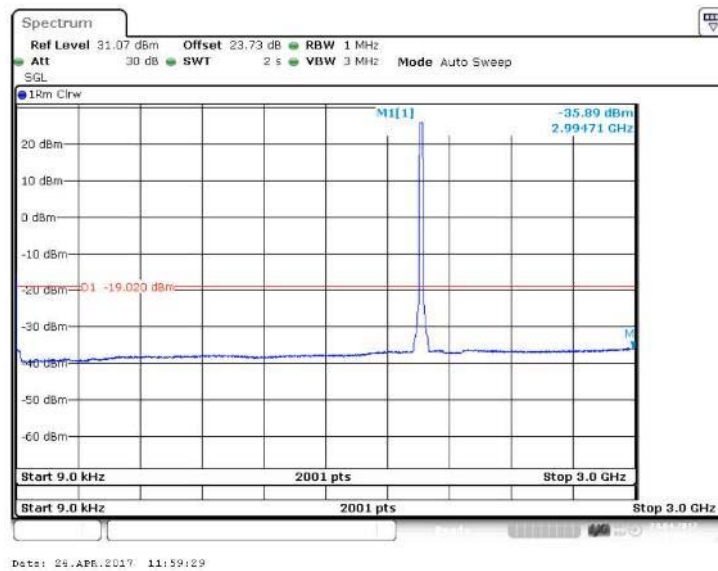


Figure 63 Spurious Emissions (9kHz – 3GHz) - QPSK (1962.5 MHz) (20MHz Channel BW)

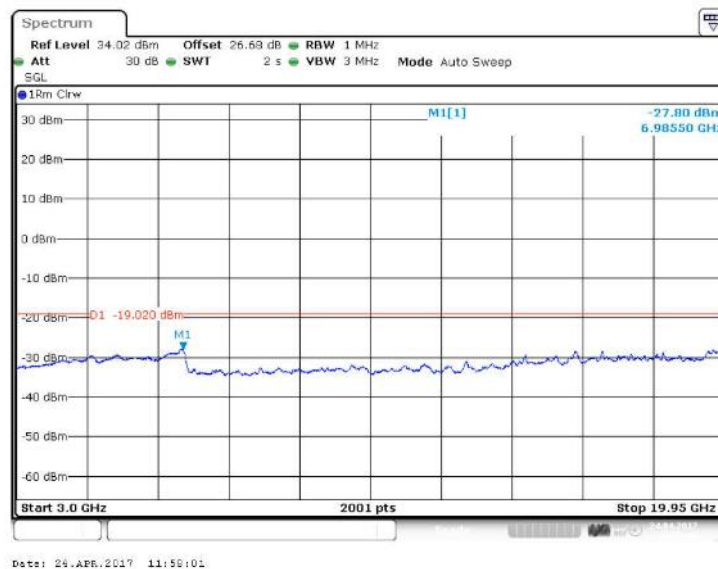


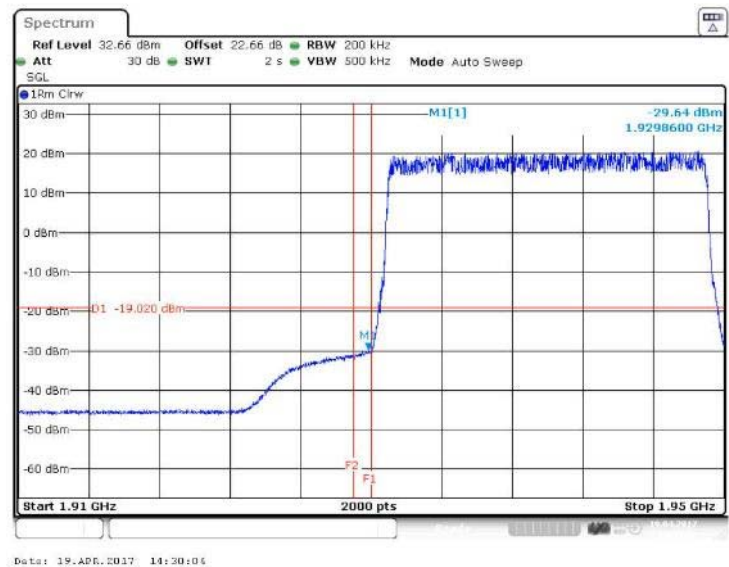
Figure 64 Spurious Emissions (3GHz – 19.950GHz) – QPSK (1962.5 MHz) (20MHz Channel BW)



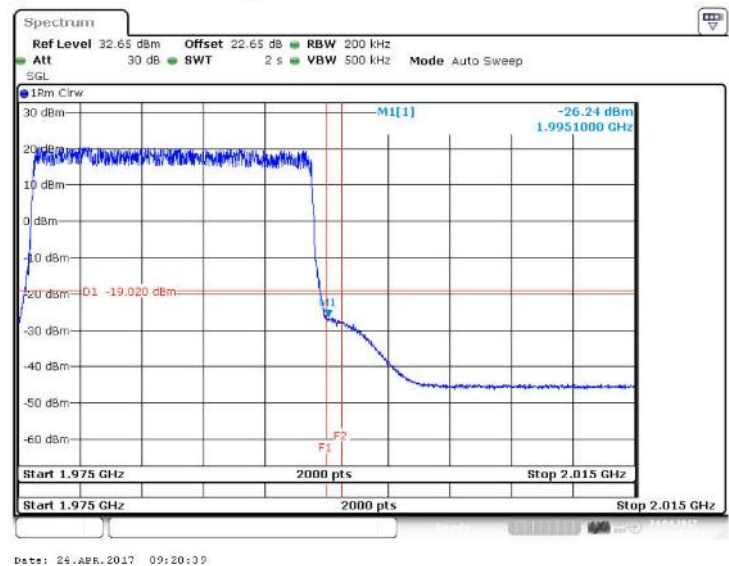
Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



**Figure 65 Spurious Emissions (Lower Band Edge) – 16QAM (1940.0 MHz)
(20MHz Channel BW)**



**Figure 66 Spurious Emissions (Upper Band Edge) – 16QAM (1985.0 MHz)
(20MHz Channel BW)**



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

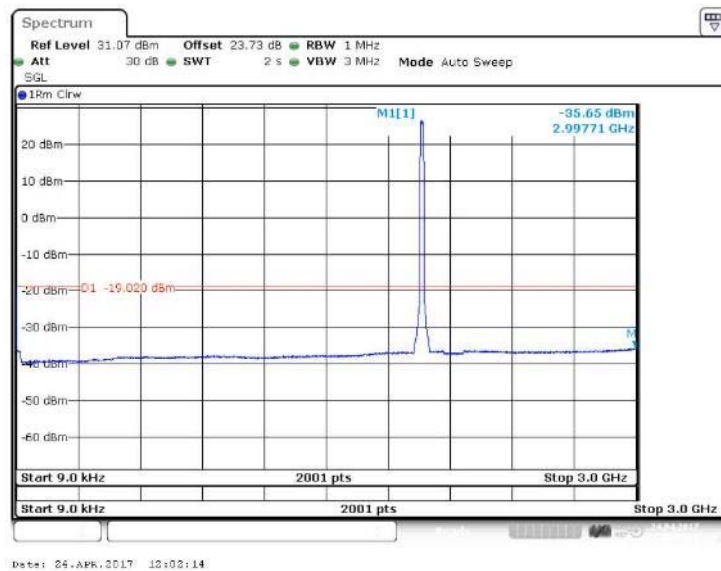


Figure 67 Spurious Emissions (9kHz – 3GHz) – 16QAM (1962.5 MHz) (20MHz Channel BW)

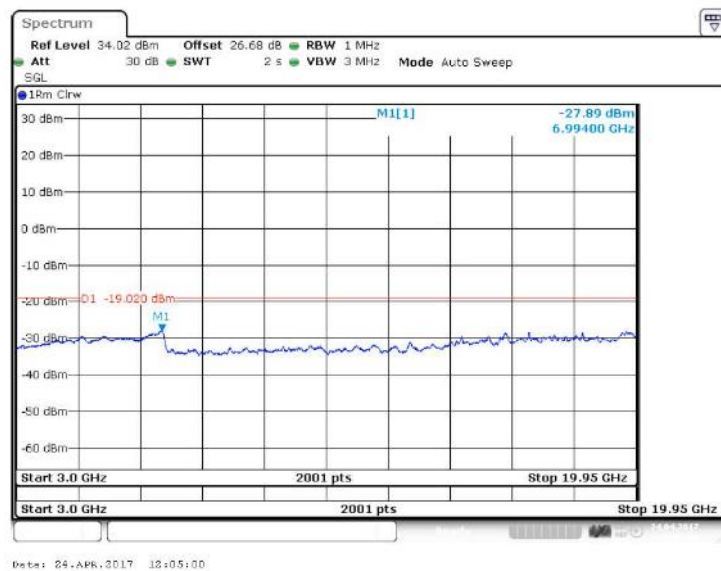


Figure 68 Spurious Emissions (3GHz – 19.950GHz) – 16QAM (1962.5 MHz) (20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

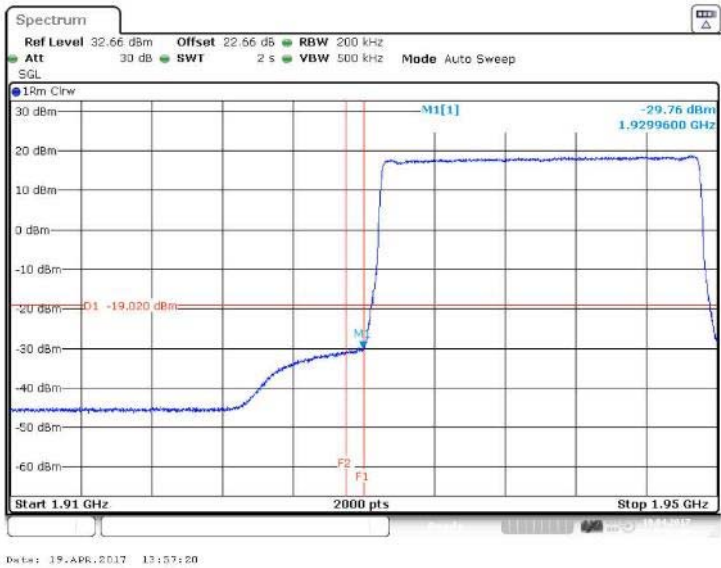


Figure 69 Spurious Emissions (Lower Band Edge) – 64QAM (1940.0 MHz)
(20MHz Channel BW)

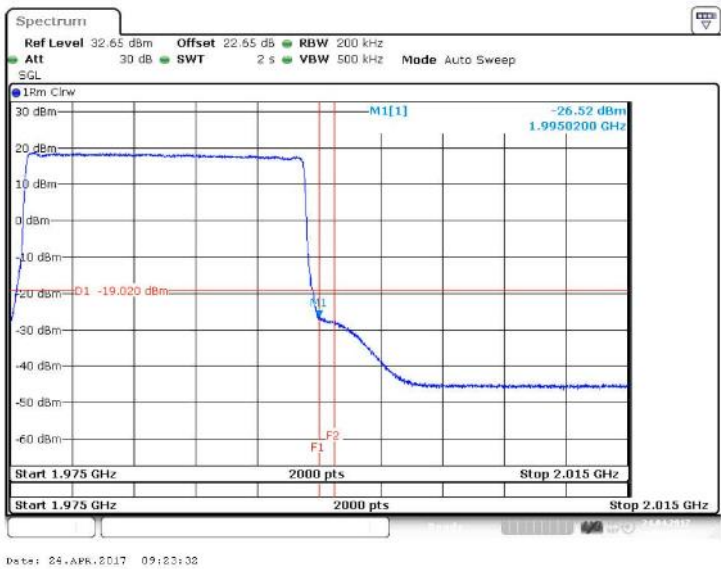


Figure 70 Spurious Emissions (Upper Band Edge) – 64QAM (1985.0 MHz)
(20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

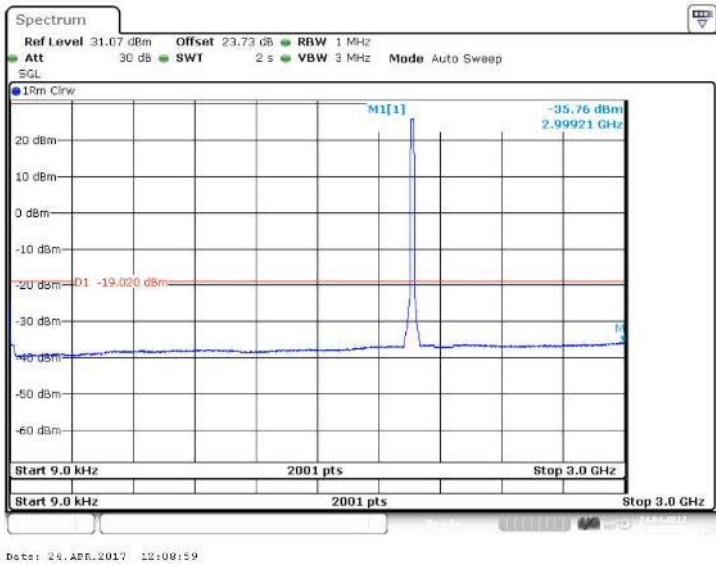


Figure 71 Spurious Emissions (9kHz – 3GHz) – 64QAM (1962.5 MHz) (20MHz Channel BW)

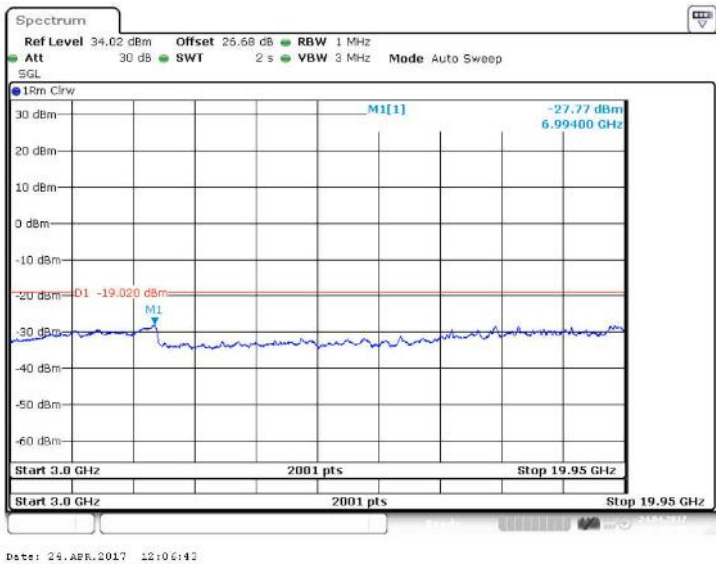


Figure 72 Spurious Emissions (3GHz – 19.950GHz) – 64QAM (1962.5 MHz) (20MHz Channel BW)



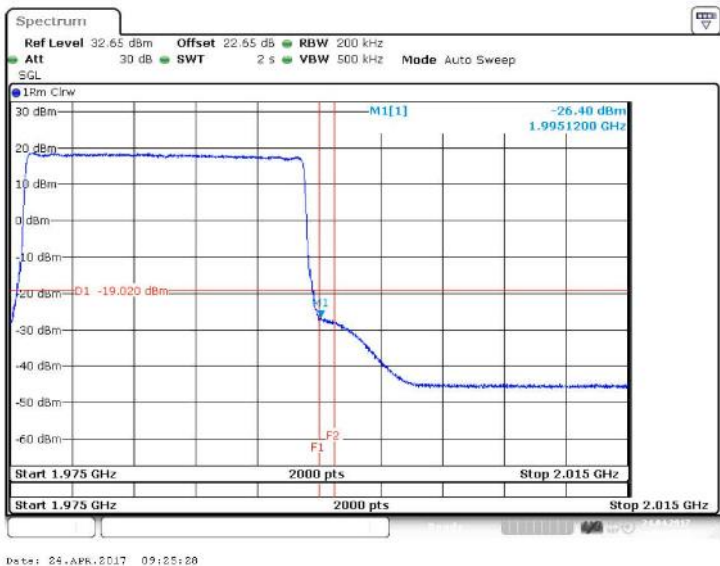
Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



**Figure 73 Spurious Emissions (Lower Band Edge) – 256QAM (1940.0 MHz)
(20MHz Channel BW)**



**Figure 74 Spurious Emissions (Upper Band Edge) – 256QAM (1985.0 MHz)
(20MHz Channel BW)**



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

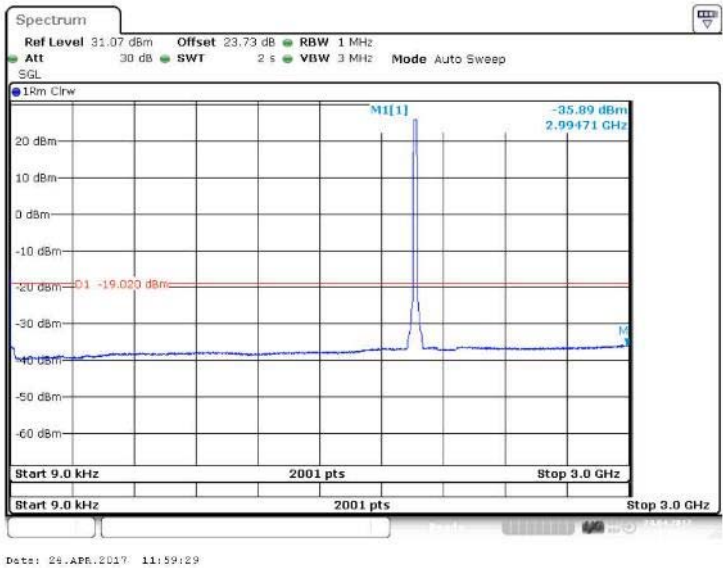


Figure 75 Spurious Emissions (9kHz – 3GHz) – 256QAM (1962.5 MHz)
(20MHz Channel BW)

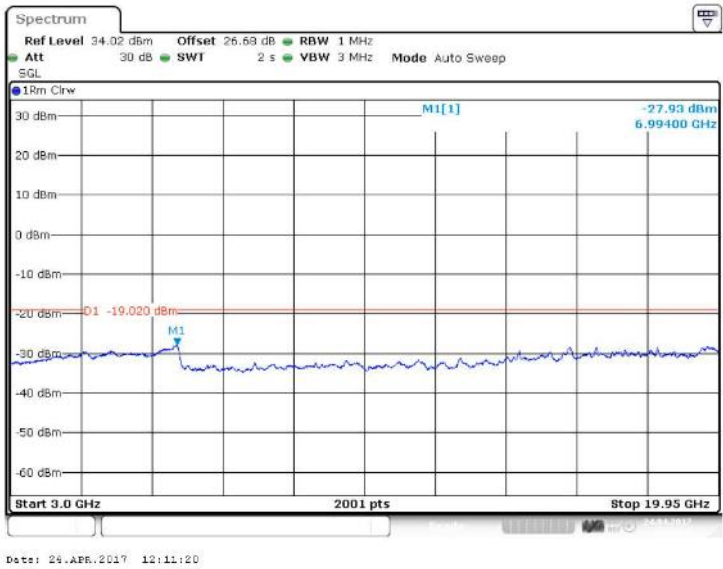


Figure 76 Spurious Emissions (3GHz – 19.950GHz) – 256QAM (1962.5 MHz)
(20MHz Channel BW)

Config A ANT4:

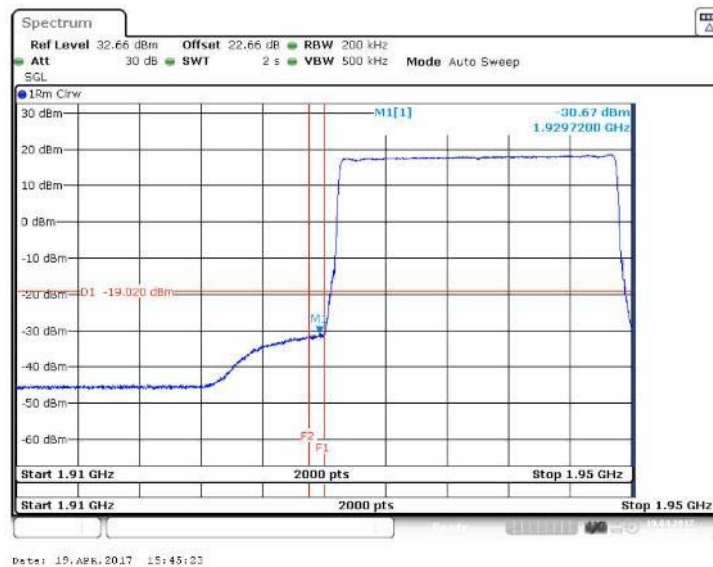
FCC 47 CFR part 24
(2016)

02. May 2017

Page 73 of 124



Product Service

FCC ID:
VBNAHFB-01Test Report No:
D555117518

**Figure 77 Spurious Emissions (Lower Band Edge) – QPSK (1940.0 MHz)
(20MHz Channel BW)**



**Figure 78 Spurious Emissions (Upper Band Edge) – QPSK (1985.0 MHz)
(20MHz Channel BW)**



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Figure 79 Spurious Emissions (9kHz – 3GHz) - QPSK (1962.5 MHz) (20MHz Channel BW)

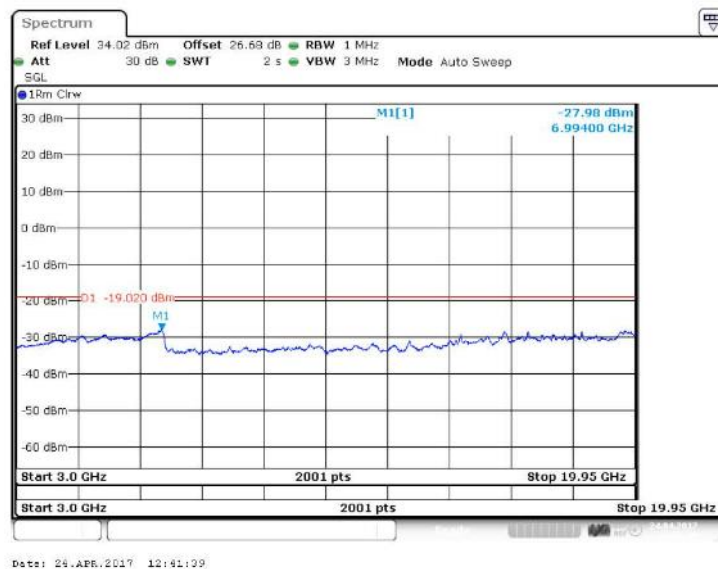


Figure 80 Spurious Emissions (3GHz – 19.950GHz) – QPSK (1962.5 MHz) (20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

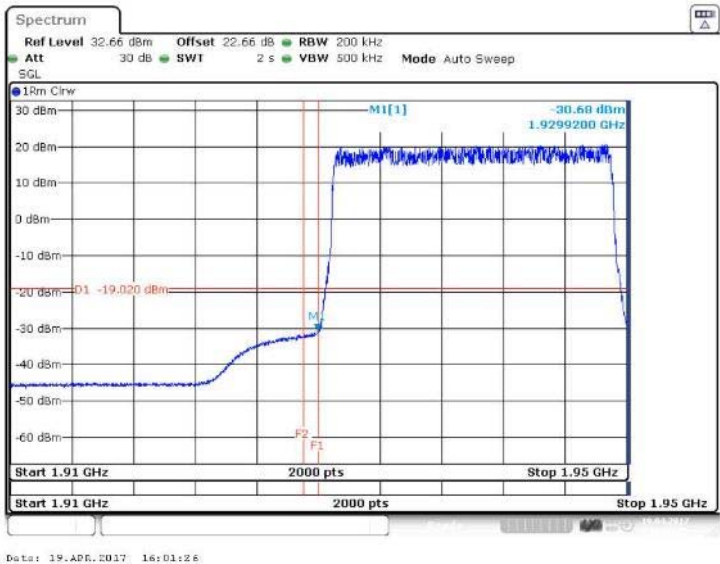


Figure 81 Spurious Emissions (Lower Band Edge) – 16QAM (1940.0 MHz)
(20MHz Channel BW)

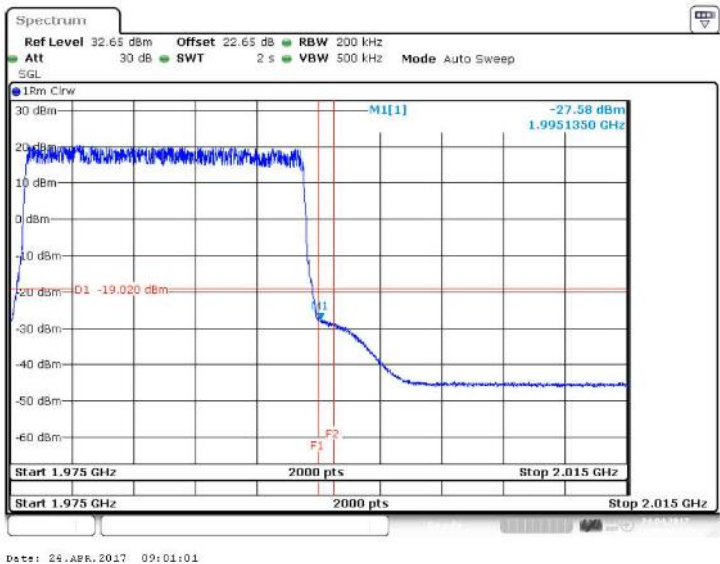


Figure 82 Spurious Emissions (Upper Band Edge) – 16QAM (1985.0 MHz)
(20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Figure 83 Spurious Emissions (9kHz – 3GHz) – 16QAM (1962.5 MHz) (20MHz Channel BW)

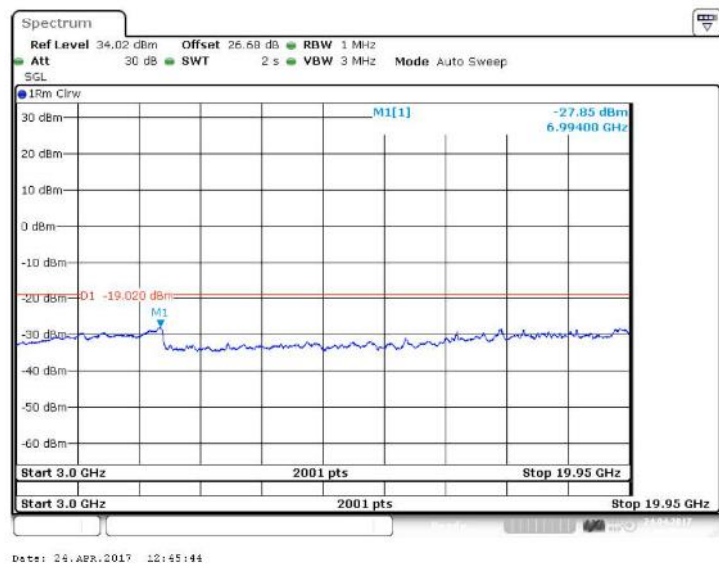


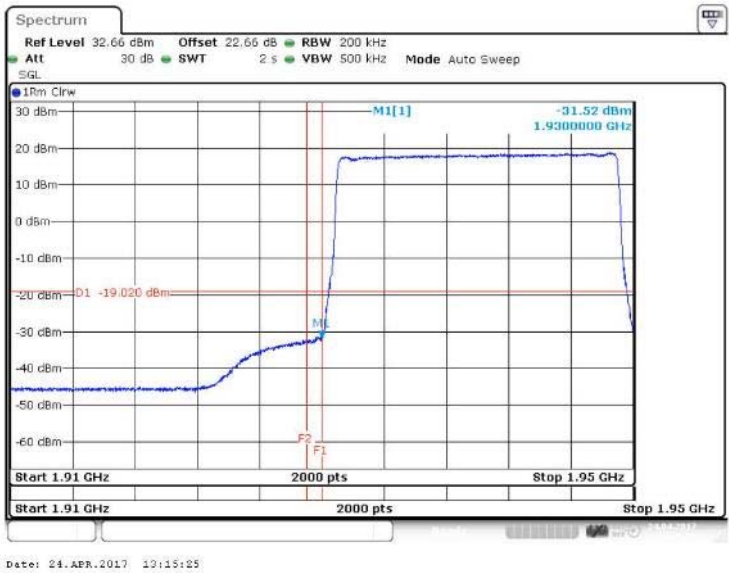
Figure 84 Spurious Emissions (3GHz – 19.950GHz) – 16QAM (1962.5 MHz) (20MHz Channel BW)



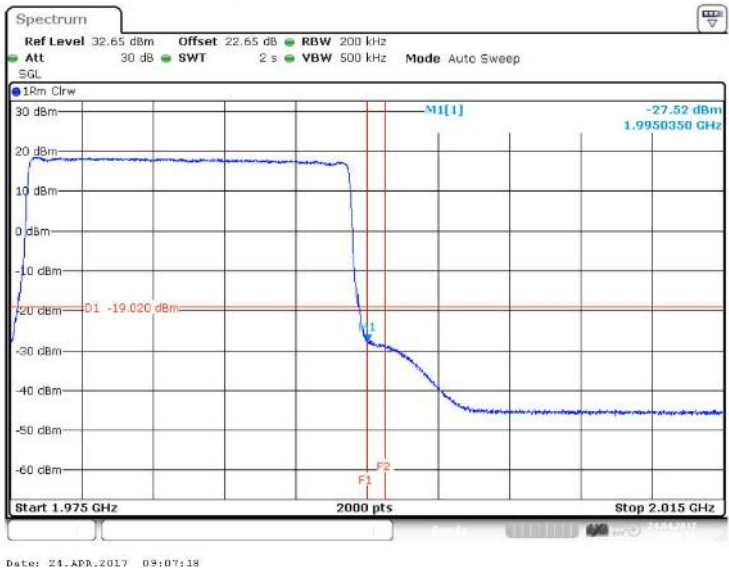
Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



**Figure 85 Spurious Emissions (Lower Band Edge) – 64QAM (1940.0 MHz)
(20MHz Channel BW)**



**Figure 86 Spurious Emissions (Upper Band Edge) – 64QAM (1985.0 MHz)
(20MHz Channel BW)**



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Figure 87 Spurious Emissions (9kHz – 3GHz) – 64QAM (1962.5 MHz) (20MHz Channel BW)

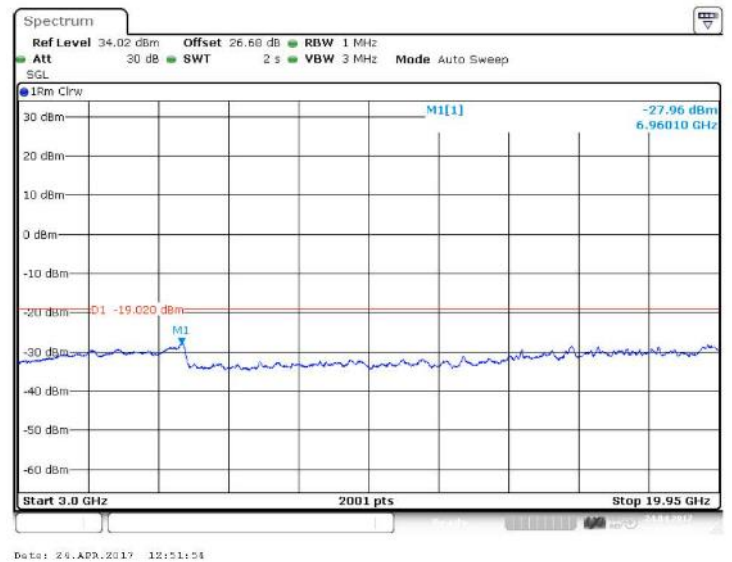


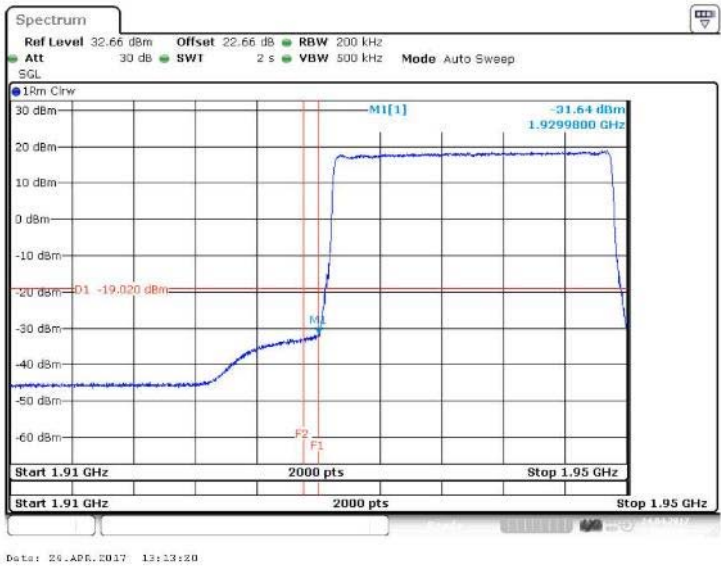
Figure 88 Spurious Emissions (3GHz – 19.950GHz) – 64QAM ((1962.5 MHz) (20MHz Channel BW)



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



**Figure 89 Spurious Emissions (Lower Band Edge) – 256QAM (1940.0 MHz)
(20MHz Channel BW)**



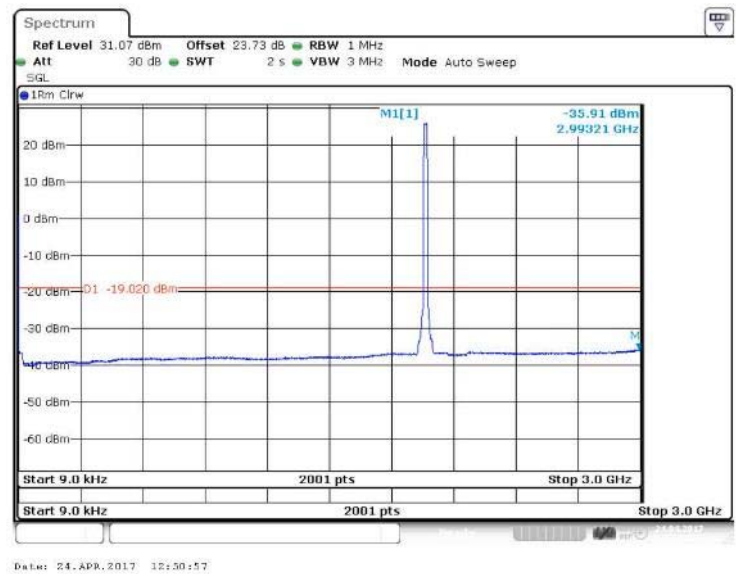
**Figure 90 Spurious Emissions (Upper Band Edge) – 256QAM (1985.0 MHz)
(20MHz Channel BW)**



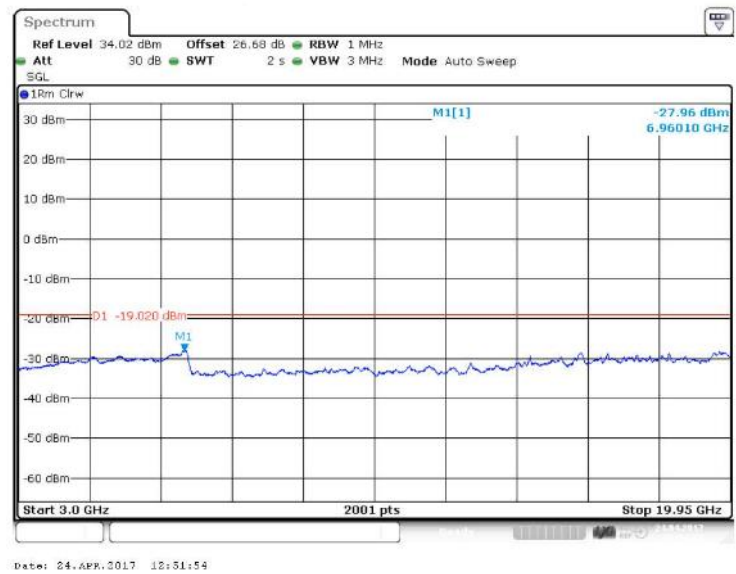
Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



**Figure 91 Spurious Emissions (9kHz – 3GHz) – 256QAM (1962.5 MHz)
(20MHz Channel BW)**



**Figure 92 Spurious Emissions (3GHz – 19.950GHz) – 256QAM 1962.5 MHz)
(20MHz Channel BW)**



Product Service

FCC ID:
VBNAHFB-01

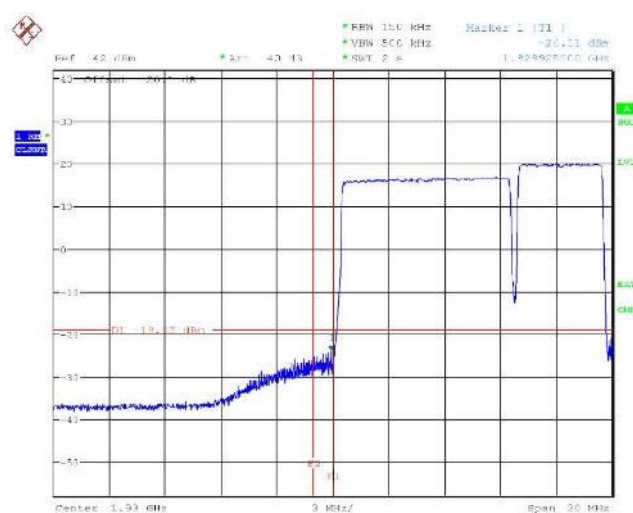
Test Report No:
D555117518

Config B ANT1:



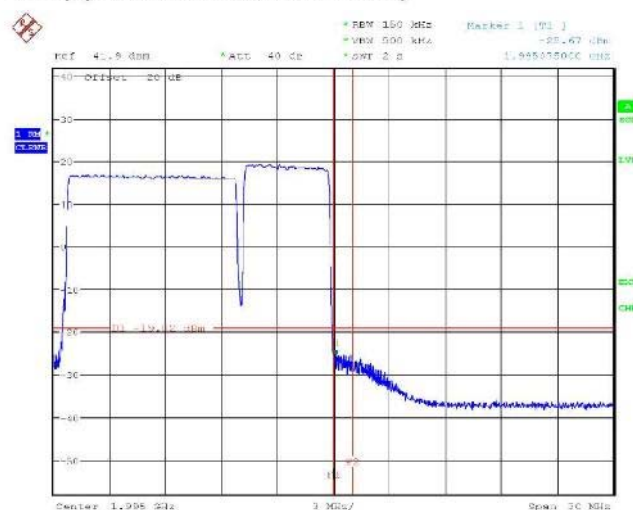
FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Date: 25.APR.2017 08:47:02

Figure 93 Spurious Emissions (Lower Band Edge) – QPSK (1935.0/1942.2 MHz) (10 MHz/5 MHz Channel BW)



Date: 25.APR.2017 06:48:40

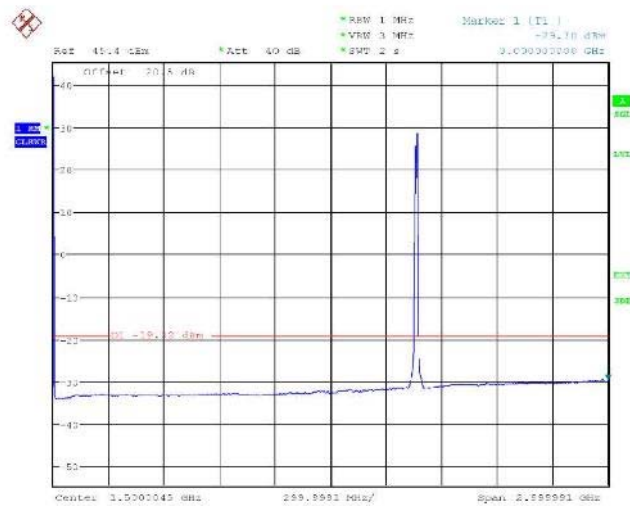
Figure 94 Spurious Emissions (Upper Band Edge) – QPSK (1985.3/1992.5 MHz) (10 MHz/5MHz Channel BW)



Product Service

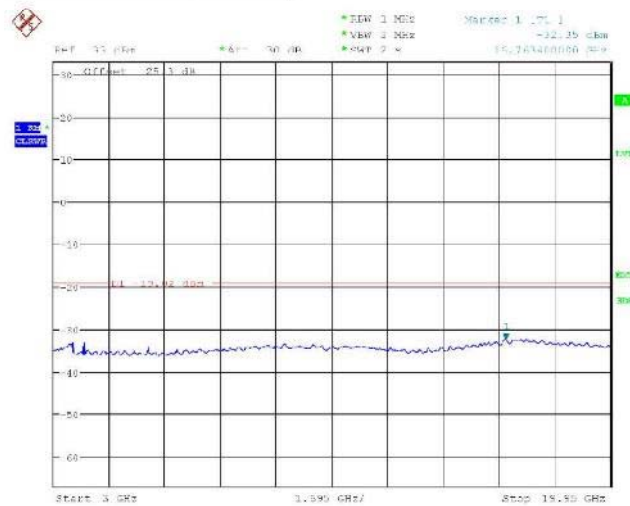
FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Date: 25.APR.2017 12:45:43

Figure 95 Spurious Emissions (9kHz – 3GHz) - QPSK (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)



Date: 25.APR.2017 13:20:29

Figure 96 Spurious Emissions (3GHz – 19.950GHz) – QPSK (1958.9/1966.1 MHz) ((10 MHz/5MHz Channel BW)

FCC 47 CFR part 24
(2016)

02. May 2017

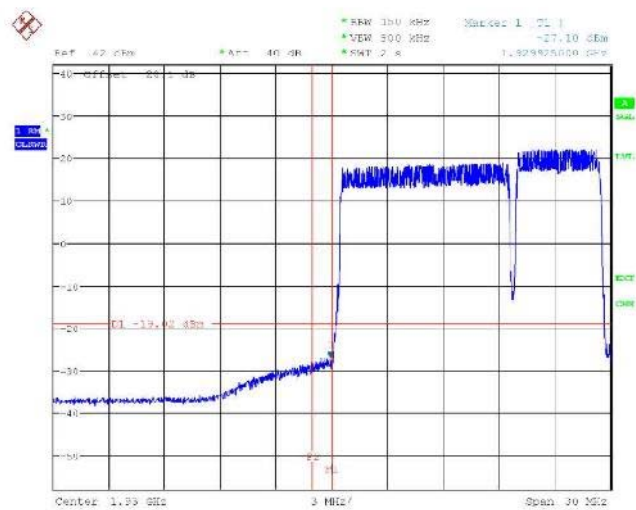
Page 84 of 124



Product Service

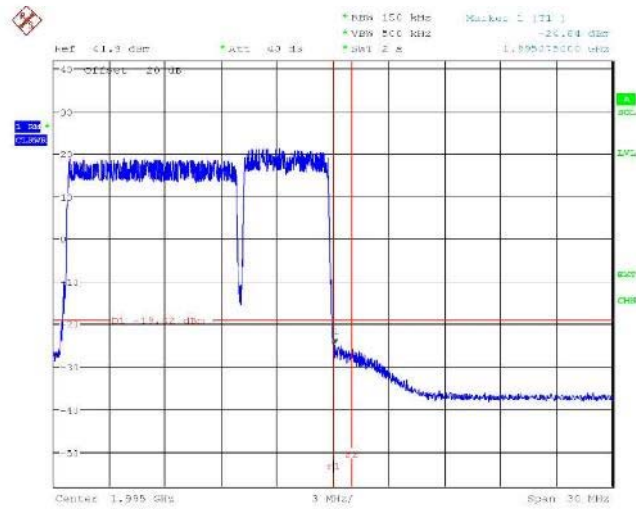
FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Date: 25.APR.2017 08:48:54

Figure 97 Spurious Emissions (Lower Band Edge) – 16QAM (1935.0/1942.2 MHz) (10MHz/5MHz Channel BW)



Date: 25.APR.2017 08:50:29

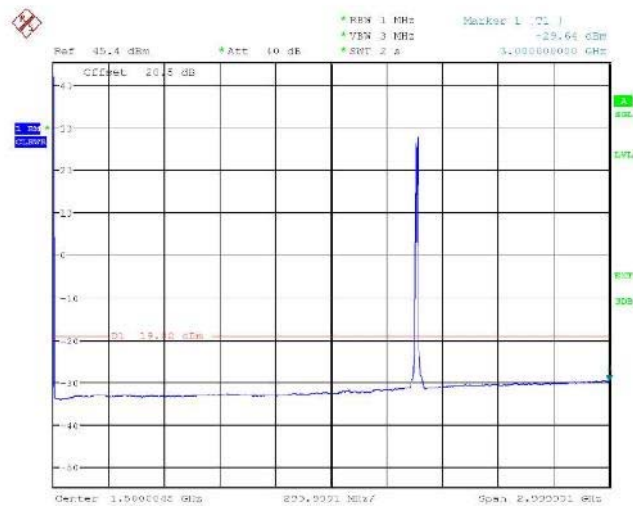
Figure 98 Spurious Emissions (Upper Band Edge) – 16QAM (1985.3/1992.5 MHz) (10MHz/5MHz Channel BW)



Product Service

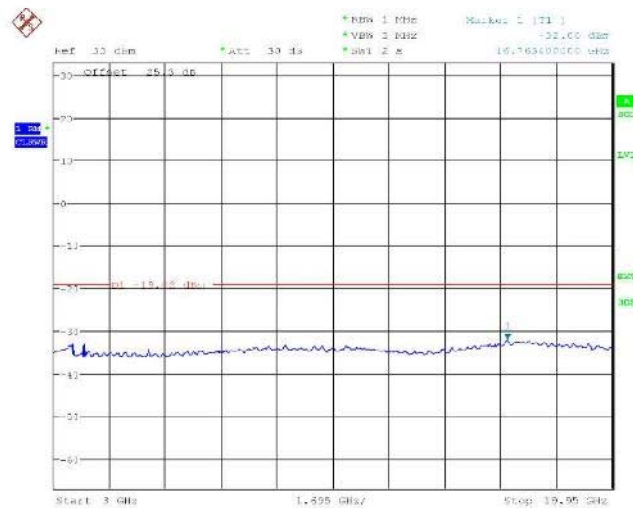
FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Date: 25.APR.2017 12:47:31

Figure 99 Spurious Emissions (9kHz – 3GHz) – 16QAM (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)



Date: 25.APR.2017 13:23:44

Figure 100 Spurious Emissions (3GHz – 19.950GHz) – 16QAM (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)

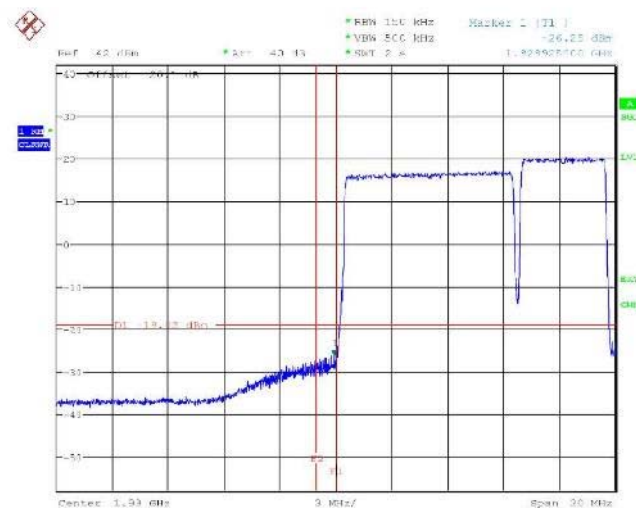
FCC 47 CFR part 24
(2016)

02. May 2017

Page 86 of 124

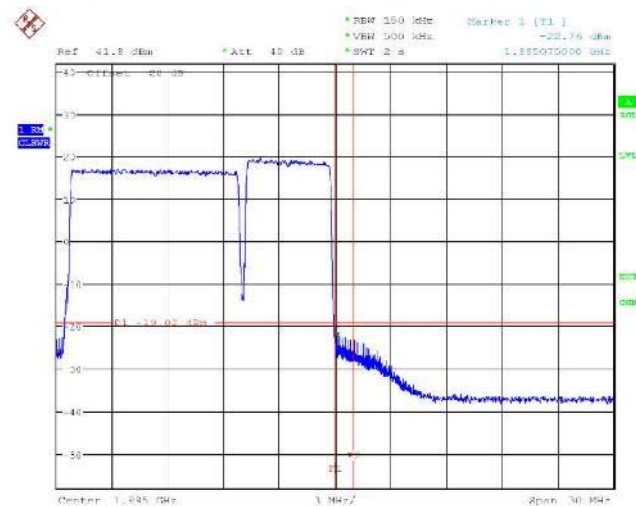


Product Service

FCC ID:
VBNAHFB-01Test Report No:
D555117518

Date: 25.APR.2017 06:49:47

Figure 101 Spurious Emissions (Lower Band Edge) – 64QAM (1935.0/1942.2 MHz) (10 MHz/5MHz Channel BW)



Date: 25.APR.2017 06:52:24

Figure 102 Spurious Emissions (Upper Band Edge) – 64QAM (1985.3/1992.5 MHz) (10 MHz/5MHz Channel BW)

FCC 47 CFR part 24
(2016)

02. May 2017

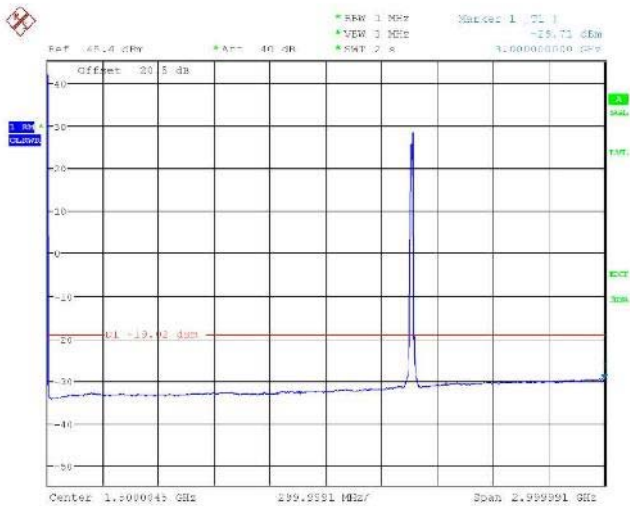
Page 87 of 124



Product Service

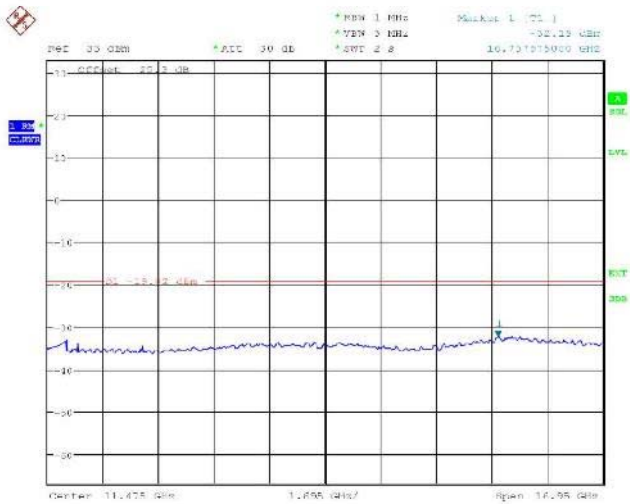
FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Date: 25.APR.2017 12:49:01

Figure 103 Spurious Emissions (9kHz – 3GHz) – 64QAM (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)



Date: 25.APR.2017 13:25:28

Figure 104 Spurious Emissions (3GHz – 19.950GHz) – 64QAM (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)

FCC 47 CFR part 24
(2016)

02. May 2017

Page 88 of 124



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518

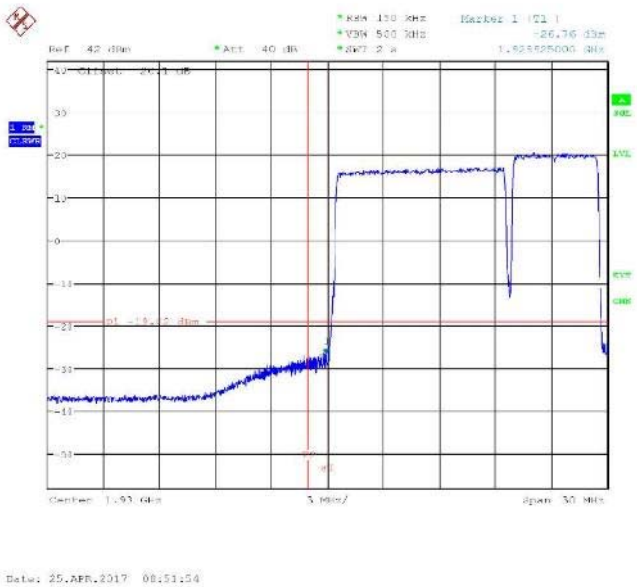


Figure 105 Spurious Emissions (Lower Band Edge) – 256QAM (1935.0/1942.2 MHz) (10 MHz/5MHz Channel BW)

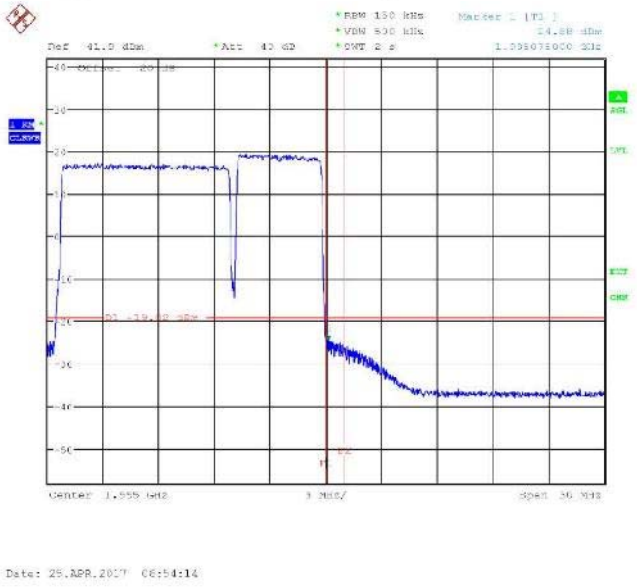


Figure 106 Spurious Emissions (Upper Band Edge) – 256QAM (1985.3/1992.5 MHz) (10 MHz/5MHz Channel BW)

FCC 47 CFR part 24
(2016)

02. May 2017

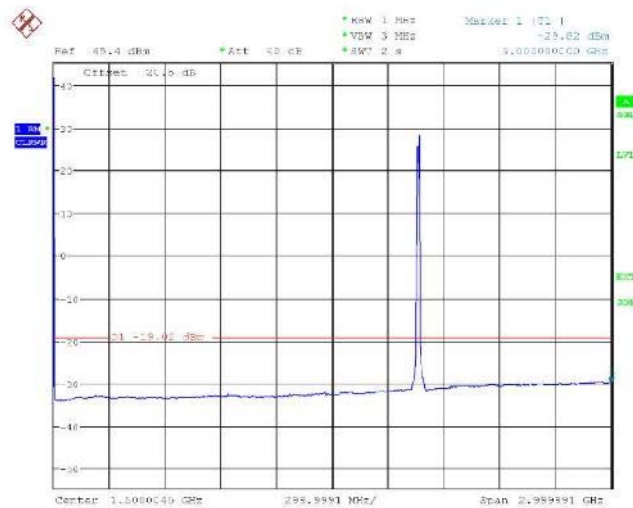
Page 89 of 124



Product Service

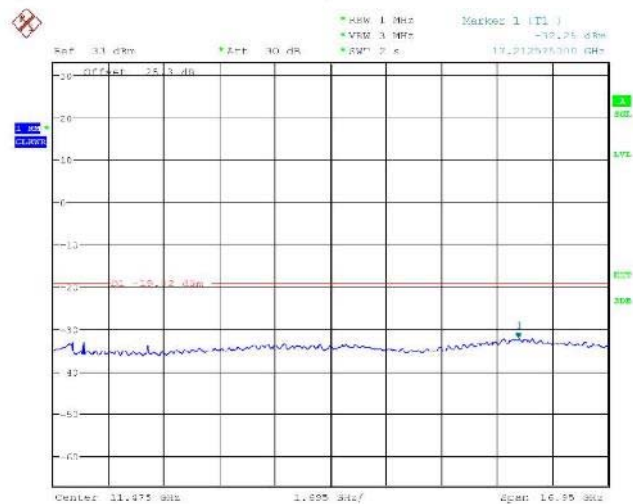
FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Date: 25.AUG.2017 12:50:07

Figure 107 Spurious Emissions (9kHz – 3GHz) – 256QAM (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)



Date: 25.AUG.2017 13:27:33

Figure 108 Spurious Emissions (3GHz – 19.950GHz) – 256QAM (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)

FCC 47 CFR part 24
(2016)

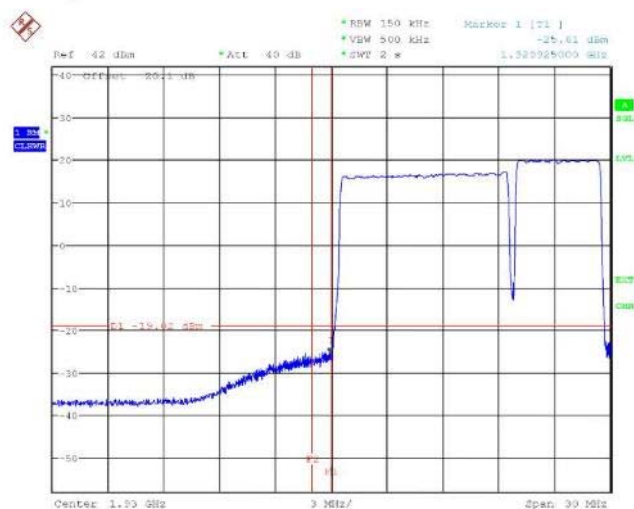
02. May 2017

Page 90 of 124



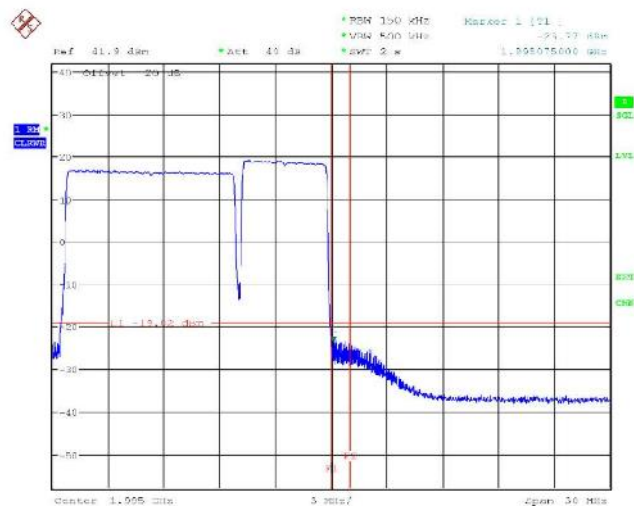
FCC ID:
VBNAHFB-01

Test Report No:
D555117518

Config B ANT2:

Date: 25.APR.2017 08:25:34

Figure 109 Spurious Emissions (Lower Band Edge) – QPSK (1935.0/1942.2 MHz) (10 MHz/5MHz Channel BW)



Date: 25.APR.2017 06:40:17

Figure 110 Spurious Emissions (Upper Band Edge) – QPSK (1985.3/1992.5 MHz) (10 MHz/5MHz Channel BW)

FCC 47 CFR part 24
(2016)

02. May 2017

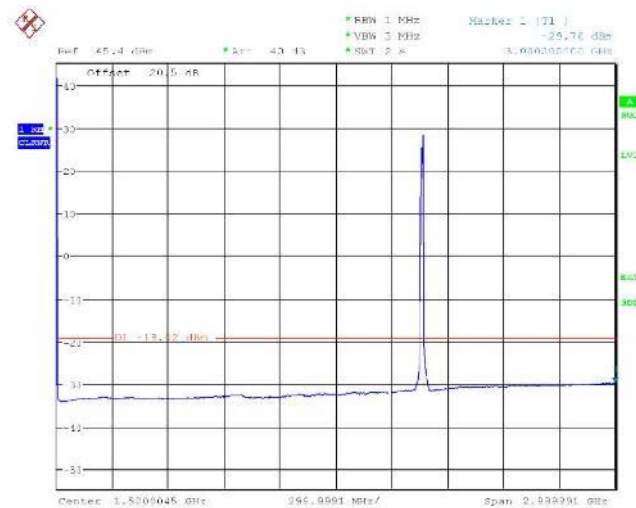
Page 91 of 124



Product Service

FCC ID:
VBNAHFB-01

Test Report No:
D555117518



Date: 25.APR.2017 11:06:20

Figure 111 Spurious Emissions (9kHz – 3GHz) - QPSK (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)



Date: 25.APR.2017 10:32:10

Figure 112 Spurious Emissions (3GHz – 19.950GHz) – QPSK (1958.9/1966.1 MHz) (10 MHz/5MHz Channel BW)

FCC 47 CFR part 24
(2016)

02. May 2017

Page 92 of 124