

Fig.48 Radiated Band Edges (GFSK, Ch0, 2380GHz~2450GHz , Horizontal Direction)

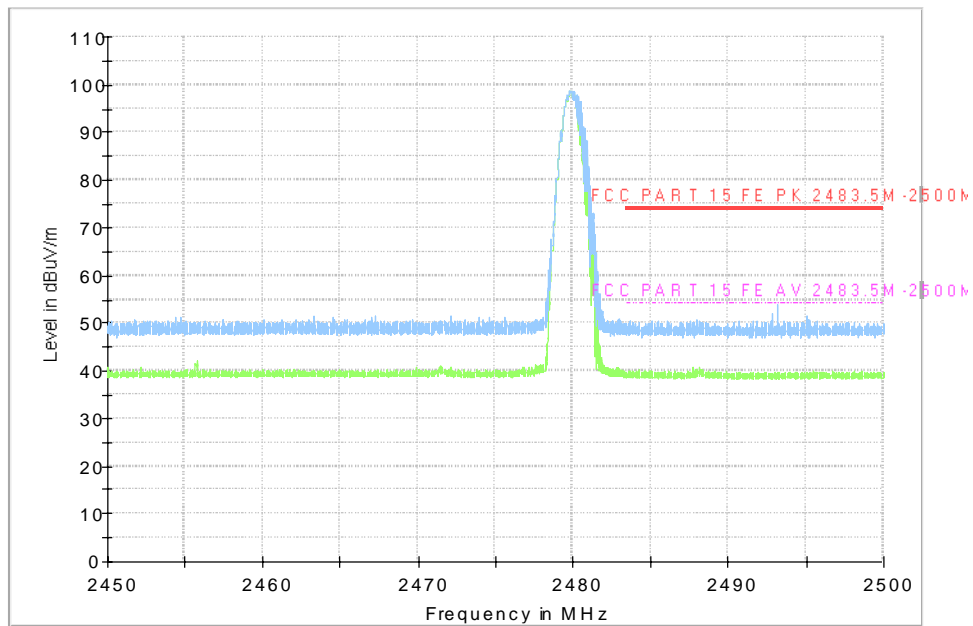


Fig.49 Radiated Band Edges (GFSK, Ch78, 2450GHz~2500GHz , Horizontal Direction)

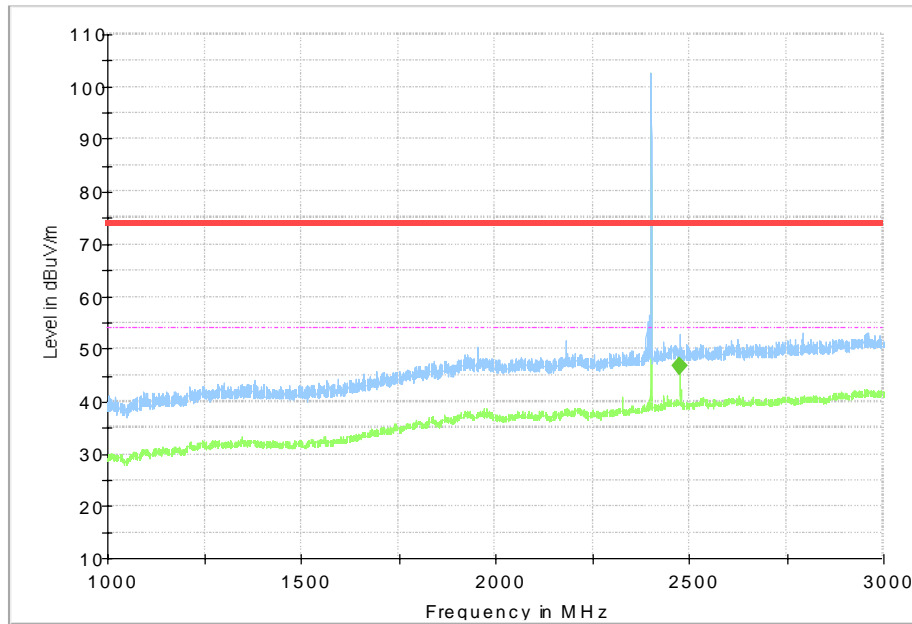


Fig.50 Radiated Spurious Emission (GFSK, Ch0, 1GHz ~3GHz , Vertical Direction)

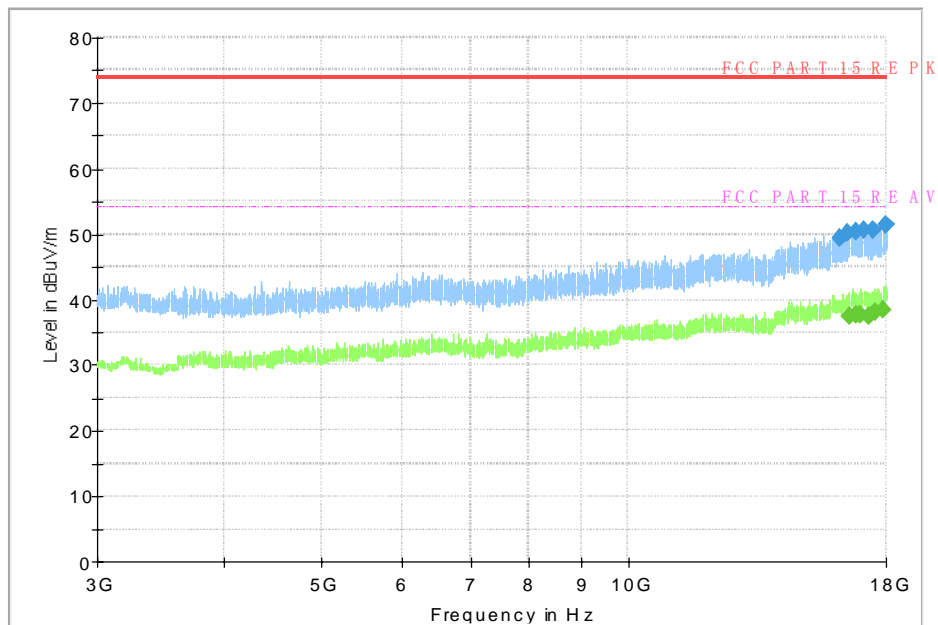


Fig.51 Radiated Spurious Emission (GFSK, Ch0, 3GHz ~18GHz , Vertical Direction)

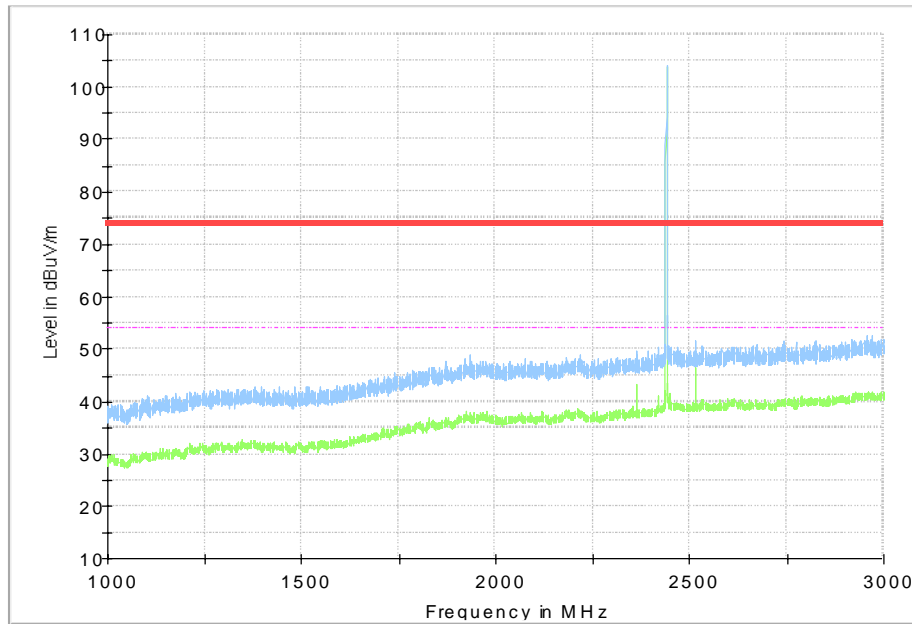


Fig.52 Radiated Spurious Emission (GFSK, Ch39, 1GHz ~3GHz , Vertical Direction)

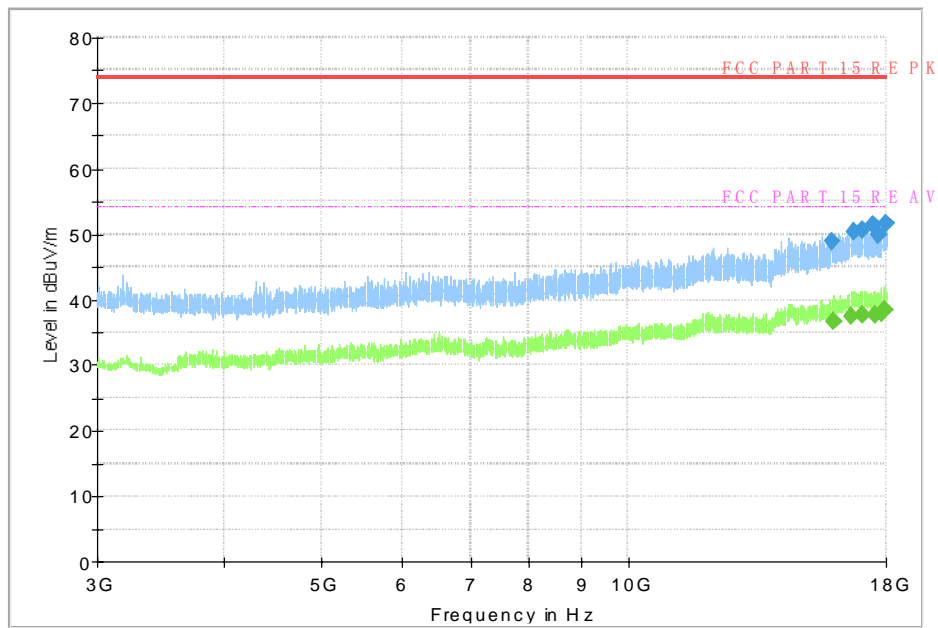


Fig.53 Radiated Spurious Emission (GFSK, Ch39, 3GHz ~18GHz , Vertical Direction)

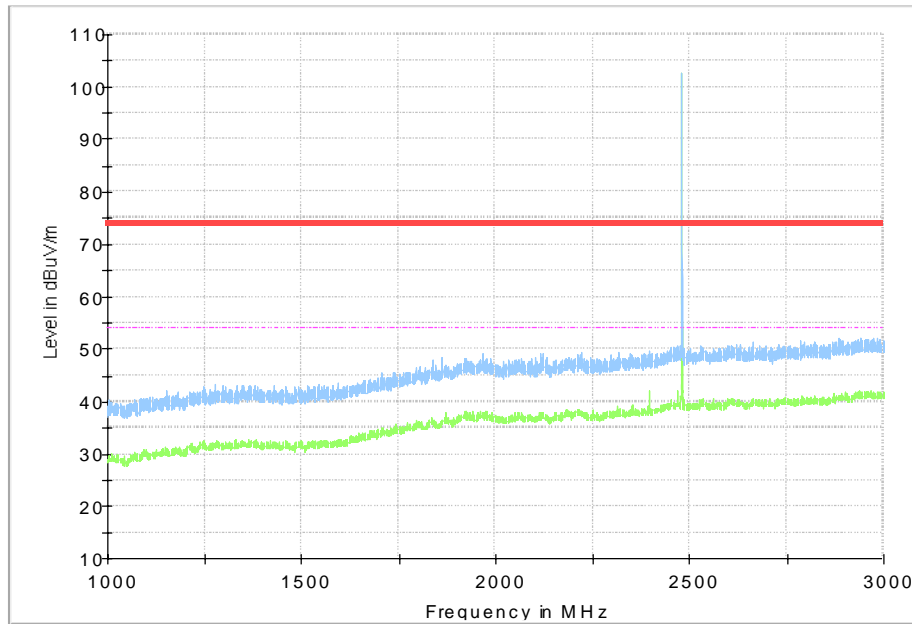


Fig.54 Radiated Spurious Emission (GFSK, Ch78, 1GHz ~3GHz , Vertical Direction)

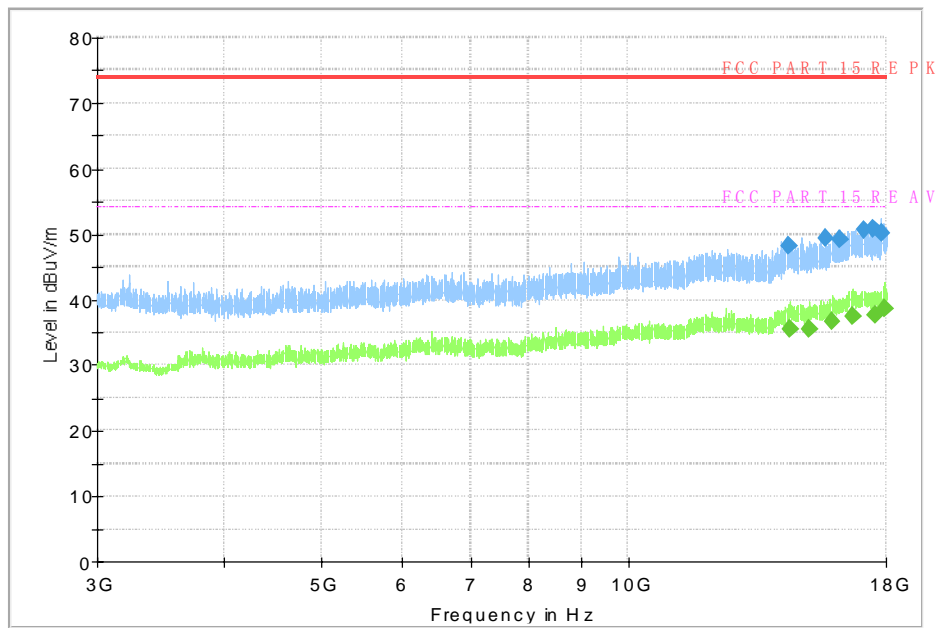


Fig.55 Radiated Spurious Emission (GFSK, Ch78, 3GHz ~18GHz , Vertical Direction)

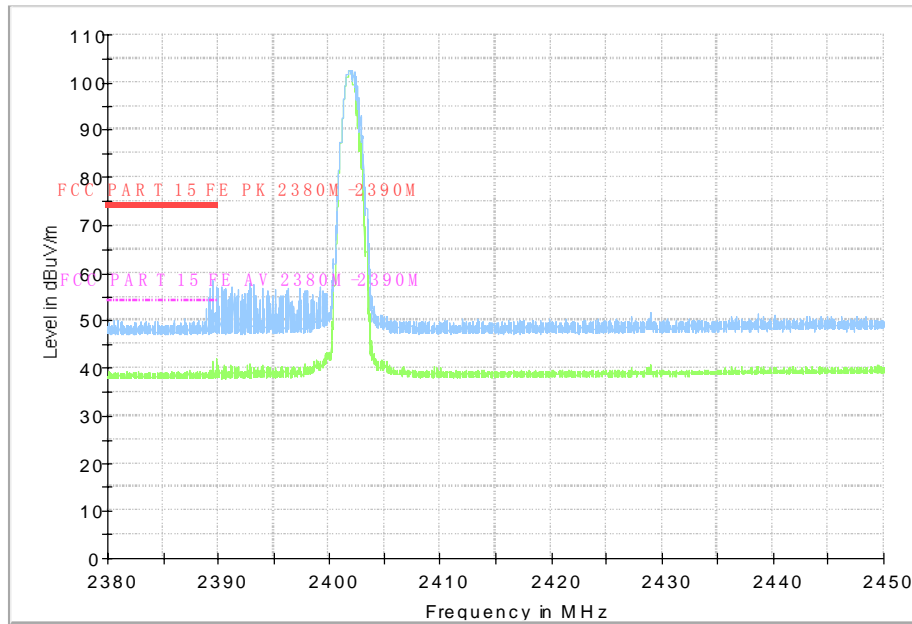


Fig.56 Radiated Band Edges (GFSK, Ch0, 2380GHz~2450GHz ,Vertical Direction)

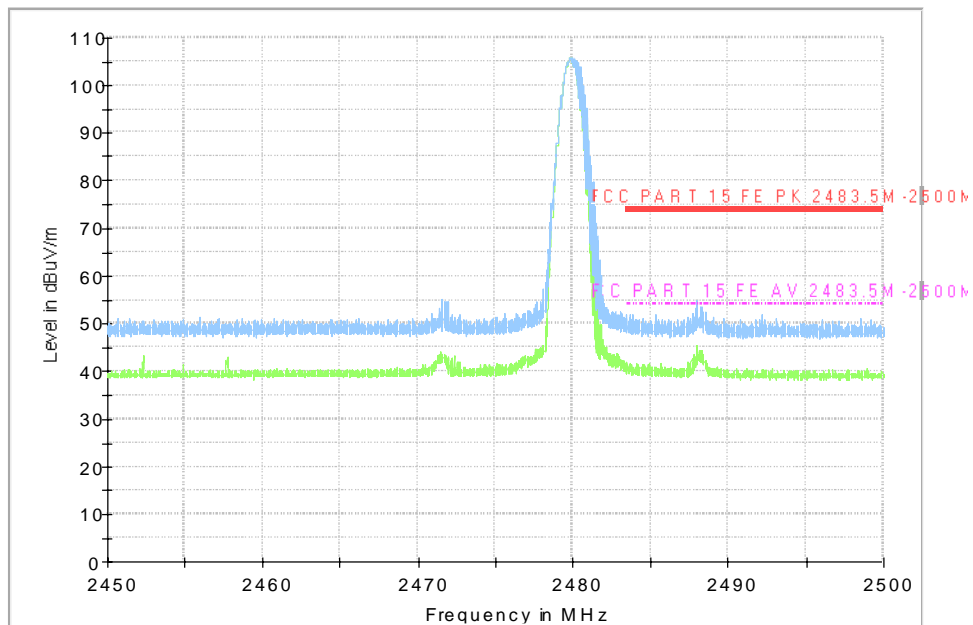


Fig.57 Radiated Band Edges (GFSK, Ch78, 2450GHz~2500GHz, Vertical Direction)

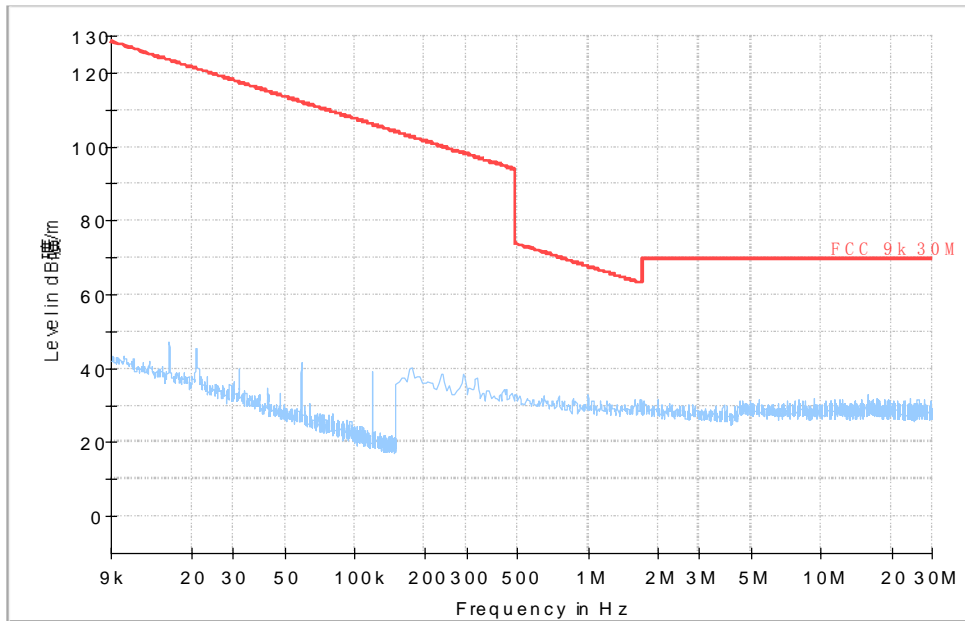


Fig.58 Radiated Spurious Emission (GFSK, All Channels, 9 kHz-30 MHz)

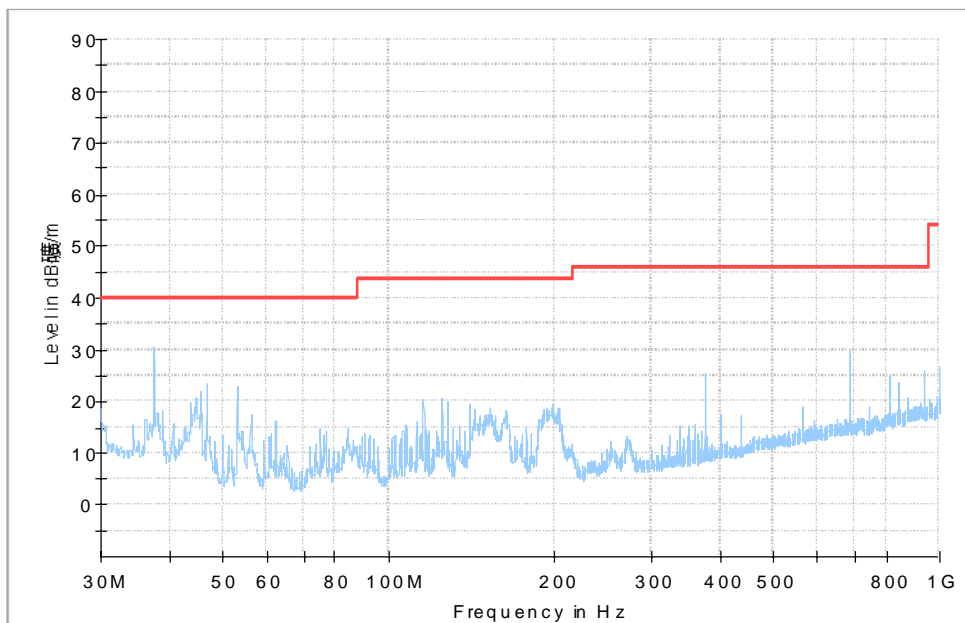


Fig.59 Radiated Spurious Emission (GFSK, All Channels, 30 MHz ~1 GHz )

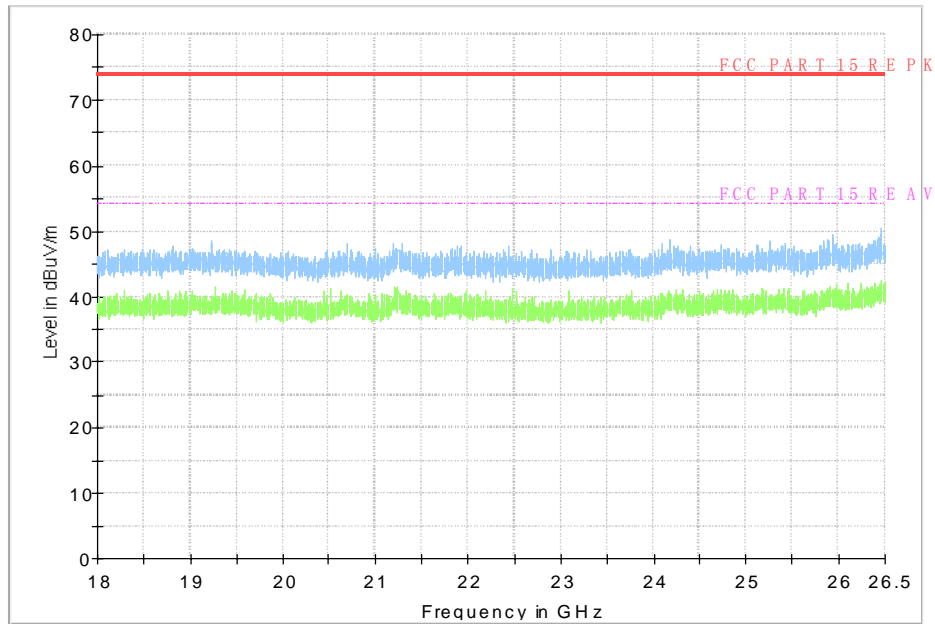


Fig.60 Radiated Spurious Emission (GFSK, All Channels, 18 GHz~ 26.5 GHz)

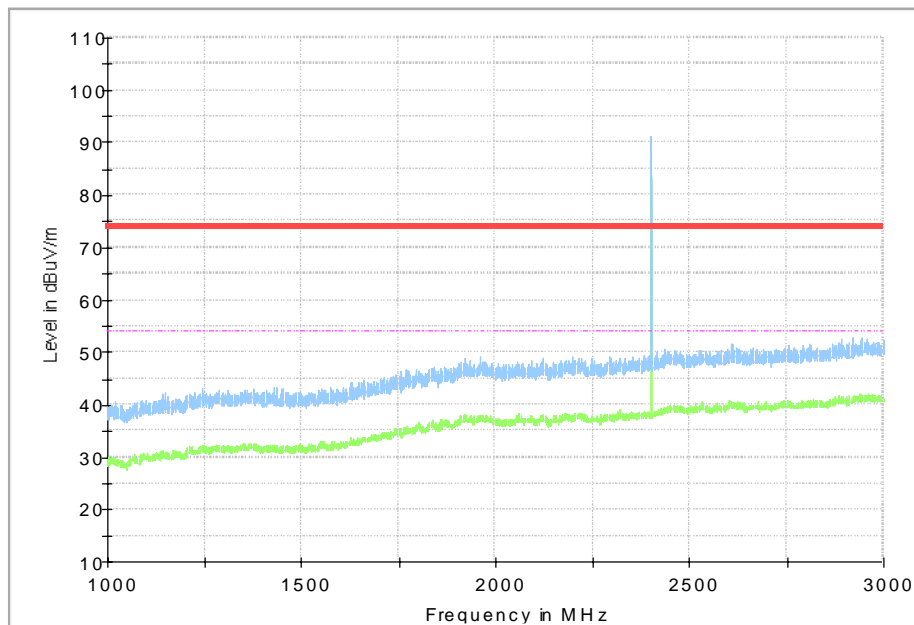


Fig.61 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch0, 1 GHz ~3 GHz, Horizontal Direction)

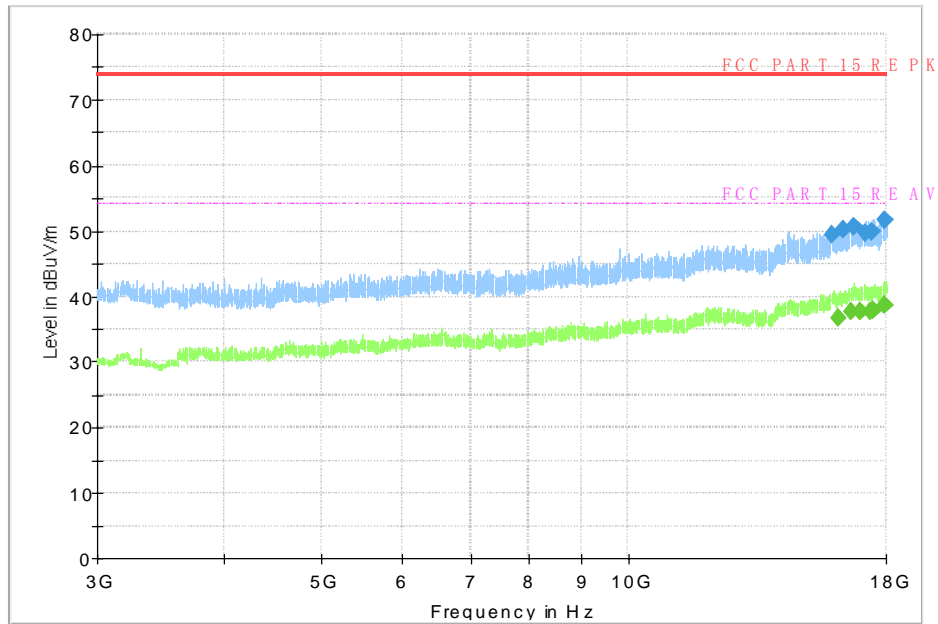


Fig.62 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch0, 3GHz ~18 GHz, Horizontal Direction)

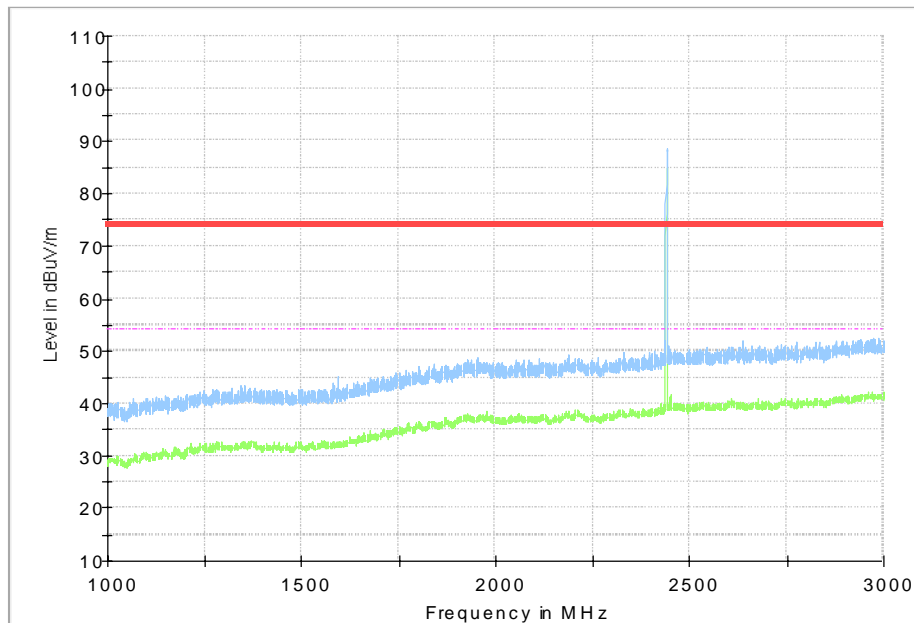


Fig.63 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch39, 1GHz ~3 GHz ,Horizontal Direction)



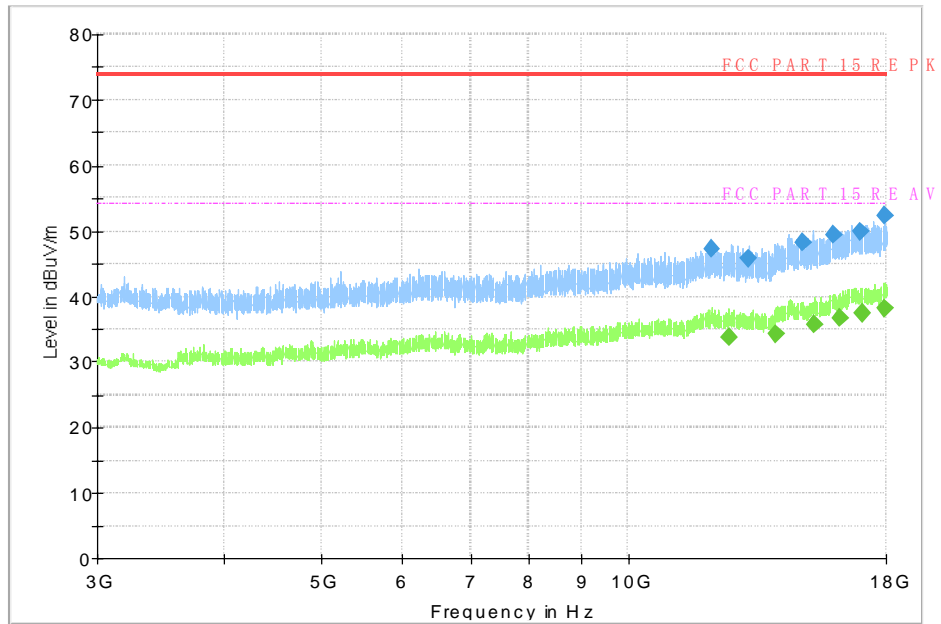


Fig.64 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch39, 3GHz ~18 GHz ,Horizontal Direction)

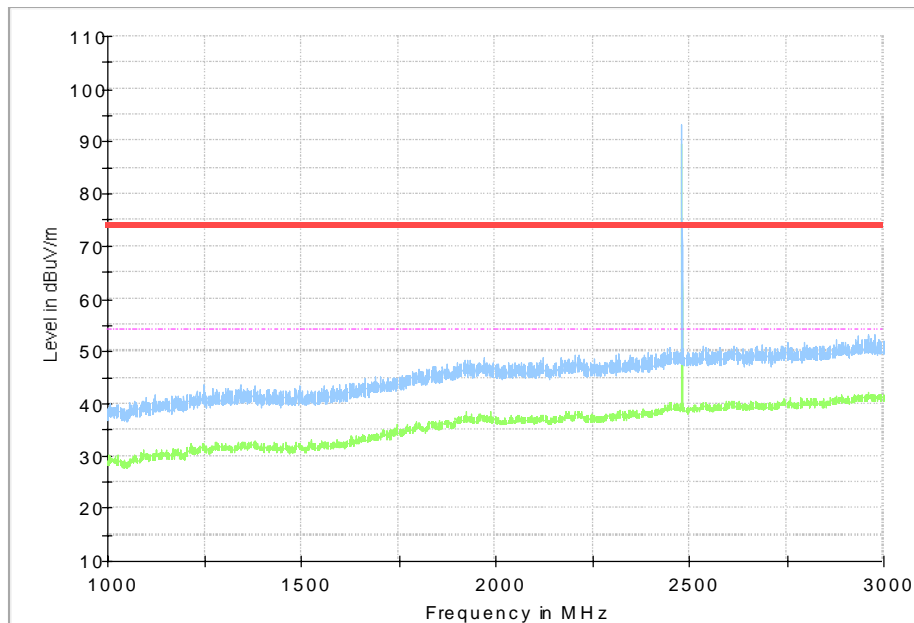


Fig.65 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch78, 1GHz ~3 GHz ,Horizontal Direction)

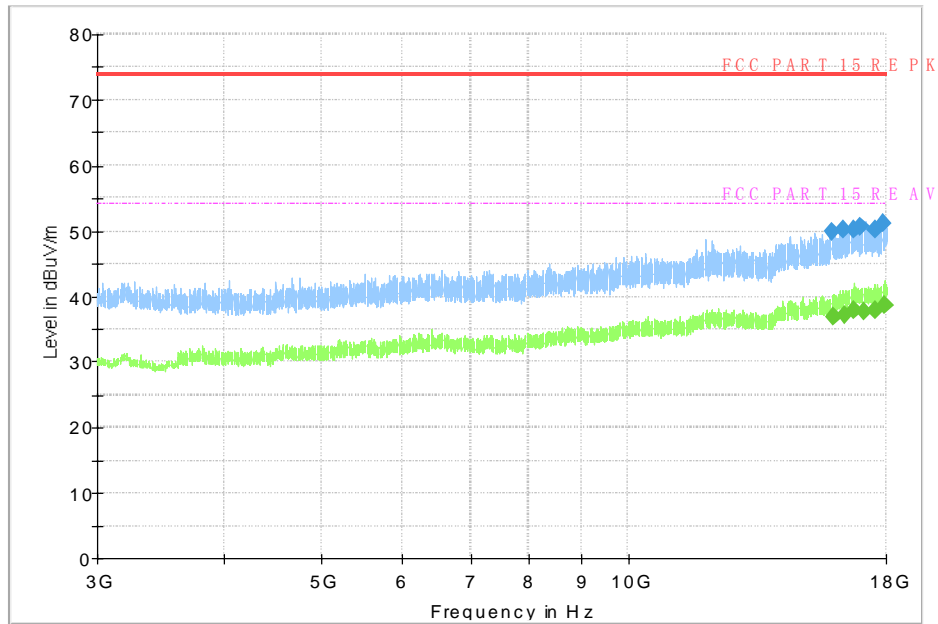


Fig.66 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch78, 3GHz ~18GHz , Horizontal Direction)

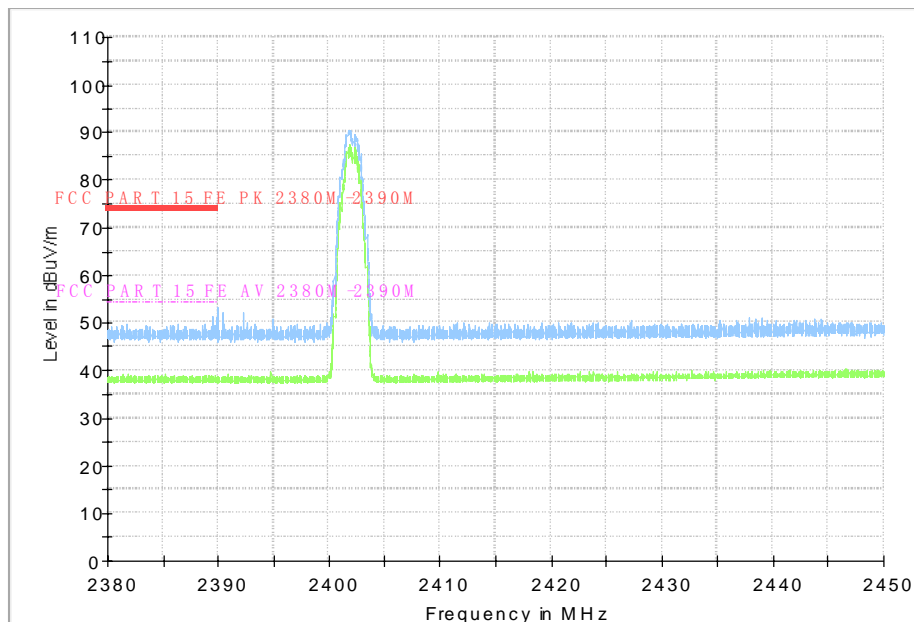


Fig.67 Radiated Band Edges ( $\pi/4$  DQPSK, Ch0, 2380GHz~2450GHz , Horizontal Direction)

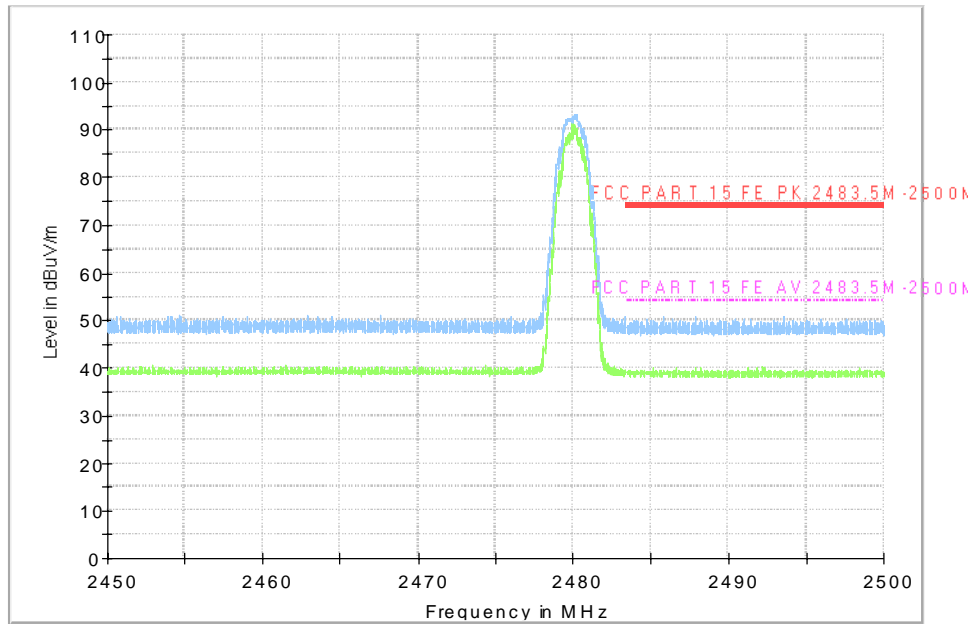


Fig.68 Radiated Band Edges ( $\pi/4$  DQPSK, Ch78, 2450GHz~2500GHz , Horizontal Direction)

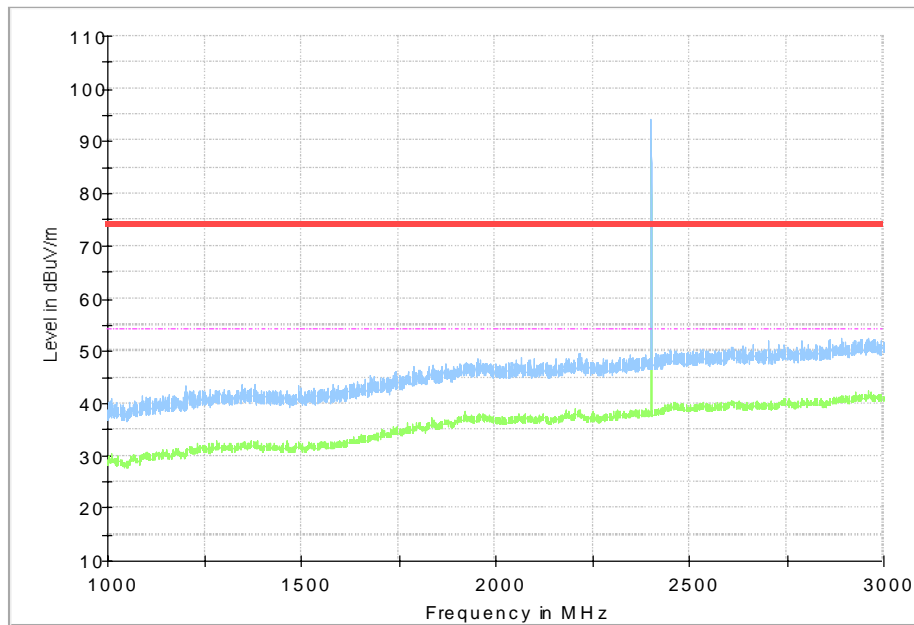


Fig.69 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch0, 1GHz ~3GHz , Vertical Direction)

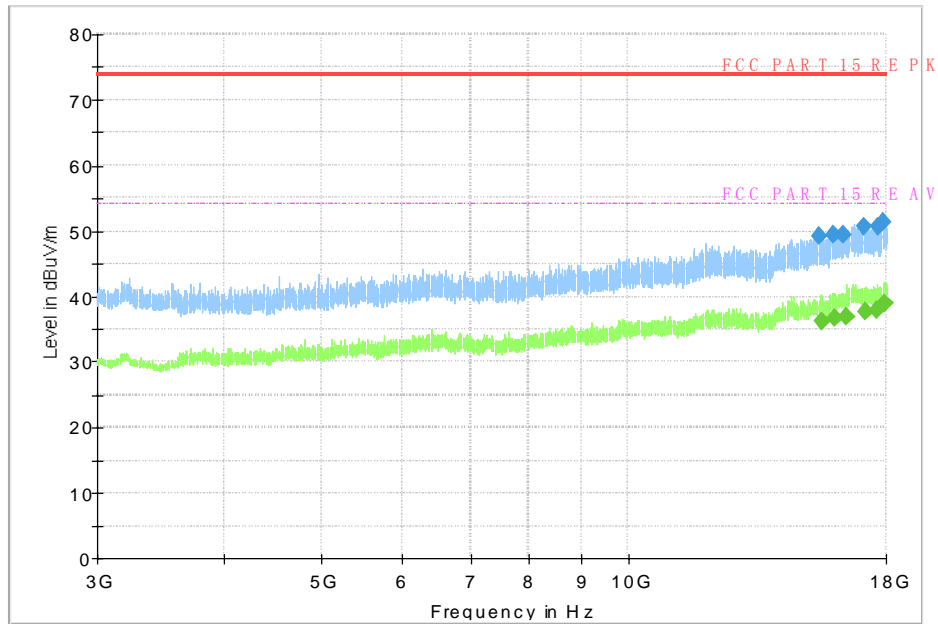


Fig.70 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch0, 3GHz ~18GHz , Vertical Direction)

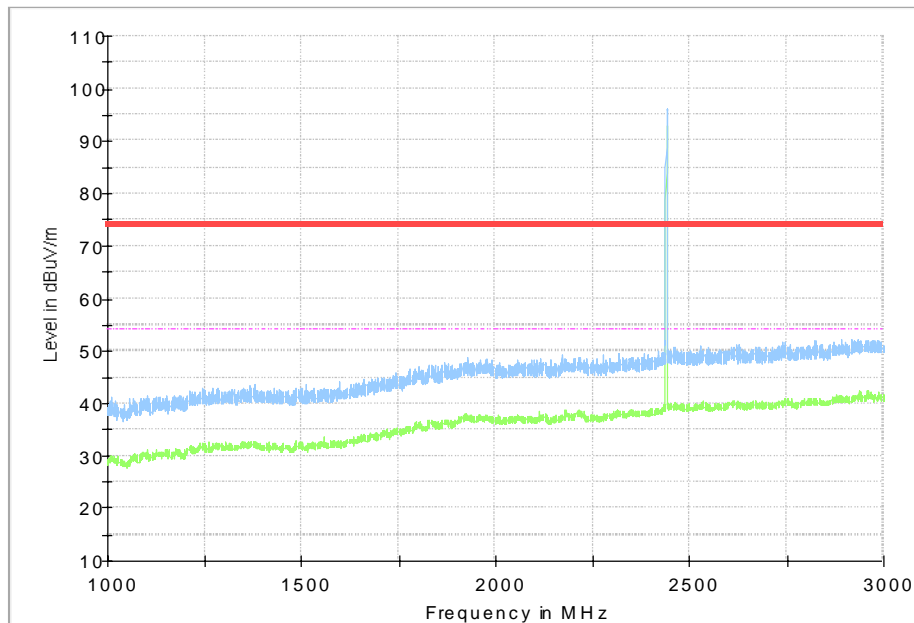


Fig.71 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch39, 1GHz ~3GHz , Vertical Direction)

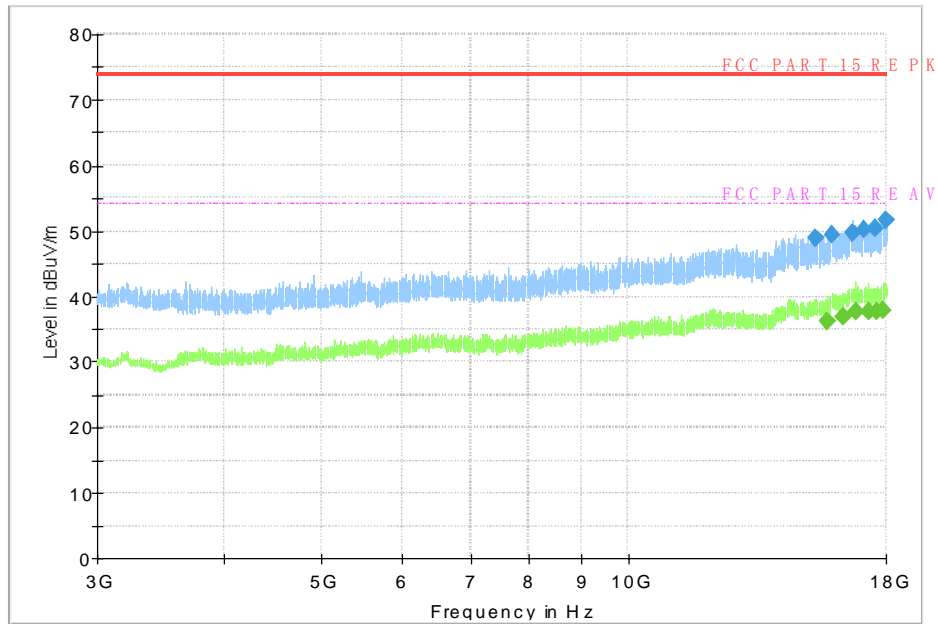


Fig.72 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch39, 3GHz ~18GHz , Vertical Direction)

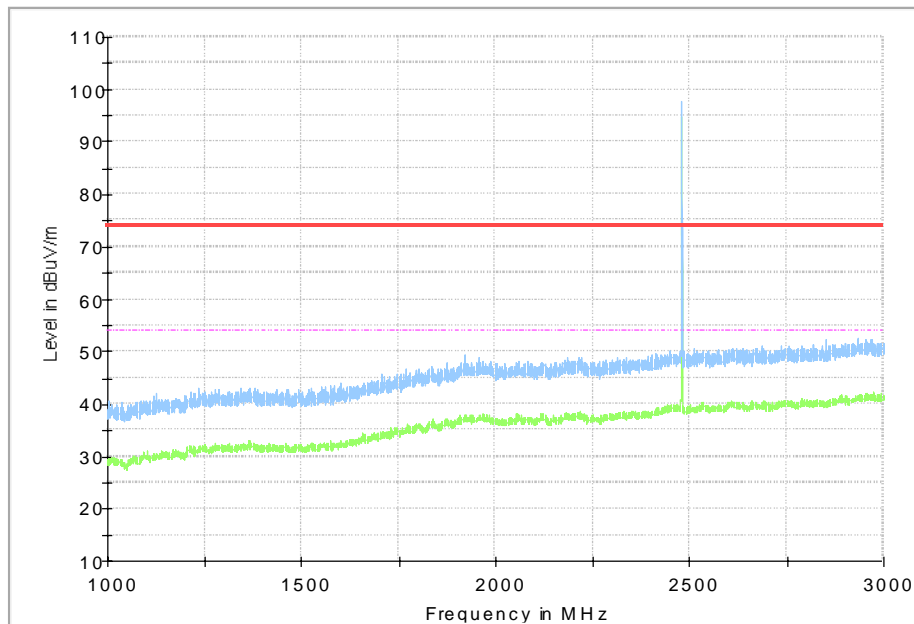


Fig.73 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch78, 1GHz ~3GHz , Vertical Direction)

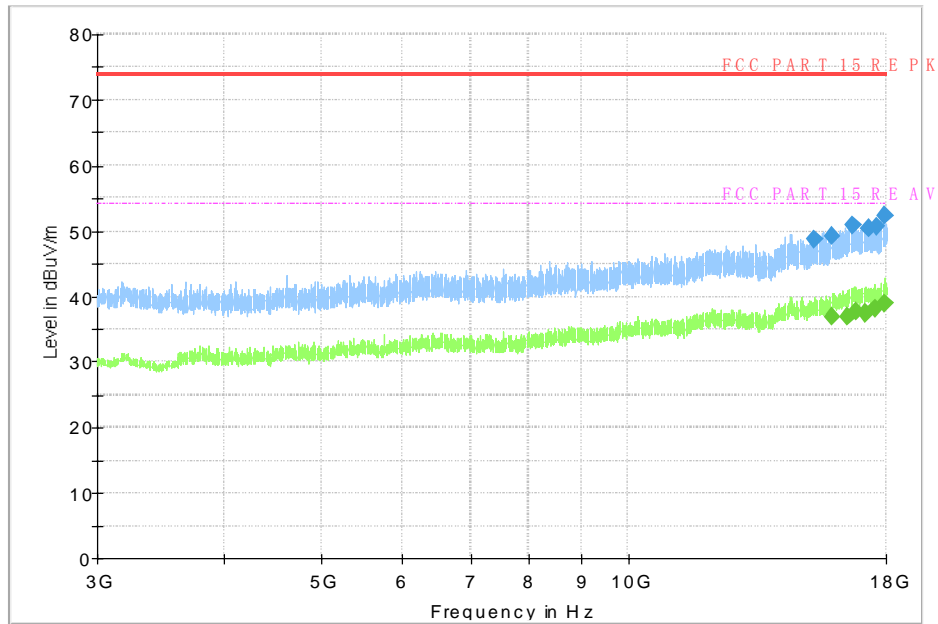


Fig.74 Radiated Spurious Emission ( $\pi/4$  DQPSK, Ch78, 3GHz ~18GHz , Vertical Direction)

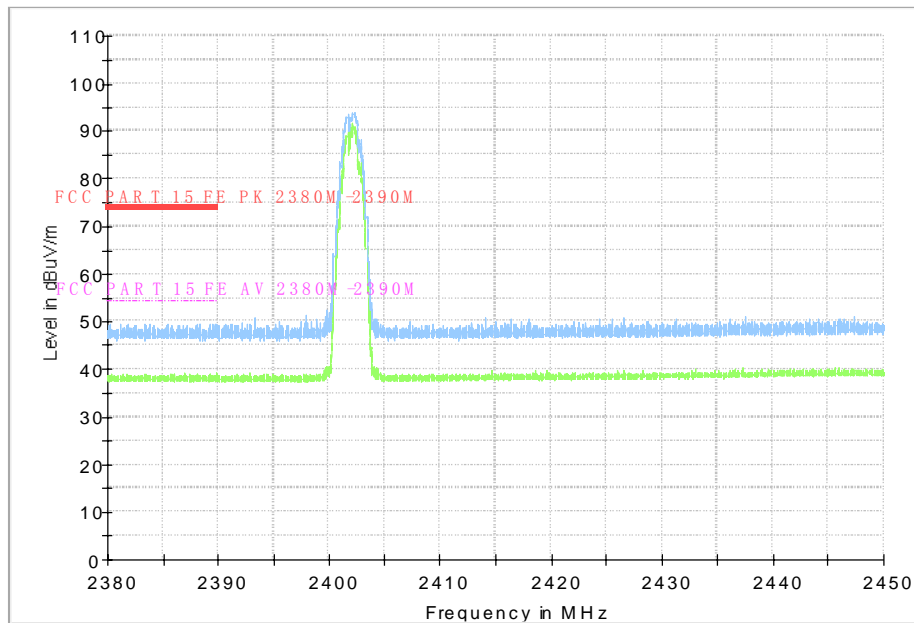


Fig.75 Radiated Band Edges ( $\pi/4$  DQPSK, Ch0, 2380GHz~2450GHz , Vertical Direction)

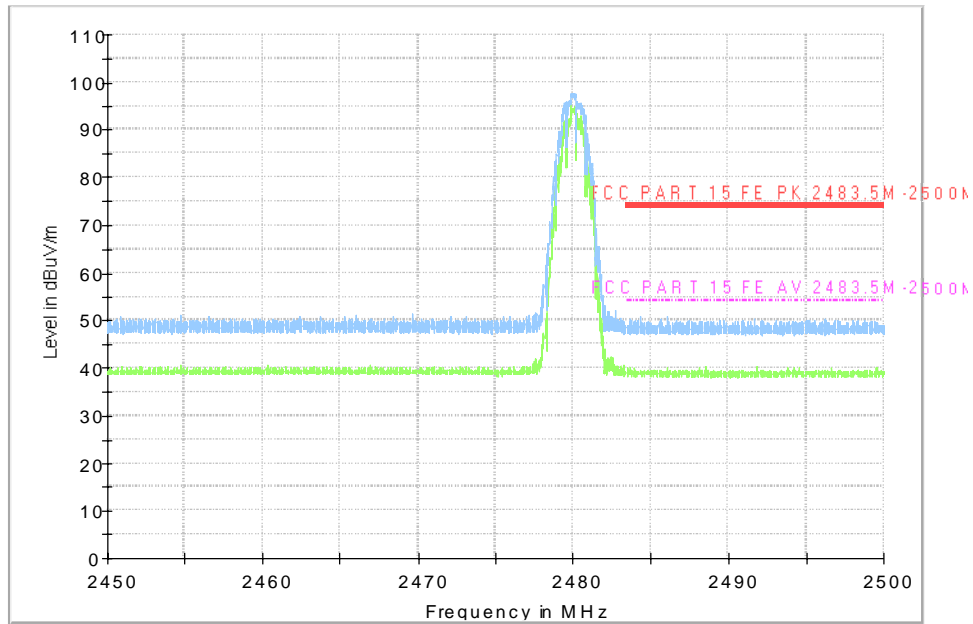


Fig.76 Radiated Band Edges ( $\pi/4$  DQPSK, Ch78, 2450GHz~2500GHz, Vertical Direction)

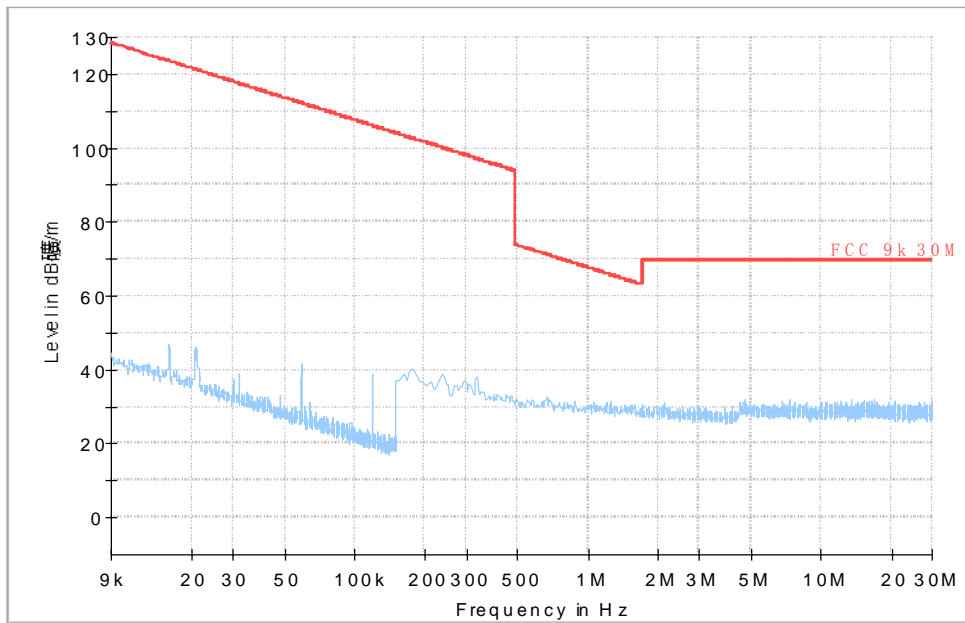


Fig.77 Radiated Spurious Emission ( $\pi/4$  DQPSK, All Channels, 9 kHz-30 MHz)

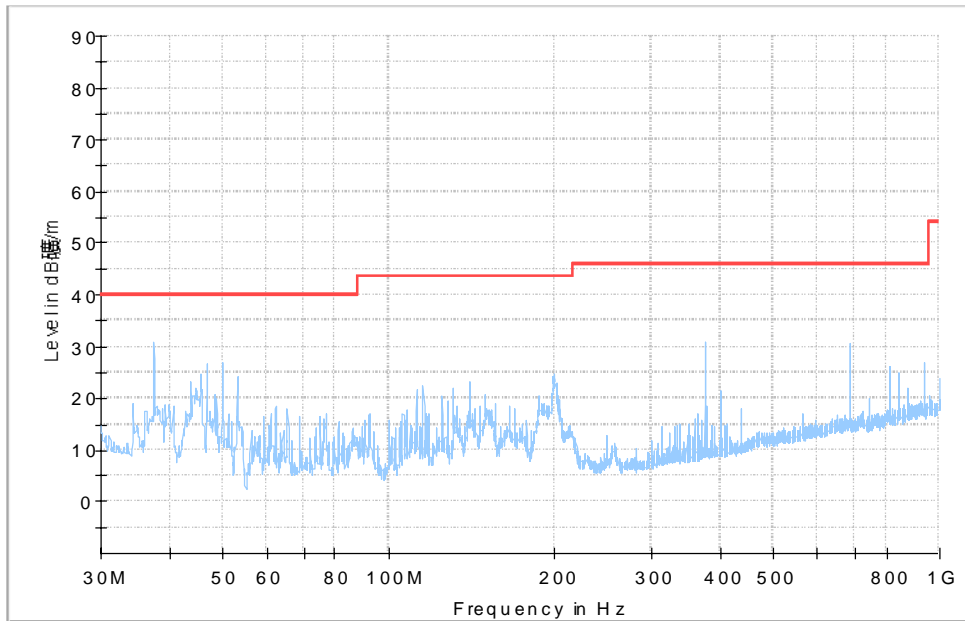


Fig.78 Radiated Spurious Emission ( $\pi/4$  DQPSK, All Channels, 30 MHz ~1 GHz )

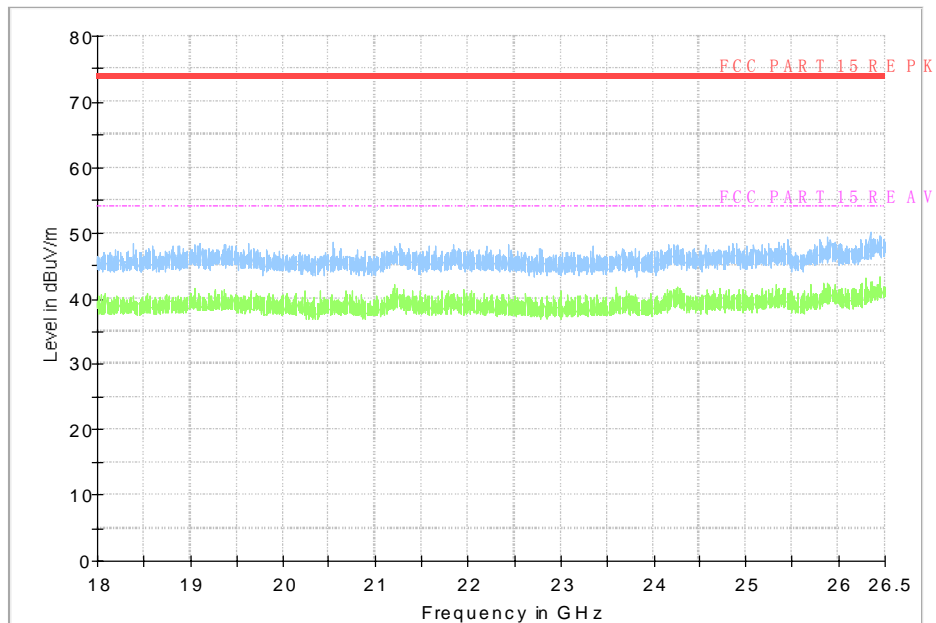


Fig.79 Radiated Spurious Emission ( $\pi/4$  DQPSK, All Channels, 18 GHz~ 26.5 GHz )



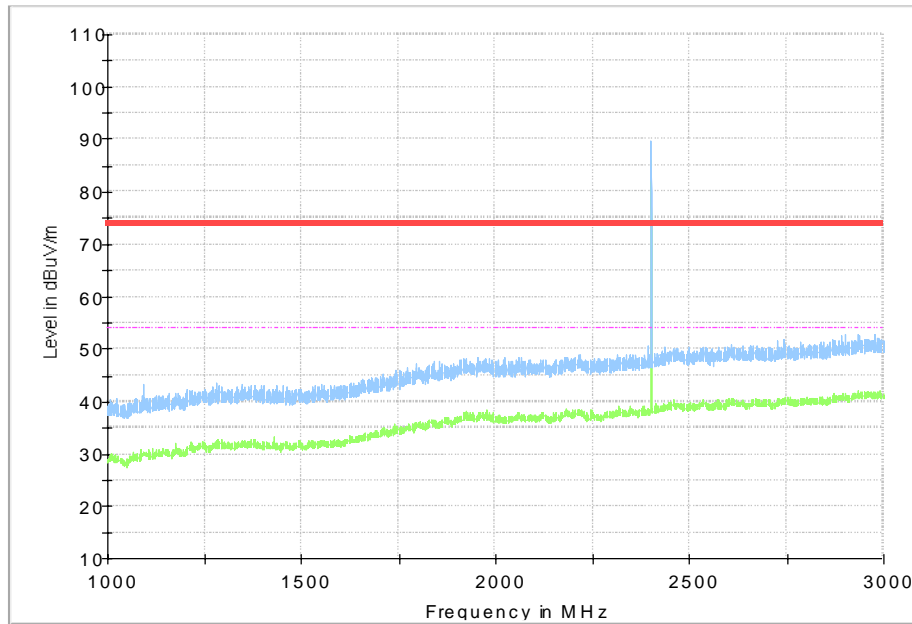


Fig.80 Radiated Spurious Emission (8DPSK, Ch0, 1 GHz ~3 GHz, Horizontal Direction)

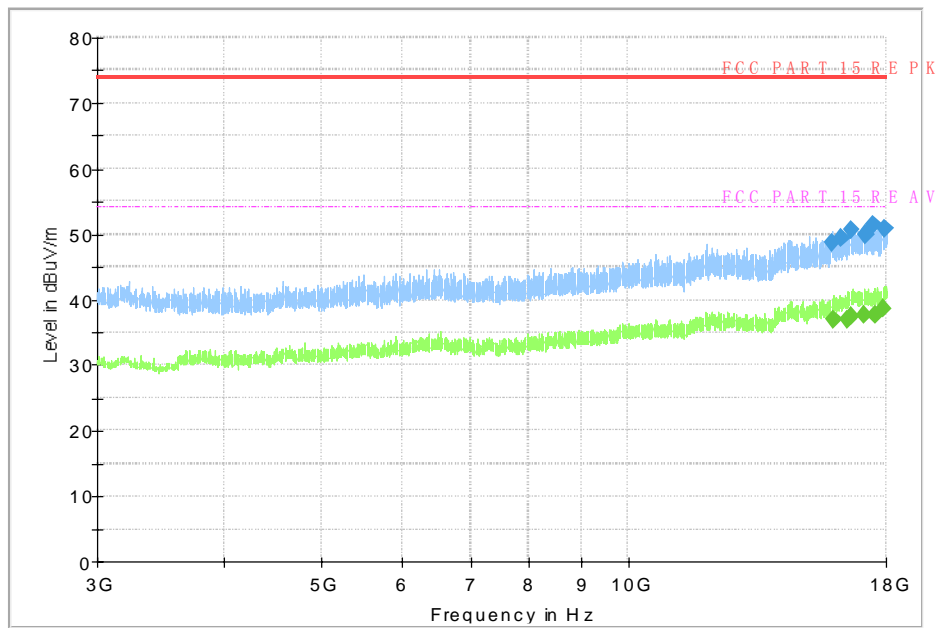


Fig.81 Radiated Spurious Emission (8DPSK, Ch0, 3GHz ~18 GHz, Horizontal Direction)

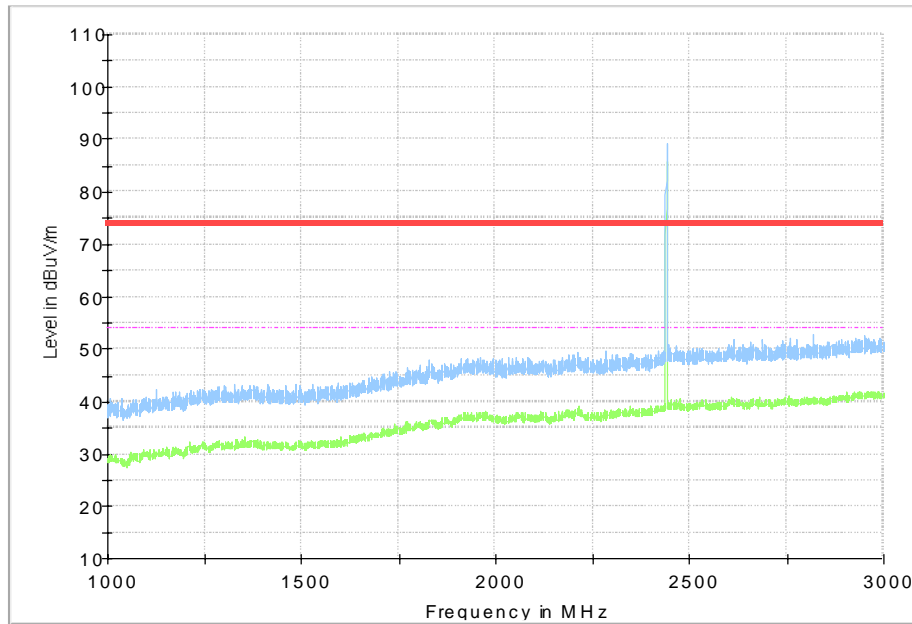


Fig.82 Radiated Spurious Emission (8DPSK, Ch39, 1GHz ~3 GHz ,Horizontal Direction)

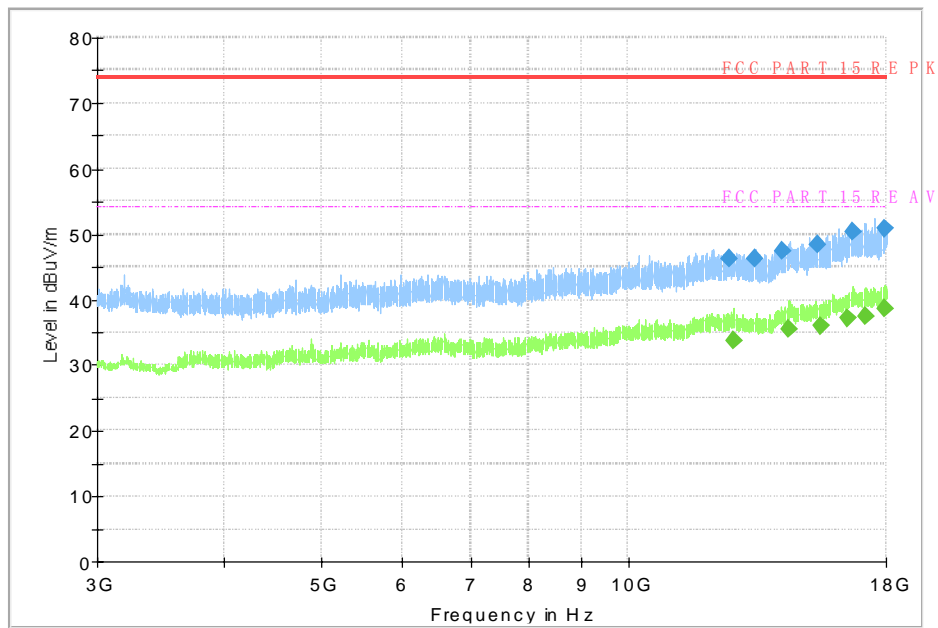


Fig.83 Radiated Spurious Emission (8DPSK, Ch39, 3GHz ~18 GHz ,Horizontal Direction)

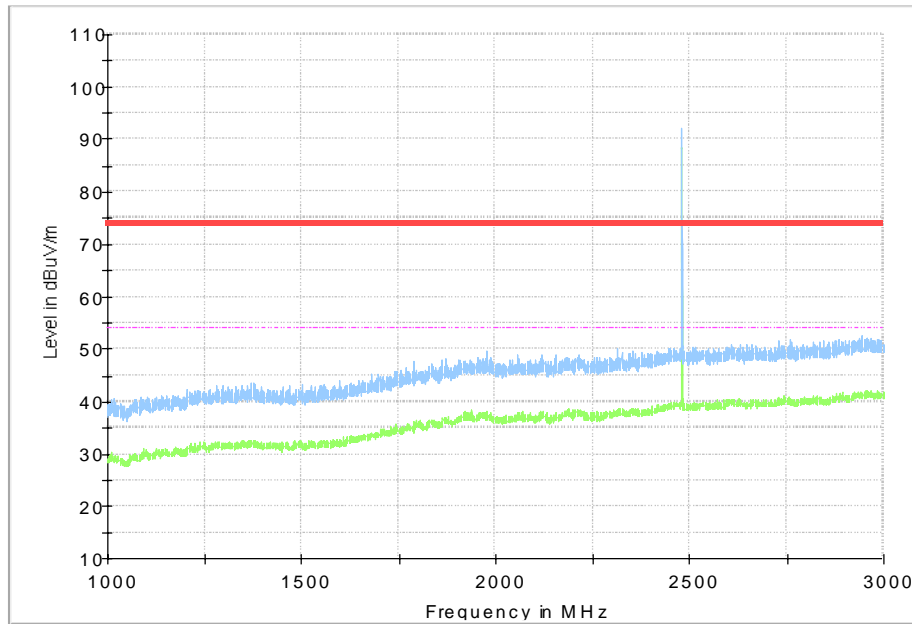


Fig.84 Radiated Spurious Emission (8DPSK, Ch78, 1GHz ~3 GHz ,Horizontal Direction)

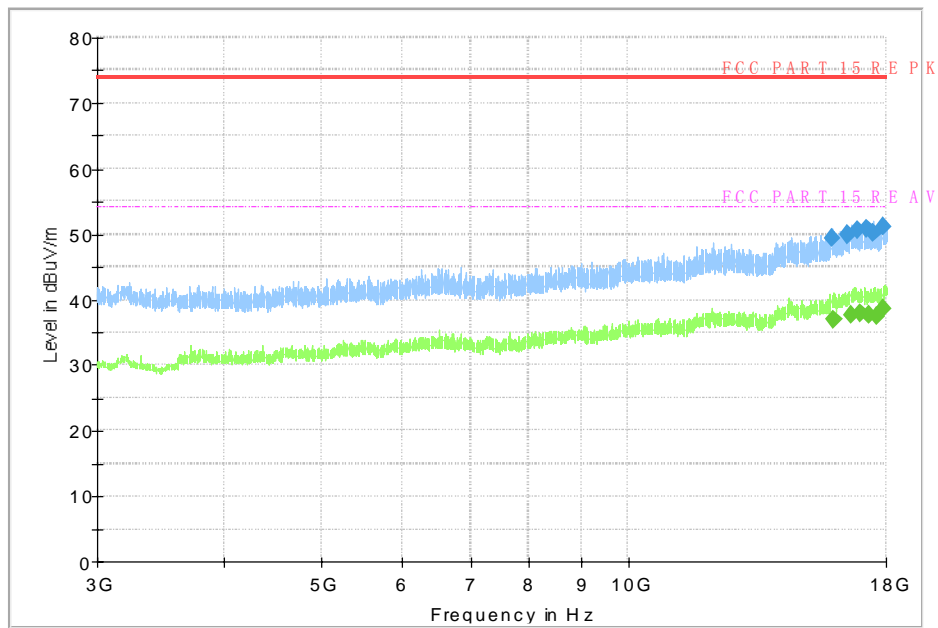


Fig.85 Radiated Spurious Emission (8DPSK, Ch78, 3GHz ~18GHz , Horizontal Direction)

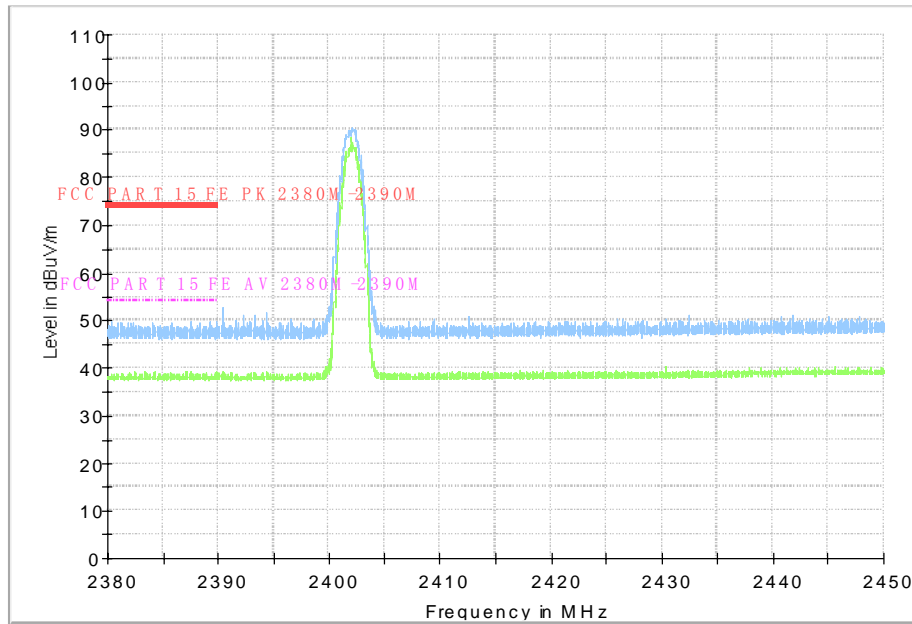


Fig.86 Radiated Band Edges (8DPSK, Ch0, 2380GHz~2450GHz , Horizontal Direction)

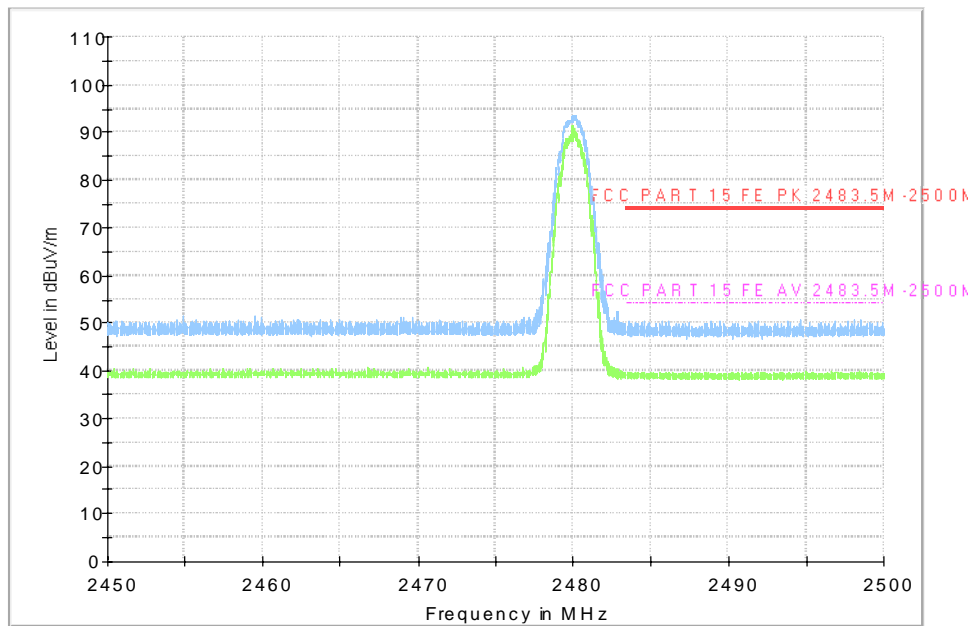


Fig.87 Radiated Band Edges (8DPSK, Ch78, 2450GHz~2500GHz , Horizontal Direction)

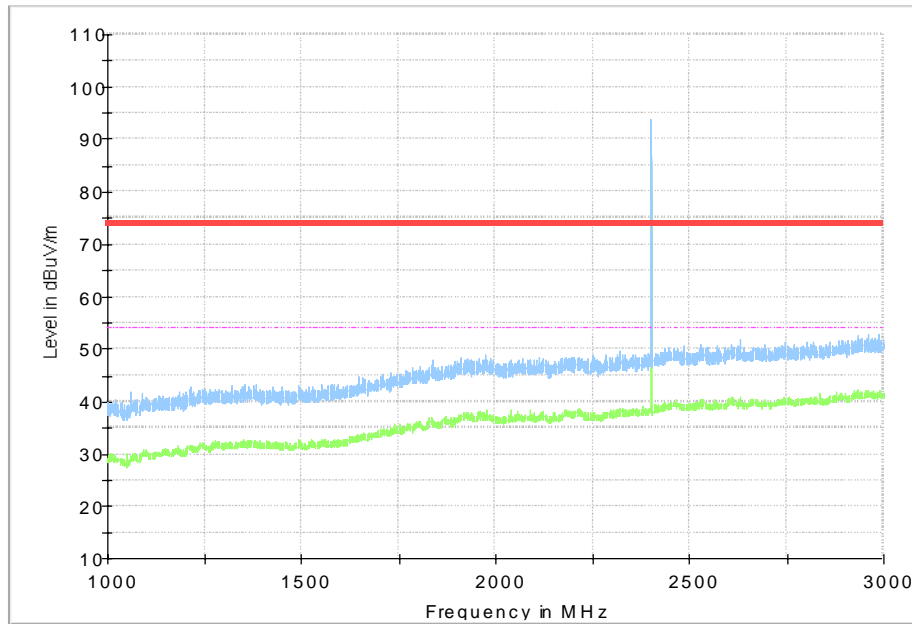


Fig.88 Radiated Spurious Emission (8DPSK, Ch0, 1GHz ~3GHz , Vertical Direction)

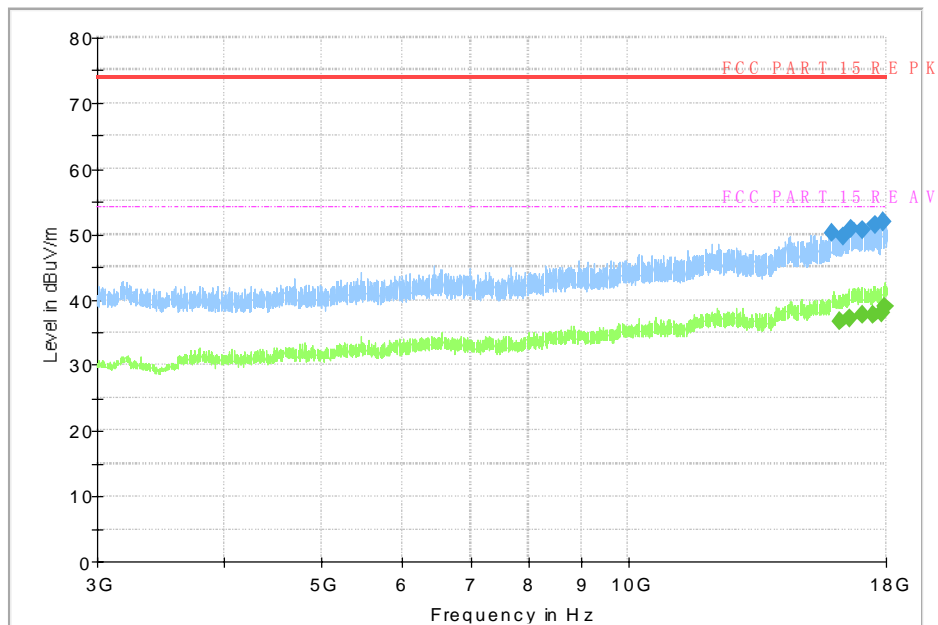


Fig.89 Radiated Spurious Emission (8DPSK, Ch0, 3GHz ~18GHz , Vertical Direction)

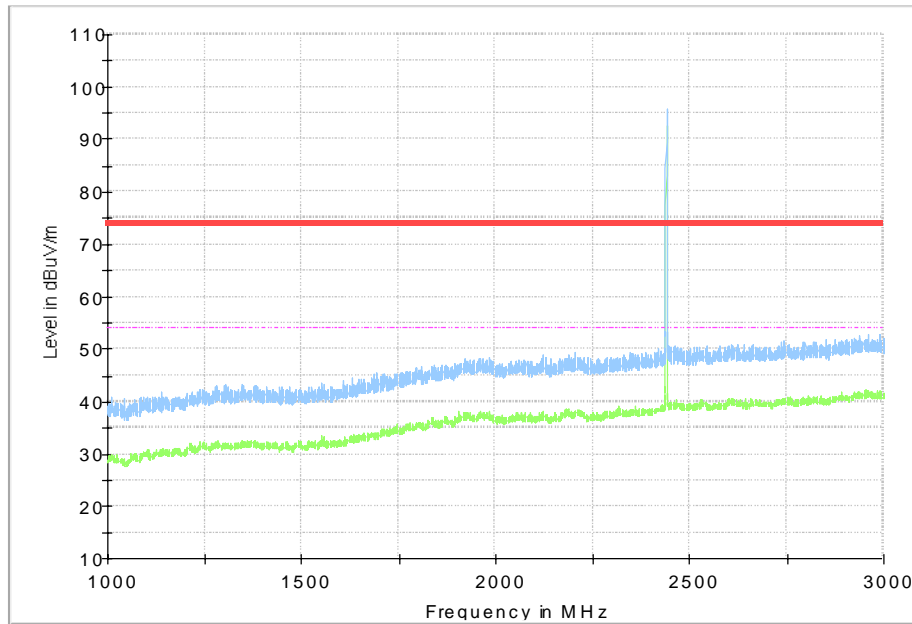


Fig.90 Radiated Spurious Emission (8DPSK, Ch39, 1GHz ~3GHz , Vertical Direction)

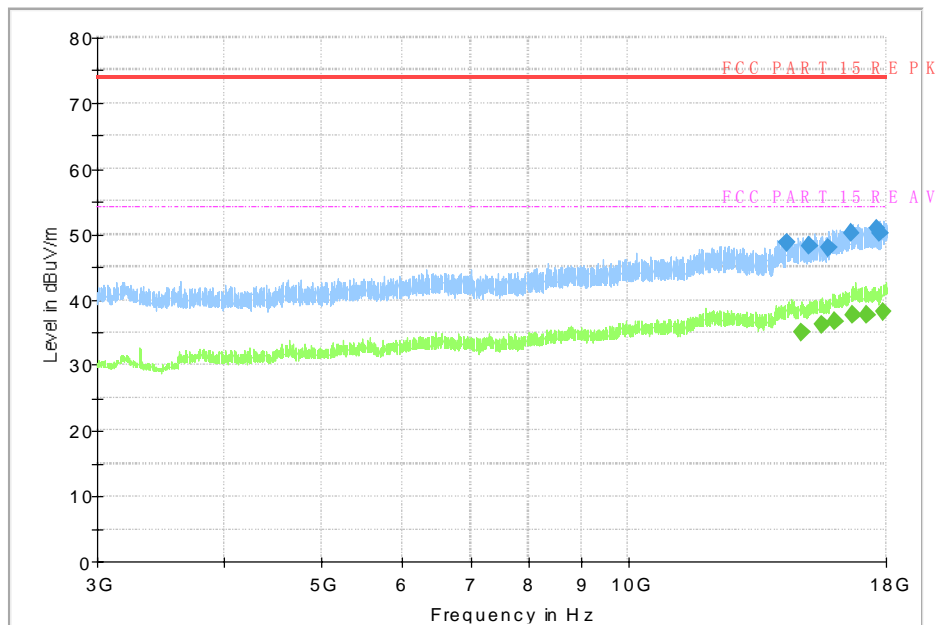


Fig.91 Radiated Spurious Emission (8DPSK, Ch39, 3GHz ~18GHz , Vertical Direction)

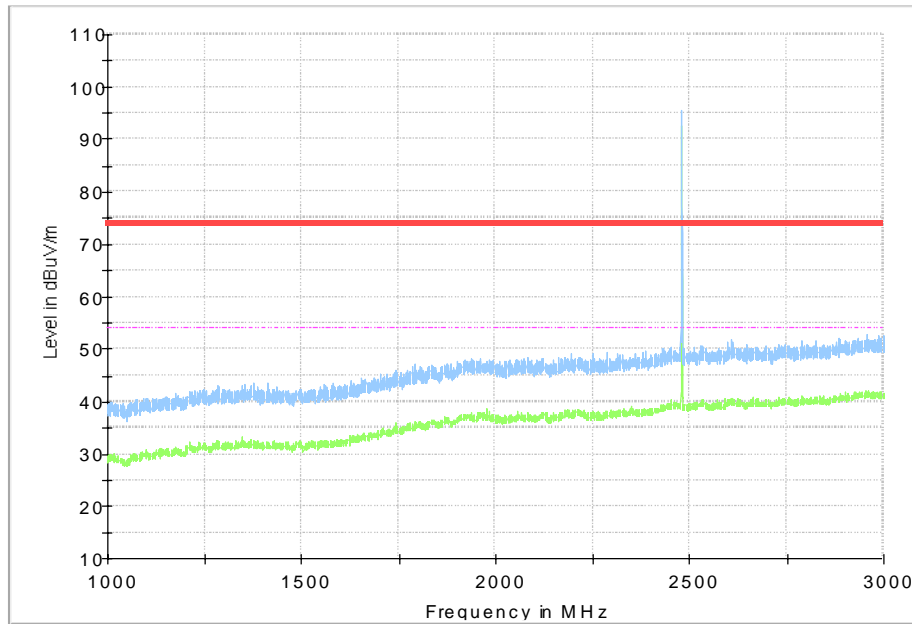


Fig.92 Radiated Spurious Emission (8DPSK, Ch78, 1GHz ~3GHz , Vertical Direction)

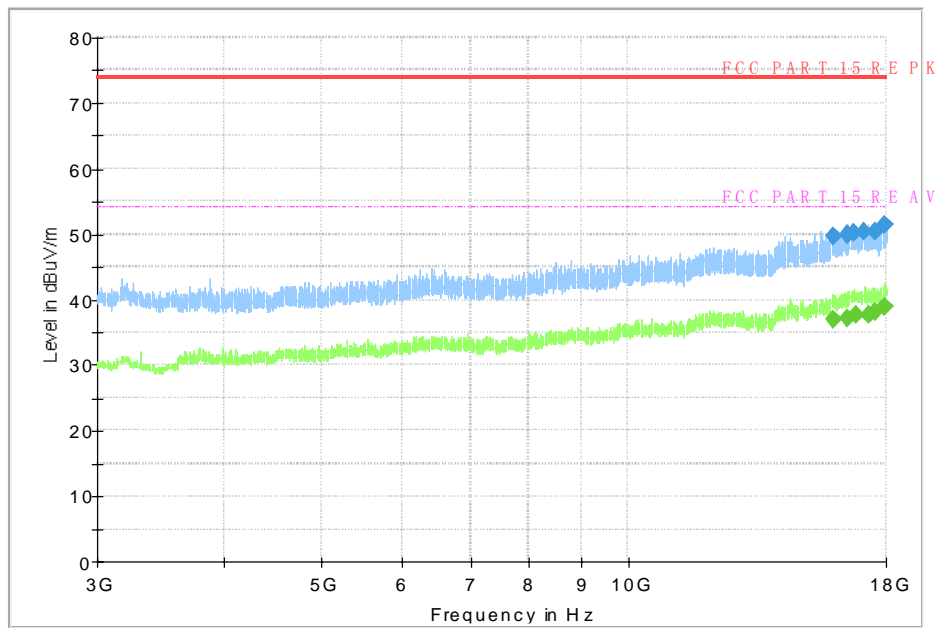


Fig.93 Radiated Spurious Emission (8DPSK, Ch78, 3GHz ~18GHz , Vertical Direction)

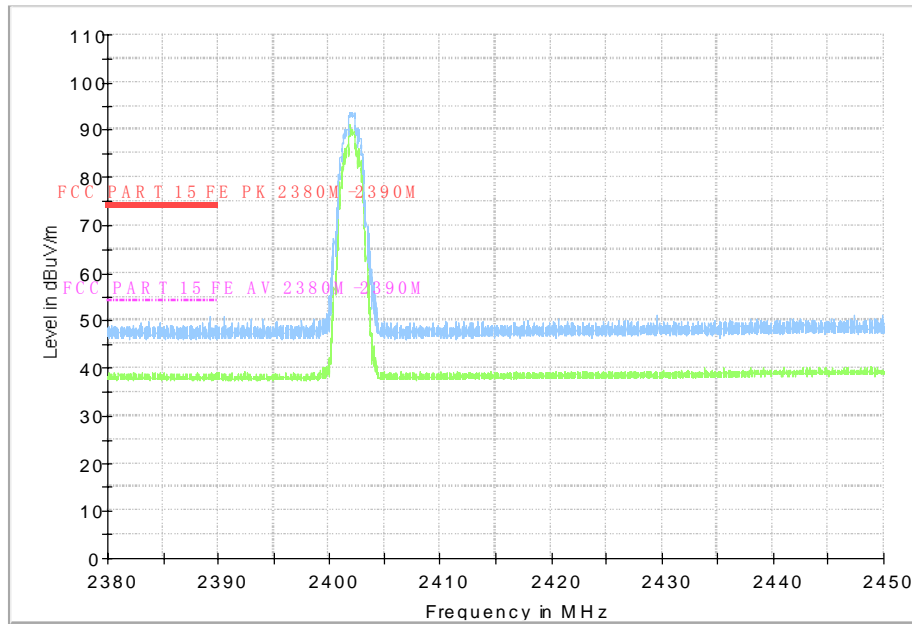


Fig.94 Radiated Band Edges (8DPSK, Ch0, 2380GHz~2450GHz ,Vertical Direction)

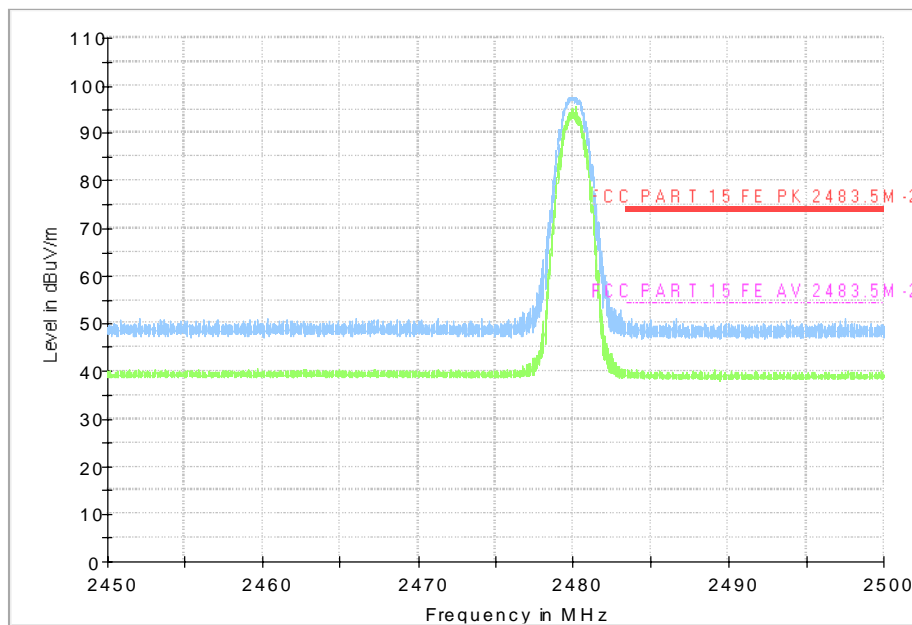


Fig.95 Radiated Band Edges (8DPSK, Ch78, 2450GHz~2500GHz, Vertical Direction)



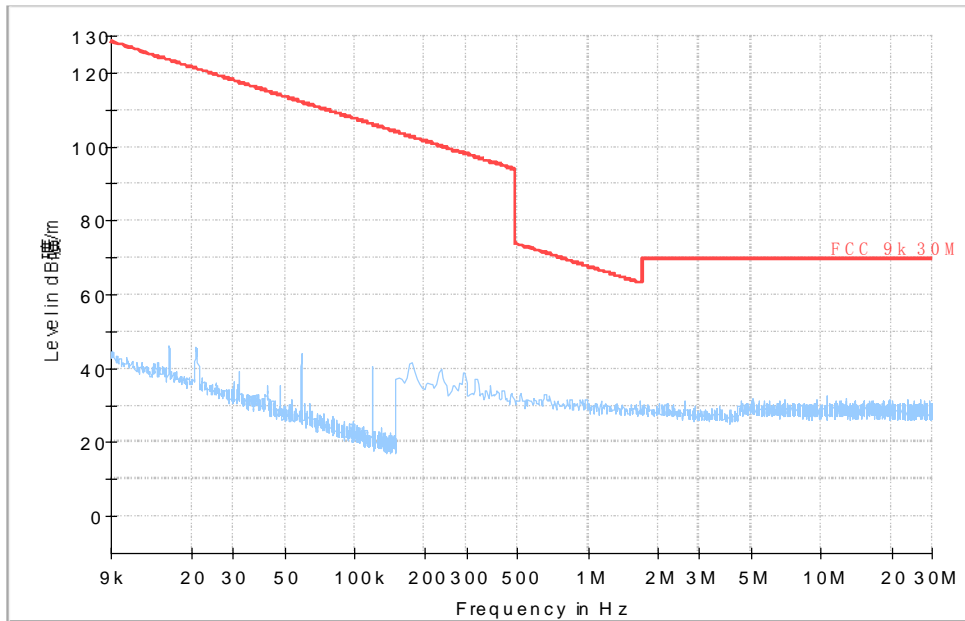


Fig.96 Radiated Spurious Emission (8DPSK, All Channels, 9 kHz-30 MHz)

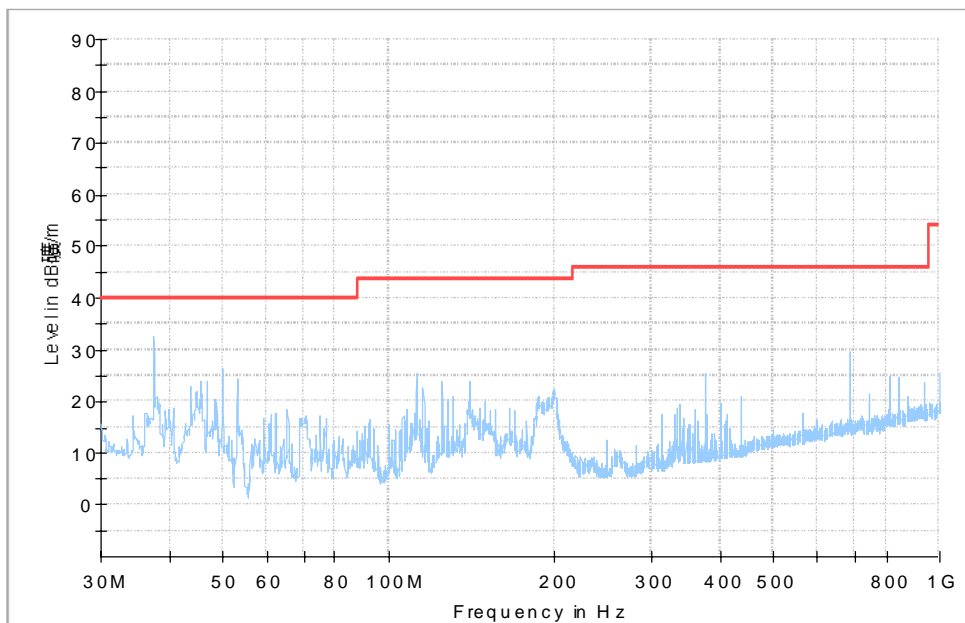
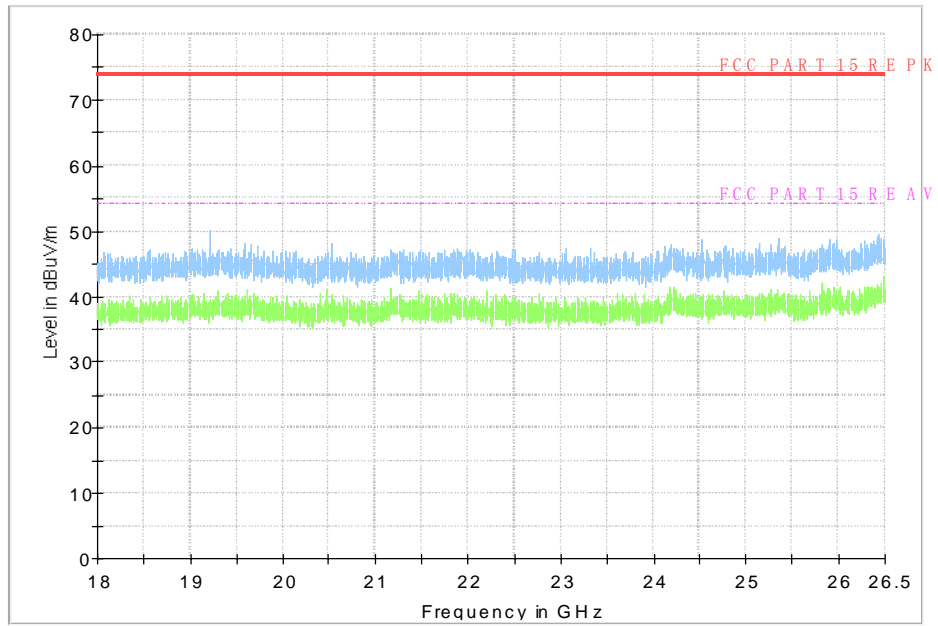


Fig.97 Radiated Spurious Emission (8DPSK, All Channels, 30 MHz ~1 GHz )



**Fig.98 Radiated Spurious Emission (8DPSK, All Channels, 18 GHz~ 26.5 GHz )**

### A.5 20dB Bandwidth

#### Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a) & RSS-247 Section 5.1	/

#### Measurement Result:

Mode	Channel	20dB Bandwidth ( KHz)		conclusion
		Fig.	Value	
GFSK	0	Fig.99	936.00	/
	39	Fig.100	934.50	
	78	Fig.101	936.00	
$\pi/4$ DQPSK	0	Fig.102	1280.25	/
	39	Fig.103	1281.75	
	78	Fig.104	1281.75	
8DPSK	0	Fig.105	1262.25	/
	39	Fig.106	1263.00	
	78	Fig.107	1266.00	

See below for test graphs.

Conclusion: PASS

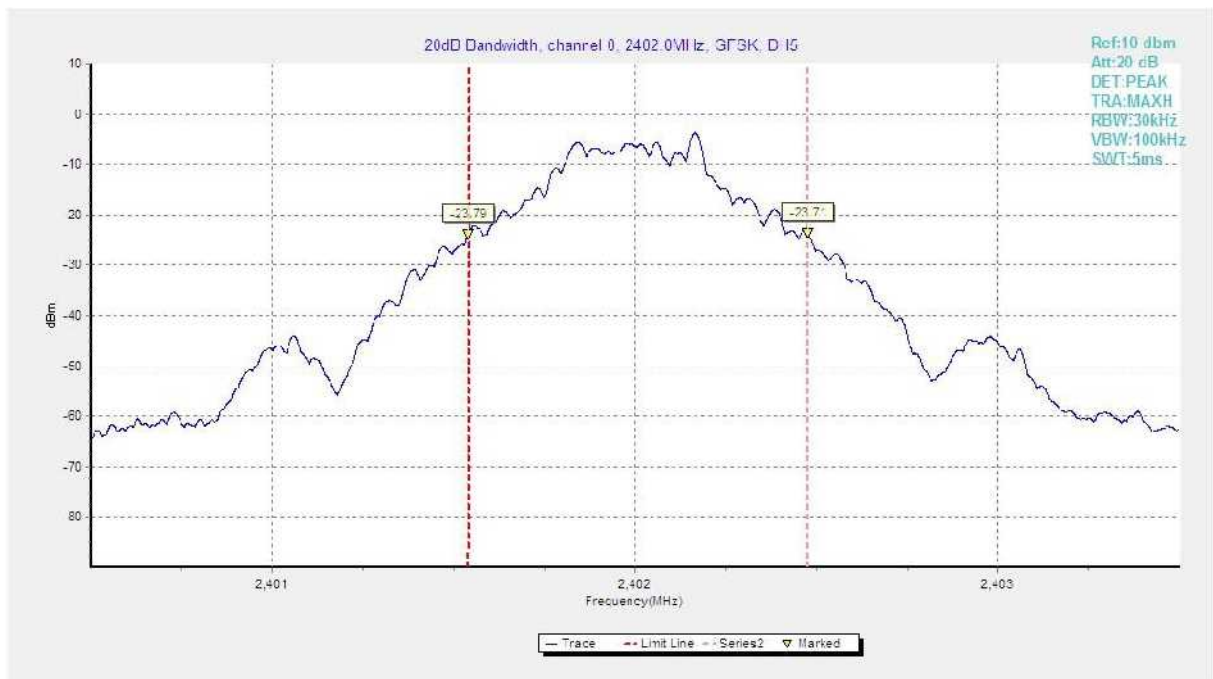


Fig. 99 20dB Bandwidth (GFSK, Ch 0)

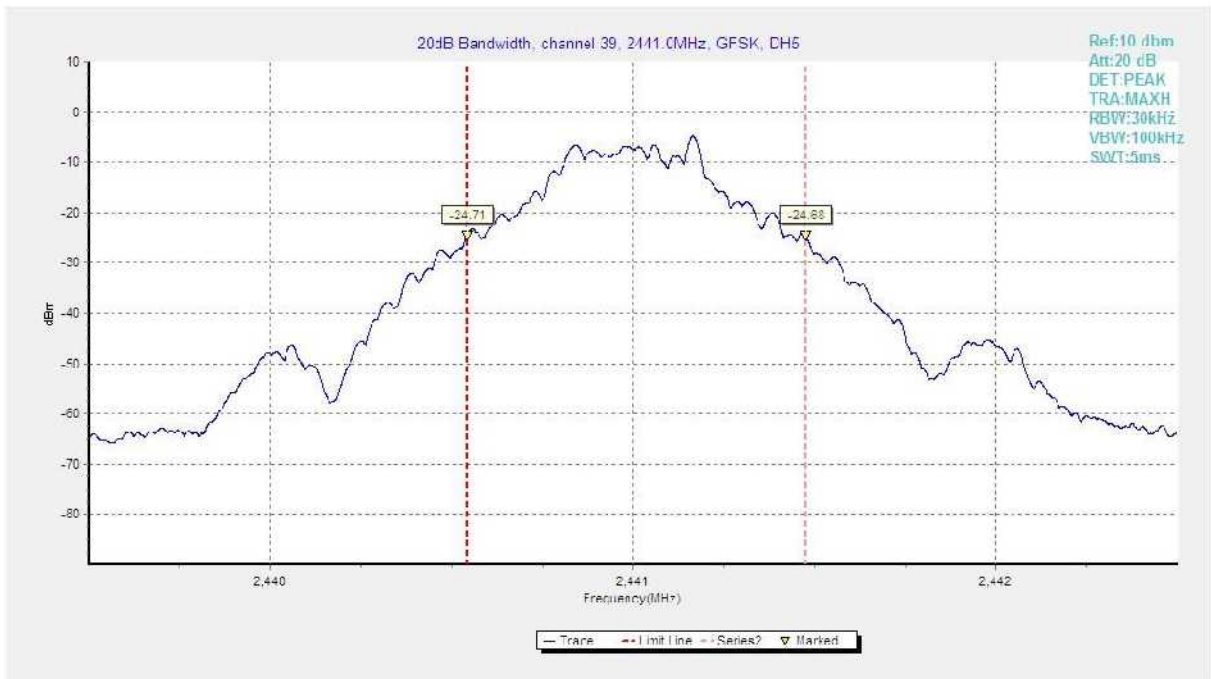


Fig. 100 20dB Bandwidth (GFSK, Ch 39)

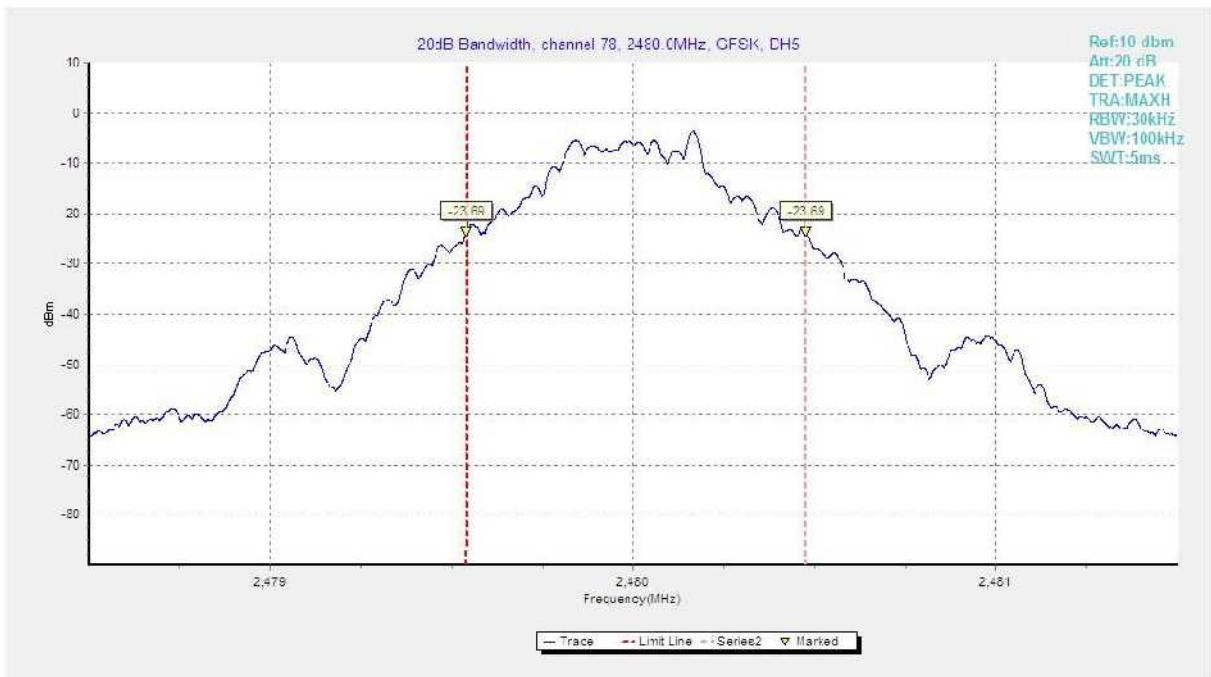


Fig. 101 20dB Bandwidth (GFSK, Ch 78)

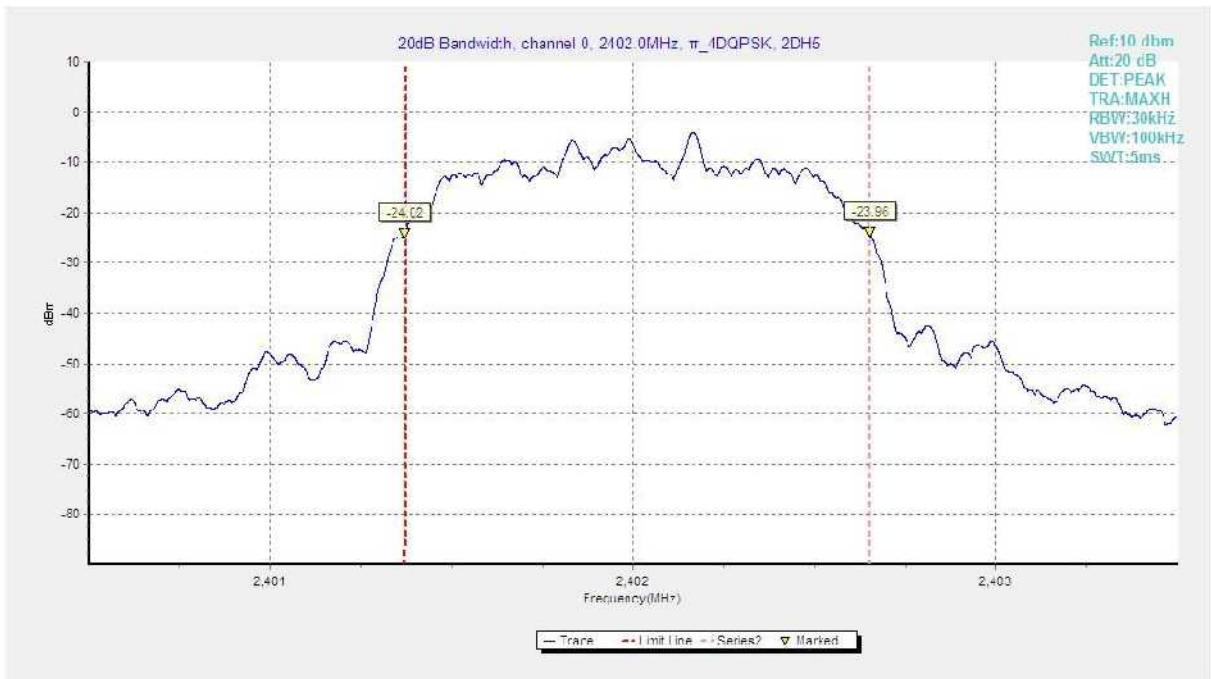


Fig. 102 20dB Bandwidth ( $\pi$ /4 DQPSK, Ch 0)

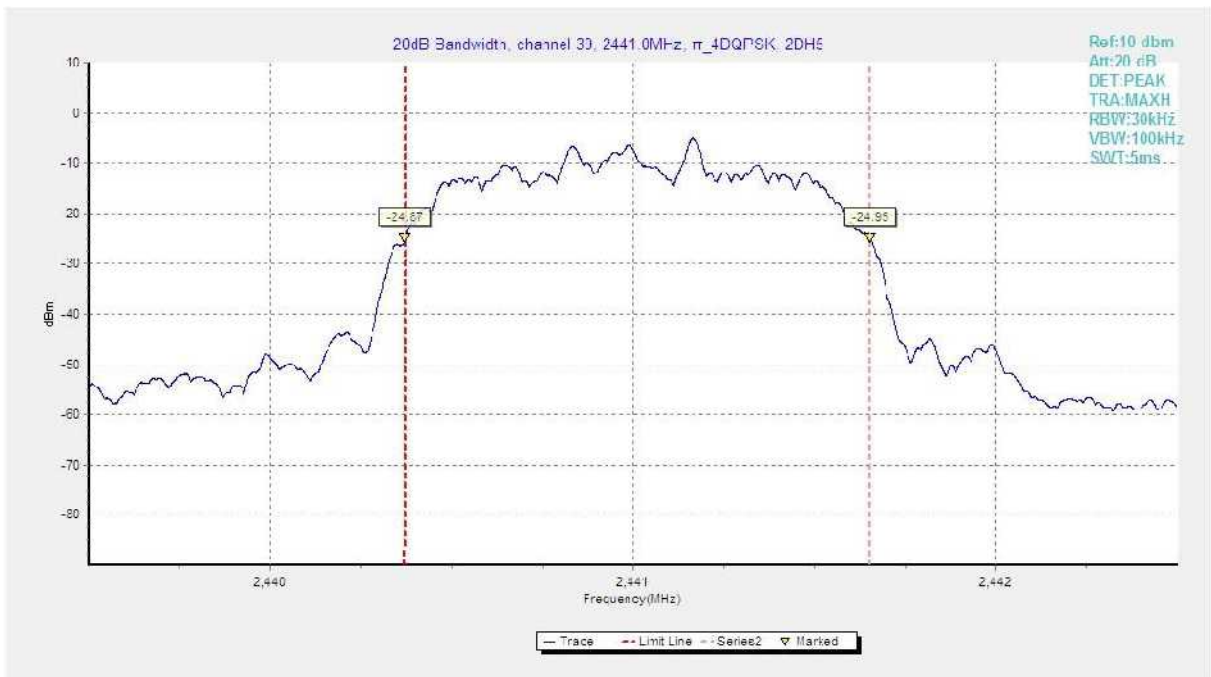


Fig. 103 20dB Bandwidth ( $\pi$ /4 DQPSK, Ch 39)

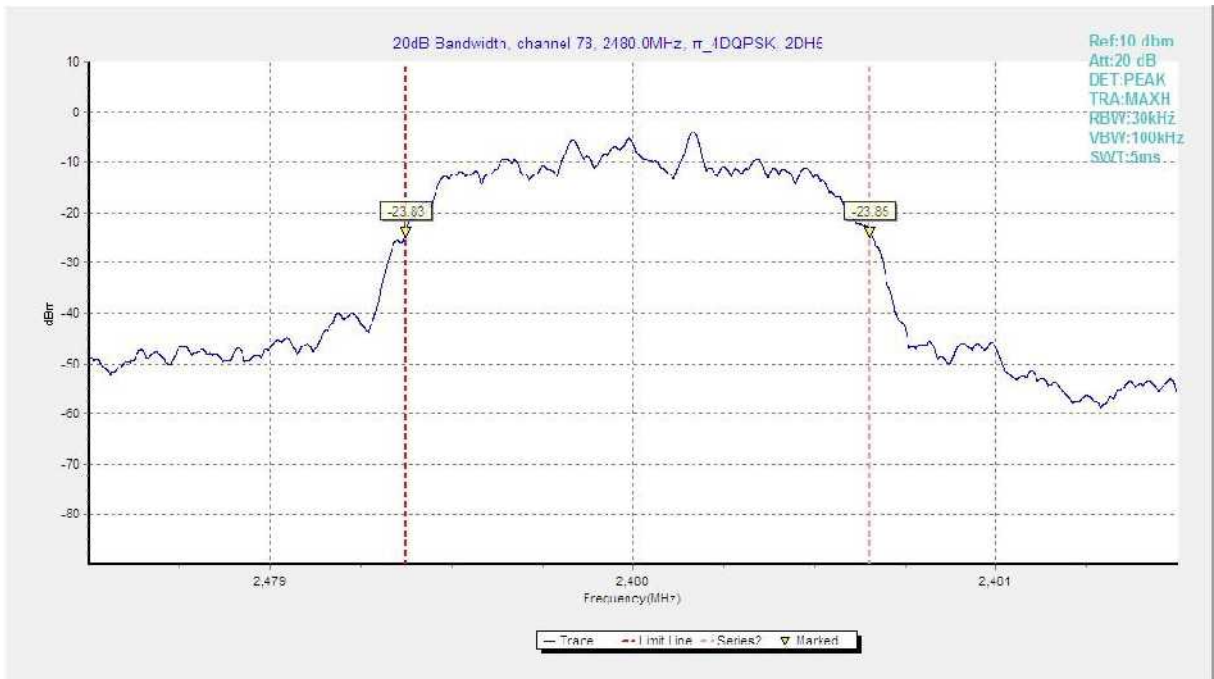


Fig. 104 20dB Bandwidth ( $\pi/4$  DQPSK, Ch 78)

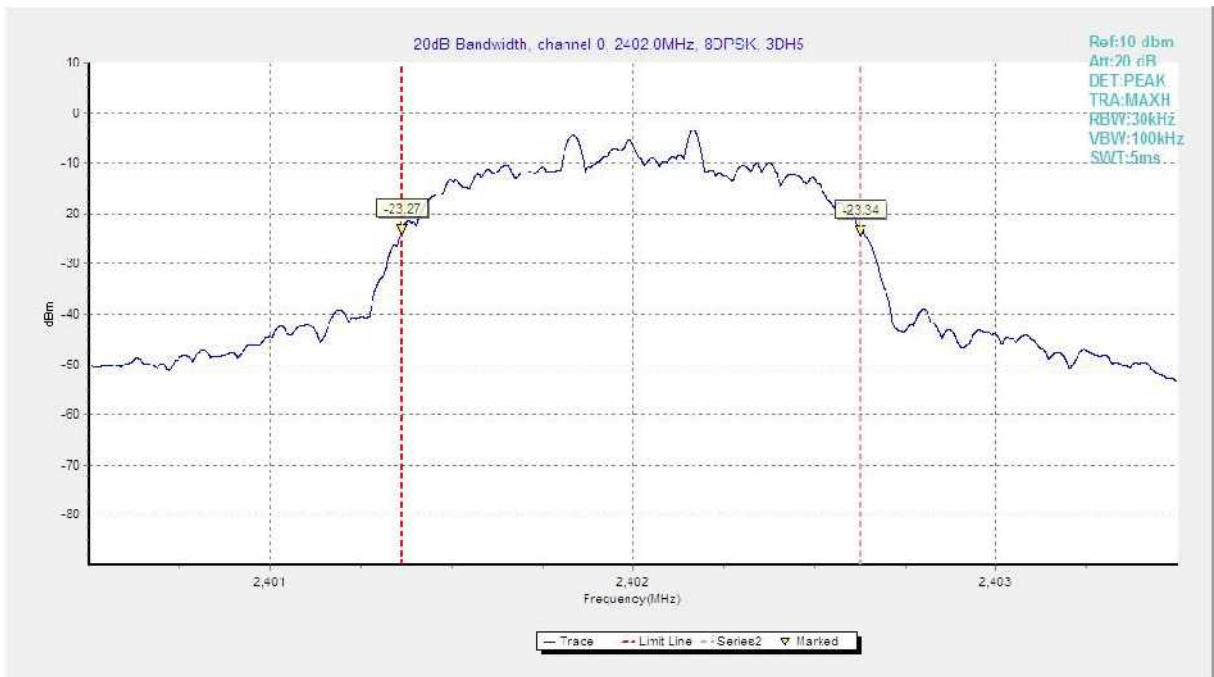


Fig. 105 20dB Bandwidth (8DPSK, Ch 0)

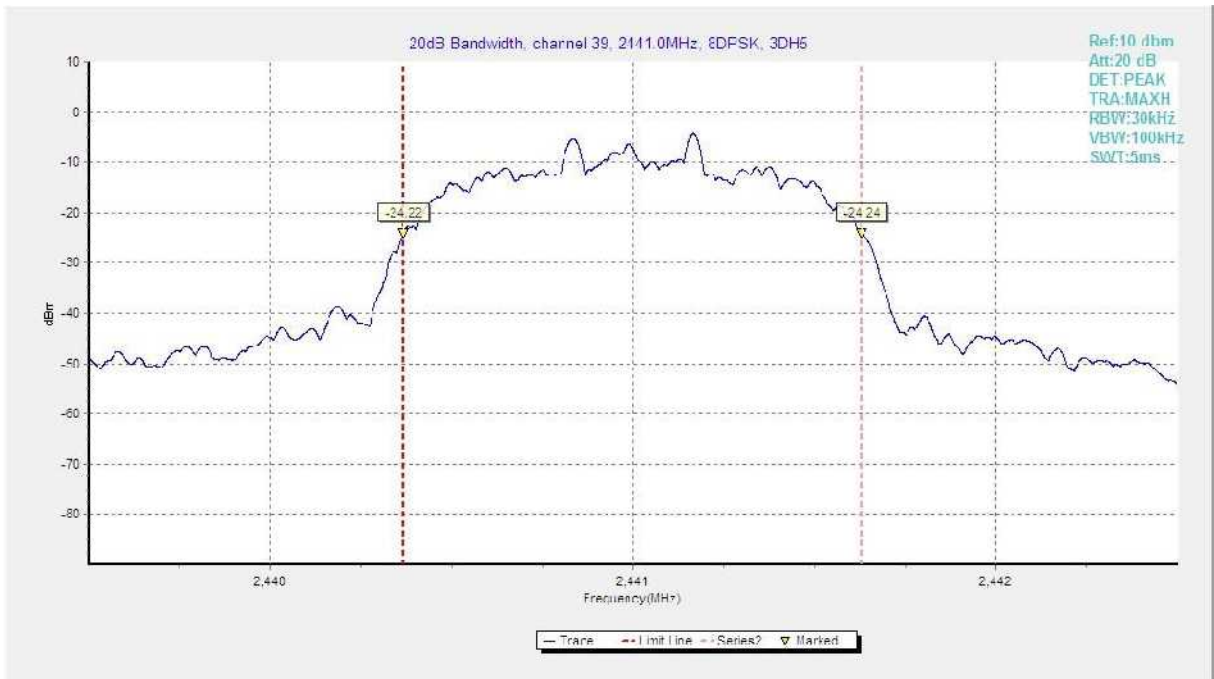


Fig. 106 20dB Bandwidth (8DPSK, Ch 39)

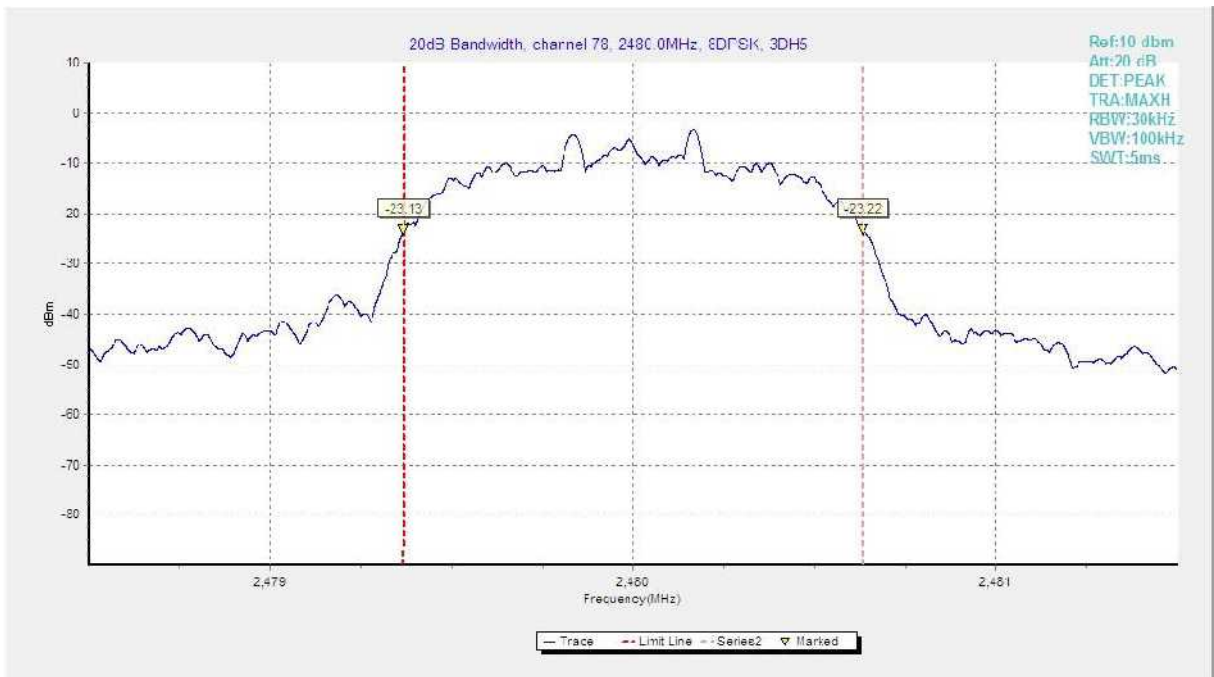


Fig. 107 20dB Bandwidth (8DPSK, Ch 78)

## A.6 Time of Occupancy (Dwell Time)

### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a) & RSS-247 Section 5.1	< 400 ms

### Measurement Results:

Mode	Channel	Packet	Dwell Time(ms)		Conclusion
GFSK	39	DH5	Fig.108	189.74	<b>P</b>
			Fig.109		
$\pi/4$ DQPSK	39	2-DH5	Fig.110	182.02	<b>P</b>
			Fig.111		
8DPSK	39	3-DH5	Fig.112	193.60	<b>P</b>
			Fig.113		

See below for test graphs.

**Conclusion: Pass**



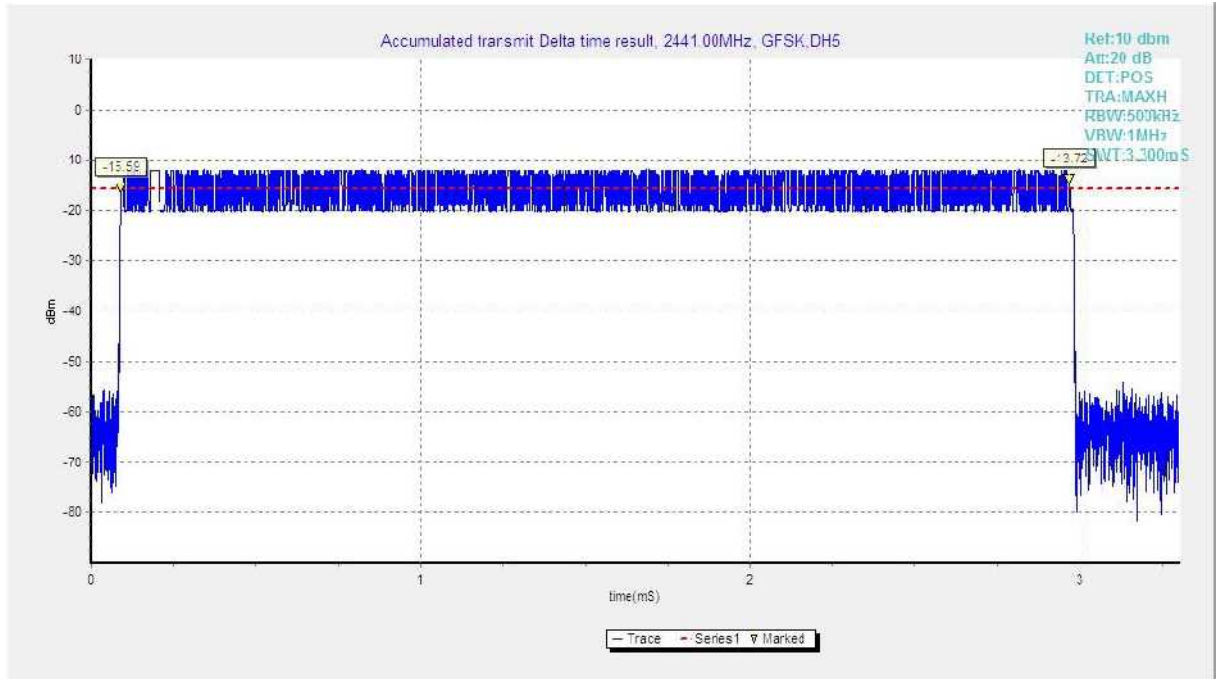


Fig. 108 Time of Occupancy(Dwell Time) (GFSK, Ch39)

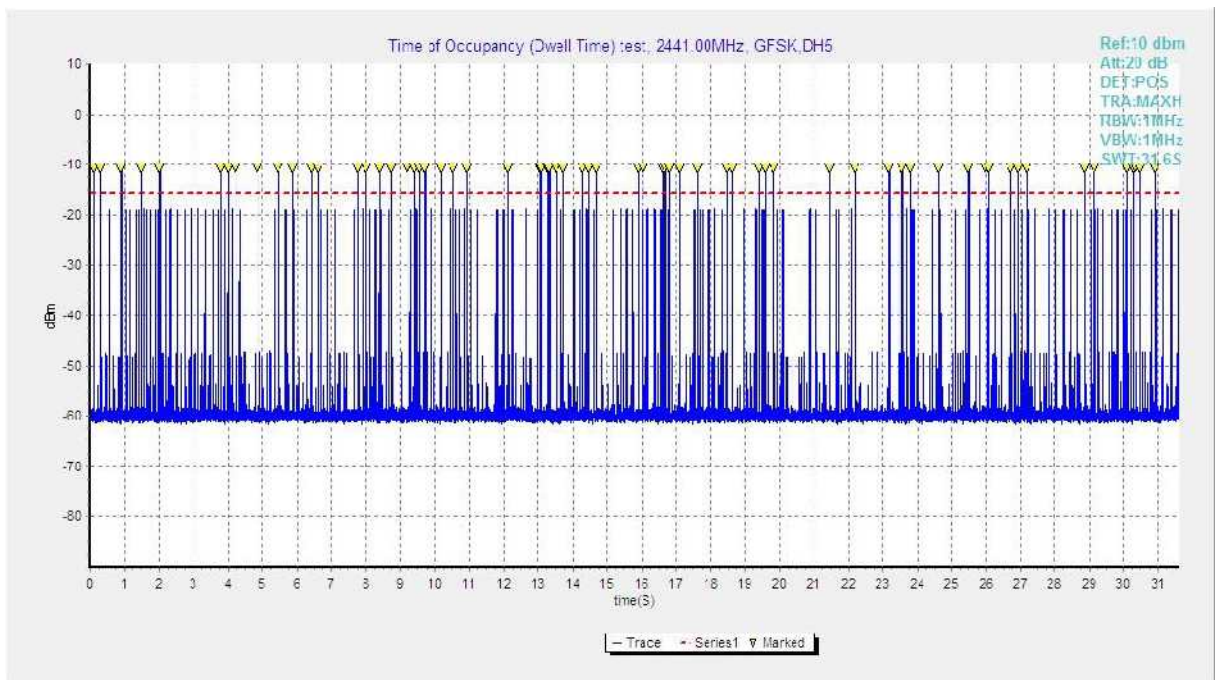


Fig. 109 Time of Occupancy(Dwell Time) (GFSK, Ch39)

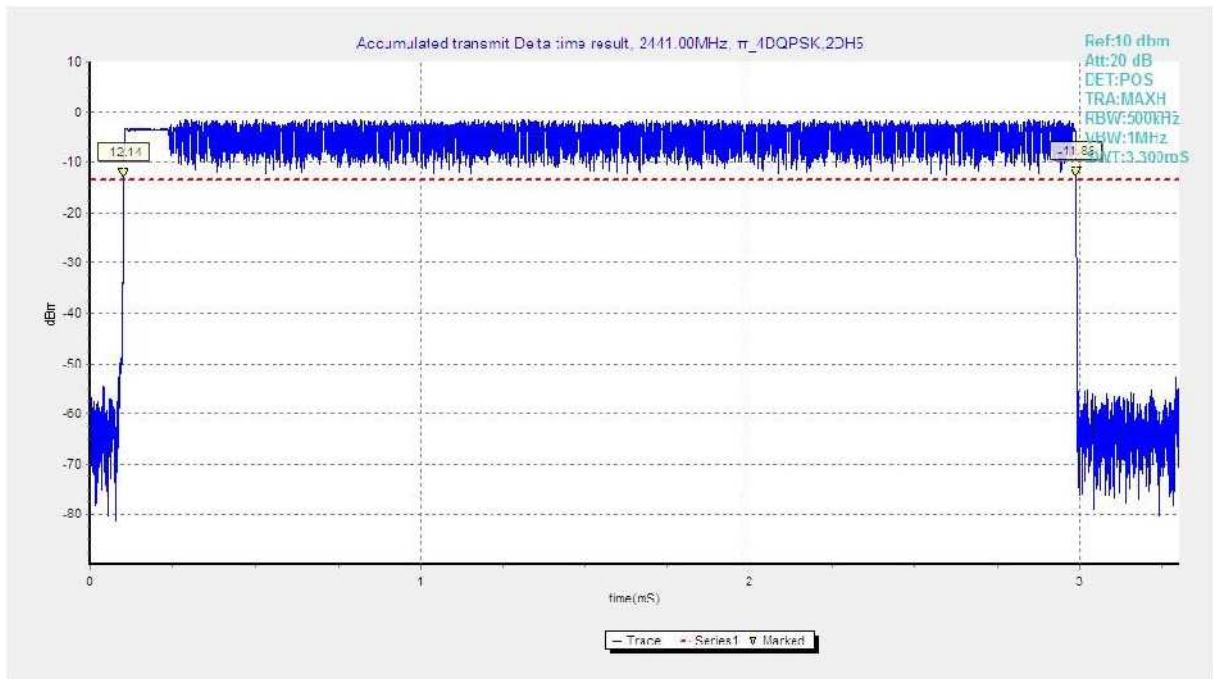


Fig. 110 Time of Occupancy(Dwell Time) ( $\pi/4$  DQPSK, Ch39)

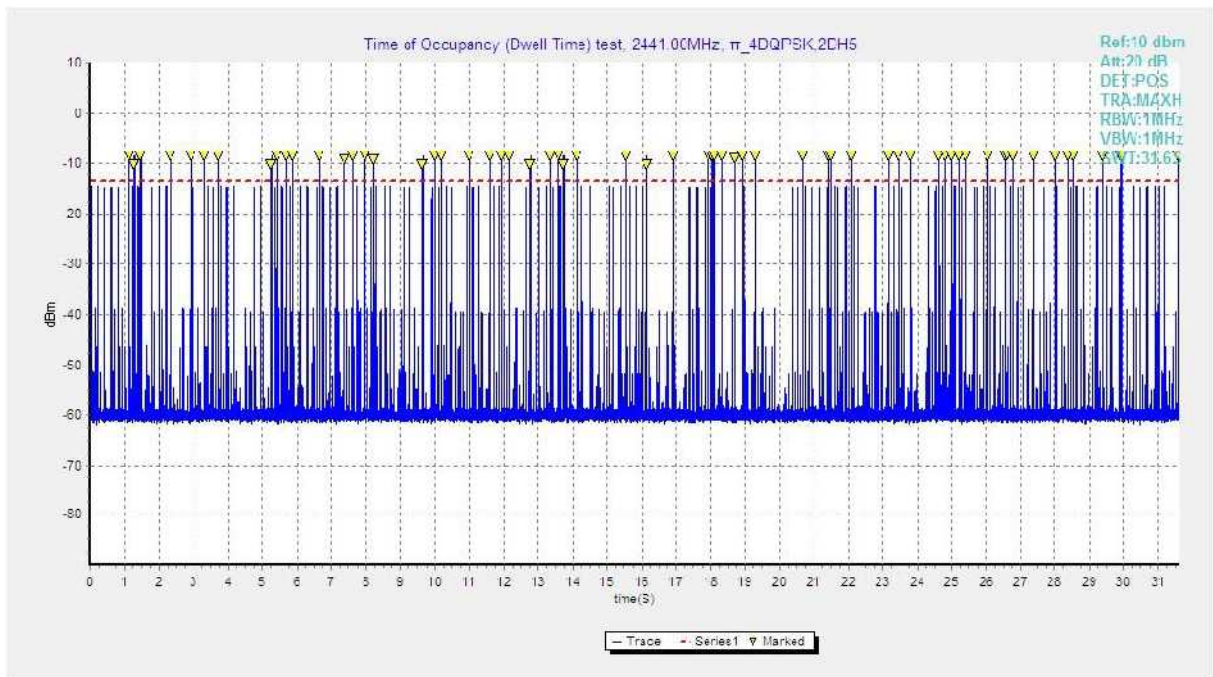


Fig. 111 Time of Occupancy(Dwell Time) ( $\pi/4$  DQPSK, Ch39)

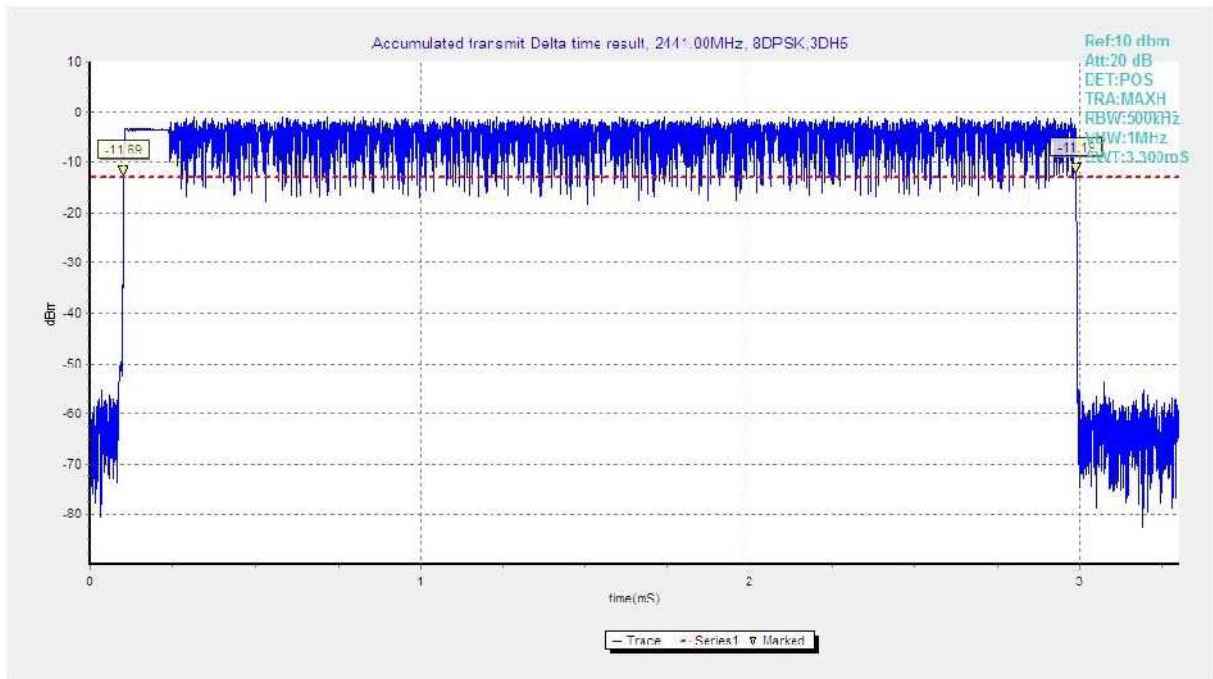


Fig. 112 Time of Occupancy(Dwell Time) (8DPSK, Ch39)

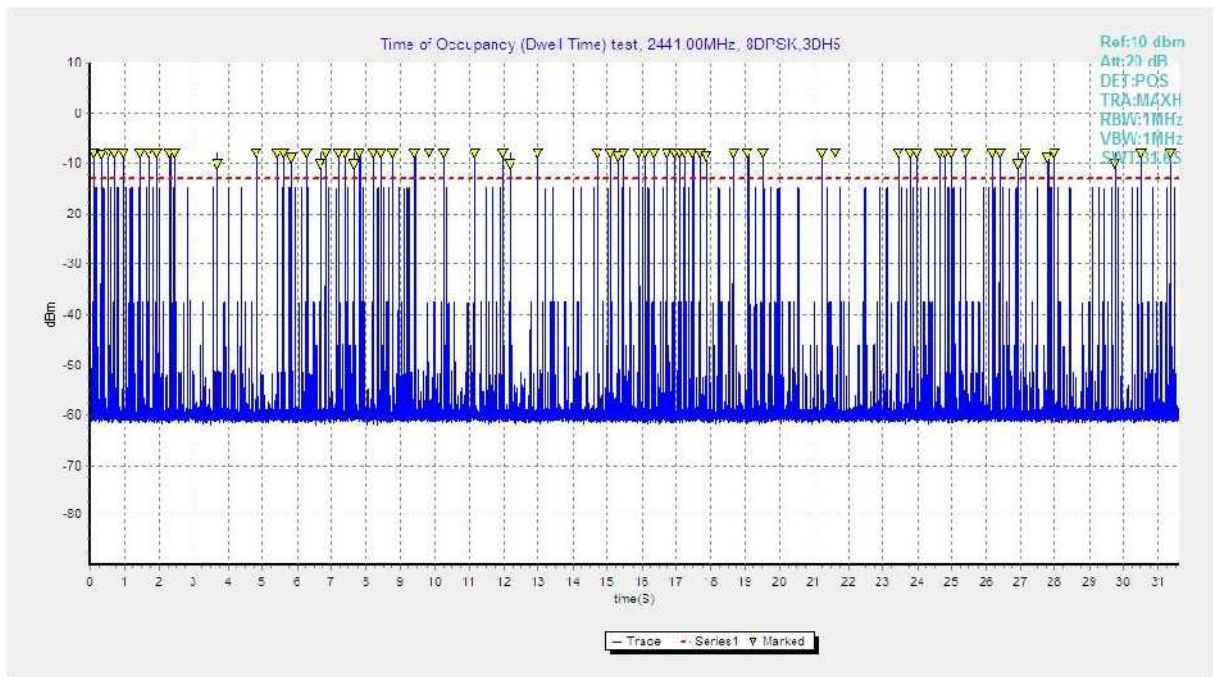


Fig. 113 Time of Occupancy(Dwell Time) (8DPSK, Ch39)

## A.7 Number of Hopping Channels

### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a) & RSS-247 Section 5.1	At least 15 non-overlapping channels

### Measurement Results:

Mode	Packet	Number of hopping		Test result	Conclusion
GFSK	DH5	Fig.114	Fig.115	79	<b>P</b>
$\pi/4$ DQPSK	2-DH5	Fig.116	Fig.117	79	<b>P</b>
8DPSK	3-DH5	Fig.118	Fig.119	79	<b>P</b>

See below for test graphs.

**Conclusion: Pass**

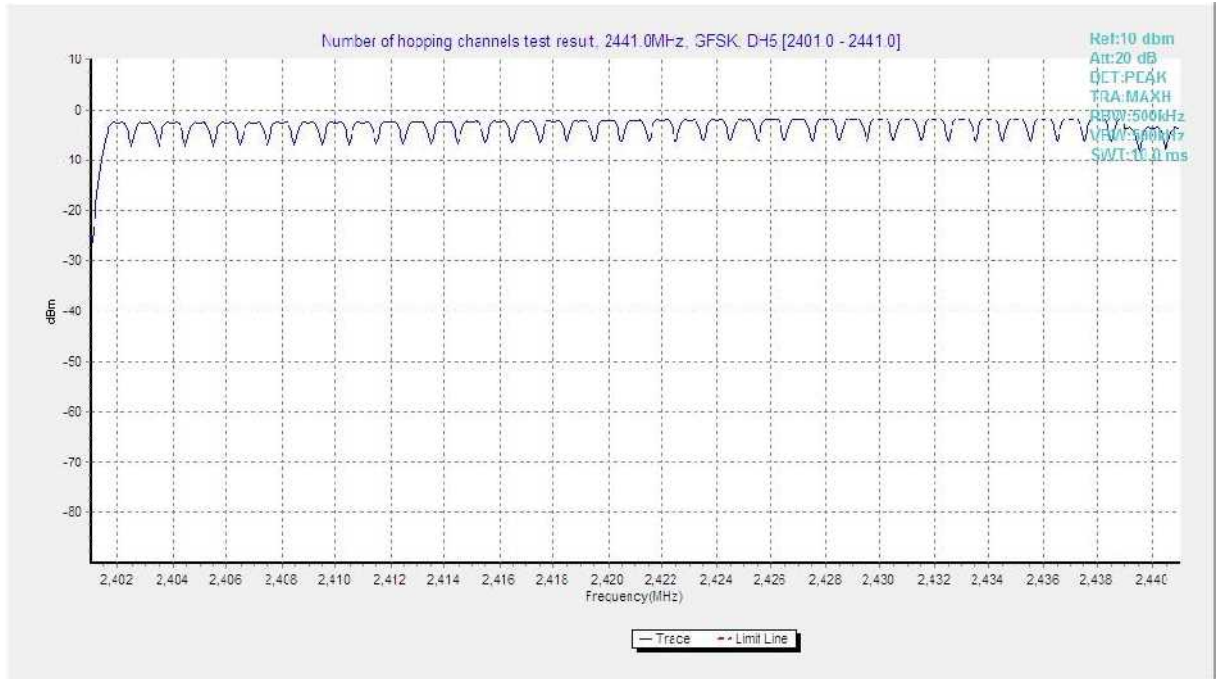


Fig. 114 Hopping channel ch0~39 (GFSK, Ch39)

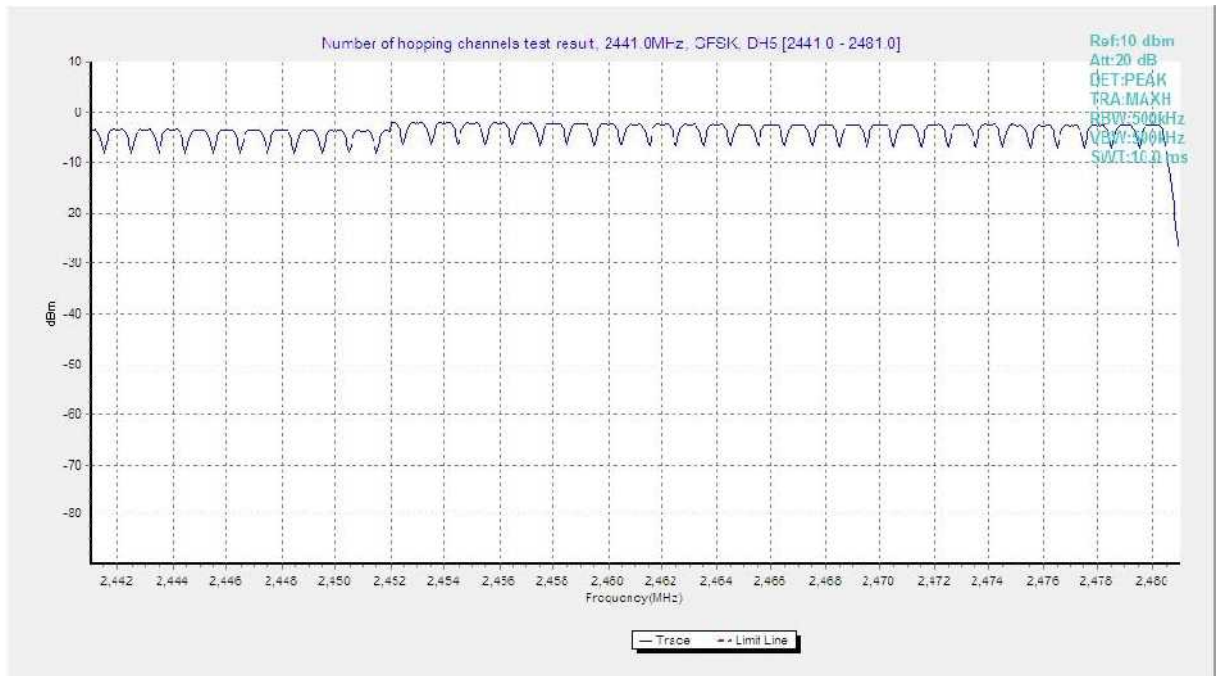


Fig. 115 Hopping channel ch39~78 (GFSK, Ch39)

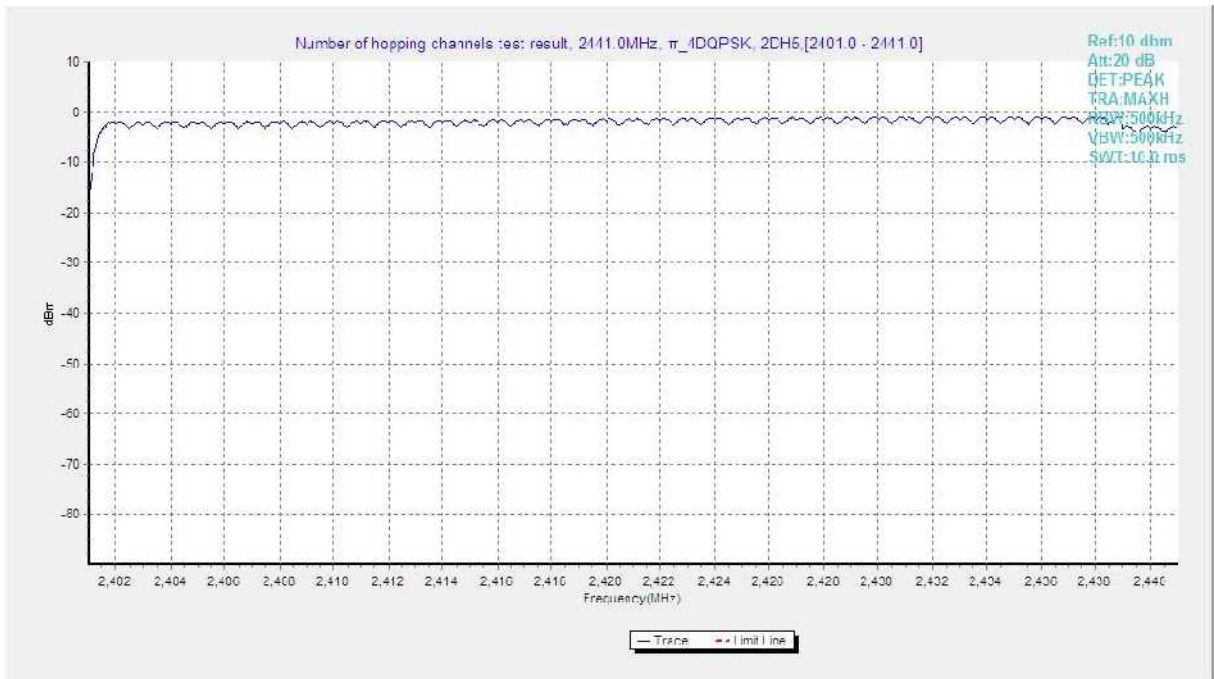


Fig. 116 Hopping channel ch0~39 ( $\pi/4$  DQPSK, Ch39)

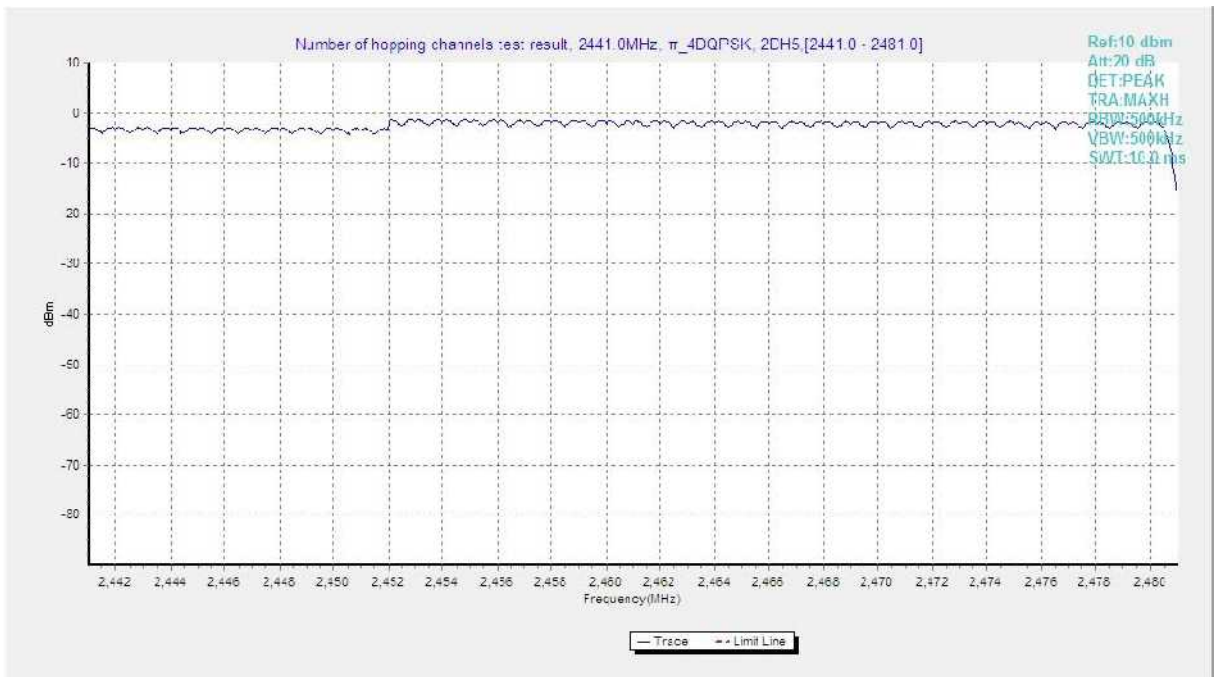


Fig. 117 Hopping channel ch39~78 ( $\pi/4$  DQPSK, Ch39)

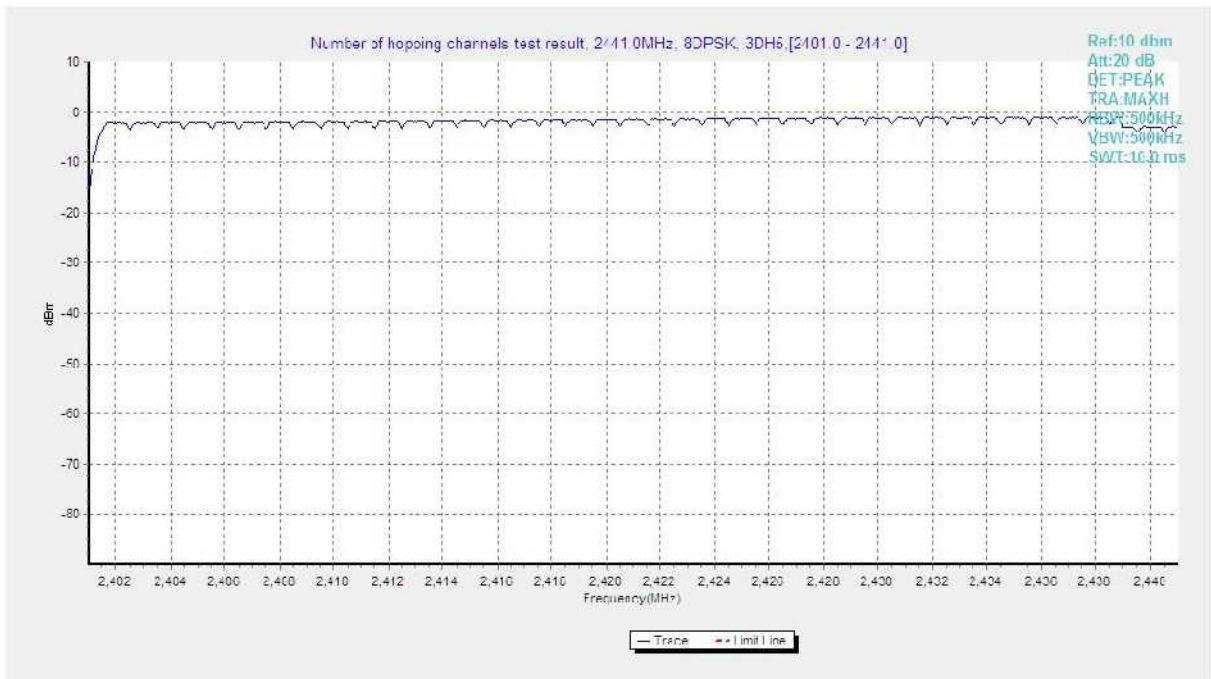


Fig. 118 Hopping channel ch0~39 (8DPSK, Ch39)

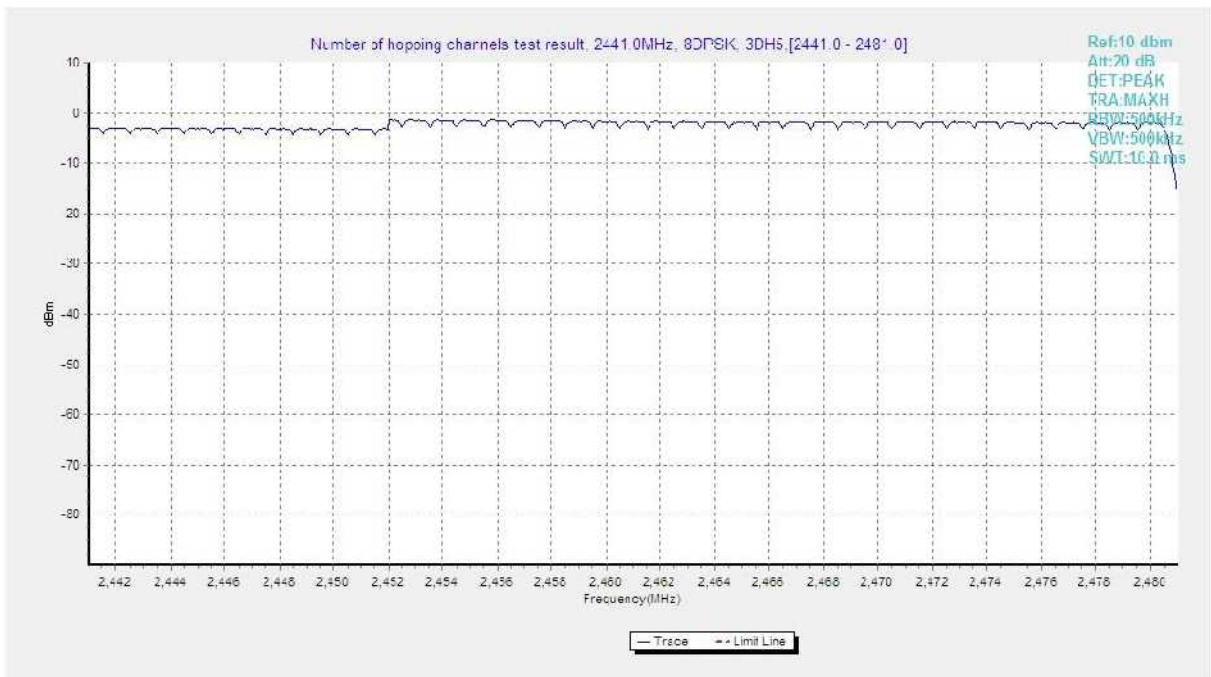


Fig. 119 Hopping channel ch39~78 (8DPSK, Ch39)

### A.8 Carrier Frequency Separation

**Measurement Limit:**

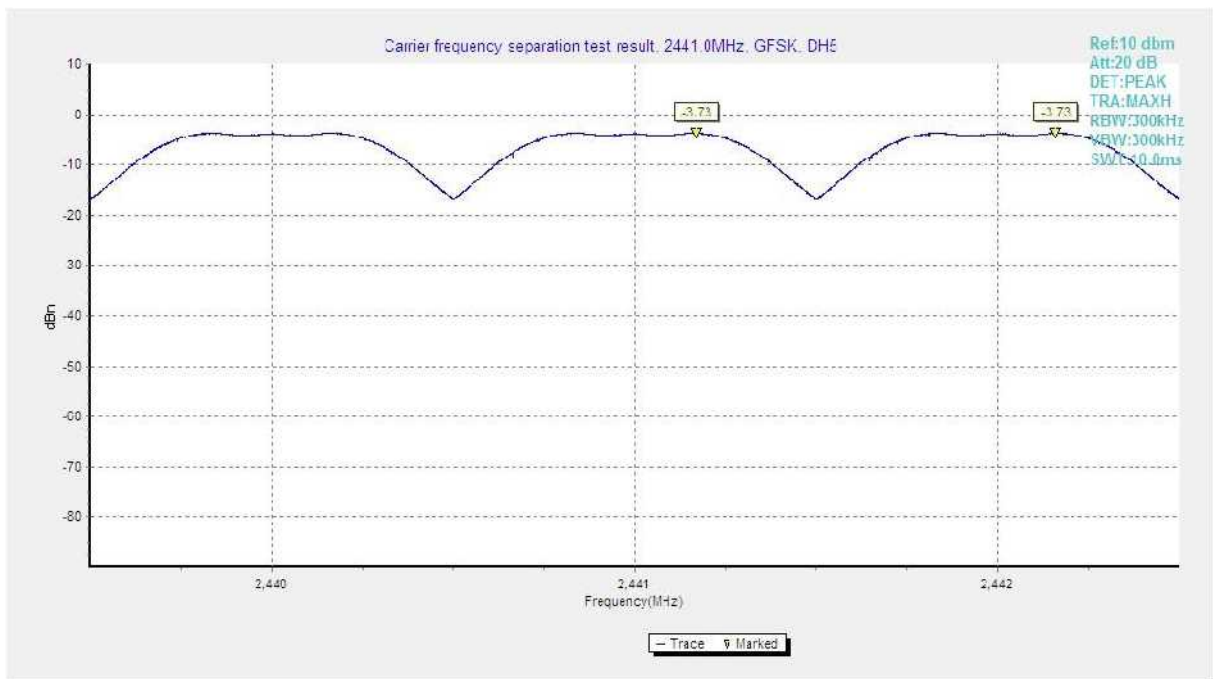
Standard	Limit
FCC 47 CFR Part 15.247(a) & RSS-247 Section 5.1	By a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater

**Measurement Results:**

Mode	Channel	Packet	Separation of hopping channels	Test result (KHz)	Conclusion
GFSK	39	DH5	Fig.120	991.50	<b>P</b>
$\pi/4$ DQPSK	39	2-DH5	Fig.121	997.50	<b>P</b>
8DPSK	39	3-DH5	Fig.122	1010.25	<b>P</b>

See below for test graphs.

**Conclusion: Pass**



**Fig. 120 Carrier Frequency Separation (GFSK, Ch39)**



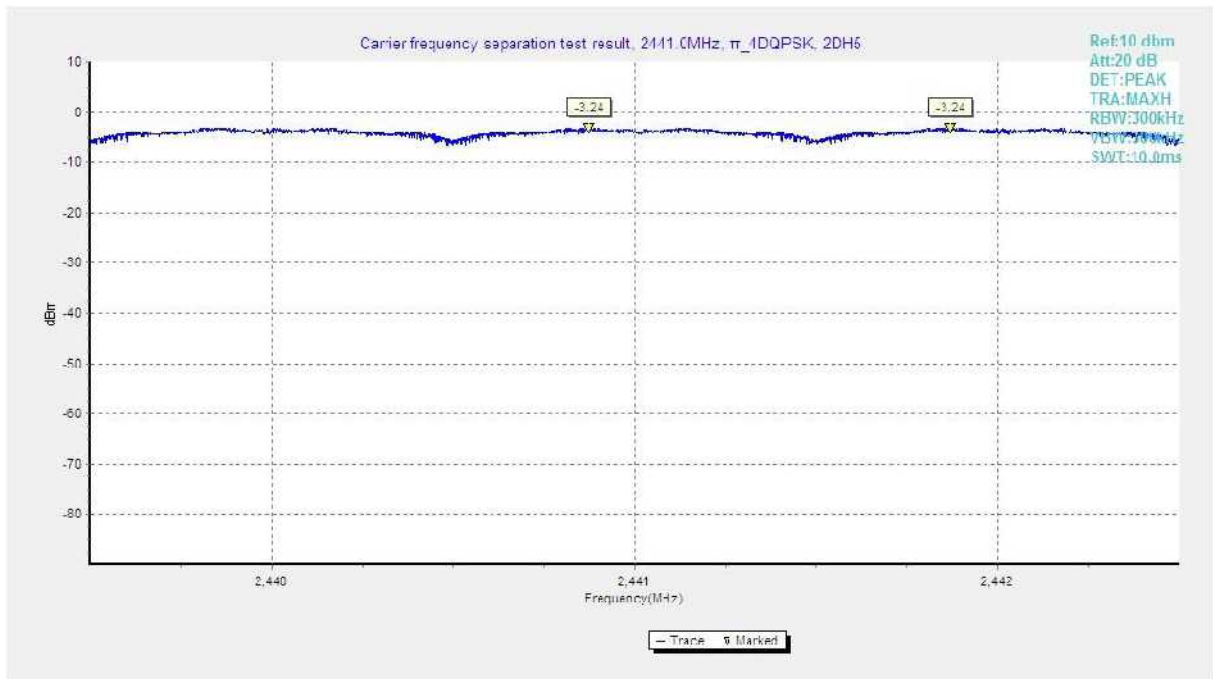


Fig. 121 Carrier Frequency Separation ( $\pi/4$  DQPSK, Ch39)

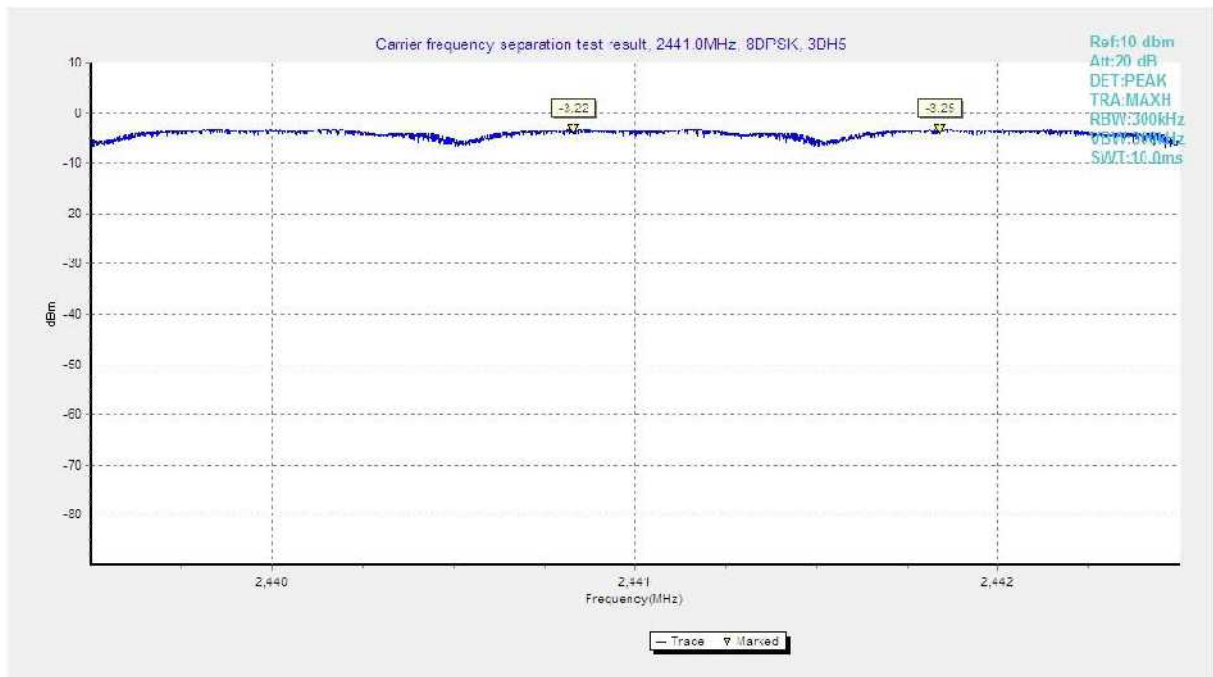


Fig. 122 Carrier Frequency Separation (8DPSK, Ch39)

### A.9 Occupied Bandwidth

**Measurement Limit:**

Standard	Limit
RSS-Gen Section 6.7	/

**Measurement Results:**

**For GFSK**

Channel	Occupied Bandwidth (KHz)	Conclusion
0	Fig.42	/
39	Fig.43	/
78	Fig.44	/

**For  $\pi/4$  DQPSK**

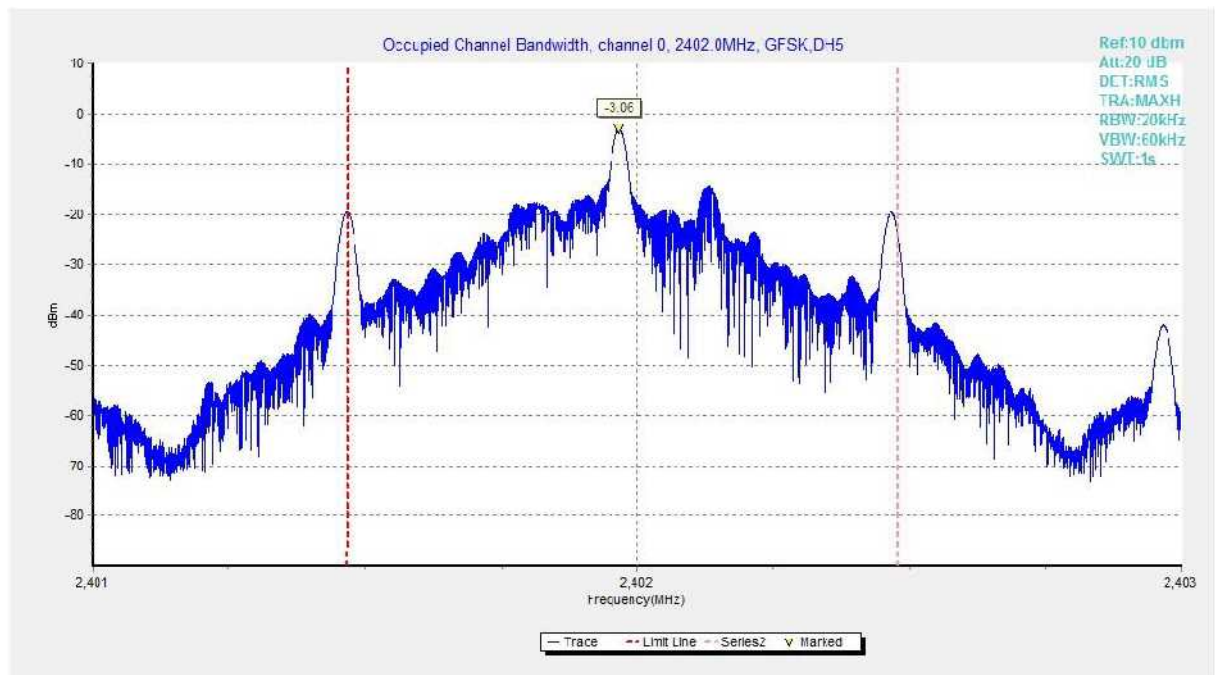
Channel	Occupied Bandwidth (MHz)	Conclusion
0	Fig.45	/
39	Fig.46	/
78	Fig.47	/

**For 8DPSK**

Channel	Occupied Bandwidth (MHz)	Conclusion
0	Fig.48	/
39	Fig.49	/
78	Fig.50	/

See below for test graphs.

**Conclusion: PASS**



**Fig. 42 Occupied Bandwidth: GFSK, Channel 0**

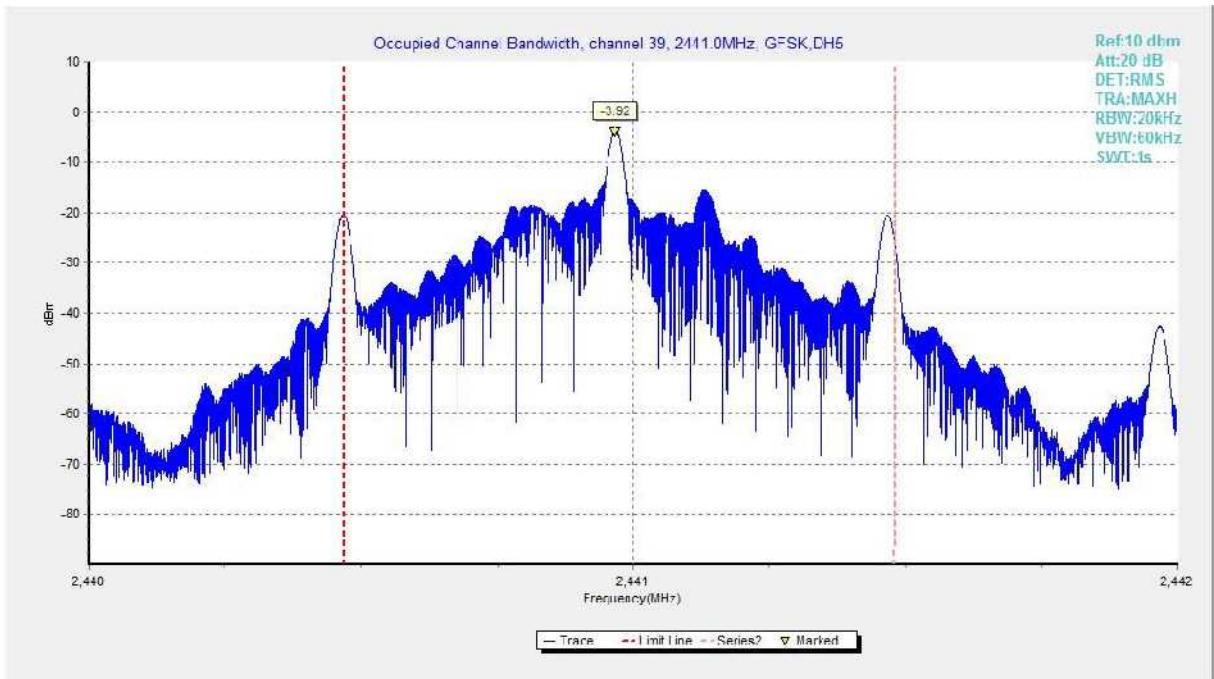


Fig. 43 Occupied Bandwidth: GFSK, Channel 39

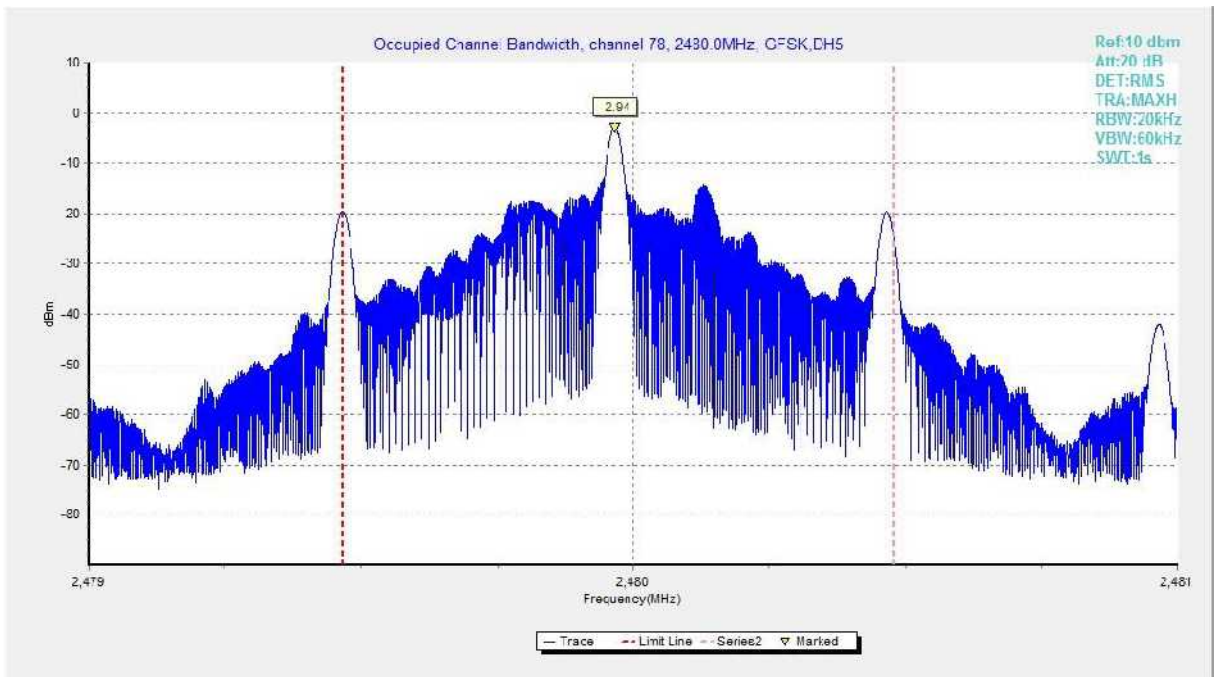


Fig. 44 Occupied Bandwidth: GFSK, Channel 78

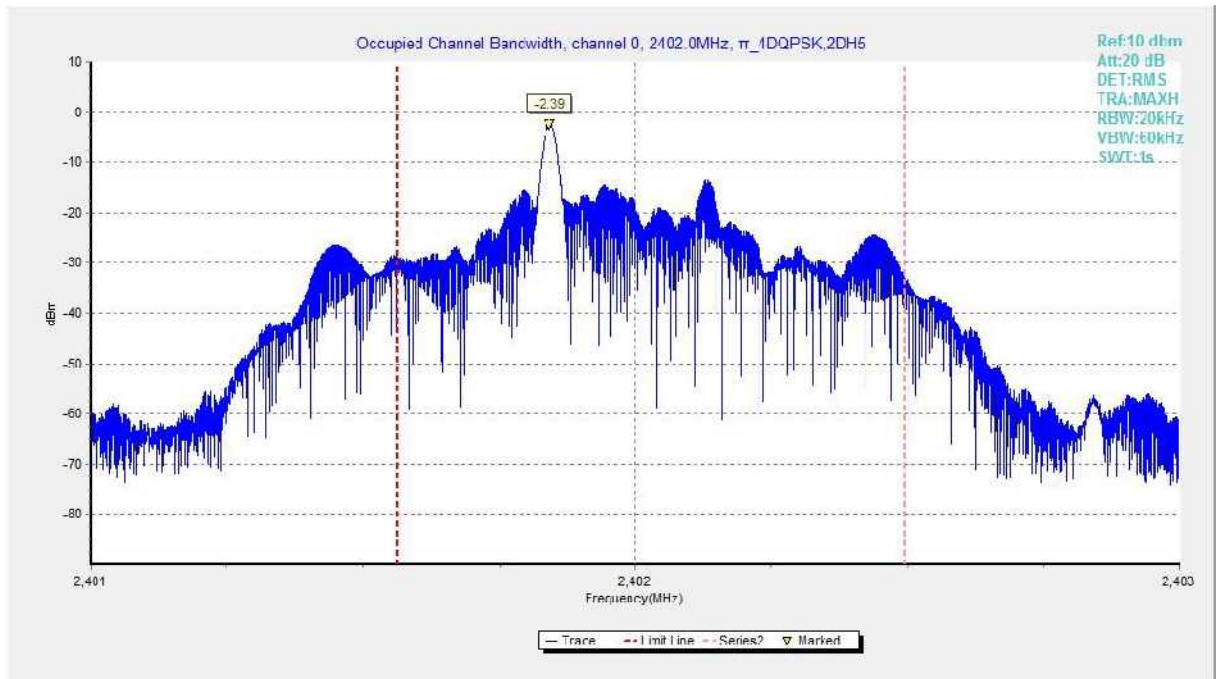


Fig. 45 Occupied Bandwidth:  $\pi/4$  DQPSK, Channel 0

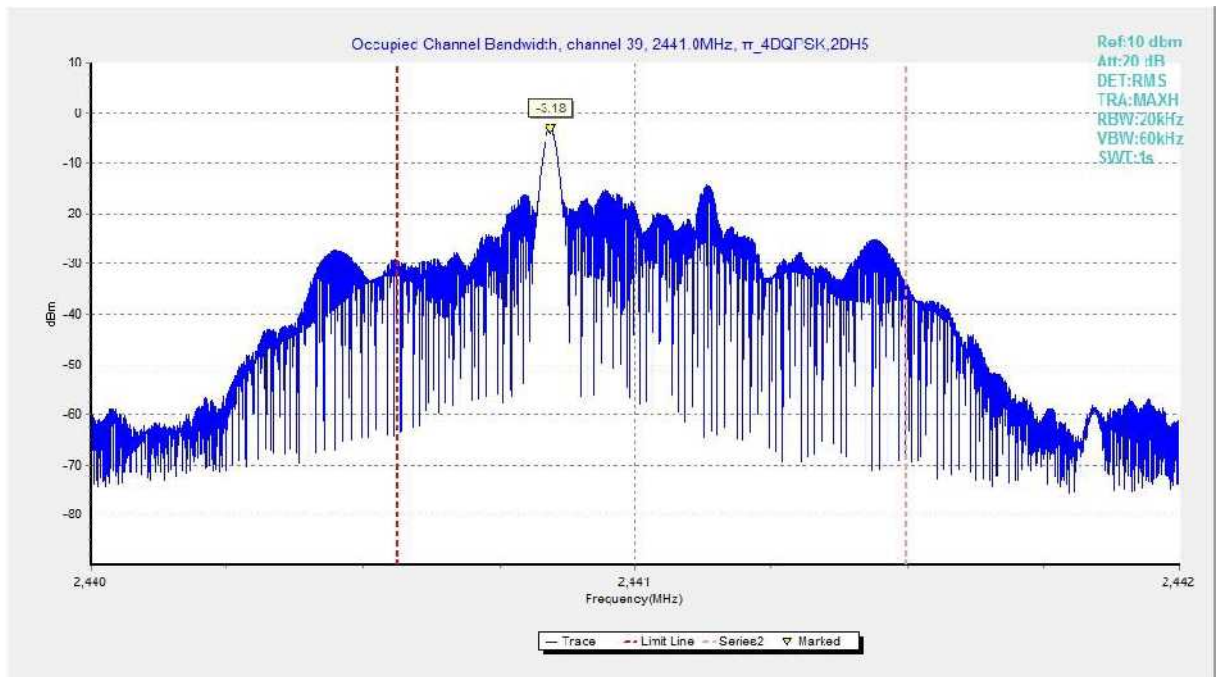


Fig. 46 Occupied Bandwidth:  $\pi/4$  DQPSK, Channel 39

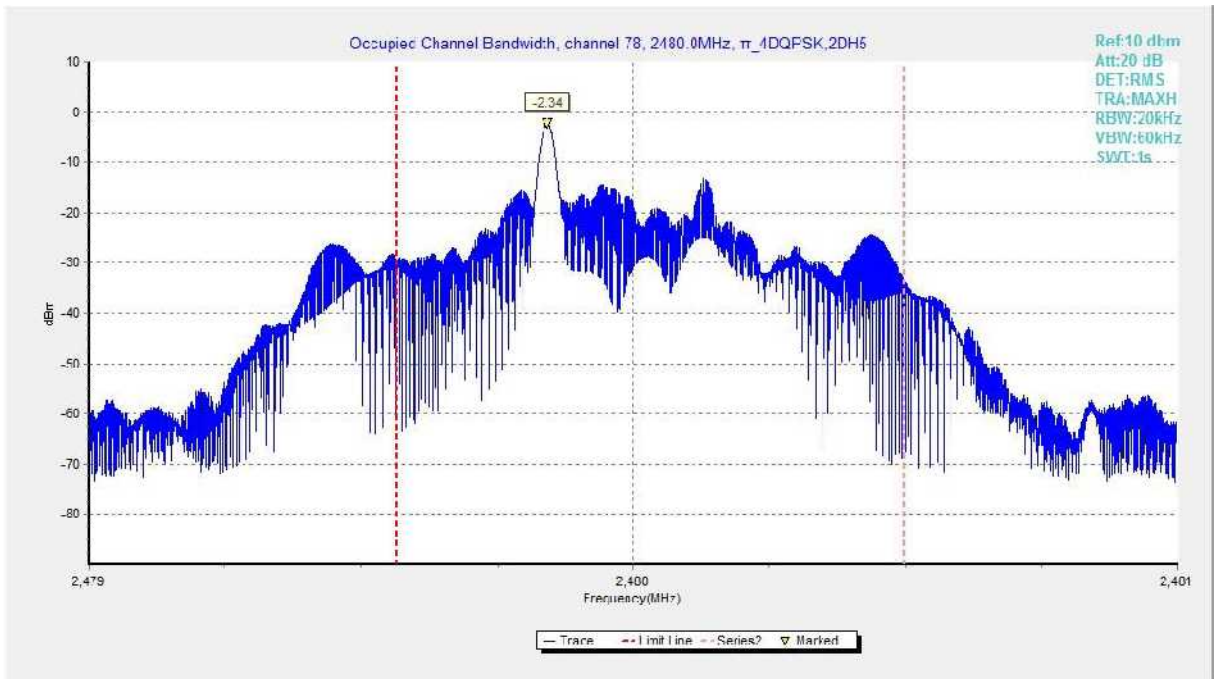


Fig. 47 Occupied Bandwidth:  $\pi$ /4 DQPSK, Channel 78

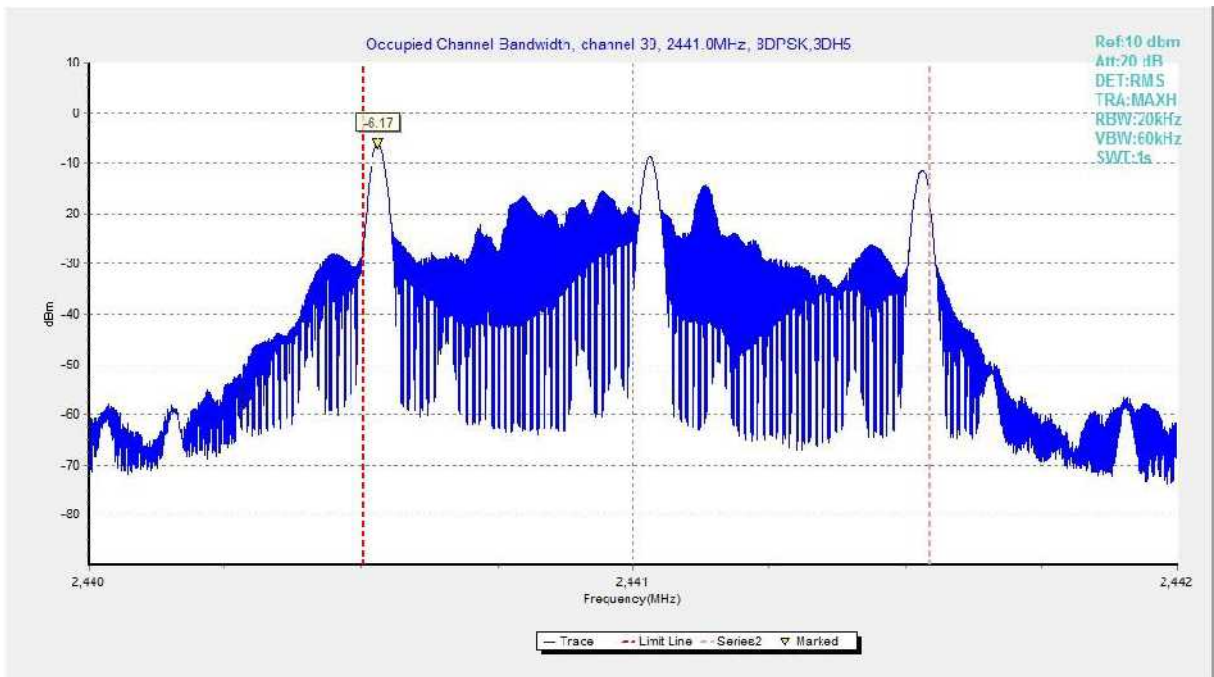


Fig. 48 Occupied Bandwidth: 8DPSK, Channel 0

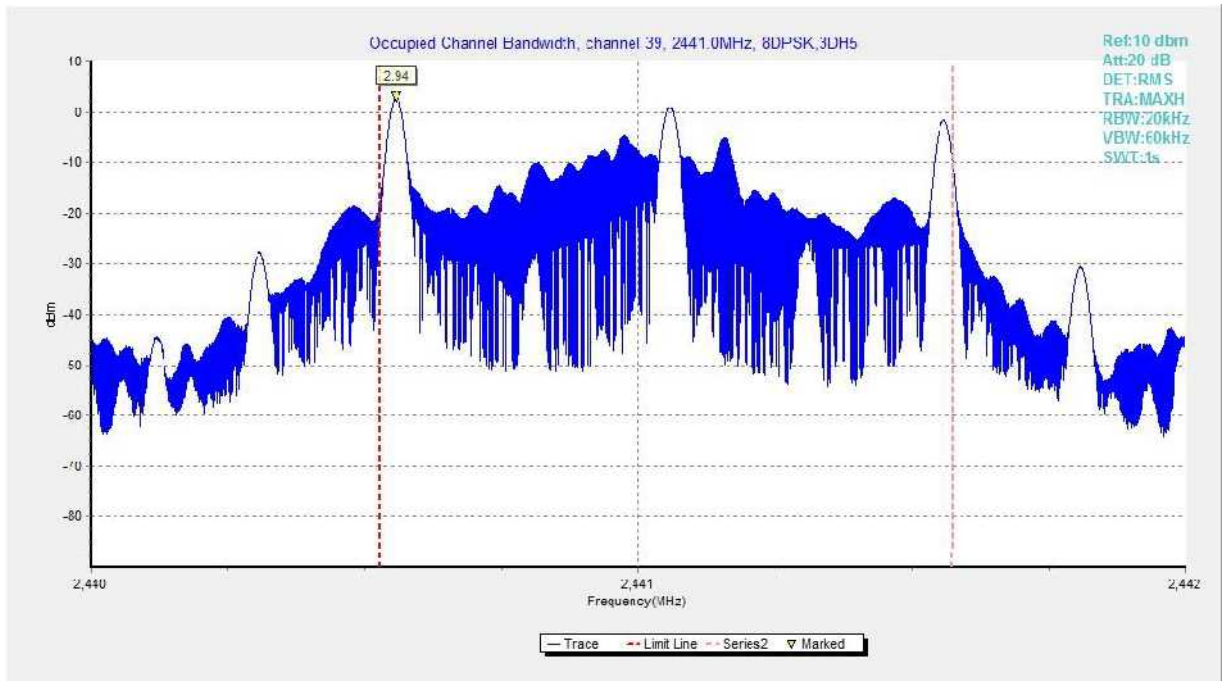


Fig. 49 Occupied Bandwidth: 8DPSK, Channel 39

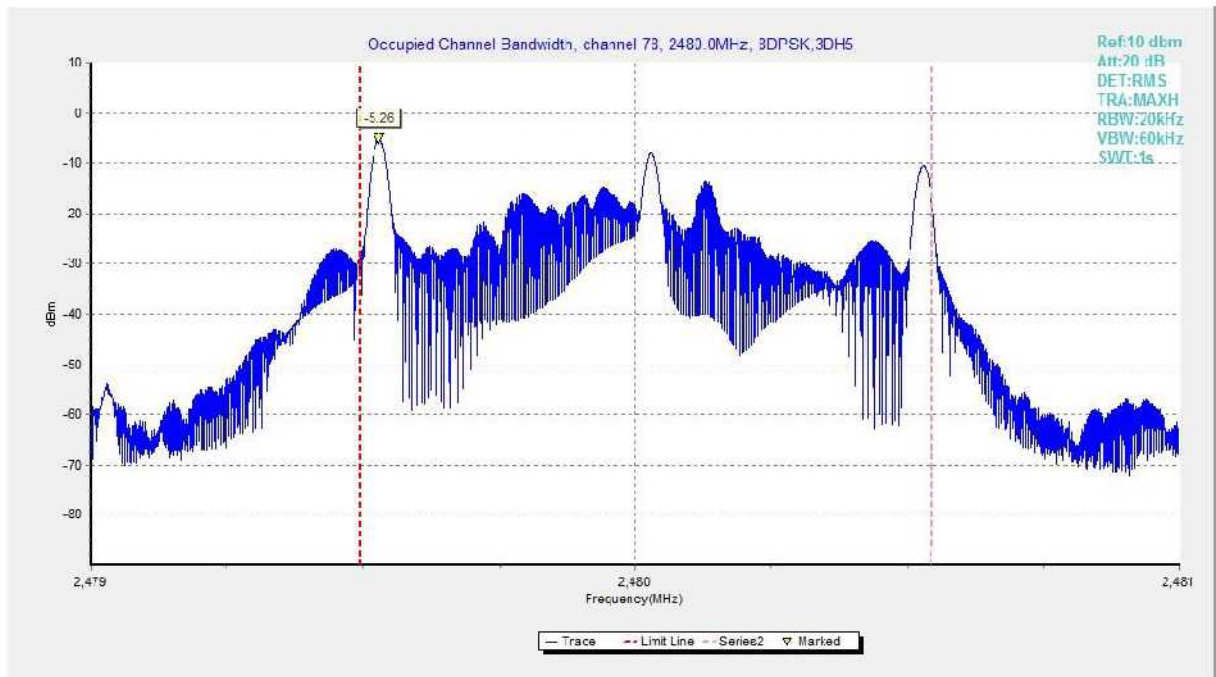


Fig. 50 Occupied Bandwidth: 8DPSK, Channel 78

\*\*\*END OF REPORT\*\*\*