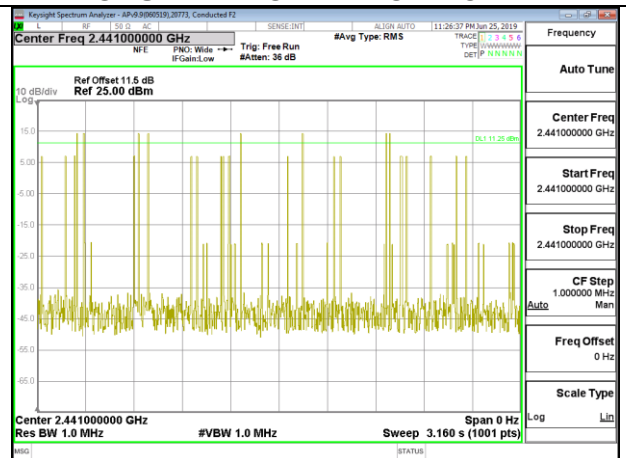
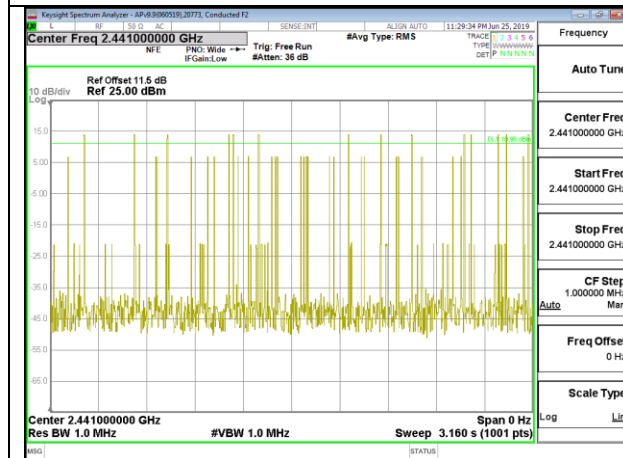
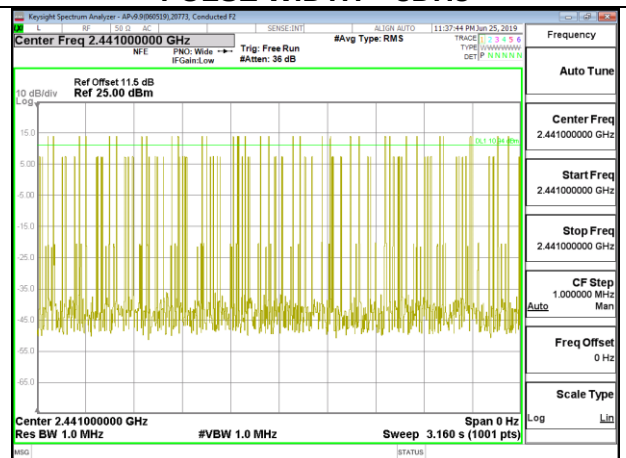
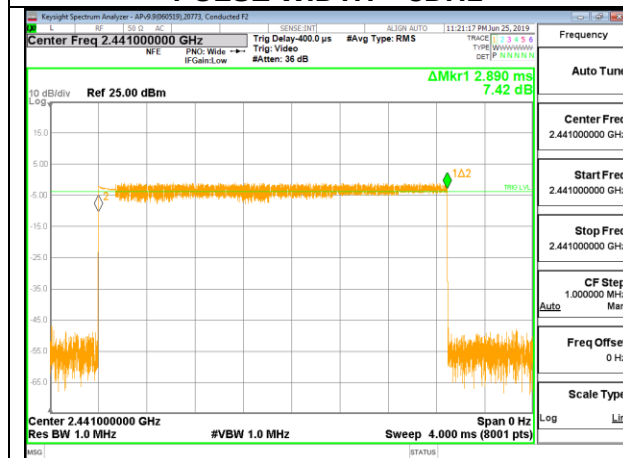
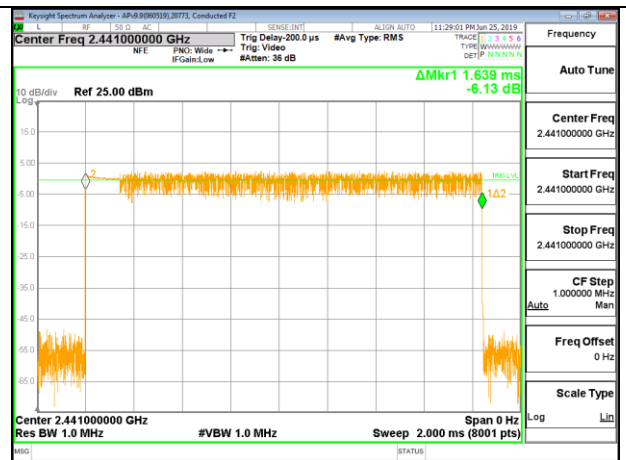
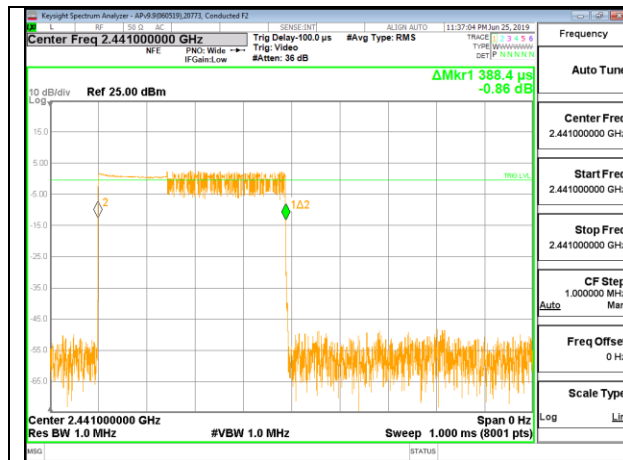
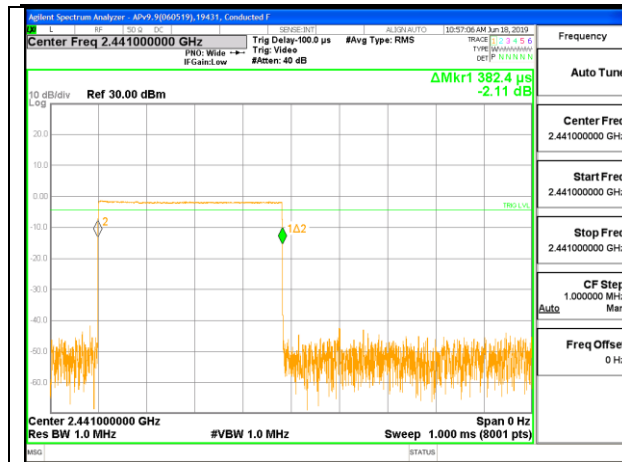




8.13.3. LOW POWER BASIC DATA RATE GFSK MODULATION

Antenna 2

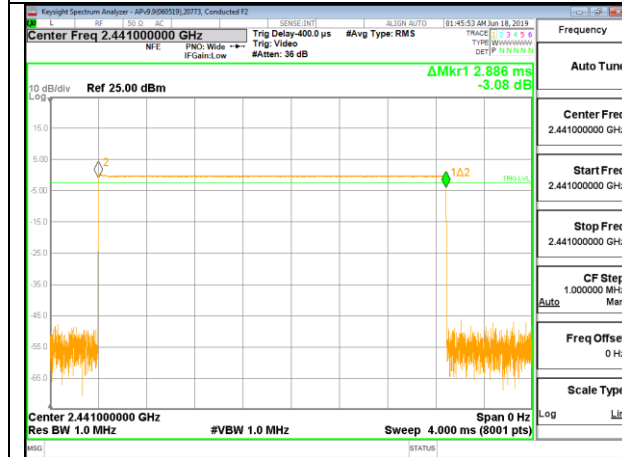
DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	0.3824	31	0.1185	0.4	-0.2815
DH3	1.638	12	0.1966	0.4	-0.2034
DH5	2.886	6	0.1732	0.4	-0.2268
DH Packet	Pulse Width (sec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	0.3824	7.75	0.02964	0.4	-0.3704
DH3	1.638	3	0.04914	0.4	-0.3509
DH5	2.886	1.5	0.04329	0.4	-0.3567



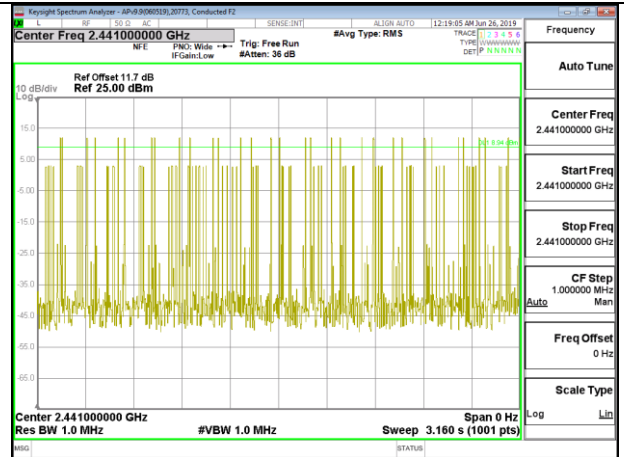
PULSE WIDTH – 3DH1



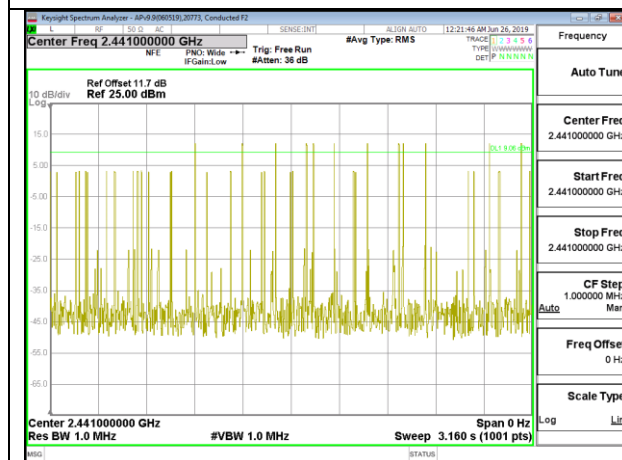
PULSE WIDTH – 3DH3



PULSE WIDTH – 3DH5



**NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – 3DH1**



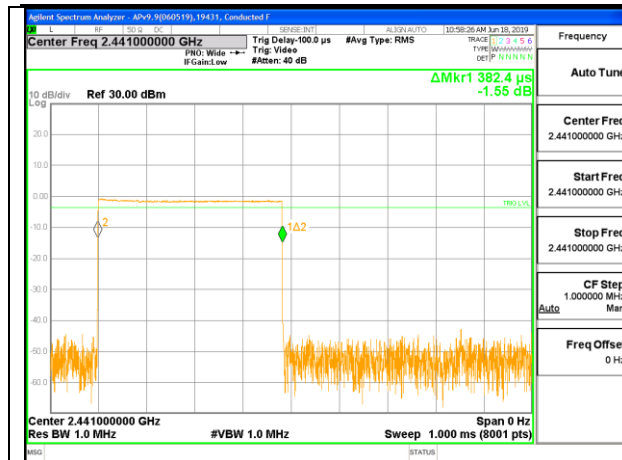
**NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – 3DH3**



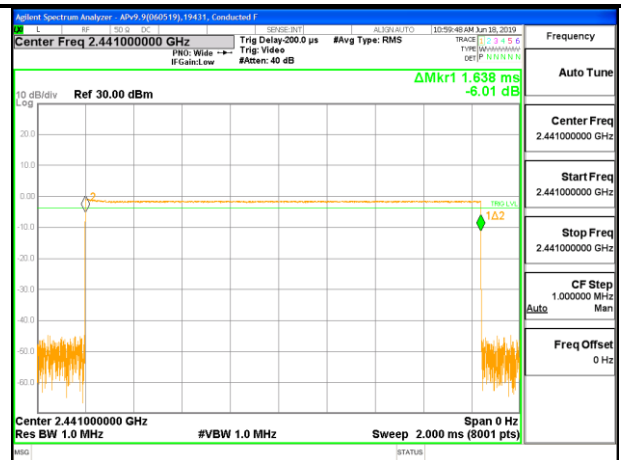
**NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – 3DH5**

Antenna 5

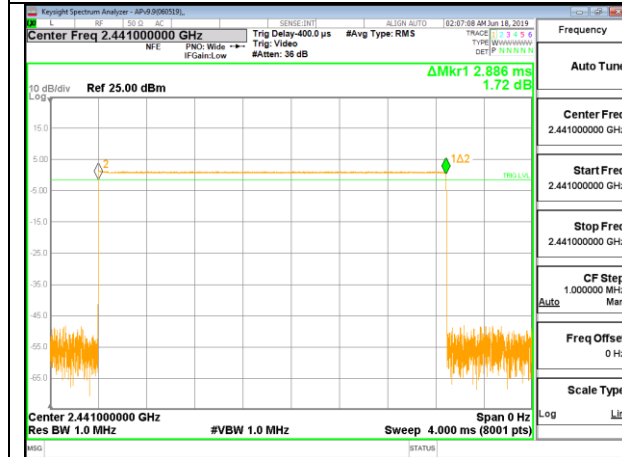
DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	0.3824	32	0.1224	0.4	-0.2776
DH3	1.638	13	0.2129	0.4	-0.1871
DH5	2.886	13	0.3752	0.4	-0.0248
DH Packet	Pulse Width (sec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	0.3824	8	0.03059	0.4	-0.3694
DH3	1.638	3.25	0.05324	0.4	-0.3468
DH5	2.886	3.25	0.09380	0.4	-0.3062



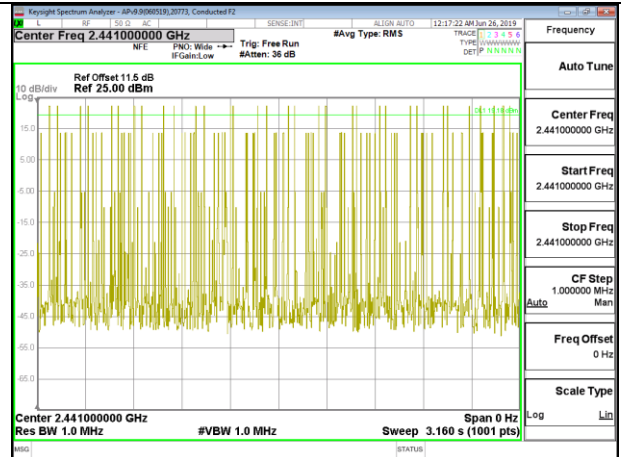
PULSE WIDTH -DH1



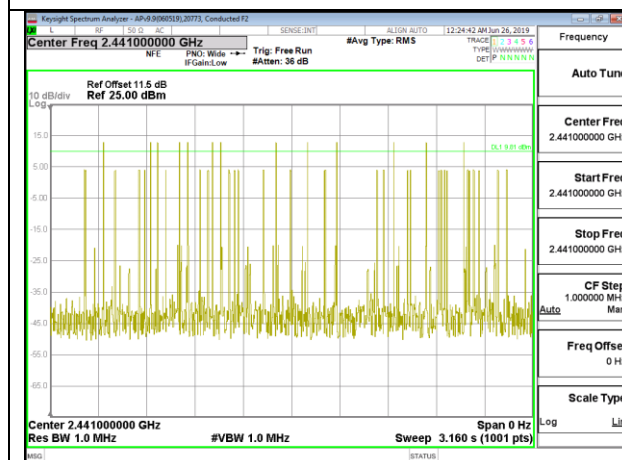
PULSE WIDTH -DH3



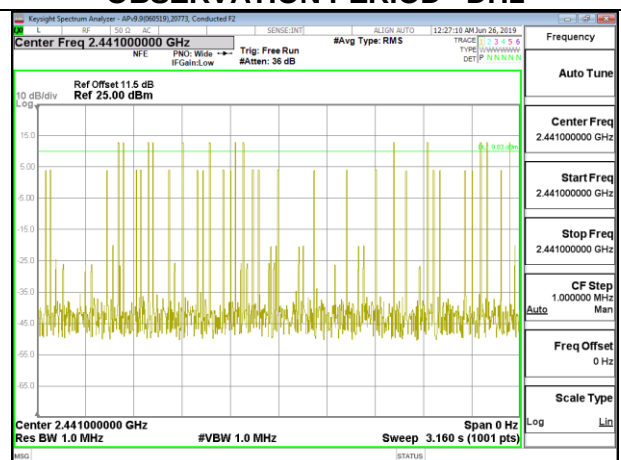
PULSE WIDTH -DH5



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD -DH1



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD -DH3



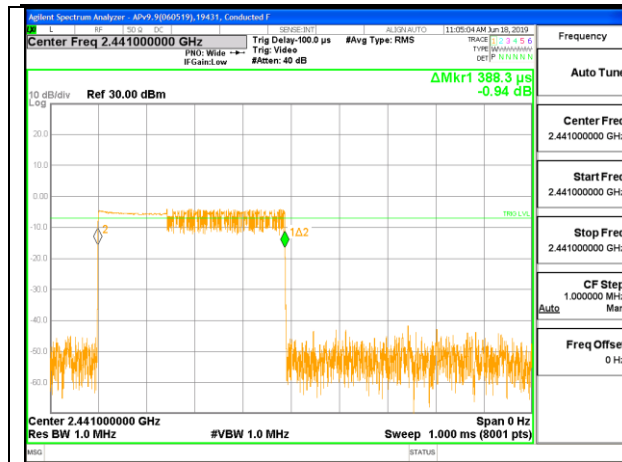
NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD -DH5

8.13.4. LOW POWER ENHANCED DATA RATE 8PSK MODULATION

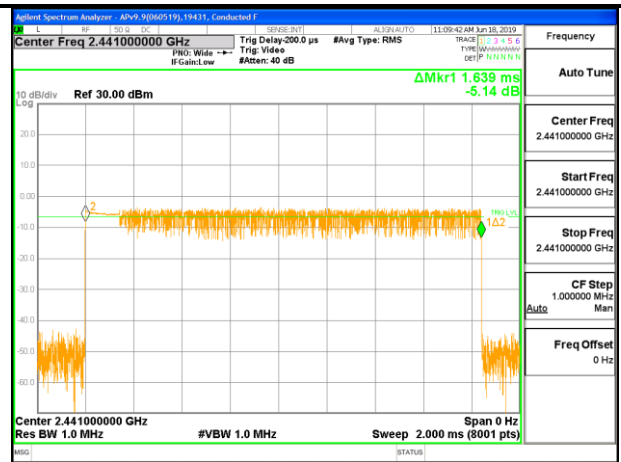
Antenna 2

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK Normal	Mode				
3DH1	0.3883	32	0.124256	0.4	-0.2757
3DH3	1.639	13	0.21307	0.4	-0.1869
3DH5	2.89	7	0.2023	0.4	-0.1977

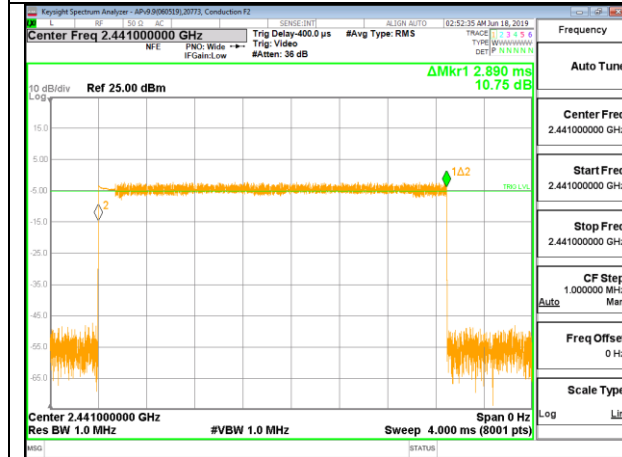
Note: for AFH(8PSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate demonstrates compliance with channel occupancy when AFH is employed.



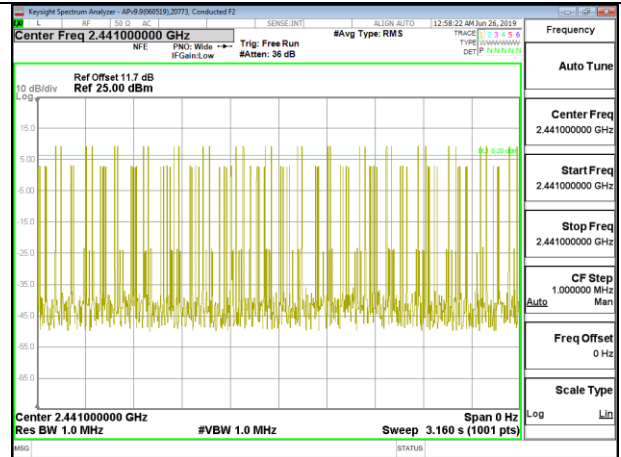
PULSE WIDTH – 3DH1



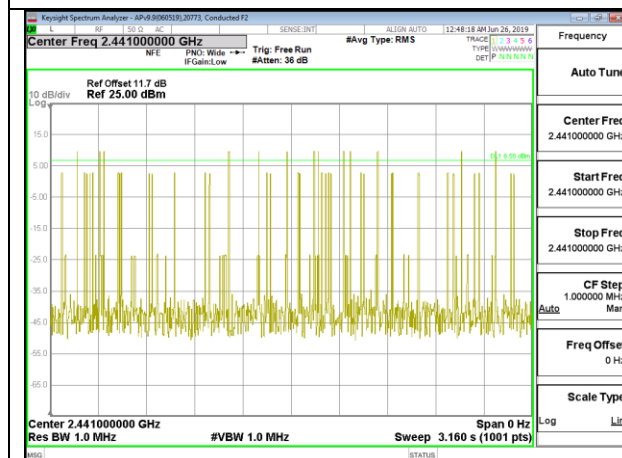
PULSE WIDTH – 3DH3



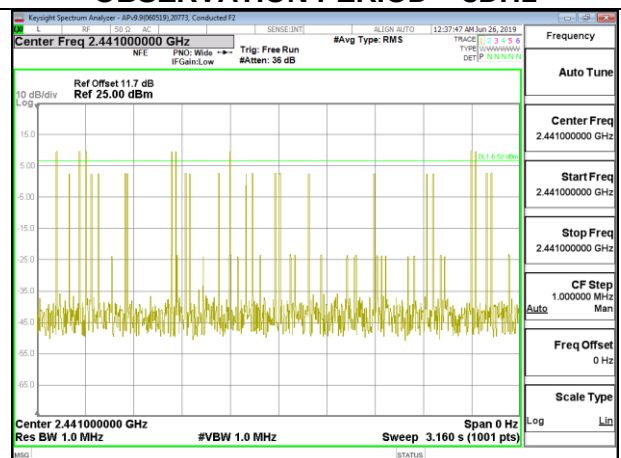
PULSE WIDTH – 3DH5



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – 3DH1



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – 3DH3

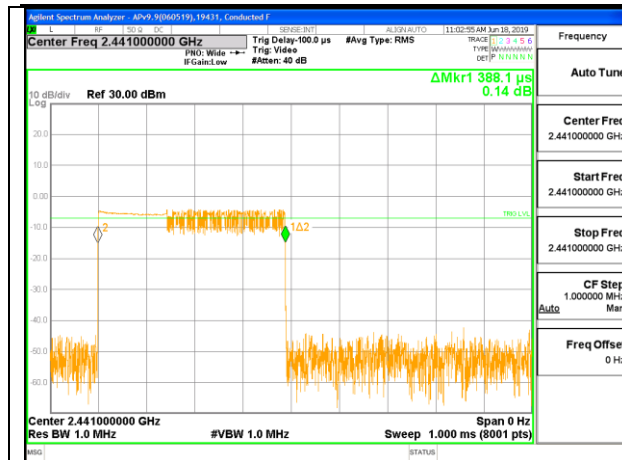


NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – 3DH5

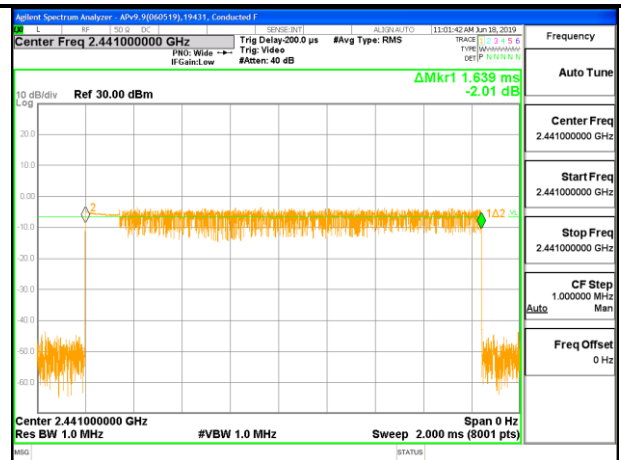
Antenna 5

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK Normal	Mode				
3DH1	0.3881	32	0.124192	0.4	-0.2758
3DH3	1.639	12	0.19668	0.4	-0.2033
3DH5	2.89	5	0.1445	0.4	-0.2555

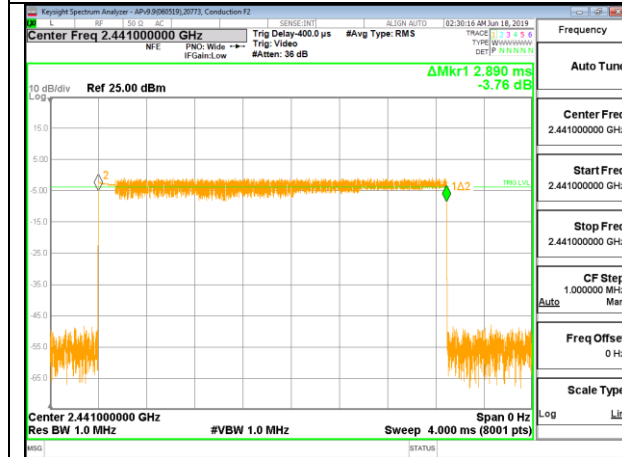
Note: for AFH(8PSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate demonstrates compliance with channel occupancy when AFH is employed.



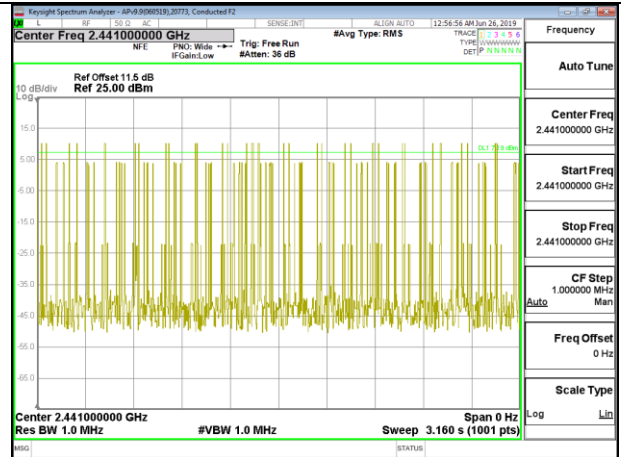
PULSE WIDTH - 3DH1



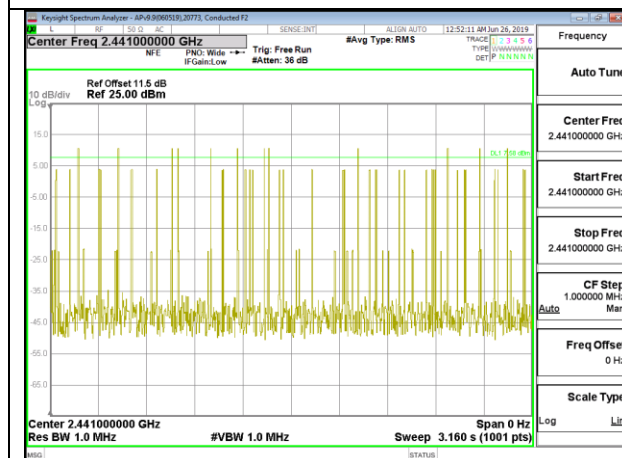
PULSE WIDTH - 3DH3



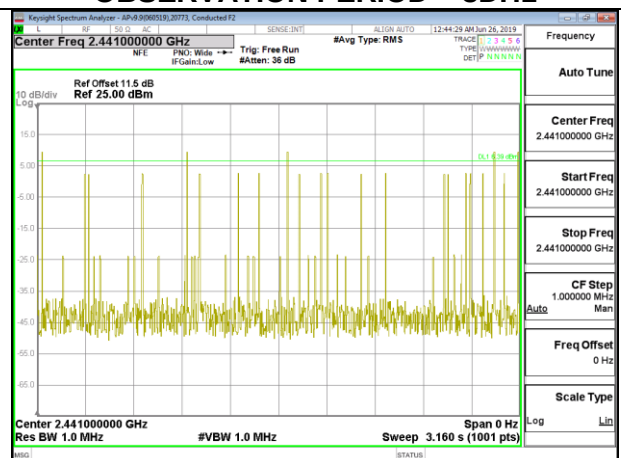
PULSE WIDTH - 3DH5



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD - 3DH1



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD - 3DH3



NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD - 3DH5

8.14. BEAMFORMING OUTPUT POWER

8.14.1. HIGH POWER BASIC DATA RATE GFSK MODULATION

Antenna 2 + Antenna 5

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Output Power Antenna 2 (dBm)	Output Power Antenna 5 (dBm)	Total Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	17.01	16.91	19.97	21	-1.03
Middle	2441	17.14	16.99	20.08	21	-0.92
High	2480	16.89	17.02	19.97	21	-1.03

8.14.2. HIGH POWER ENHANCED DATA RATE QPSK MODULATION

Antenna 2 + Antenna 5

Tested By:	20773
Date:	7/3/2019

Channel	Frequency (MHz)	Output Power Antenna 2 (dBm)	Output Power Antenna 5 (dBm)	Total Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	17.44	17.38	20.42	21	-0.58
Middle	2441	17.34	17.33	20.35	21	-0.65
High	2480	17.39	17.41	20.41	21	-0.59

8.14.3. HIGH POWER ENHANCED DATA RATE 8PSK MODULATION

Antenna 2 + Antenna 5

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Output Power Antenna 2 (dBm)	Output Power Antenna 5 (dBm)	Total Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	17.42	17.40	20.42	21	-0.58
Middle	2441	17.53	17.52	20.54	21	-0.46
High	2480	17.49	17.48	20.50	21	-0.50

8.14.4. LOW POWER BASIC DATA RATE GFSK MODULATION**Antenna 2 + Antenna 5**

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Output Power Antenna 2 (dBm)	Output Power Antenna 5 (dBm)	Total Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	11.86	11.89	14.89	21	-6.11
Middle	2441	11.90	11.96	14.94	21	-6.06
High	2480	11.92	11.83	14.89	21	-6.11

8.14.5. LOW POWER ENHANCED DATA RATE QPSK MODULATION**Antenna 2 + Antenna 5**

Tested By:	20773
Date:	7/3/2019

Channel	Frequency (MHz)	Output Power Antenna 2 (dBm)	Output Power Antenna 5 (dBm)	Total Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.76	10.85	13.82	21	-7.18
Middle	2441	10.94	10.81	13.89	21	-7.11
High	2480	10.89	10.80	13.86	21	-7.14

8.14.6. LOW POWER ENHANCED DATA RATE 8PSK MODULATION**Antenna 2 + Antenna 5**

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Output Power Antenna 2 (dBm)	Output Power Antenna 5 (dBm)	Total Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.98	11	14.00	21	-7.00
Middle	2441	11.11	11.06	14.10	21	-6.90
High	2480	10.95	10.97	13.97	21	-7.03

8.15. BEAMFORMING AVERAGE POWER

8.15.1. HIGH POWER BASIC DATA RATE GFSK MODULATION

Antenna 2 + Antenna 5

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Average Power Antenna 2 (dBm)	Average Power Antenna 5 (dBm)	Total Power (dBm)
Low	2402	16.75	16.65	19.71
Middle	2441	16.74	16.74	19.75
High	2480	16.57	16.75	19.67

8.15.2. HIGH POWER ENHANCED DATA RATE QPSK MODULATION

Antenna 2 + Antenna 5

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Average Power Antenna 2 (dBm)	Average Power Antenna 5 (dBm)	Total Power (dBm)
Low	2402	14.68	14.67	17.69
Middle	2441	14.71	14.70	17.72
High	2480	14.69	14.70	17.71

8.15.3. HIGH POWER ENHANCED DATA RATE 8PSK MODULATION

Antenna 2 + Antenna 5

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Average Power Antenna 2 (dBm)	Average Power Antenna 5 (dBm)	Total Power (dBm)
Low	2402	14.72	14.71	17.73
Middle	2441	14.75	14.73	17.75
High	2480	14.74	14.72	17.74

8.15.4. LOW POWER BASIC DATA RATE GFSK MODULATION**Antenna 2 + Antenna 5**

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Average Power Antenna 2 (dBm)	Average Power Antenna 5 (dBm)	Total Power (dBm)
Low	2402	12.11	12.15	15.14
Middle	2441	12.12	12.22	15.18
High	2480	12.09	12.13	15.12

8.15.5. LOW POWER ENHANCED DATA RATE QPSK MODULATION**Antenna 2 + Antenna 5**

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Average Power Antenna 2 (dBm)	Average Power Antenna 5 (dBm)	Total Power (dBm)
Low	2402	8.67	8.64	11.67
Middle	2441	8.71	8.52	11.63
High	2480	8.67	8.67	11.68

8.15.6. LOW POWER ENHANCED DATA RATE 8PSK MODULATION**Antenna 2 + Antenna 5**

Tested By:	20773
Date:	6/26/2019

Channel	Frequency (MHz)	Average Power Antenna 2 (dBm)	Average Power Antenna 5 (dBm)	Total Power (dBm)
Low	2402	8.70	8.75	11.74
Middle	2441	8.74	8.61	11.69
High	2480	8.69	8.70	11.71

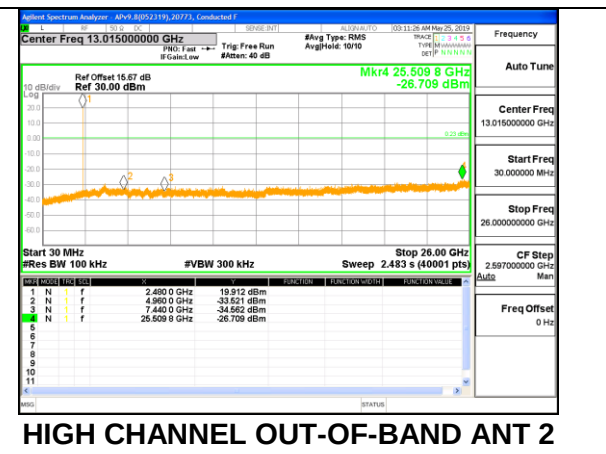
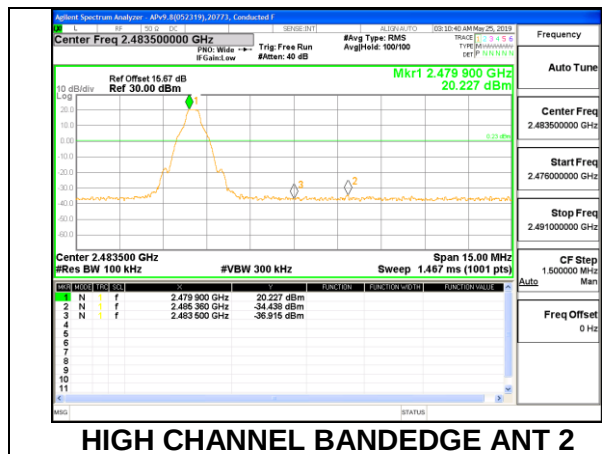
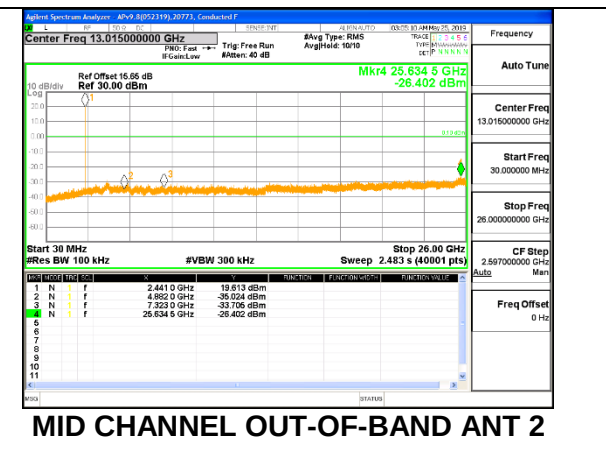
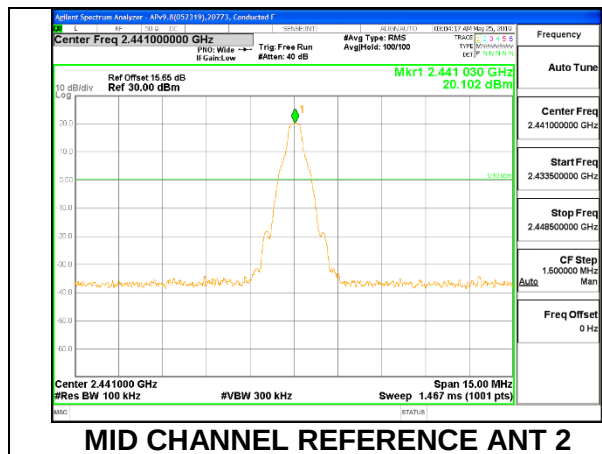
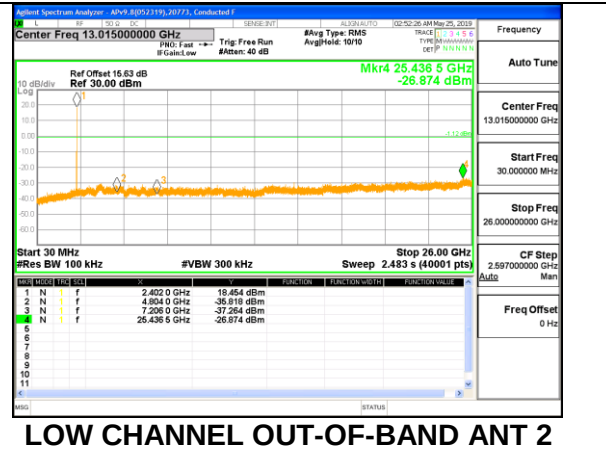
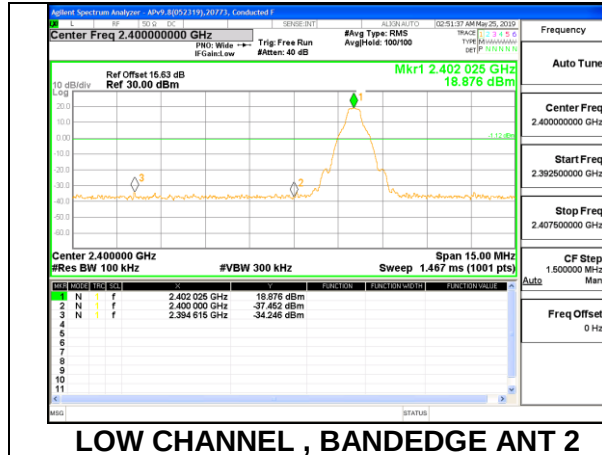
Note: Test procedures and setting on beamforming mode are same as BT basic and EDR mode

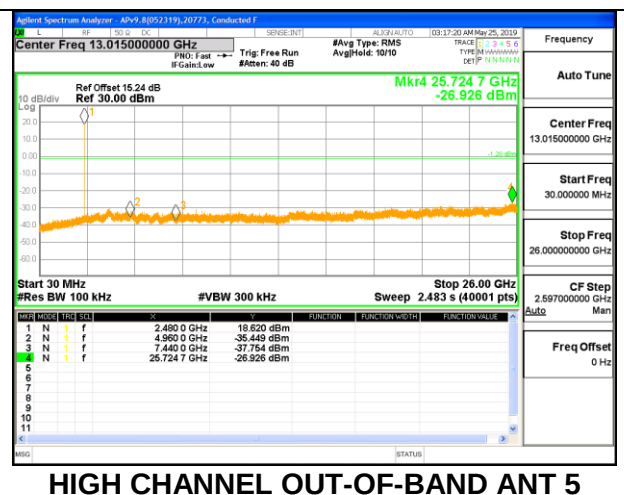
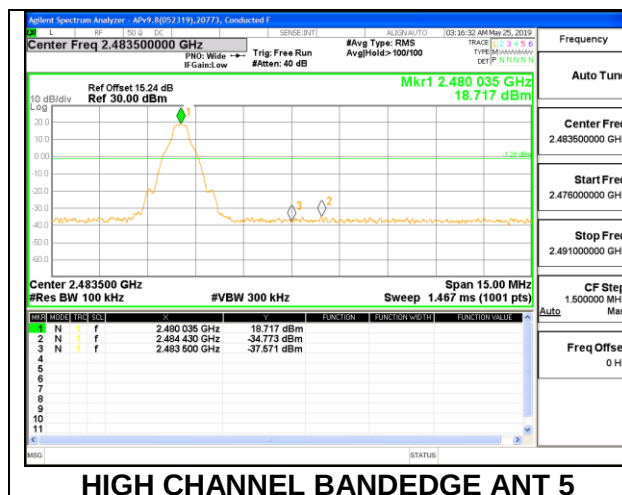
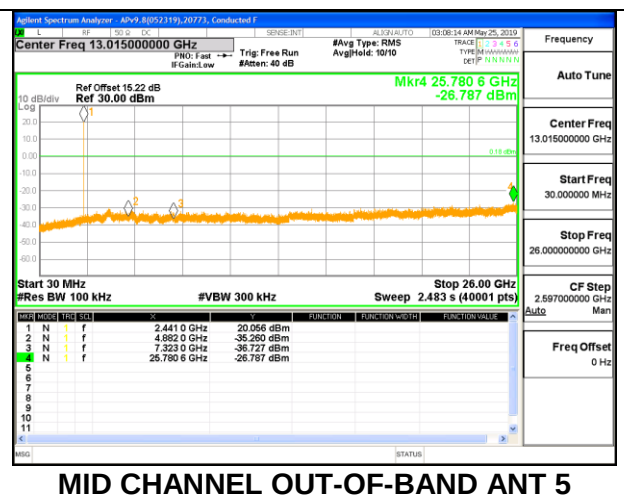
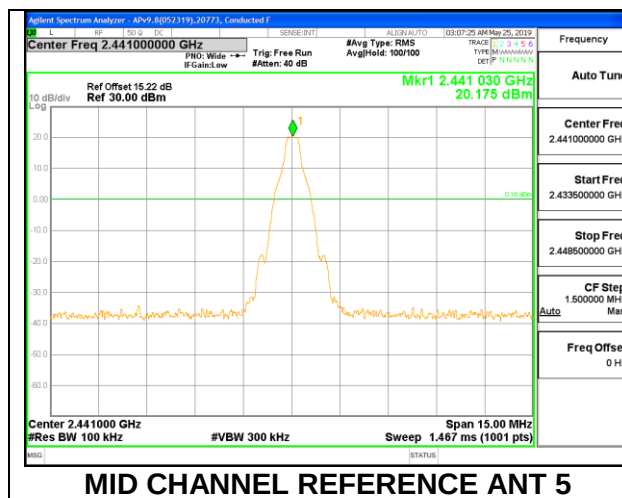
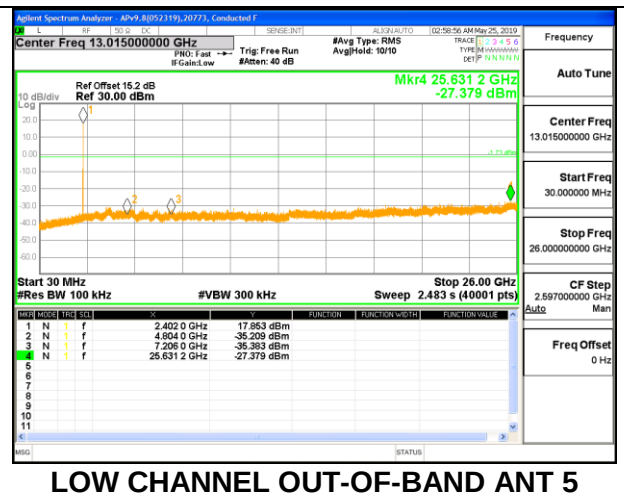
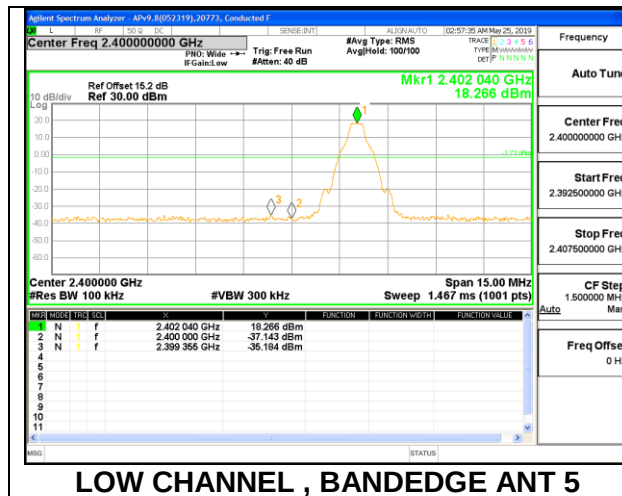
8.16. BEAMFORMING, CONDUCTED SPURIOUS

8.16.1. HIGH POWER BASIC DATA RATE GFSK MODULATION

Note: Test procedure on beamforming mode is same as BT basic and EDR mode

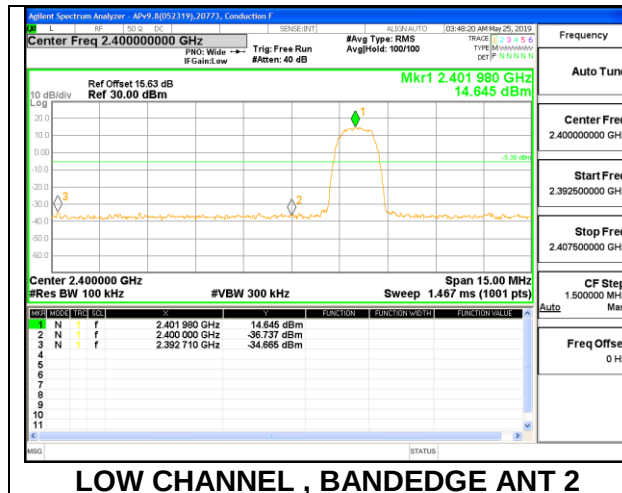
Antenna 2



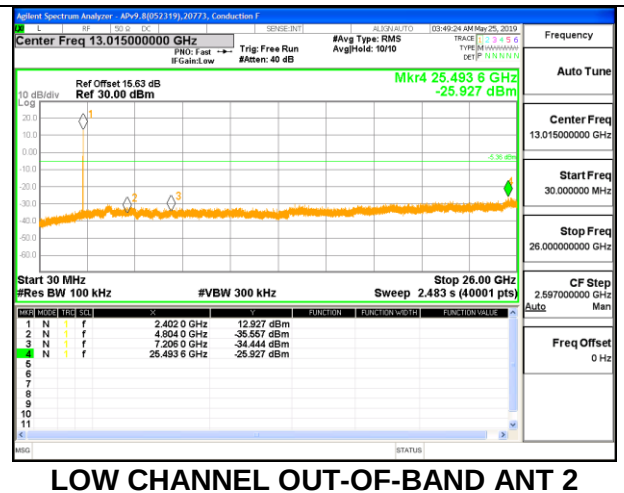
Antenna 5

8.16.2. HIGH POWER ENHANCED DATA RATE 8PSK MODULATION

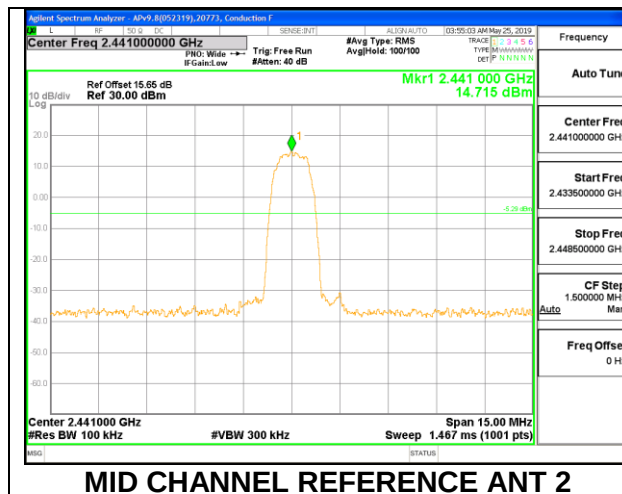
Antenna 2



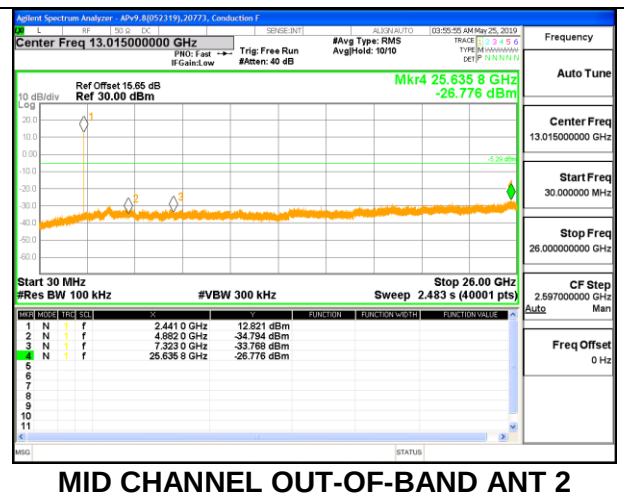
LOW CHANNEL , BANDEDGE ANT 2



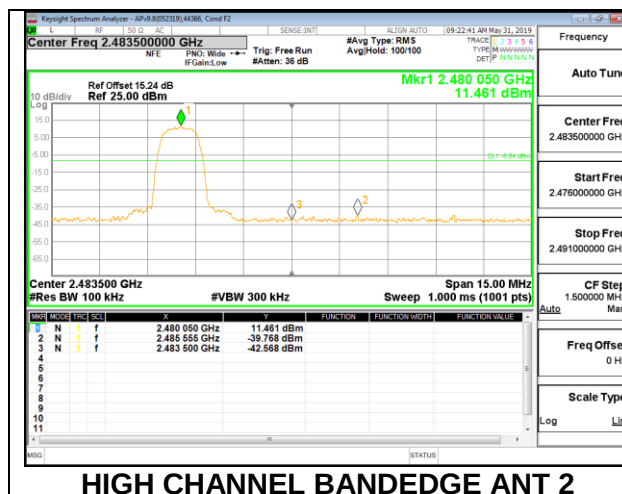
LOW CHANNEL OUT-OF-BAND ANT 2



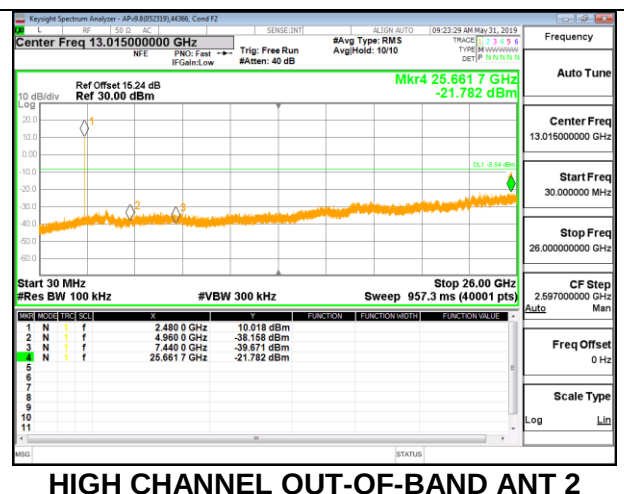
MID CHANNEL REFERENCE ANT 2



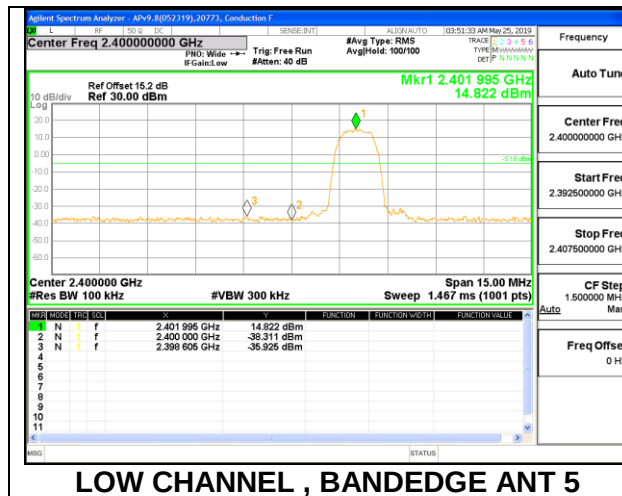
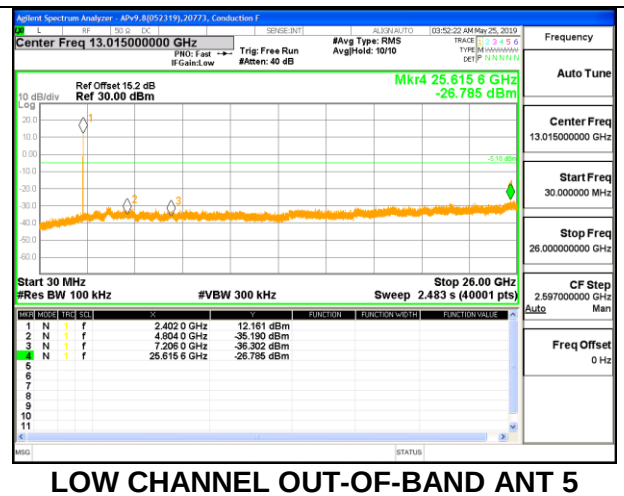
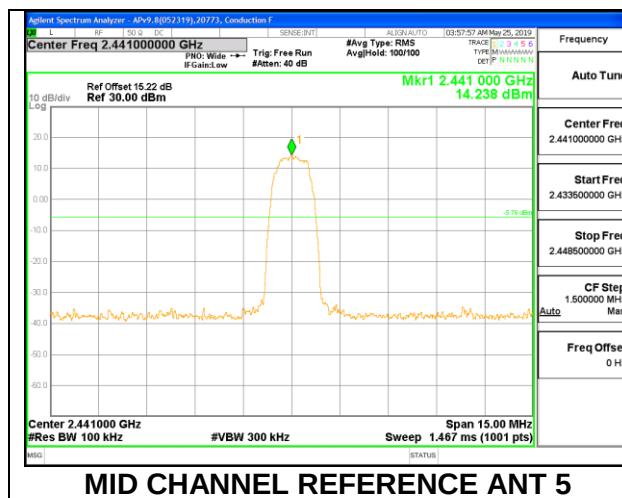
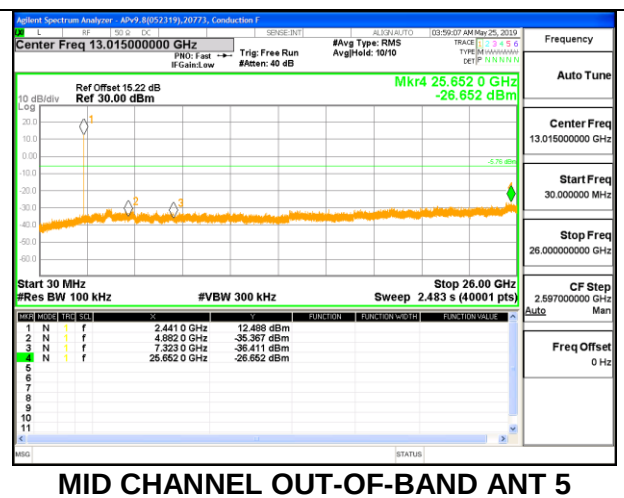
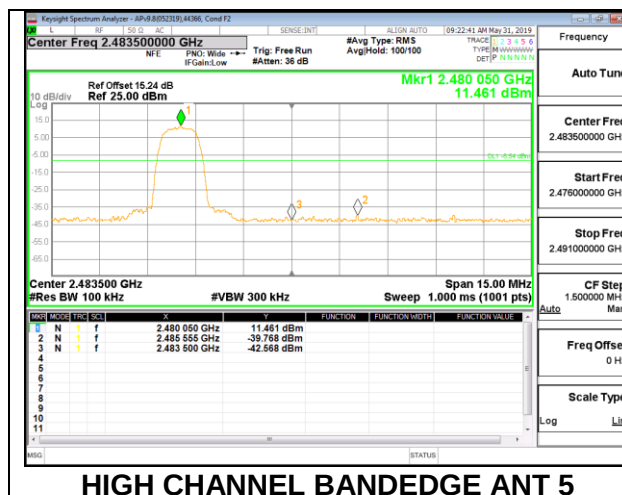
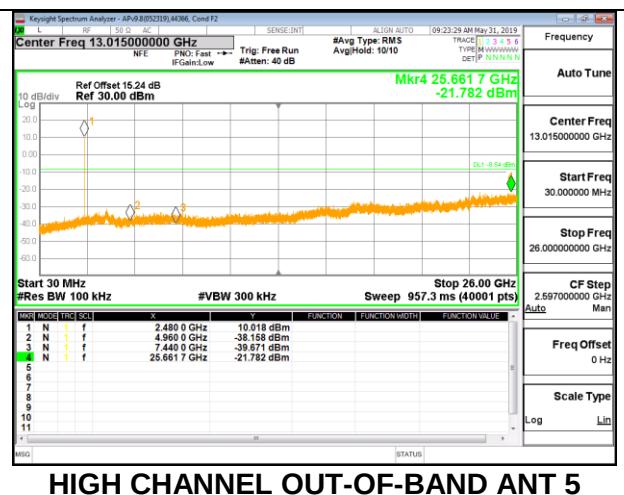
MID CHANNEL OUT-OF-BAND ANT 2

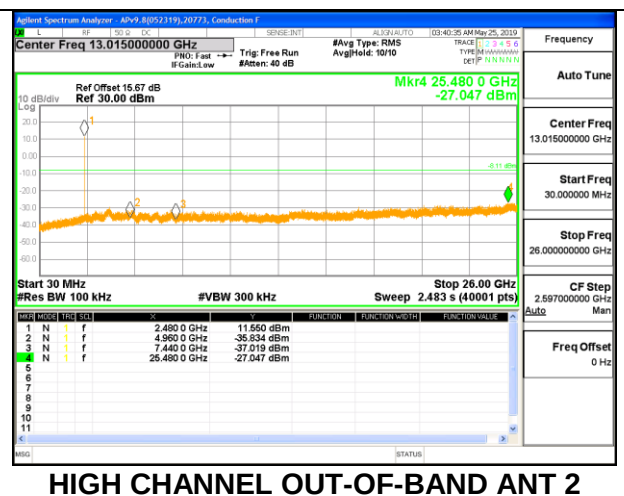
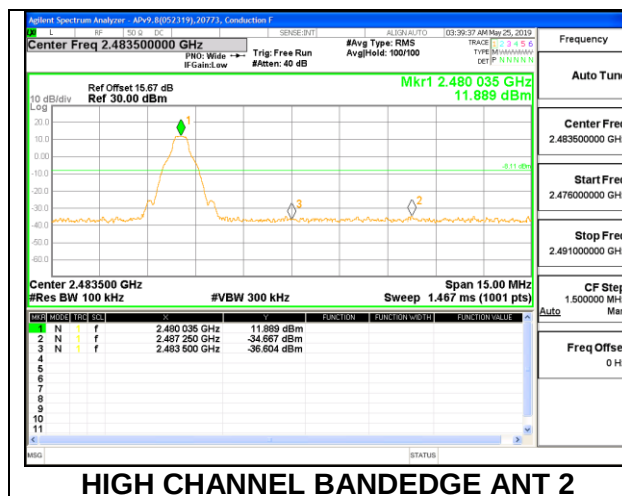
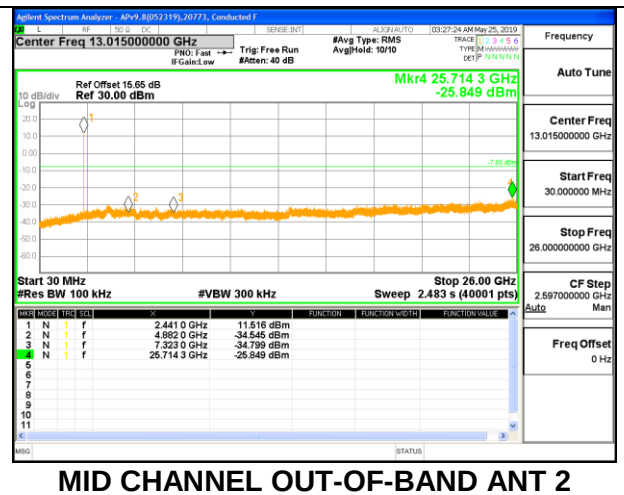
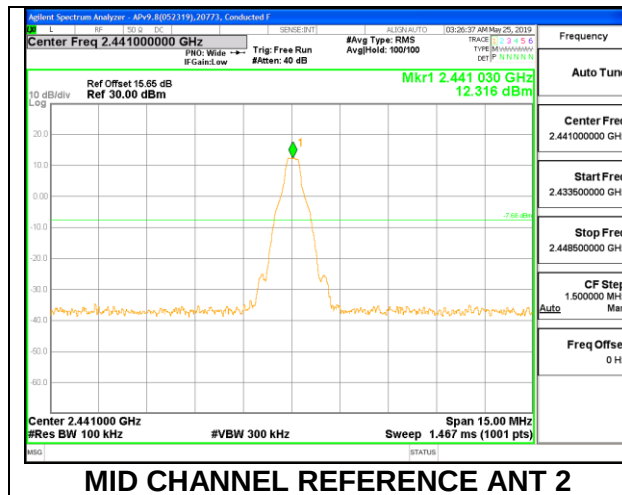
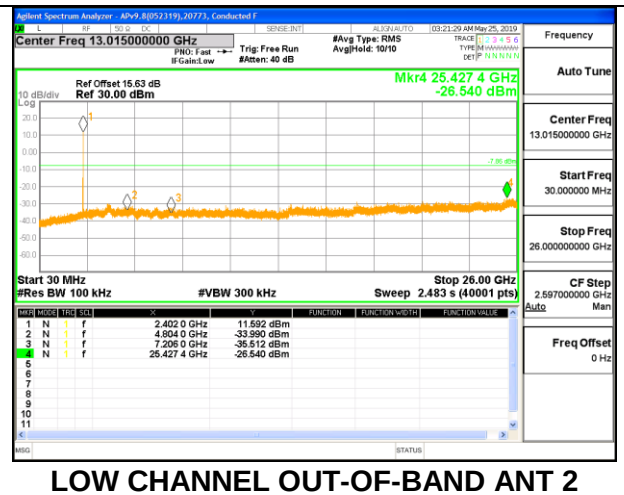
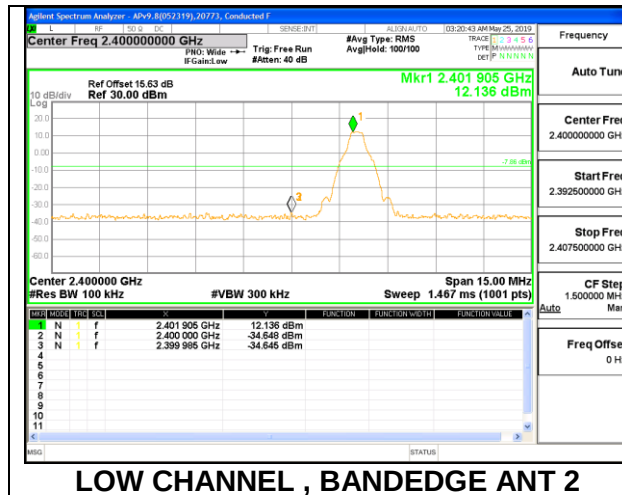


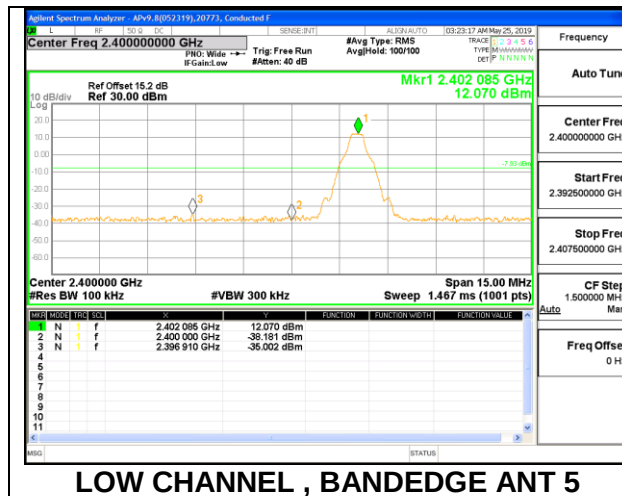
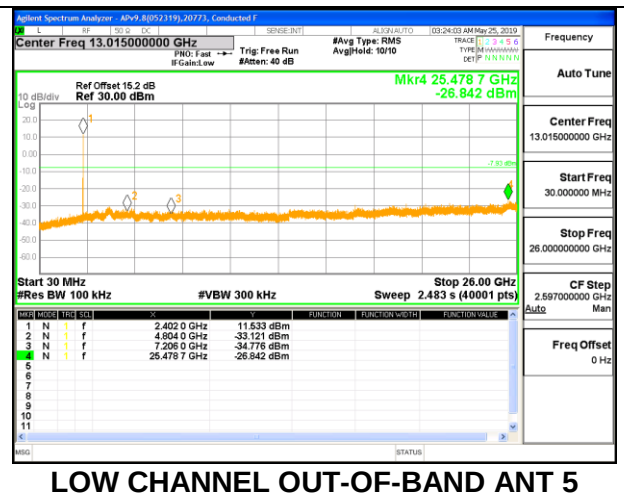
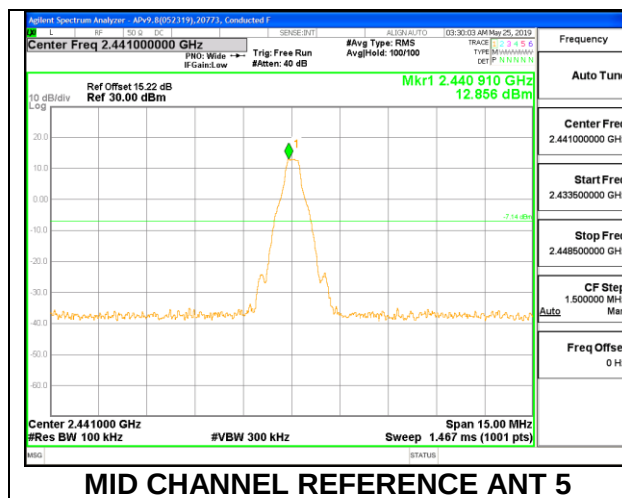
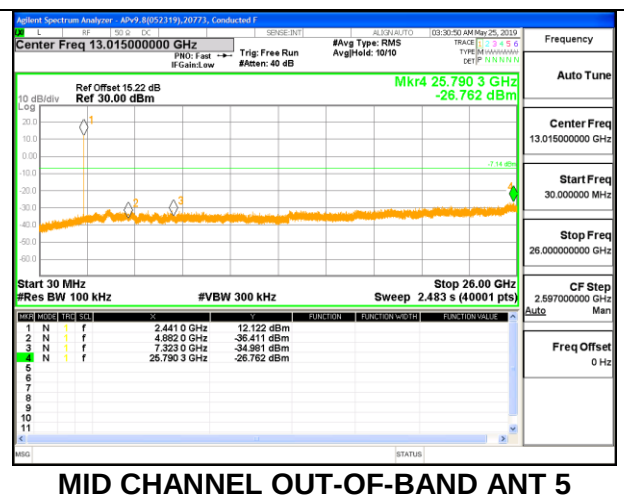
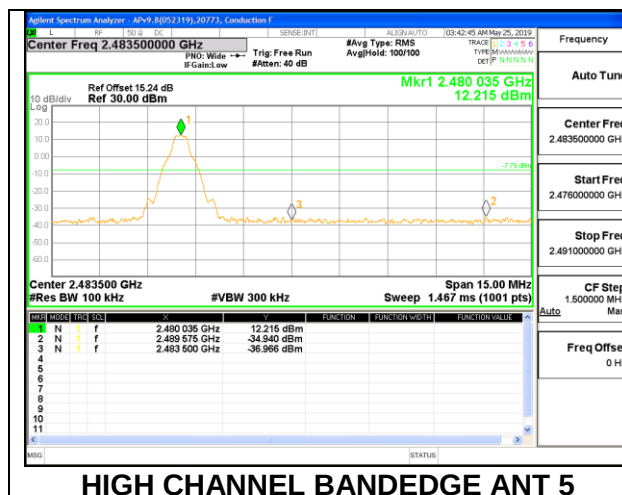
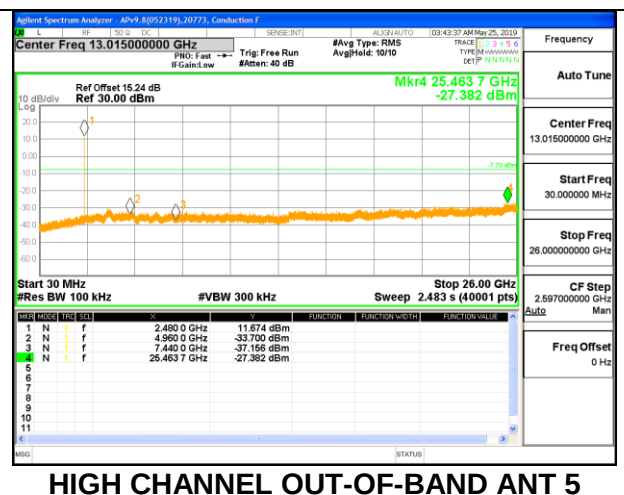
HIGH CHANNEL BANDEDGE ANT 2



HIGH CHANNEL OUT-OF-BAND ANT 2

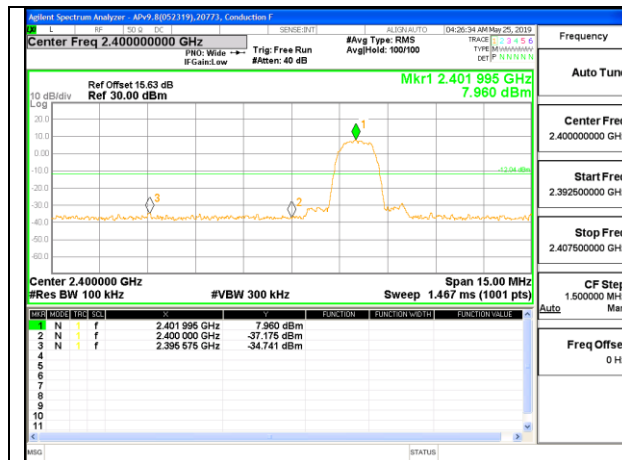
Antenna 5**LOW CHANNEL , BANDEDGE ANT 5****LOW CHANNEL OUT-OF-BAND ANT 5****MID CHANNEL REFERENCE ANT 5****MID CHANNEL OUT-OF-BAND ANT 5****HIGH CHANNEL BANDEDGE ANT 5****HIGH CHANNEL OUT-OF-BAND ANT 5**

8.16.3. LOW POWER BASIC DATA RATE GFSK MODULATION**Antenna 2**

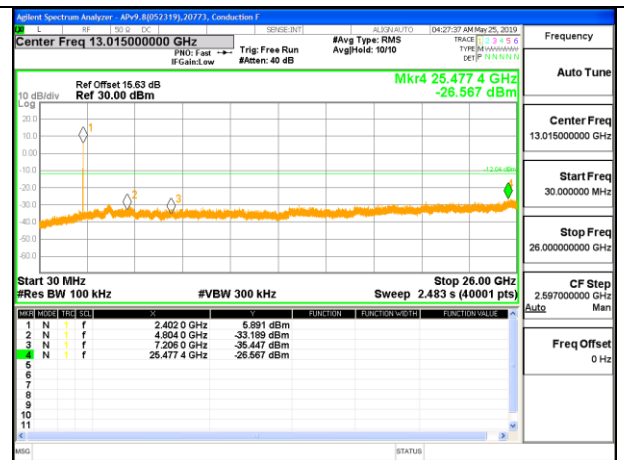
Antenna 5**LOW CHANNEL , BANDEDGE ANT 5****LOW CHANNEL OUT-OF-BAND ANT 5****MID CHANNEL REFERENCE ANT 5****MID CHANNEL OUT-OF-BAND ANT 5****HIGH CHANNEL BANDEDGE ANT 5****HIGH CHANNEL OUT-OF-BAND ANT 5**

8.16.4. LOW POWER ENHANCED DATA RATE 8PSK MODULATION

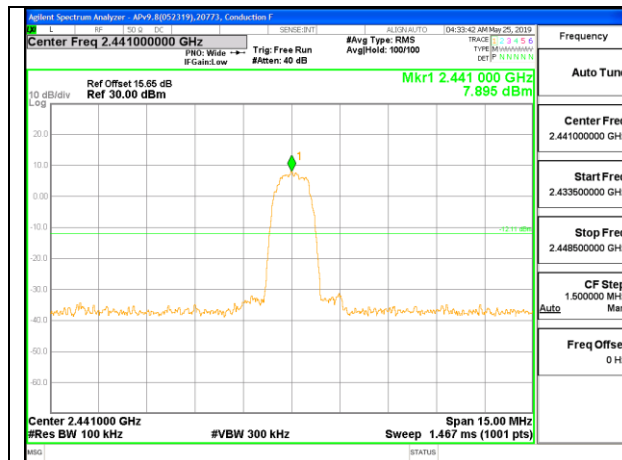
Antenna 2



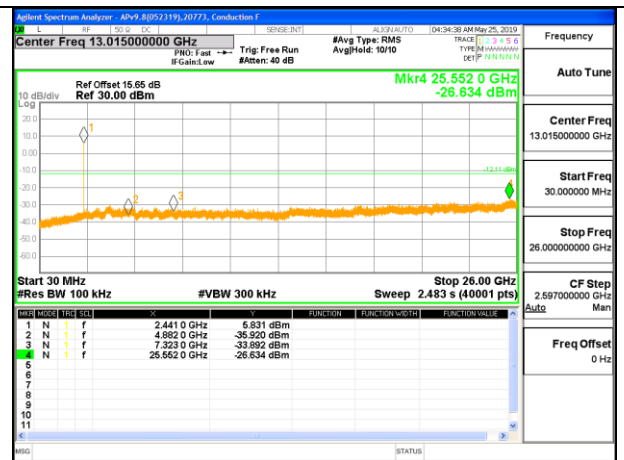
LOW CHANNEL , BANDEDGE ANT 2



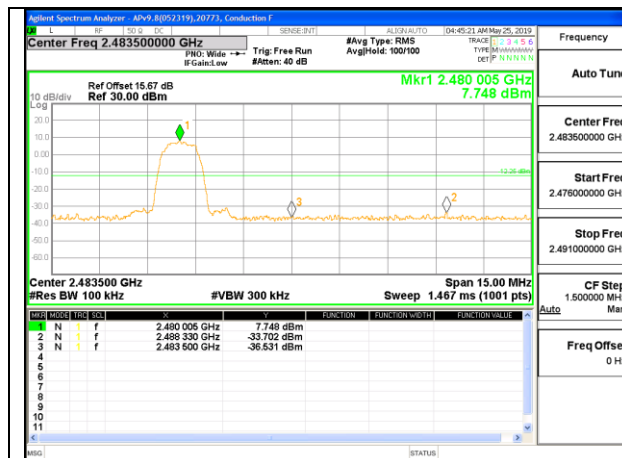
LOW CHANNEL OUT-OF-BAND ANT 2



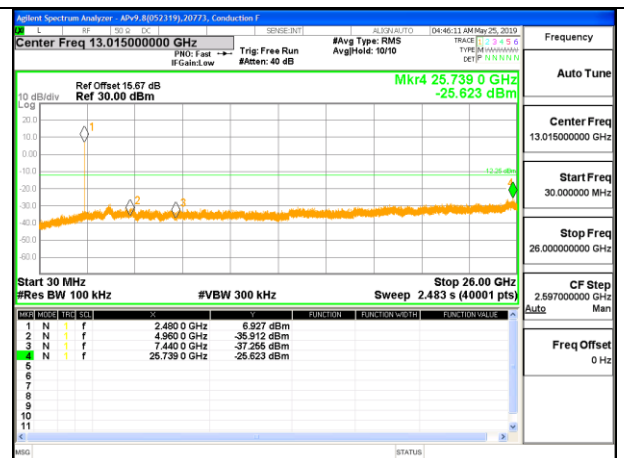
MID CHANNEL REFERENCE ANT 2



MID CHANNEL OUT-OF-BAND ANT 2



HIGH CHANNEL BANDEDGE ANT 2



HIGH CHANNEL OUT-OF-BAND ANT 2