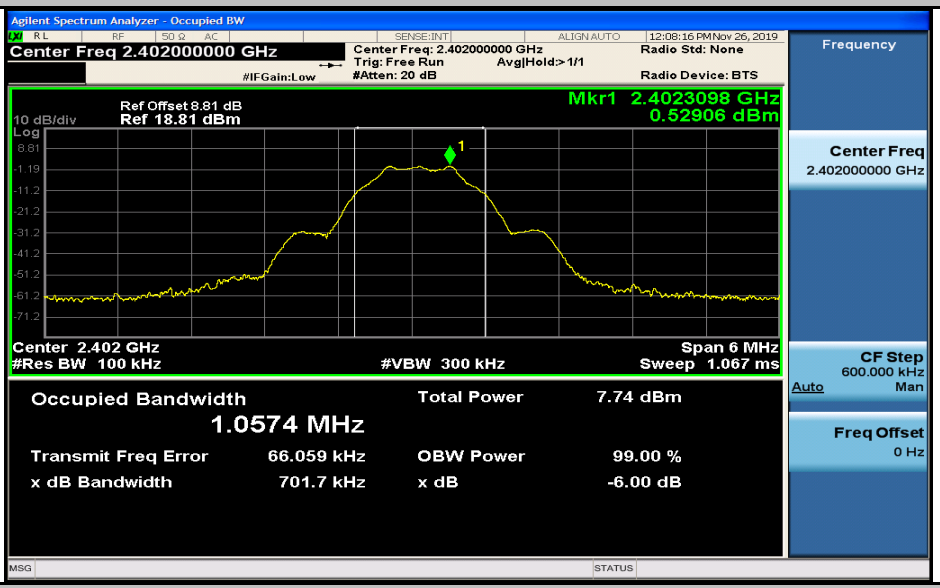
Appendix B for SHEM191001834302

A1965-Left

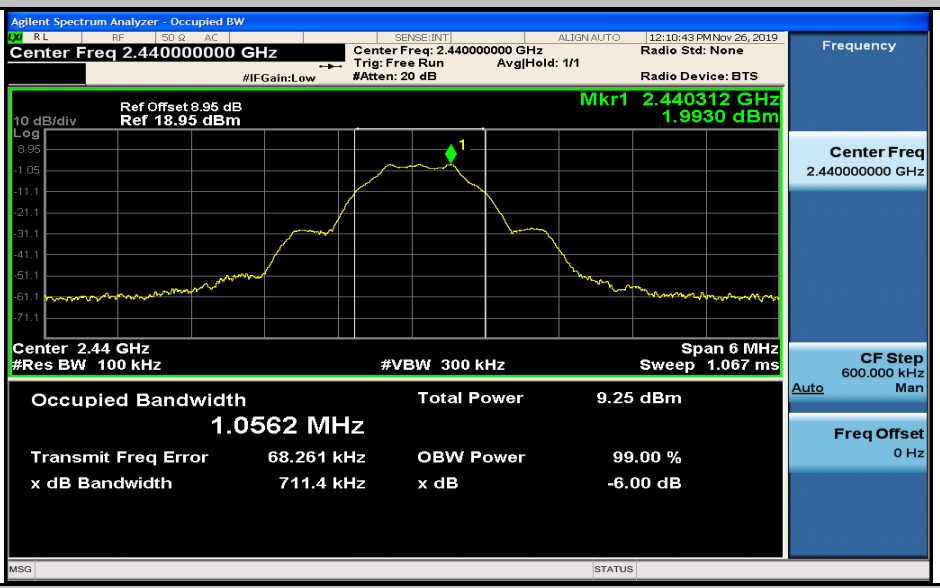
1.6dB Bandwidth

Test Mode	Test Channel	EBW[MHz]		Limit	Verdict
		1Mbps	2Mbps		
BLE	2402	0.70	1.26	0.5	PASS
BLE	2440	0.71	1.26	0.5	PASS
BLE	2480	0.70	1.26	0.5	PASS

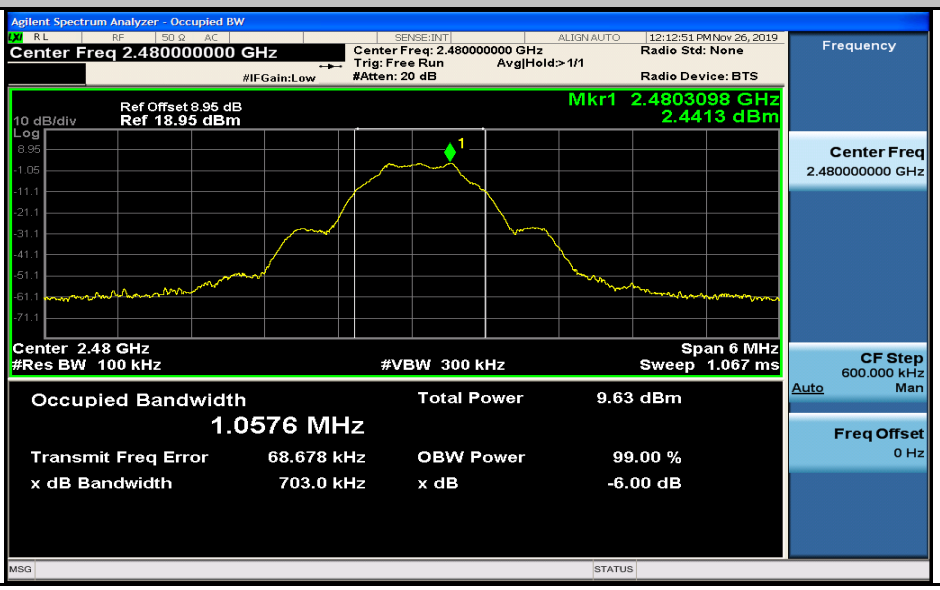
6dB Bandwidth_BLE_2402-1Mbps



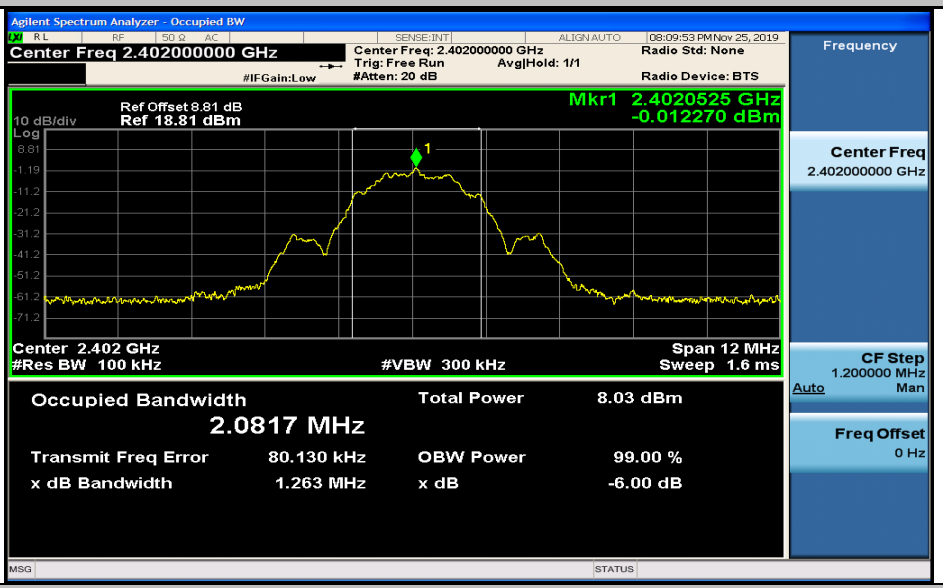
6dB Bandwidth_BLE_2440-1Mbps



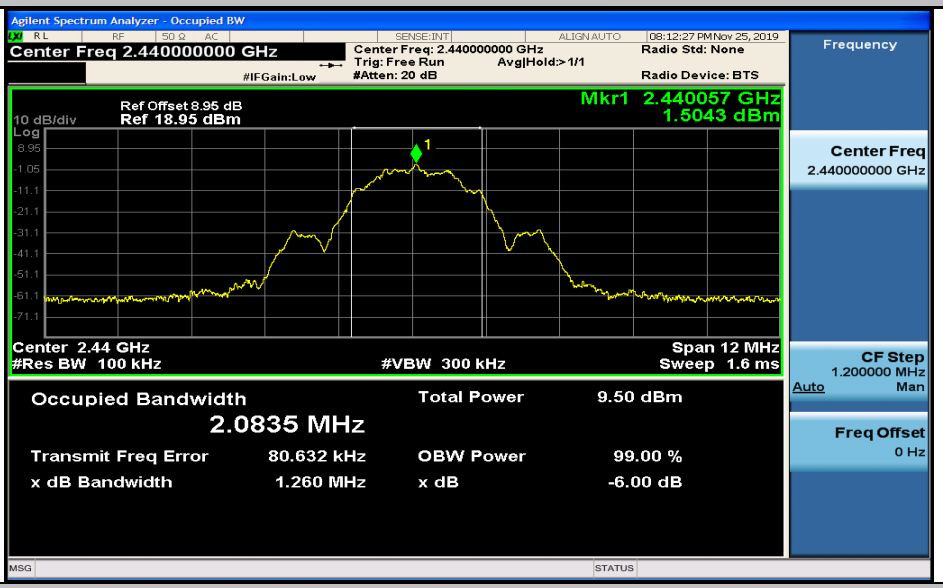
6dB Bandwidth_BLE_2480-1Mbps



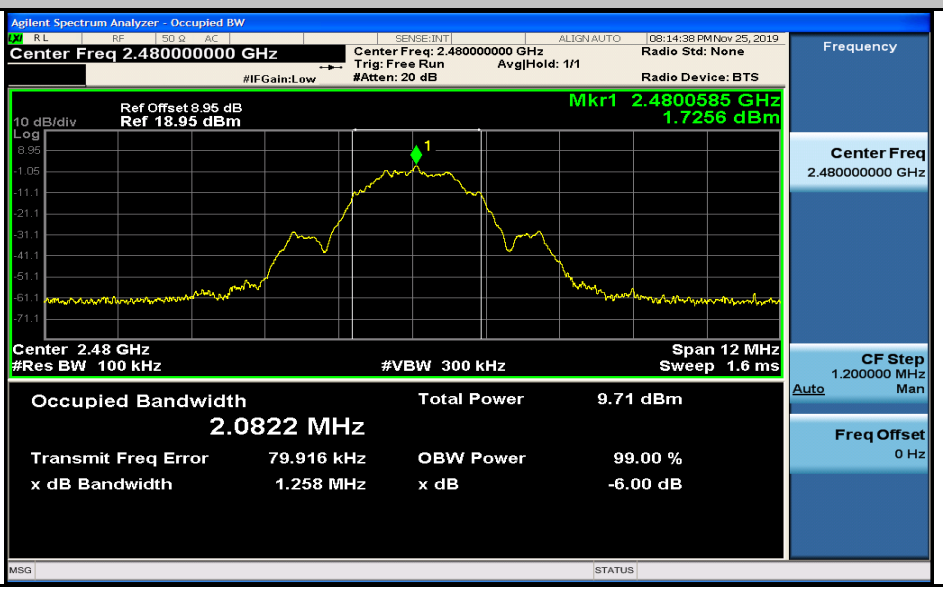
6dB Bandwidth_BLE_2402-2Mbps



6dB Bandwidth_BLE_2440-2Mbps



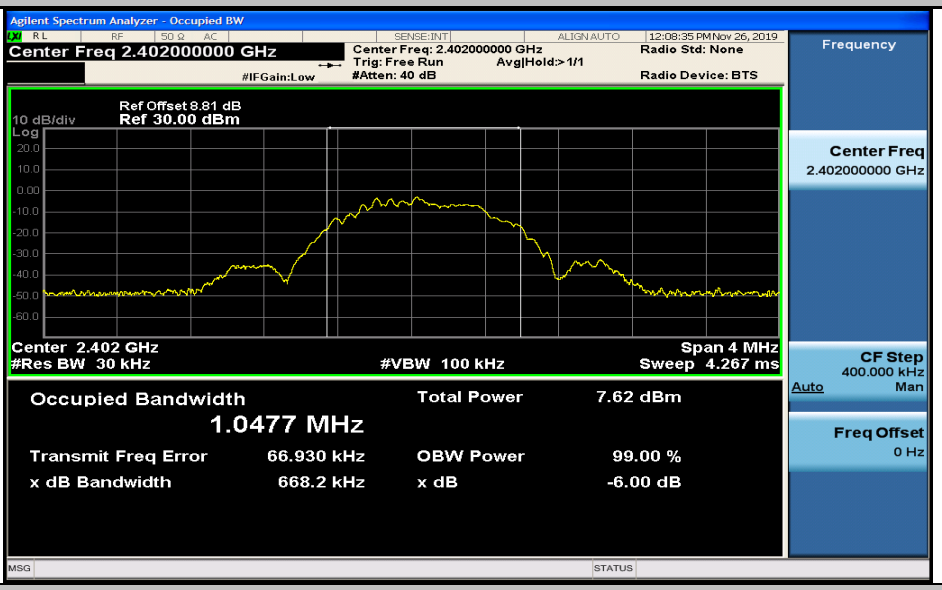
6dB Bandwidth_BLE_2480-2Mbps



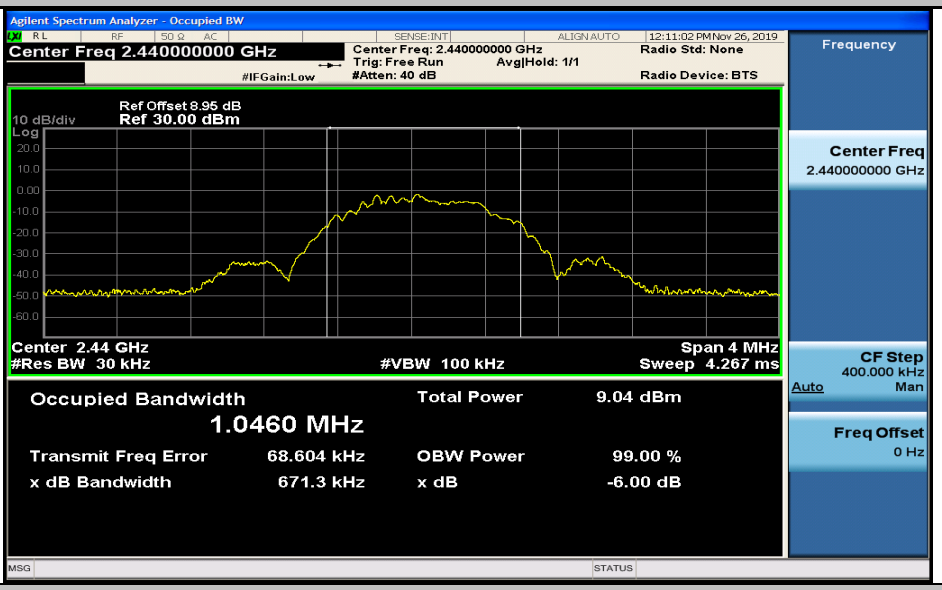
2.Occupied Bandwidth

Test Mode	Test Channel	OBW[MHz]		Limit[MHz]	Verdict
		1Mbps	2Mbps		
BLE	2402	1.05	2.08	---	PASS
BLE	2440	1.05	2.08	---	PASS
BLE	2480	1.04	2.08	---	PASS

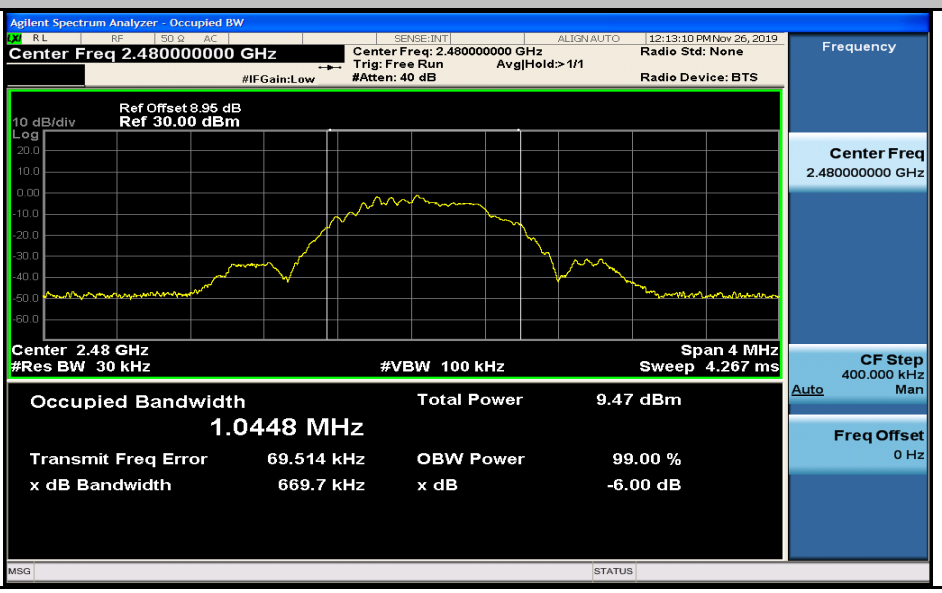
Occupied Bandwidth_BLE_2402-1Mbps



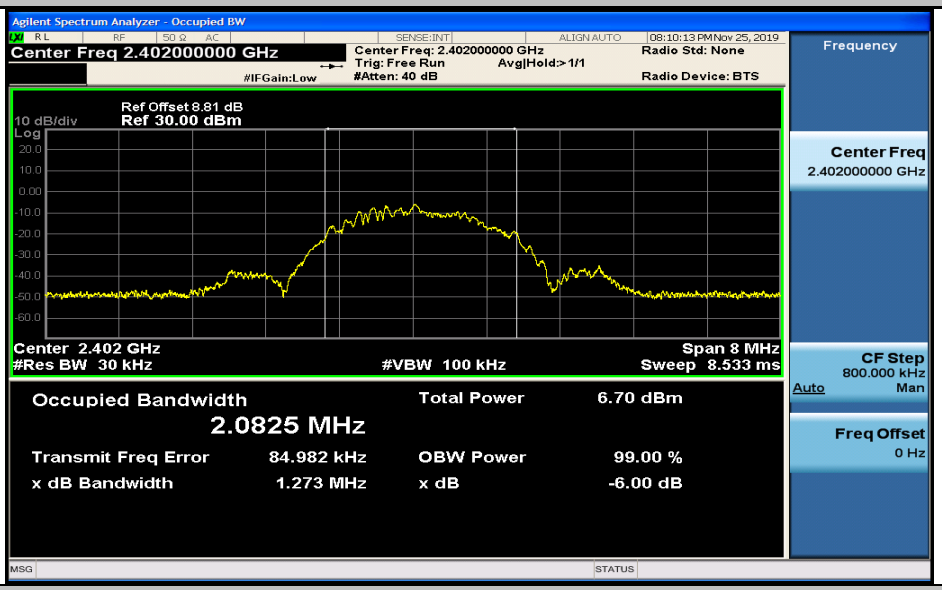
Occupied Bandwidth_BLE_2440-1Mbps



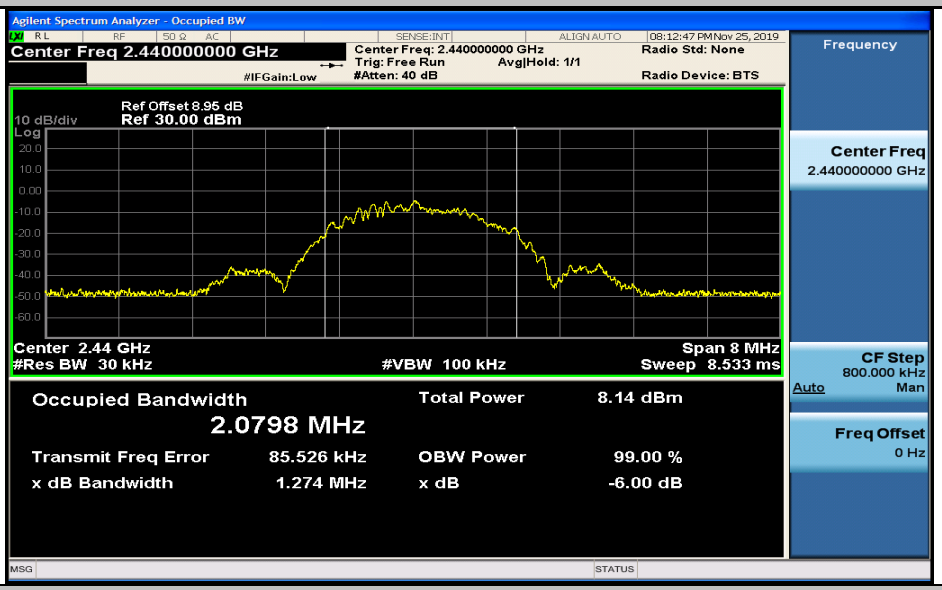
Occupied Bandwidth_BLE_2480-1Mbps



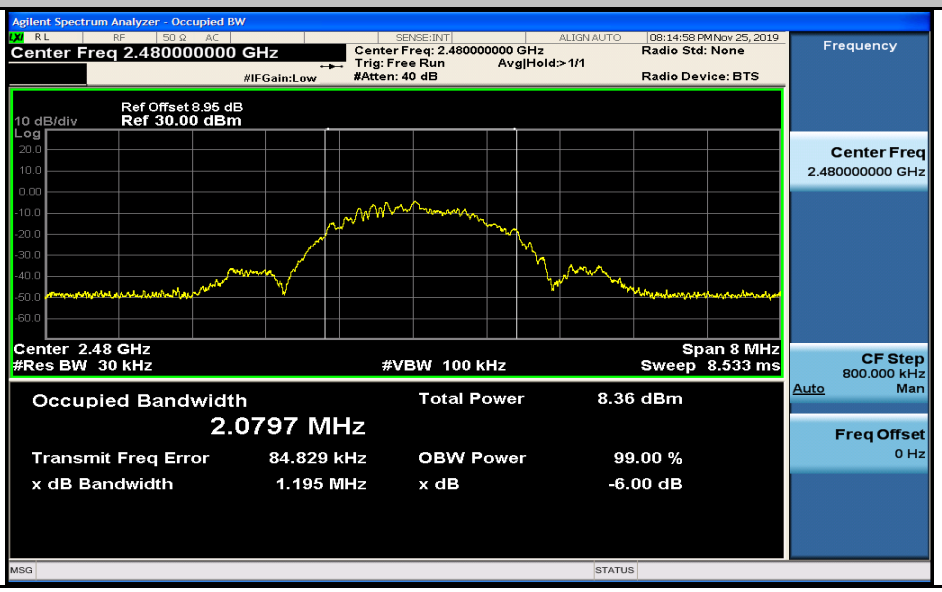
Occupied Bandwidth_BLE_2402-2Mbps



Occupied Bandwidth_BLE_2440-2Mbps



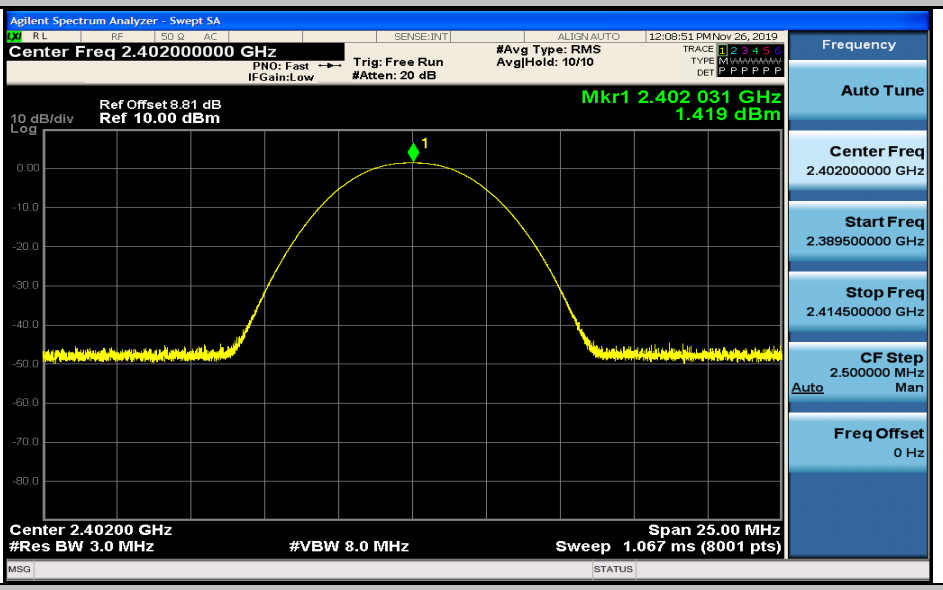
Occupied Bandwidth_BLE_2480-2Mbps



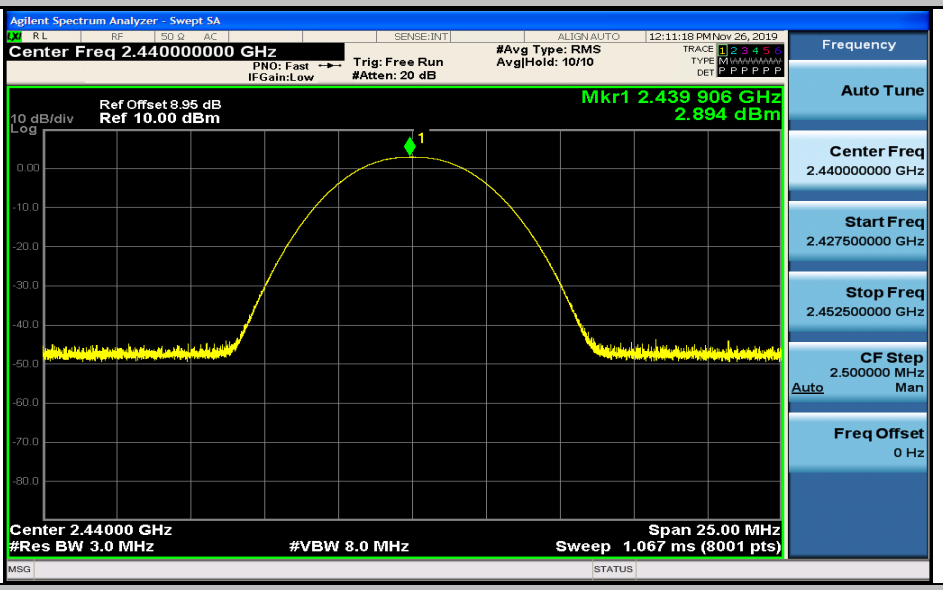
3.Maximum peak conducted output power

Test Mode	Test Channel	Power[dBm]		Limit[dBm]	Verdict
		1Mbps	2Mbps		
BLE	2402	1.42	1.32	30	PASS
BLE	2440	2.89	2.82	30	PASS
BLE	2480	3.36	3.28	30	PASS

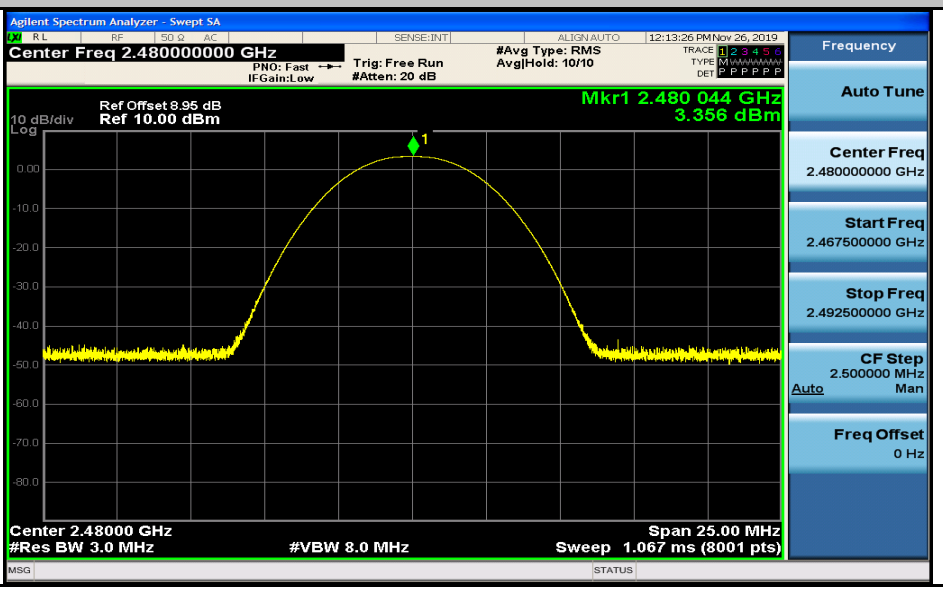
Maximum peak conducted output power_BLE_2402-1Mbps



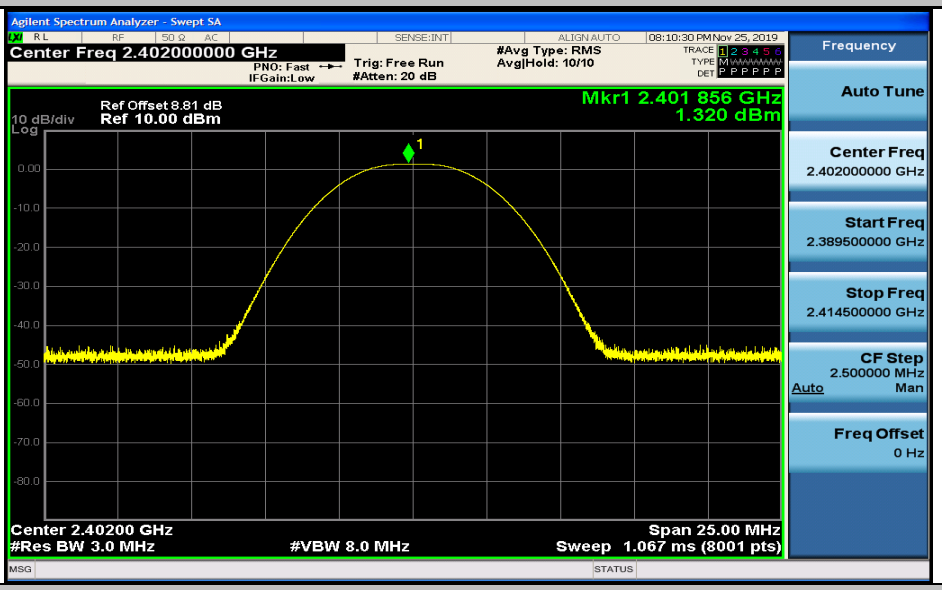
Maximum peak conducted output power_BLE_2440-1Mbps



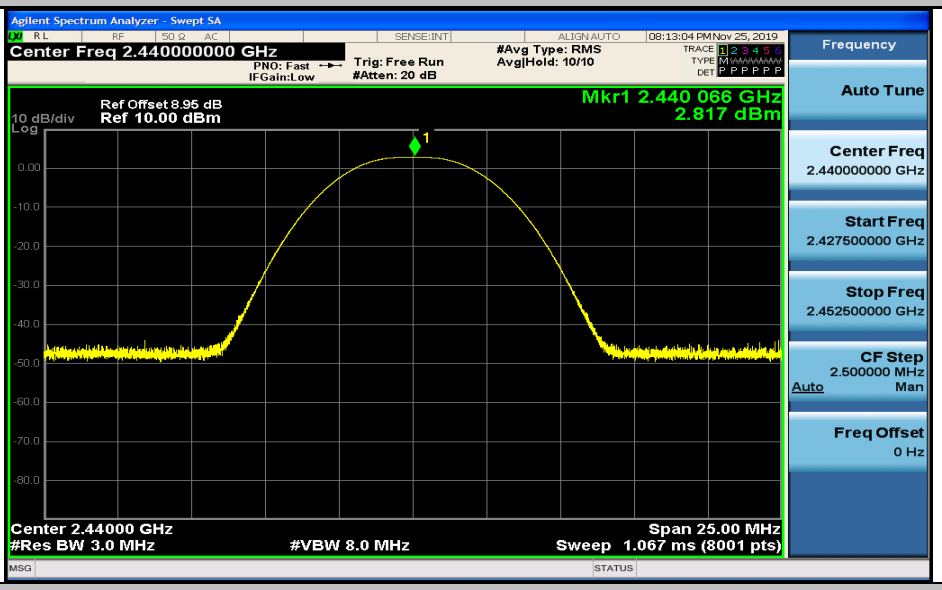
Maximum peak conducted output power_BLE_2480-1Mbps



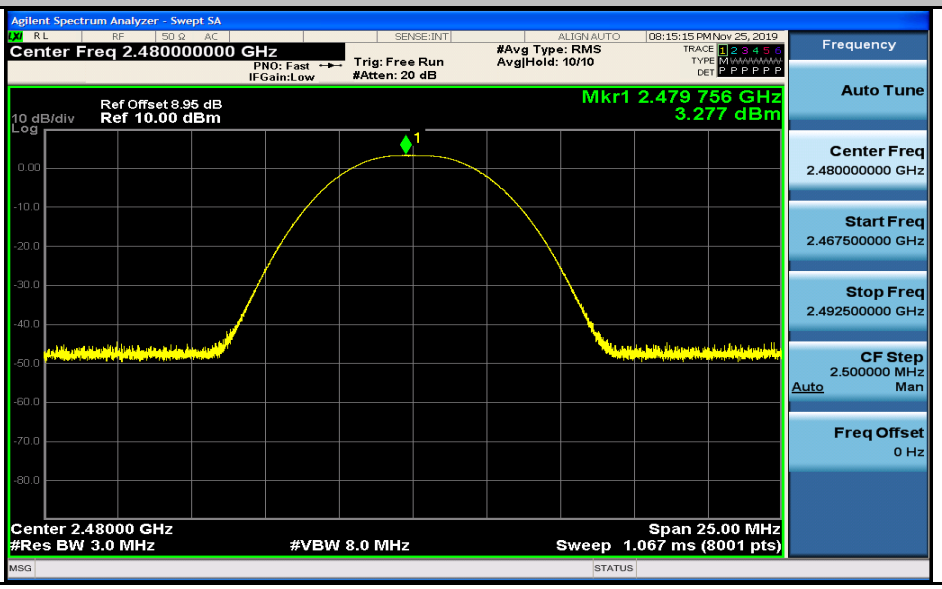
Maximum peak conducted output power_BLE_2402-2Mbps



Maximum peak conducted output power_BLE_2440-2Mbps



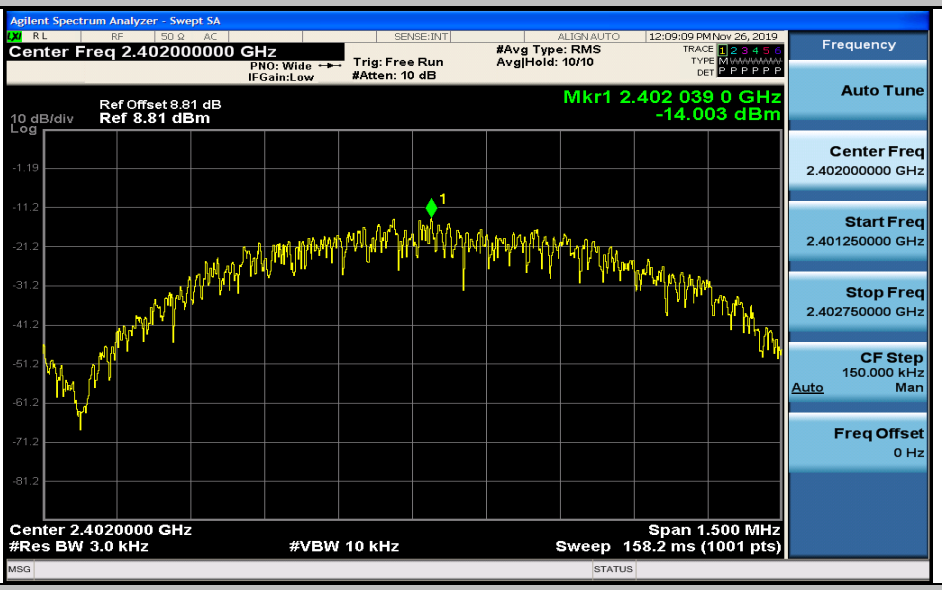
Maximum peak conducted output power_BLE_2480-2Mbps



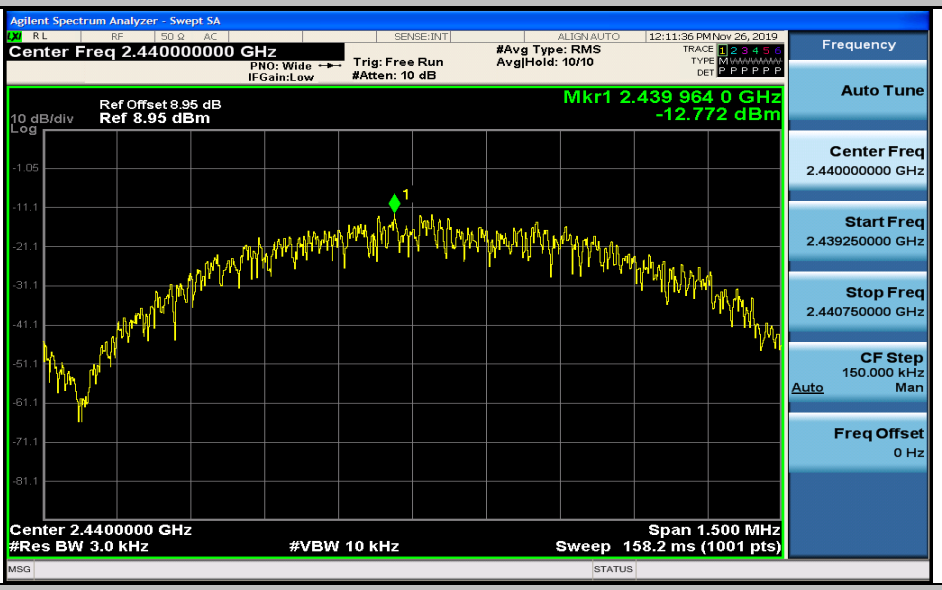
4.Maximum Peak power spectral density

Test Mode	Test Channel	PSD[dBm/3kHz]		Limit[dBm/3kHz]	Verdict
		1Mbps	2Mbps		
BLE	2402	-14.00	-16.31	8.00	PASS
BLE	2440	-12.77	-14.94	8.00	PASS
BLE	2480	-12.19	-14.65	8.00	PASS

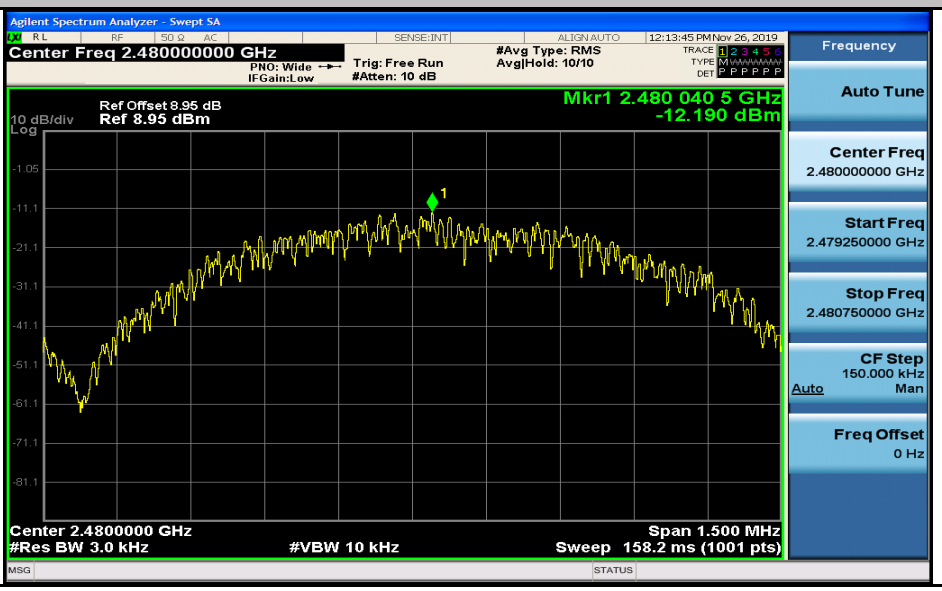
Maximum Peak power spectral density_BLE_2402-1Mbps



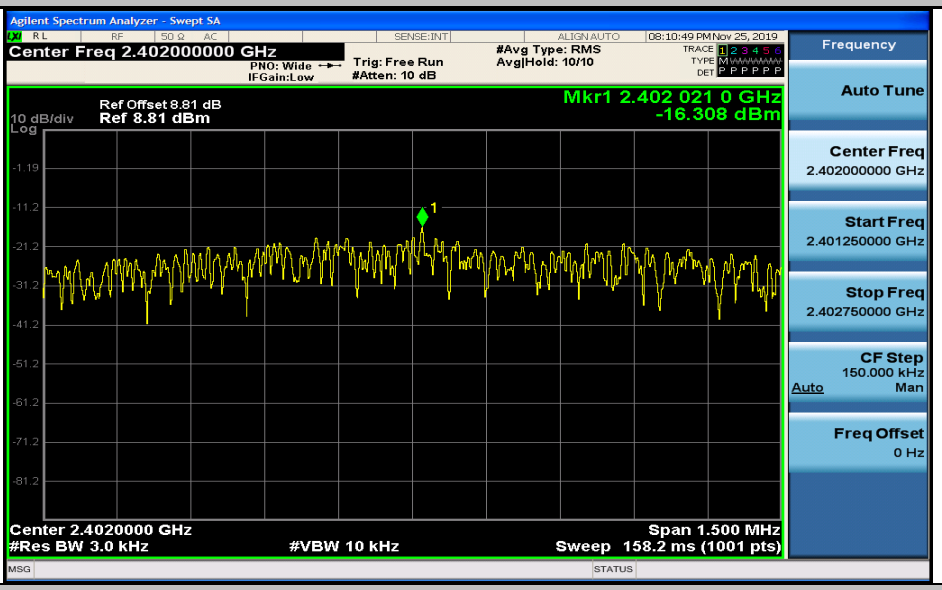
Maximum Peak power spectral density_BLE_2440-1Mbps



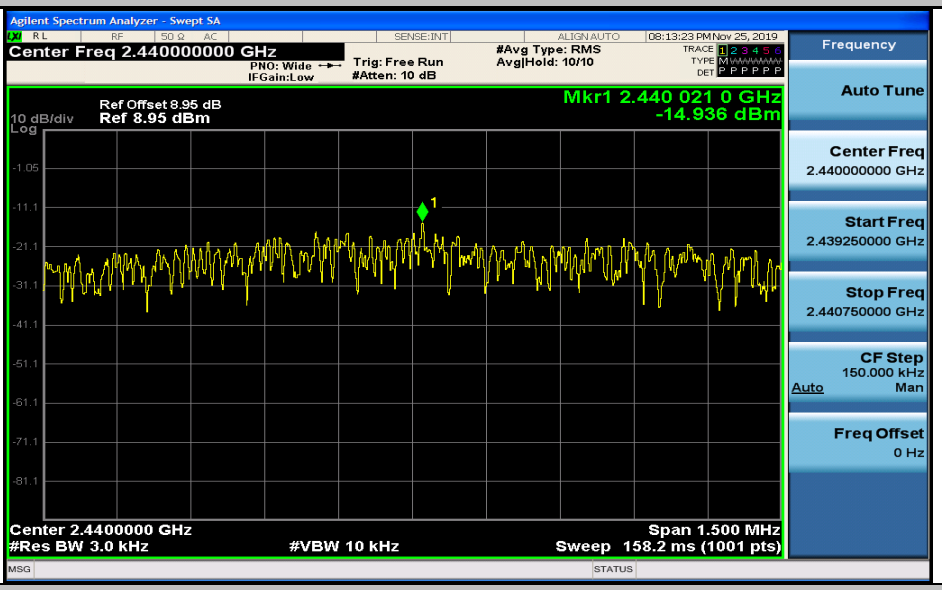
Maximum Peak power spectral density_BLE_2480-1Mbps



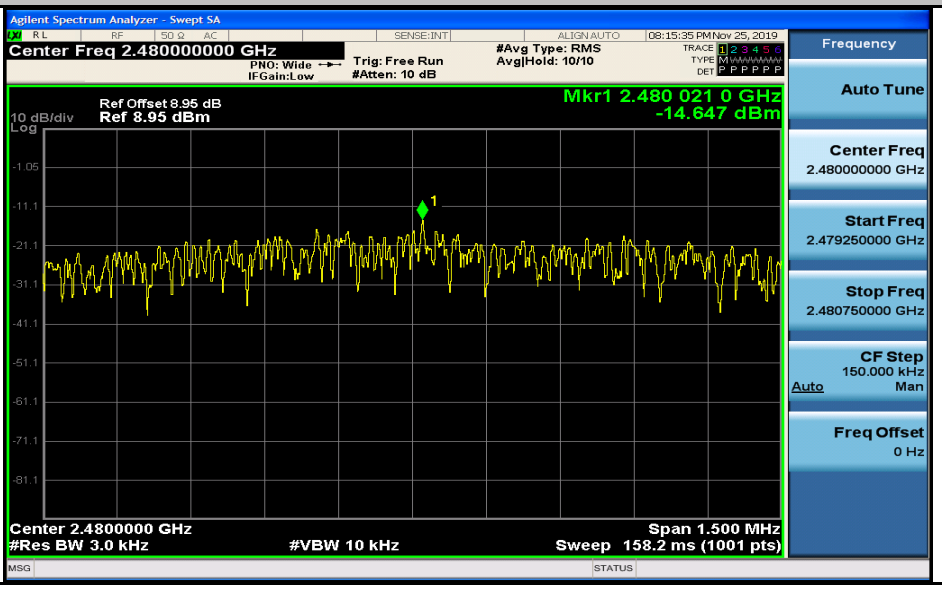
Maximum Peak power spectral density_BLE_2402-2Mbps



Maximum Peak power spectral density_BLE_2440-2Mbps



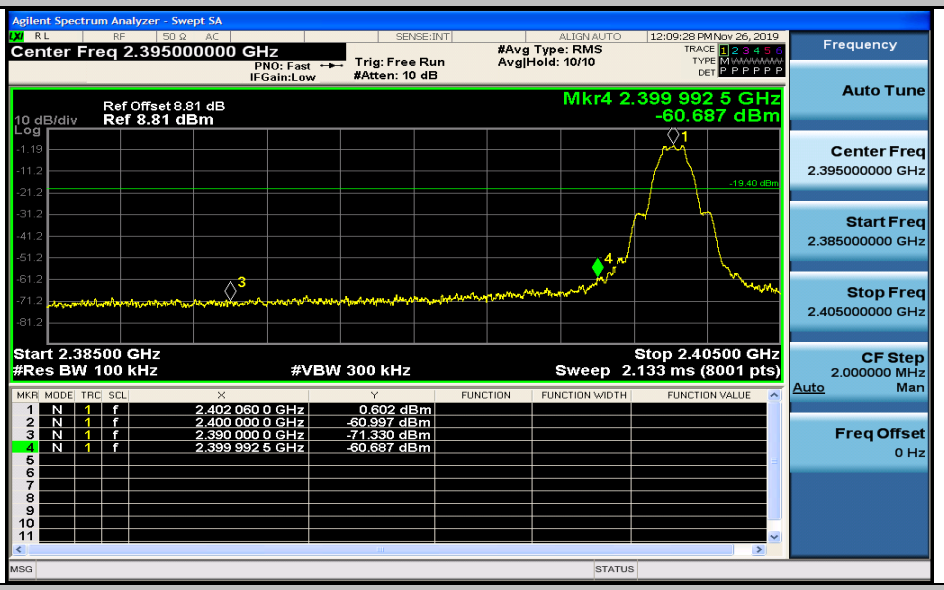
Maximum Peak power spectral density_BLE_2480-2Mbps



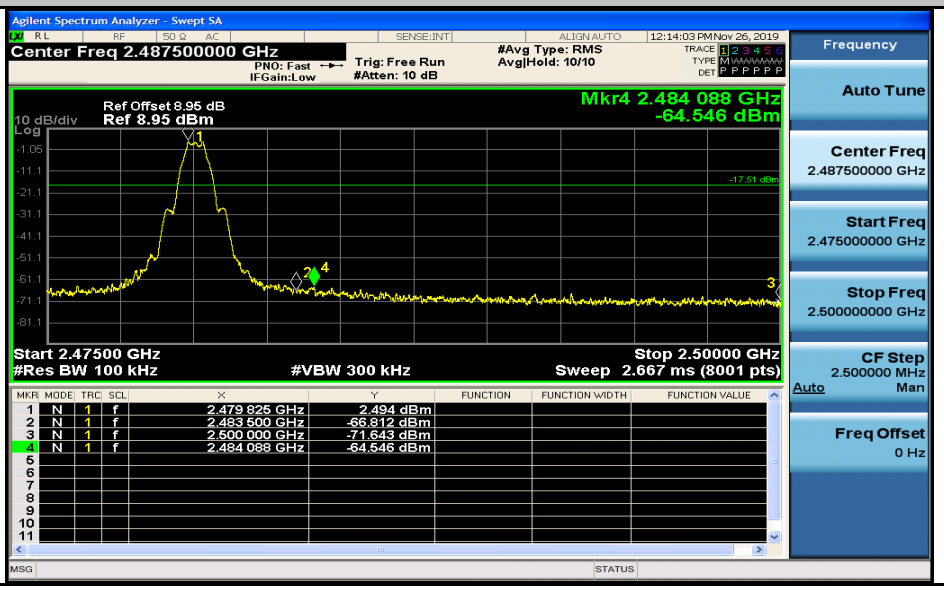
5.Band-edge for RF Conducted Emissions

Test Mode	Test Channel	Carrier Power[dBm]		Max. Spurious Level [dBm]		Limit [dBm]	Verdict
		1Mbps	2Mbps	1Mbps	2Mbps		
BLE	2402	0.60	-0.30	-60.69	-34.59	-17.53	PASS
BLE	2480	2.49	1.43	-64.55	-59.01	-17.00	PASS

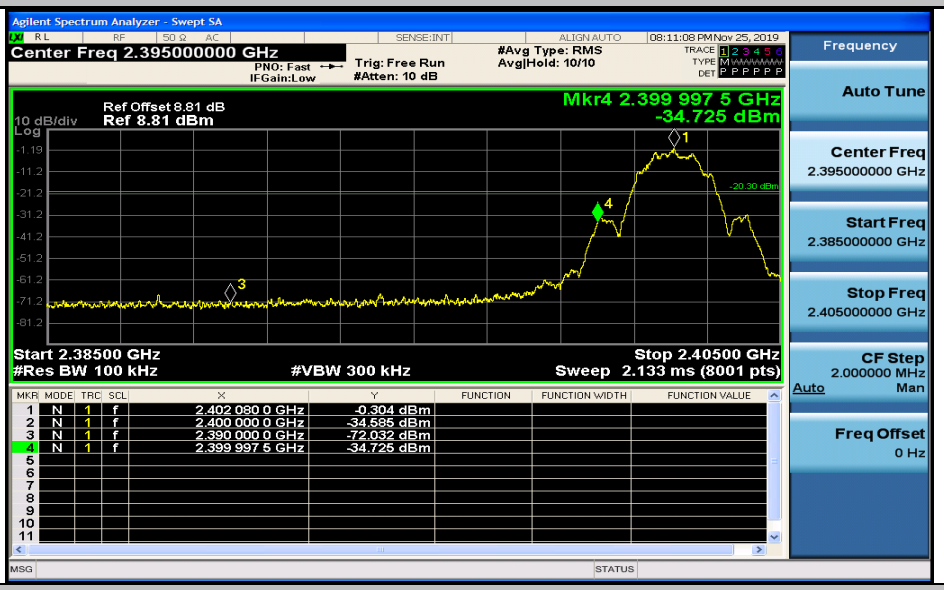
Band-edge for RF Conducted Emissions_BLE_2402_Hopping Off-1Mbps



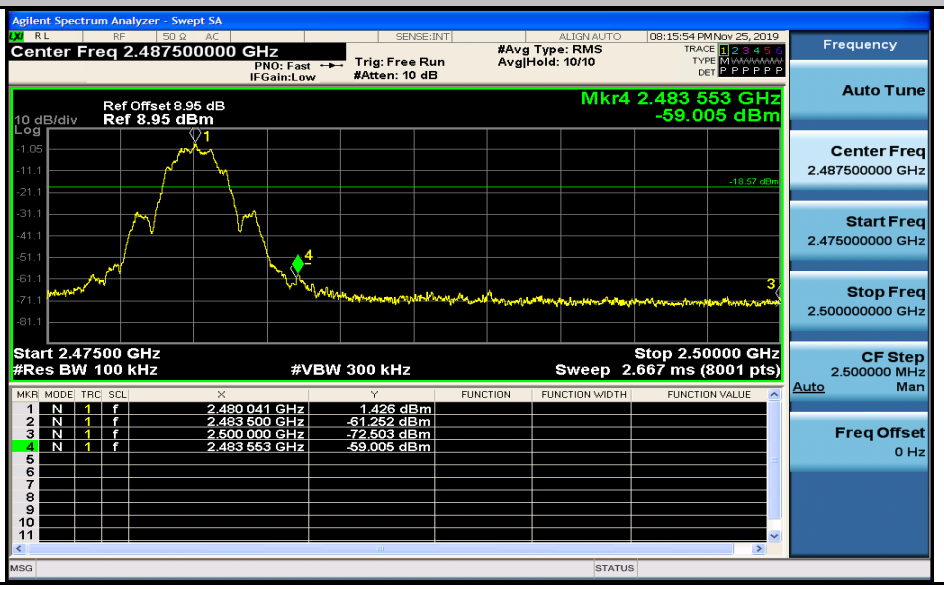
Band-edge for RF Conducted Emissions_BLE_2480_Hopping Off-1Mbps



Band-edge for RF Conducted Emissions_BLE_2402_Hopping Off-2Mbps

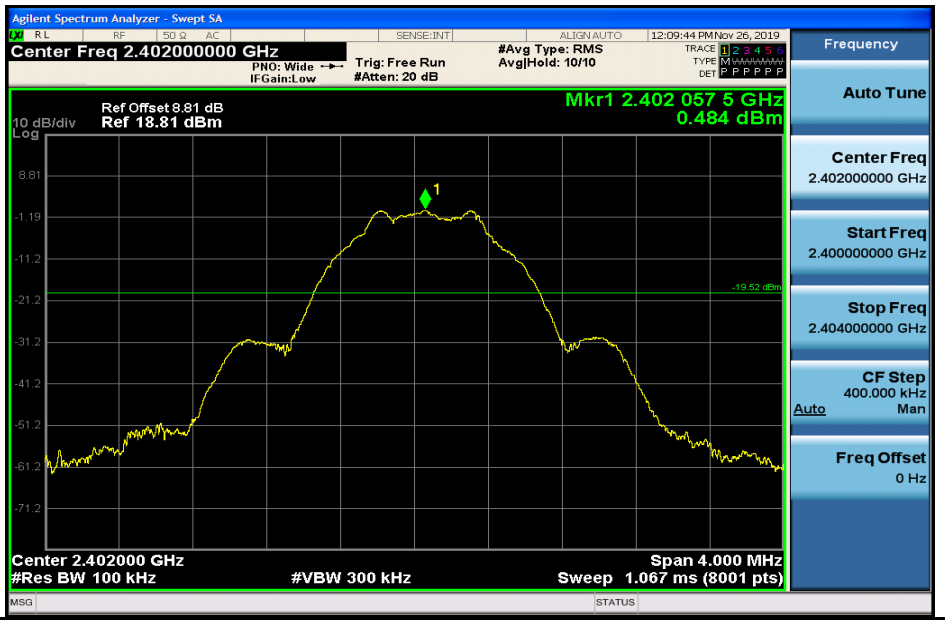
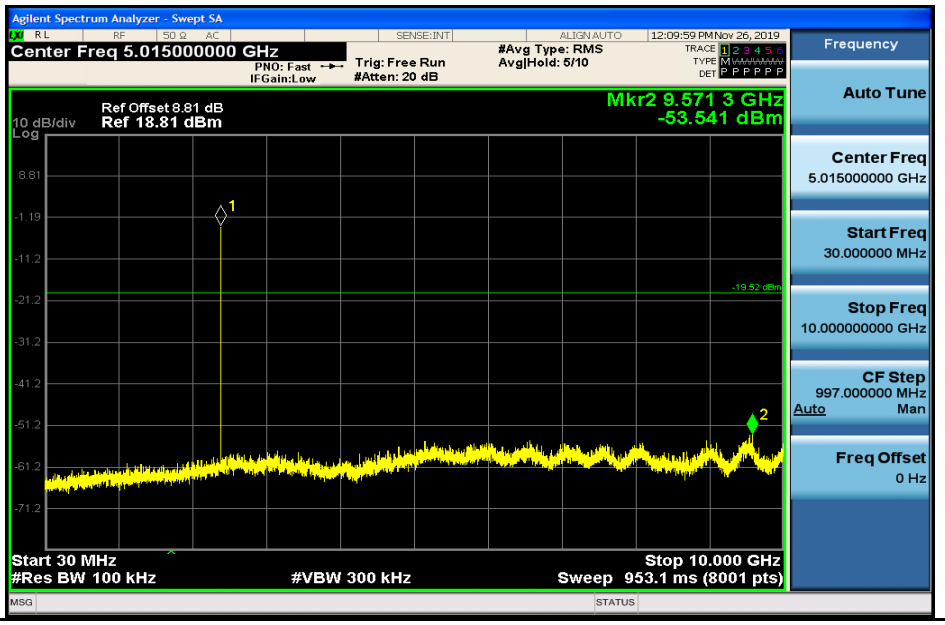


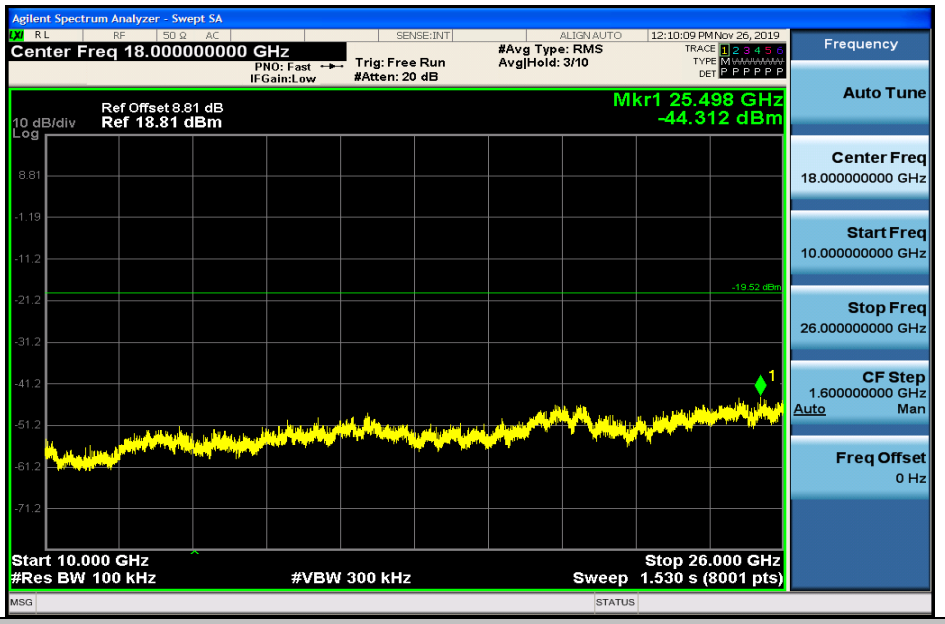
Band-edge for RF Conducted Emissions_BLE_2480_Hopping Off-2Mbps



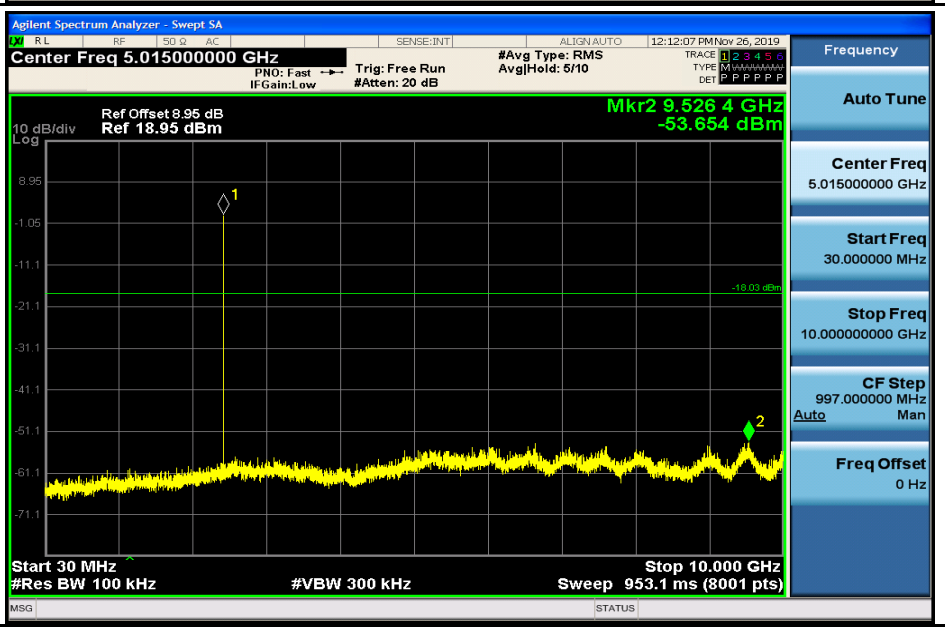
6.RF Conducted Spurious Emissions

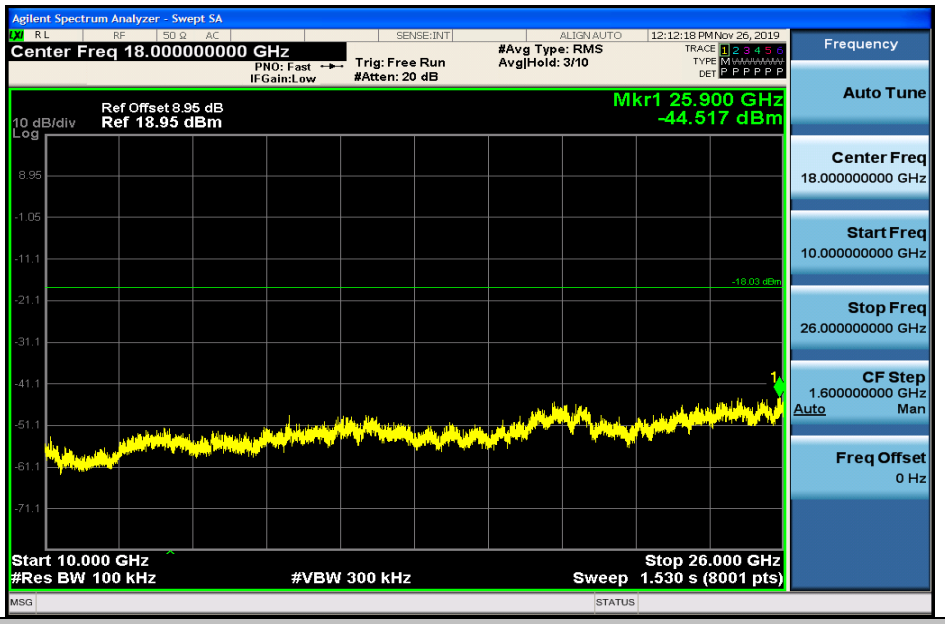
Test Mode	Test Channel	StartFre [MHz]	StopFre [MHz]	RBW [kHz]	VBW [kHz]	Pref[dBm]		Max. Level [dBm]		Limit [dBm]		Verdict
						1Mbps	2Mbps	1Mbps	2Mbps	1Mbps	2Mbps	
BLE	2402	30	10000	100	300	0.48	0.02	-53.54	-54.07	<-19.52	<-19.99	PASS
BLE	2402	10000	26000	100	300	0.484	0.015	-44.312	-43.979	<-19.516	<-19.985	PASS
BLE	2440	30	10000	100	300	1.97	1.48	-53.65	-54.34	<-18.03	<-18.52	PASS
BLE	2440	10000	26000	100	300	1.967	1.478	-44.517	-43.687	<-18.033	<-18.522	PASS
BLE	2480	30	10000	100	300	2.43	1.53	-54.19	-53.85	<-17.57	<-18.48	PASS
BLE	2480	10000	26000	100	300	2.428	1.525	-44.380	-44.436	<-17.572	<-18.475	PASS

RF Conducted Spurious Emissions_BLE_2402-1Mbps



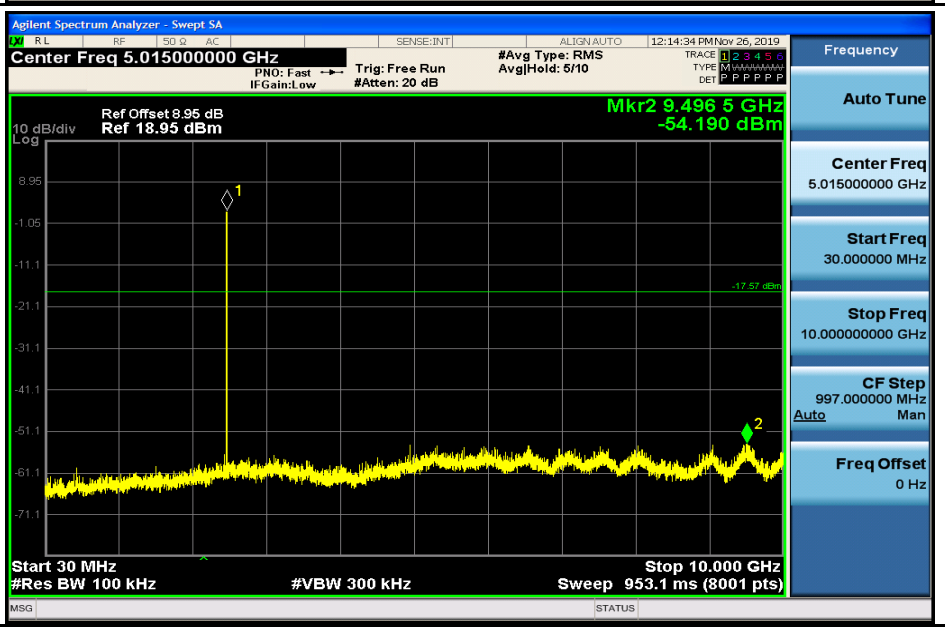


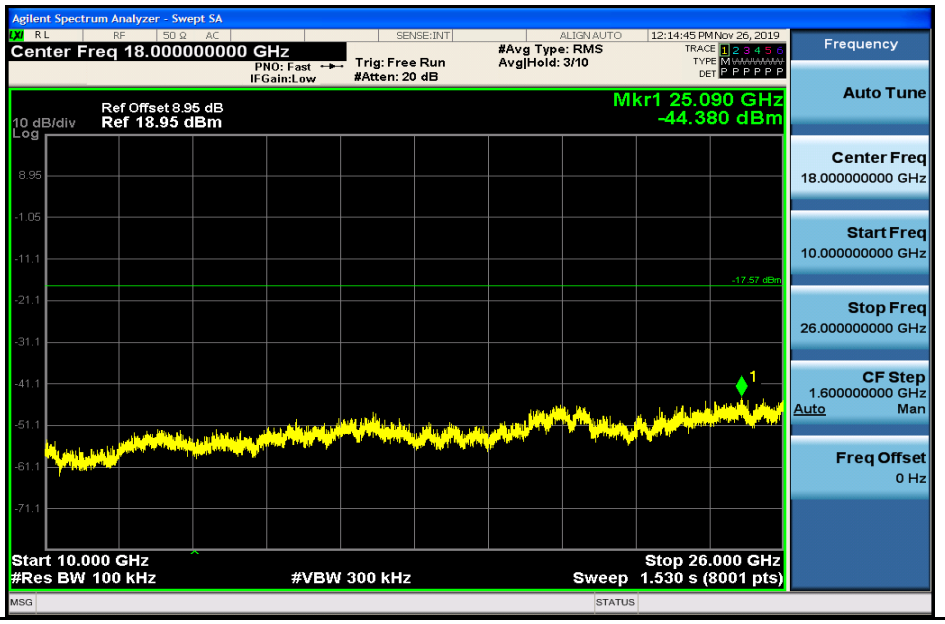
RF Conducted Spurious Emissions_BLE_2440-1Mbps

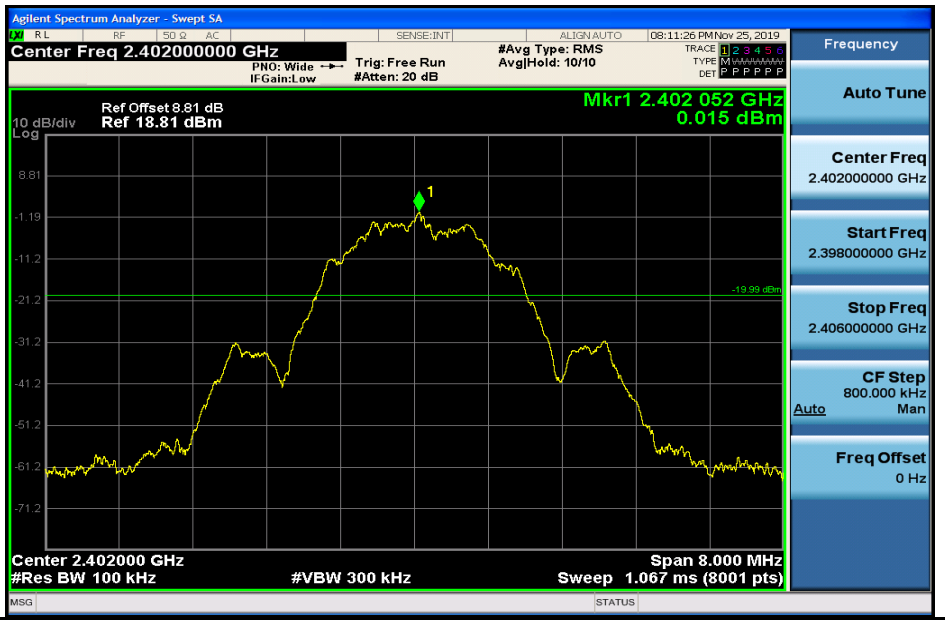
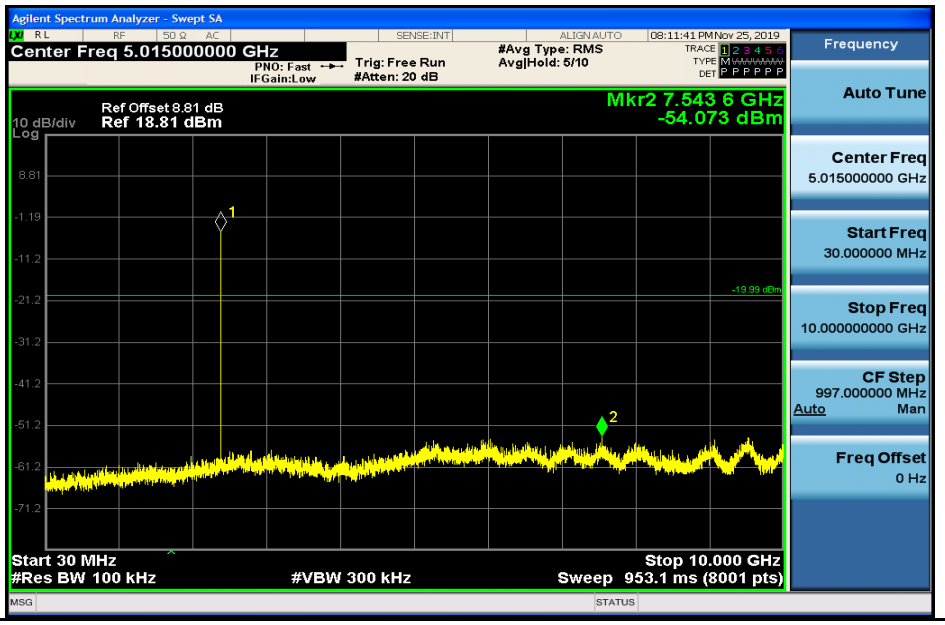
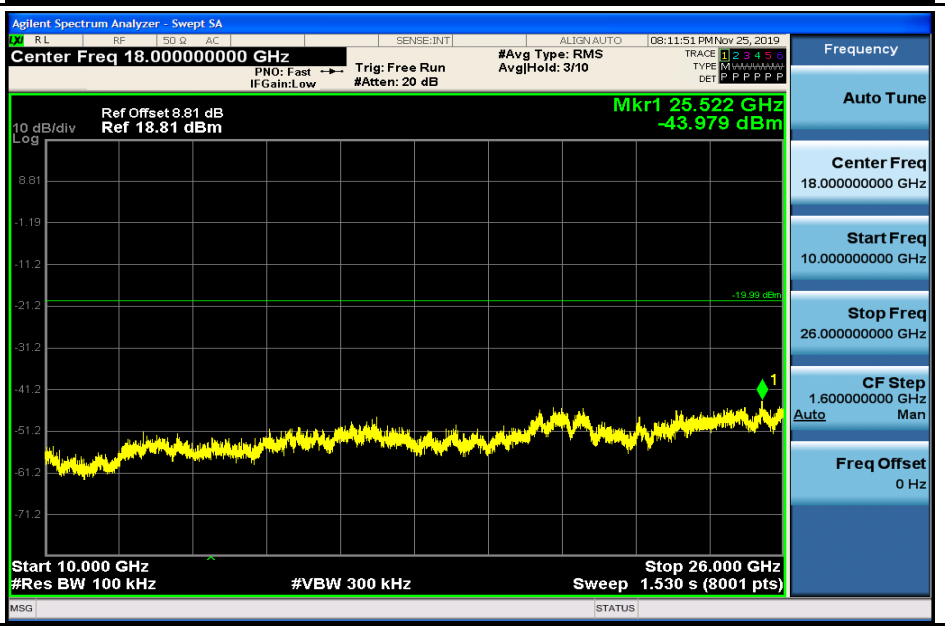


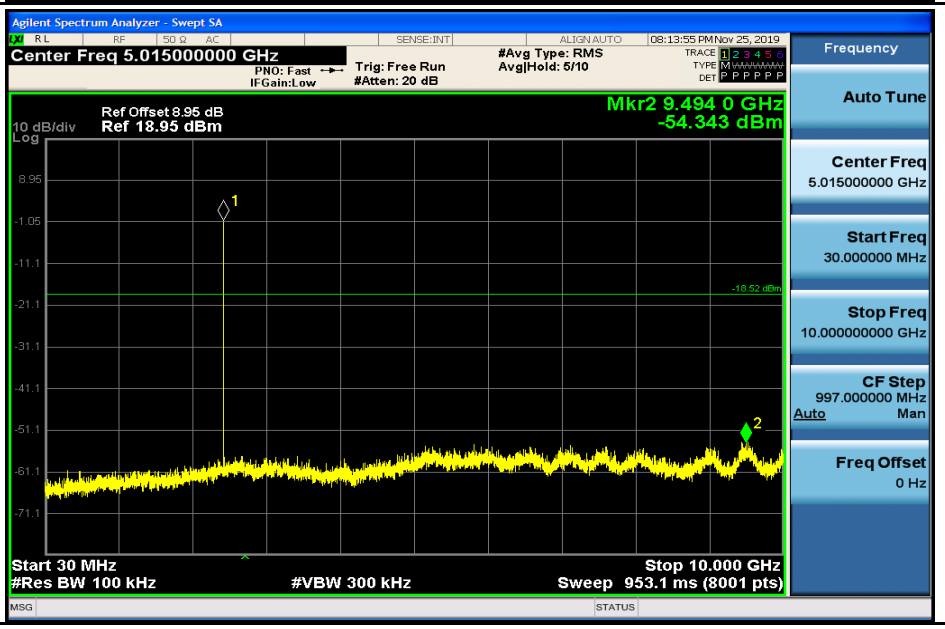
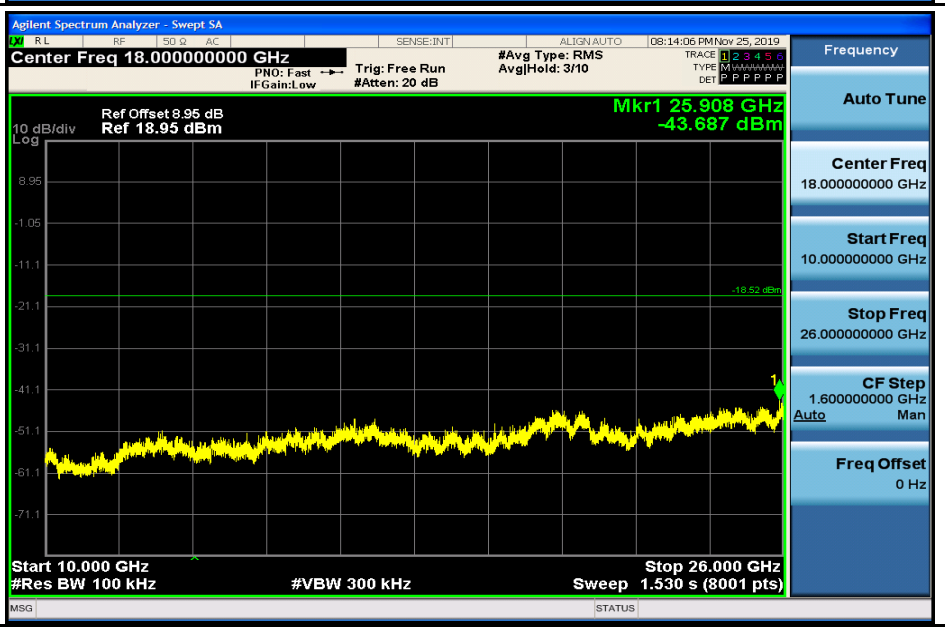


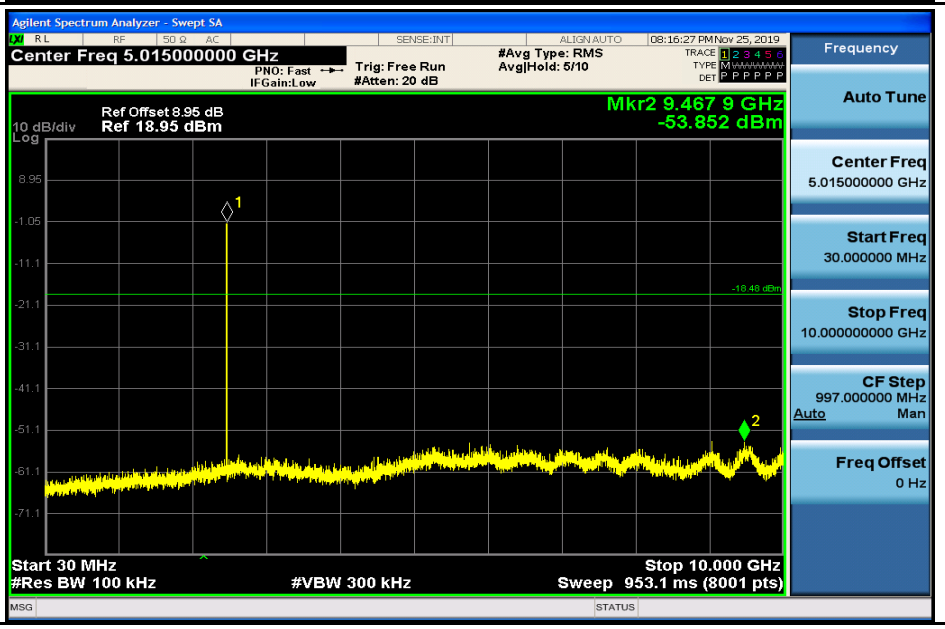
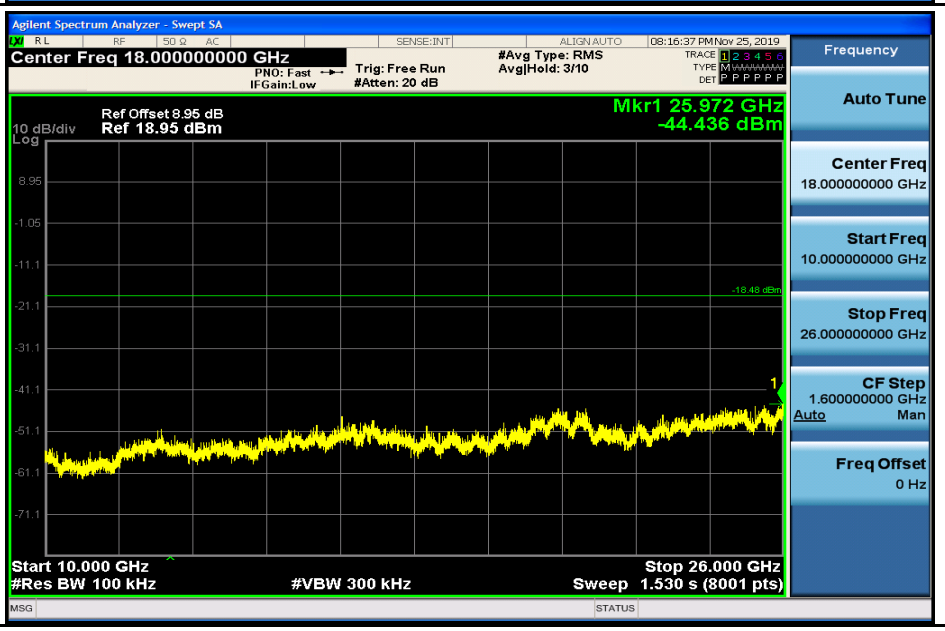
RF Conducted Spurious Emissions_BLE_2480-1Mbps




Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
12:14:45 PM Nov 26, 2019
Center Freq 18.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/10
TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 dBm
Mkr1 25.090 GHz
-44.380 dBm
8.95
-1.05
-11.1
-21.1
-31.1
-41.1
-51.1
-61.1
-71.1
-17.57 dBm
1
Start 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.000 GHz
Sweep 1.530 s (8001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
18.000000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
26.000000000 GHz
CF Step
1.600000000 GHz
Auto
Man
Freq Offset
0 Hz

RF Conducted Spurious Emissions_BLE_2402-2Mbps




RF Conducted Spurious Emissions_BLE_2440-2Mbps



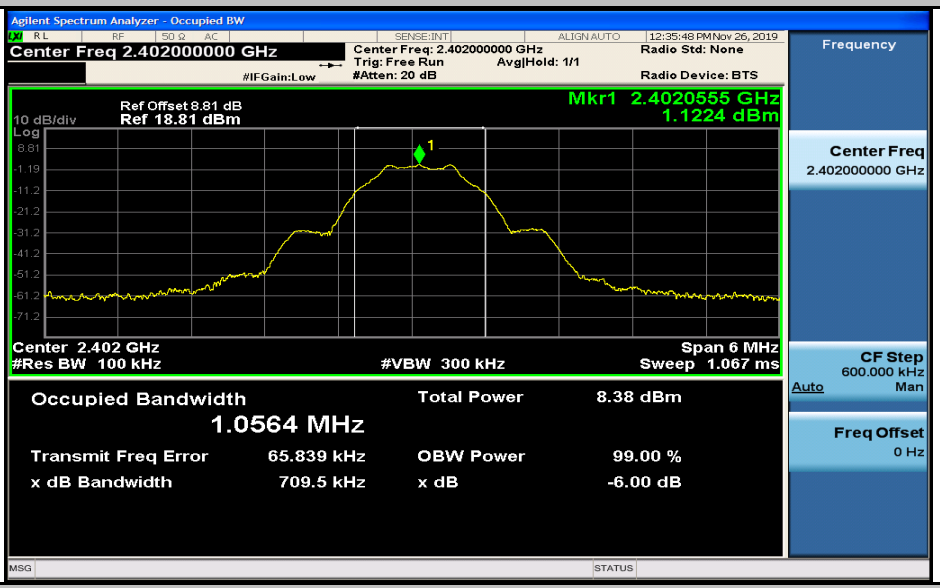
RF Conducted Spurious Emissions_BLE_2480-2Mbps



A1965-Right

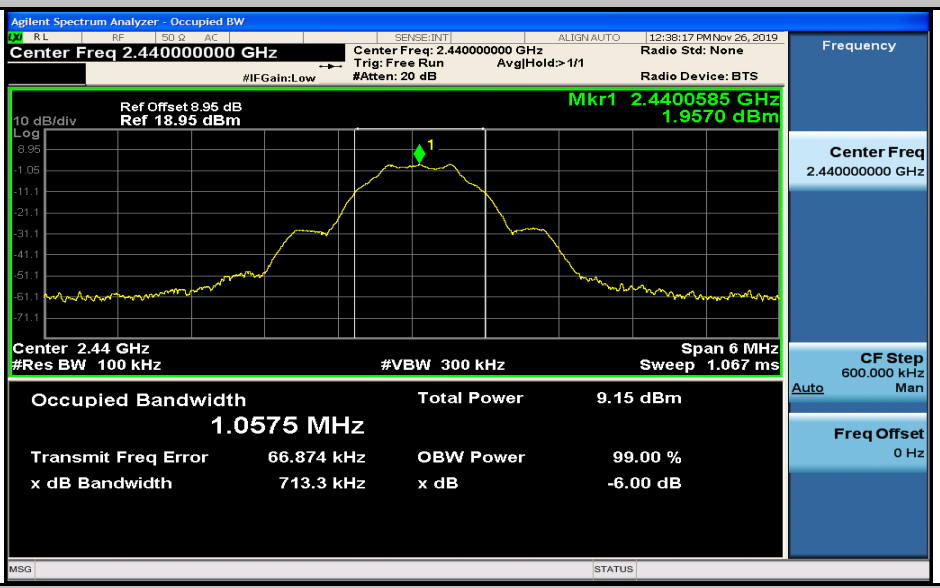
1.6dB Bandwidth

Test Mode	Test Channel	EBW[MHz]		Limit	Verdict
		1Mbps	2Mbps		
BLE	2402	0.71	1.27	0.5	PASS
BLE	2440	0.71	1.27	0.5	PASS
BLE	2480	0.71	1.25	0.5	PASS

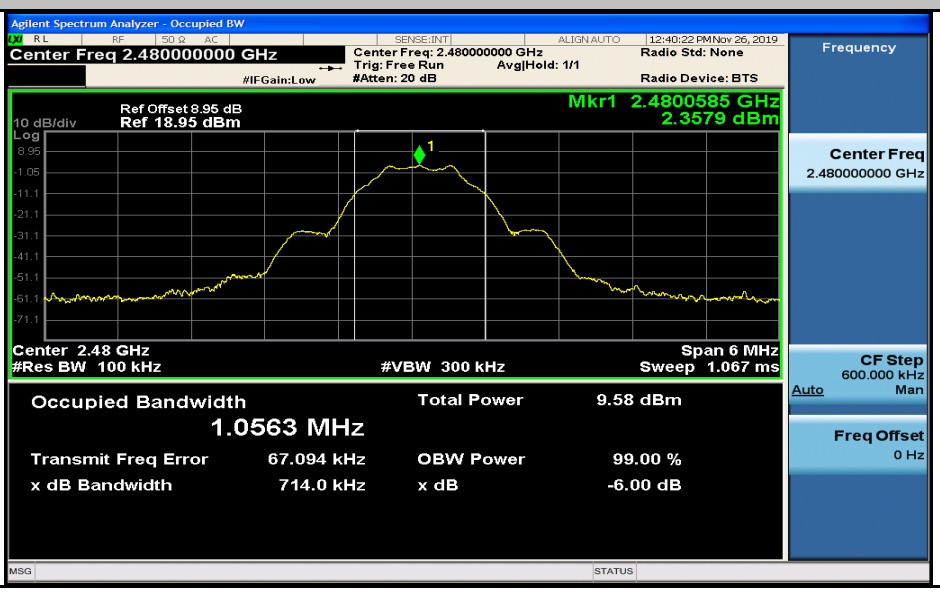
6dB Bandwidth_BLE_2402-1Mbps



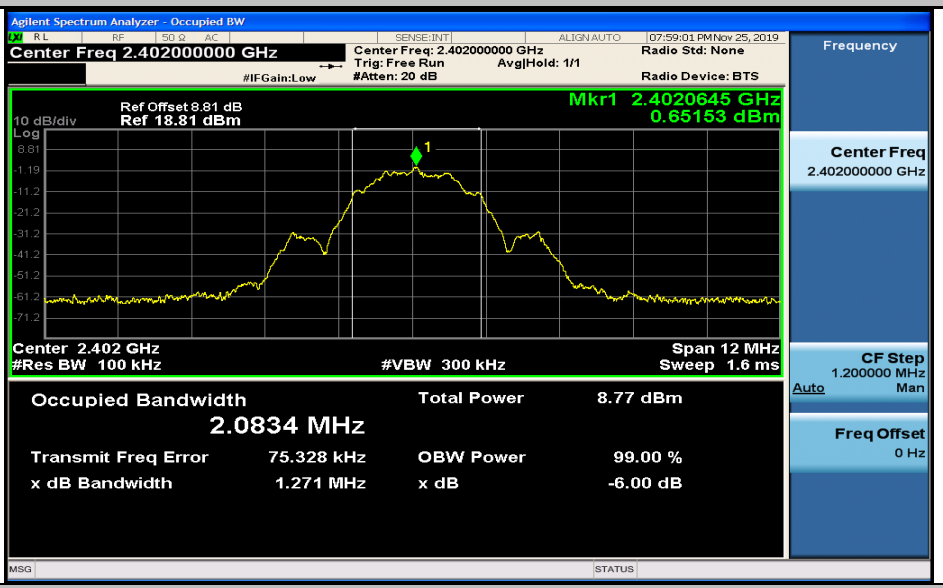
6dB Bandwidth_BLE_2440-1Mbps



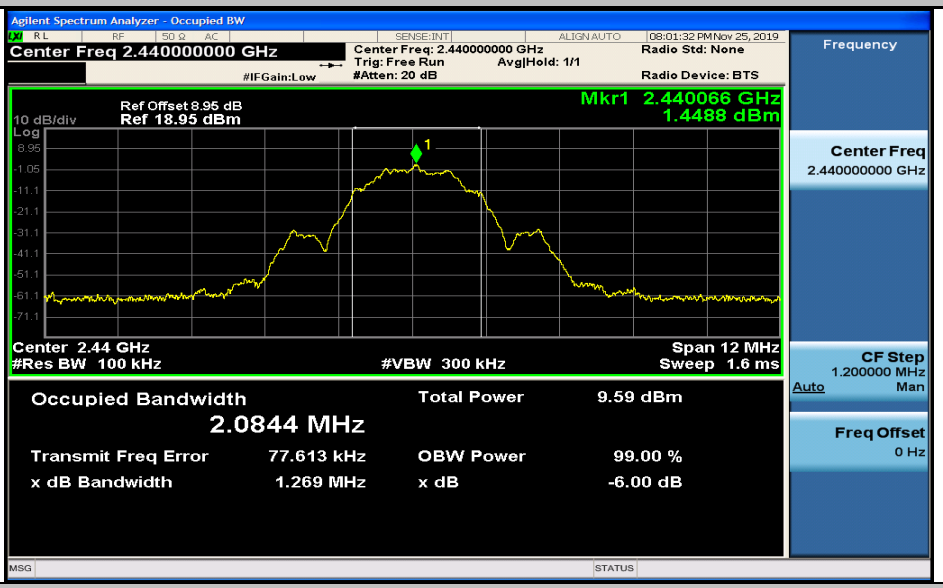
6dB Bandwidth_BLE_2480-1Mbps



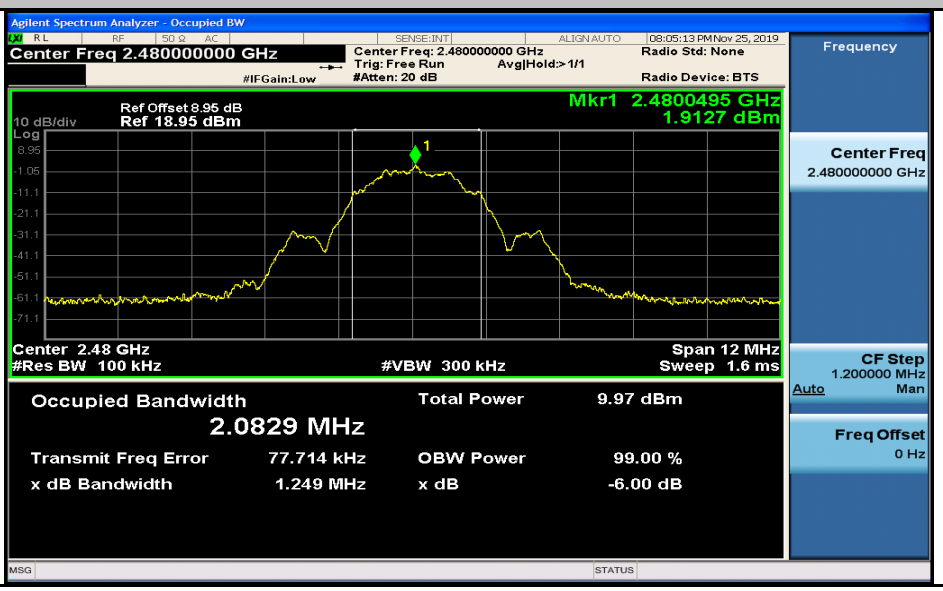
6dB Bandwidth_BLE_2402-2Mbps



6dB Bandwidth_BLE_2440-2Mbps



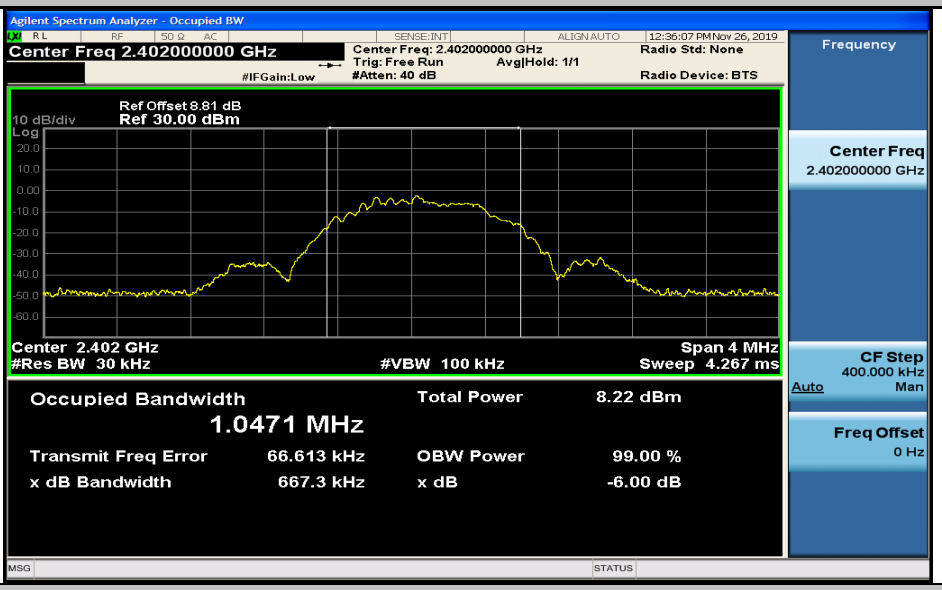
6dB Bandwidth_BLE_2480-2Mbps



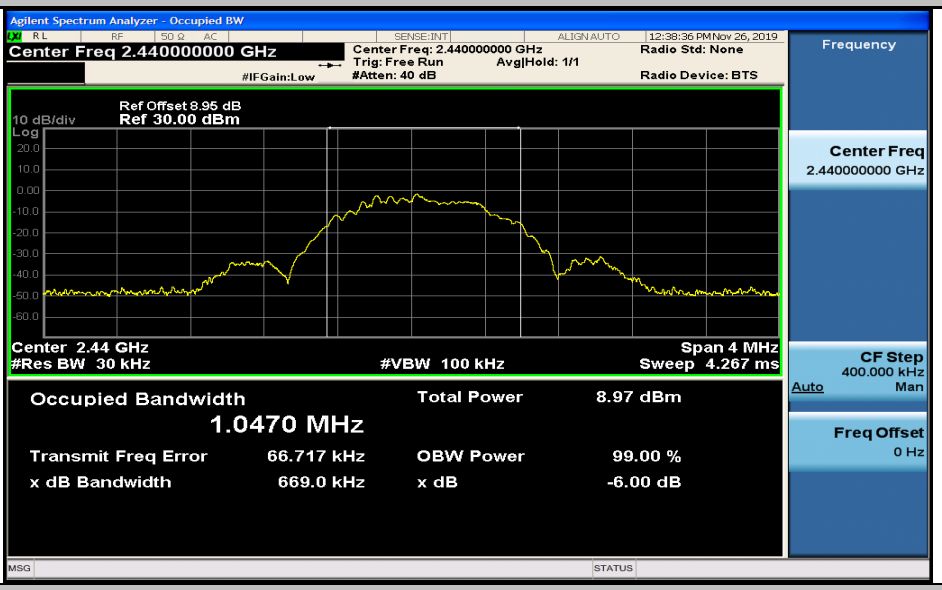
2.Occupied Bandwidth

Test Mode	Test Channel	OBW[MHz]		Limit[MHz]	Verdict
		1Mbps	2Mbps		
BLE	2402	1.05	2.08	---	PASS
BLE	2440	1.05	2.08	---	PASS
BLE	2480	1.05	2.08	---	PASS

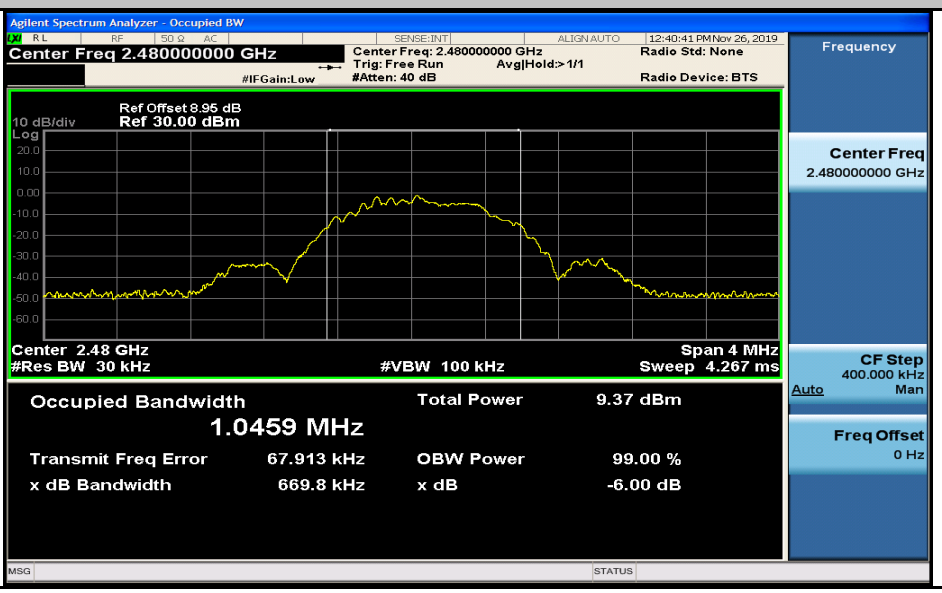
Occupied Bandwidth_BLE_2402-1Mbps



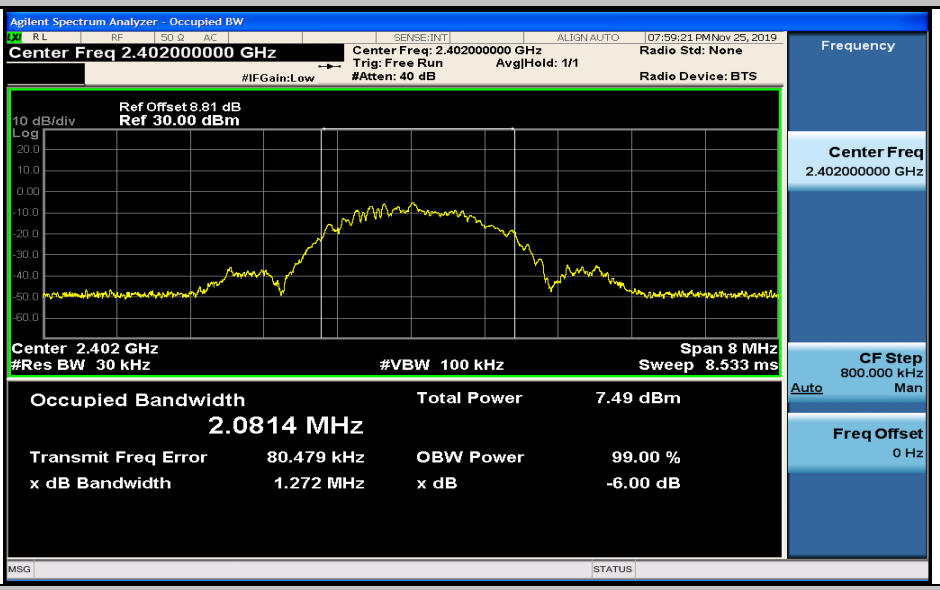
Occupied Bandwidth_BLE_2440-1Mbps



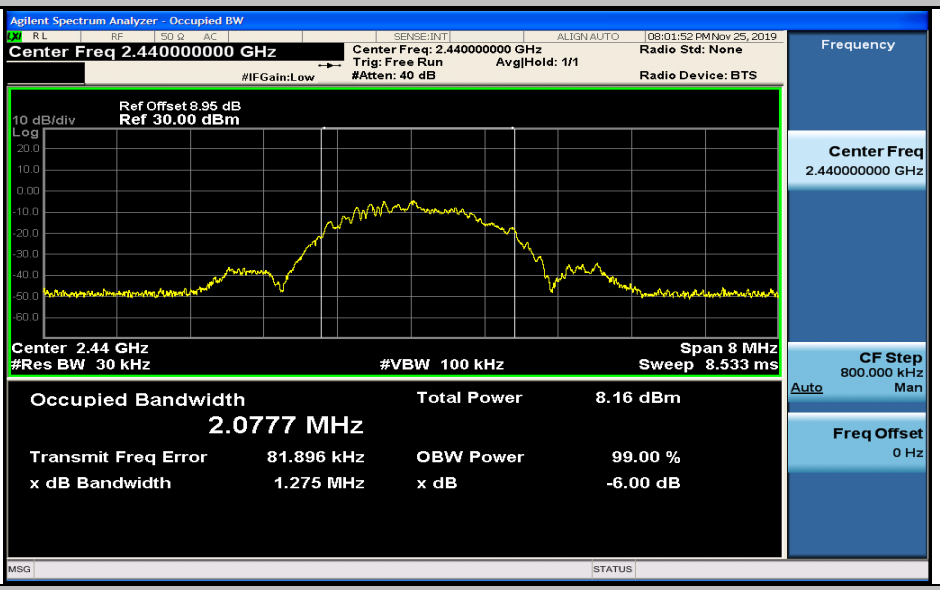
Occupied Bandwidth_BLE_2480-1Mbps



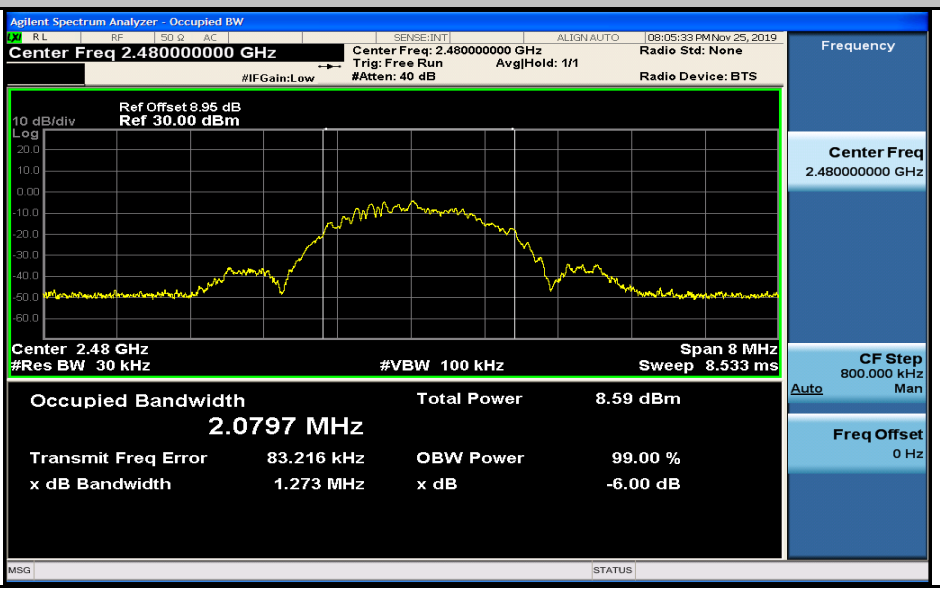
Occupied Bandwidth_BLE_2402-2Mbps



Occupied Bandwidth_BLE_2440-2Mbps



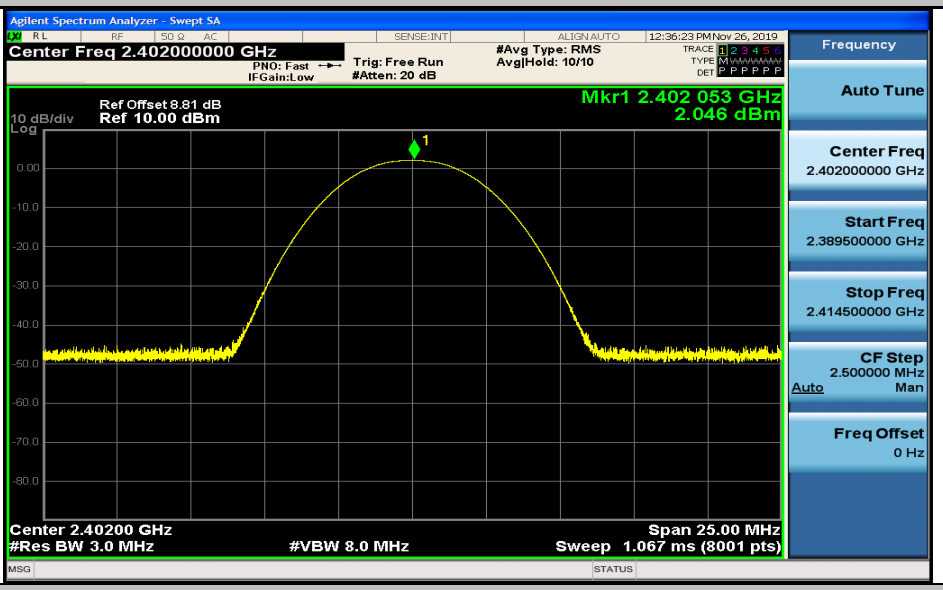
Occupied Bandwidth_BLE_2480-2Mbps



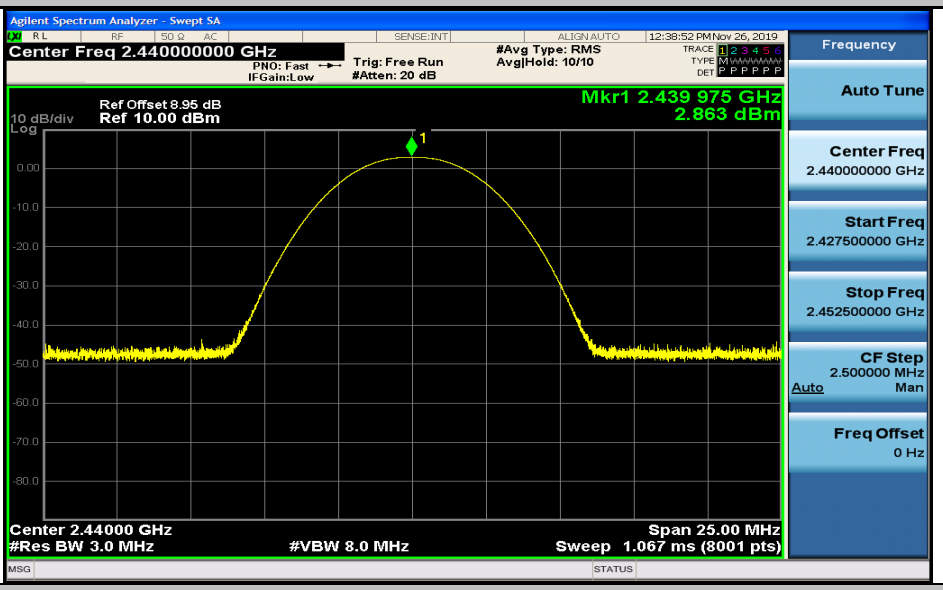
3.Maximum peak conducted output power

Test Mode	Test Channel	Power[dBm]		Limit[dBm]	Verdict
		1Mbps	2Mbps		
BLE	2402	2.05	2.13	30	PASS
BLE	2440	2.86	2.92	30	PASS
BLE	2480	3.27	3.32	30	PASS

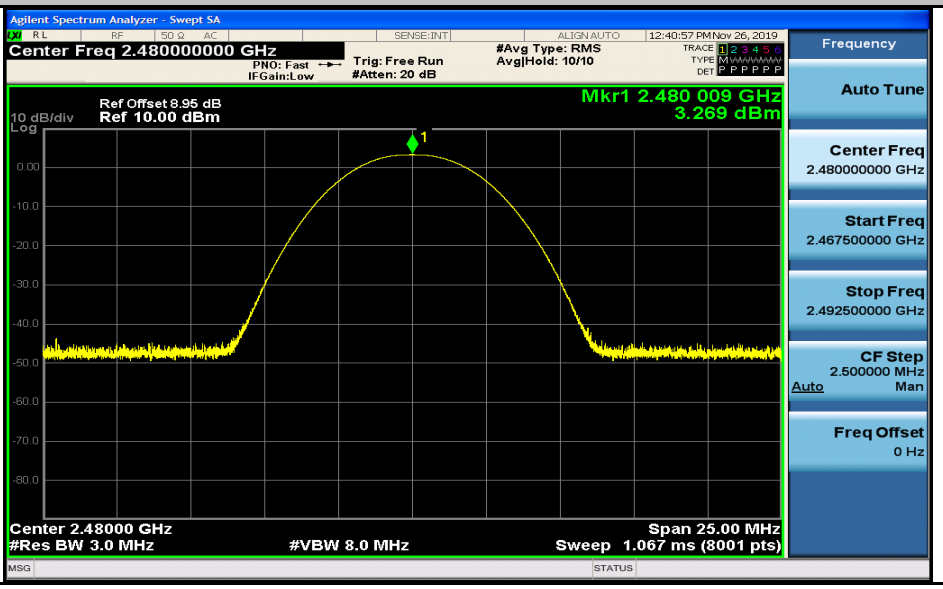
Maximum peak conducted output power_BLE_2402-1Mbps



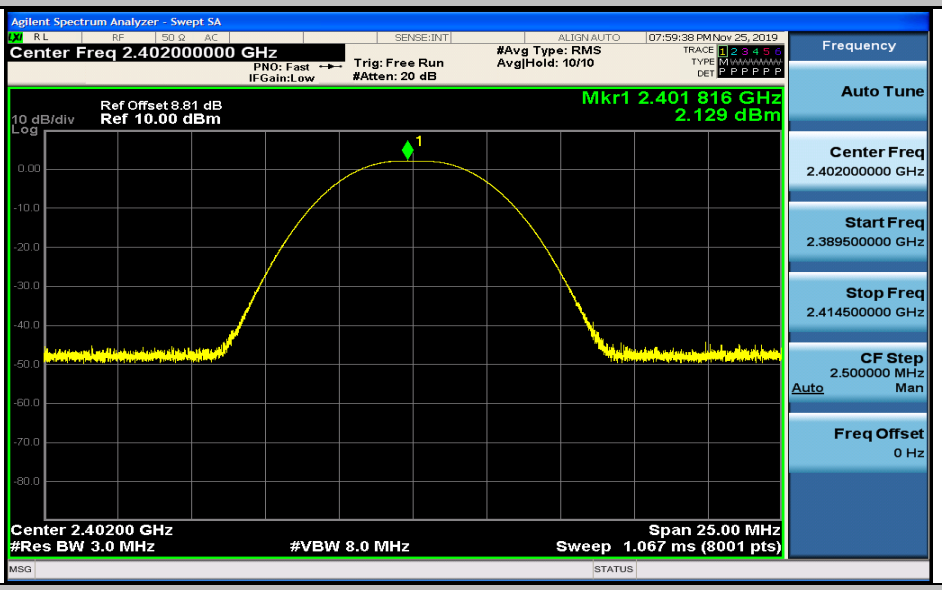
Maximum peak conducted output power_BLE_2440-1Mbps



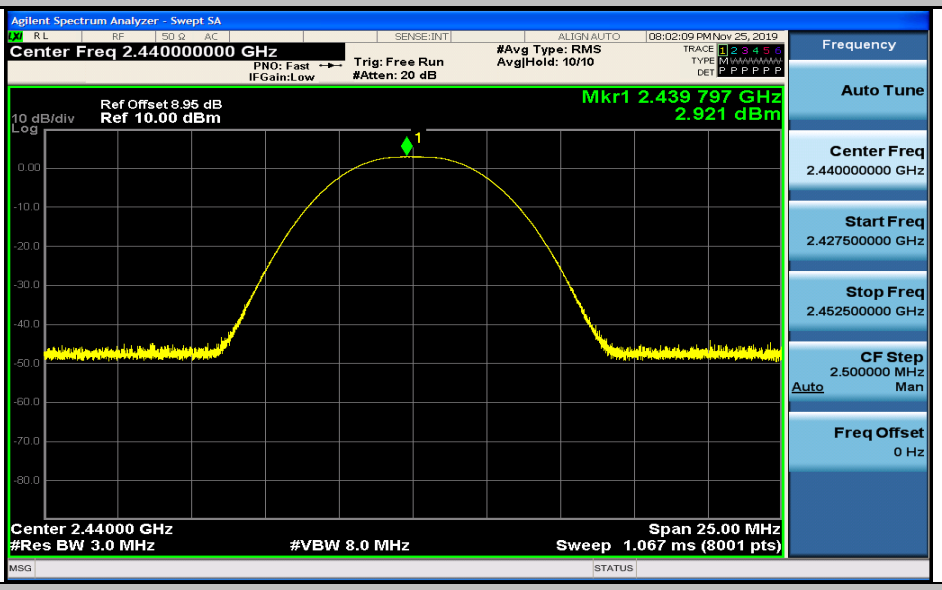
Maximum peak conducted output power_BLE_2480-1Mbps



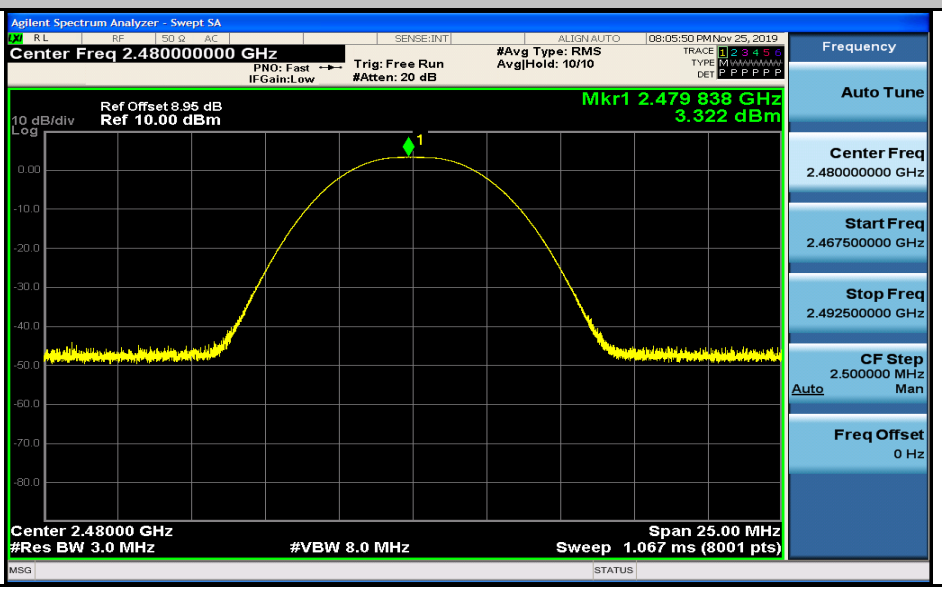
Maximum peak conducted output power_BLE_2402-2Mbps



Maximum peak conducted output power_BLE_2440-2Mbps



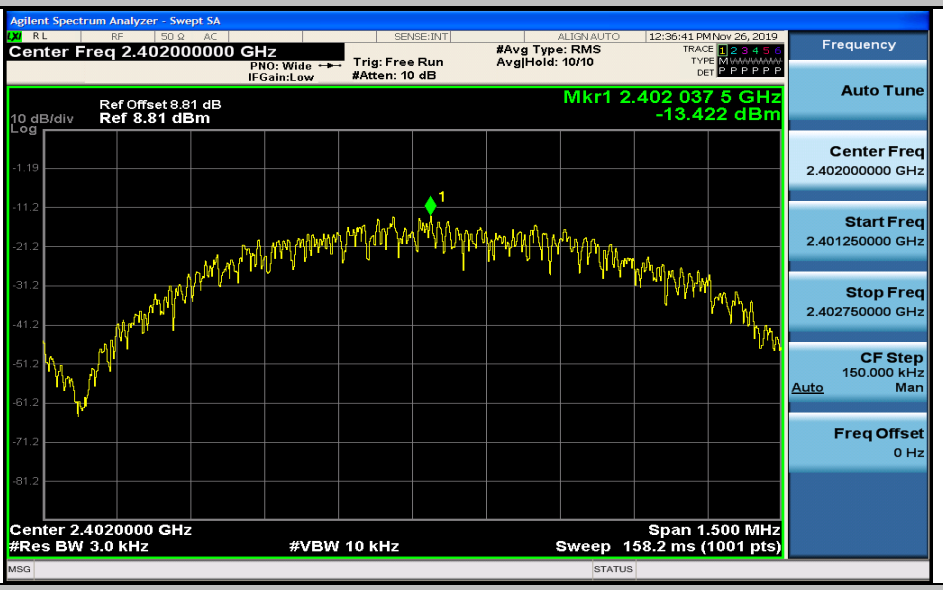
Maximum peak conducted output power_BLE_2480-2Mbps



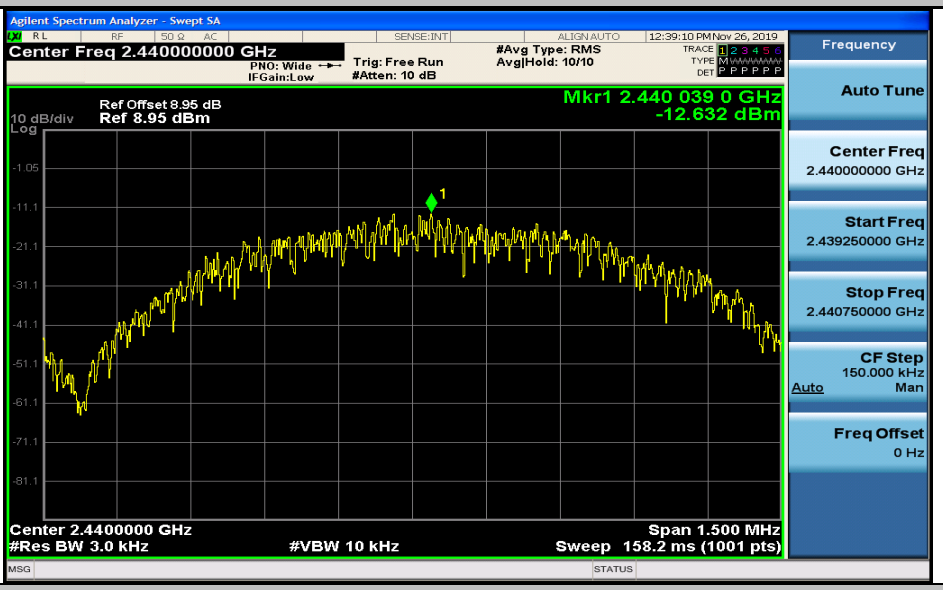
4.Maximum Peak power spectral density

Test Mode	Test Channel	PSD[dBm/3kHz]		Limit[dBm/3kHz]	Verdict
		1Mbps	2Mbps		
BLE	2402	-13.42	-16.17	8.00	PASS
BLE	2440	-12.63	-14.87	8.00	PASS
BLE	2480	-12.77	-14.38	8.00	PASS

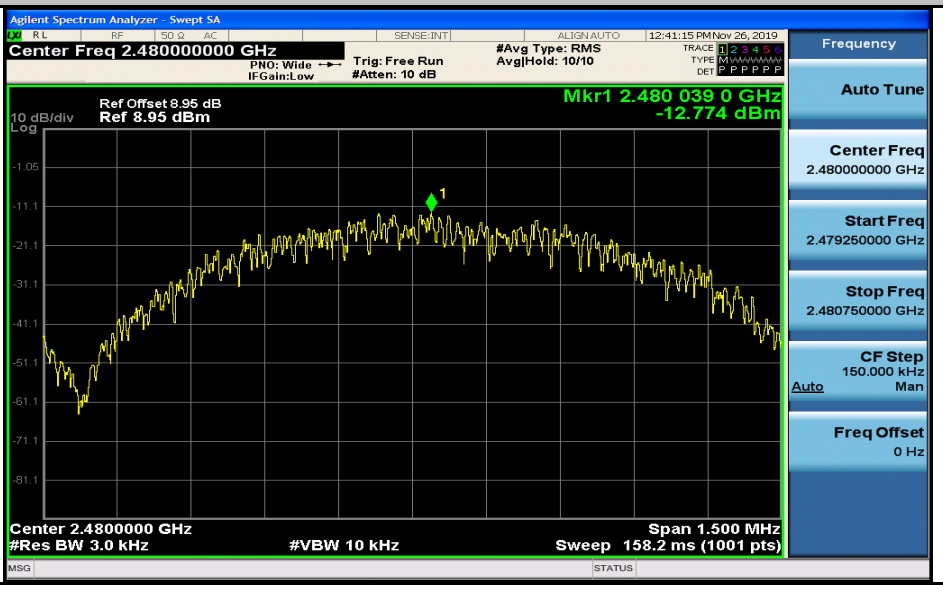
Maximum Peak power spectral density_BLE_2402-1Mbps



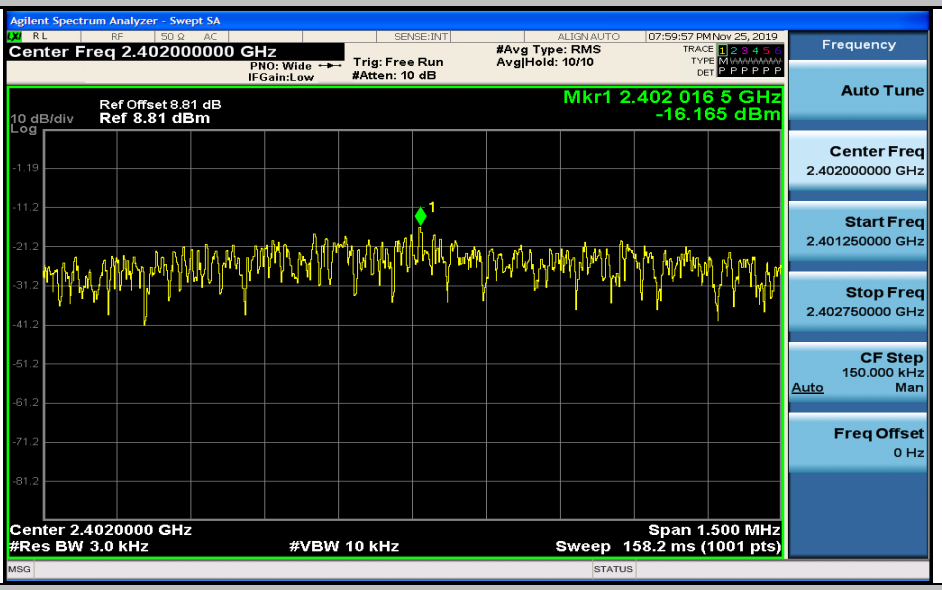
Maximum Peak power spectral density_BLE_2440-1Mbps



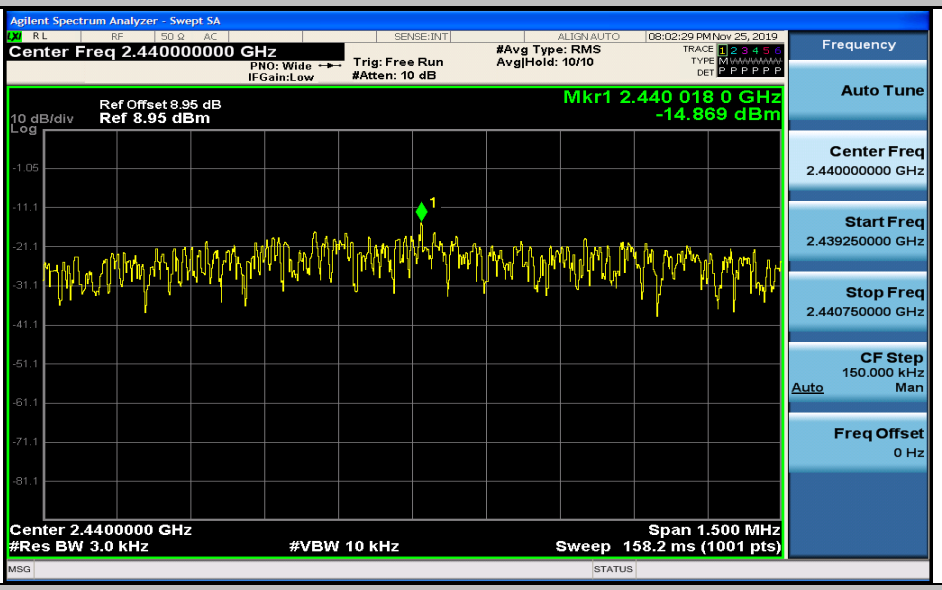
Maximum Peak power spectral density_BLE_2480-1Mbps



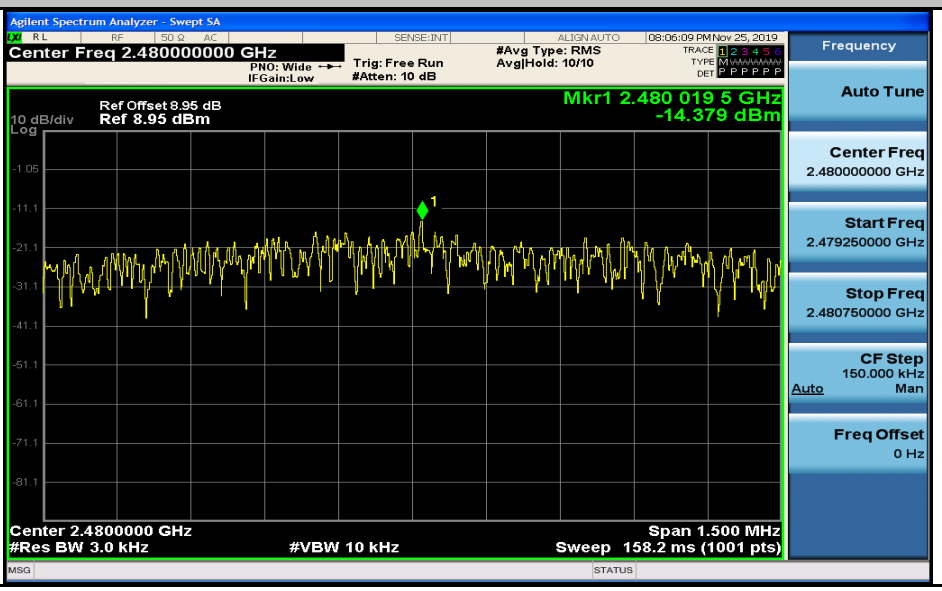
Maximum Peak power spectral density_BLE_2402-2Mbps



Maximum Peak power spectral density_BLE_2440-2Mbps



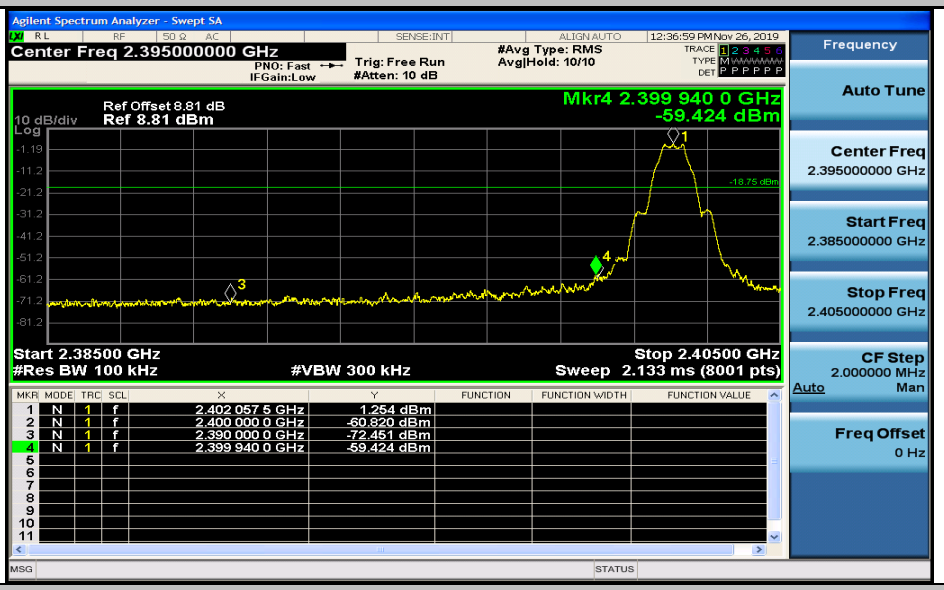
Maximum Peak power spectral density_BLE_2480-2Mbps



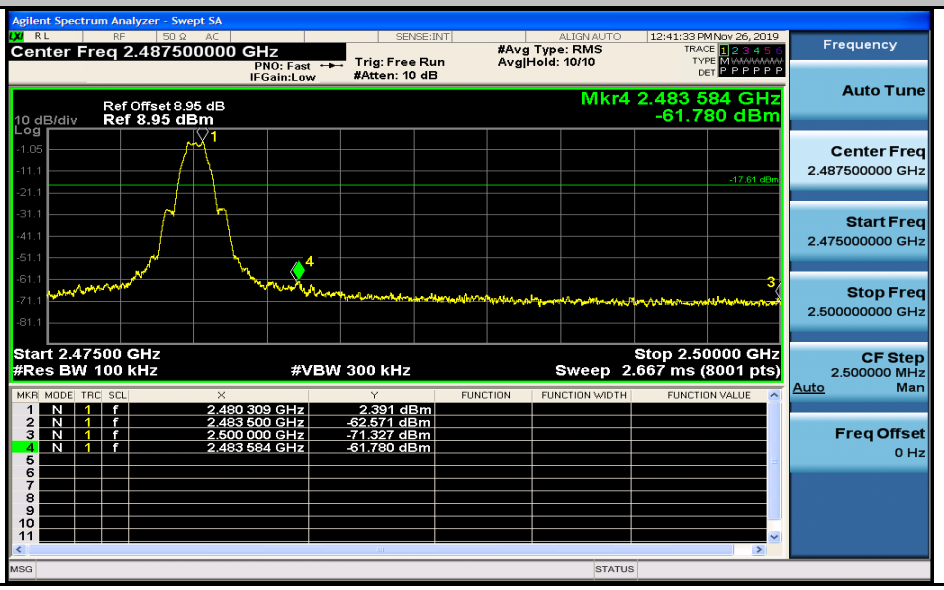
5.Band-edge for RF Conducted Emissions

Test Mode	Test Channel	Carrier Power[dBm]		Max. Spurious Level [dBm]		Limit [dBm]	Verdict
		1Mbps	2Mbps	1Mbps	2Mbps		
BLE	2402	1.25	0.84	-59.42	-33.12	-17.53	PASS
BLE	2480	2.39	1.33	-61.78	-60.19	-17.00	PASS

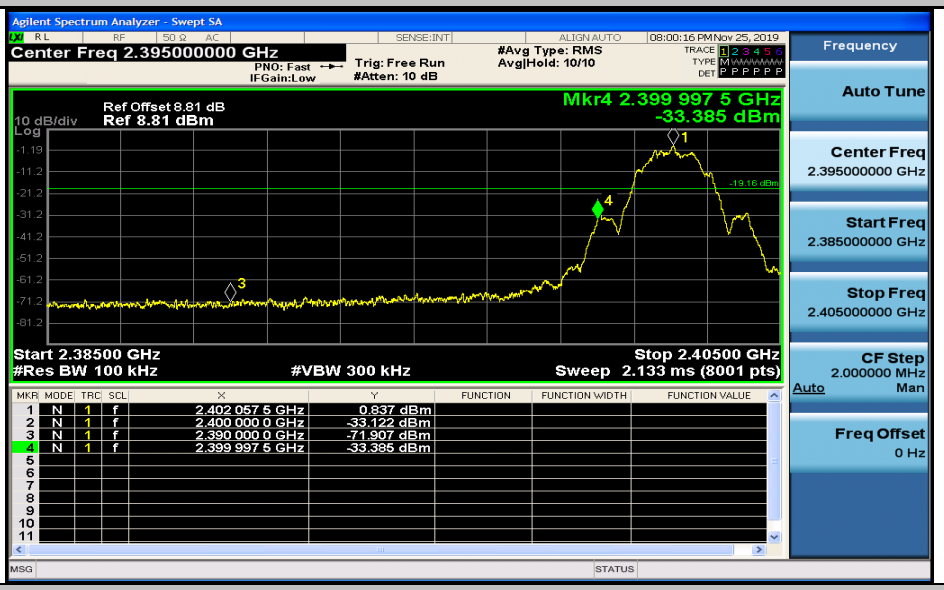
Band-edge for RF Conducted Emissions_BLE_2402_Hopping Off-1Mbps



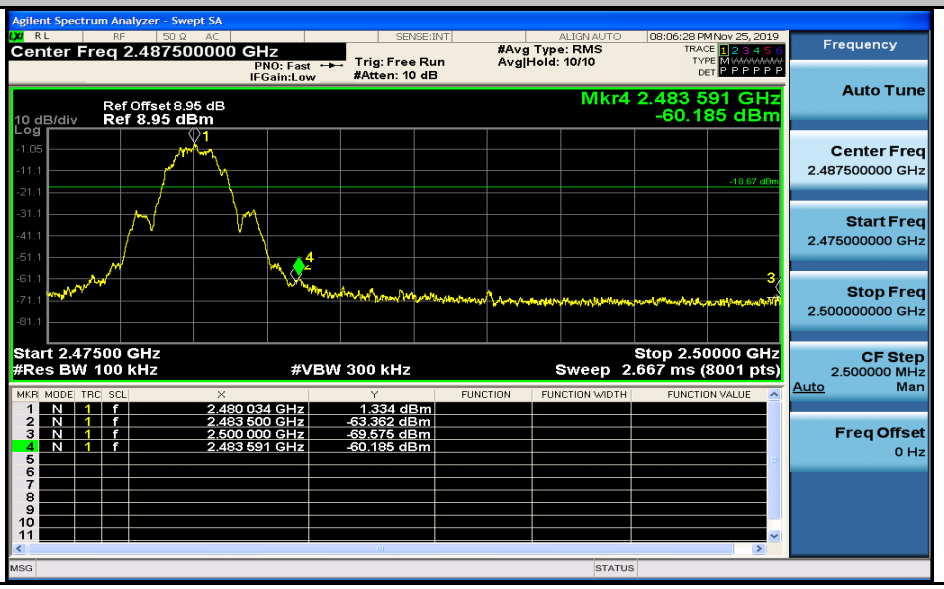
Band-edge for RF Conducted Emissions_BLE_2480_Hopping Off-1Mbps



Band-edge for RF Conducted Emissions_BLE_2402_Hopping Off-2Mbps

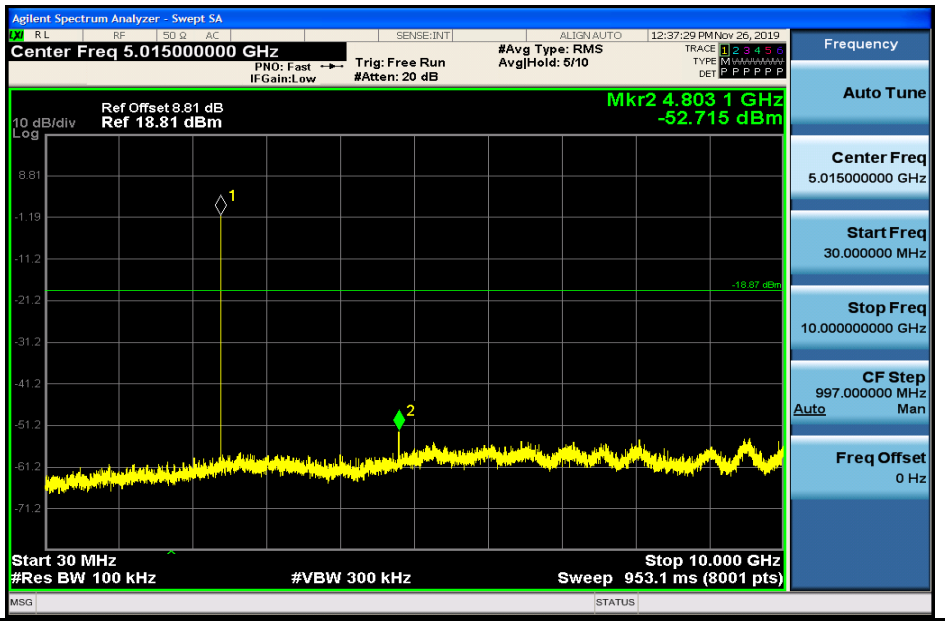


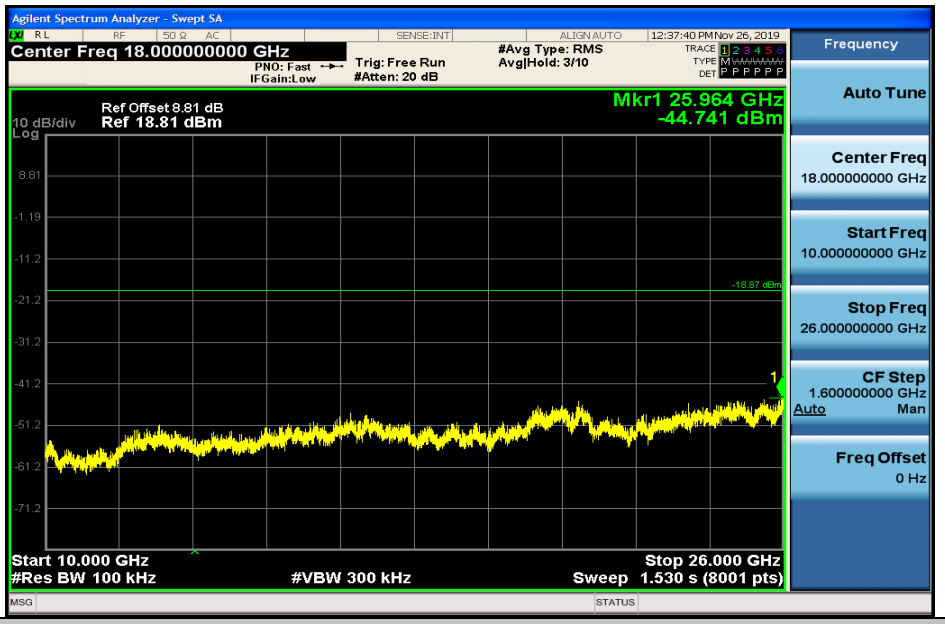
Band-edge for RF Conducted Emissions_BLE_2480_Hopping Off-2Mbps



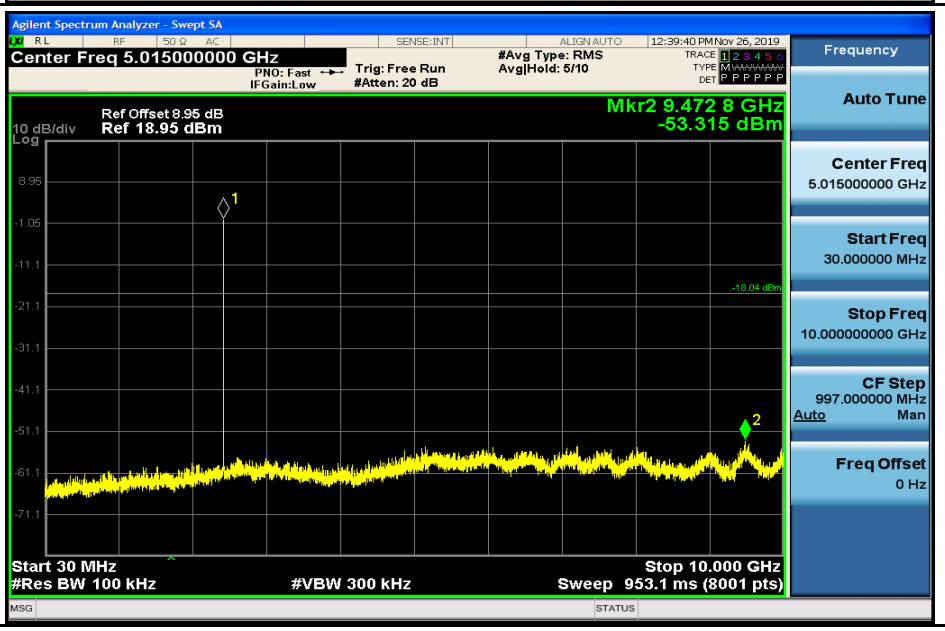
6.RF Conducted Spurious Emissions

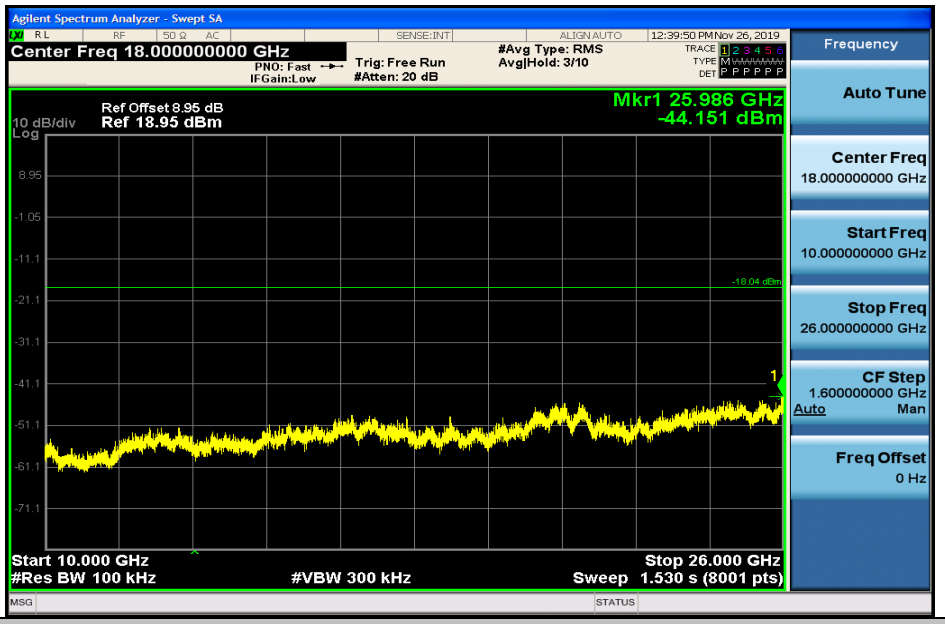
Test Mode	Test Channel	StartFre [MHz]	StopFre [MHz]	RBW [kHz]	VBW [kHz]	Pref[dBm]		Max. Level [dBm]		Limit [dBm]		Verdict
						1Mbps	2Mbps	1Mbps	2Mbps	1Mbps	2Mbps	
BLE	2402	30	10000	100	300	1.13	0.77	-52.72	-54.12	<-18.87	<-19.23	PASS
BLE	2402	10000	26000	100	300	1.132	0.766	-44.741	-44.556	<-18.868	<-19.234	PASS
BLE	2440	30	10000	100	300	1.96	1.57	-53.32	-53.30	<-18.04	<-18.43	PASS
BLE	2440	10000	26000	100	300	1.964	1.573	-44.151	-44.363	<-18.036	<-18.427	PASS
BLE	2480	30	10000	100	300	2.32	1.99	-52.85	-54.45	<-17.68	<-18.01	PASS
BLE	2480	10000	26000	100	300	2.319	1.989	-44.327	-44.201	<-17.681	<-18.011	PASS

RF Conducted Spurious Emissions_BLE_2402-1Mbps


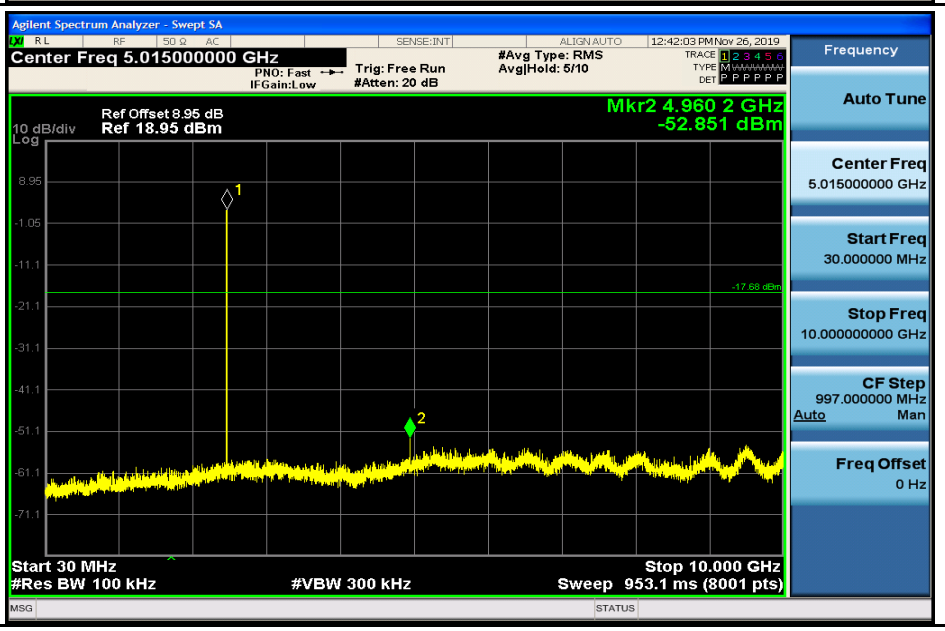


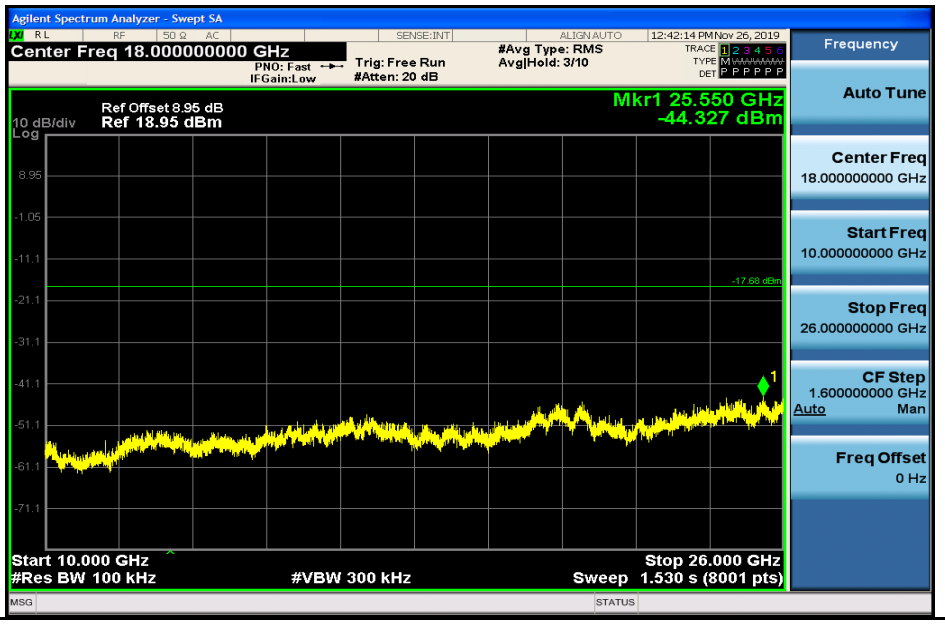
RF Conducted Spurious Emissions_BLE_2440-1Mbps

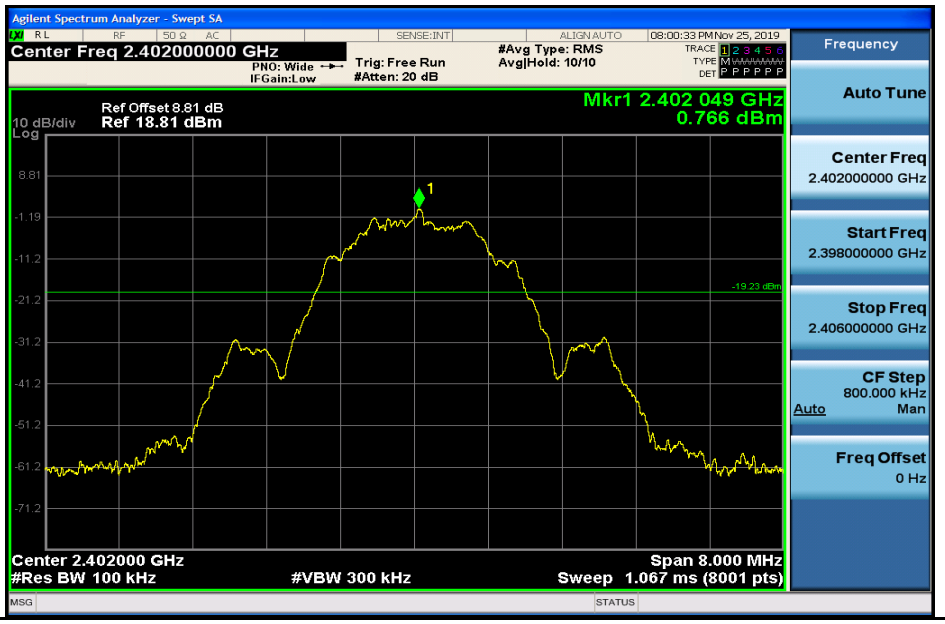
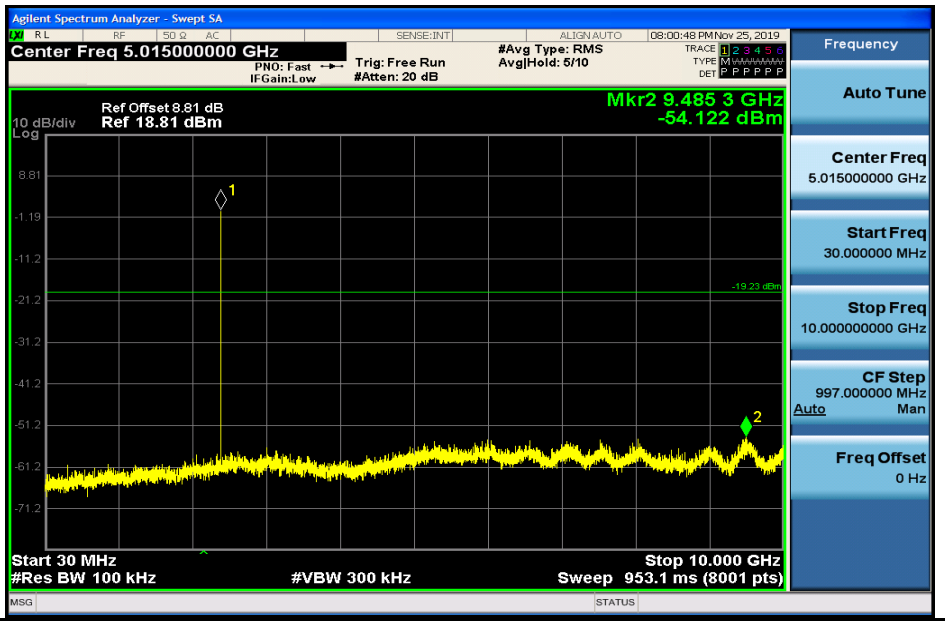
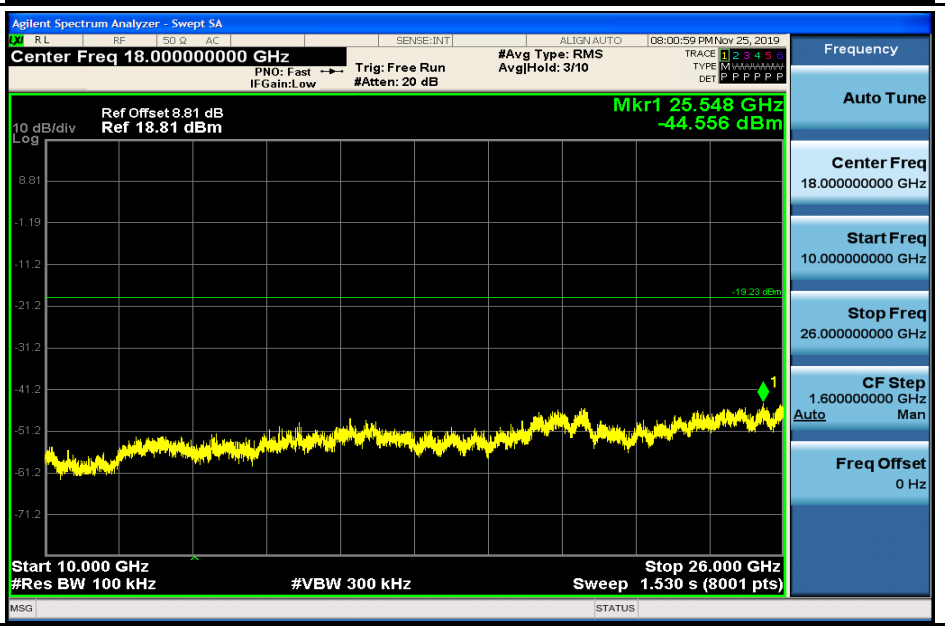


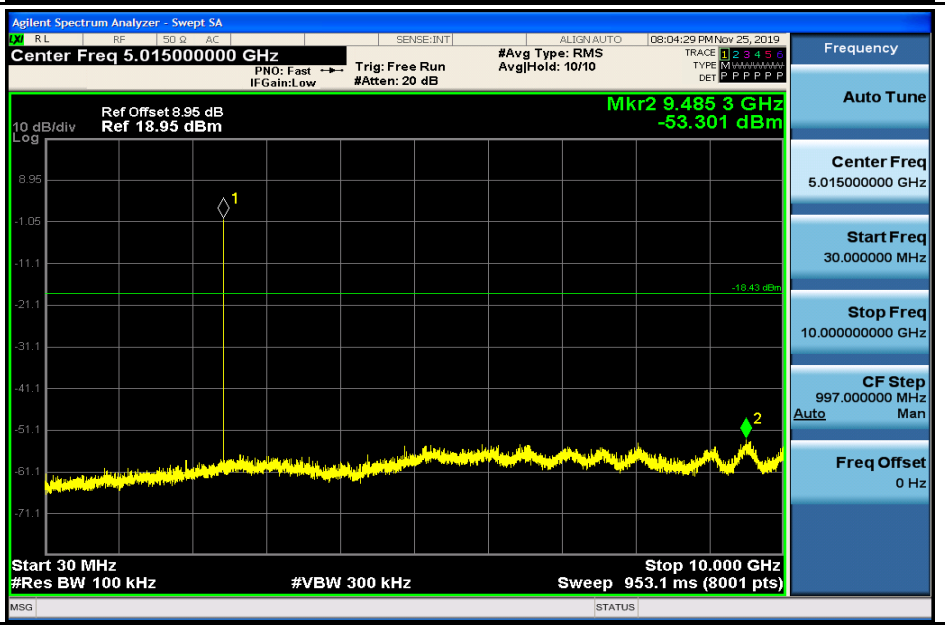
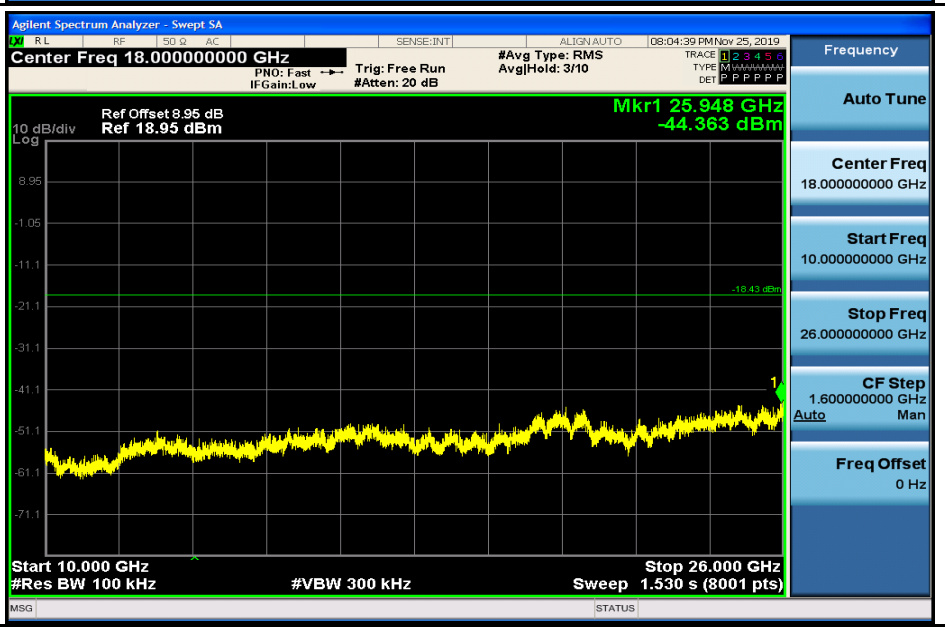
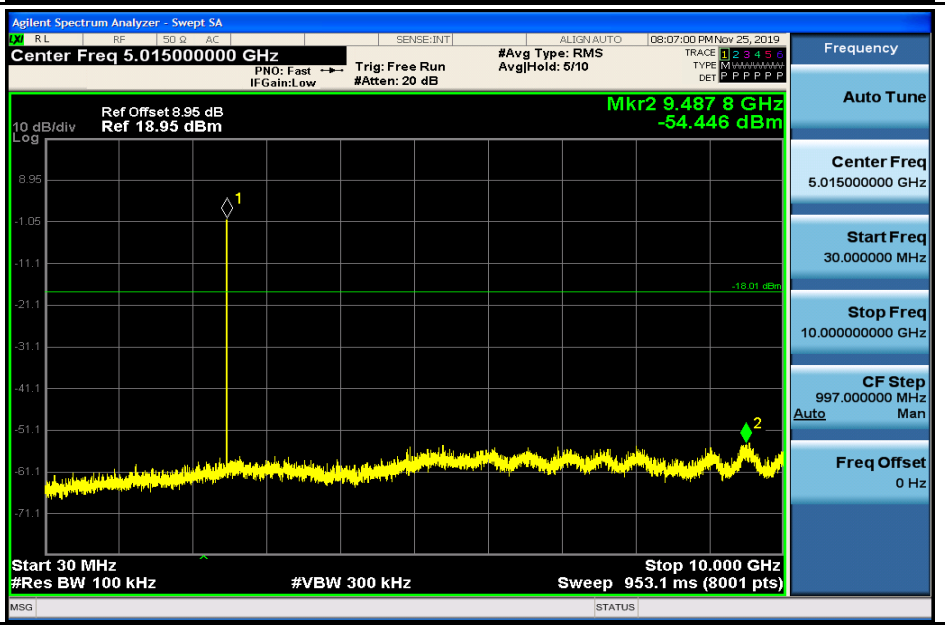
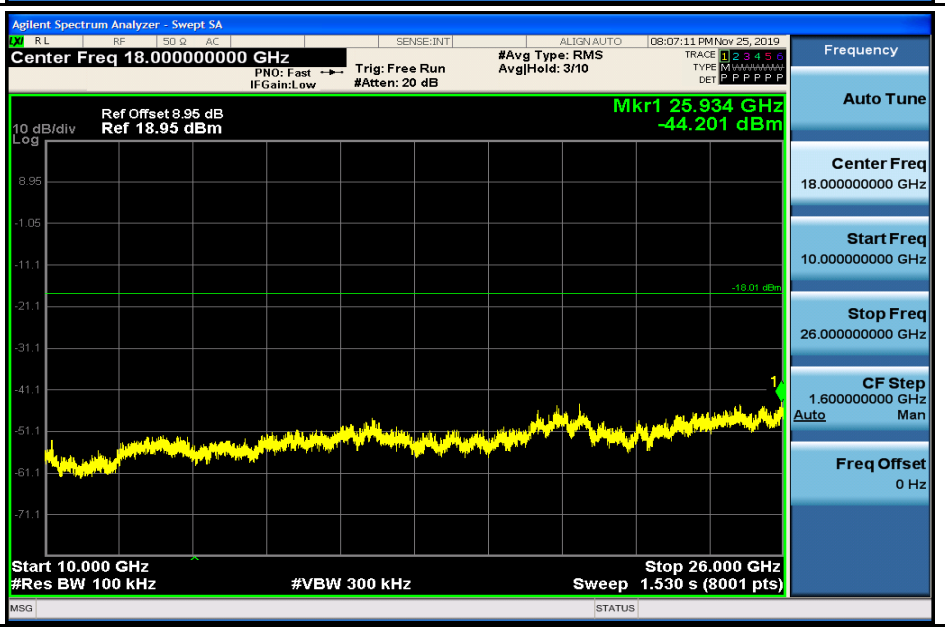


RF Conducted Spurious Emissions_BLE_2480-1Mbps




Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
12:42:14 PM Nov 26, 2019
Center Freq 18.000000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/10
TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P
Ref Offset 8.95 dB
10 dB/div
Log
Ref 18.95 dBm
Mkr1 25.550 GHz
-44.327 dBm
8.95
-1.05
-11.1
-21.1
-31.1
-41.1
-51.1
-61.1
-71.1
-17.68 dBm
Start 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.000 GHz
Sweep 1.530 s (8001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
18.000000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
26.000000000 GHz
CF Step
1.600000000 GHz
Auto
Man
Freq Offset
0 Hz

RF Conducted Spurious Emissions_BLE_2402-2Mbps




RF Conducted Spurious Emissions_BLE_2440-2Mbps



RF Conducted Spurious Emissions_BLE_2480-2Mbps