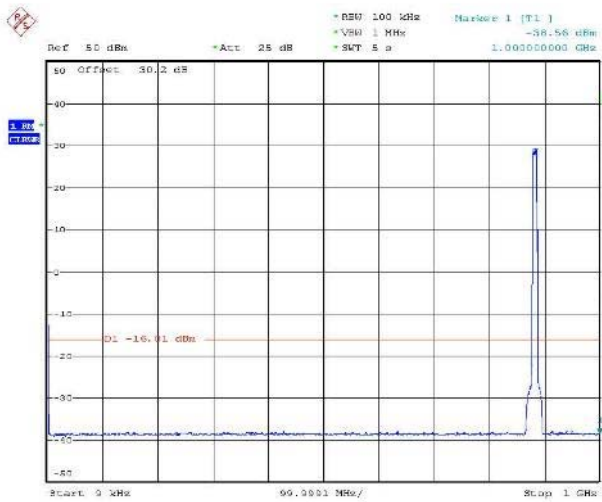




Product Service

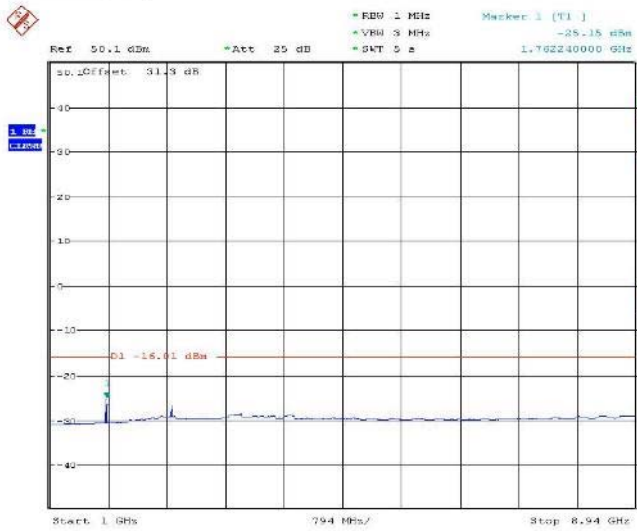
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 25.APR.2017 09:07:20

**Figure 558 Spurious Emissions (9kHz – 1GHz) - 64QAM (881.5 MHz) (10MHz Channel BW)**



Date: 25.APR.2017 09:13:05

**Figure 559 Spurious Emissions (1GHz – 8.94GHz) – 64QAM (881.5 MHz) (10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 370 of 427

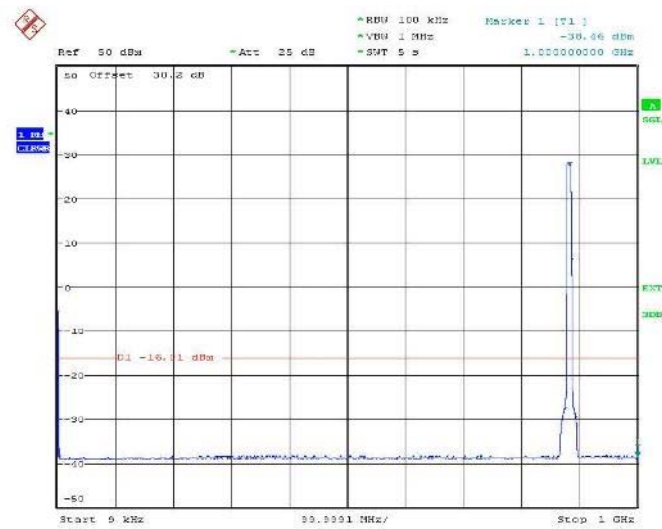




Product Service

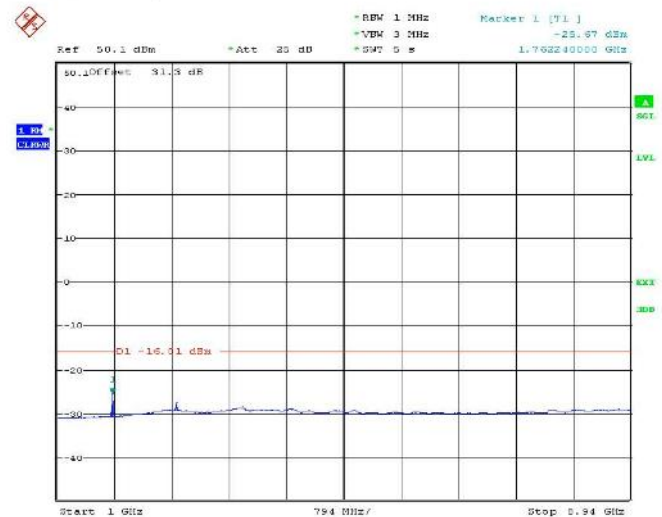
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 27.APR.2017 13:16:00

**Figure 562 Spurious Emissions (9kHz – 1GHz) - 256QAM (881.5 MHz) (10MHz Channel BW)**



Date: 27.APR.2017 13:19:32

**Figure 563 Spurious Emissions (1GHz – 8.94GHz) - 256QAM (881.5 MHz) (10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 372 of 427

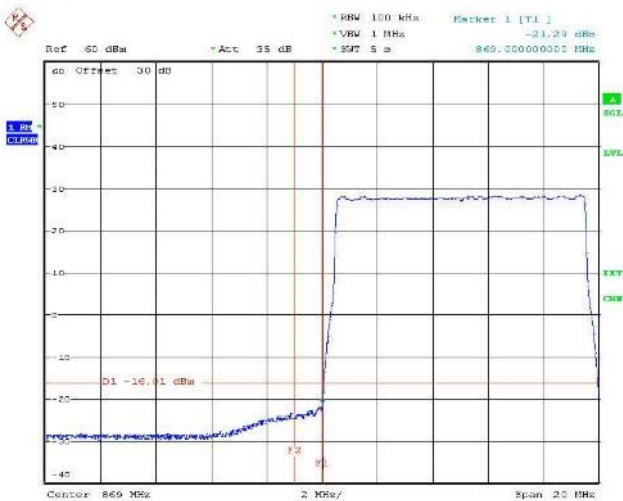


Product Service

FCC ID:  
VBNAHCA-01

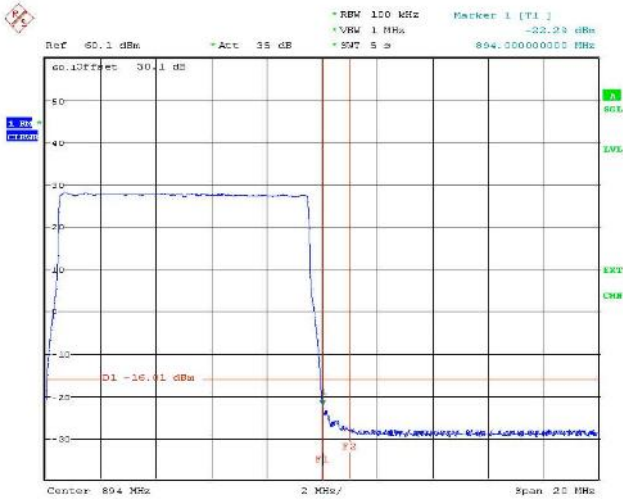
Test Report No:  
D555647736

Config I ANT3:



Date: 27.APR.2017 11:21:21

Figure 564 Spurious Emissions (Lower Band Edge) – QPSK (874 MHz)  
(10MHz Channel BW)



Date: 28.APR.2017 09:22:00

Figure 565 Spurious Emissions (Upper Band Edge) – QPSK (889 MHz)  
(10MHz Channel BW)

FCC 47 CFR part 22  
(2016)

23. May 2017

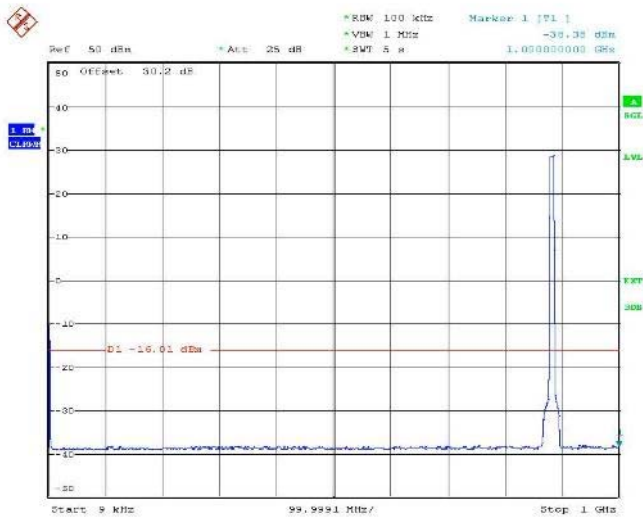
Page 373 of 427



Product Service

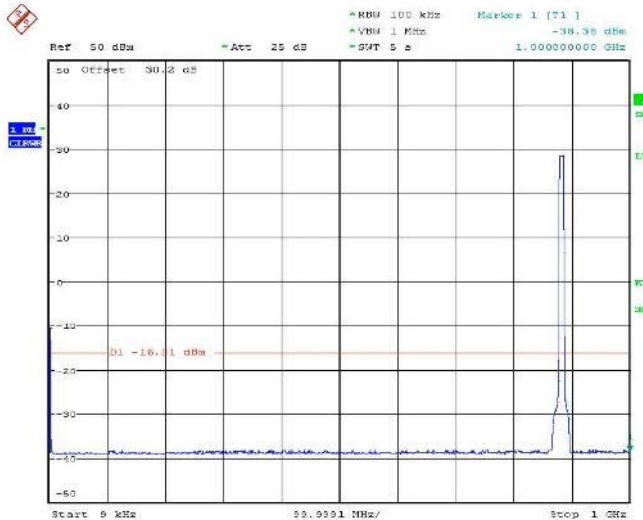
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 28.APR.2017 06:57:58

**Figure 566 Spurious Emissions (9kHz – 1GHz) - QPSK (881.5 MHz) (10MHz Channel BW)**



Date: 28.APR.2017 06:57:59

**Figure 567 Spurious Emissions (1GHz – 8.94GHz) – QPSK (881.5 MHz) (10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

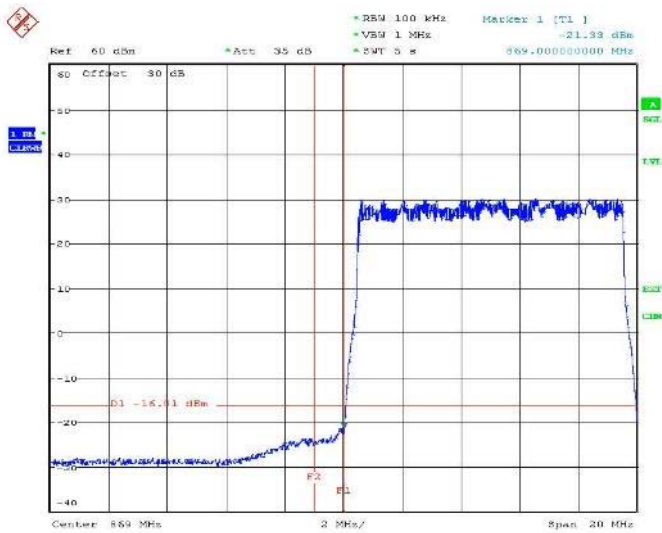
Page 374 of 427



Product Service

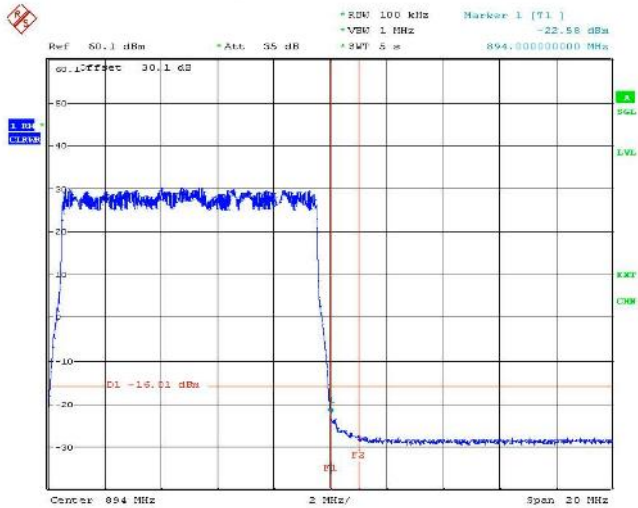
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 27.APR.2017 11:26:54

**Figure 568 Spurious Emissions (Lower Band Edge) – 16QAM (874 MHz)  
(10MHz Channel BW)**



Date: 28.APR.2017 09:04:28

**Figure 569 Spurious Emissions (Upper Band Edge) – 16QAM (889 MHz)  
(10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

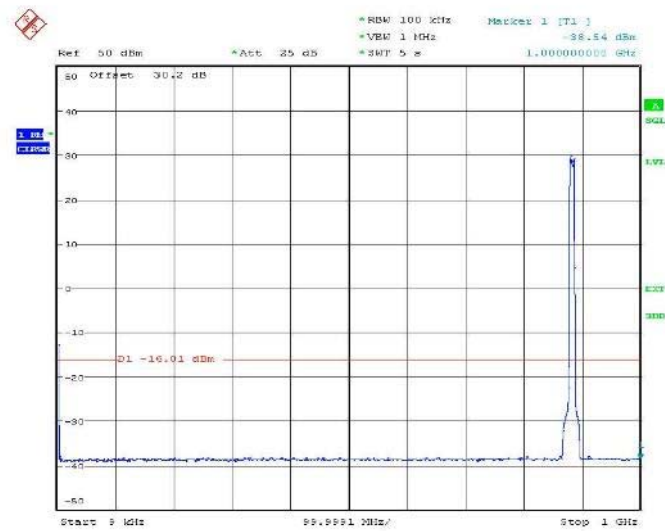
Page 375 of 427



Product Service

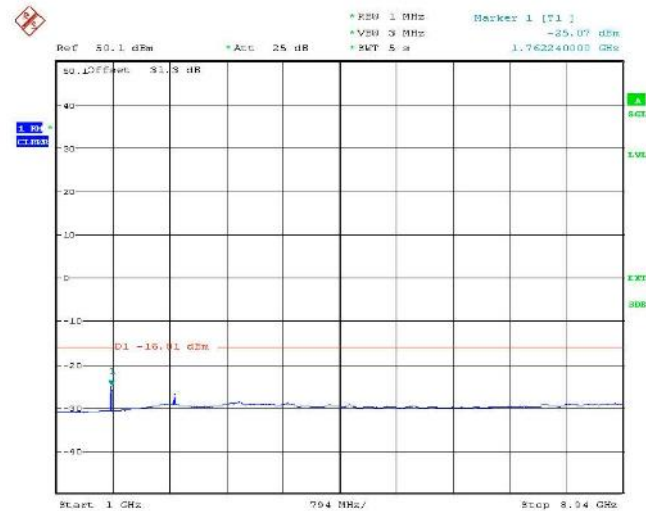
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 25.APR.2017 07:01:58

**Figure 570 Spurious Emissions (9kHz – 1GHz) - 16QAM (881.5 MHz) (10MHz Channel BW)**



Date: 25.APR.2017 07:03:18

**Figure 571 Spurious Emissions (1GHz – 8.94GHz) – 16QAM (881.5 MHz) (10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 376 of 427

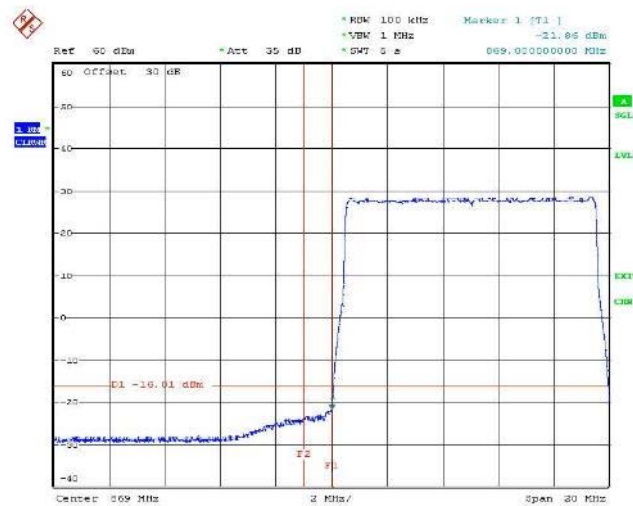




Product Service

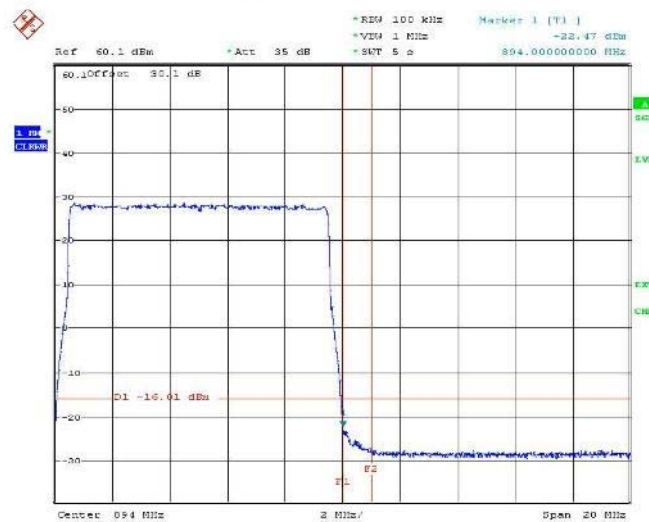
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 27.APR.2017 11:36:23

**Figure 572 Spurious Emissions (Lower Band Edge) – 64QAM (874 MHz)  
(10MHz Channel BW)**



Date: 28.APR.2017 09:00:37

**Figure 573 Spurious Emissions (Upper Band Edge) – 64QAM (889 MHz)  
(10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 377 of 427

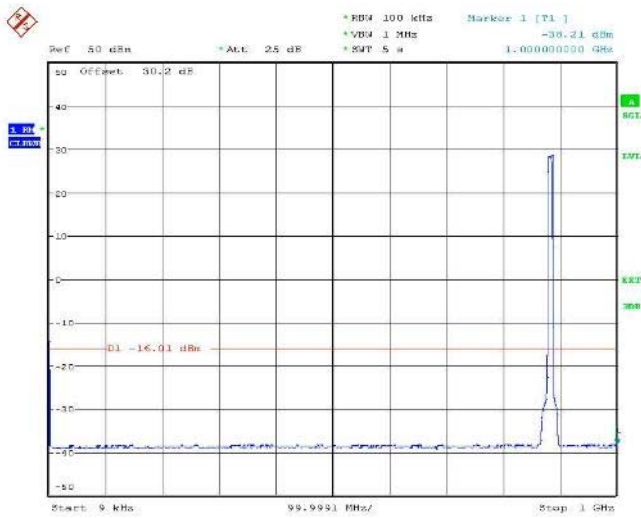




Product Service

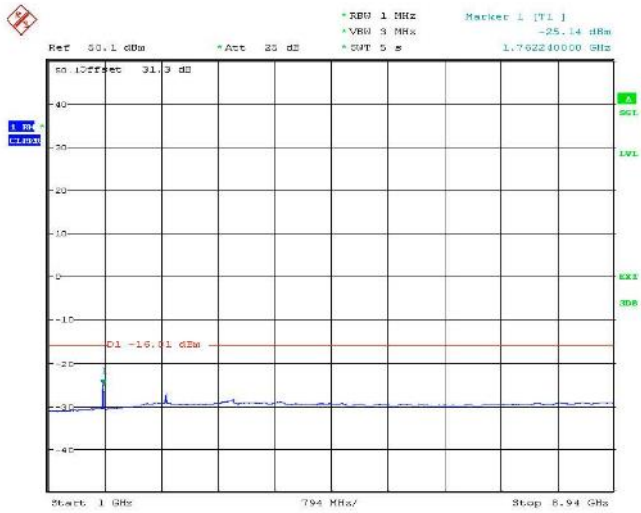
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 28.APR.2017 07:07:12

**Figure 574 Spurious Emissions (9kHz – 1GHz) - 64QAM (881.5 MHz) (10MHz Channel BW)**



Date: 28.APR.2017 07:07:57

**Figure 575 Spurious Emissions (1GHz – 8.94GHz) – 64QAM (881.5 MHz) (10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

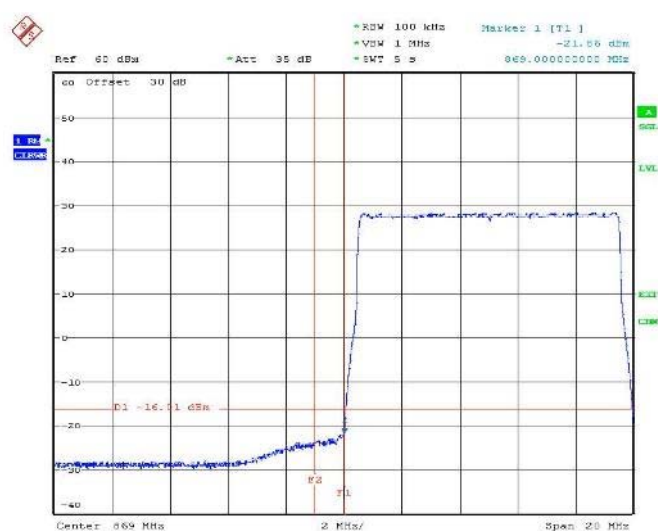
23. May 2017

Page 378 of 427



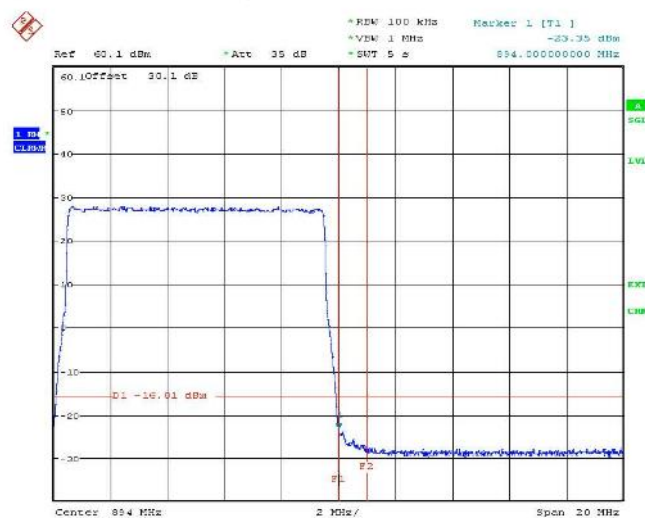
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 27.APR.2017 11:36:23

**Figure 576 Spurious Emissions (Lower Band Edge) – 256QAM (874 MHz)  
(10MHz Channel BW)**



Date: 28.APR.2017 10:10:09

**Figure 577 Spurious Emissions (Upper Band Edge) – 256QAM (889 MHz)  
(10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

---

23. May 2017

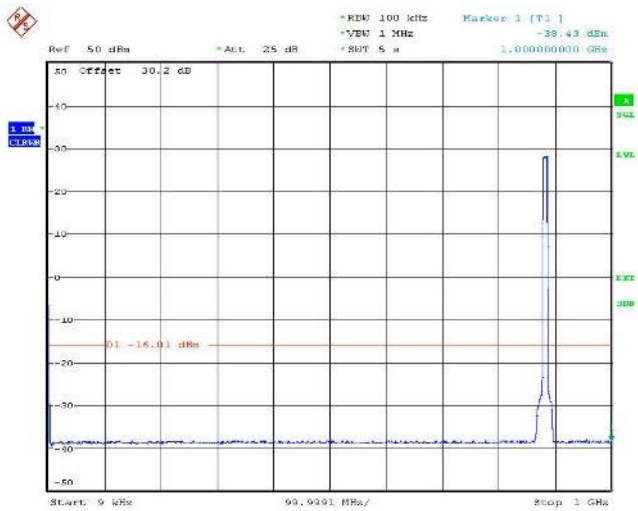
Page 379 of 427



Product Service

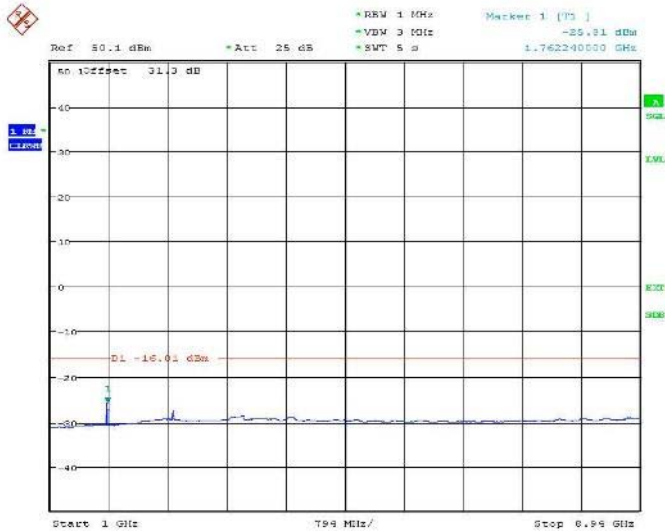
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 27.APR.2017 13:35:37

**Figure 578 Spurious Emissions (9kHz – 1GHz) - 256QAM (881.5 MHz) (10MHz Channel BW)**



Date: 27.APR.2017 13:42:23

**Figure 579 Spurious Emissions (1GHz – 8.94GHz) – 256QAM (881.5 MHz) (10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 380 of 427

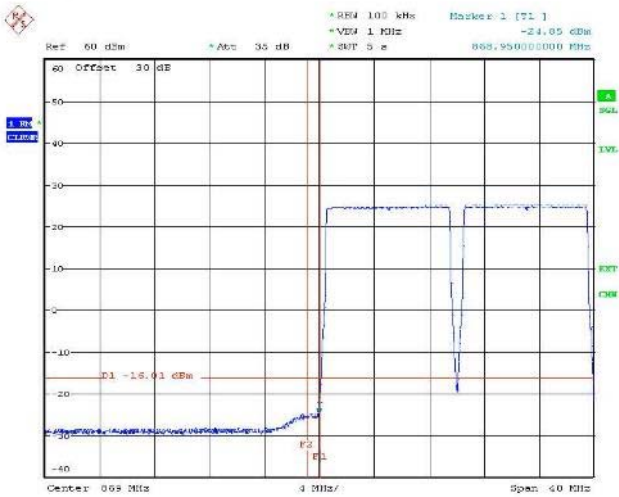


Product Service

FCC ID:  
VBNAHCA-01

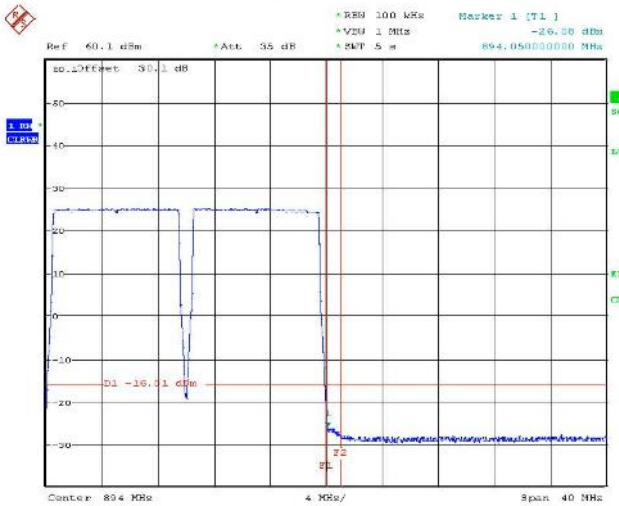
Test Report No:  
D555647736

Config J ANT1:



Date: 28.APR.2017 11:16:48

Figure 580 Spurious Emissions (Lower Band Edge) – QPSK (874/884 MHz)  
(10+10MHz Channel BW)



Date: 2.MAY.2017 09:52:48

Figure 581 Spurious Emissions (Upper Band Edge) – QPSK (879/889 MHz)  
(10+10MHz Channel BW)

FCC 47 CFR part 22  
(2016)

23. May 2017

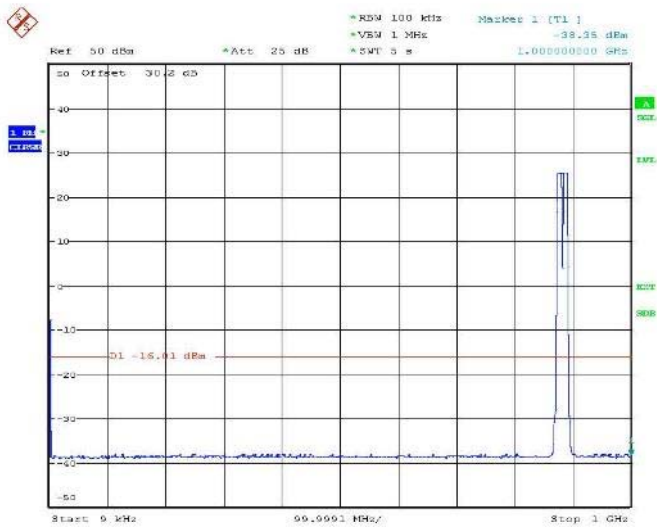
Page 381 of 427



Product Service

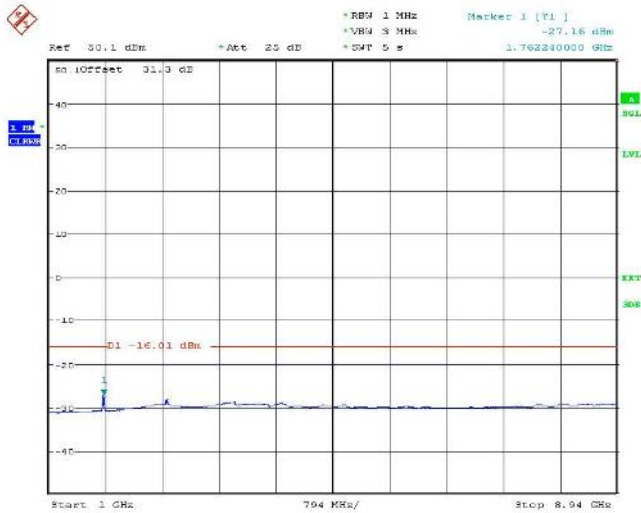
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 2.MAY.2017 07:12:20

**Figure 582 Spurious Emissions (9kHz – 1GHz) - QPSK (876.5/886.5 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 07:13:19

**Figure 583 Spurious Emissions (1GHz – 8.94GHz) – QPSK (876.5/886.5 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

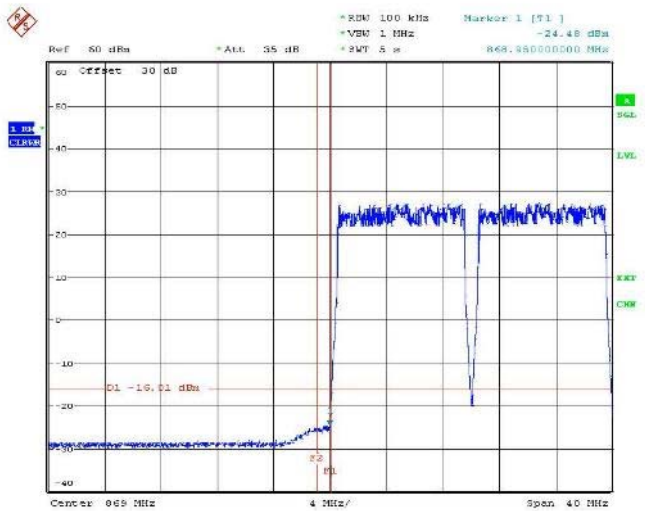
Page 382 of 427



Product Service

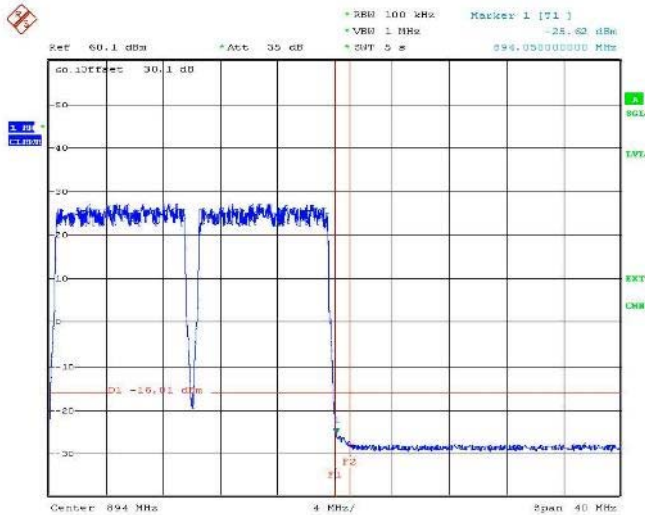
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 28.APR.2017 11:25:20

**Figure 584 Spurious Emissions (Lower Band Edge) – 16QAM (874/884 MHz) (10+10MHz Channel BW)**



Date: 2.MAY.2017 08:56:29

**Figure 585 Spurious Emissions (Upper Band Edge) – 16QAM (879/889 MHz) (10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

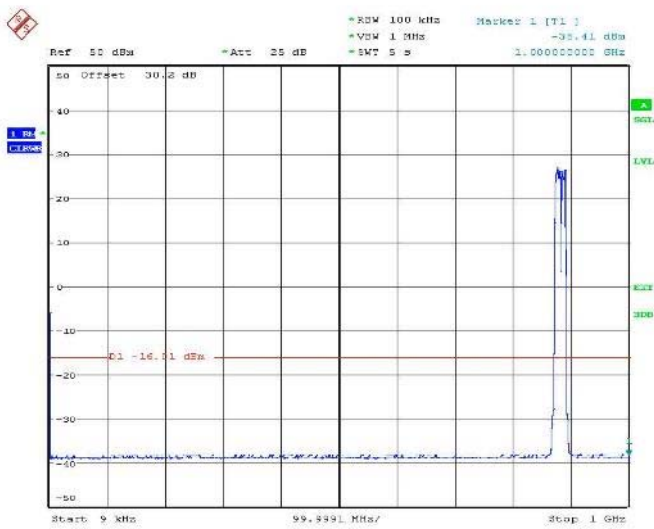
Page 383 of 427



Product Service

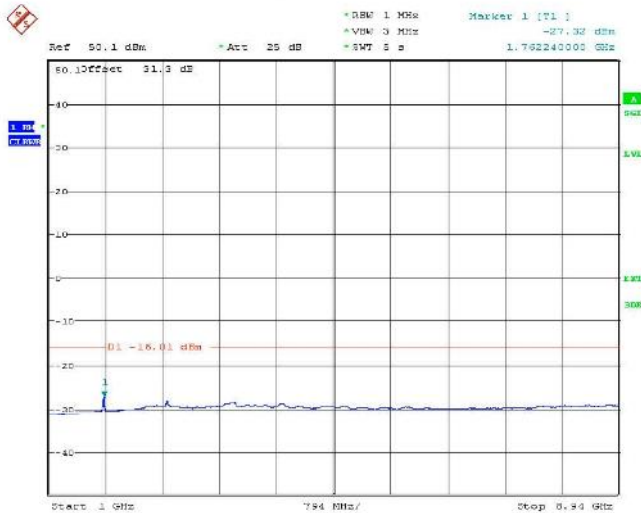
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 2.MAY.2017 07:18:46

**Figure 586 Spurious Emissions (9kHz – 1GHz) - 16QAM (876.5/886.5 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 07:26:32

**Figure 587 Spurious Emissions (1GHz – 8.94GHz) – 16QAM (876.5/886.5 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 384 of 427

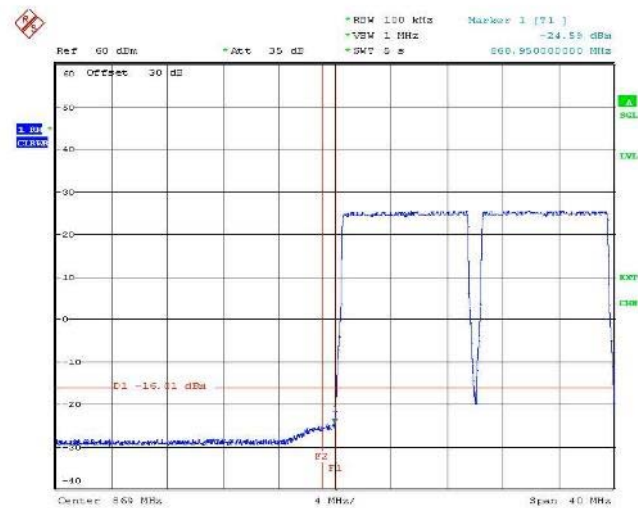




Product Service

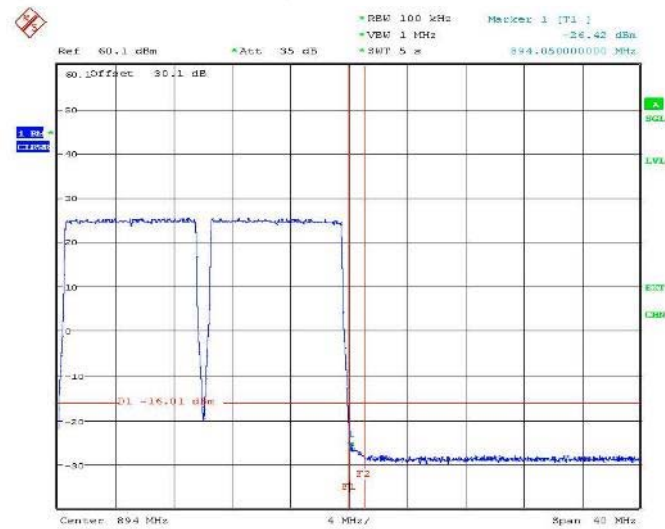
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 20.APR.2017 11:07:41

**Figure 588 Spurious Emissions (Lower Band Edge) – 64QAM (874/884 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 08:59:26

**Figure 589 Spurious Emissions (Upper Band Edge) – 64QAM (879/889 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

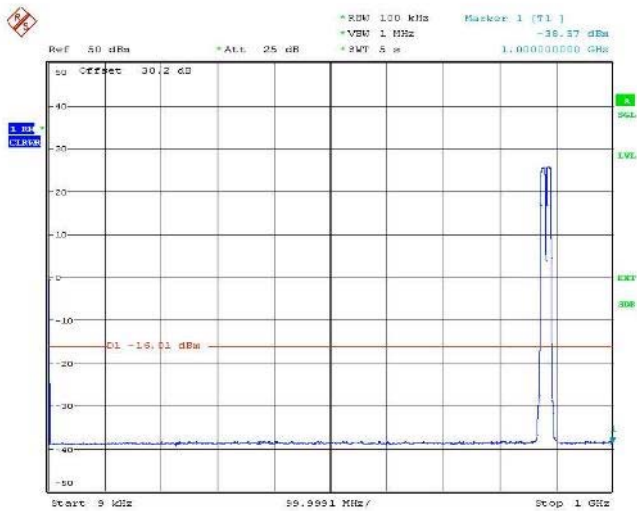
Page 385 of 427



Product Service

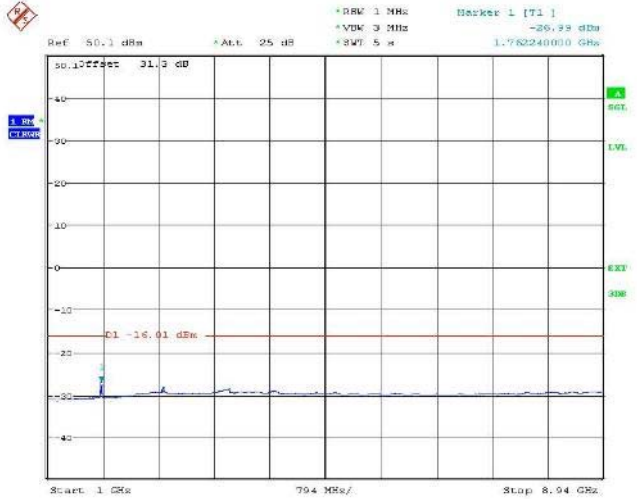
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 2.MAY.2017 07:00:25

**Figure 590 Spurious Emissions (9kHz – 1GHz) - 64QAM (876.5/886.5 MHz) (10+10MHz Channel BW)**



Date: 2.MAY.2017 07:01:26

**Figure 591 Spurious Emissions (1GHz – 8.94GHz) – 64QAM (876.5/886.5 MHz) (10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

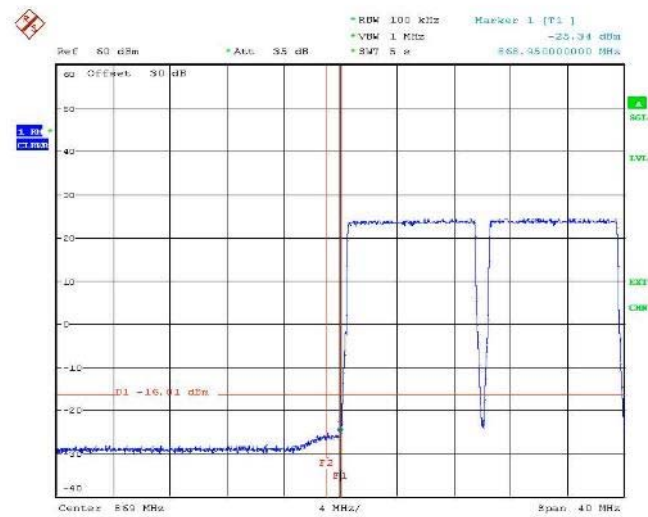
Page 386 of 427



Product Service

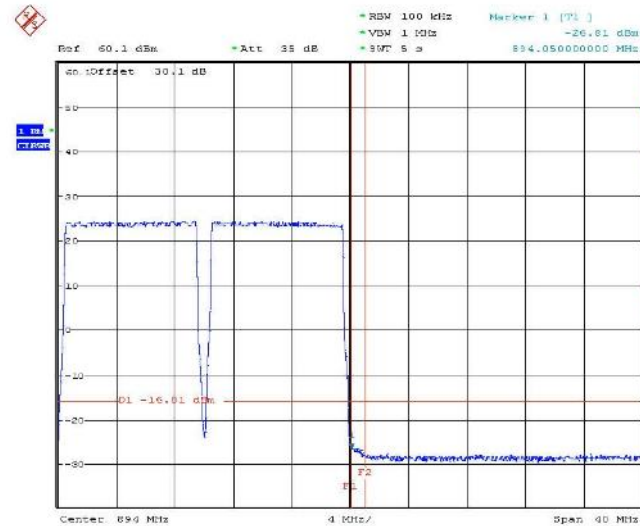
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 25.APR.2017 13:02:05

**Figure 592 Spurious Emissions (Lower Band Edge) – 256QAM (874/884 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 10:01:19

**Figure 593 Spurious Emissions (Upper Band Edge) – 256QAM (879/889 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

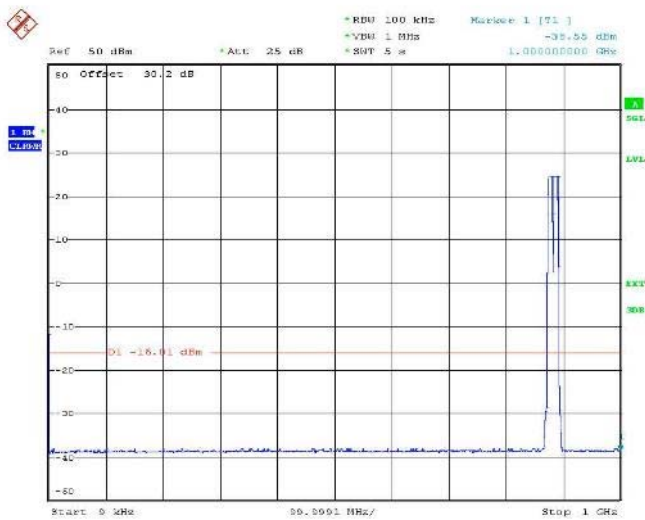
Page 387 of 427



Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Data: 20.APR.2017 13:16:44

**Figure 594 Spurious Emissions (9kHz – 1GHz) - 256QAM (876.5/886.5 MHz) (10+10MHz Channel BW)**



Data: 20.APR.2017 13:18:03

**Figure 595 Spurious Emissions (1GHz – 8.94GHz) – 256QAM (876.5/886.5 MHz) (10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 388 of 427

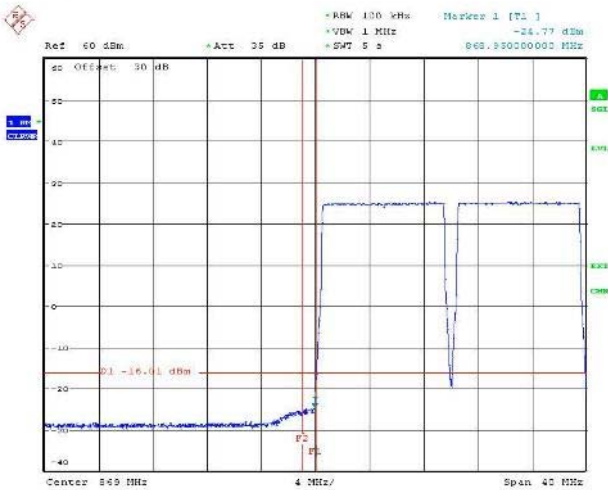


Product Service

FCC ID:  
VBNAHCA-01

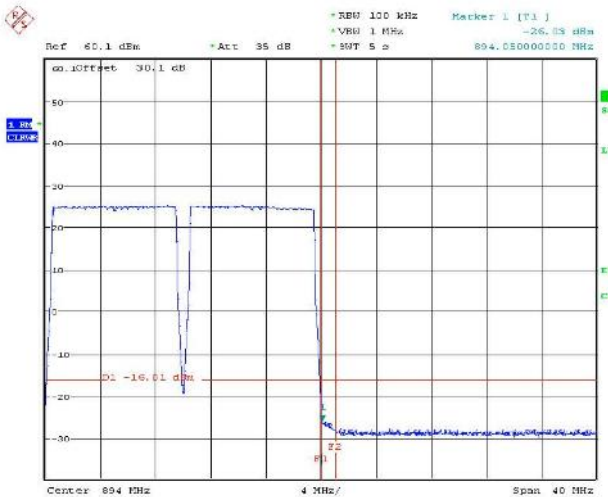
Test Report No:  
D555647736

Config J ANT3:



Date: 20.APR.2017 11:42:10

Figure 596 Spurious Emissions (Lower Band Edge) – QPSK (874/884 MHz)  
(10+10MHz Channel BW)



Date: 2.MAY.2017 02:27:43

Figure 597 Spurious Emissions (Upper Band Edge) – QPSK (879/889 MHz)  
(10+10MHz Channel BW)

FCC 47 CFR part 22  
(2016)

23. May 2017

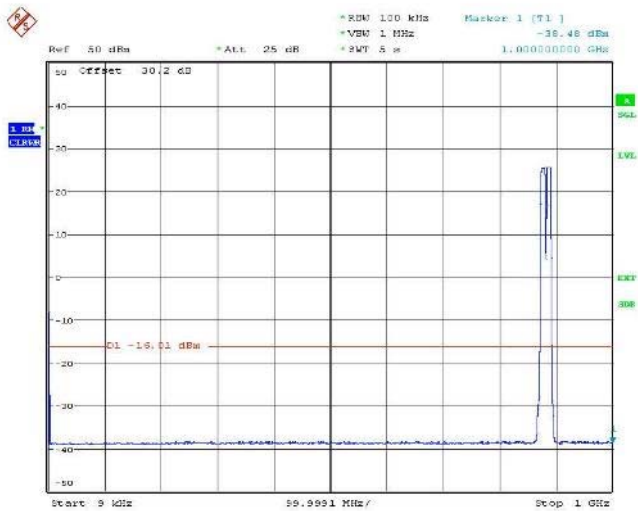
Page 389 of 427



Product Service

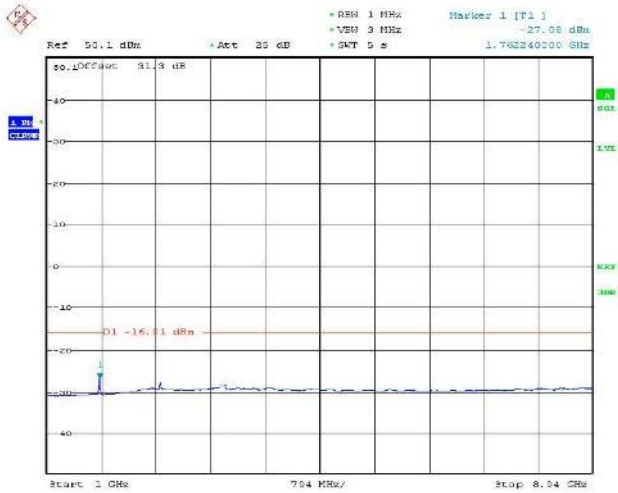
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 2.MAY.2017 07:58:09

**Figure 598 Spurious Emissions (9kHz – 1GHz) - QPSK (876.5/886.5 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 07:58:57

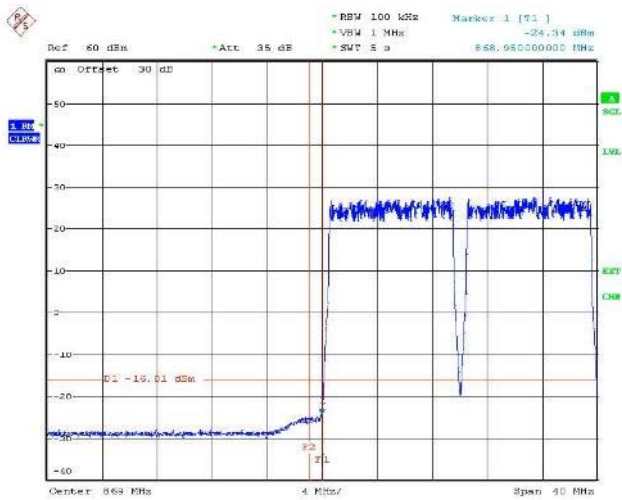
**Figure 599 Spurious Emissions (1GHz – 8.94GHz) – QPSK (876.5/886.5 MHz)  
(10+10MHz Channel BW)**



Product Service

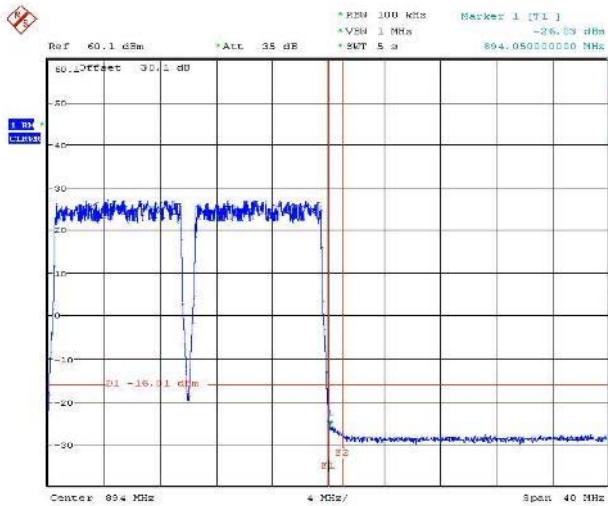
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 28.APR.2017 11:46:00

**Figure 600 Spurious Emissions (Lower Band Edge) – 16QAM (874/884 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 09:41:00

**Figure 601 Spurious Emissions (Upper Band Edge) – 16QAM (879/889 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 391 of 427





Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736

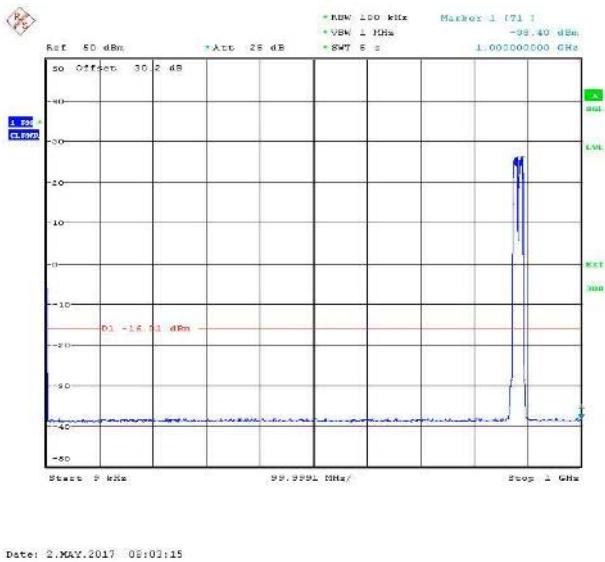


Figure 602 Spurious Emissions (9kHz – 1GHz) - 16QAM (876.5/886.5 MHz) (10+10MHz Channel BW)

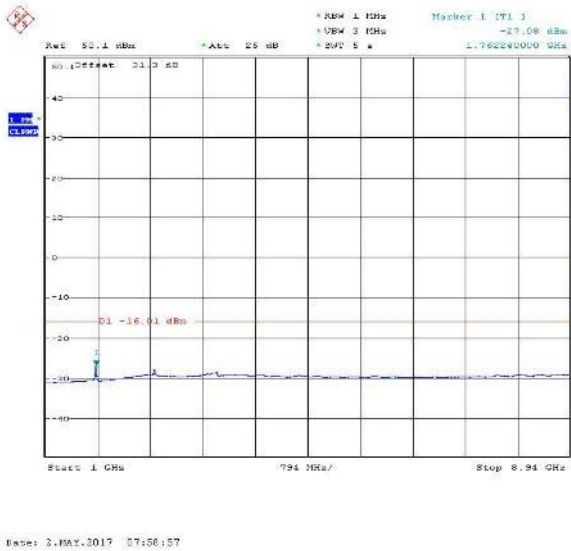


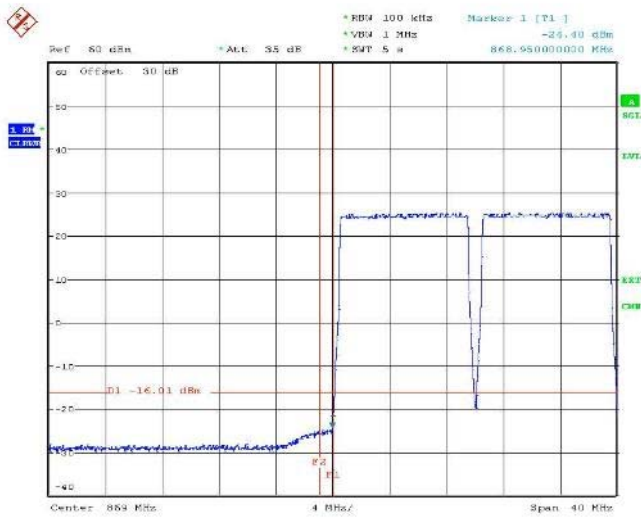
Figure 603 Spurious Emissions (1GHz – 8.94GHz) – (876.5/886.5 MHz) (10+10MHz Channel BW)



Product Service

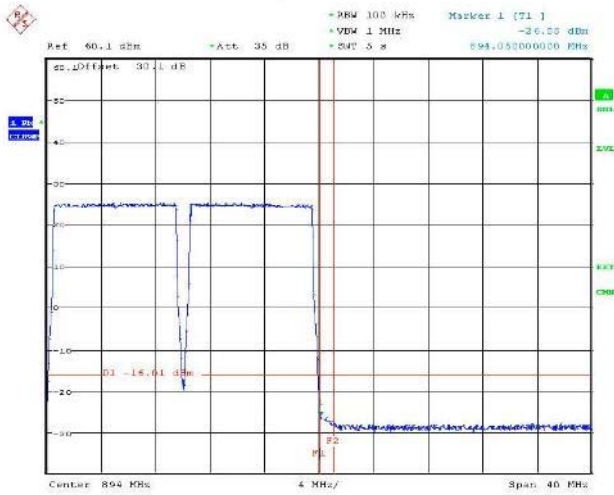
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 28.APR.2017 11:49:20

**Figure 604 Spurious Emissions (Lower Band Edge) – 64QAM (874/884 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 08:47:18

**Figure 605 Spurious Emissions (Upper Band Edge) – 64QAM (879/889 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

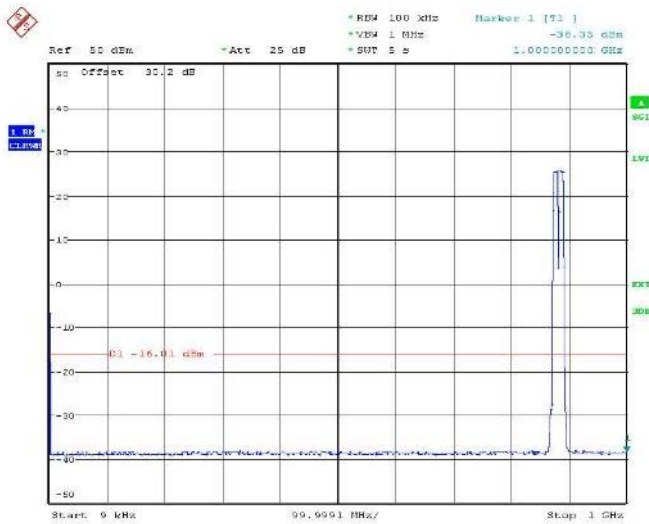
Page 393 of 427



Product Service

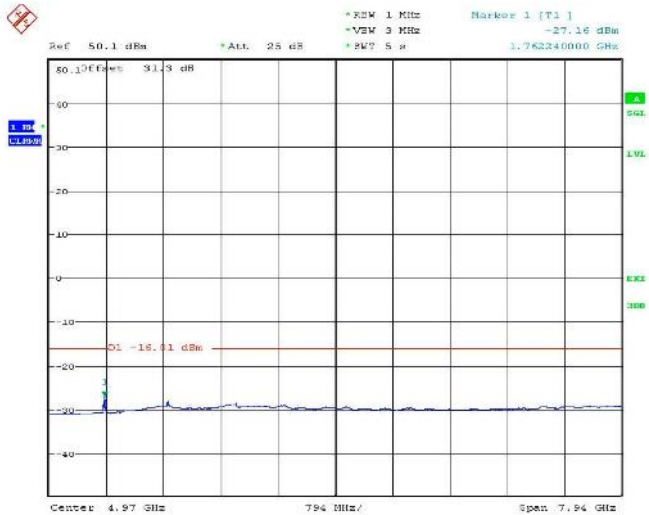
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 2.MAY.2017 08:27:44

**Figure 606 Spurious Emissions (9kHz – 1GHz) - 64QAM (876.5/886.5 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 08:08:38

**Figure 607 Spurious Emissions (1GHz – 8.94GHz) – 64QAM (876.5/886.5 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

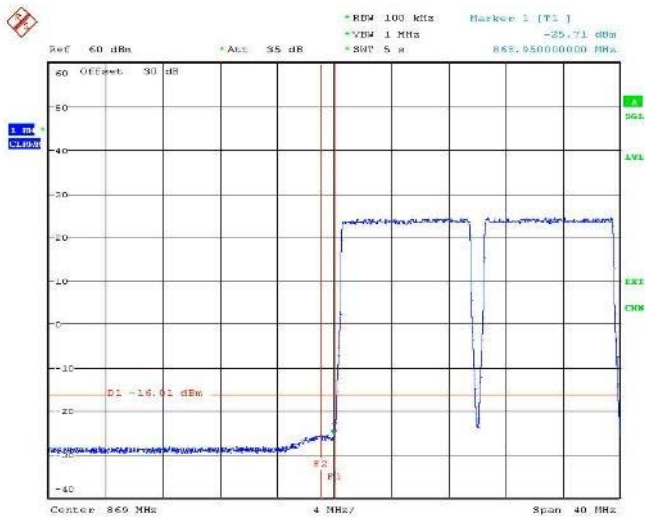
Page 394 of 427



Product Service

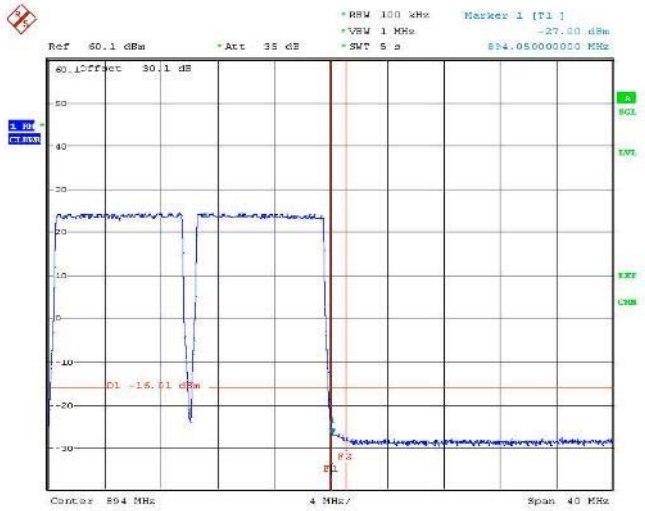
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 20.APR.2017 12:56:04

**Figure 608 Spurious Emissions (Lower Band Edge) – 256QAM (874/884 MHz)  
(10+10MHz Channel BW)**



Date: 2.MAY.2017 10:10:24

**Figure 609 Spurious Emissions (Upper Band Edge) – 256QAM (879/889 MHz)  
(10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

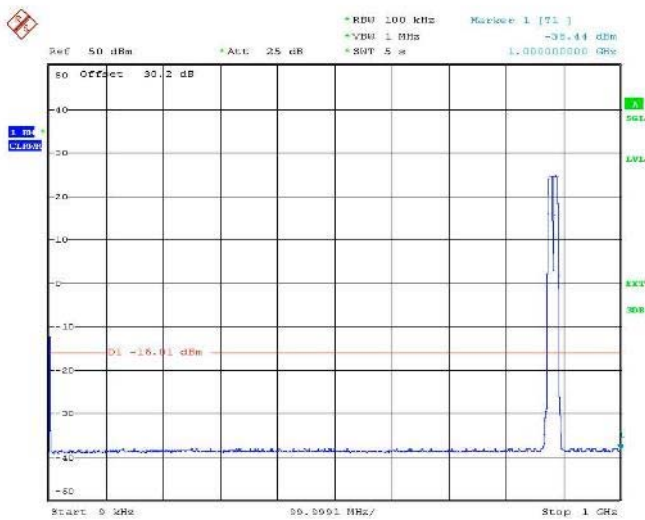
Page 395 of 427



Product Service

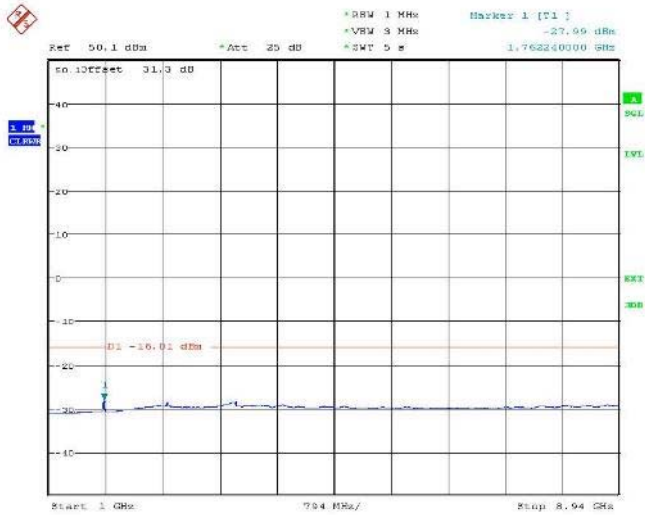
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



Date: 20. APR. 2017 13:31:10

**Figure 610 Spurious Emissions (9kHz – 1GHz) - 256QAM (876.5/886.5 MHz) (10+10MHz Channel BW)**



Date: 20. APR. 2017 13:32:06

**Figure 611 Spurious Emissions (1GHz – 8.94GHz) – 256QAM (876.5/886.5 MHz) (10+10MHz Channel BW)**

FCC 47 CFR part 22  
(2016)

23. May 2017

Page 396 of 427



Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736

5.2.4. Test No. 5: Field Strength of Spurious Radiation

Config A, B, C, D, E, F, G, H, I, J:

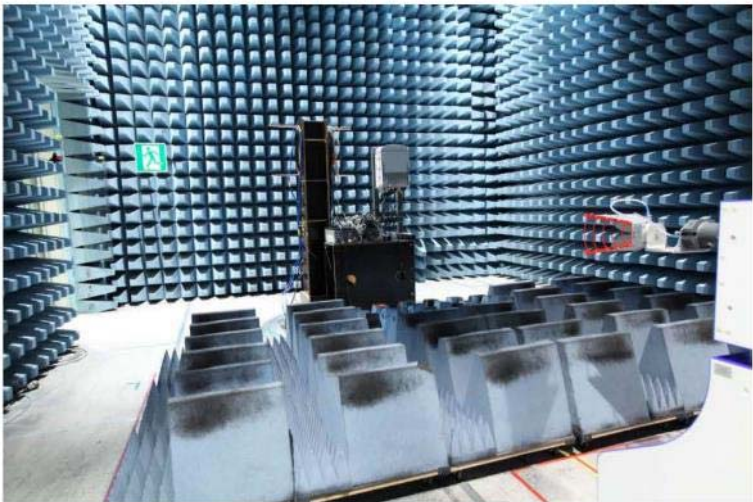


Figure 612 Photograph of the anechoic chamber with the EUT

Config A:

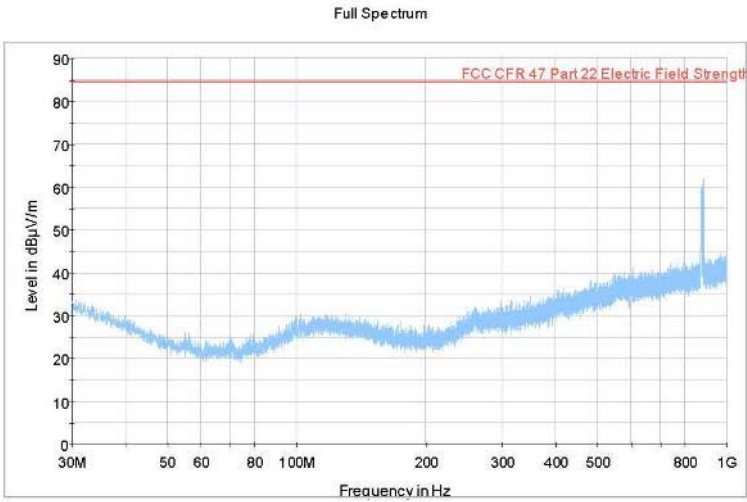


Figure 613 Radiated Emission 30 MHz – 1 GHz (871.5 MHz) (5MHz Channel BW)

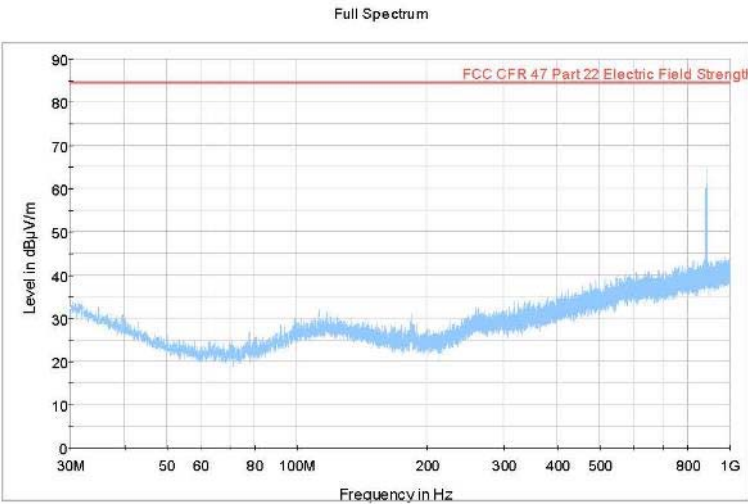




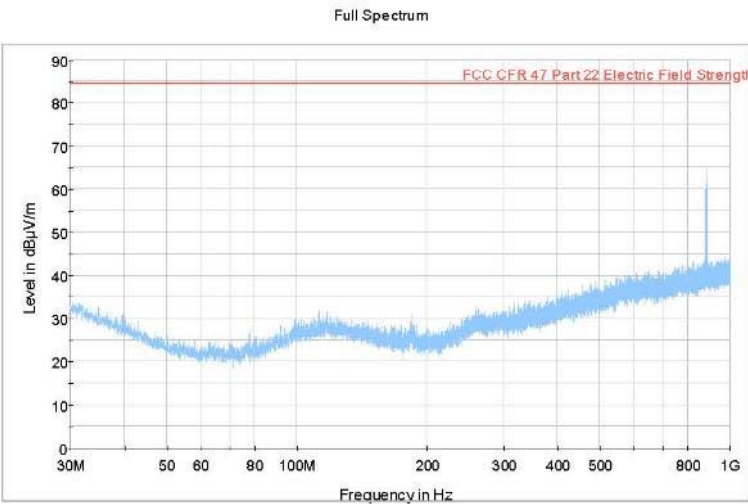
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 614 Radiated Emission 30 MHz – 1 GHz (881.5 MHz) (5MHz Channel BW)**



**Figure 615 Radiated Emission 30 MHz – 1 GHz (891.5 MHz) (5MHz Channel BW)**

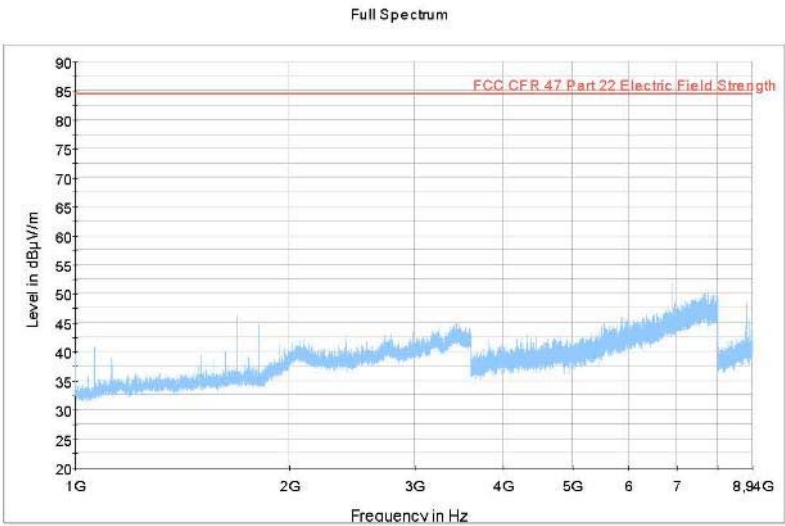




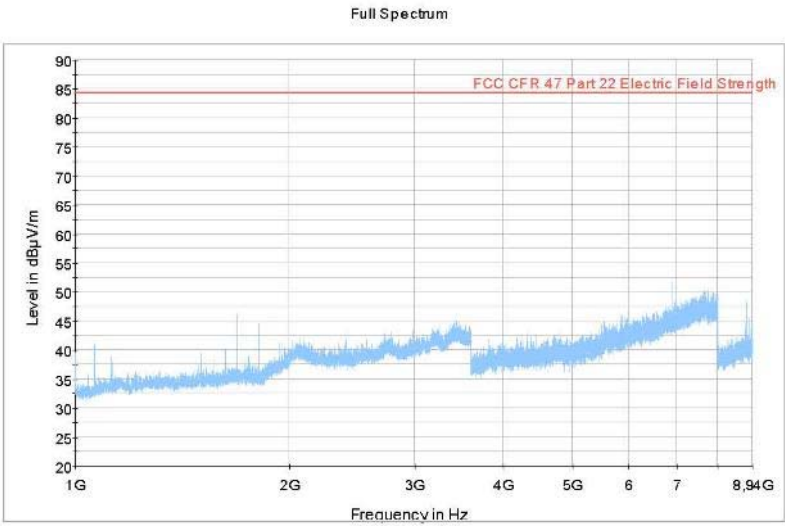
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 616 Radiated Emission 1 GHz – 8.94 GHz (871.5 MHz) (5MHz Channel BW)**



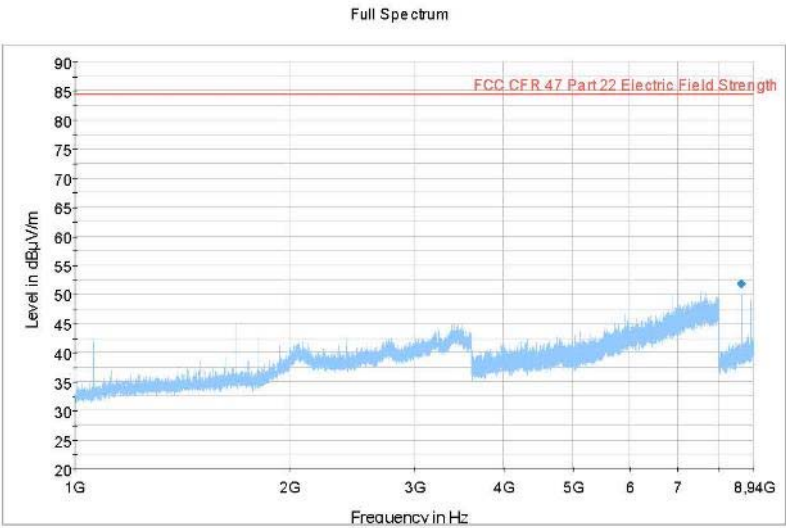
**Figure 617 Radiated Emission 1 GHz – 8.94 GHz (881.5 MHz) (5MHz Channel BW)**



Product Service

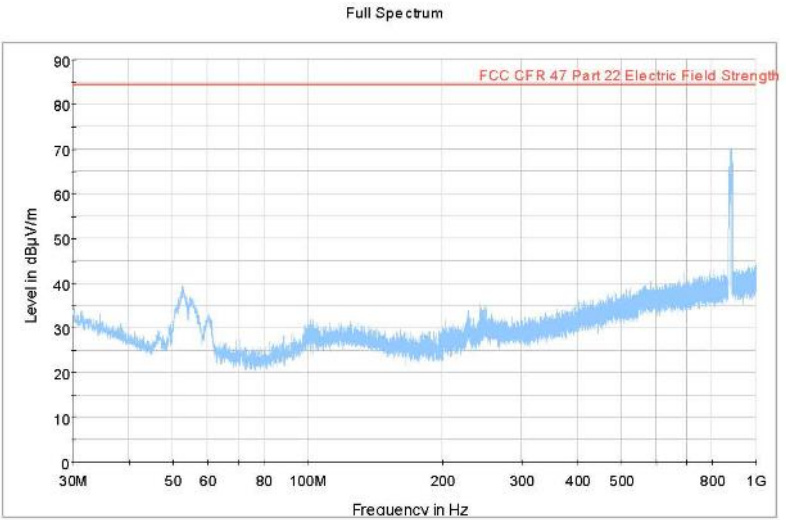
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 618 Radiated Emission 1 GHz – 8.94 GHz (891.5 MHz) (5MHz Channel BW)**

**Config B:**

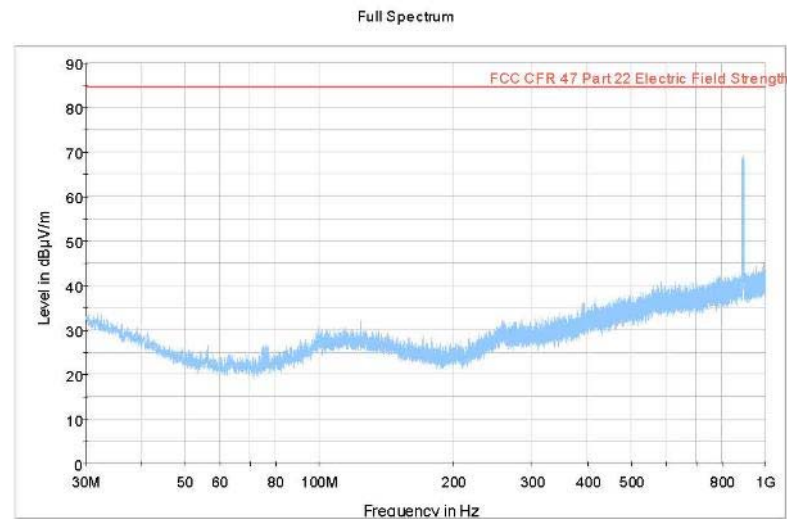


**Figure 619 Radiated Emission 30 MHz – 1 GHz (871.5MHz / 876.5MHz) (5MHz+5MHz Channel BW)**

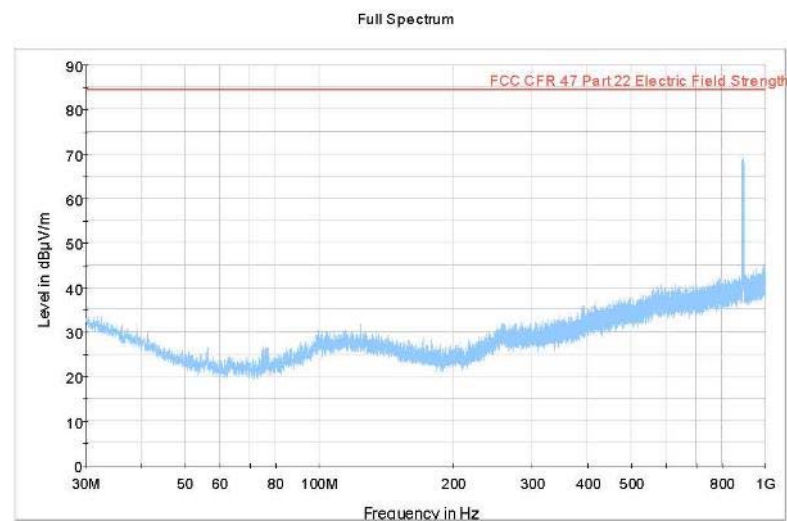


FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 620 Radiated Emission 30 MHz – 1 GHz (879MHz / 884MHz)**  
(5MHz+5MHz Channel BW)



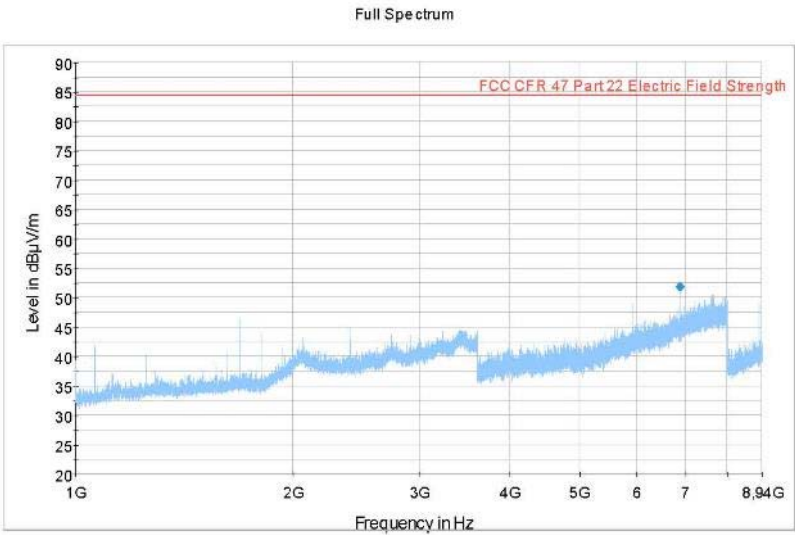
**Figure 621 Radiated Emission 30 MHz – 1 GHz (886.5MHz / 891.5MHz)**  
(5MHz+5MHz Channel BW)



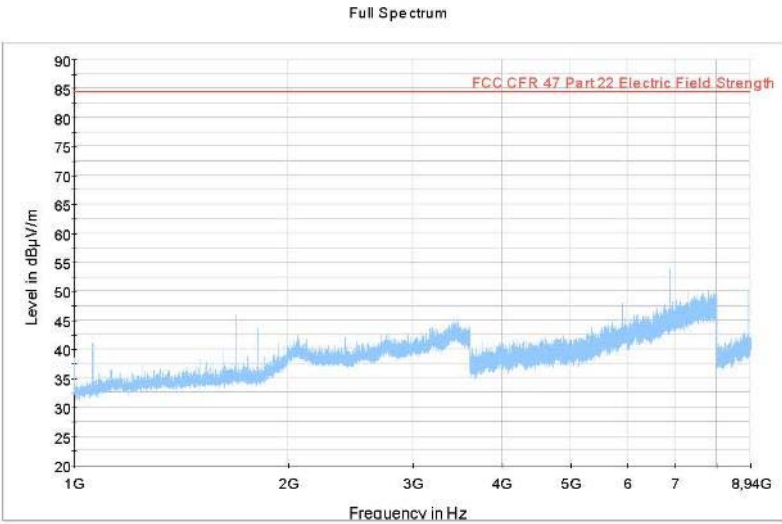
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 622 Radiated Emission 1 GHz – 8.94 GHz (871.5MHz / 876.5MHz)  
(5MHz+5MHz Channel BW)**

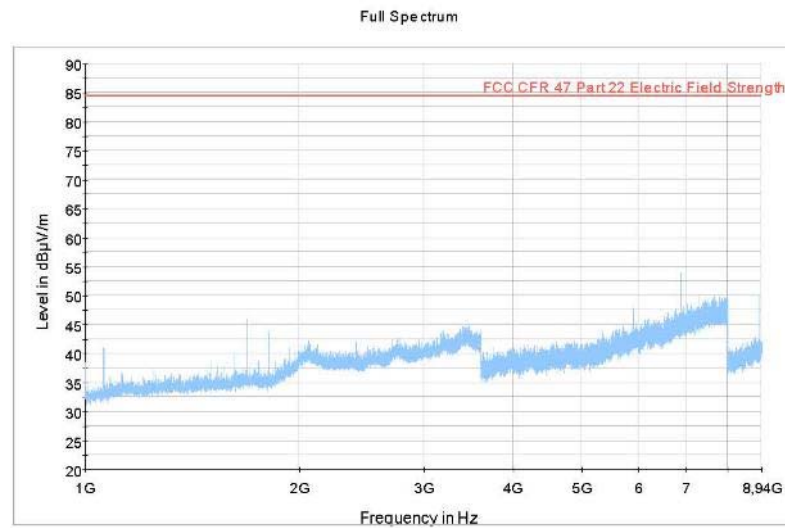


**Figure 623 Radiated Emission 1 GHz – 8.94 GHz (879MHz / 884MHz)  
(5MHz+5MHz Channel BW)**



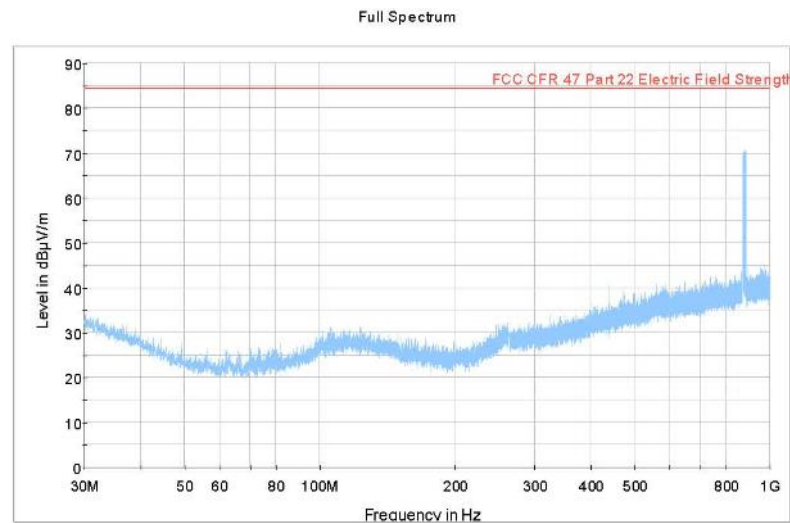
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 624 Radiated Emission 1 GHz – 8.94 GHz (886.5MHz / 891.5MHz)  
(5MHz+5MHz Channel BW)**

**Config C:**



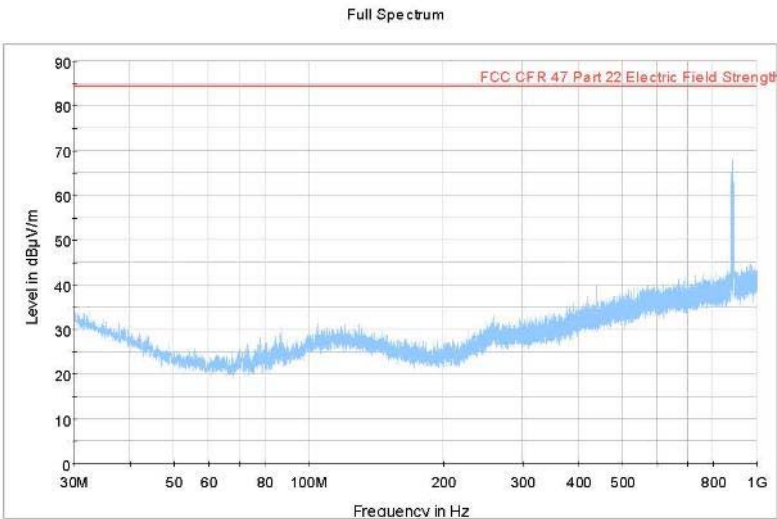
**Figure 625 Radiated Emission 30 MHz – 1 GHz (871.5MHz / 876.5MHz /  
881.5MHz) (5MHz+5MHz+5MHz Channel BW)**



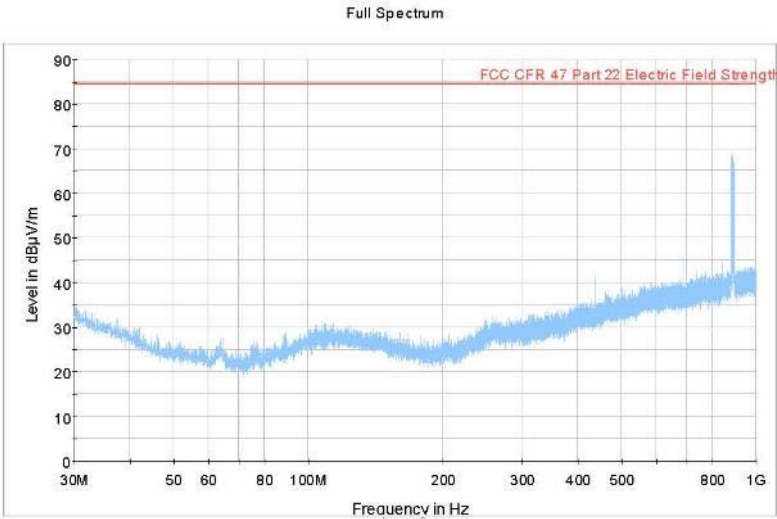
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 626 Radiated Emission 30 MHz – 1 GHz (876.5MHz / 881.5MHz / 886.5MHz) (5MHz+5MHz+5MHz Channel BW)**



**Figure 627 Radiated Emission 30 MHz – 1 GHz (881.5MHz / 886.5MHz / 891.5MHz) (5MHz+5MHz+5MHz Channel BW)**

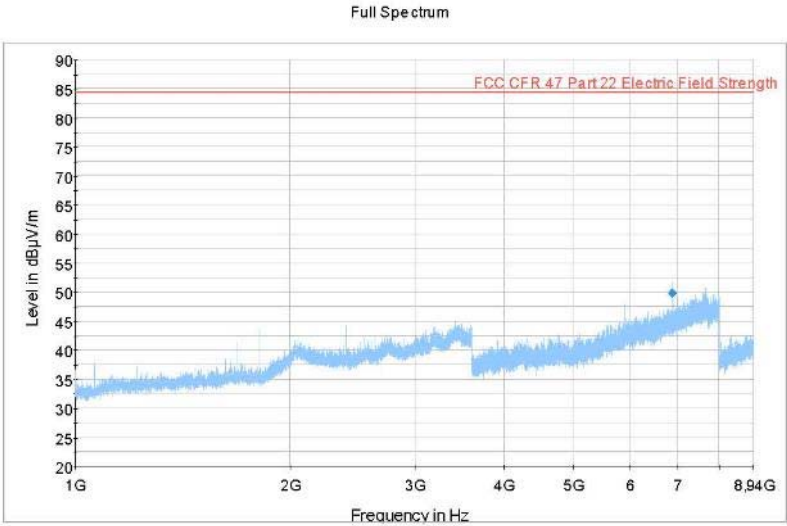




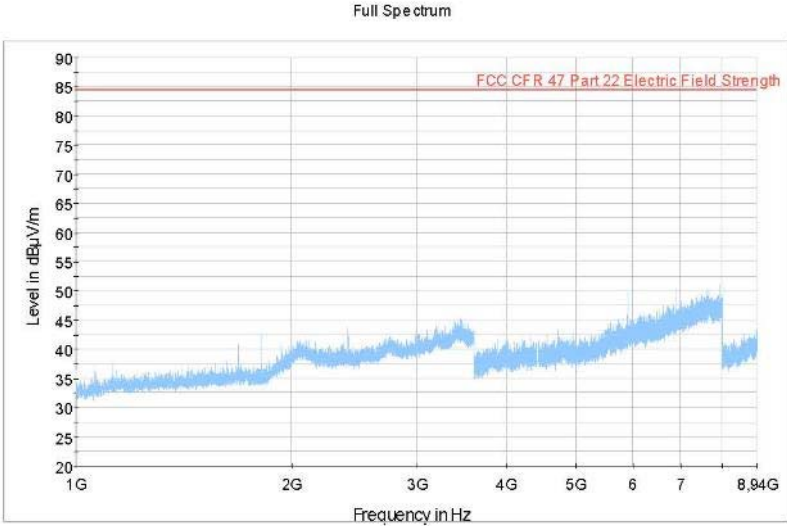
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 628 Radiated Emission 1 GHz – 8.94 GHz (871.5MHz / 876.5MHz / 881.5MHz) (5MHz+5MHz+5MHz Channel BW)**



**Figure 629 Radiated Emission 1 GHz – 8.94 GHz (876.5MHz / 881.5MHz / 886.5MHz) (5MHz+5MHz+5MHz Channel BW)**

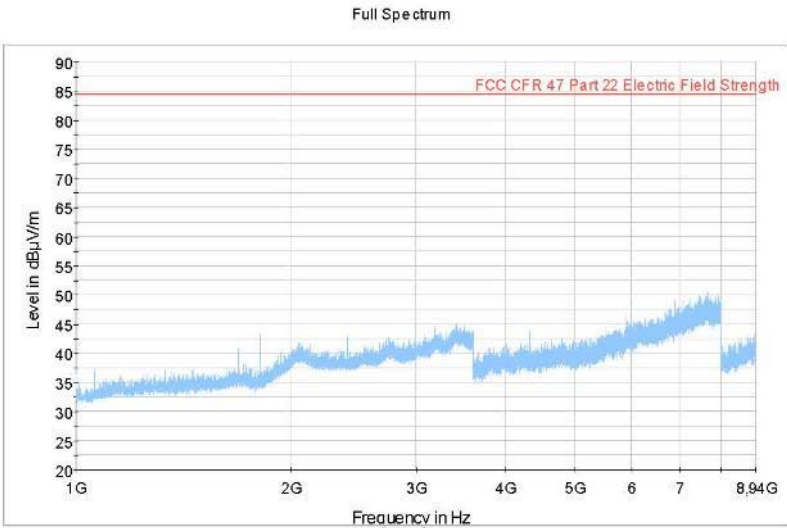




Product Service

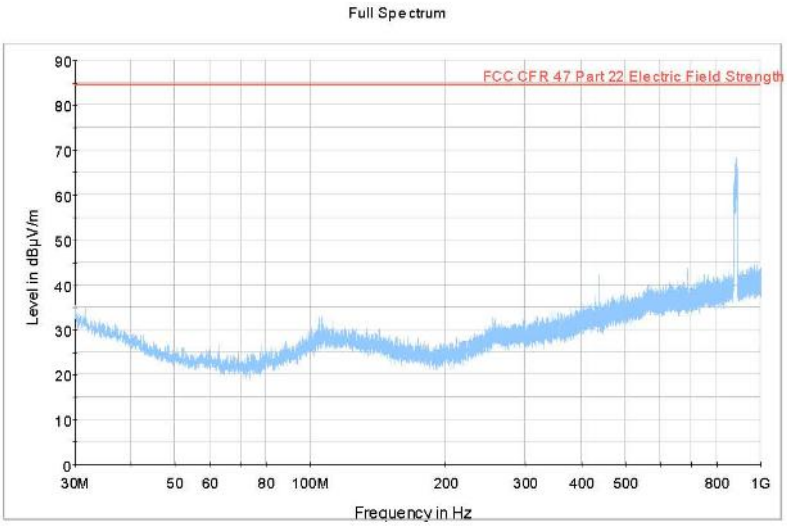
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 630 Radiated Emission 1 GHz – 8.94 GHz (881.5MHz / 886.5 MHz / 891.5 MHz) (5MHz+5MHz+5MHz Channel BW)**

**Config D:**



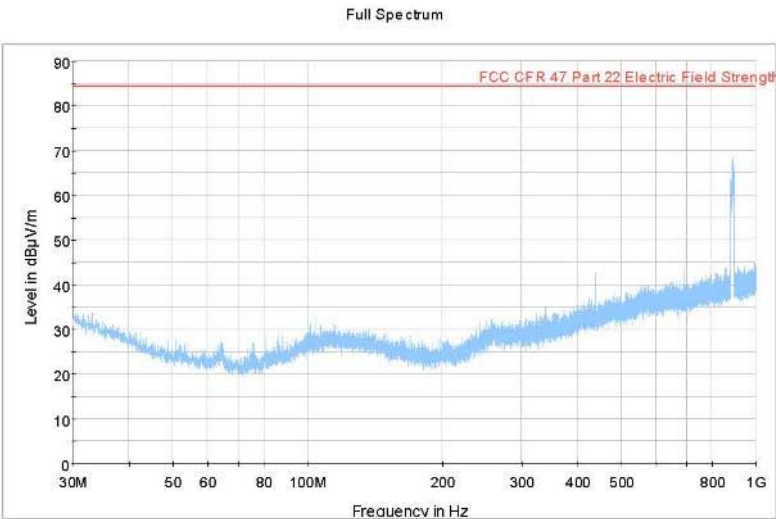
**Figure 631 Radiated Emission 30 MHz – 1 GHz (874MHz) (10MHz Channel BW)**



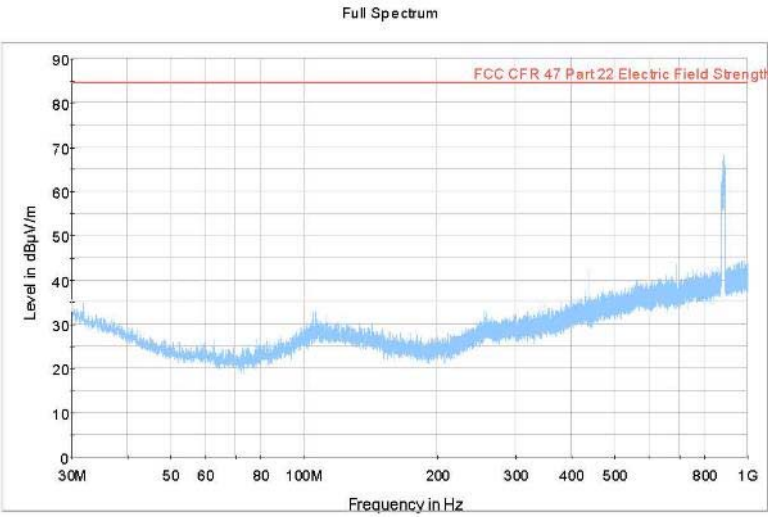
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 632 Radiated Emission 30 MHz – 1 GHz (881.5MHz) (10MHz Channel BW)**



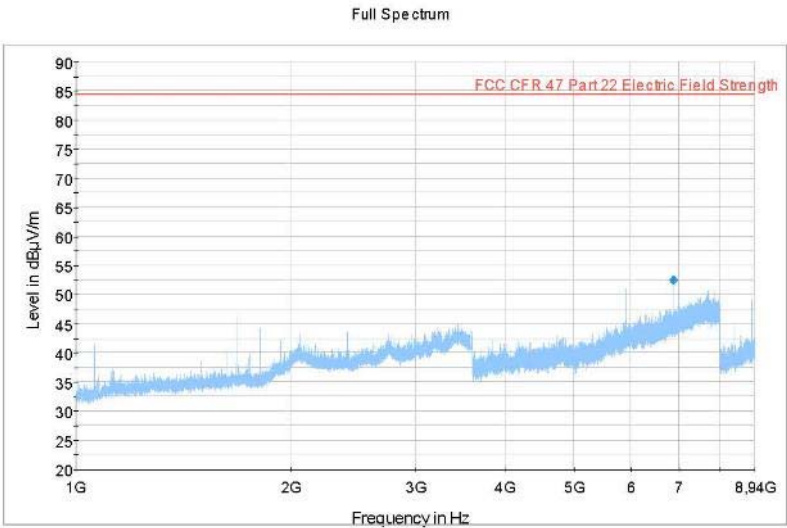
**Figure 633 Radiated Emission 30 MHz – 1 GHz (889MHz) (10MHz Channel BW)**



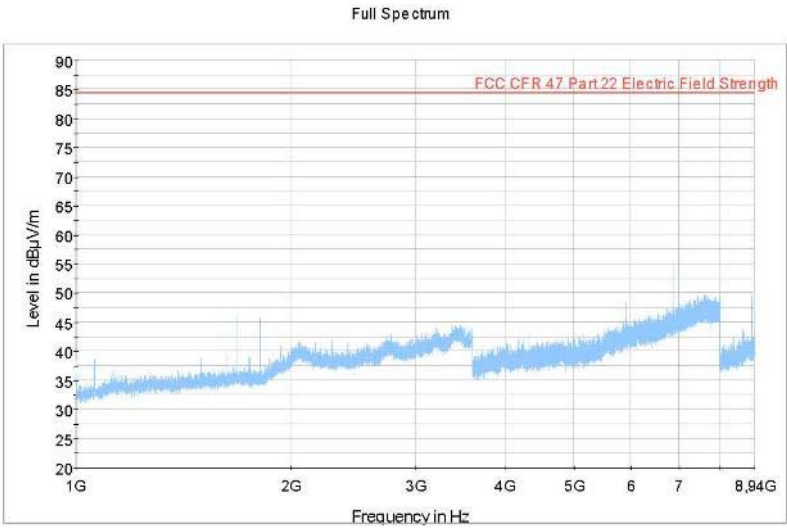
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 634 Radiated Emission 1 GHz – 8.94 GHz (874MHz) (10MHz Channel BW)**



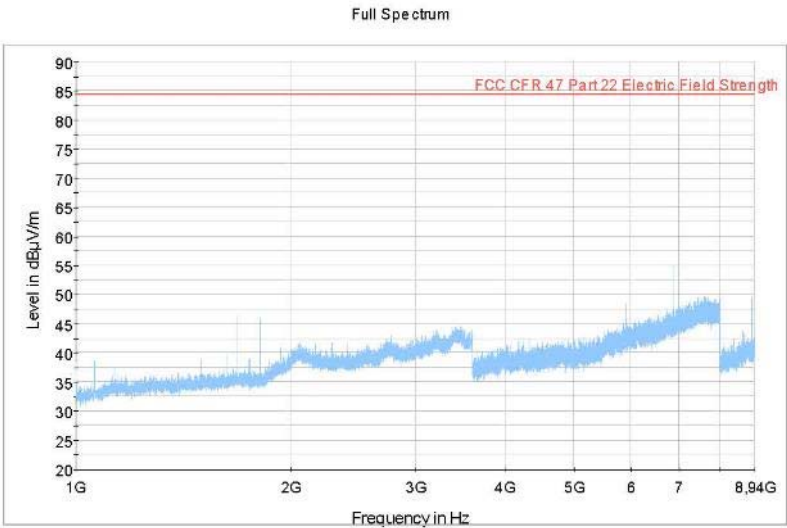
**Figure 635 Radiated Emission 1 GHz – 8.94 GHz (881.5MHz) (10MHz Channel BW)**



Product Service

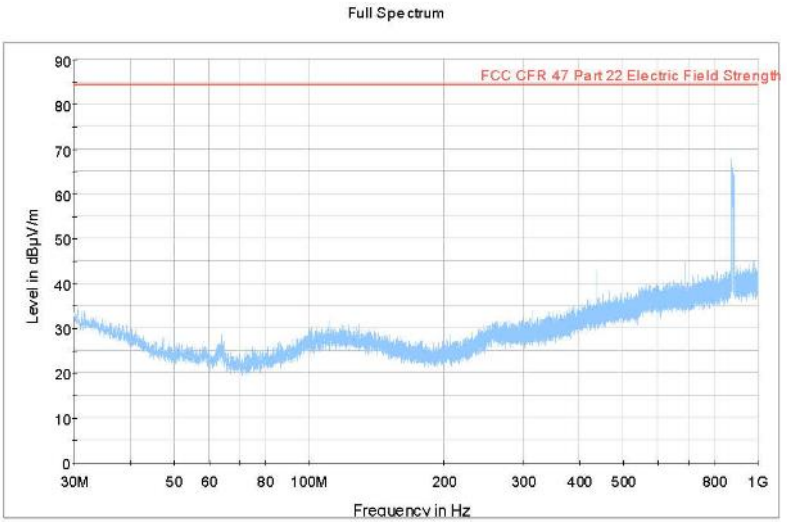
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 636 Radiated Emission 1 GHz – 8.94 GHz (889MHz) (10MHz Channel BW)**

**Config E:**



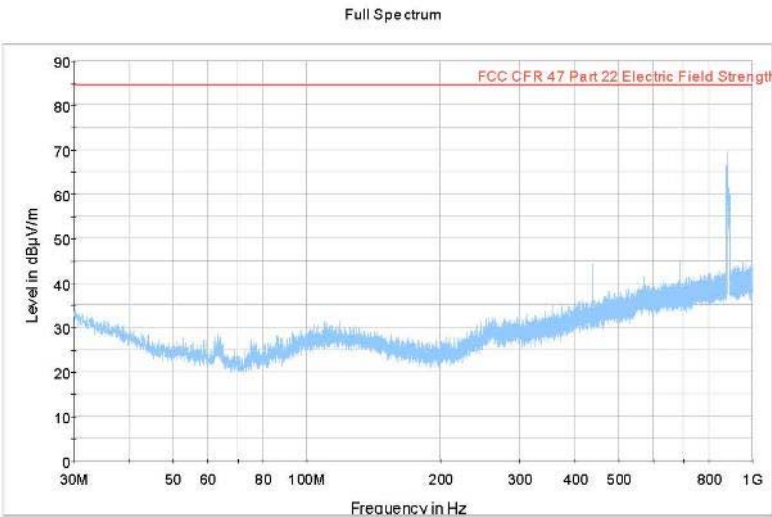
**Figure 637 Radiated Emission 30 MHz – 1 GHz (874MHz / 884MHz) (10MHz+10MHz Channel BW)**



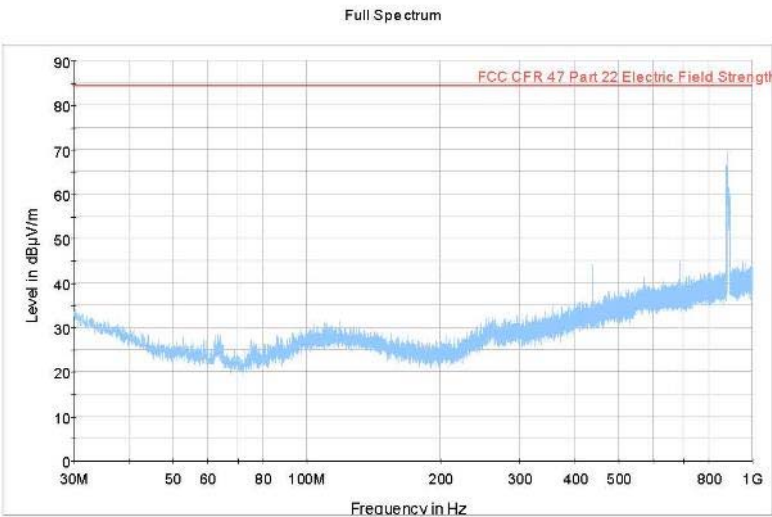
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 638 Radiated Emission 30 MHz – 1 GHz (876.5MHz / 886.5MHz)  
(10MHz+10MHz Channel BW)**



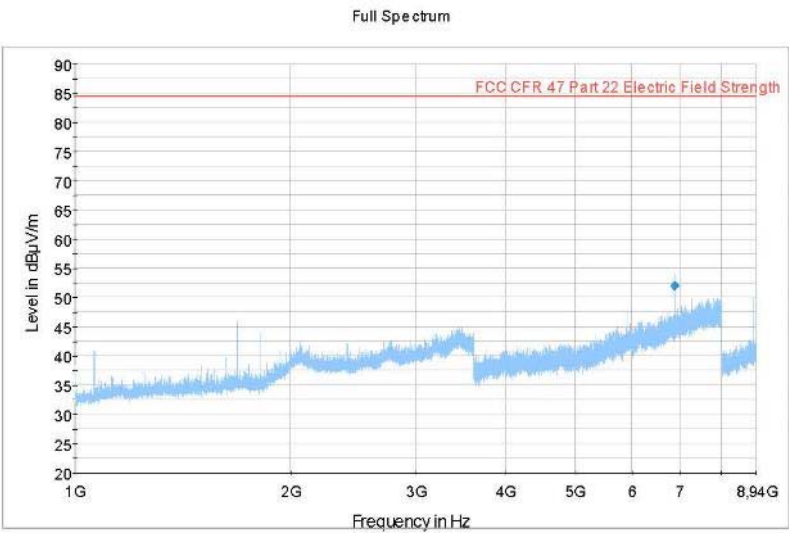
**Figure 639 Radiated Emission 30 MHz – 1 GHz (879MHz / 889MHz)  
(10MHz+10MHz Channel BW)**



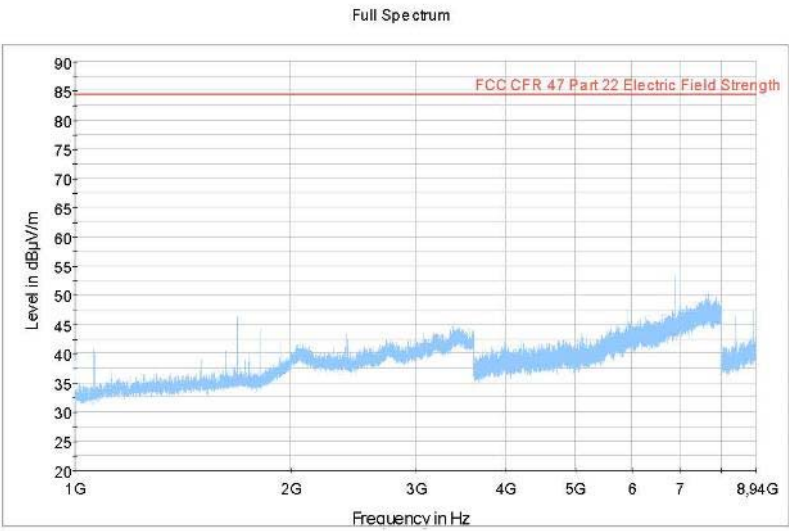
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 640 Radiated Emission 1 GHz – 8.94 GHz (874MHz / 884MHz)  
(10MHz+10 MHz Channel BW)**



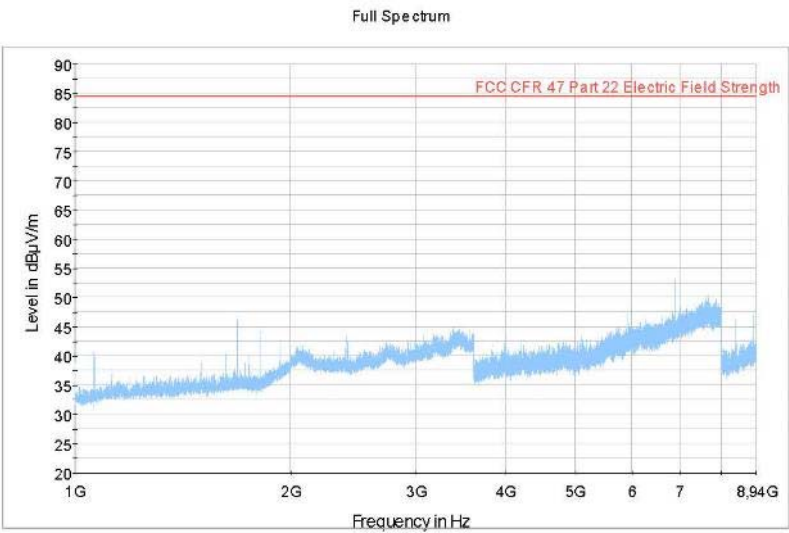
**Figure 641 Radiated Emission 1 GHz – 8.94 GHz (876.5MHz / 886.5MHz)  
(10MHz+10MHz Channel BW)**



Product Service

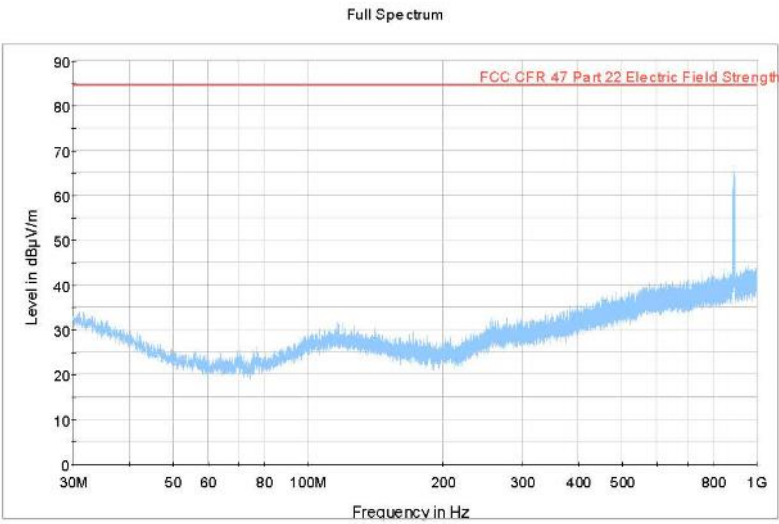
FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 642 Radiated Emission 1 GHz – 8.94 GHz (879/889MHz)  
(10MHz+10MHz Channel BW)**

**Config F:**



**Figure 643 Radiated Emission 30 MHz – 1 GHz (871.5MHz) (5MHz Channel BW)**

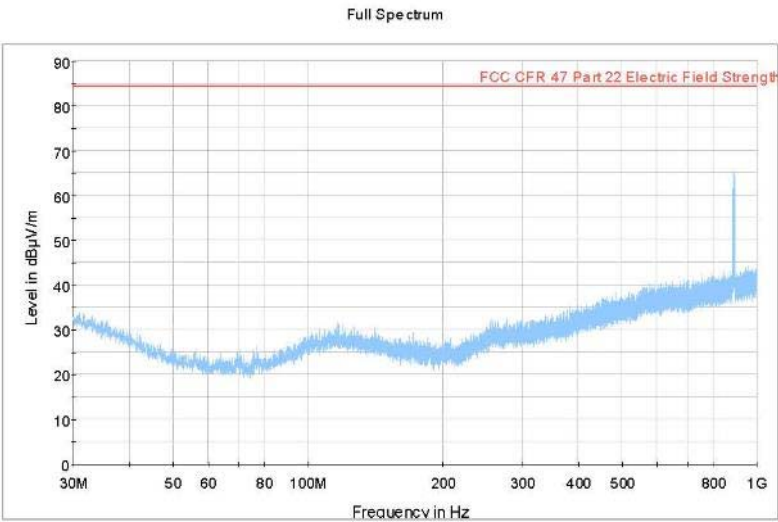




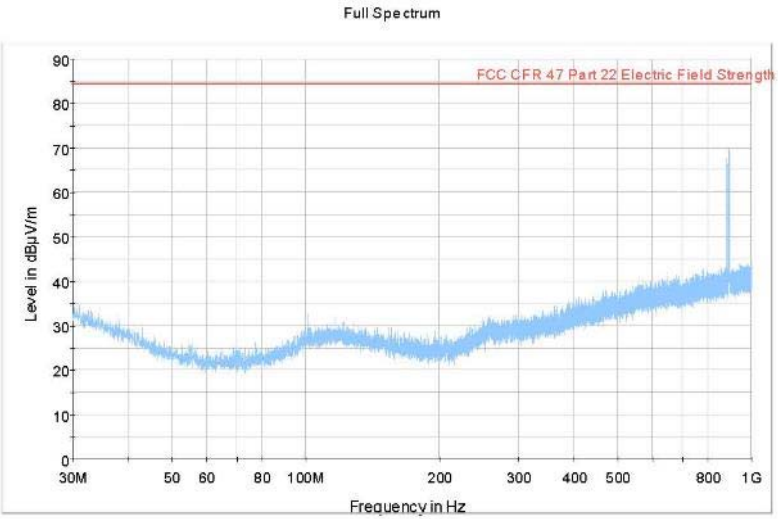
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 644 Radiated Emission 30 MHz – 1 GHz (881.5MHz) (5MHz Channel BW)**



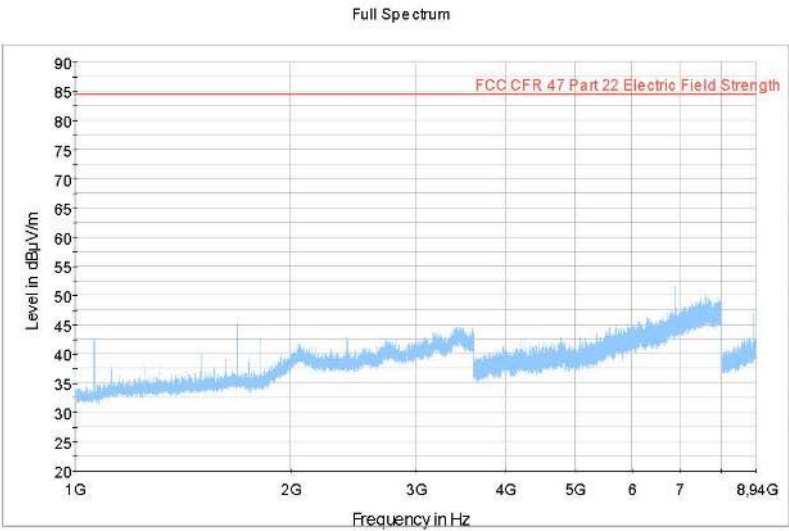
**Figure 645 Radiated Emission 30 MHz – 1 GHz (891.5MHz) (5MHz Channel BW)**



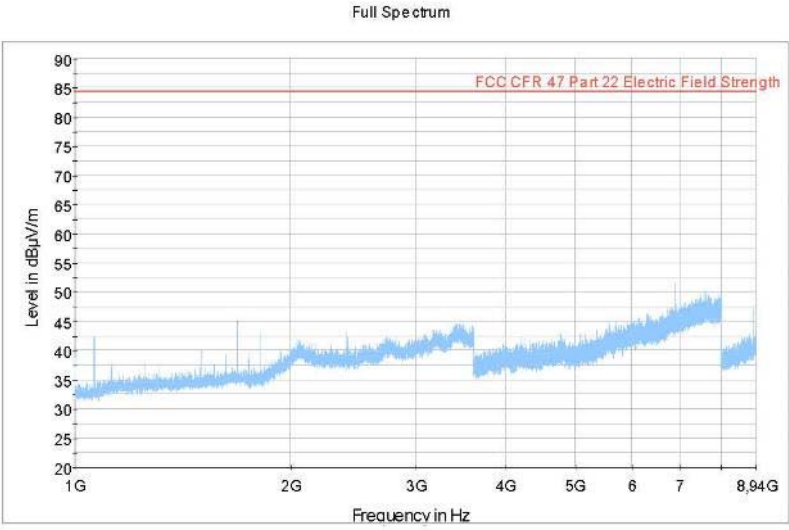
Product Service

FCC ID:  
VBNAHCA-01

Test Report No:  
D555647736



**Figure 646 Radiated Emission 1 GHz – 8.94 GHz (871.5MHz) (5MHz Channel BW)**



**Figure 647 Radiated Emission 1 GHz – 8.94 GHz (881.5MHz) (5MHz Channel BW)**