

Appendix A

RF Test Data for BT(BLE) (Conducted Measurement)

Product Name: X-brain Smart gateway

Trade Mark: Xunison

Test Model: XUS100

FCC ID: 2AP2F-XUS100

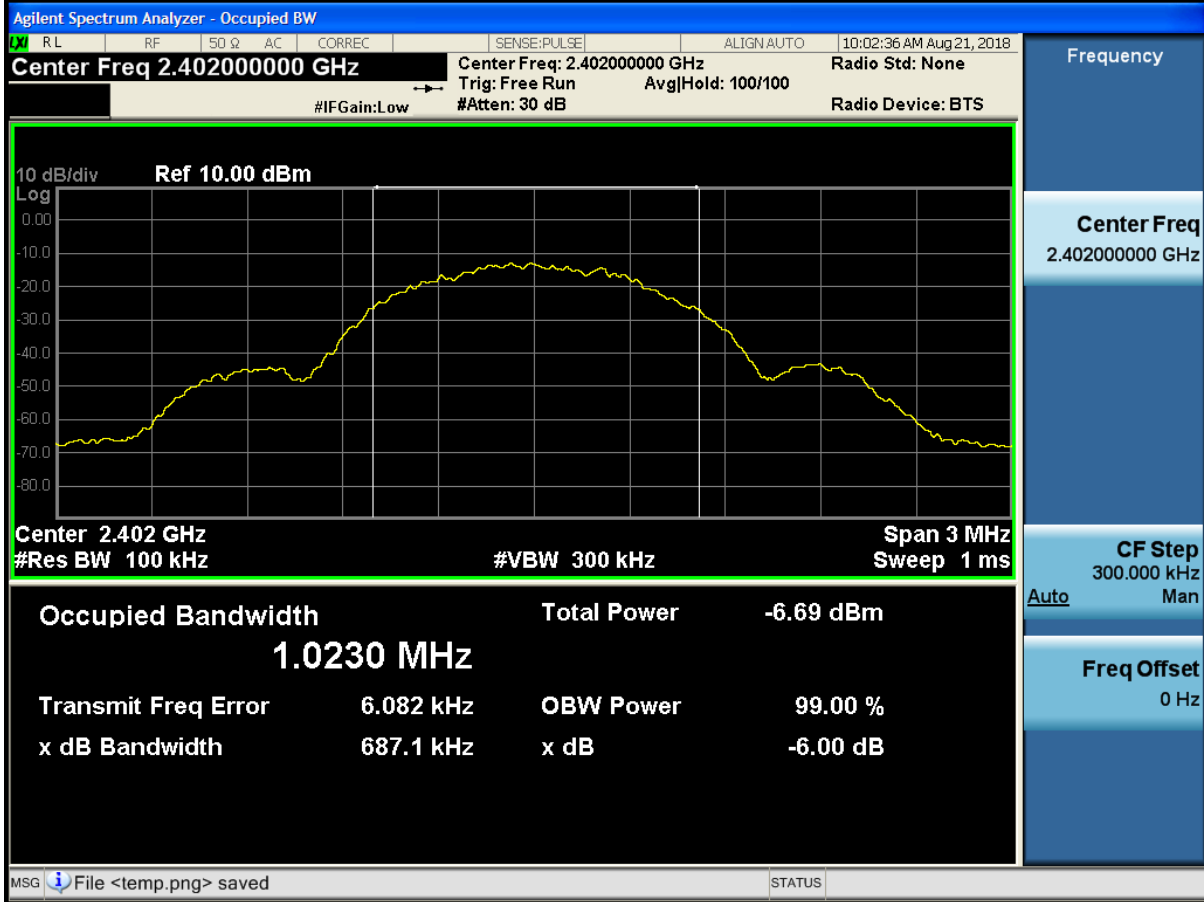
Environmental Conditions

Temperature:	22.9° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

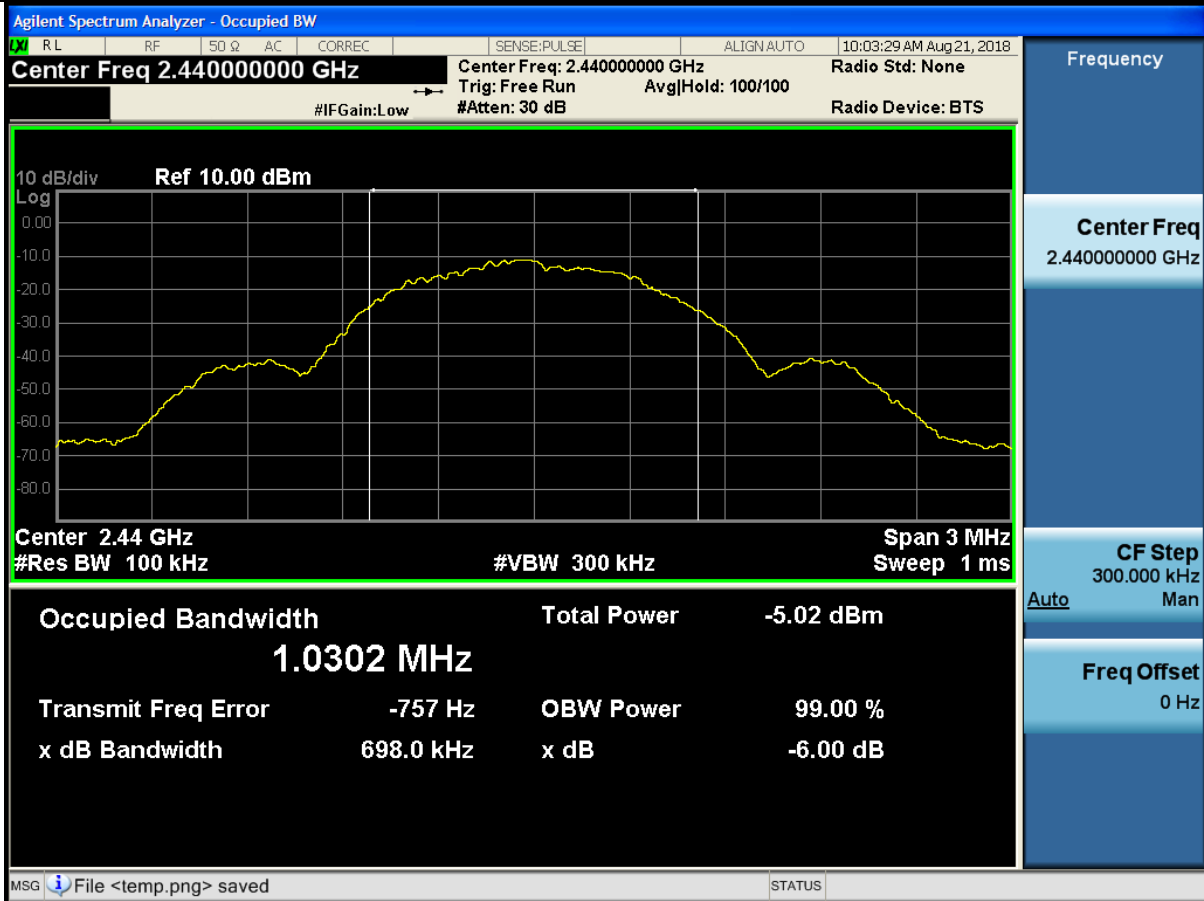
1.6dB Bandwidth

Test Mode	Test Channel	Ant	EBW[MHz]	Limit	Verdict
BLE	2402	Ant1	0.687	0.5	PASS
BLE	2440	Ant1	0.698	0.5	PASS
BLE	2480	Ant1	0.663	0.5	PASS

6dB Bandwidth_BLE_2402_Ant1



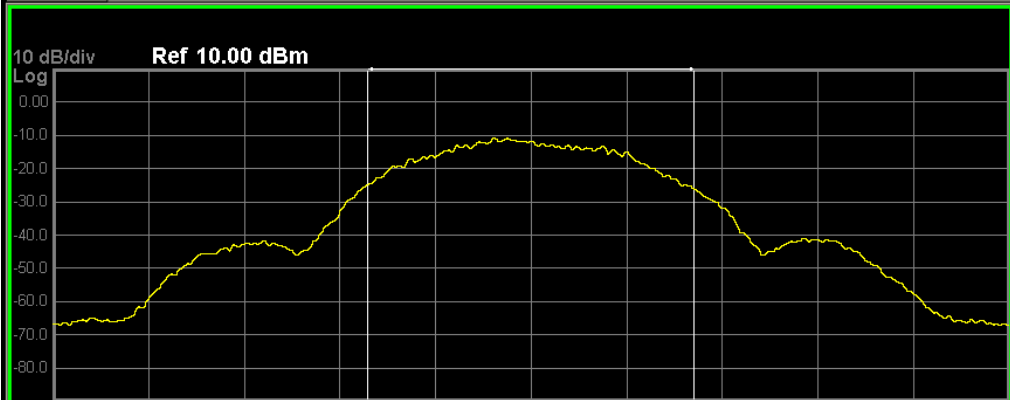
6dB Bandwidth_BLE_2440_Ant1



6dB Bandwidth_BLE_2480_Ant1

Agilent Spectrum Analyzer - Occupied BW

RL RF 50 Ω AC CORREC SENSE:PULSE ALIGN:AUTO 10:04:07 AM Aug 21, 2018
Center Freq 2.48000000 GHz Center Freq: 2.48000000 GHz Radio Std: None
 #IFGain:Low Trig: Free Run Avg|Hold: 100/100
 #Atten: 30 dB Radio Device: BTS



Center 2.48 GHz Span 3 MHz
 #Res BW 100 kHz #VBW 300 kHz Sweep 1 ms

Occupied Bandwidth		Total Power	-4.86 dBm
	1.0223 MHz		
Transmit Freq Error	-1.719 kHz	OBW Power	99.00 %
x dB Bandwidth	663.0 kHz	x dB	-6.00 dB

Frequency

Center Freq
2.48000000 GHz

CF Step
300.000 kHz
Auto Man

Freq Offset
0 Hz

MSG File <temp.png> saved

STATUS

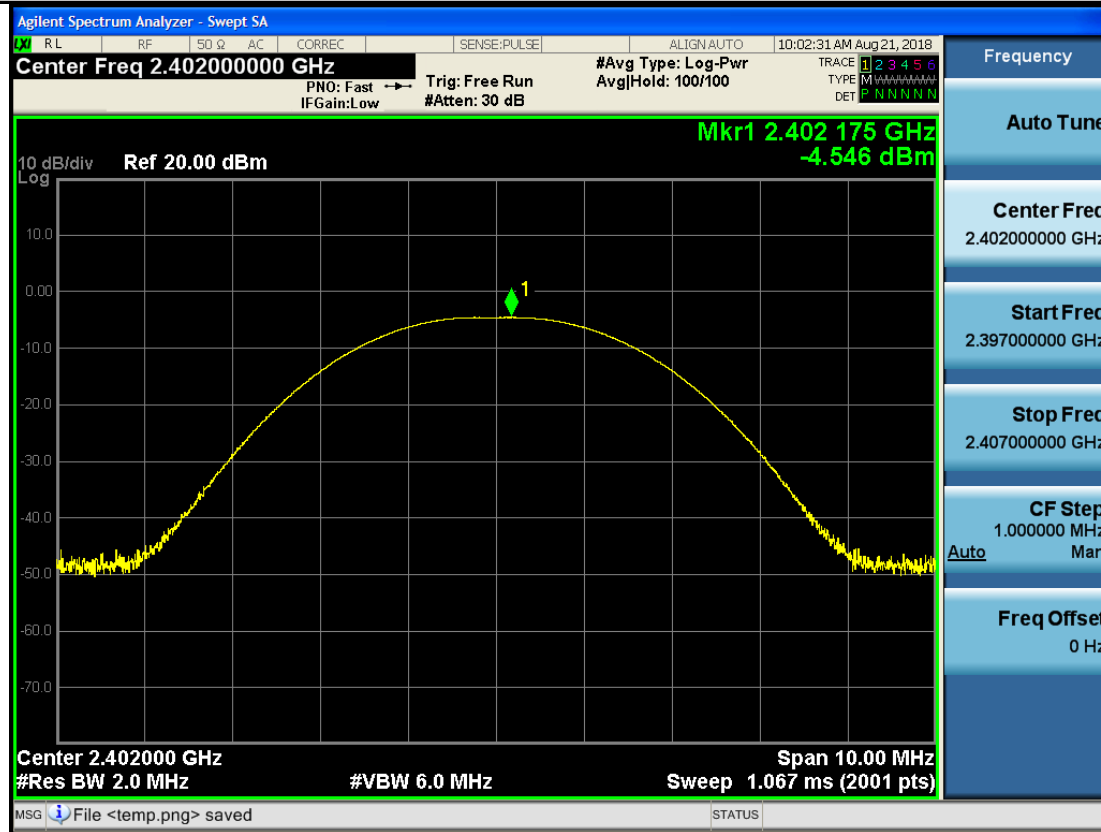
2.Occupied Bandwidth

Test Mode	Test Channel	Ant	OBW[MHz]	Limit[MHz]	Verdict
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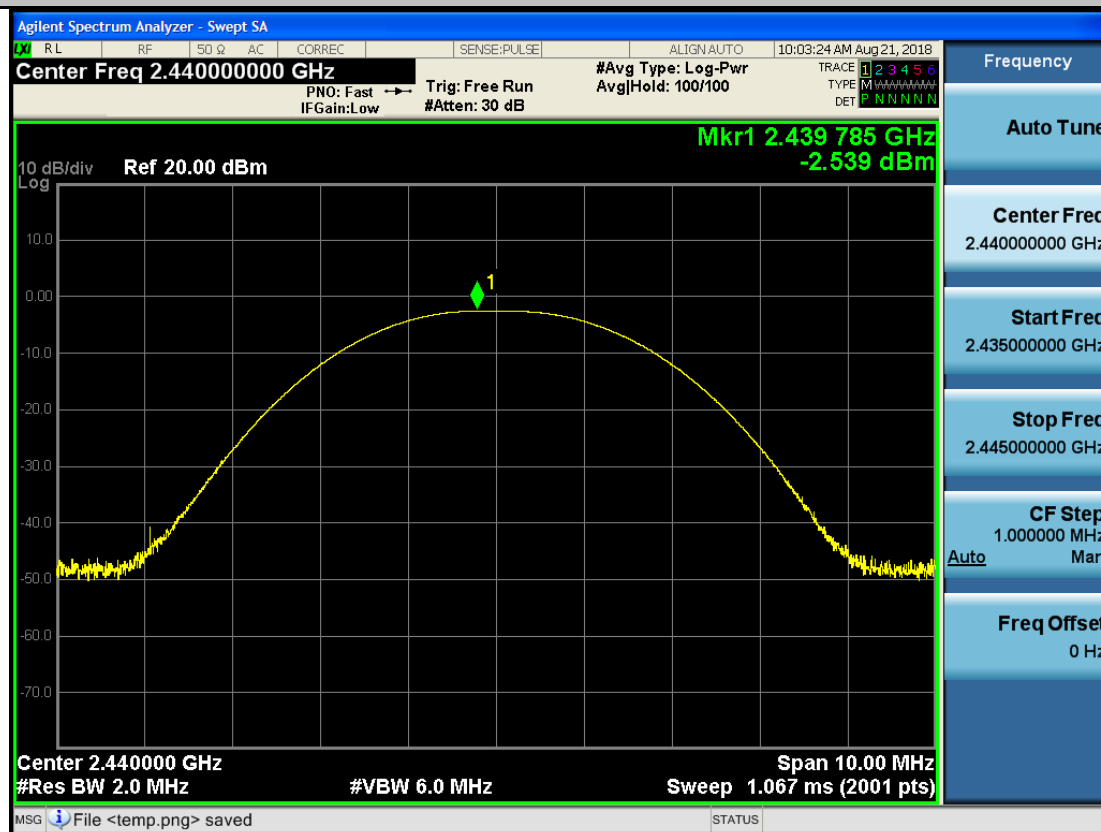
3.Maximum peak conducted output power

Test Mode	Test Channel	Ant	Power[dBm]	Limit[dBm]	Verdict
BLE	2402	Ant1	-4.546	30	PASS
BLE	2440	Ant1	-2.539	30	PASS
BLE	2480	Ant1	-2.501	30	PASS

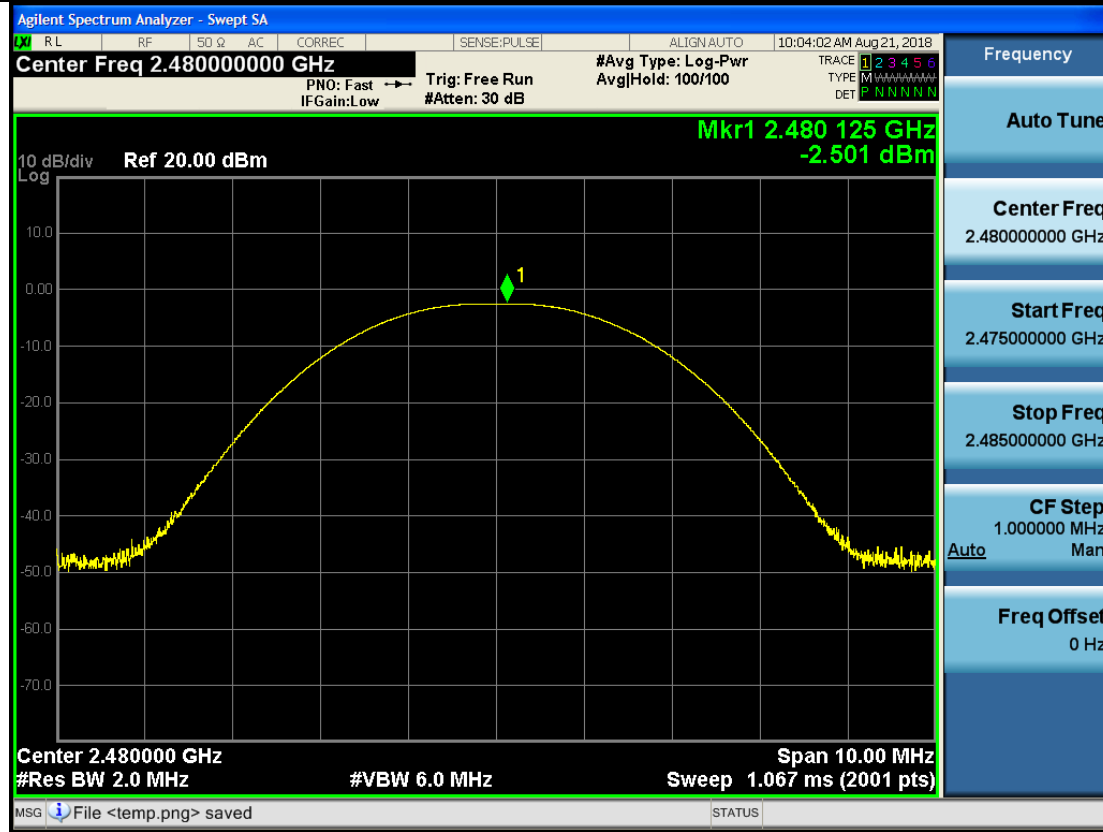
Maximum peak conducted output power_BLE_2402_Ant1



Maximum peak conducted output power_BLE_2440_Ant1



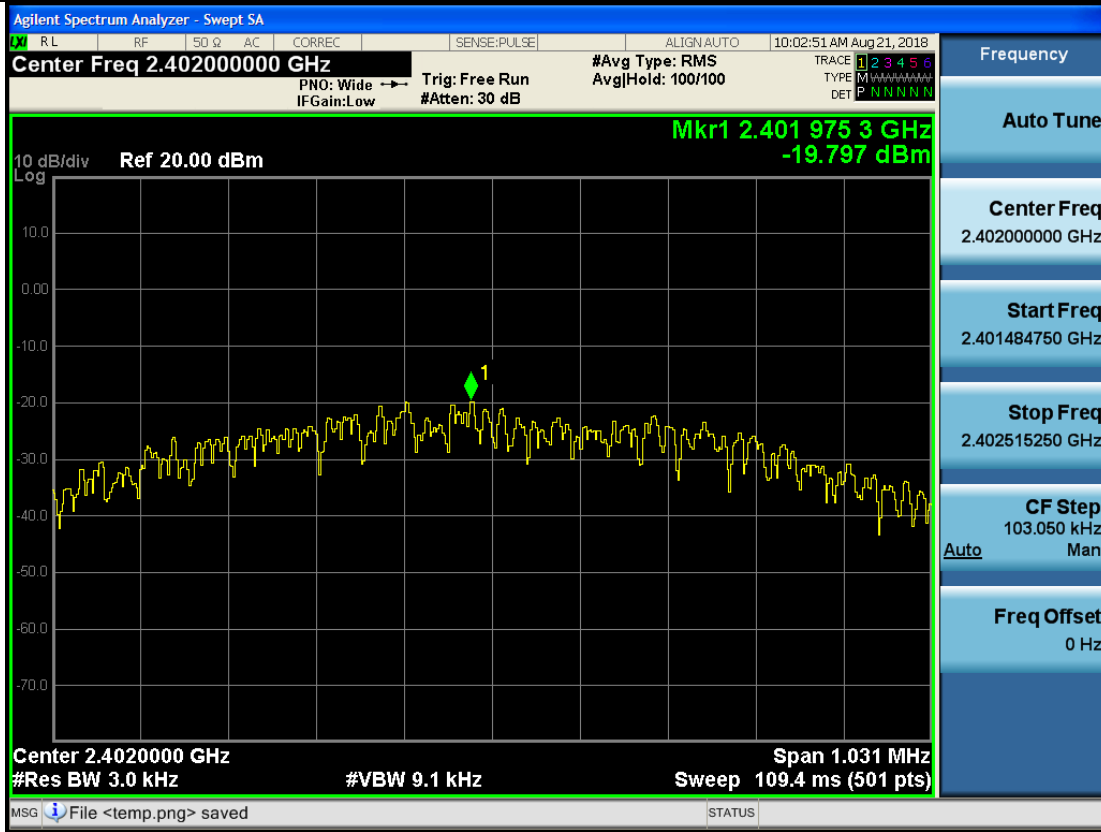
Maximum peak conducted output power_BLE_2480_Ant1



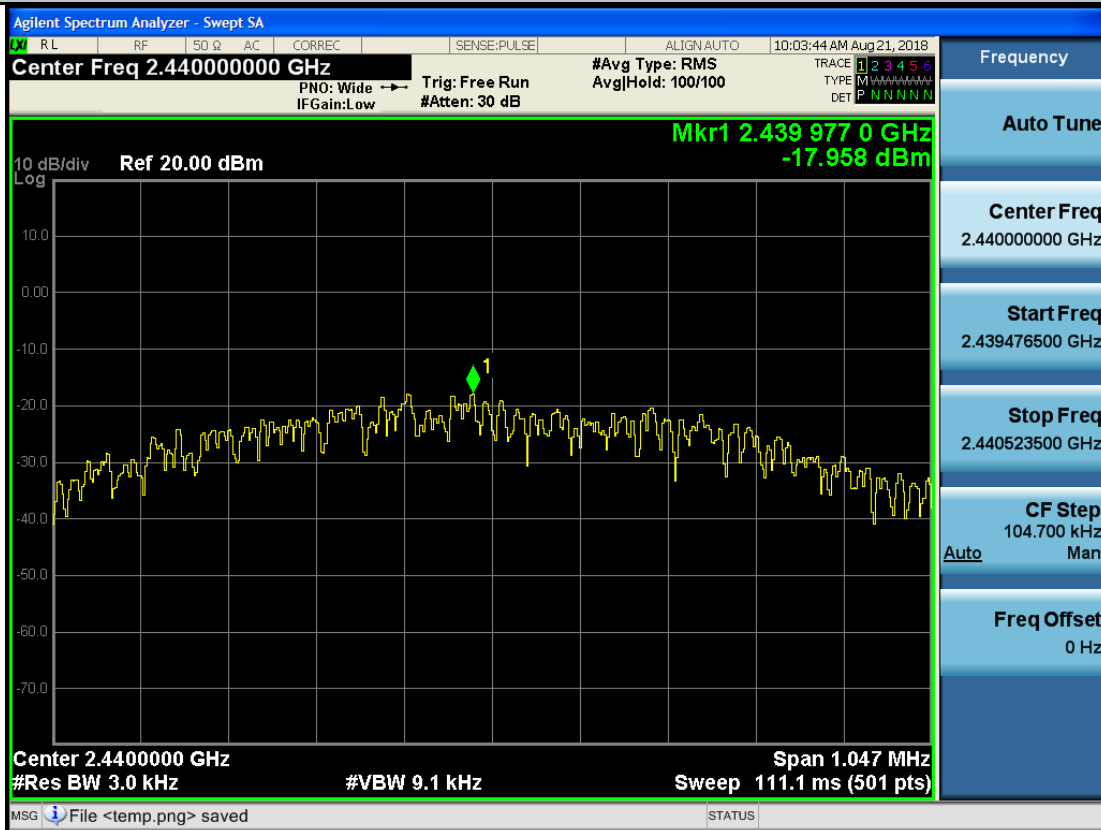
4. Maximum Peak power spectral density

Test Mode	Test Channel	Ant	PSD[dBm/3KHz]	Limit[dBm/3KHz]	Verdict
BLE	2402	Ant1	-19.80	8.00	PASS
BLE	2440	Ant1	-17.96	8.00	PASS
BLE	2480	Ant1	-17.82	8.00	PASS

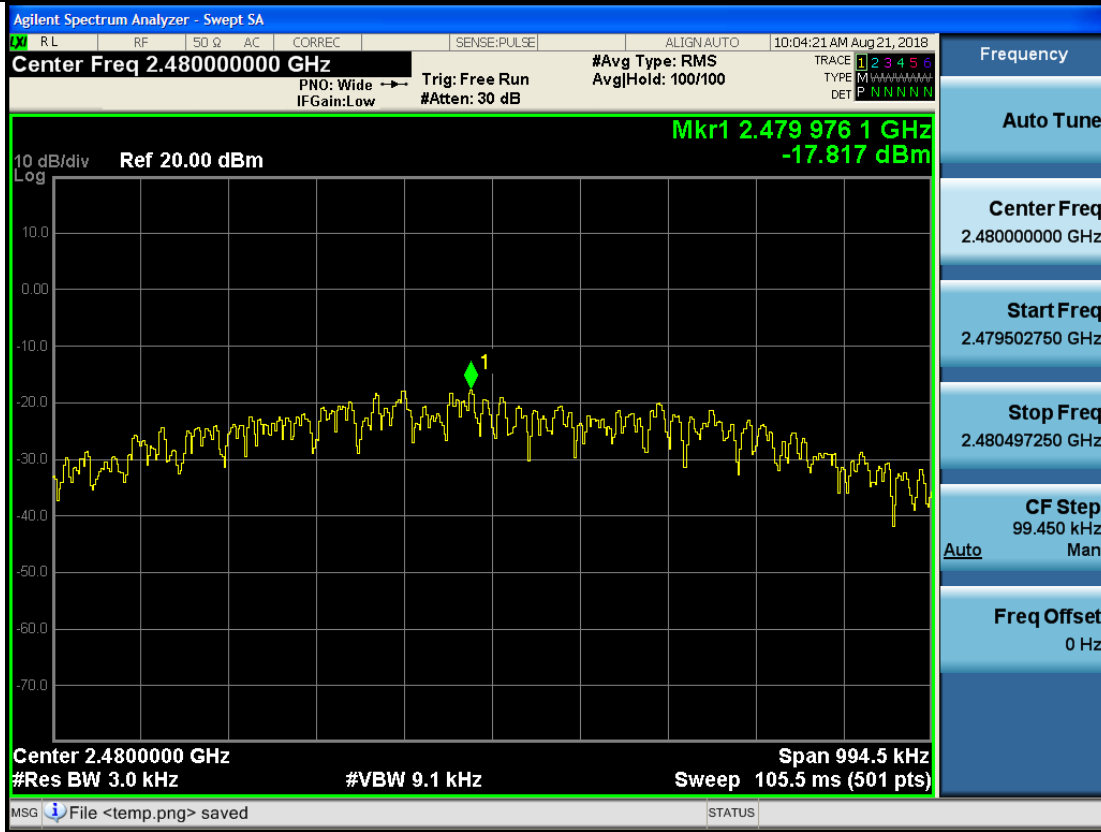
Maximum Peak power spectral density_BLE_2402_Ant1



Maximum Peak power spectral density_BLE_2440_Ant1



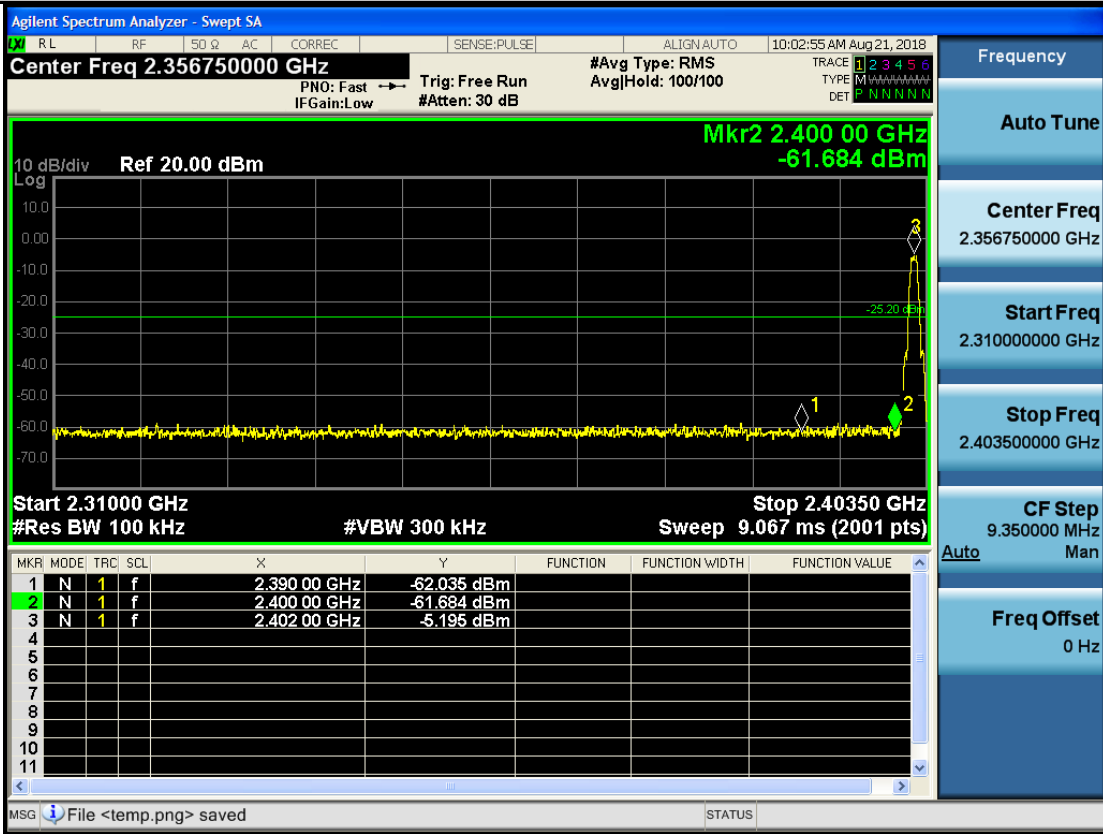
Maximum Peak power spectral density_BLE_2480_Ant1



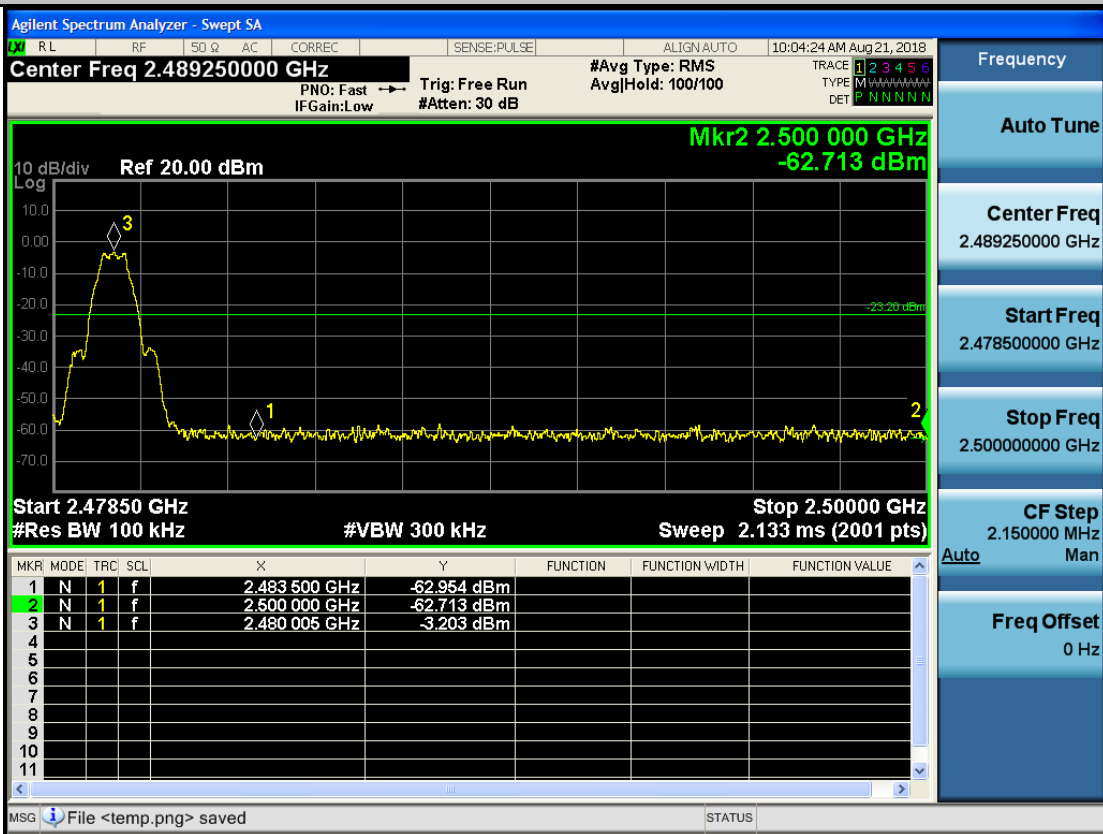
5.Band-edge for RF Conducted Emissions

Test Mode	Test Channel	Ant	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
BLE	2402	Ant1	-5.195	-61.684	-25.20	PASS
BLE	2480	Ant1	-3.203	-62.713	-23.20	PASS

Band-edge for RF Conducted Emissions_BLE_2402_Ant1

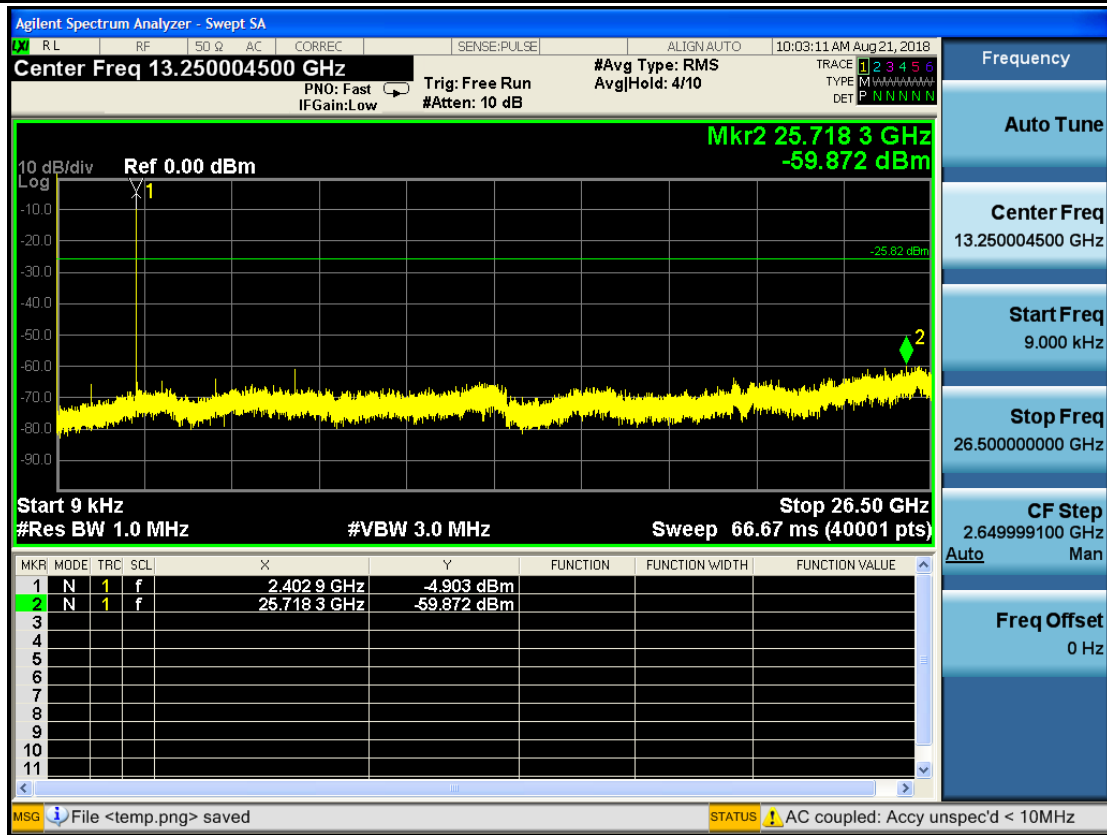
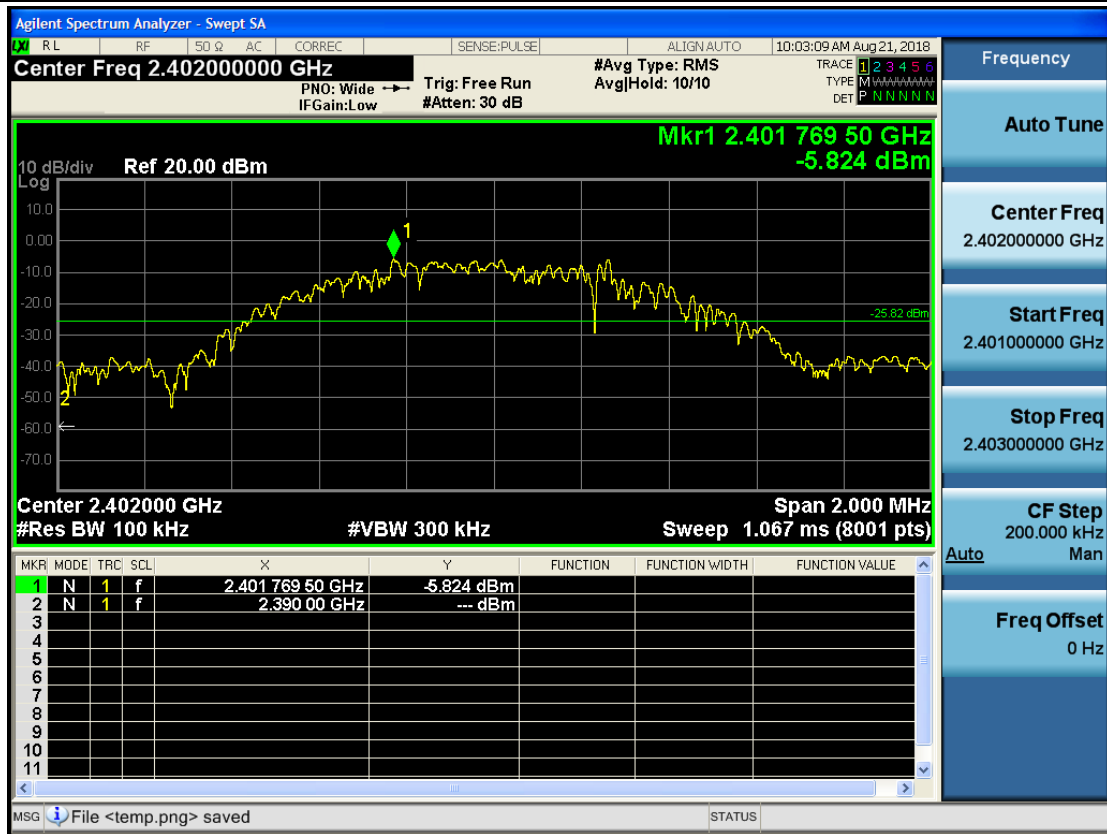


Band-edge for RF Conducted Emissions_BLE_2480_Ant1

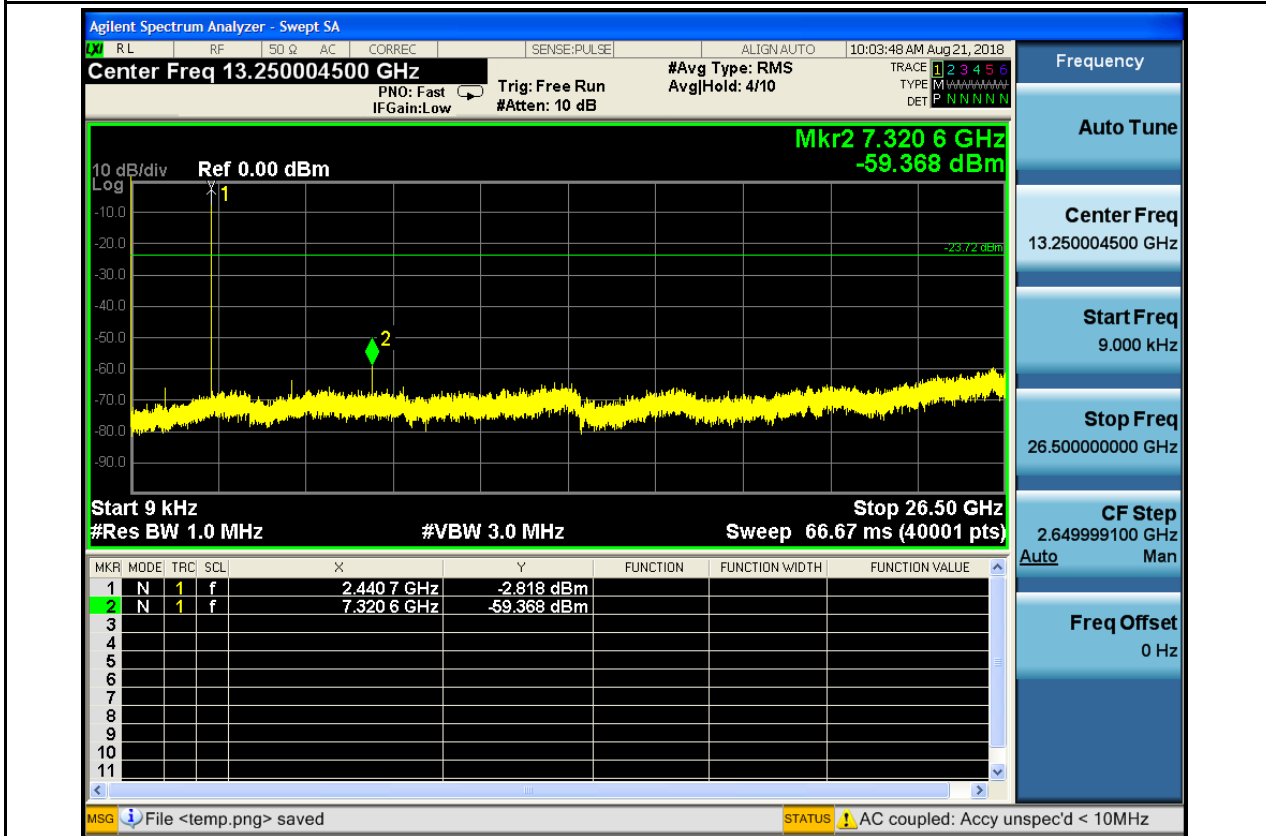


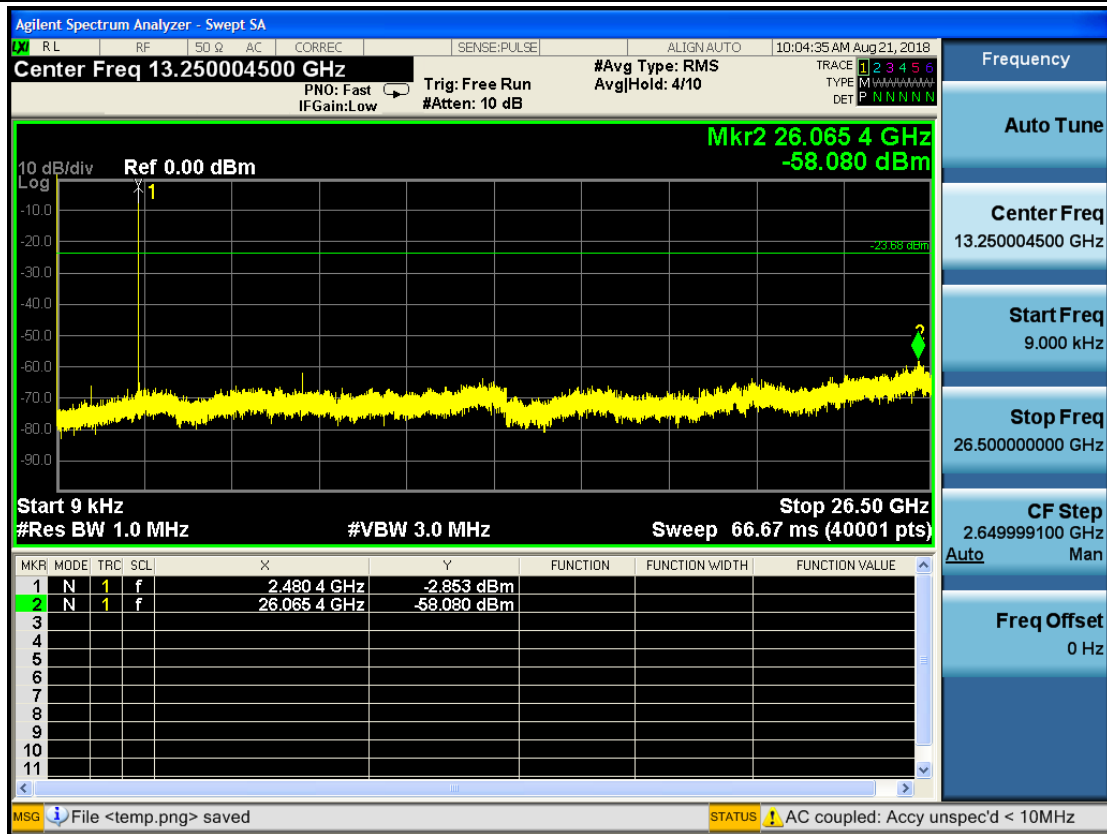
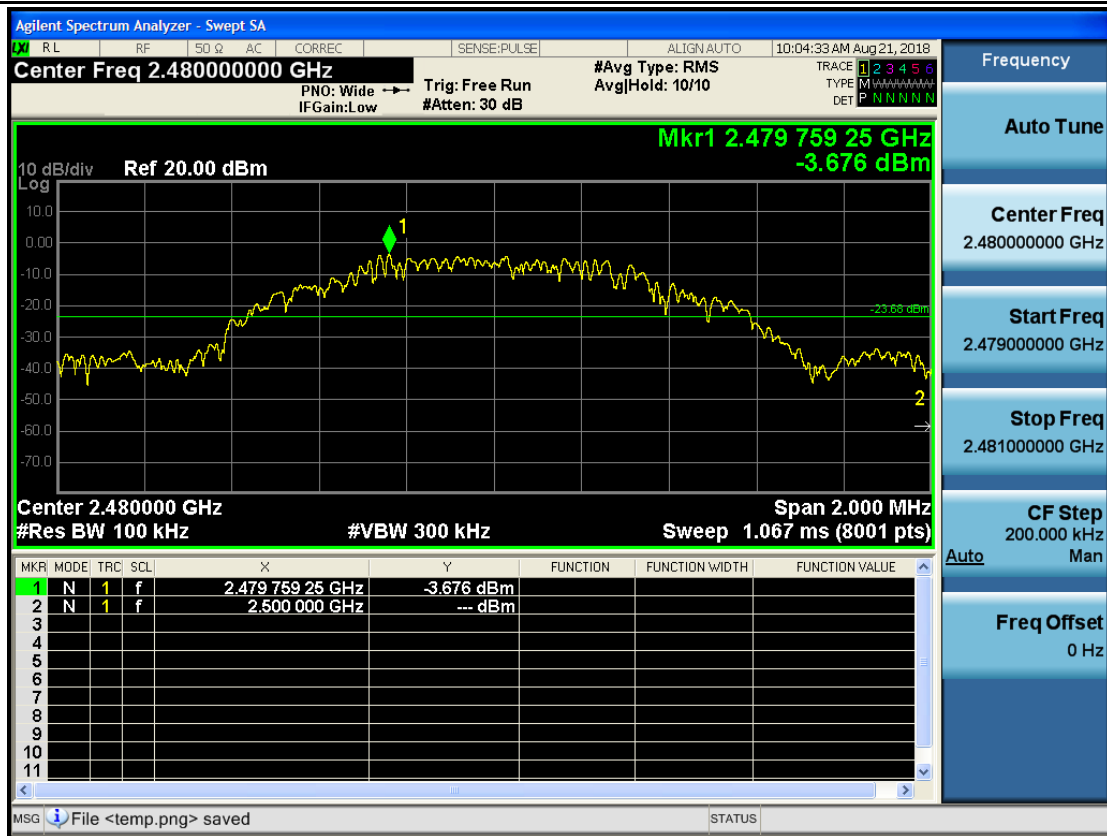
6.RF Conducted Spurious Emissions

RF Conducted Spurious Emissions_BLE_2402_Ant1



RF Conducted Spurious Emissions_BLE_2440_Ant1

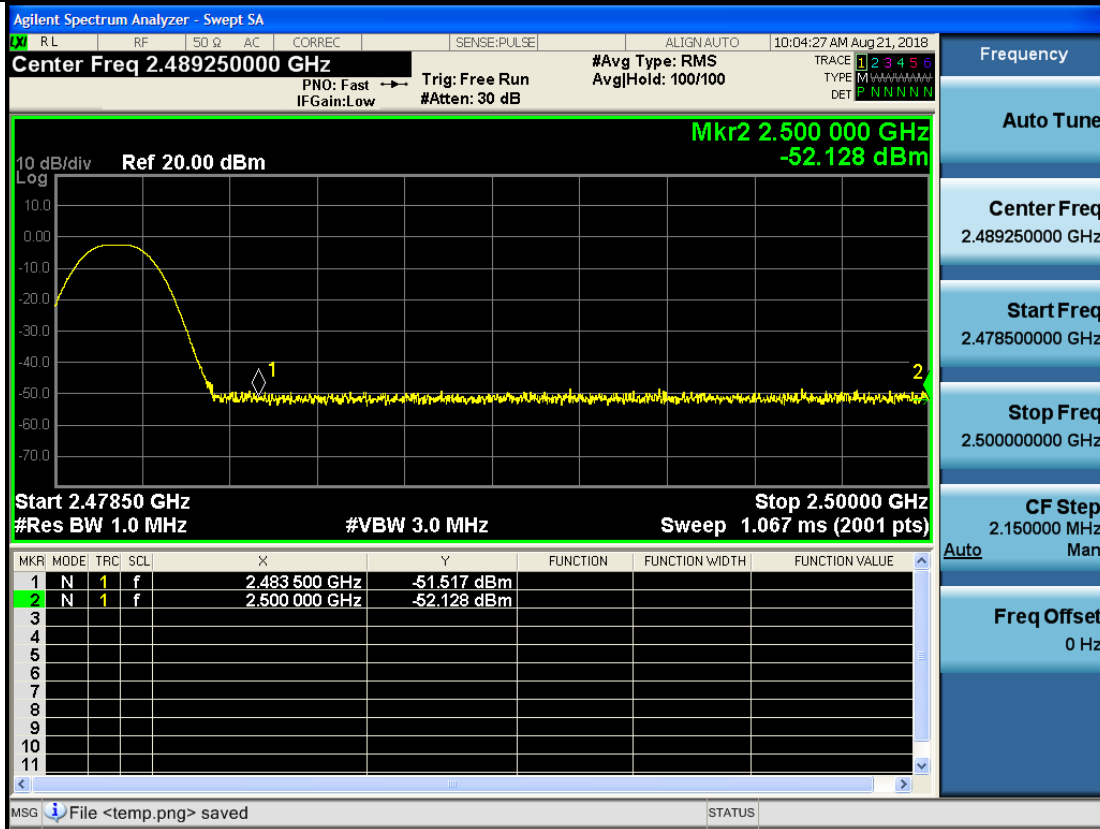




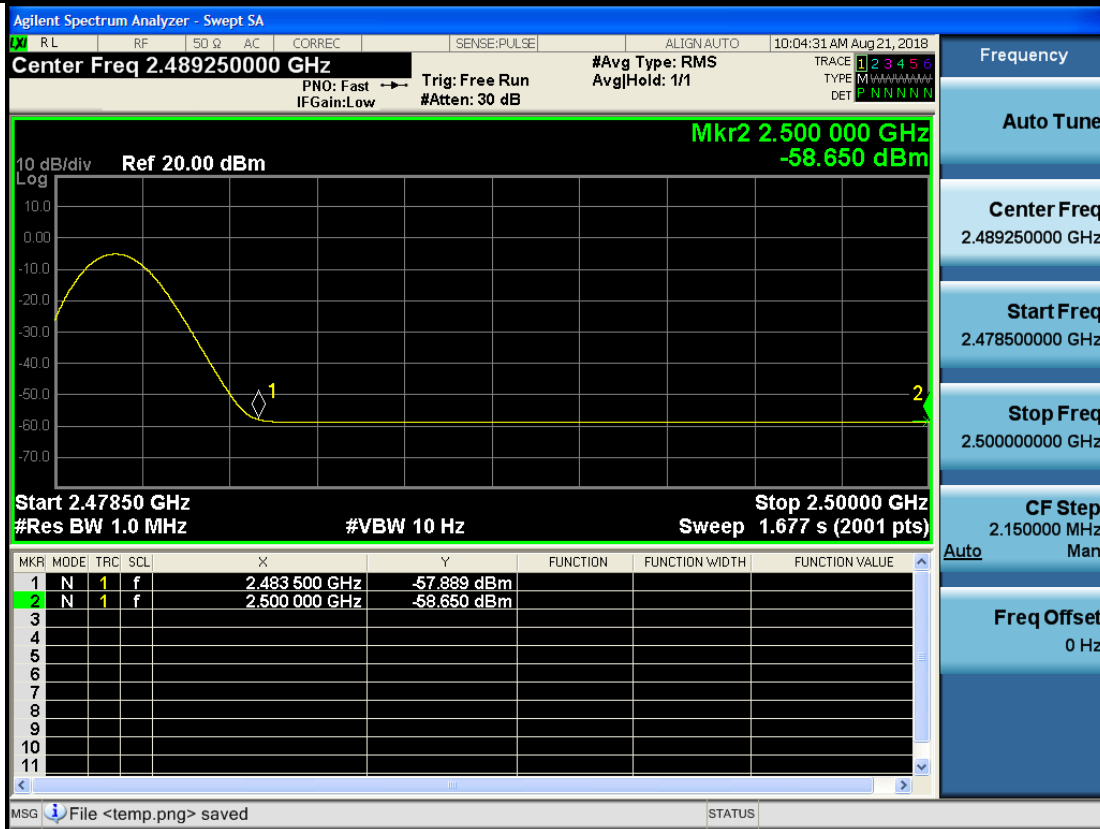
7.Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
BLE	2402	Ant1	2310.0-2390.0	-51.59	2.00	0	45.61	PEAK	74	PASS
BLE	2402	Ant1	2310.0-2390.0	-59.26	2.00	0	37.94	AV	54	PASS
BLE	2480	Ant1	2483.5-2500.0	-51.52	2.00	0	45.68	PEAK	74	PASS
BLE	2480	Ant1	2483.5-2500.0	-57.89	2.00	0	39.31	AV	54	PASS

Restrict-band band-edge measurements_BLE_2480_Ant1_PEAK



Restrict-band band-edge measurements_BLE_2480_Ant1_AV



8.Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BLE	2440	Ant1	62.68	PASS

