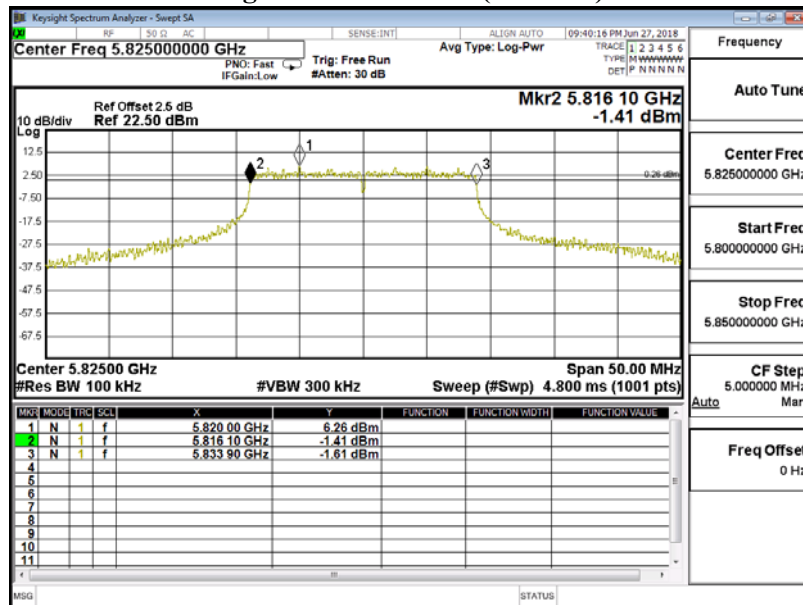


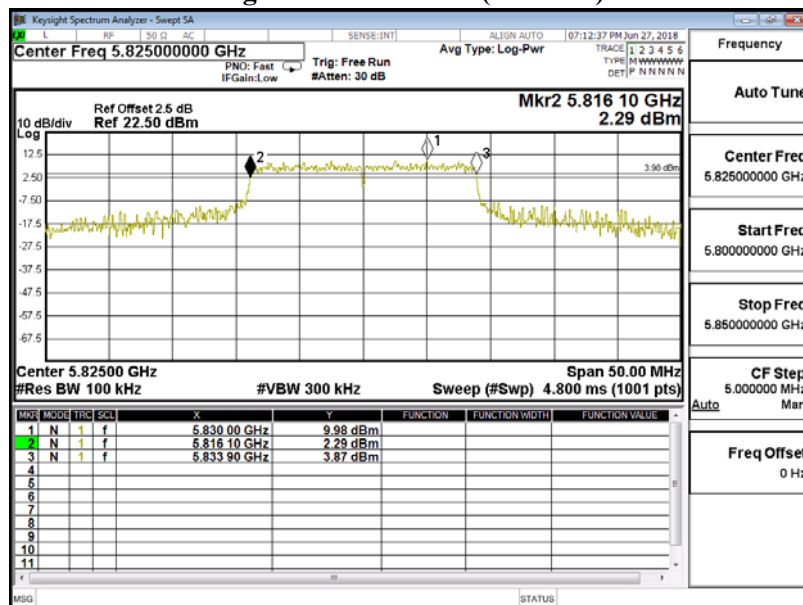
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17800	>500	Pass

Figure Channel 165: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17800	>500	Pass

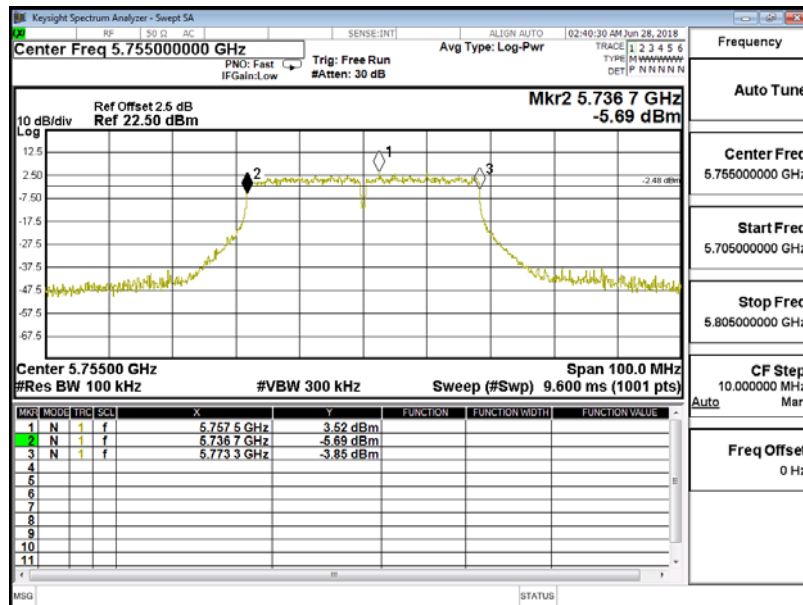
Figure Channel 165: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (5755MHz) (Antenna No.18)

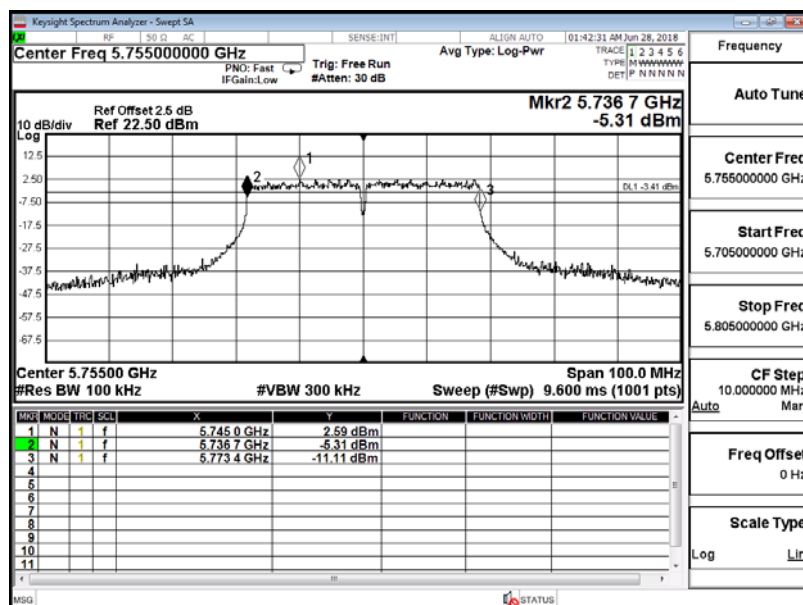
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

Figure Channel 151: (Chain A)



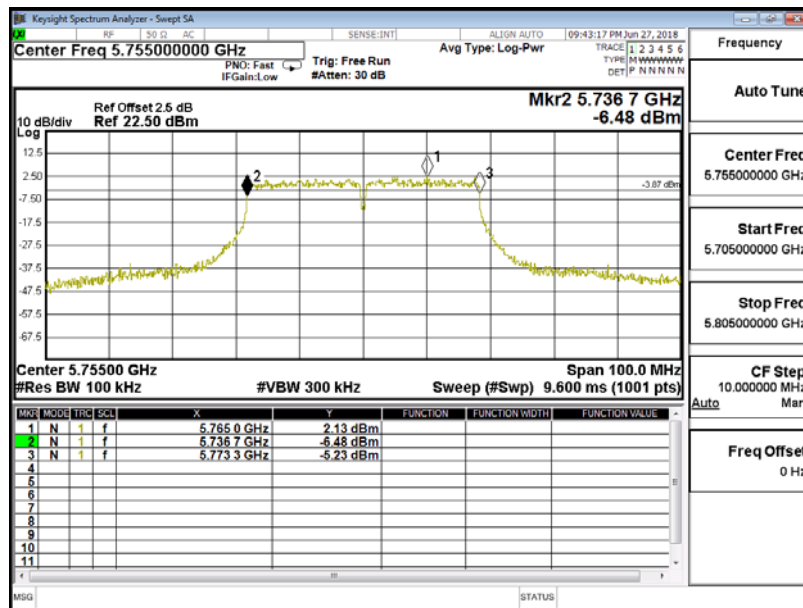
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36700	>500	Pass

Figure Channel 151: (Chain B)



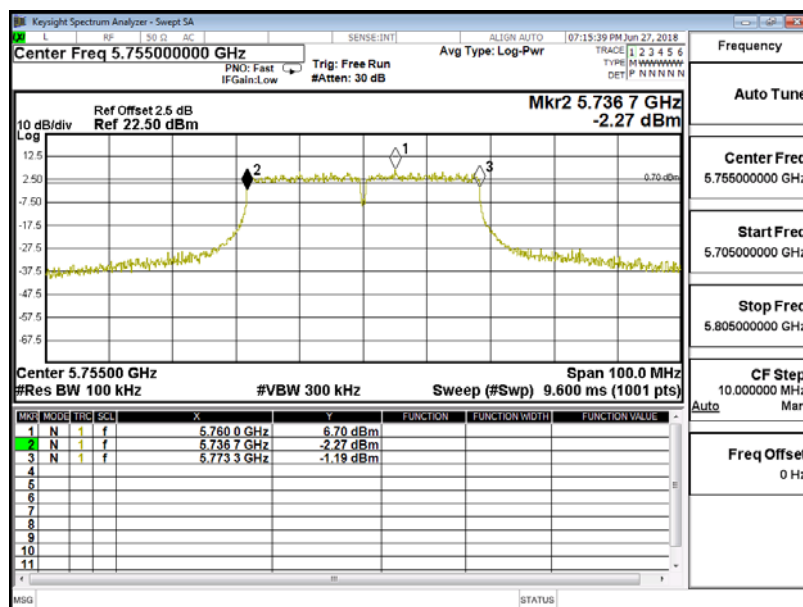
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

Figure Channel 151: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

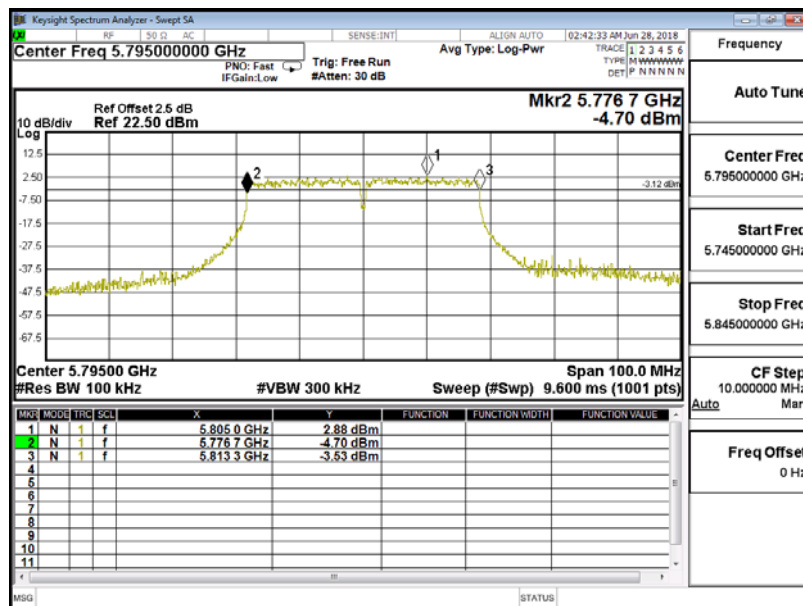
Figure Channel 151: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (5795MHz) (Antenna No.18)

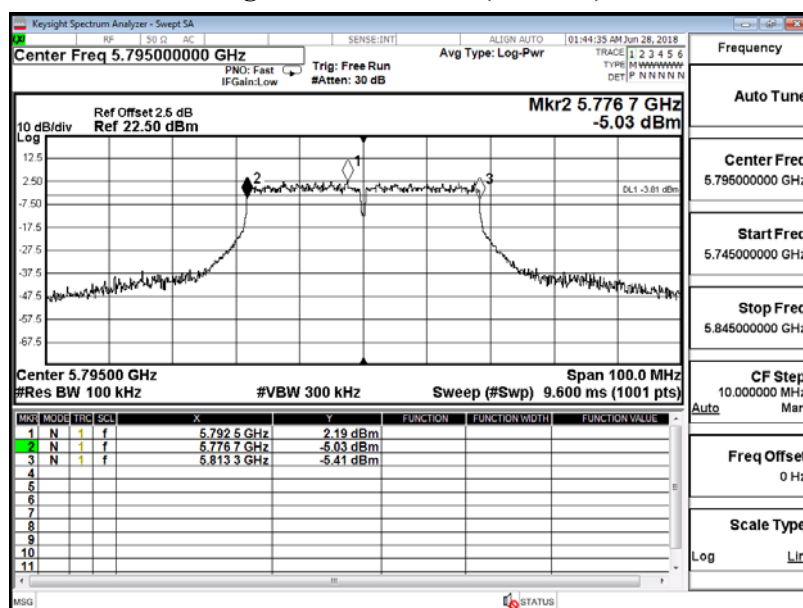
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

Figure Channel 159: (Chain A)



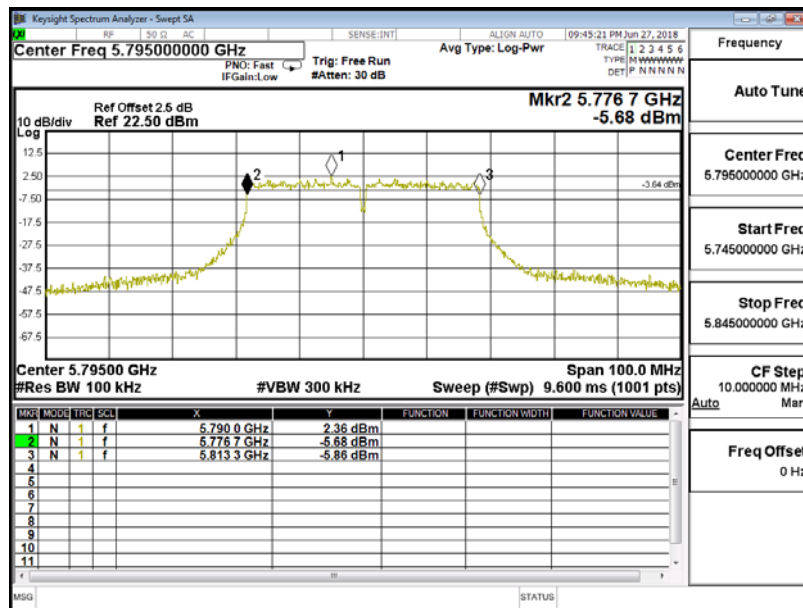
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

Figure Channel 159: (Chain B)



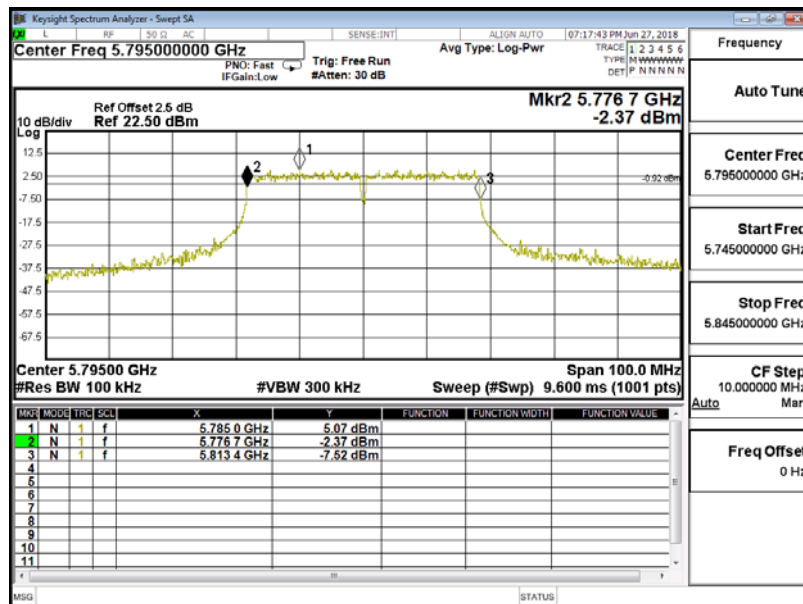
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

Figure Channel 159: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36700	>500	Pass

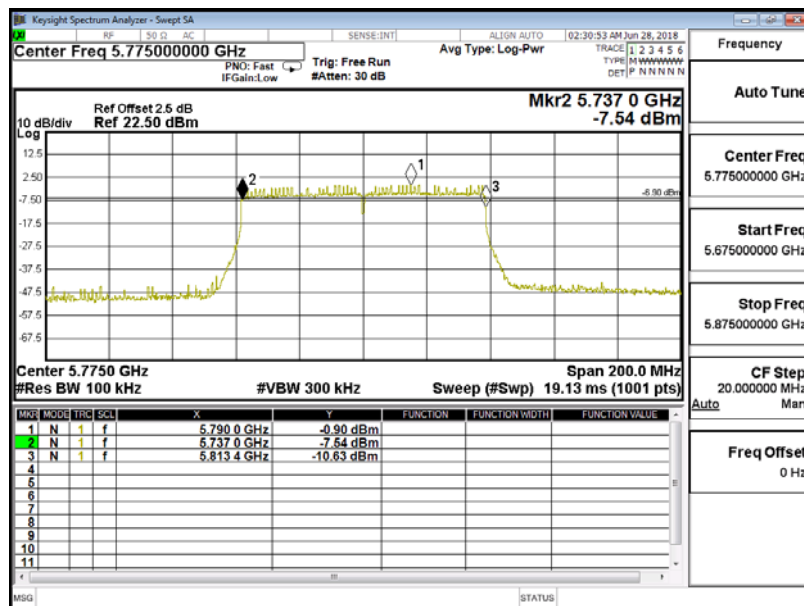
Figure Channel 159: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (5775MHz) (Antenna No.18)

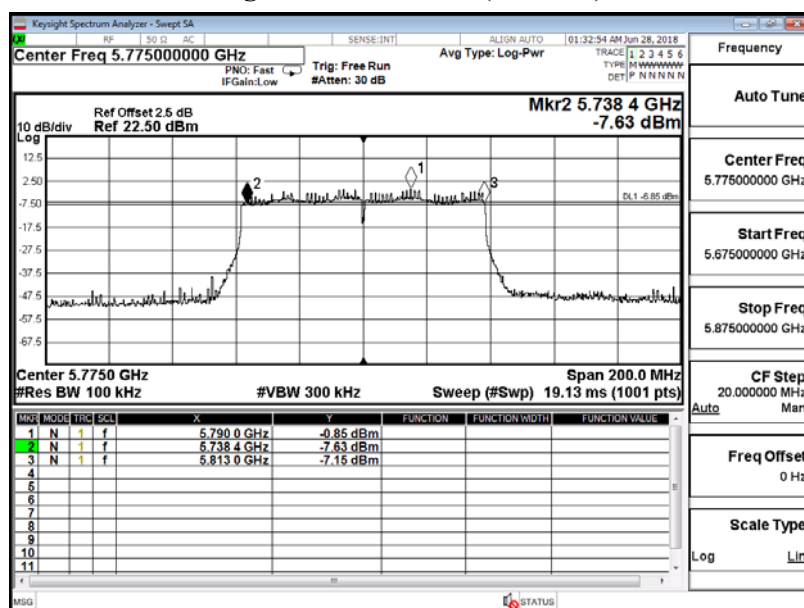
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	76400	>500	Pass

Figure Channel 155: (Chain A)



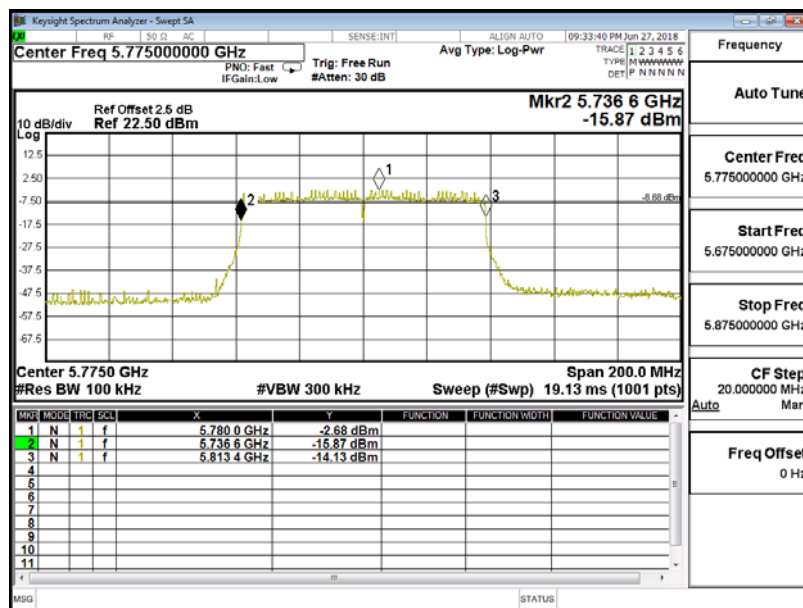
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	74600	>500	Pass

Figure Channel 155: (Chain B)



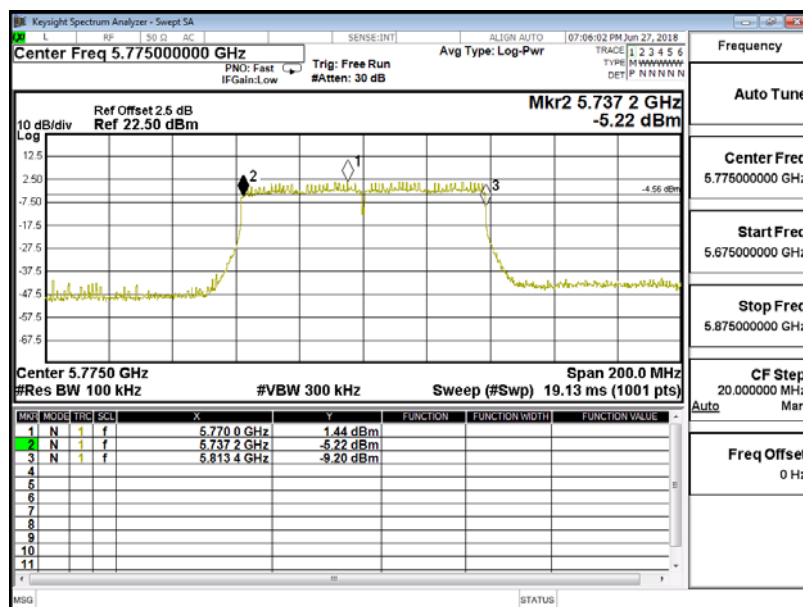
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	76800	>500	Pass

Figure Channel 155: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	76200	>500	Pass

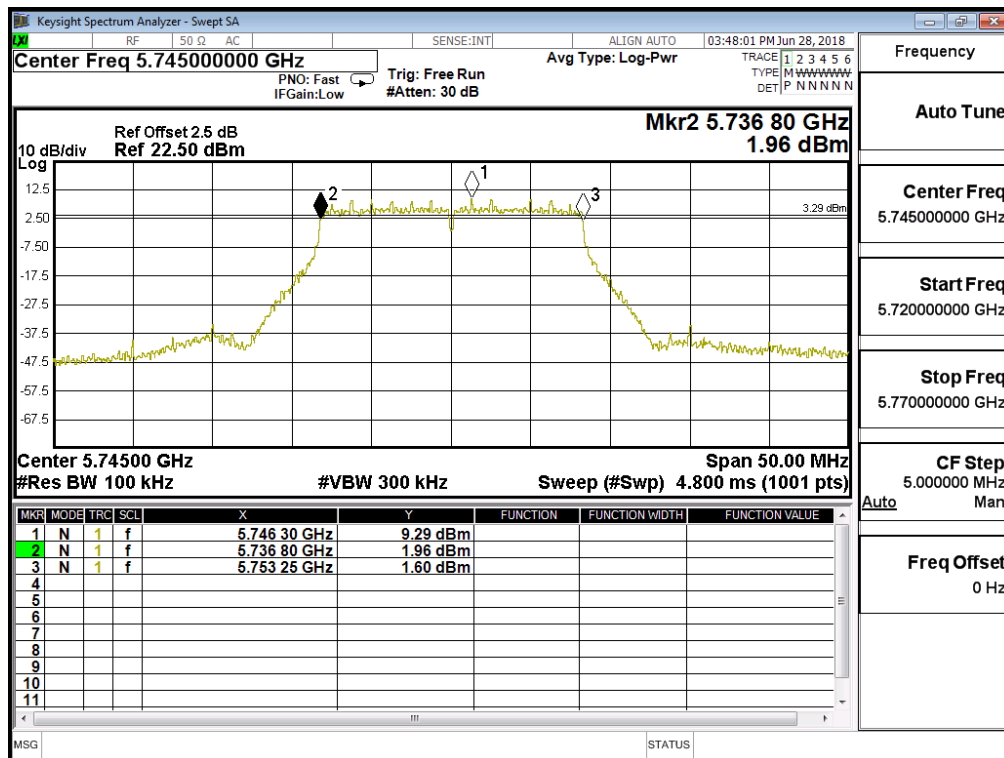
Figure Channel 155: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5745MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16450	>500	Pass

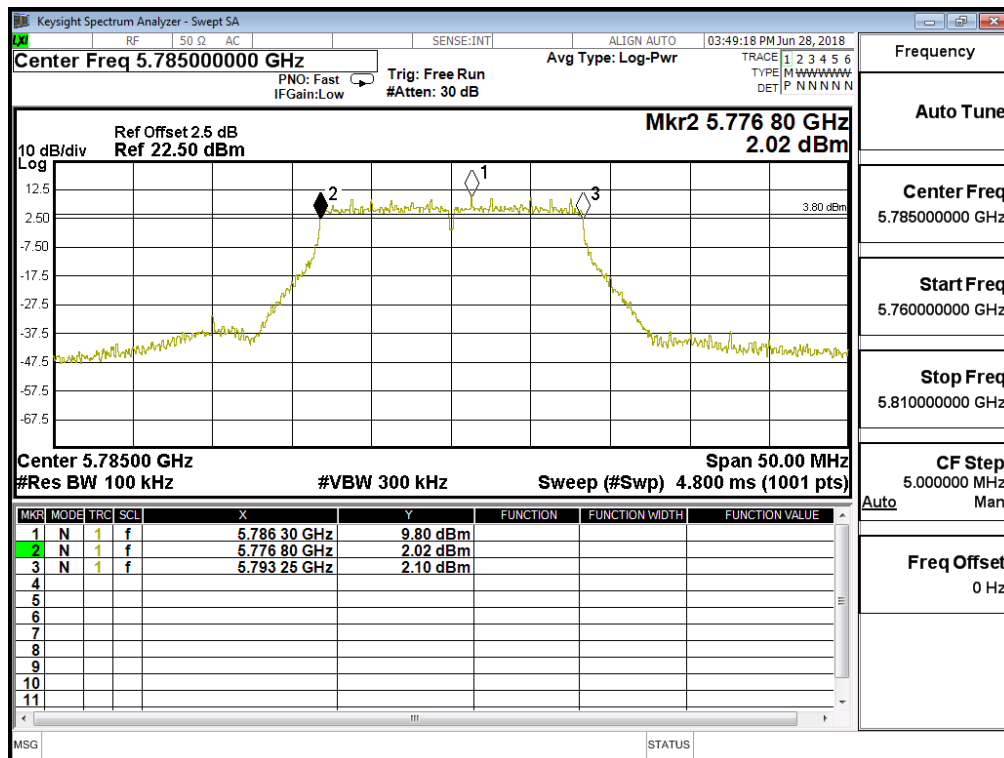
Figure Channel 149:



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5785MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16450	>500	Pass

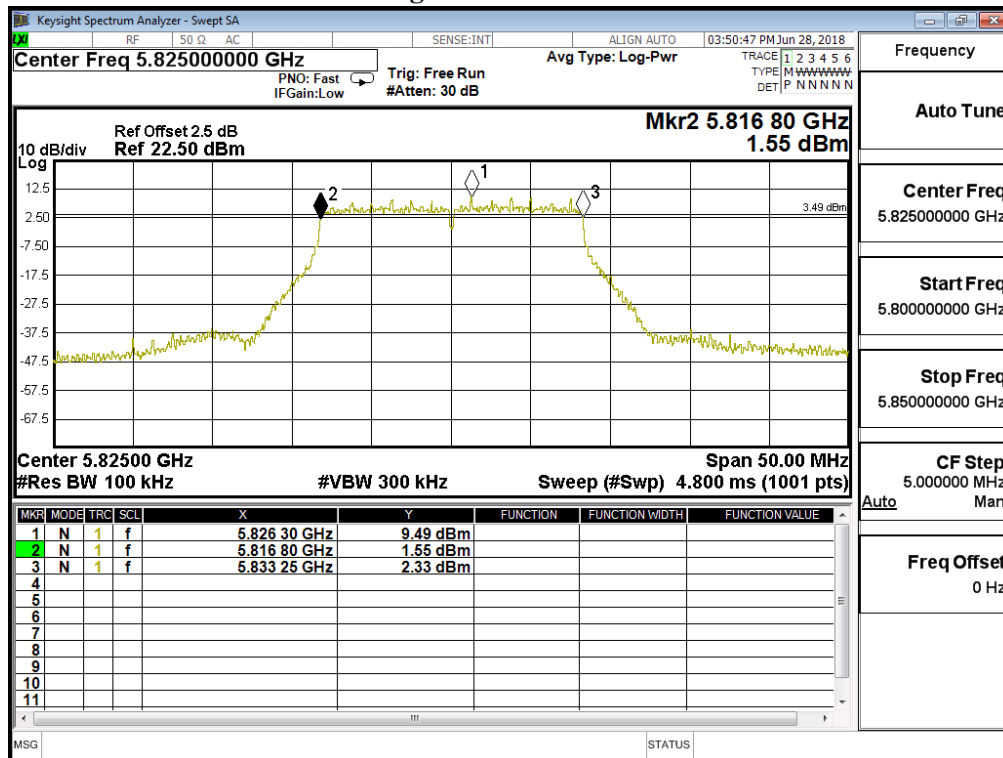
Figure Channel 157:



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5825MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16450	>500	Pass

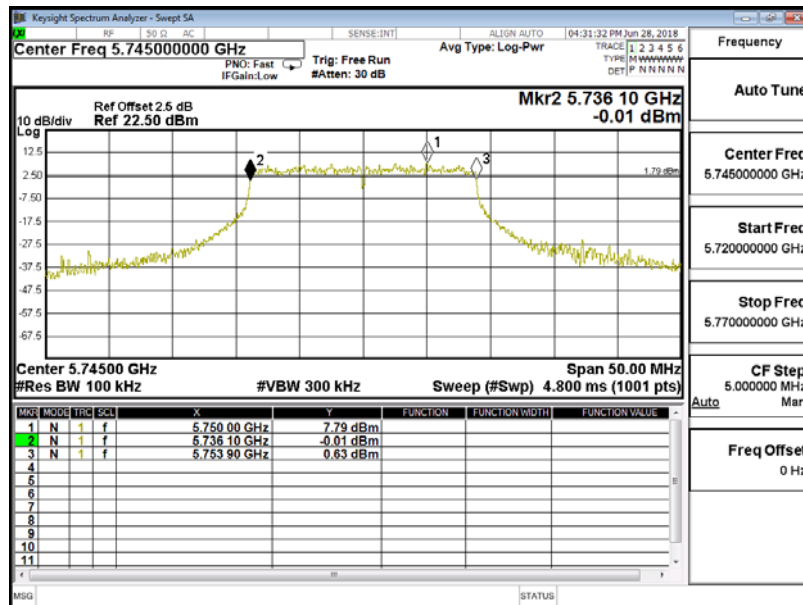
Figure Channel 165:



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (5745MHz) (Antenna No.19)

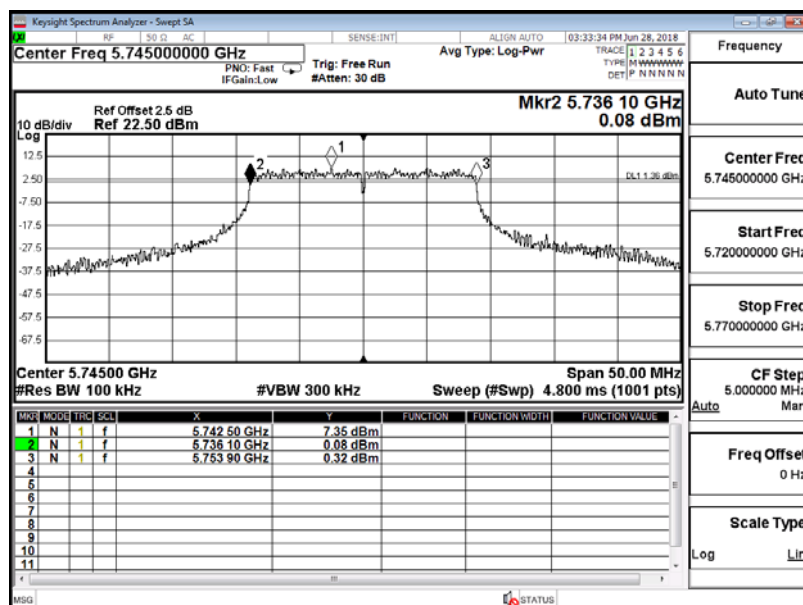
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17800	>500	Pass

Figure Channel 149: (Chain A)



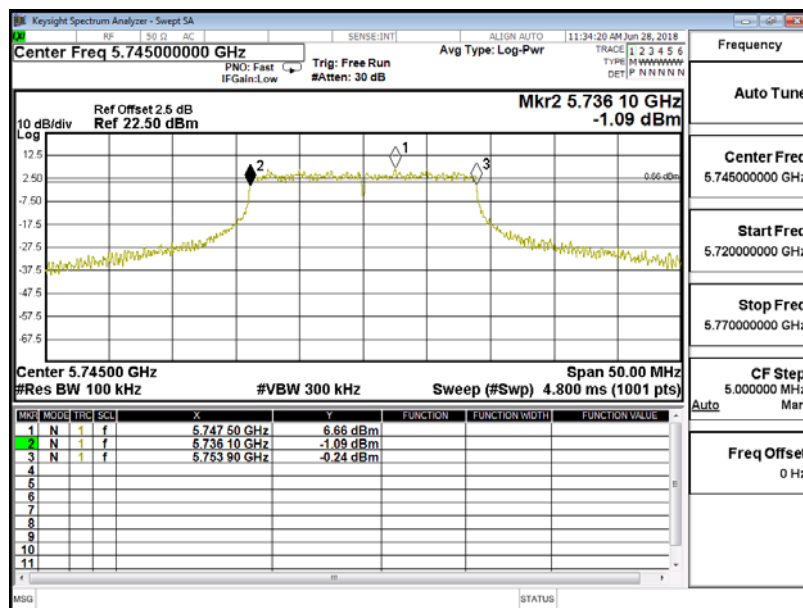
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17800	>500	Pass

Figure Channel 149: (Chain B)



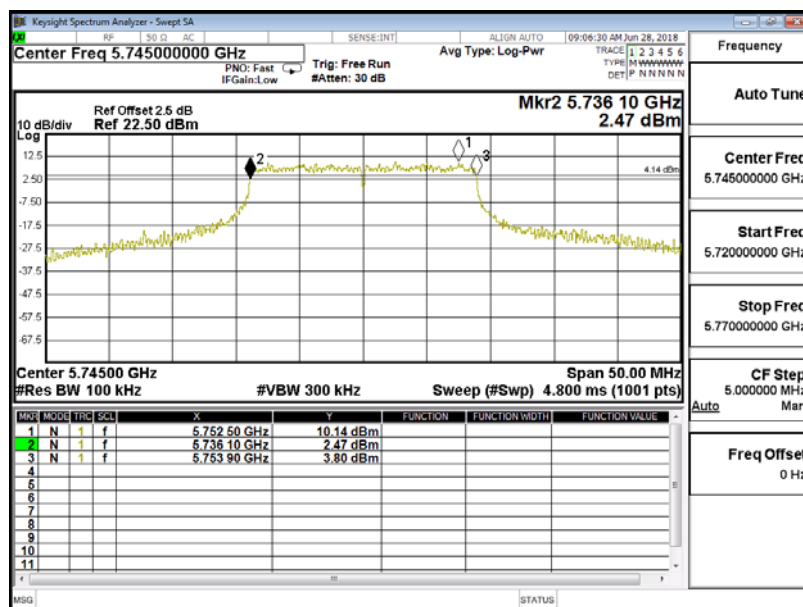
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17800	>500	Pass

Figure Channel 149: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17800	>500	Pass

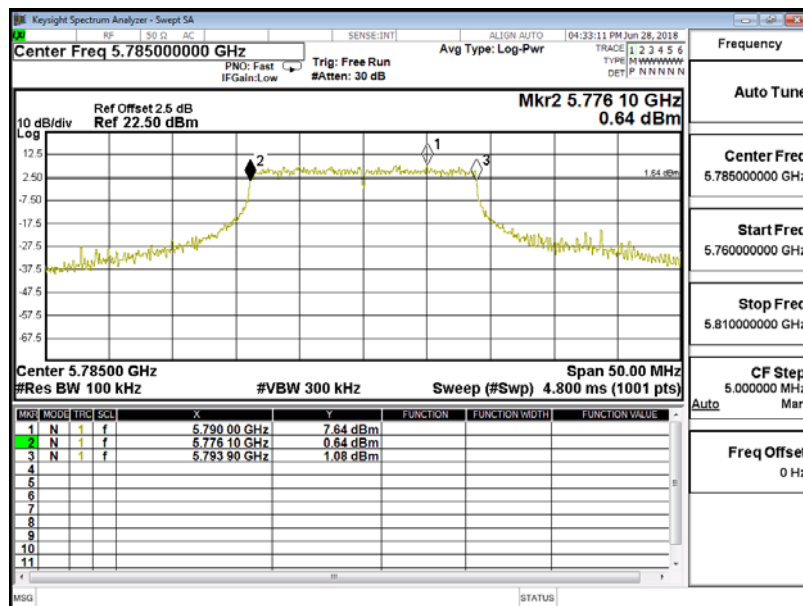
Figure Channel 149: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (5785MHz) (Antenna No.19)

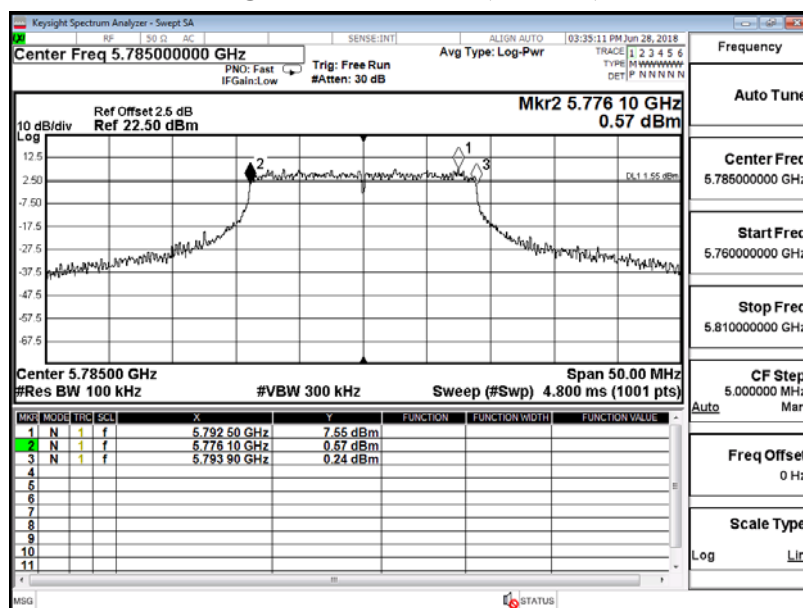
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17800	>500	Pass

Figure Channel 157: (Chain A)



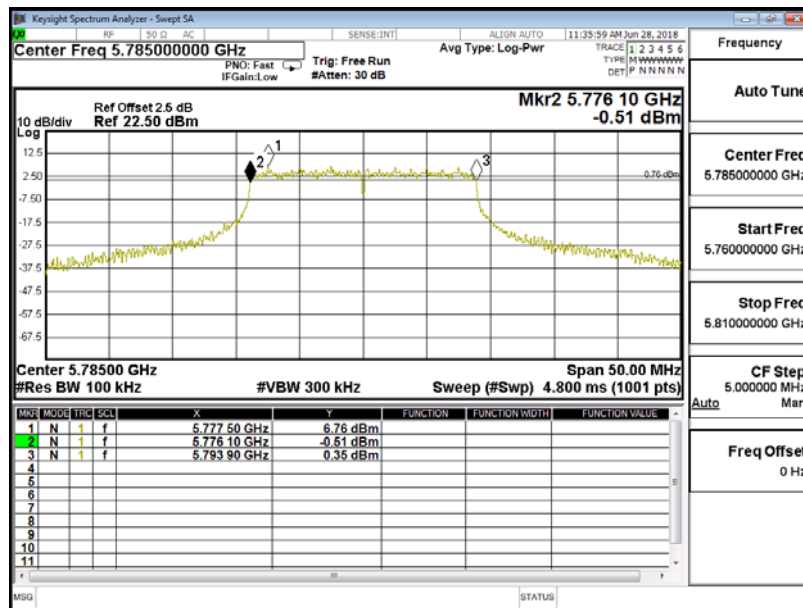
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17800	>500	Pass

Figure Channel 157: (Chain B)



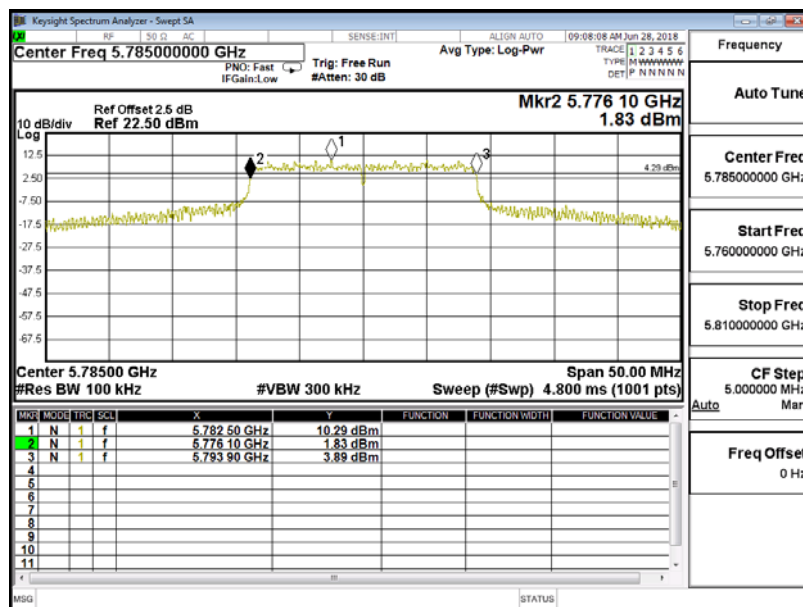
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17800	>500	Pass

Figure Channel 157: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17800	>500	Pass

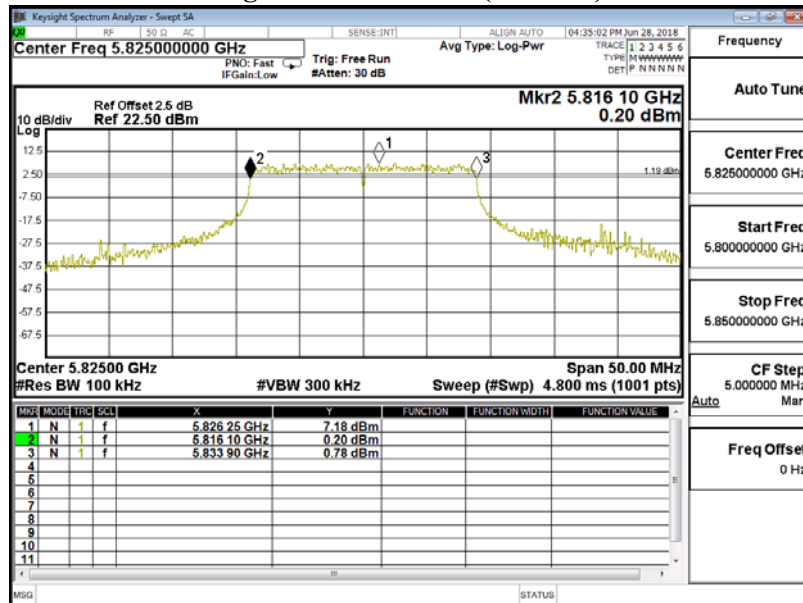
Figure Channel 157: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (5825MHz) (Antenna No.19)

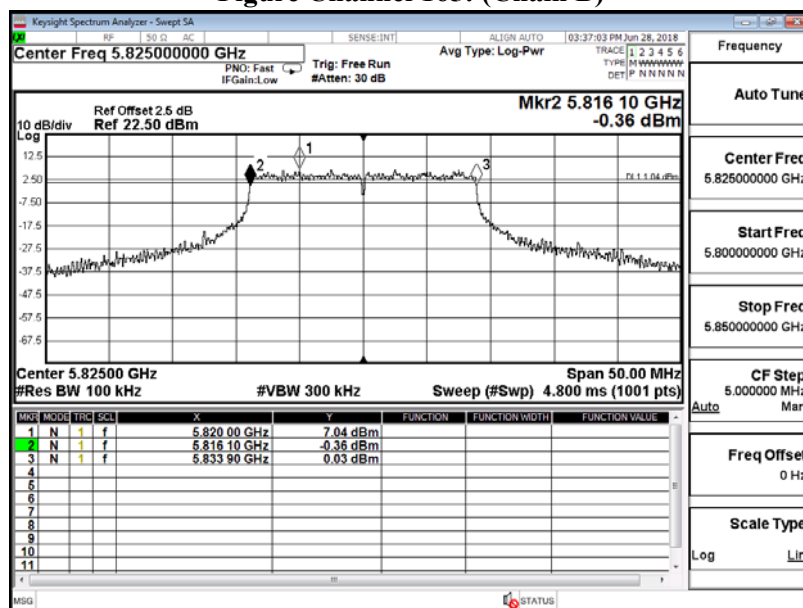
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17800	>500	Pass

Figure Channel 165: (Chain A)



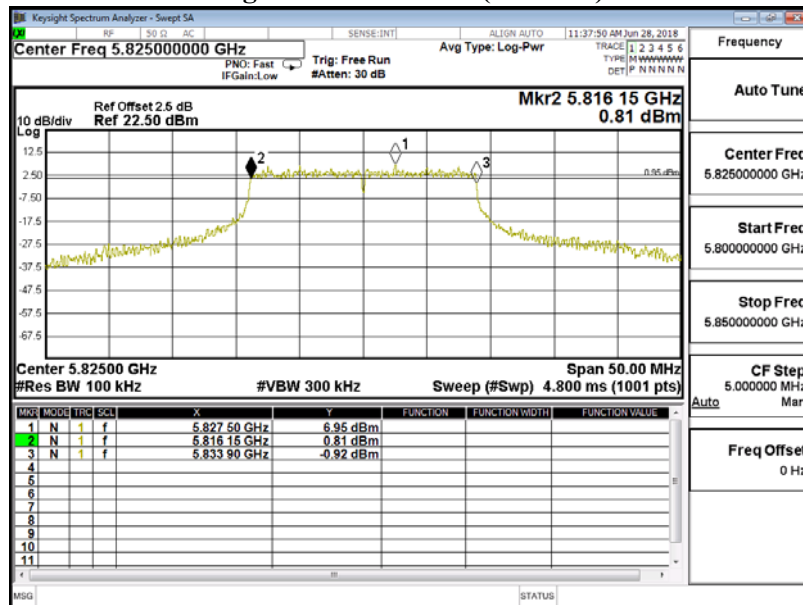
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17800	>500	Pass

Figure Channel 165: (Chain B)



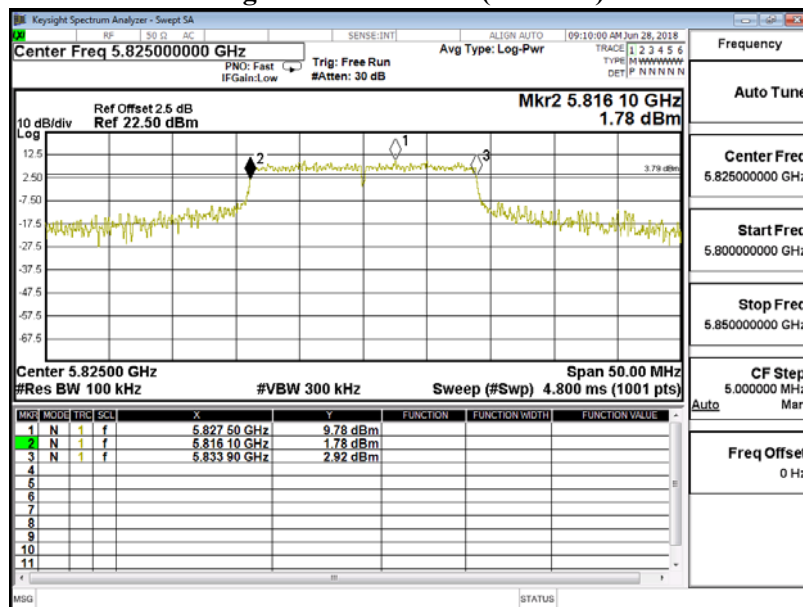
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17750	>500	Pass

Figure Channel 165: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17800	>500	Pass

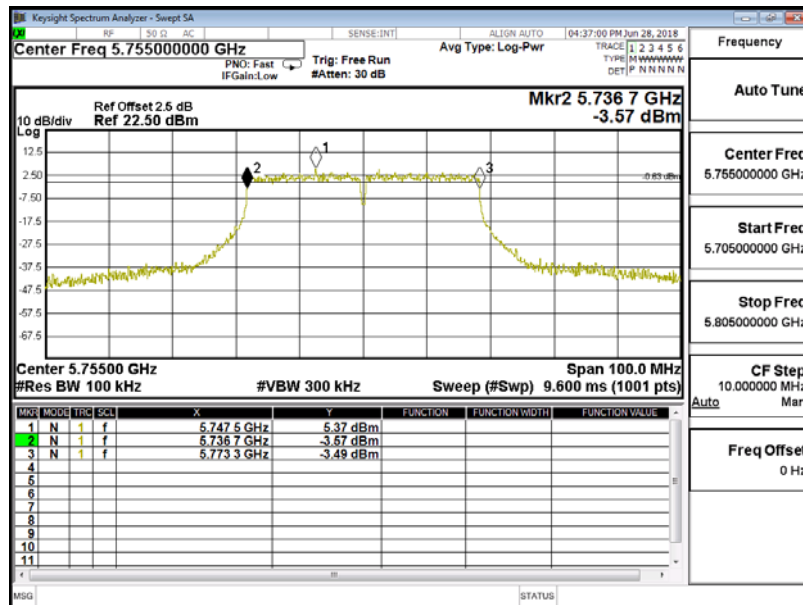
Figure Channel 165: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (5755MHz) (Antenna No.19)

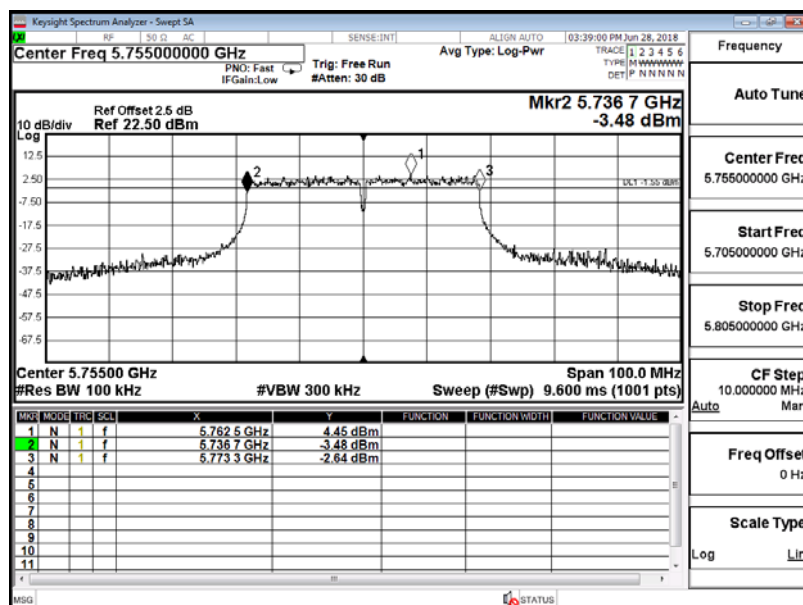
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

Figure Channel 151: (Chain A)



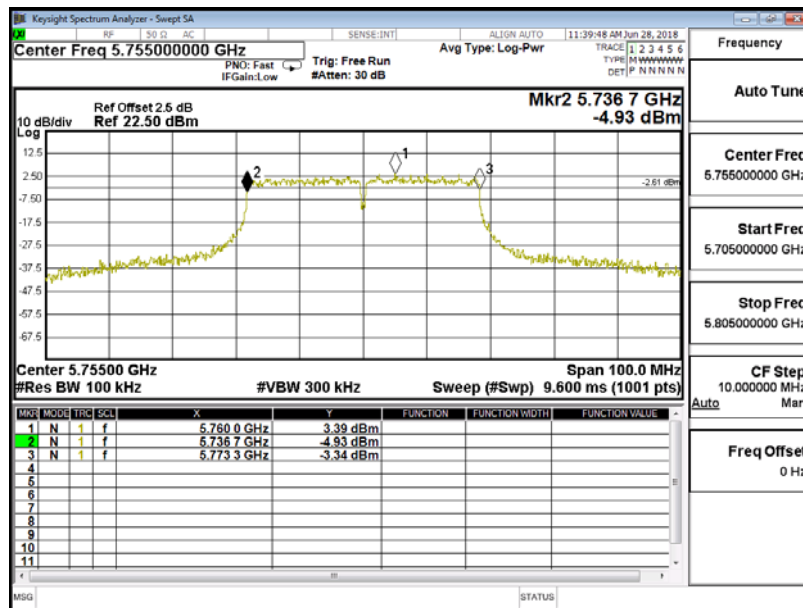
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

Figure Channel 151: (Chain B)



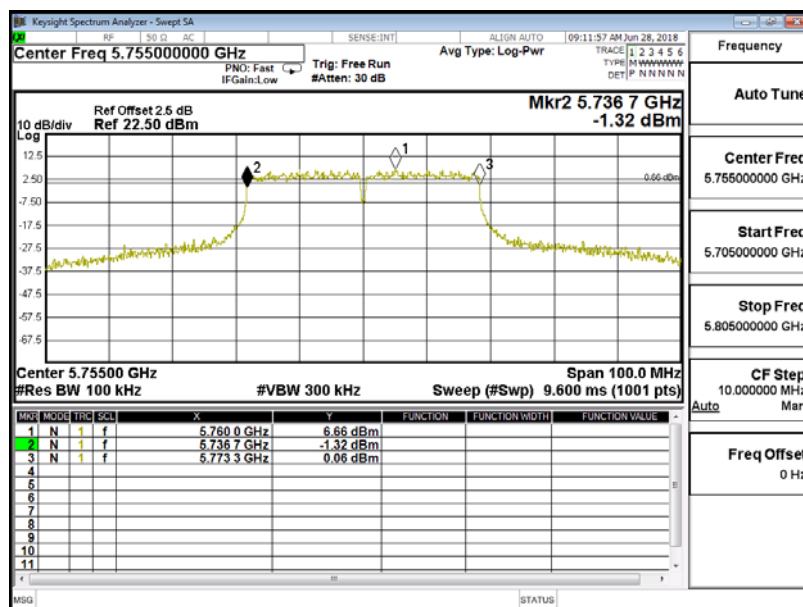
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

Figure Channel 151: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

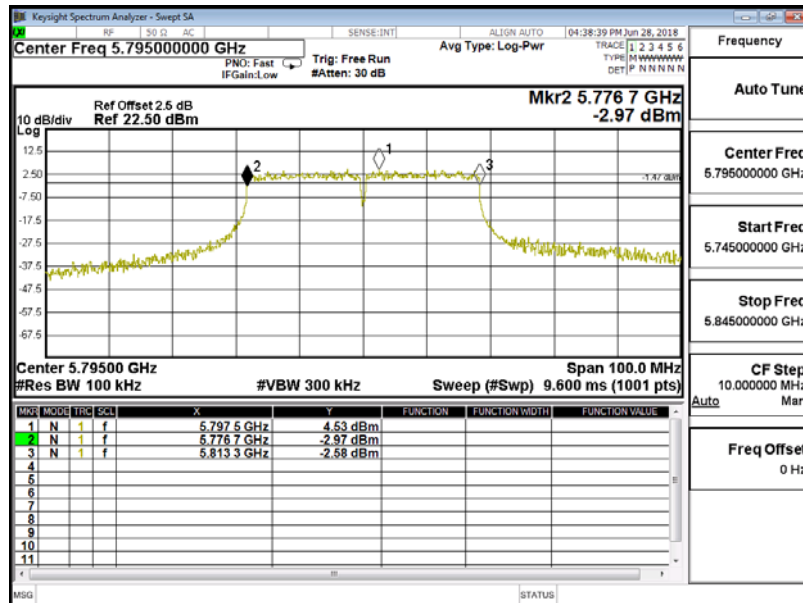
Figure Channel 151: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (5795MHz) (Antenna No.19)

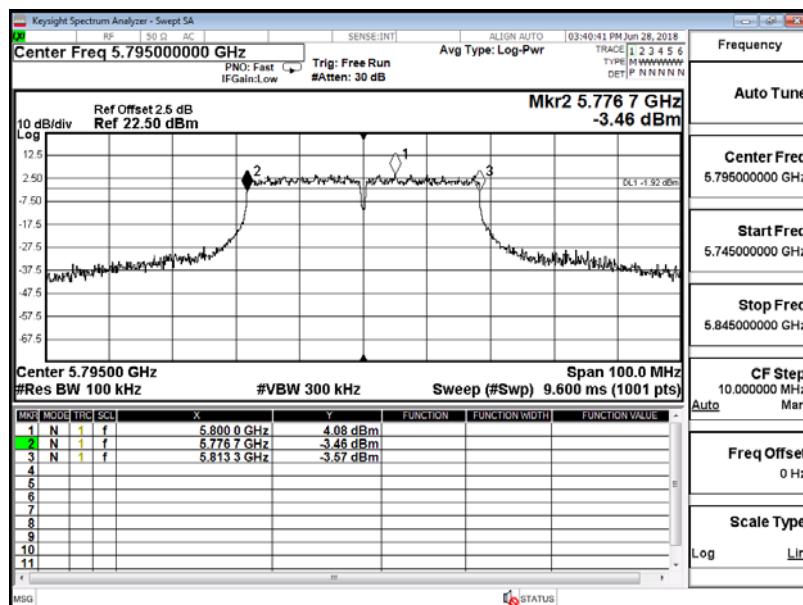
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

Figure Channel 159: (Chain A)



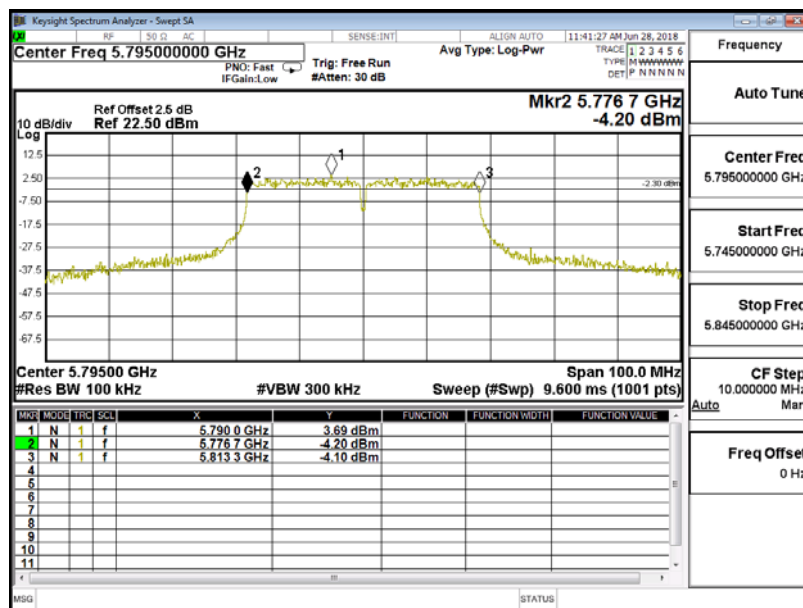
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

Figure Channel 159: (Chain B)



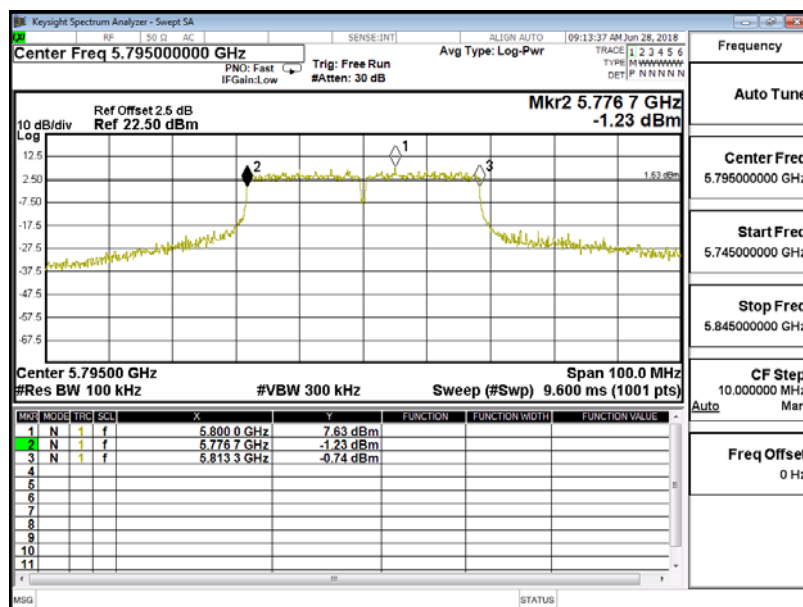
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

Figure Channel 159: (Chain C)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

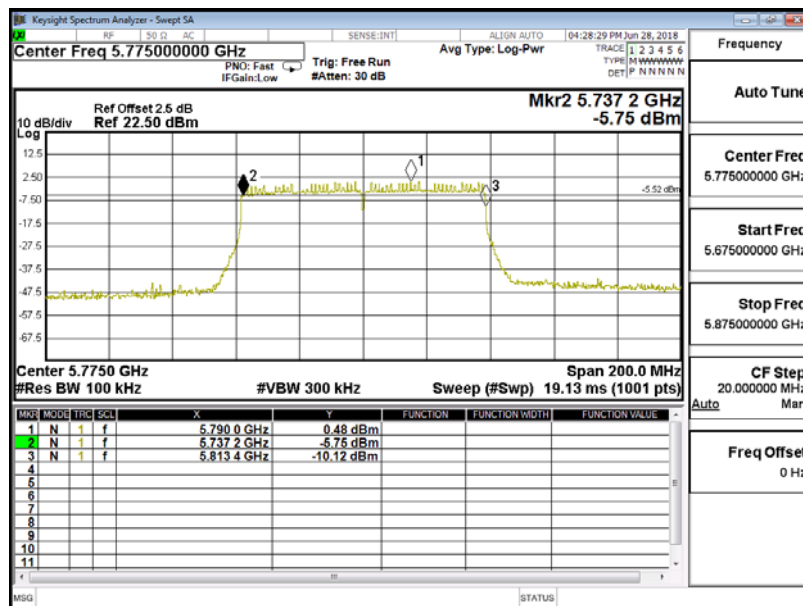
Figure Channel 159: (Chain D)



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (5775MHz) (Antenna No.19)

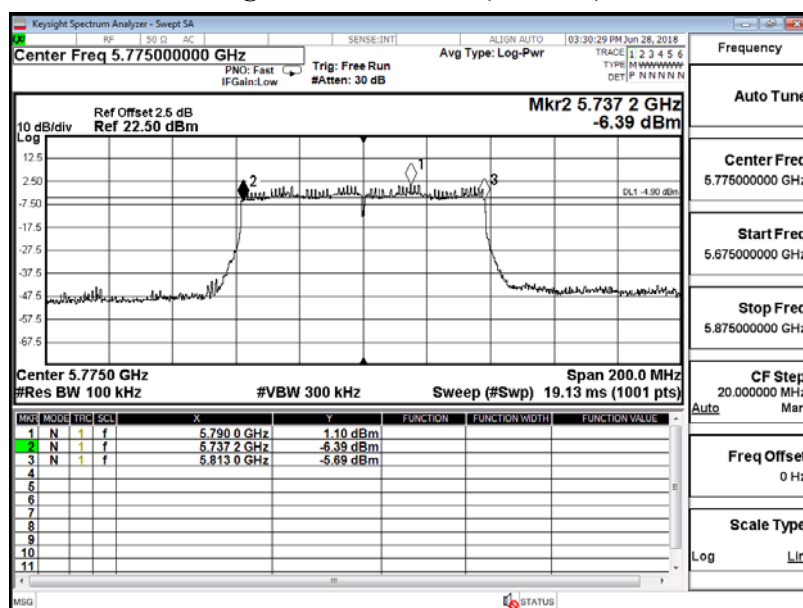
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	76200	>500	Pass

Figure Channel 155: (Chain A)



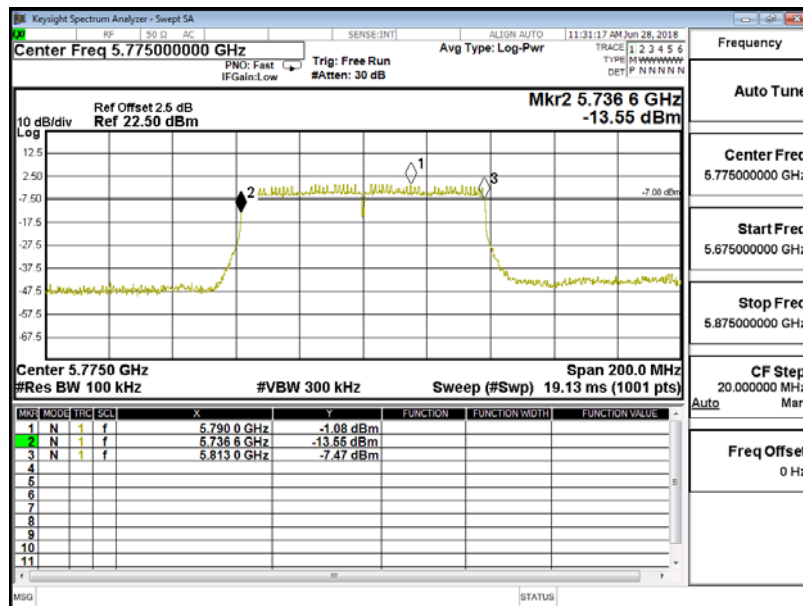
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	75800	>500	Pass

Figure Channel 155: (Chain B)



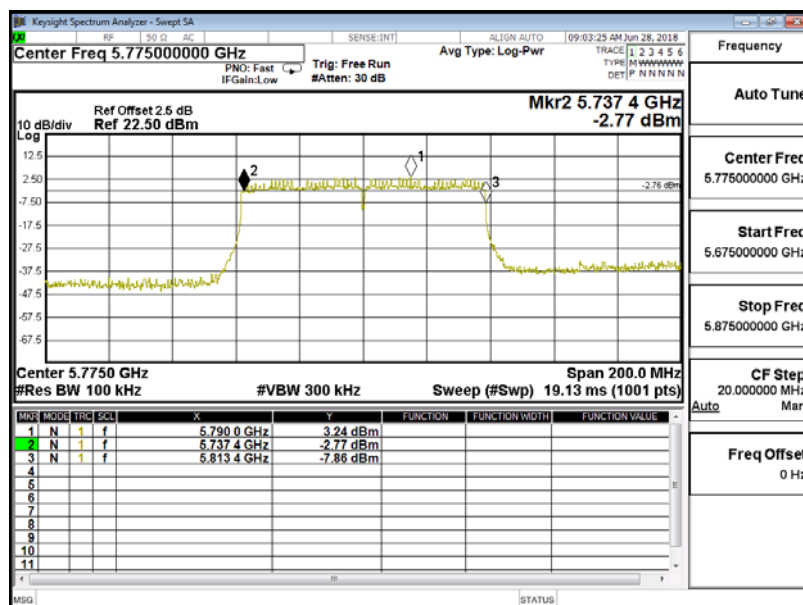
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	76400	>500	Pass

Figure Channel 155: (Chain C)



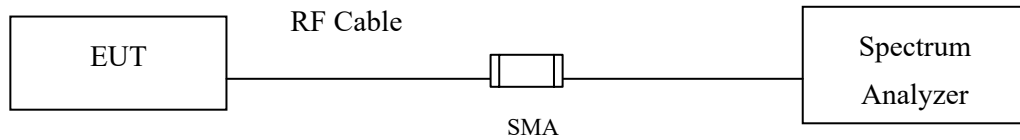
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	76000	>500	Pass

Figure Channel 155: (Chain D)



8. Duty Cycle

8.1. Test Setup



8.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to test procedure of KDB789033 for compliance to FCC 47CFR 15.407 requirements.

8.3. Uncertainty

$\pm 2.31\text{msec}$

8.4. Test Result of Duty Cycle

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Duty Cycle
 Test Mode : Mode 1 MIMO: Transmit

Duty Cycle Formula:

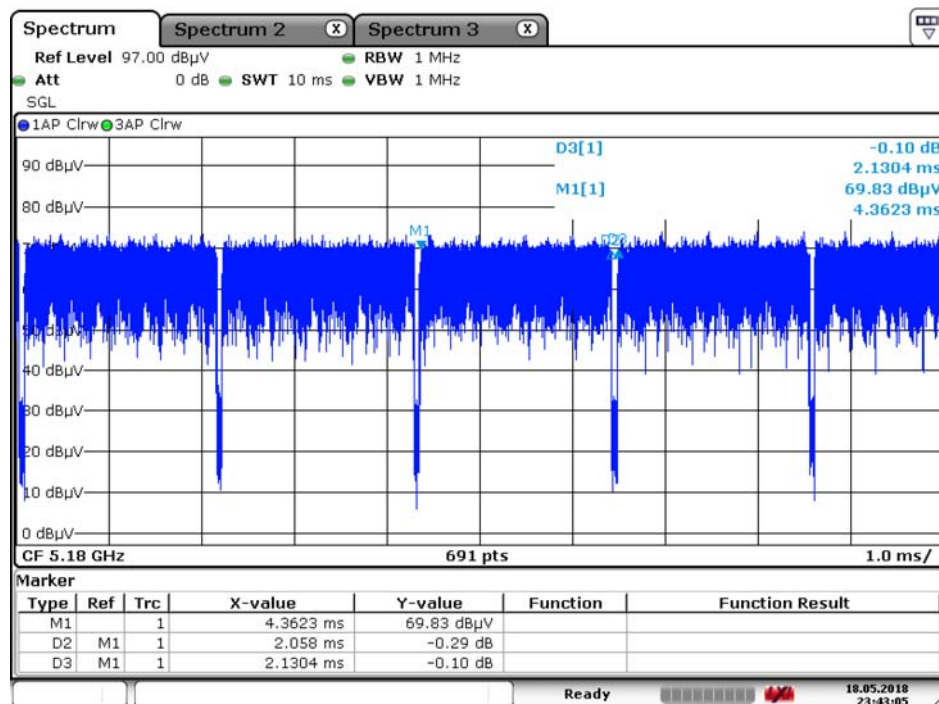
Duty Cycle = $T_{on} / (T_{on} + T_{off})$

Duty Factor = 10 Log (1/Duty Cycle)

Results:

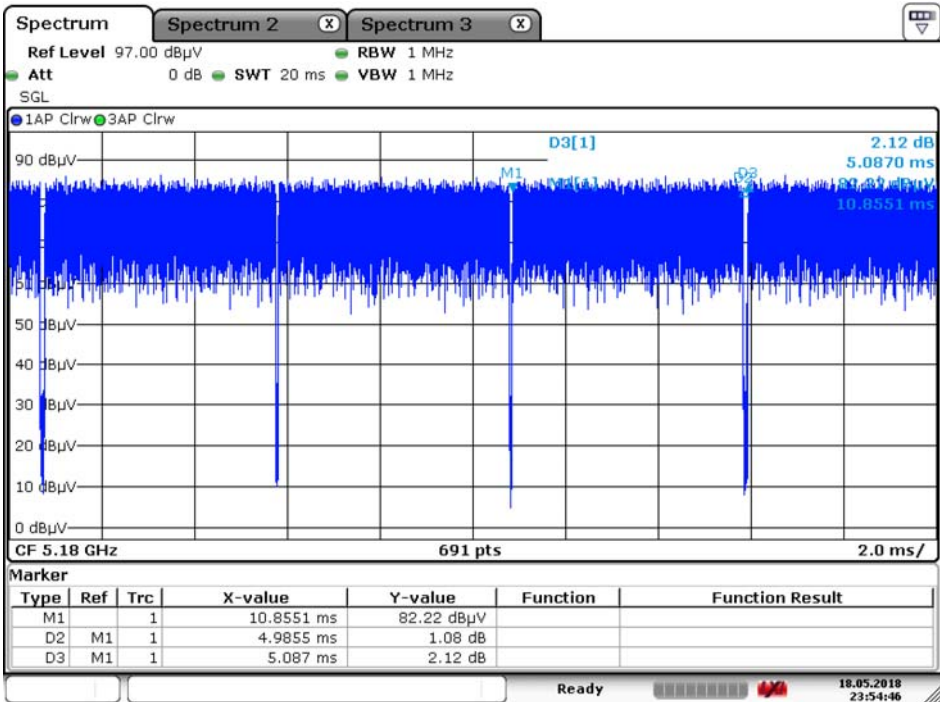
5GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11 a	2.0580	2.1304	96.60	0.15
802.11n20	4.9855	5.0870	98.00	0.09
802.11n40	2.3913	2.4928	95.93	0.18
802.11ac80	1.1377	1.2101	94.01	0.27

802.11a



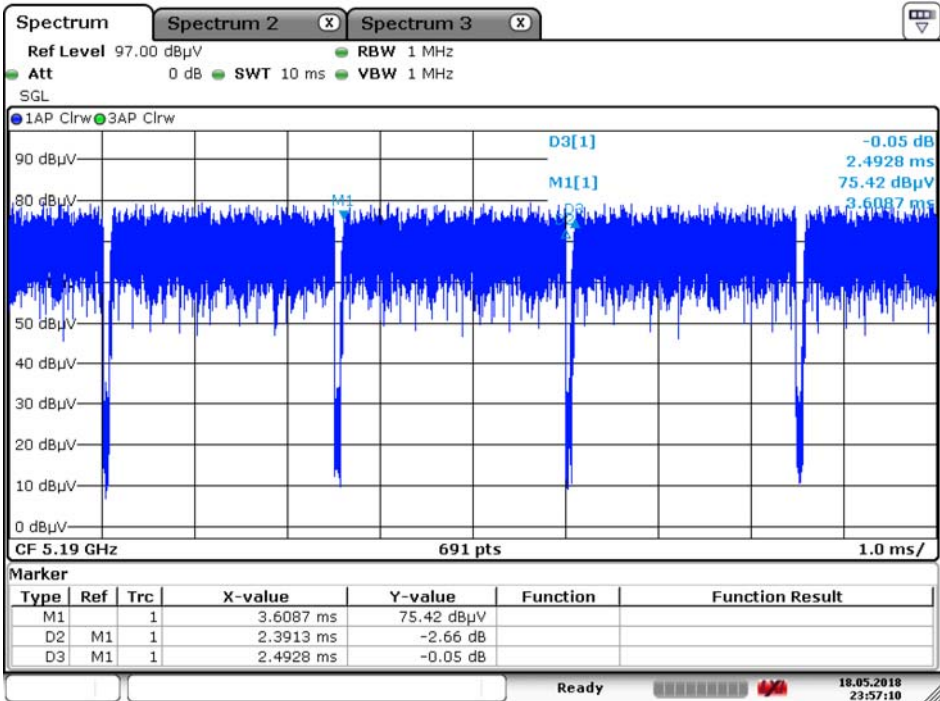
Date: 18.MAY.2018 23:43:04

802.11n20



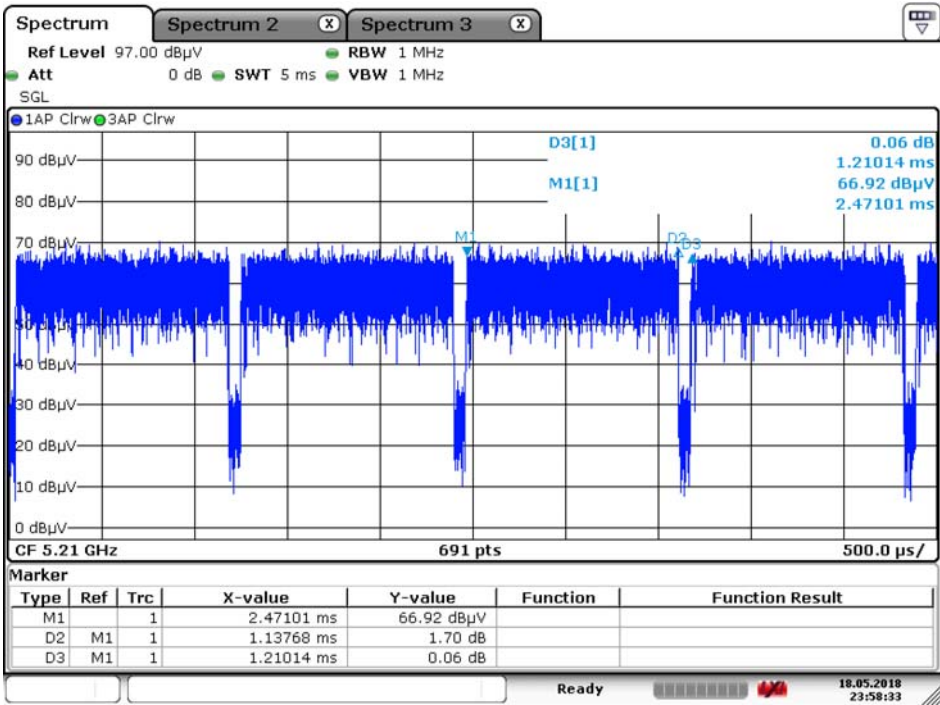
Date: 18.MAY.2018 23:54:46

802.11n40



Date: 18.MAY.2018 23:57:10

802.11ac80



Date: 18.MAY.2018 23:58:33

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.