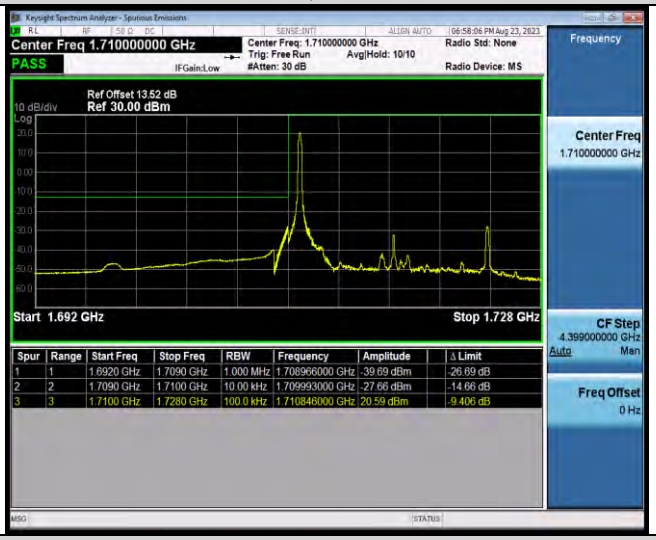
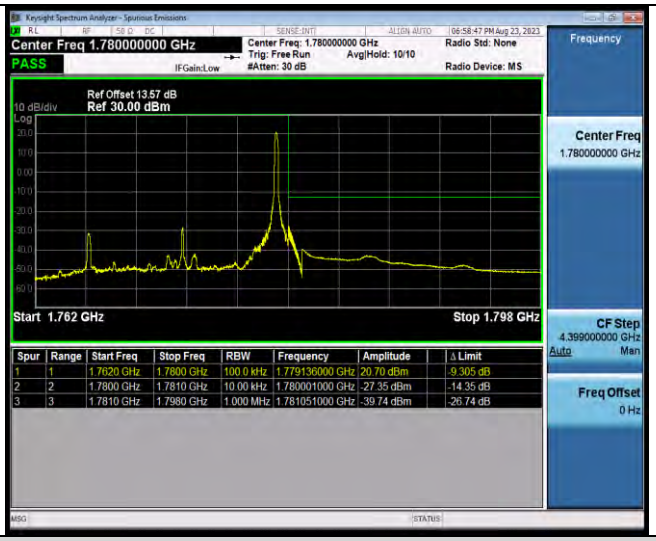
Band66-15MHz-QPSK-132047-1RB#0



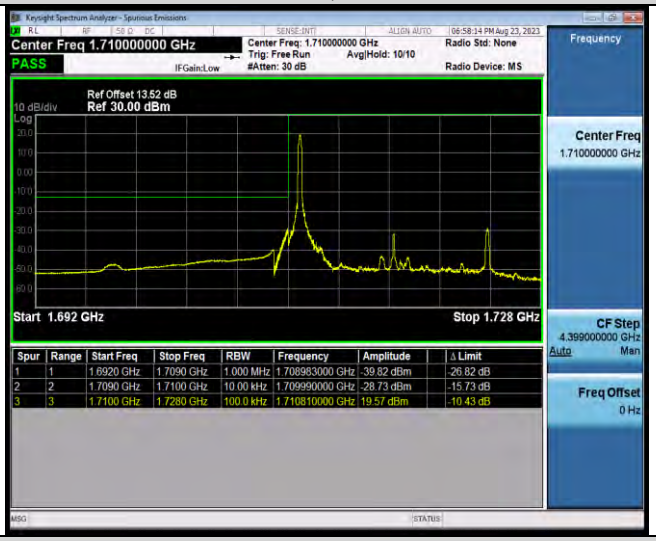
Band66-15MHz-QPSK-132047-75RB#0

Band66-15MHz-QPSK-132597-1RB#74



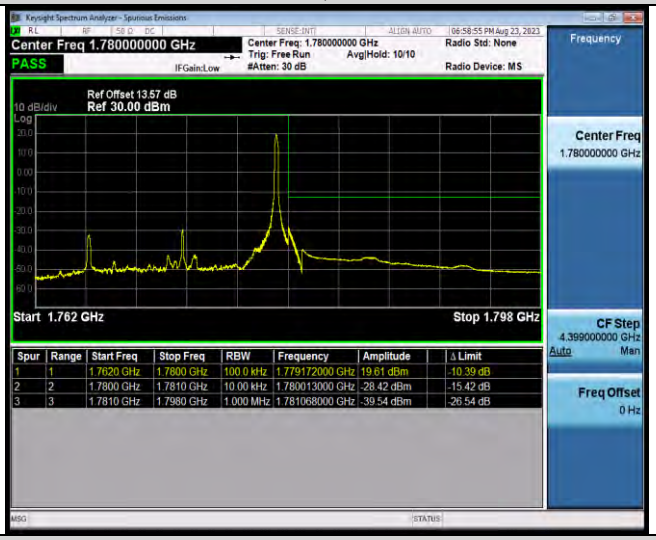
Band66-15MHz-QPSK-132597-75RB#0

Band66-15MHz-16QAM-132047-1RB#0



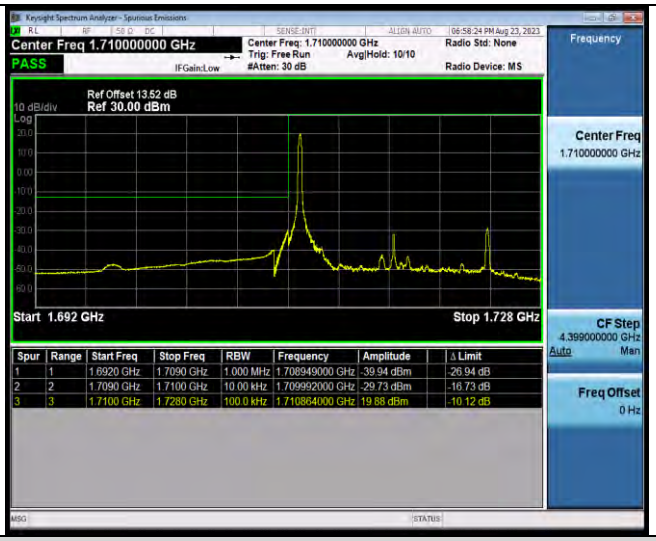
Band66-15MHz-16QAM-132047-75RB#0

Band66-15MHz-16QAM-132597-1RB#74



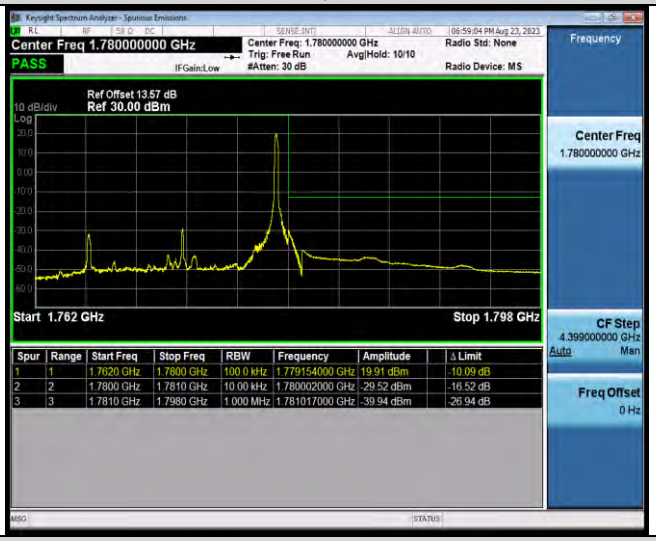
Band66-15MHz-16QAM-132597-75RB#0

Band66-15MHz-64QAM-132047-1RB#0



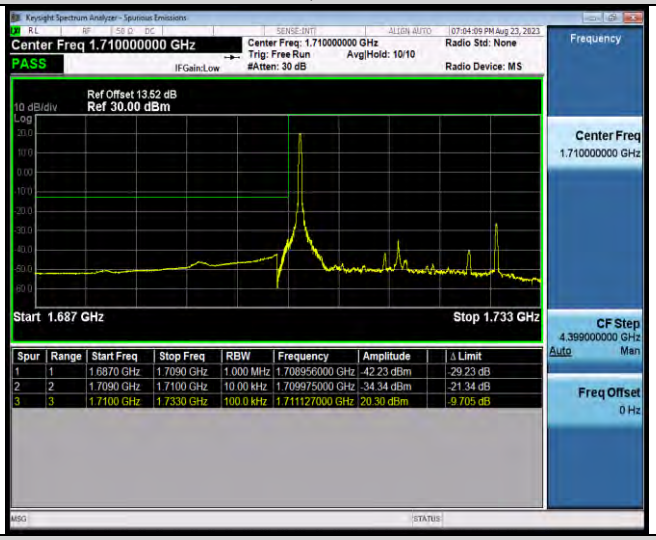
Band66-15MHz-64QAM-132047-75RB#0

Band66-15MHz-64QAM-132597-1RB#74



Band66-15MHz-64QAM-132597-75RB#0

Band66-20MHz-QPSK-132072-1RB#0

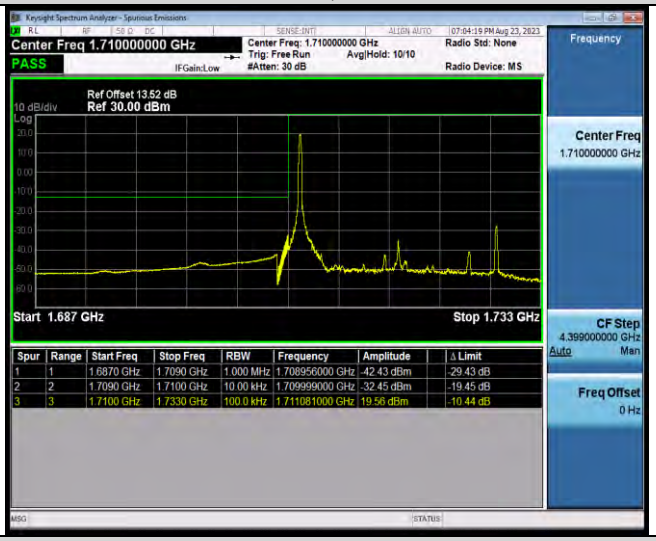


Band66-20MHz-QPSK-132072-100RB#0

Band66-20MHz-QPSK-132572-1RB#99

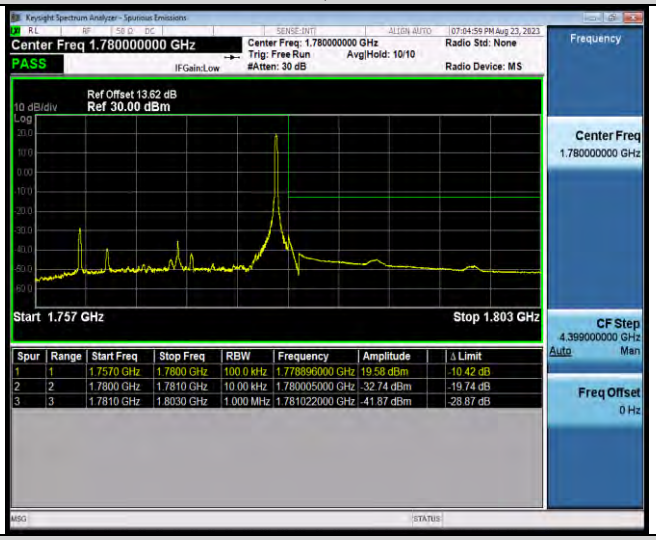
Band66-20MHz-QPSK-132572-100RB#0

Band66-20MHz-16QAM-132072-1RB#0



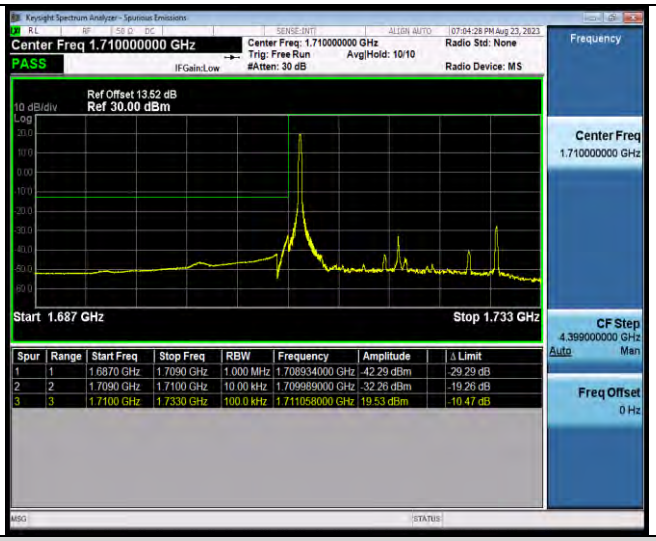
Band66-20MHz-16QAM-132072-100RB#0

Band66-20MHz-16QAM-132572-1RB#99



Band66-20MHz-16QAM-132572-100RB#0

Band66-20MHz-64QAM-132072-1RB#0



Band66-20MHz-64QAM-132072-100RB#0

Band66-20MHz-64QAM-132572-1RB#99

Band66-20MHz-64QAM-132572-100RB#0

Keysight Spectrum Analyzer - Spurious Emissions
Center Freq 1.780000000 GHz
PASS
Center Freq: 1.780000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 30 dB
Radio Std: None
Radio Device: MS
Ref Offset 13.62 dB
10 dB/div
Ref 30.00 dBm
Start 1.757 GHz
Stop 1.803 GHz
Frequency
Center Freq
1.780000000 GHz
CF Step
4.399000000 GHz
Auto
Man
Freq Offset
0 Hz
Spur | Range | Start Freq | Stop Freq | RBW | Frequency | Amplitude | Δ Limit
1 | 1 | 1.7570 GHz | 1.7800 GHz | 300.0 kHz | 1.766959000 GHz | 3.546 dBm | -26.45 dB
2 | 2 | 1.7800 GHz | 1.7810 GHz | 300.0 kHz | 1.780077000 GHz | -37.42 dBm | -24.42 dB
3 | 3 | 1.7810 GHz | 1.8030 GHz | 1.000 MHz | 1.781132000 GHz | -34.70 dBm | -21.70 dB

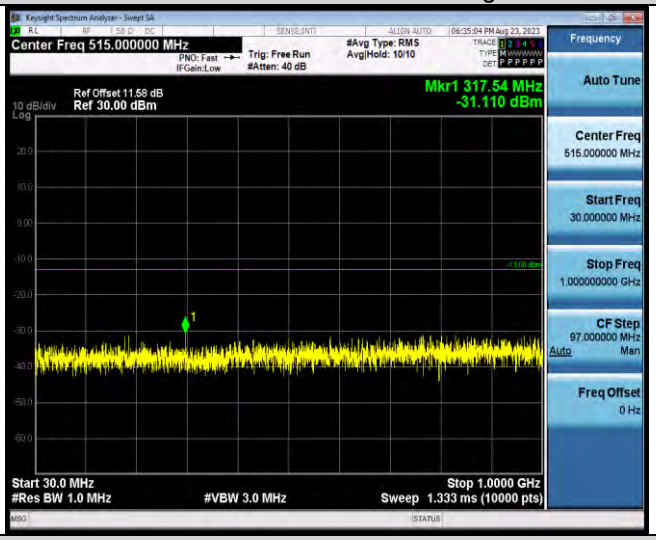
CONDUCTED SPURIOUS EMISSION

Test Result

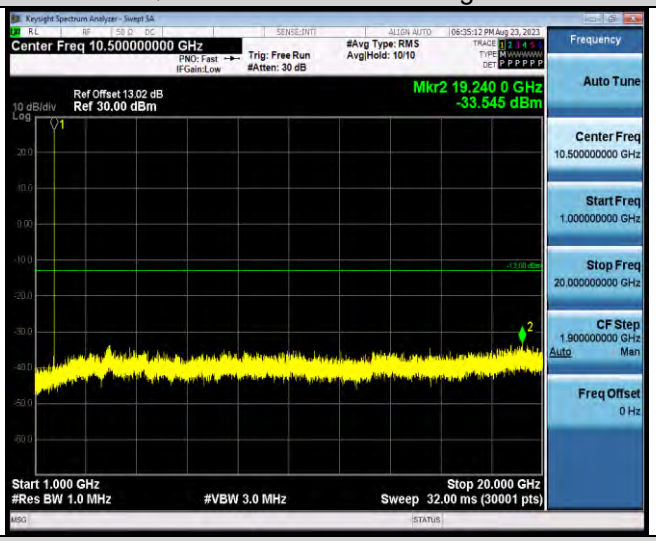
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band66	1.4MHz	QPSK	131979	1RB#0	Range1:30~1000MHz	-31.11	PASS
Band66	1.4MHz	QPSK	131979	1RB#0	Range2:1000~20000MHz	-33.55	PASS
Band66	1.4MHz	QPSK	132322	1RB#0	Range1:30~1000MHz	-30.86	PASS
Band66	1.4MHz	QPSK	132322	1RB#0	Range2:1000~20000MHz	-33.02	PASS
Band66	1.4MHz	QPSK	132665	1RB#0	Range1:30~1000MHz	-30.18	PASS
Band66	1.4MHz	QPSK	132665	1RB#0	Range2:1000~20000MHz	-33.34	PASS
Band66	3MHz	QPSK	131987	1RB#0	Range1:30~1000MHz	-30.95	PASS
Band66	3MHz	QPSK	131987	1RB#0	Range2:1000~20000MHz	-32.95	PASS
Band66	3MHz	QPSK	132322	1RB#0	Range1:30~1000MHz	-30.24	PASS
Band66	3MHz	QPSK	132322	1RB#0	Range2:1000~20000MHz	-33.49	PASS
Band66	3MHz	QPSK	132657	1RB#0	Range1:30~1000MHz	-30.63	PASS
Band66	3MHz	QPSK	132657	1RB#0	Range2:1000~20000MHz	-32.66	PASS
Band66	5MHz	QPSK	131997	1RB#0	Range1:30~1000MHz	-29.8	PASS
Band66	5MHz	QPSK	131997	1RB#0	Range2:1000~20000MHz	-32.53	PASS
Band66	5MHz	QPSK	132322	1RB#0	Range1:30~1000MHz	-30.15	PASS
Band66	5MHz	QPSK	132322	1RB#0	Range2:1000~20000MHz	-32.95	PASS
Band66	5MHz	QPSK	132647	1RB#0	Range1:30~1000MHz	-30.22	PASS
Band66	5MHz	QPSK	132647	1RB#0	Range2:1000~20000MHz	-32.32	PASS
Band66	10MHz	QPSK	132022	1RB#0	Range1:30~1000MHz	-30.03	PASS
Band66	10MHz	QPSK	132022	1RB#0	Range2:1000~20000MHz	-32.43	PASS
Band66	10MHz	QPSK	132322	1RB#0	Range1:30~1000MHz	-30.49	PASS
Band66	10MHz	QPSK	132322	1RB#0	Range2:1000~20000MHz	-33.22	PASS
Band66	10MHz	QPSK	132622	1RB#0	Range1:30~1000MHz	-30.67	PASS
Band66	10MHz	QPSK	132622	1RB#0	Range2:1000~20000MHz	-32.59	PASS
Band66	15MHz	QPSK	132047	1RB#0	Range1:30~1000MHz	-30.16	PASS
Band66	15MHz	QPSK	132047	1RB#0	Range2:1000~20000MHz	-32.3	PASS
Band66	15MHz	QPSK	132322	1RB#0	Range1:30~1000MHz	-30.67	PASS
Band66	15MHz	QPSK	132322	1RB#0	Range2:1000~20000MHz	-33.34	PASS
Band66	15MHz	QPSK	132597	1RB#0	Range1:30~1000MHz	-30.2	PASS
Band66	15MHz	QPSK	132597	1RB#0	Range2:1000~20000MHz	-33.02	PASS
Band66	20MHz	QPSK	132072	1RB#0	Range1:30~1000MHz	-29.78	PASS
Band66	20MHz	QPSK	132072	1RB#0	Range2:1000~20000MHz	-32.24	PASS
Band66	20MHz	QPSK	132322	1RB#0	Range1:30~1000MHz	-30.21	PASS
Band66	20MHz	QPSK	132322	1RB#0	Range2:1000~20000MHz	-32.76	PASS
Band66	20MHz	QPSK	132572	1RB#0	Range1:30~1000MHz	-30.19	PASS
Band66	20MHz	QPSK	132572	1RB#0	Range2:1000~20000MHz	-33.04	PASS

Test Graphs

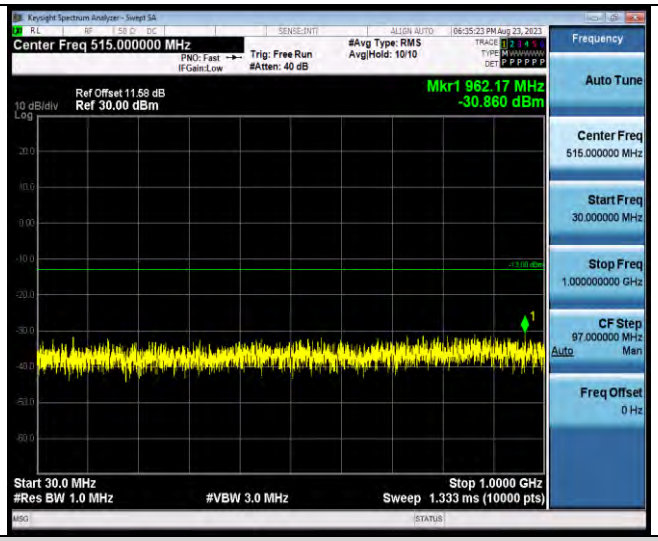
Band66-1.4MHz-QPSK-131979-1RB#0-Range1:30~1000MHz



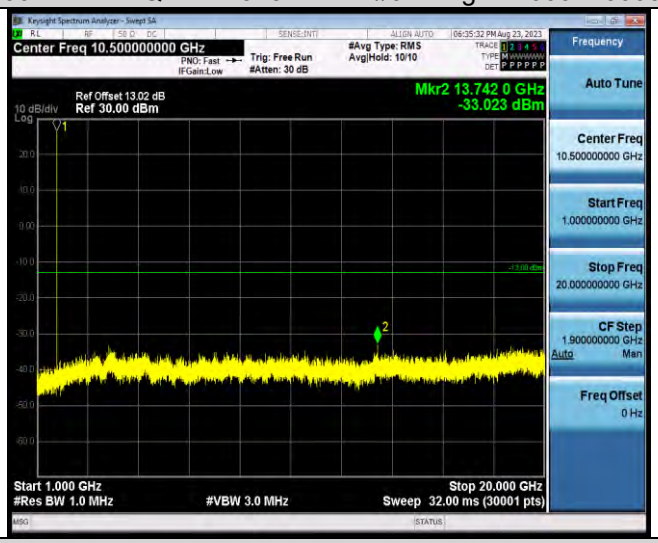
Band66-1.4MHz-QPSK-131979-1RB#0-Range2:1000~20000MHz



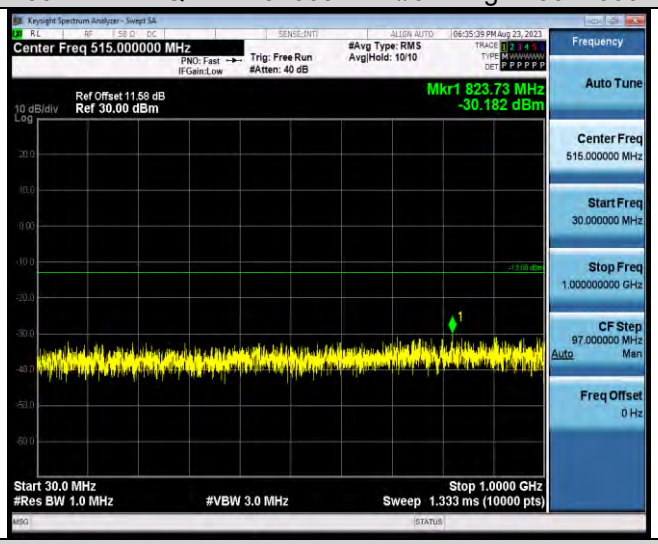
Band66-1.4MHz-QPSK-132322-1RB#0-Range1:30~1000MHz



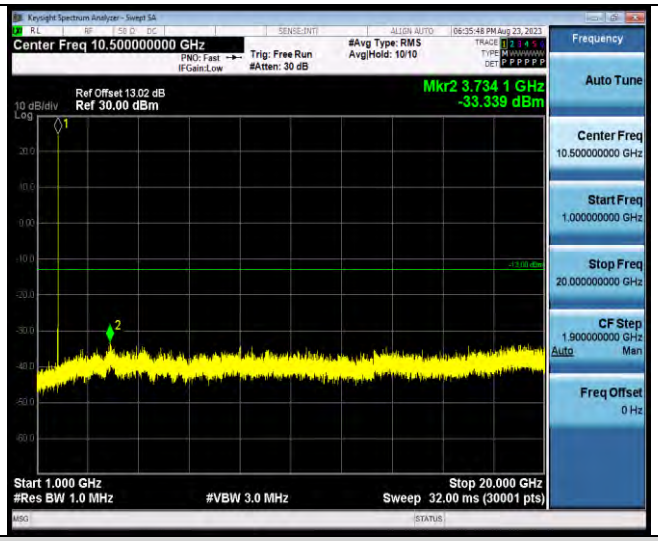
Band66-1.4MHz-QPSK-132322-1RB#0-Range2:1000~20000MHz



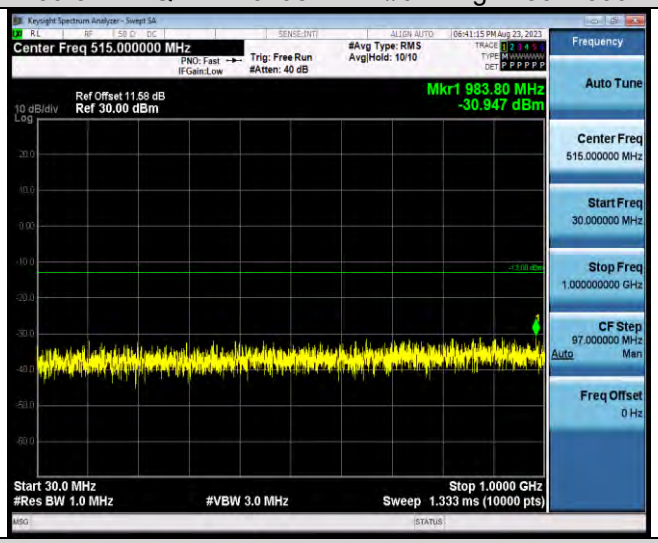
Band66-1.4MHz-QPSK-132665-1RB#0-Range1:30~1000MHz



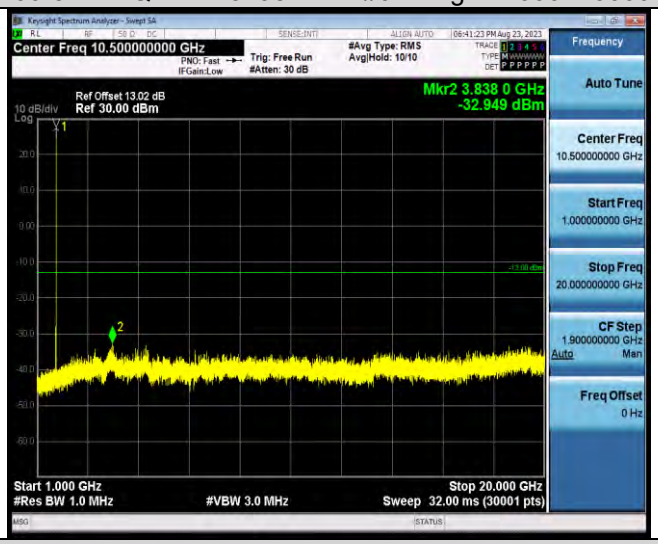
Band66-1.4MHz-QPSK-132665-1RB#0-Range2:1000~20000MHz



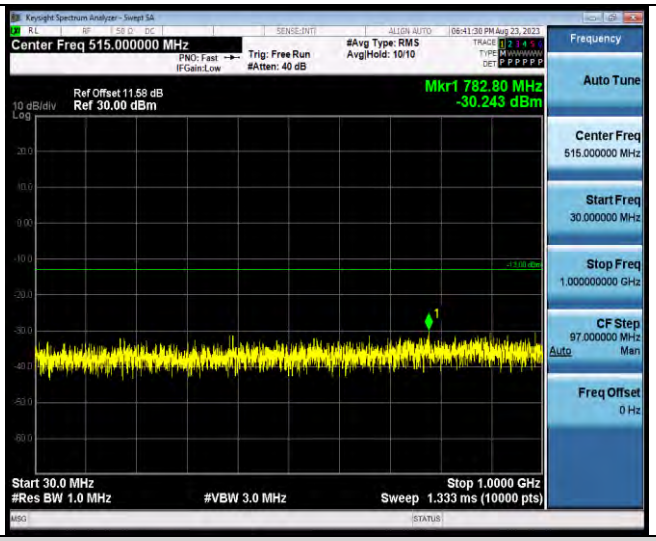
Band66-3MHz-QPSK-131987-1RB#0-Range1:30~1000MHz



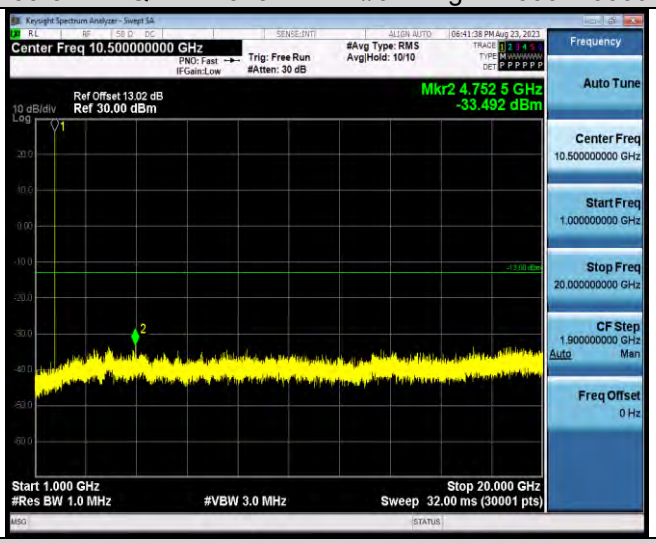
Band66-3MHz-QPSK-131987-1RB#0-Range2:1000~20000MHz



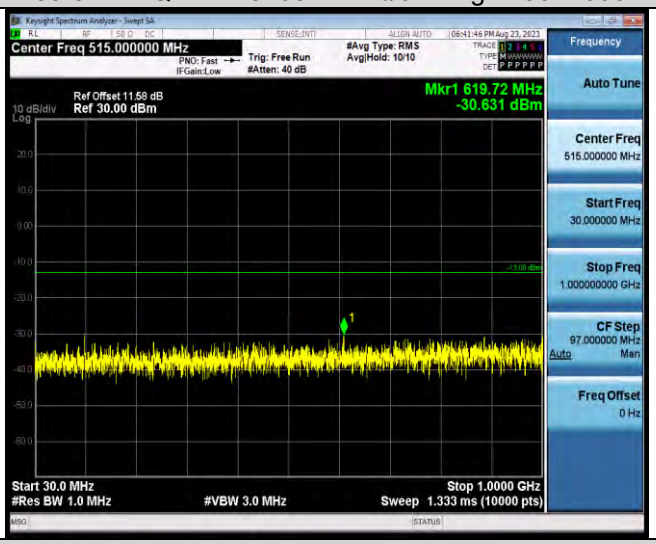
Band66-3MHz-QPSK-132322-1RB#0-Range1:30~1000MHz



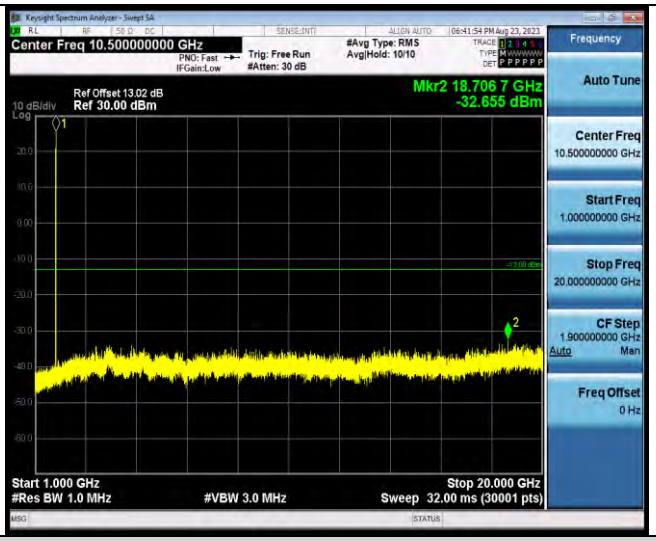
Band66-3MHz-QPSK-132322-1RB#0-Range2:1000~20000MHz



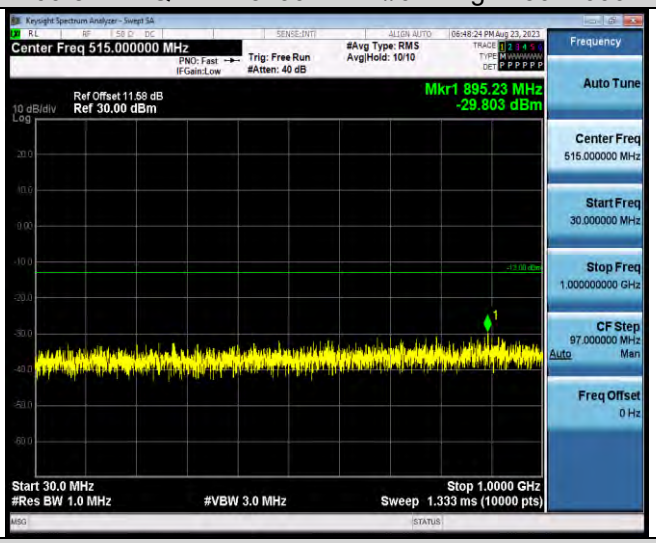
Band66-3MHz-QPSK-132657-1RB#0-Range1:30~1000MHz



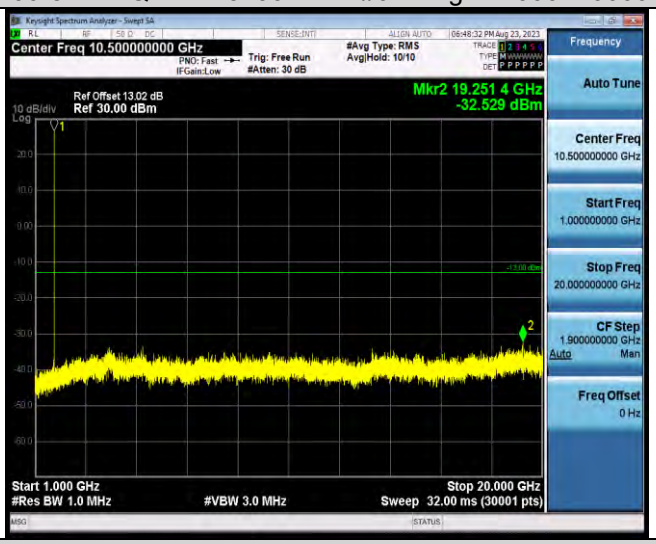
Band66-3MHz-QPSK-132657-1RB#0-Range2:1000~20000MHz



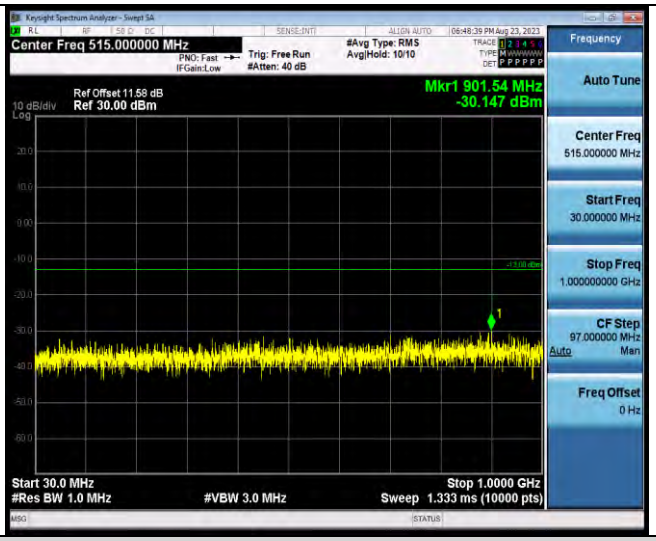
Band66-5MHz-QPSK-131997-1RB#0-Range1:30~1000MHz



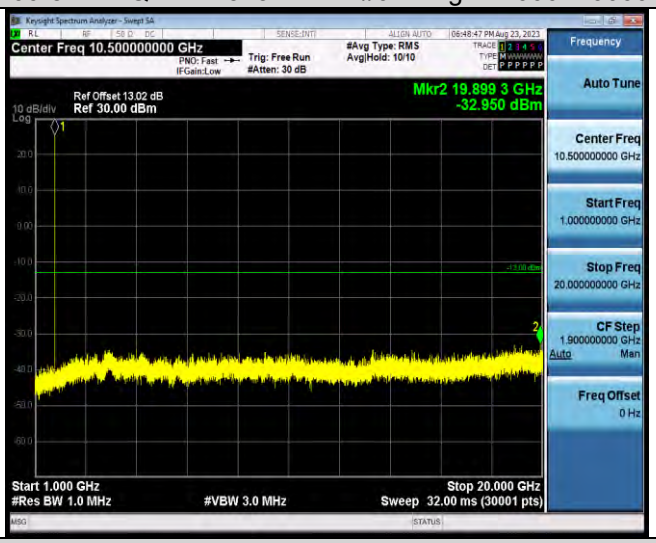
Band66-5MHz-QPSK-131997-1RB#0-Range2:1000~20000MHz



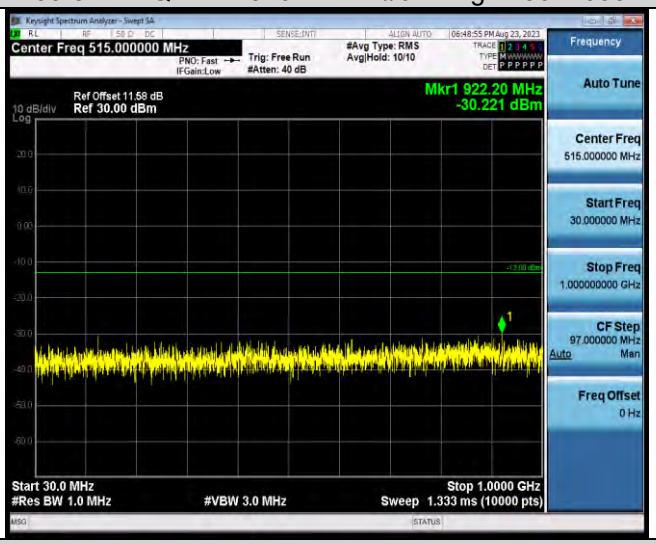
Band66-5MHz-QPSK-132322-1RB#0-Range1:30~1000MHz



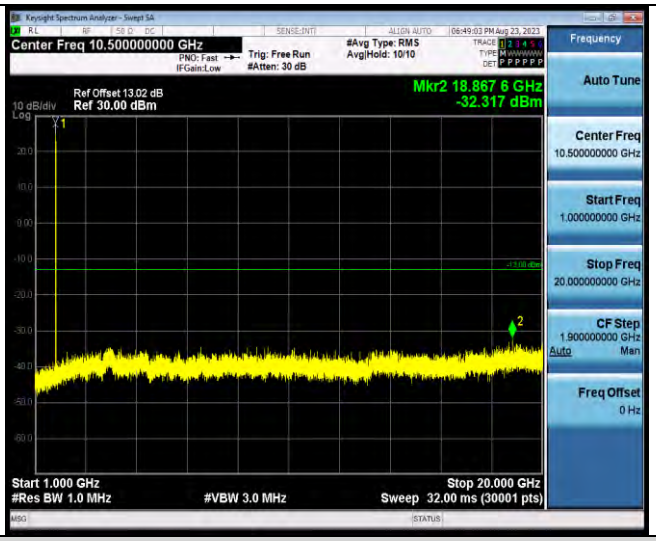
Band66-5MHz-QPSK-132322-1RB#0-Range2:1000~20000MHz



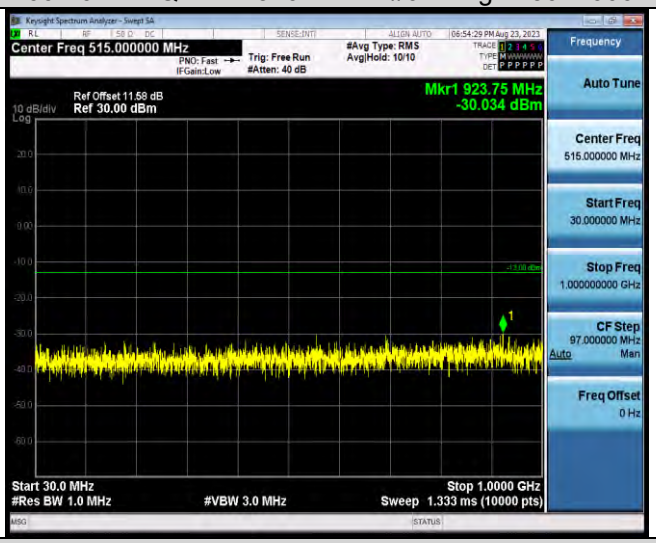
Band66-5MHz-QPSK-132647-1RB#0-Range1:30~1000MHz



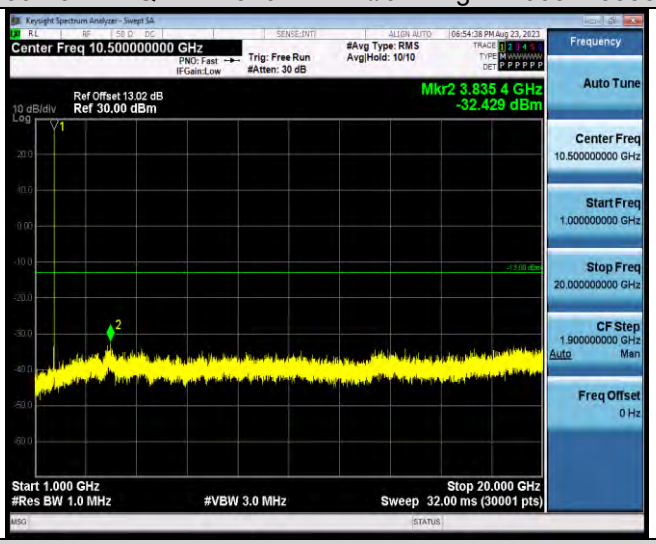
Band66-5MHz-QPSK-132647-1RB#0-Range2:1000~20000MHz



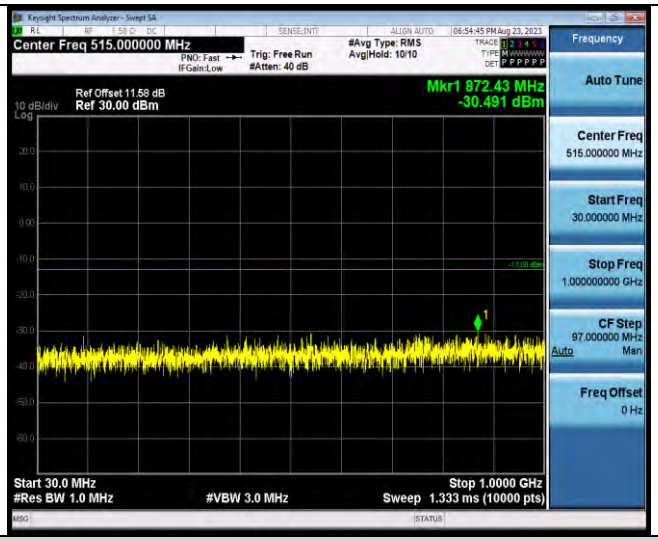
Band66-10MHz-QPSK-132022-1RB#0-Range1:30~1000MHz



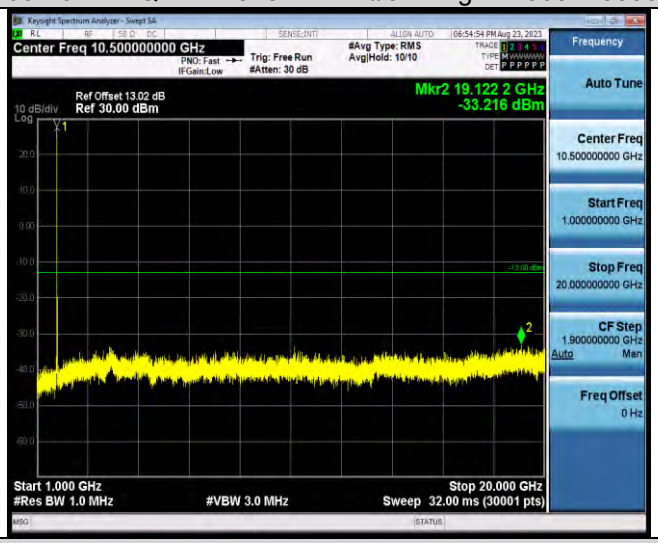
Band66-10MHz-QPSK-132022-1RB#0-Range2:1000~20000MHz



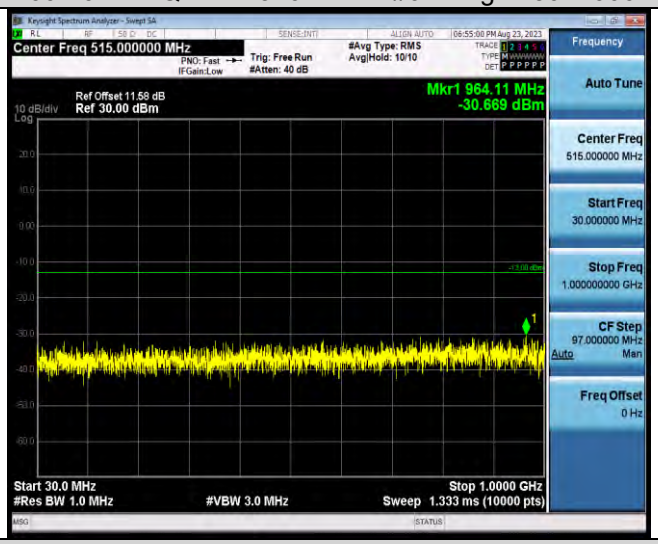
Band66-10MHz-QPSK-132322-1RB#0-Range1:30~1000MHz



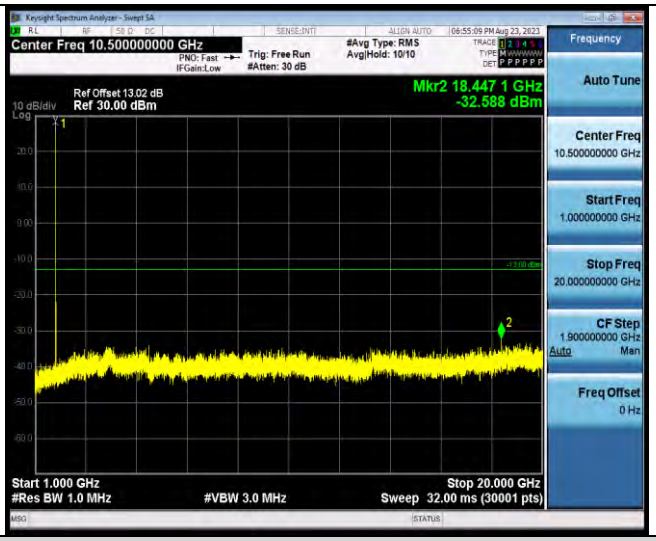
Band66-10MHz-QPSK-132322-1RB#0-Range2:1000~20000MHz



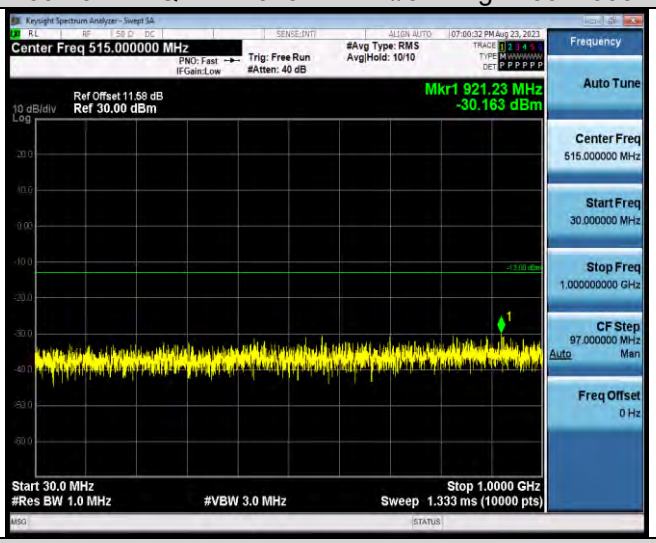
Band66-10MHz-QPSK-132622-1RB#0-Range1:30~1000MHz



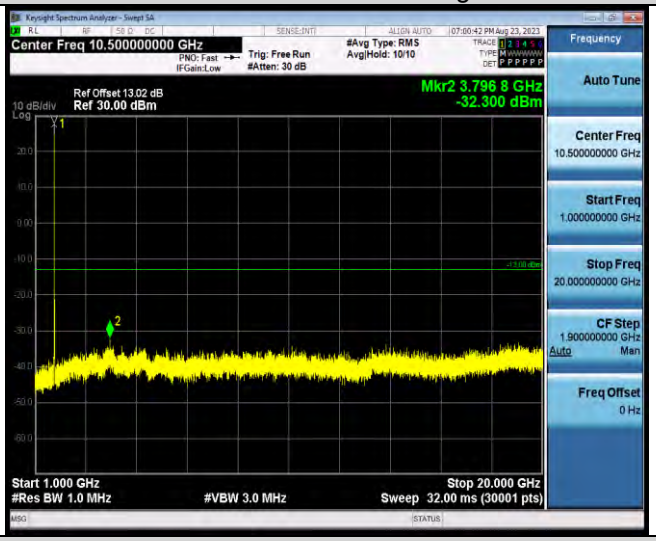
Band66-10MHz-QPSK-132622-1RB#0-Range2:1000~20000MHz



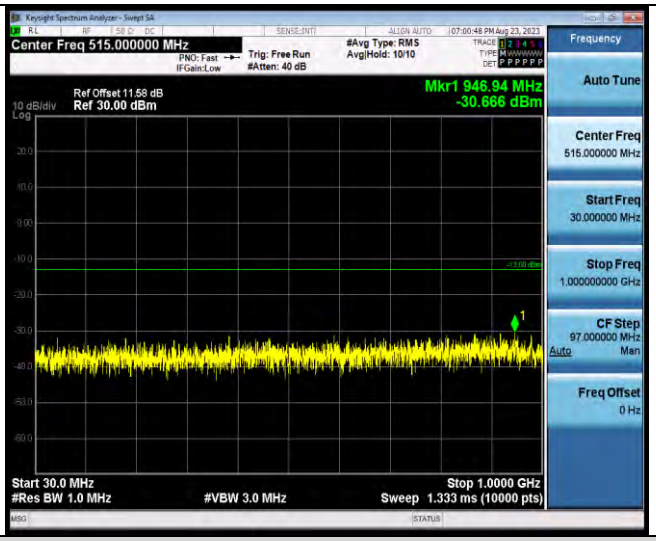
Band66-15MHz-QPSK-132047-1RB#0-Range1:30~1000MHz



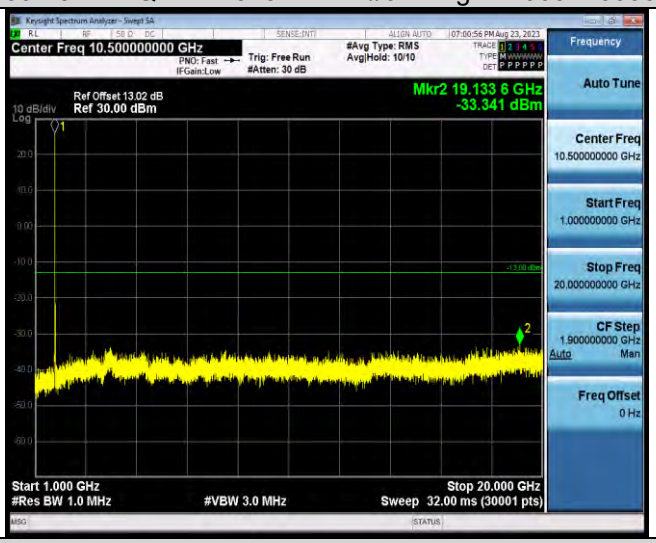
Band66-15MHz-QPSK-132047-1RB#0-Range2:1000~20000MHz



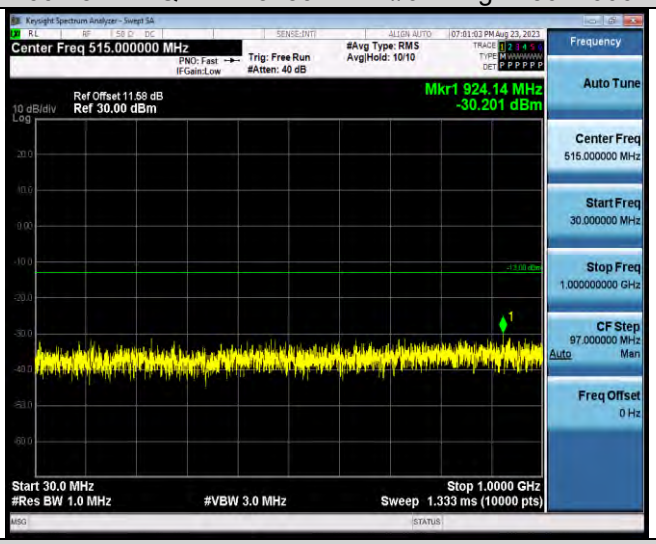
Band66-15MHz-QPSK-132322-1RB#0-Range1:30~1000MHz



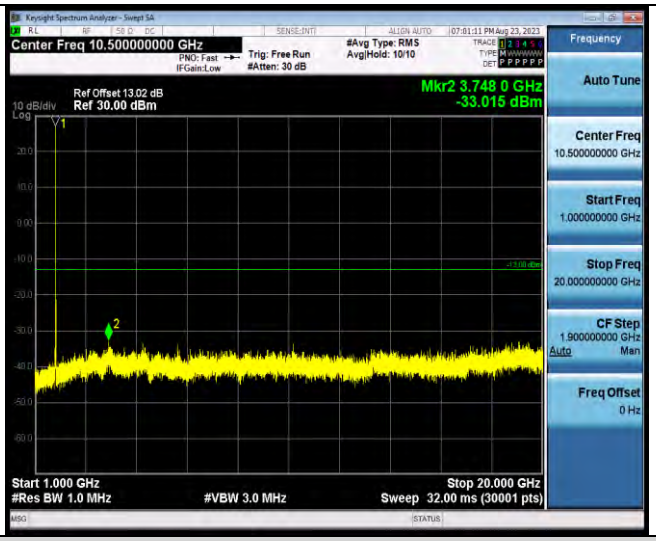
Band66-15MHz-QPSK-132322-1RB#0-Range2:1000~20000MHz



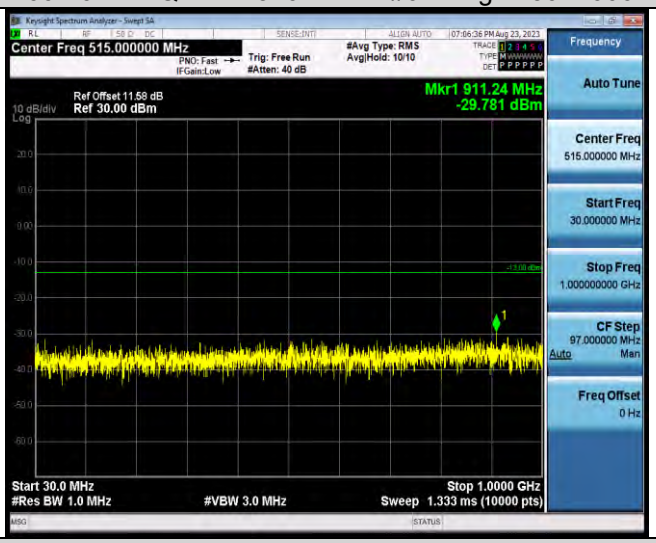
Band66-15MHz-QPSK-132597-1RB#0-Range1:30~1000MHz



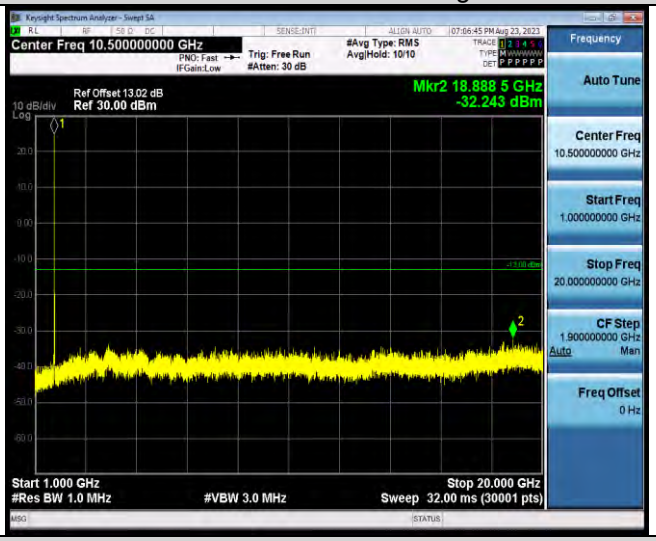
Band66-15MHz-QPSK-132597-1RB#0-Range2:1000~20000MHz



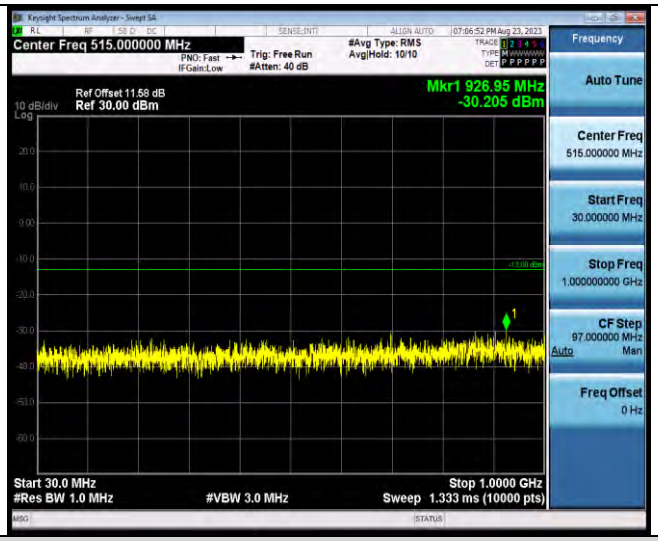
Band66-20MHz-QPSK-132072-1RB#0-Range1:30~1000MHz



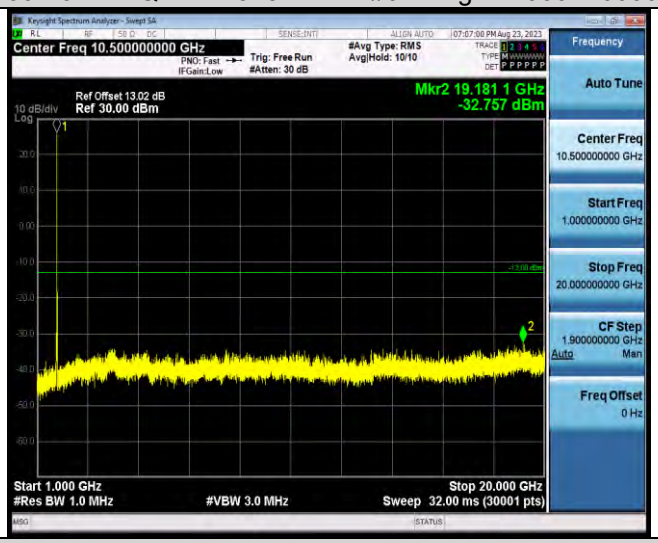
Band66-20MHz-QPSK-132072-1RB#0-Range2:1000~20000MHz



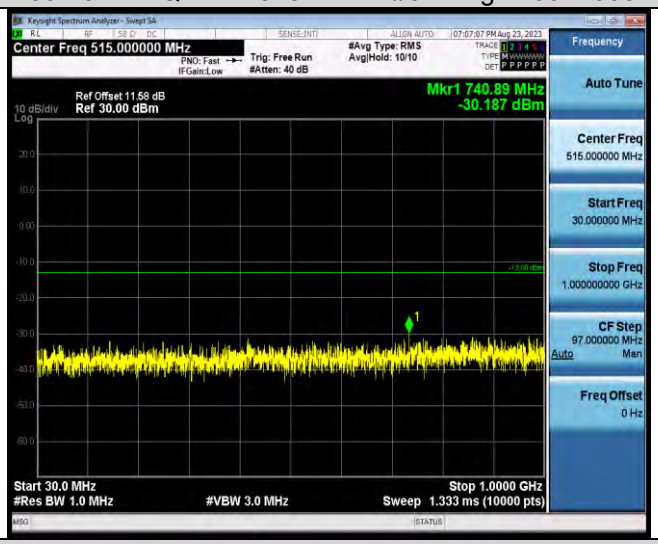
Band66-20MHz-QPSK-132322-1RB#0-Range1:30~1000MHz



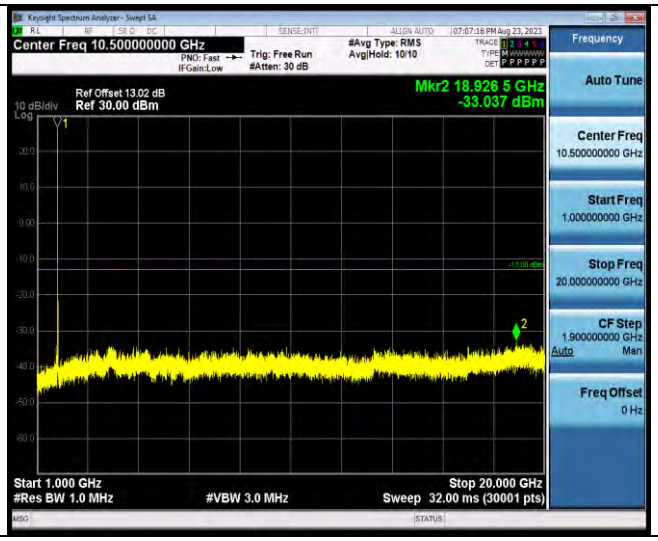
Band66-20MHz-QPSK-132322-1RB#0-Range2:1000~20000MHz



Band66-20MHz-QPSK-132572-1RB#0-Range1:30~1000MHz



Band66-20MHz-QPSK-132572-1RB#0-Range2:1000~20000MHz


Keysight Spectrum Analyzer - Swept SA
Center Freq 10.500000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 10/10
07:07:16 PM Aug 23, 2023
Frequency
Auto Tune
Center Freq
10.500000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
1.900000000 GHz
Auto
Man
Freq Offset
0 Hz
Mkr2 18.926 5 GHz
-33.037 dBm
Ref Offset 13.02 dB
10 dB/div
Ref 30.00 dBm
Log
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
Sweep 32.00 ms (30001 pts)

FREQUENCY STABILITY

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band66	20MHz	QPSK	132072	100RB#0	LV	NT	-10.73	-0.006238	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	NT	-7.45	-0.004331	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	HV	NT	-12.70	-0.007384	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	LV	NT	-5.26	-0.003014	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	NT	-15.46	-0.008860	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	HV	NT	4.26	0.002441	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	LV	NT	-15.61	-0.008819	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	NT	10.59	0.005983	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	HV	NT	-18.22	-0.010294	±2.5	PASS

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band66	20MHz	QPSK	132072	100RB#0	NV	-30	-12.93	-0.007517	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	-20	-13.69	-0.007959	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	-10	-9.00	-0.005233	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	0	-14.99	-0.008715	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	10	-15.12	-0.008791	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	20	5.11	0.002971	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	30	-14.43	-0.008390	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	40	-13.82	-0.008035	±2.5	PASS
Band66	20MHz	QPSK	132072	100RB#0	NV	50	-13.36	-0.007767	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	-30	-14.33	-0.008212	±2.5	PASS

Band66	20MHz	QPSK	132322	100RB#0	NV	-20	-10.90	-0.006246	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	-10	3.48	0.001994	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	0	-6.47	-0.003708	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	10	11.03	0.006321	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	20	-6.27	-0.003593	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	30	14.38	0.008241	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	40	-8.84	-0.005066	±2.5	PASS
Band66	20MHz	QPSK	132322	100RB#0	NV	50	-12.45	-0.007135	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	-30	-12.80	-0.007232	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	-20	-15.61	-0.008819	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	-10	-9.80	-0.005537	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	0	-2.93	-0.001655	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	10	-15.31	-0.008650	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	20	-12.93	-0.007305	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	30	-4.66	-0.002633	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	40	-7.64	-0.004316	±2.5	PASS
Band66	20MHz	QPSK	132572	100RB#0	NV	50	-13.60	-0.007684	±2.5	PASS

MAX Deviation calculation

Frequency Stability	Frequency (MHz)	Limit Line(MHz)	Result
fL-|MAX(△f)|	1710.993982	≥1710	PASS
fH+|MAX(△f)|	1778.986518	≤1780	

Note：1. |MAX(△f)| = Max Deviation
2. fL = Occ low channel fl(-13dBm/MHz)
3. fH = Occ High channel fH(-13dBm/MHz)
4. |MAX(△f)| =18.22 Hz.

---END---