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VERITAS

**Test Report No.: W7L-P23030025RF06**

Band7	20MHz	QPSK	21350	100RB#0	NV	50	-4.98	-0.001945	±2.5	PASS
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Note: LV = Low voltage(3.4V); NV = Normal voltage(4V); HV = High voltage(4.35V);NT = Normal temperature (25°C).

**MAX Deviation calculation**

Frequency Stability	Frequency (MHz)	Limit Line(MHz)	Result
$fL -  \text{MAX}(\Delta f) $	2501.030500	$\geq 2500$	PASS
$fH +  \text{MAX}(\Delta f) $	2568.952500	$\leq 2570$	

Note : 1.  $|\text{MAX}(\Delta f)|$  = Max Deviation

2.  $fL$  = Occ low channel  $fL(-13\text{dBm/MHz})$

3.  $fH$  = Occ High channel  $fH(-13\text{dBm/MHz})$

4.  $|\text{MAX}(\Delta f)|$  = 8.2 Hz.



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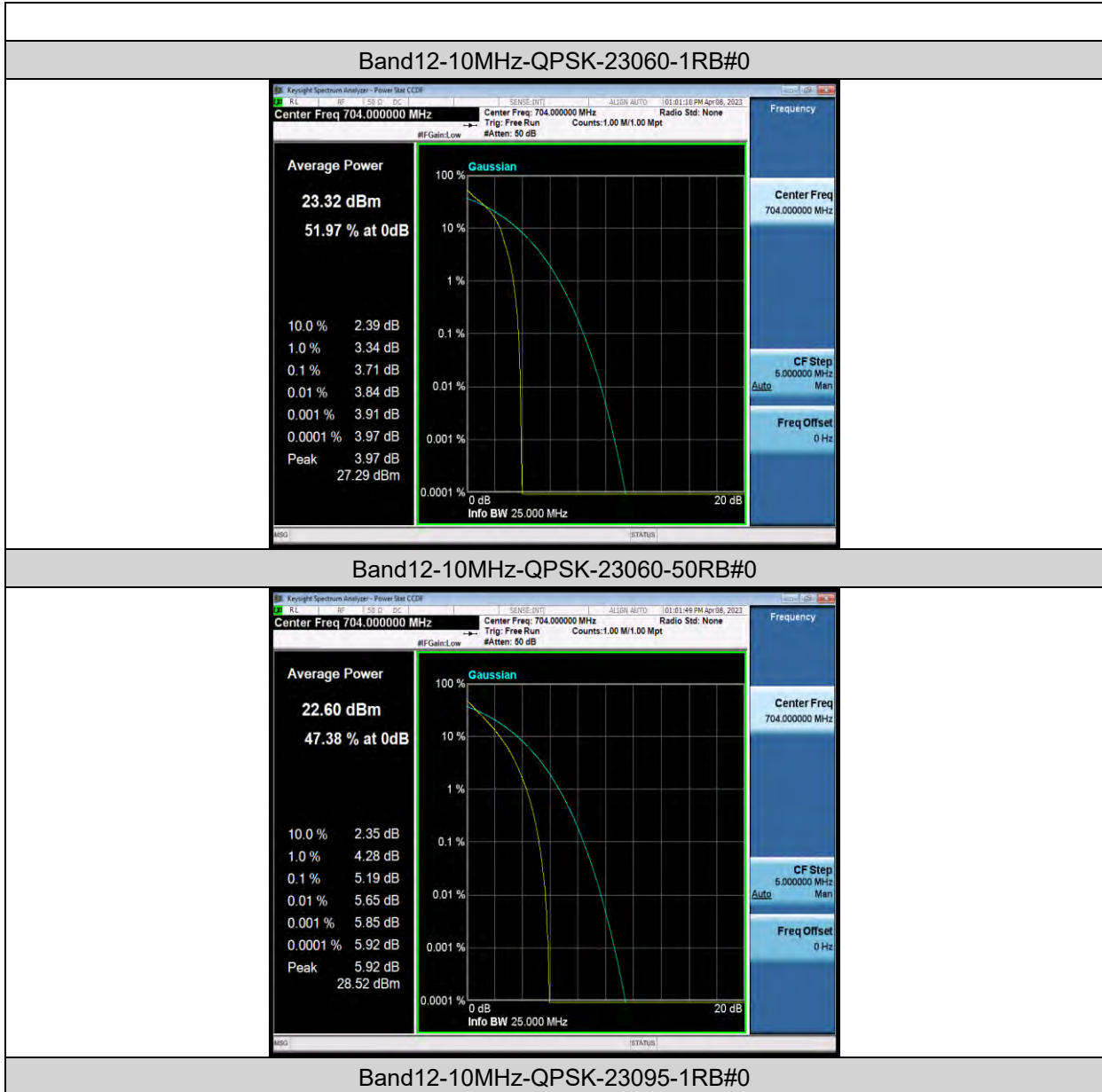
## LTE BAND12 (INCLUDING B17)

### PEAK-TO-AVERAGE RATIO(CCDF)

#### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	1RB#0	3.71	13	PASS
Band12	10MHz	QPSK	23060	50RB#0	5.19	13	PASS
Band12	10MHz	QPSK	23095	1RB#0	4.56	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.16	13	PASS
Band12	10MHz	QPSK	23130	1RB#0	5.40	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.17	13	PASS
Band12	10MHz	16QAM	23060	1RB#0	4.47	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	5.89	13	PASS
Band12	10MHz	16QAM	23095	1RB#0	5.34	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.10	13	PASS
Band12	10MHz	16QAM	23130	1RB#0	6.30	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	5.99	13	PASS
Band12	10MHz	64QAM	23060	1RB#0	5.32	13	PASS
Band12	10MHz	64QAM	23060	50RB#0	6.53	13	PASS
Band12	10MHz	64QAM	23095	1RB#0	6.06	13	PASS
Band12	10MHz	64QAM	23095	50RB#0	6.46	13	PASS
Band12	10MHz	64QAM	23130	1RB#0	6.55	13	PASS
Band12	10MHz	64QAM	23130	50RB#0	6.44	13	PASS

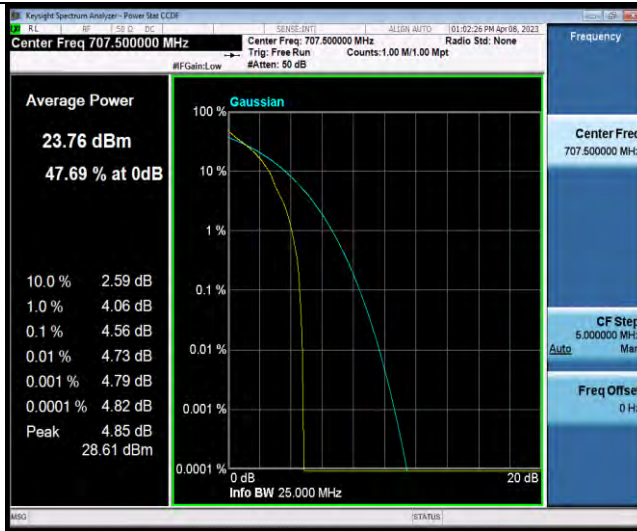
### Test Graphs



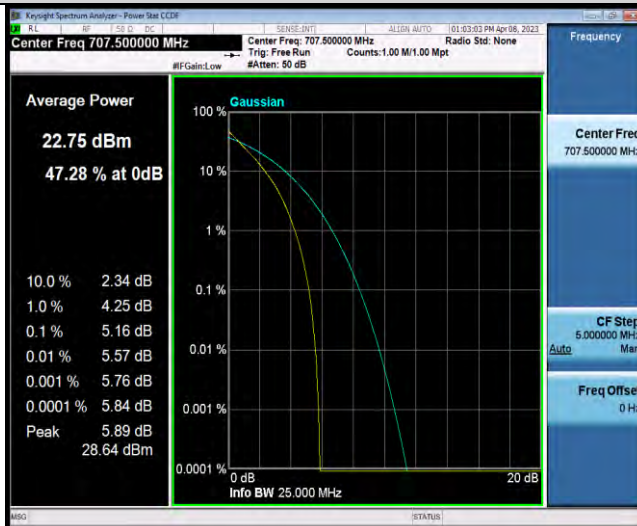


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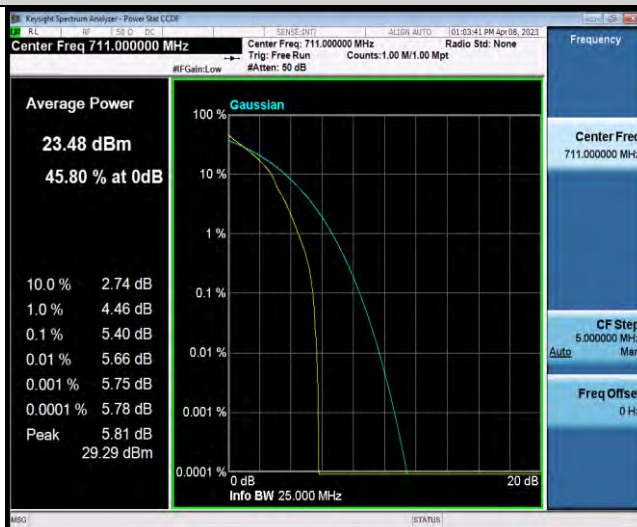
Test Report No.: W7L-P23030025RF06



Band12-10MHz-QPSK-23095-50RB#0



Band12-10MHz-QPSK-23130-1RB#0



Band12-10MHz-QPSK-23130-50RB#0

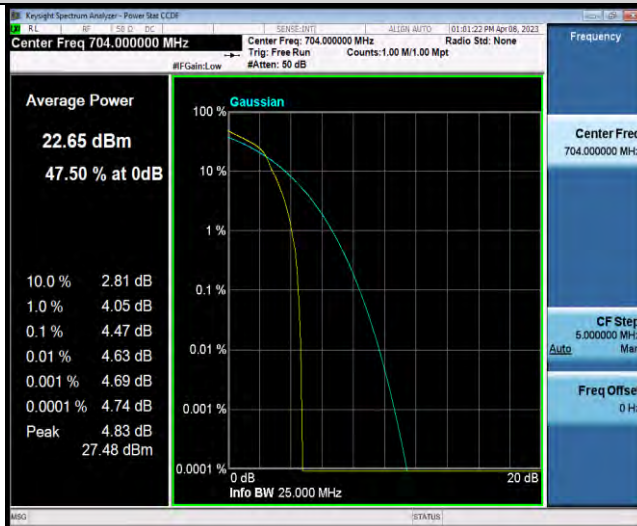


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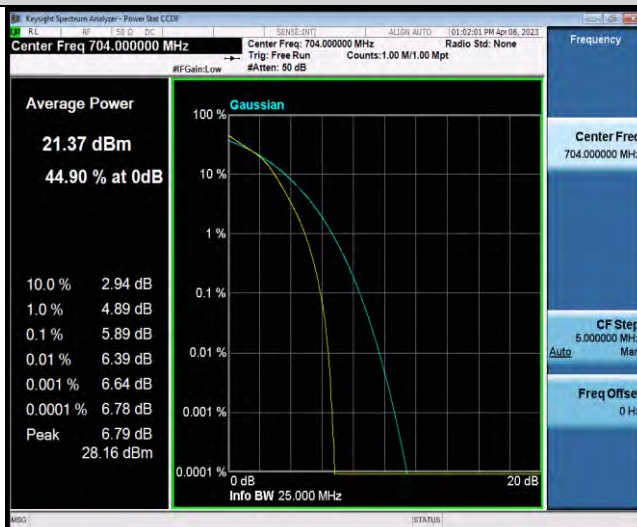
Test Report No.: W7L-P23030025RF06



Band12-10MHz-16QAM-23060-1RB#0



Band12-10MHz-16QAM-23060-50RB#0



Band12-10MHz-16QAM-23095-1RB#0



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Band12-10MHz-16QAM-23095-50RB#0



Band12-10MHz-16QAM-23130-1RB#0

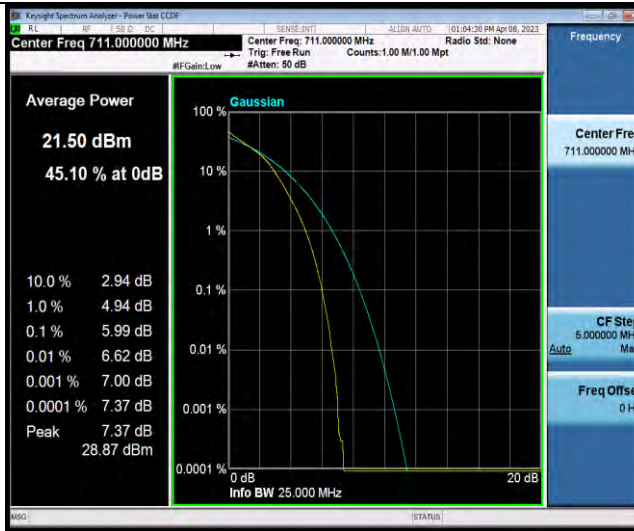


Band12-10MHz-16QAM-23130-50RB#0

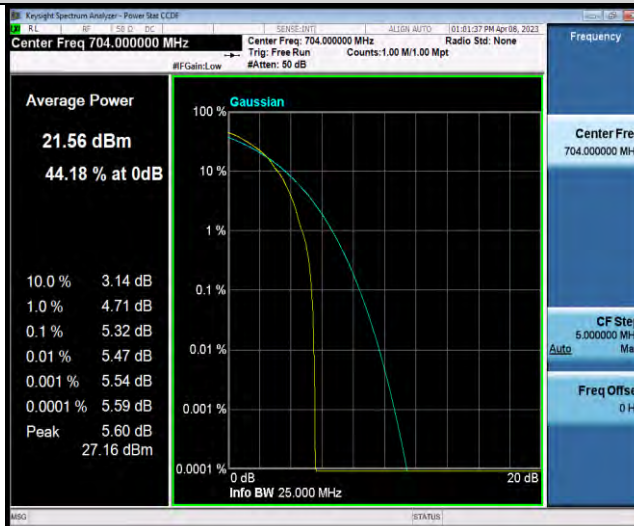


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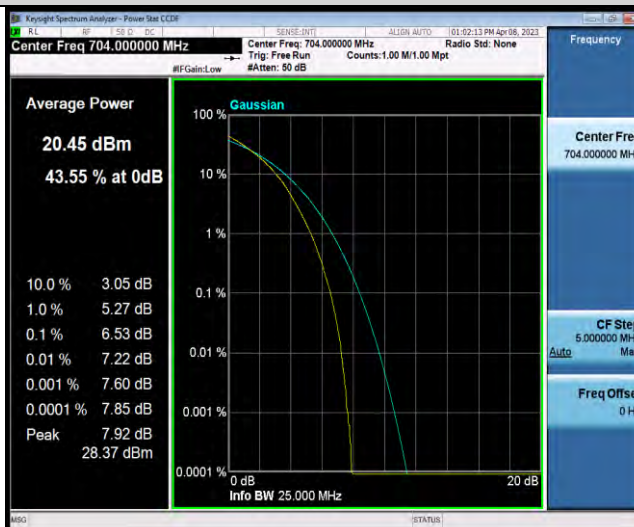
### Test Report No.: W7L-P23030025RF06



Band12-10MHz-64QAM-23060-1RB#0



Band12-10MHz-64QAM-23060-50RB#0



Band12-10MHz-64QAM-23095-1RB#0

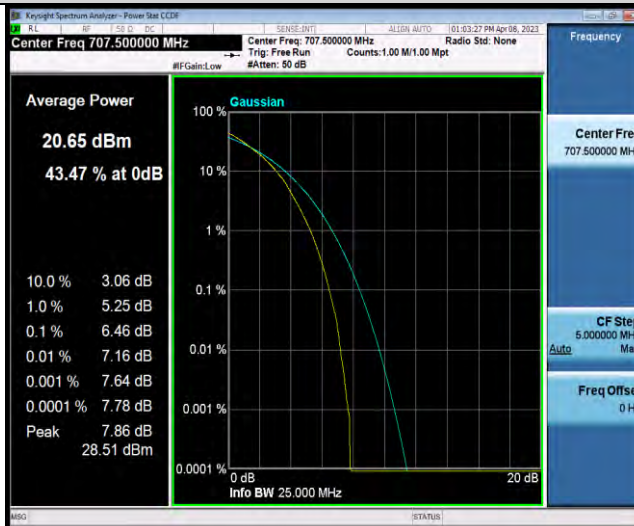


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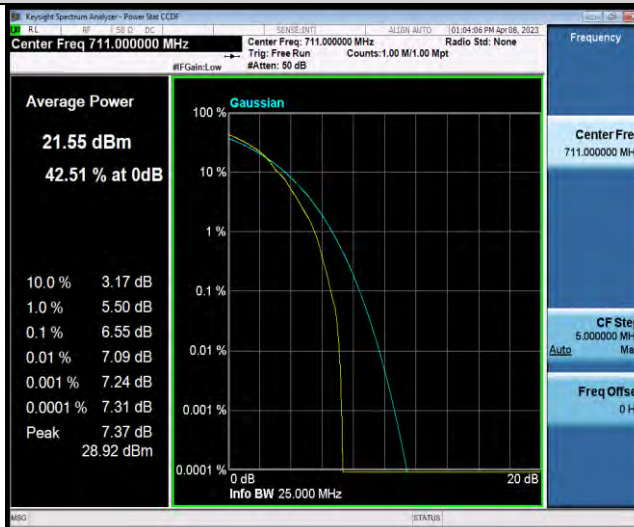
Test Report No.: W7L-P23030025RF06



Band12-10MHz-64QAM-23095-50RB#0



Band12-10MHz-64QAM-23130-1RB#0



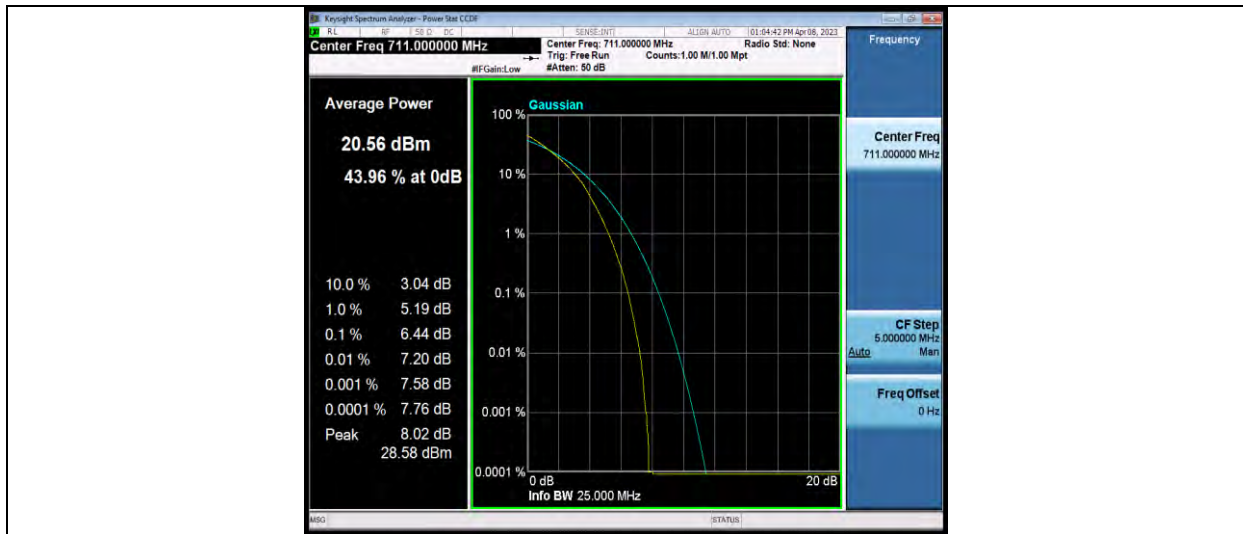
Band12-10MHz-64QAM-23130-50RB#0





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Test Report No.: W7L-P23030025RF06





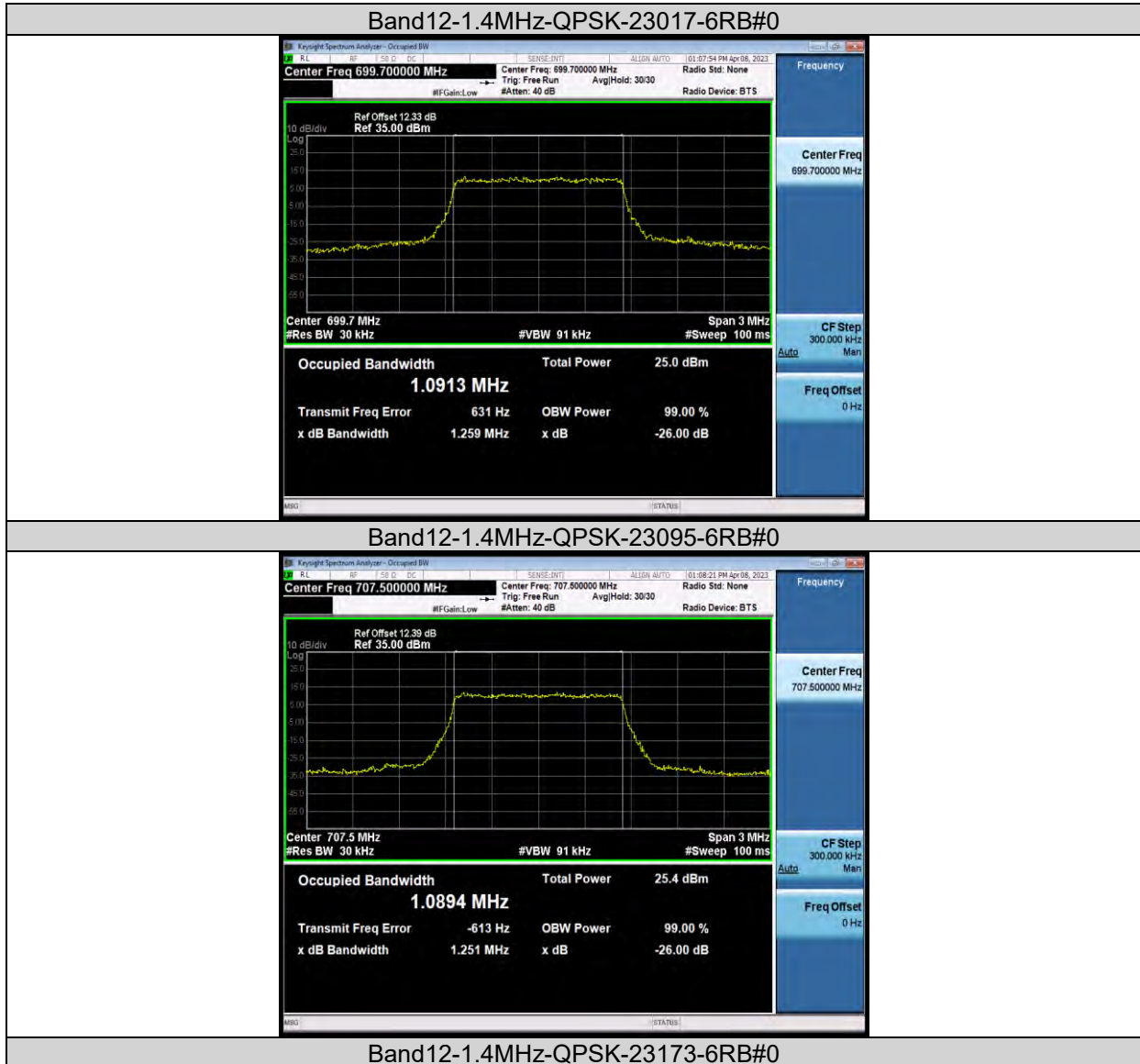
Test Report No.: W7L-P23030025RF06

## 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.0913	1.259	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.0894	1.251	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.0929	1.257	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.0943	1.273	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.0963	1.267	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.0927	1.260	PASS
Band12	1.4MHz	64QAM	23017	6RB#0	1.0881	1.259	PASS
Band12	1.4MHz	64QAM	23095	6RB#0	1.0883	1.257	PASS
Band12	1.4MHz	64QAM	23173	6RB#0	1.0896	1.260	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.6985	2.915	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.6931	2.916	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.6958	2.940	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.6917	2.928	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.6954	2.916	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.6938	2.916	PASS
Band12	3MHz	64QAM	23025	15RB#0	2.6998	2.926	PASS
Band12	3MHz	64QAM	23095	15RB#0	2.6933	2.911	PASS
Band12	3MHz	64QAM	23165	15RB#0	2.7014	2.909	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.4852	4.847	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.4873	4.852	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.4878	4.864	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.4945	4.840	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.4924	4.832	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.4878	4.869	PASS
Band12	5MHz	64QAM	23035	25RB#0	4.4890	4.854	PASS
Band12	5MHz	64QAM	23095	25RB#0	4.4986	4.862	PASS
Band12	5MHz	64QAM	23155	25RB#0	4.4983	4.886	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.9463	9.521	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.9675	9.531	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.9563	9.503	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.9377	9.510	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.9576	9.540	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.9599	9.538	PASS
Band12	10MHz	64QAM	23060	50RB#0	8.9615	9.536	PASS
Band12	10MHz	64QAM	23095	50RB#0	8.9513	9.533	PASS
Band12	10MHz	64QAM	23130	50RB#0	8.9603	9.521	PASS

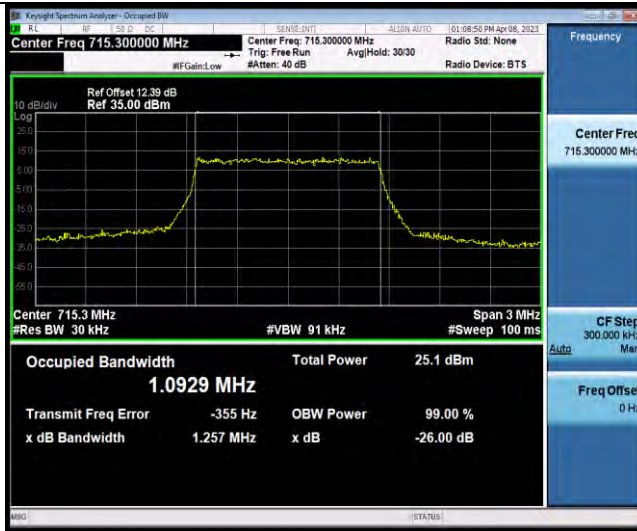
## Test Graphs





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### Test Report No.: W7L-P23030025RF06



Band12-1.4MHz-16QAM-23017-6RB#0



Band12-1.4MHz-16QAM-23095-6RB#0

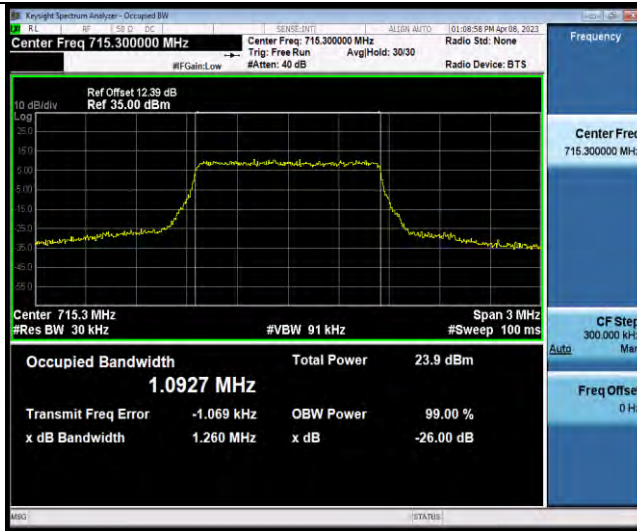


Band12-1.4MHz-16QAM-23173-6RB#0



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Band12-1.4MHz-64QAM-23017-6RB#0



Band12-1.4MHz-64QAM-23095-6RB#0

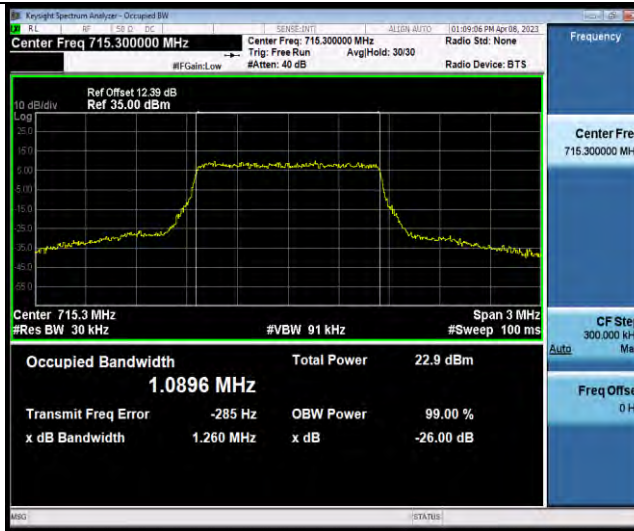


Band12-1.4MHz-64QAM-23173-6RB#0



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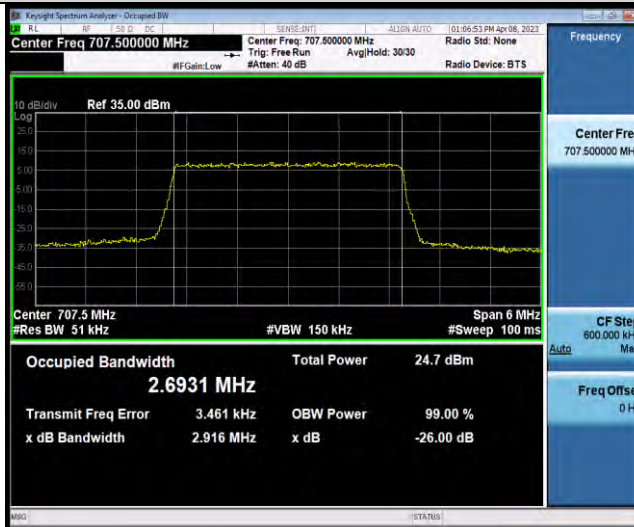
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Band12-3MHz-QPSK-23025-15RB#0



Band12-3MHz-QPSK-23095-15RB#0

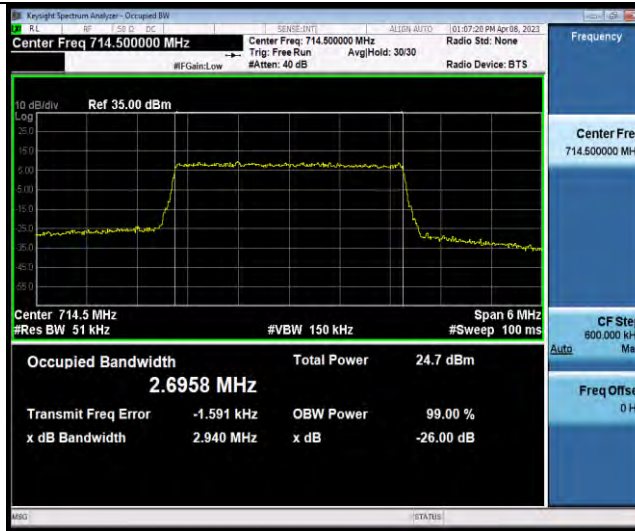


Band12-3MHz-QPSK-23165-15RB#0

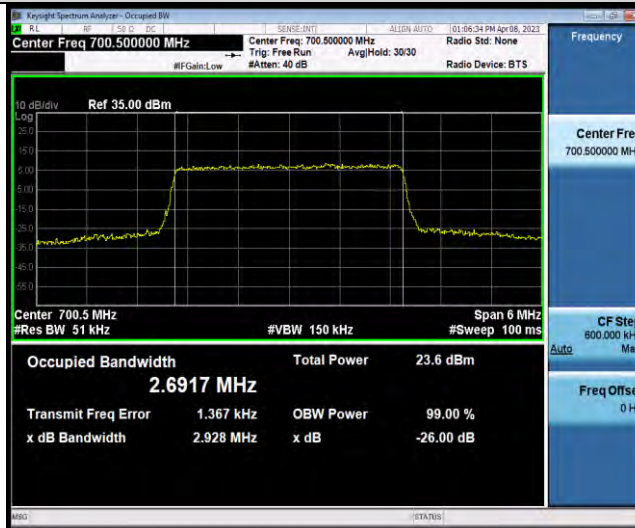


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Test Report No.: W7L-P23030025RF06



Band12-3MHz-16QAM-23025-15RB#0



Band12-3MHz-16QAM-23095-15RB#0

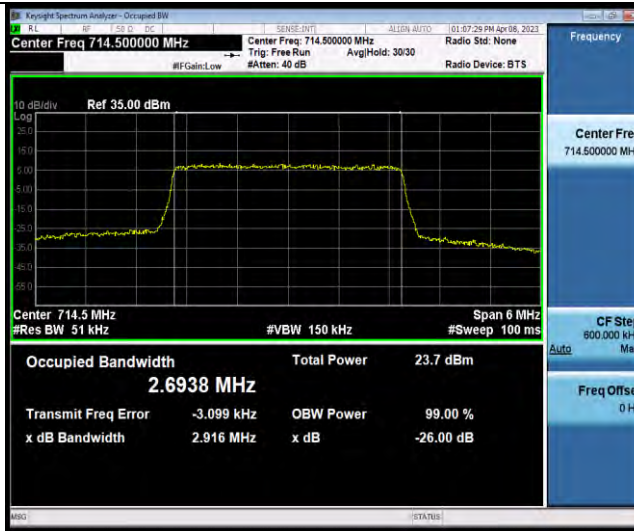


Band12-3MHz-16QAM-23165-15RB#0

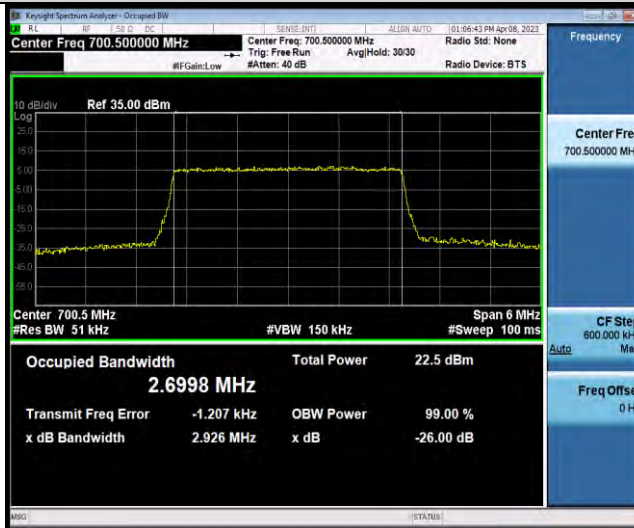


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Test Report No.: W7L-P23030025RF06



Band12-3MHz-64QAM-23025-15RB#0



Band12-3MHz-64QAM-23095-15RB#0



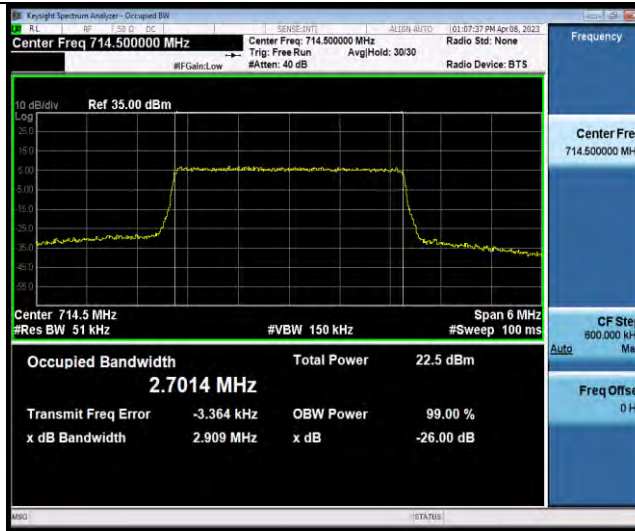
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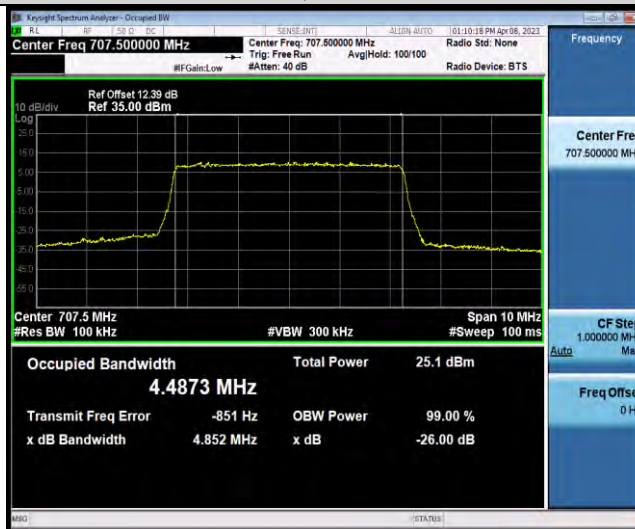
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Band12-5MHz-QPSK-23035-25RB#0



Band12-5MHz-QPSK-23095-25RB#0

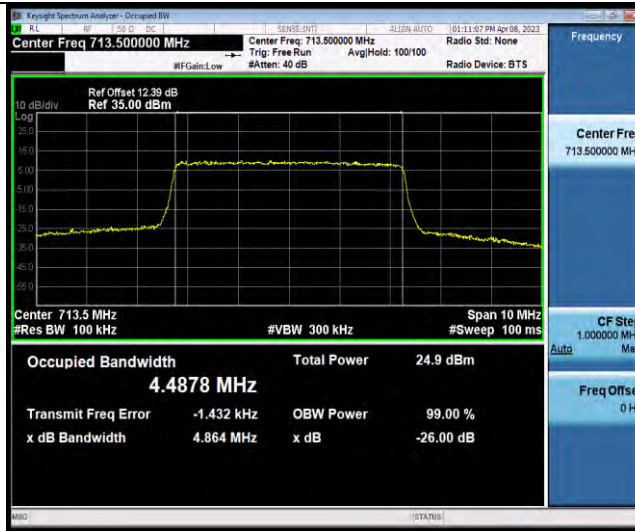


Band12-5MHz-QPSK-23155-25RB#0

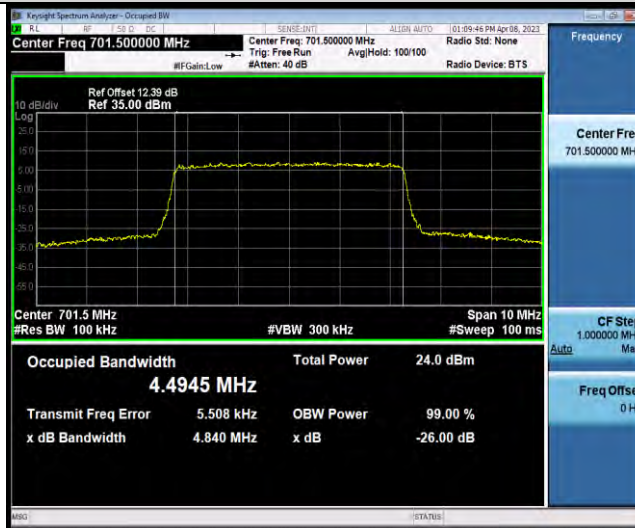


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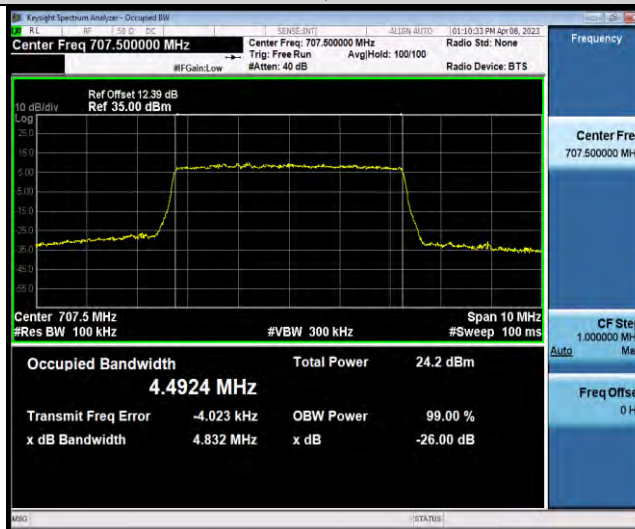
Test Report No.: W7L-P23030025RF06



Band12-5MHz-16QAM-23035-25RB#0



Band12-5MHz-16QAM-23095-25RB#0



Band12-5MHz-16QAM-23155-25RB#0



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Band12-5MHz-64QAM-23035-25RB#0



Band12-5MHz-64QAM-23095-25RB#0



Band12-5MHz-64QAM-23155-25RB#0



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Band12-10MHz-QPSK-23060-50RB#0



Band12-10MHz-QPSK-23095-50RB#0



Band12-10MHz-QPSK-23130-50RB#0



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Band12-10MHz-16QAM-23060-50RB#0



Band12-10MHz-16QAM-23095-50RB#0



Band12-10MHz-16QAM-23130-50RB#0



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Test Report No.: W7L-P23030025RF06



Band12-10MHz-64QAM-23060-50RB#0



Band12-10MHz-64QAM-23095-50RB#0



Band12-10MHz-64QAM-23130-50RB#0



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Test Report No.: W7L-P23030025RF06





Test Report No.: W7L-P23030025RF06

## BAND EDGE

### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	-29.72,-21.06	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	-27.67,-27.30	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	-22.30,-27.13	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	-28.23,-29.26	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	-31.65,-22.54	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	-28.45,-27.40	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	-22.90,-27.94	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	-29.43,-28.90	PASS
Band12	1.4MHz	64QAM	23017	1RB#0	-34.99,-24.93	PASS
Band12	1.4MHz	64QAM	23017	6RB#0	-32.78,-32.12	PASS
Band12	1.4MHz	64QAM	23173	1RB#5	-26.12,-29.58	PASS
Band12	1.4MHz	64QAM	23173	6RB#0	-30.09,-30.05	PASS
Band12	3MHz	QPSK	23025	1RB#0	-29.65,-19.60	PASS
Band12	3MHz	QPSK	23025	15RB#0	-29.47,-28.31	PASS
Band12	3MHz	QPSK	23165	1RB#14	-22.45,-33.43	PASS
Band12	3MHz	QPSK	23165	15RB#0	-30.20,-30.79	PASS
Band12	3MHz	16QAM	23025	1RB#0	-28.98,-19.60	PASS
Band12	3MHz	16QAM	23025	15RB#0	-32.40,-30.97	PASS
Band12	3MHz	16QAM	23165	1RB#14	-21.93,-33.21	PASS
Band12	3MHz	16QAM	23165	15RB#0	-31.12,-32.32	PASS
Band12	3MHz	64QAM	23025	1RB#0	-31.97,-23.55	PASS
Band12	3MHz	64QAM	23025	15RB#0	-35.44,-32.03	PASS
Band12	3MHz	64QAM	23165	1RB#14	-26.17,-36.16	PASS
Band12	3MHz	64QAM	23165	15RB#0	-32.99,-33.62	PASS
Band12	5MHz	QPSK	23035	1RB#0	-34.62,-27.02	PASS
Band12	5MHz	QPSK	23035	25RB#0	-33.23,-33.61	PASS
Band12	5MHz	QPSK	23155	1RB#24	-27.33,-40.17	PASS
Band12	5MHz	QPSK	23155	25RB#0	-32.98,-31.47	PASS
Band12	5MHz	16QAM	23035	1RB#0	-38.73,-27.22	PASS
Band12	5MHz	16QAM	23035	25RB#0	-33.52,-33.36	PASS
Band12	5MHz	16QAM	23155	1RB#24	-28.26,-40.99	PASS
Band12	5MHz	16QAM	23155	25RB#0	-32.52,-32.88	PASS
Band12	5MHz	64QAM	23035	1RB#0	-42.45,-28.44	PASS
Band12	5MHz	64QAM	23035	25RB#0	-36.06,-35.67	PASS
Band12	5MHz	64QAM	23155	1RB#24	-29.65,-40.35	PASS
Band12	5MHz	64QAM	23155	25RB#0	-34.36,-34.60	PASS
Band12	10MHz	QPSK	23060	1RB#0	-44.04,-39.61	PASS
Band12	10MHz	QPSK	23060	50RB#0	-34.75,-36.88	PASS
Band12	10MHz	QPSK	23130	1RB#49	-41.46,-44.65	PASS
Band12	10MHz	QPSK	23130	50RB#0	-38.26,-36.44	PASS
Band12	10MHz	16QAM	23060	1RB#0	-45.75,-40.06	PASS
Band12	10MHz	16QAM	23060	50RB#0	-35.58,-37.52	PASS
Band12	10MHz	16QAM	23130	1RB#49	-42.05,-45.96	PASS
Band12	10MHz	16QAM	23130	50RB#0	-39.52,-37.78	PASS



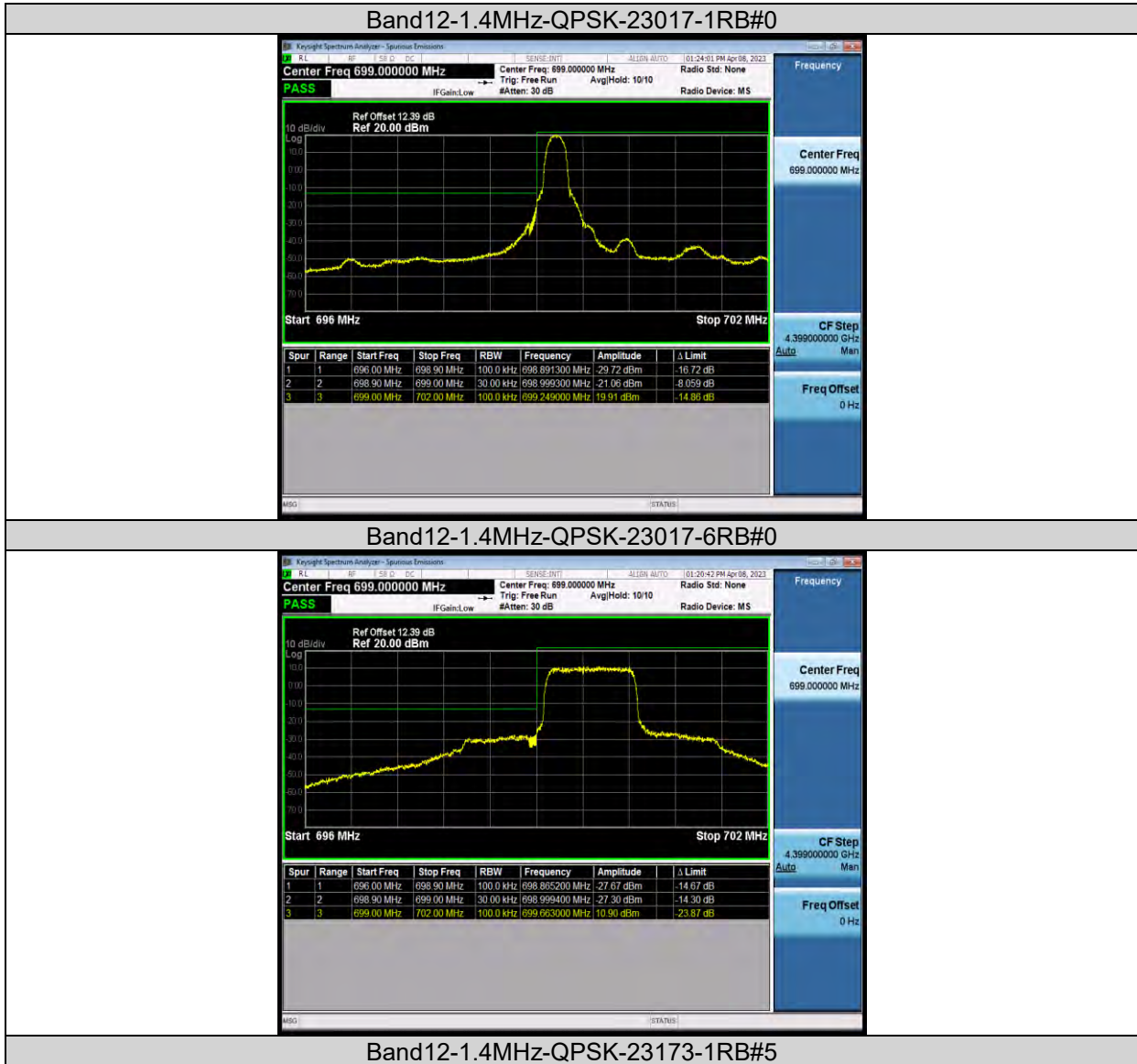


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Band12	10MHz	64QAM	23060	1RB#0	-46.52,-41.73	PASS
Band12	10MHz	64QAM	23060	50RB#0	-37.23,-38.96	PASS
Band12	10MHz	64QAM	23130	1RB#49	-42.77,-47.13	PASS
Band12	10MHz	64QAM	23130	50RB#0	-40.62,-39.64	PASS

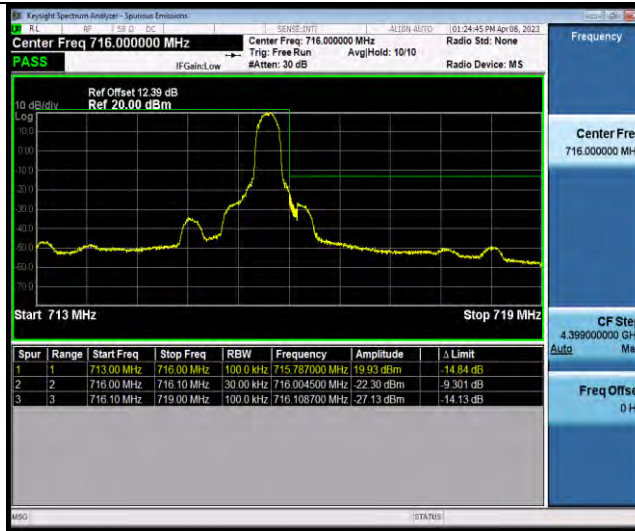
**Test Graphs**



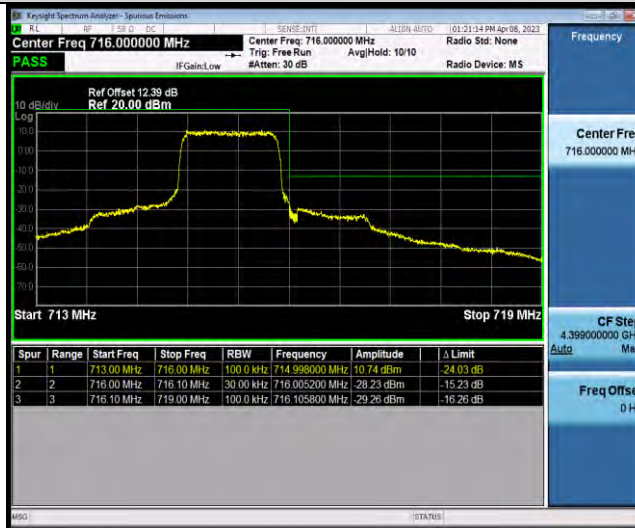


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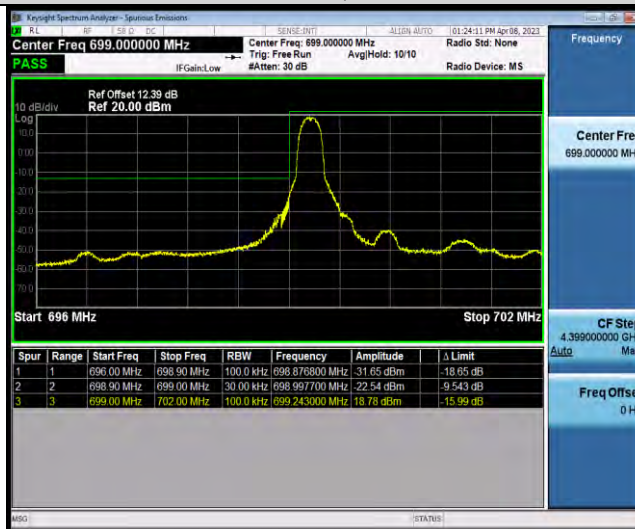
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Band12-1.4MHz-QPSK-23173-6RB#0



Band12-1.4MHz-16QAM-23017-1RB#0



Band12-1.4MHz-16QAM-23017-6RB#0

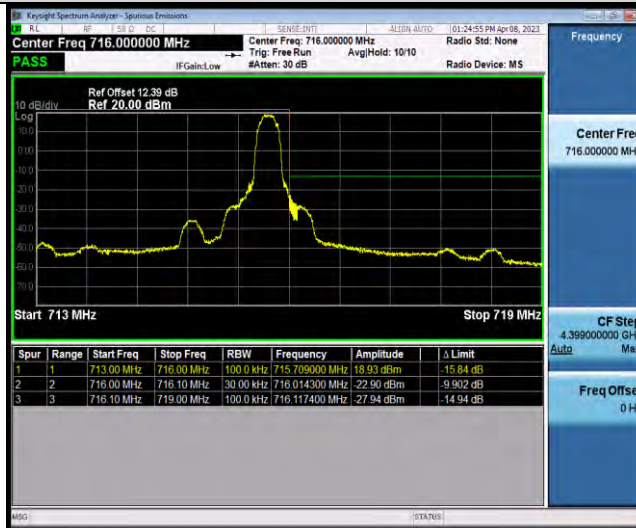


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### Test Report No.: W7L-P23030025RF06



Band12-1.4MHz-16QAM-23173-1RB#5



Band12-1.4MHz-16QAM-23173-6RB#0

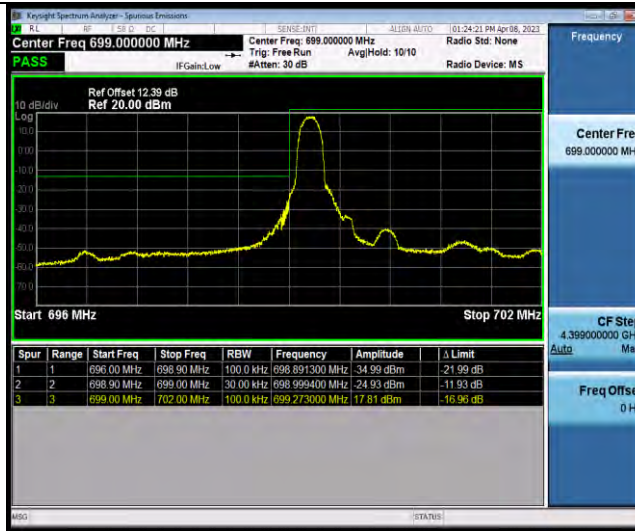


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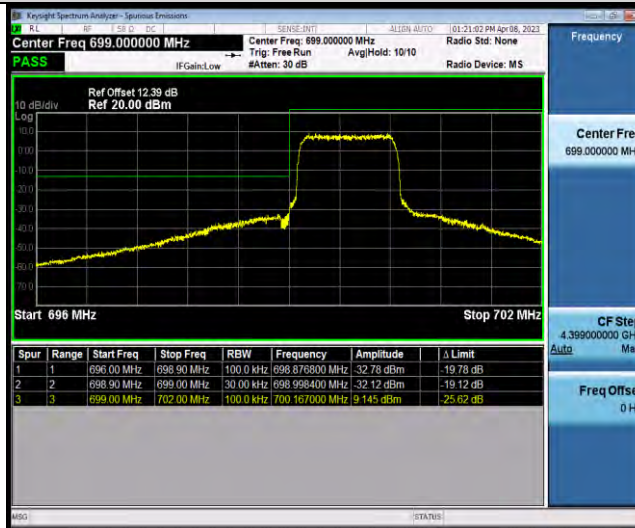


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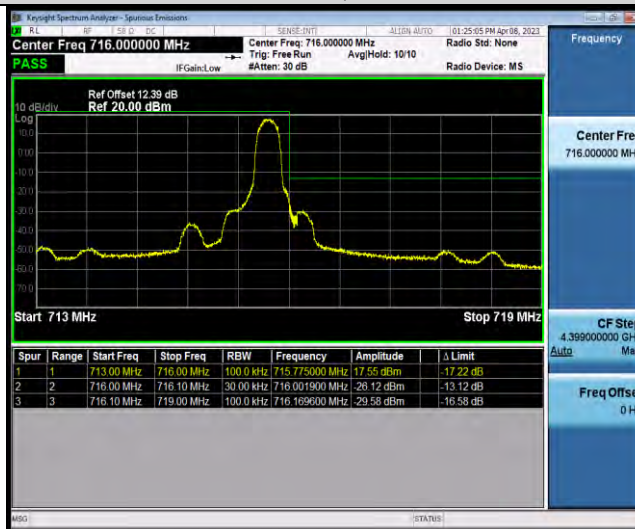
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Band12-1.4MHz-64QAM-23017-6RB#0



Band12-1.4MHz-64QAM-23173-1RB#5



Band12-1.4MHz-64QAM-23173-6RB#0

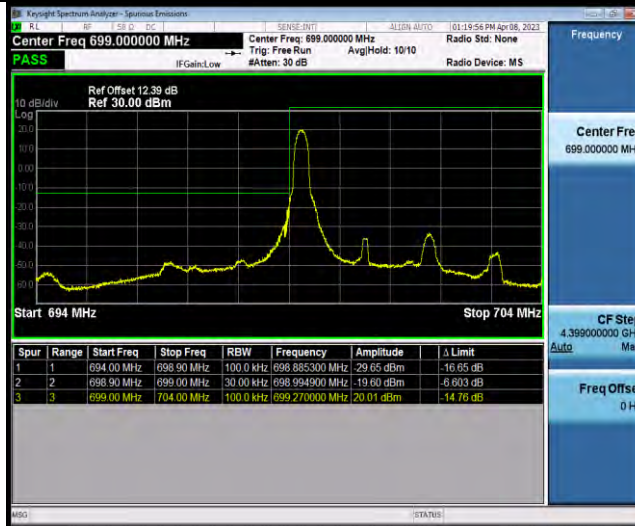


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# Test Report No.: W7L-P23030025RF06



Band12-3MHz-QPSK-23025-1RB#0



Band12-3MHz-QPSK-23025-15RB#0

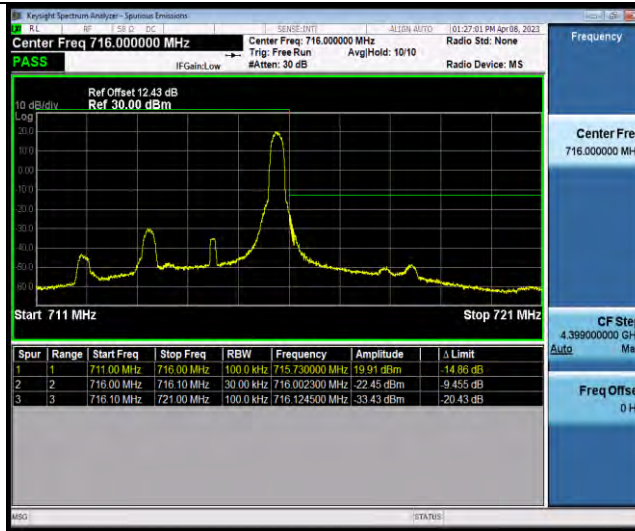


Band12-3MHz-QPSK-23165-1RB#14



BUREAU VERITAS

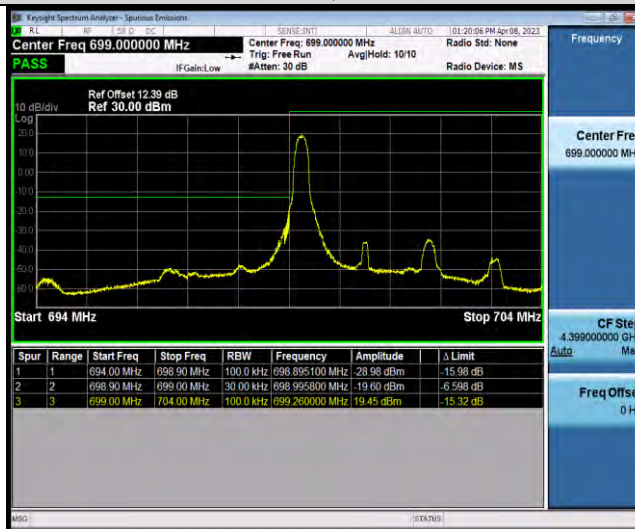
# Test Report No.: W7L-P23030025RF06



Band12-3MHz-QPSK-23165-15RB#0



Band12-3MHz-16QAM-23025-1RB#0



Band12-3MHz-16QAM-23025-15RB#0

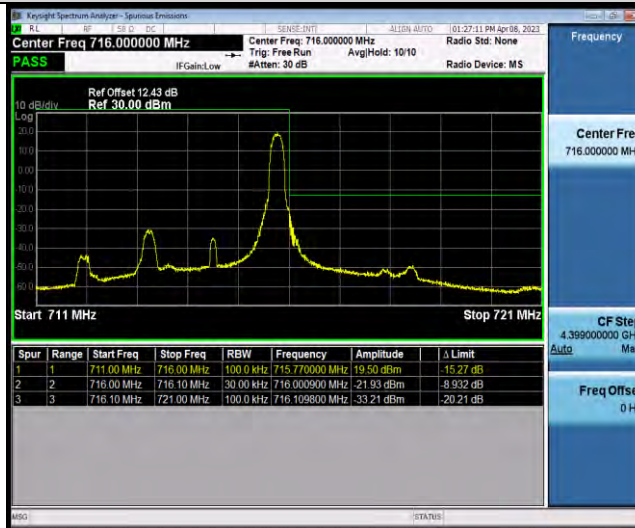


BUREAU VERITAS

# Test Report No.: W7L-P23030025RF06



Band12-3MHz-16QAM-23165-1RB#14



Band12-3MHz-16QAM-23165-15RB#0

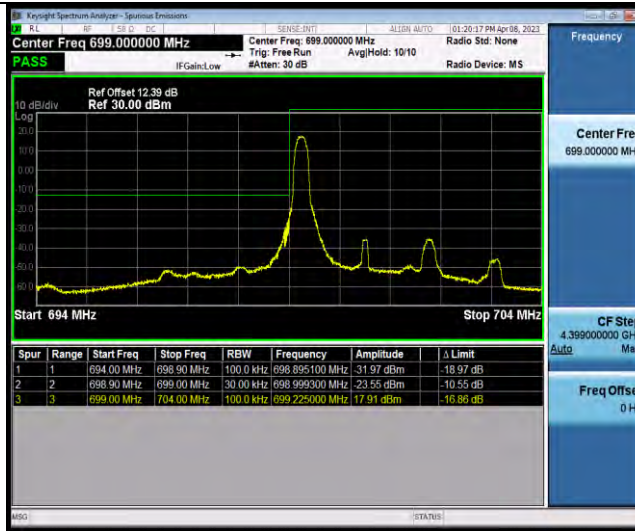


Band12-3MHz-64QAM-23025-1RB#0

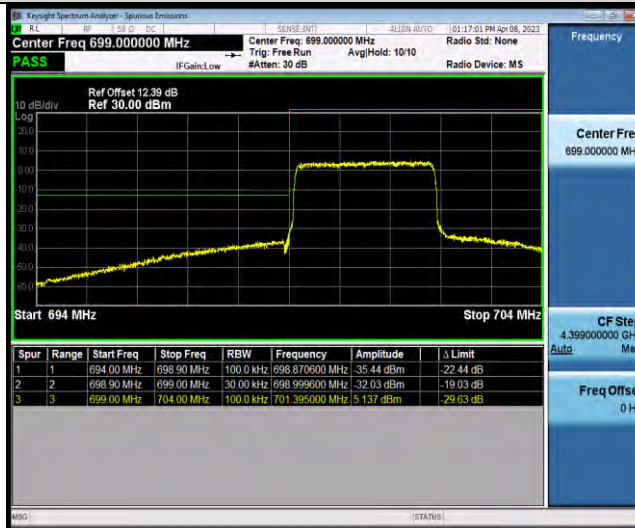


BUREAU VERITAS

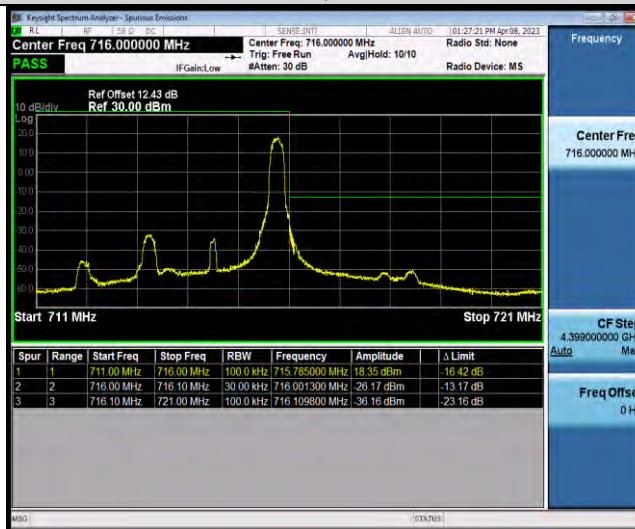
### Test Report No.: W7L-P23030025RF06



Band12-3MHz-64QAM-23025-15RB#0



Band12-3MHz-64QAM-23165-1RB#14



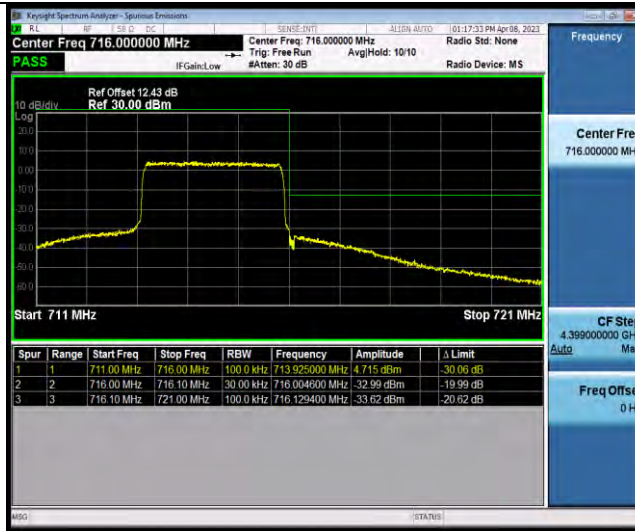
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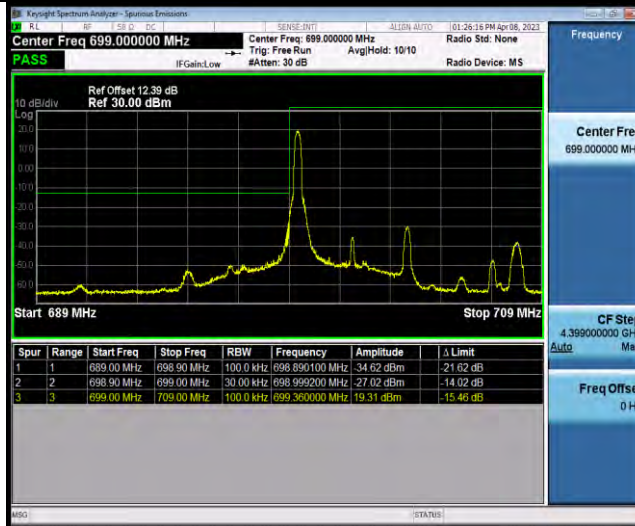


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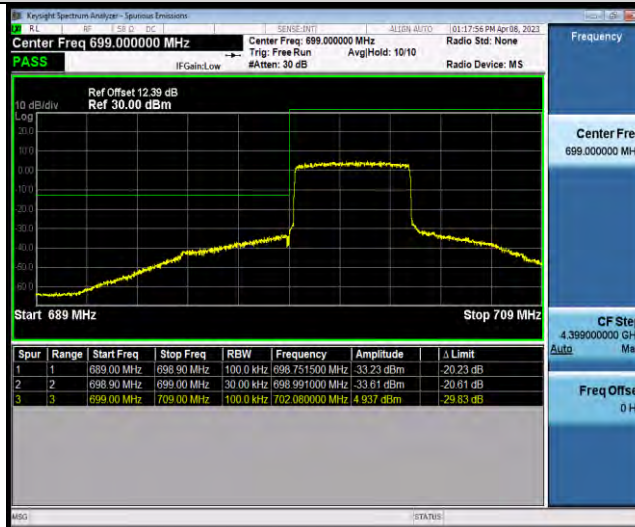
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Band12-5MHz-QPSK-23035-1RB#0



Band12-5MHz-QPSK-23035-25RB#0

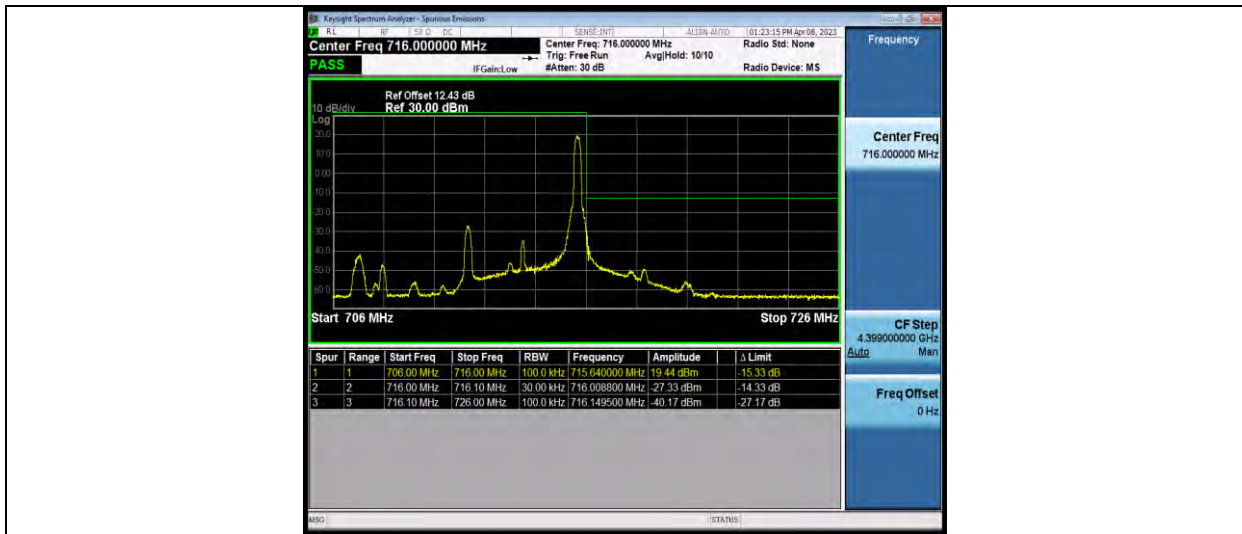


Band12-5MHz-QPSK-23155-1RB#24

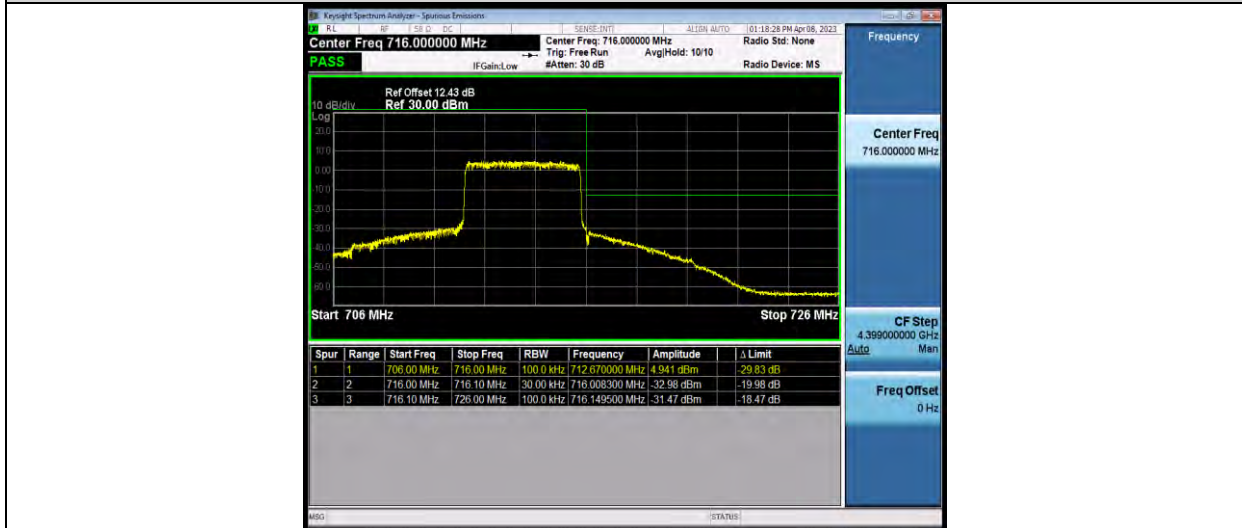


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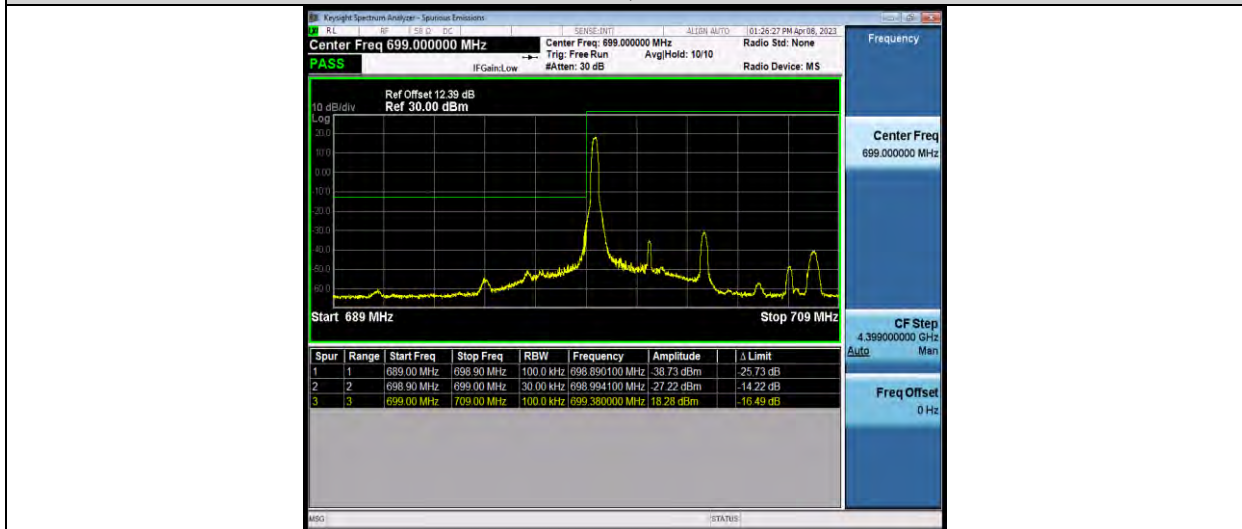
# Test Report No.: W7L-P23030025RF06



Band12-5MHz-QPSK-23155-25RB#0



Band12-5MHz-16QAM-23035-1RB#0



Band12-5MHz-16QAM-23035-25RB#0

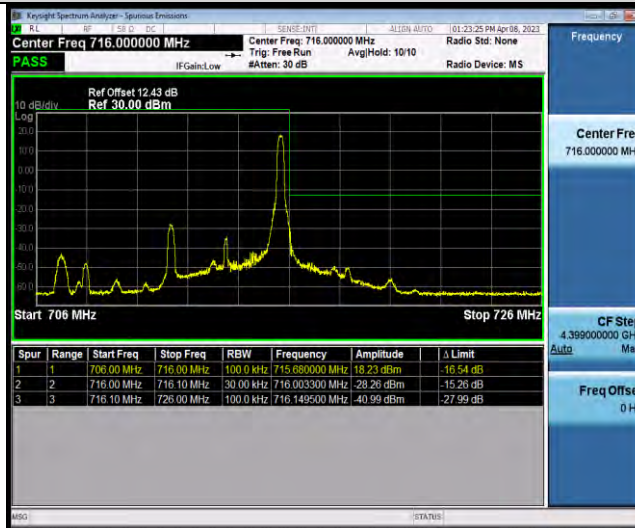


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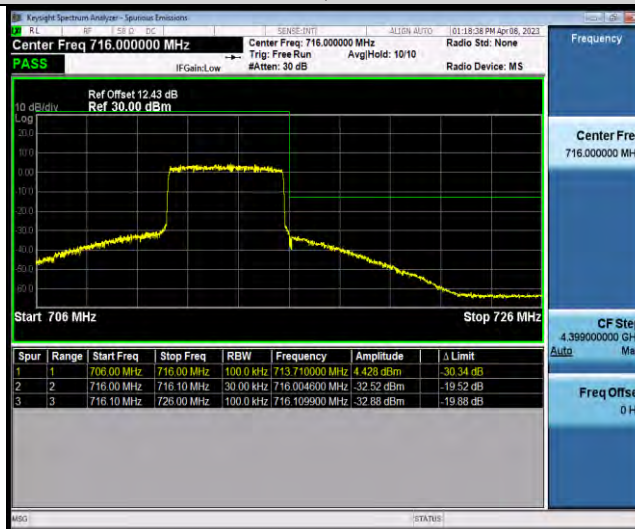
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Band12-5MHz-16QAM-23155-1RB#24



Band12-5MHz-16QAM-23155-25RB#0

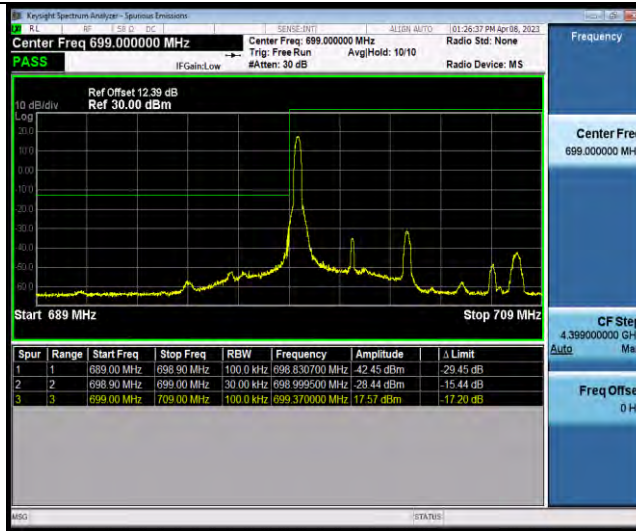


Band12-5MHz-64QAM-23035-1RB#0

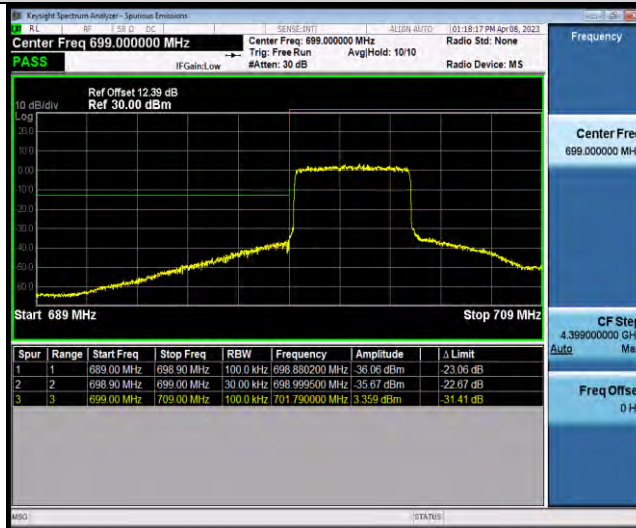


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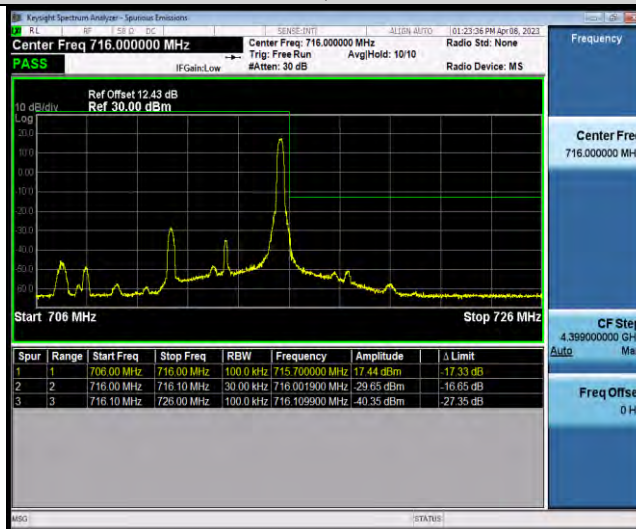
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Band12-5MHz-64QAM-23035-25RB#0



Band12-5MHz-64QAM-23155-1RB#24



Band12-5MHz-64QAM-23155-25RB#0

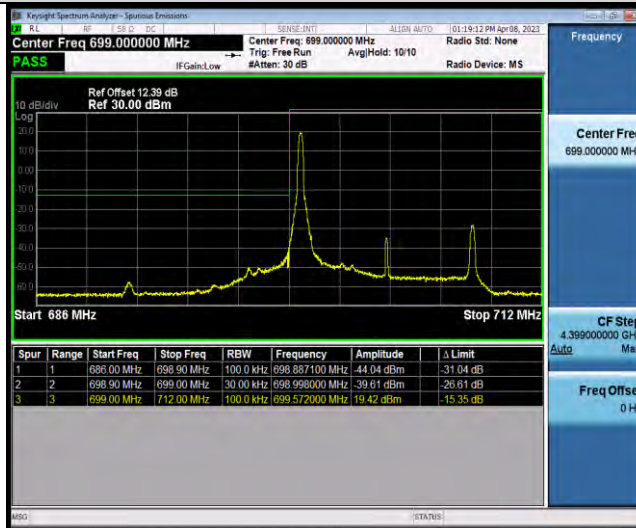


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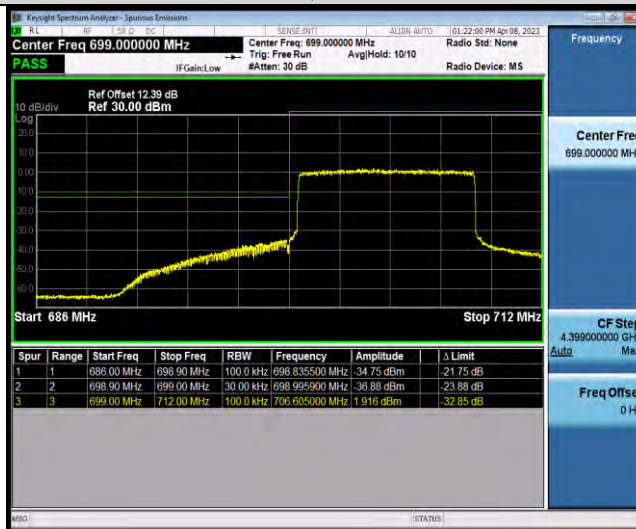
Test Report No.: W7L-P23030025RF06



Band12-10MHz-QPSK-23060-1RB#0



Band12-10MHz-QPSK-23060-50RB#0

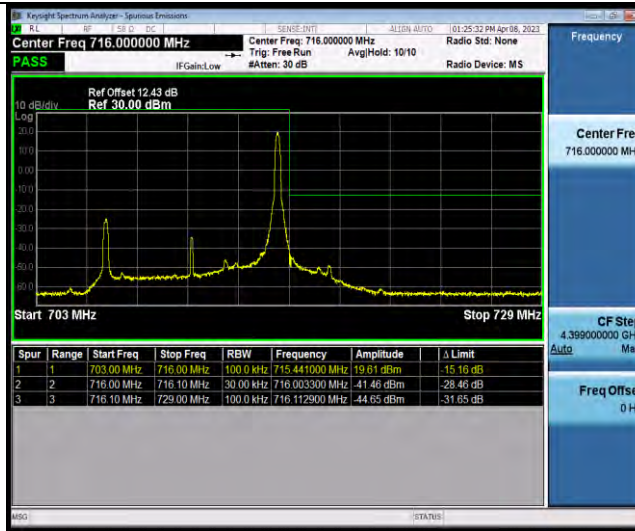


Band12-10MHz-QPSK-23130-1RB#49



BUREAU VERITAS

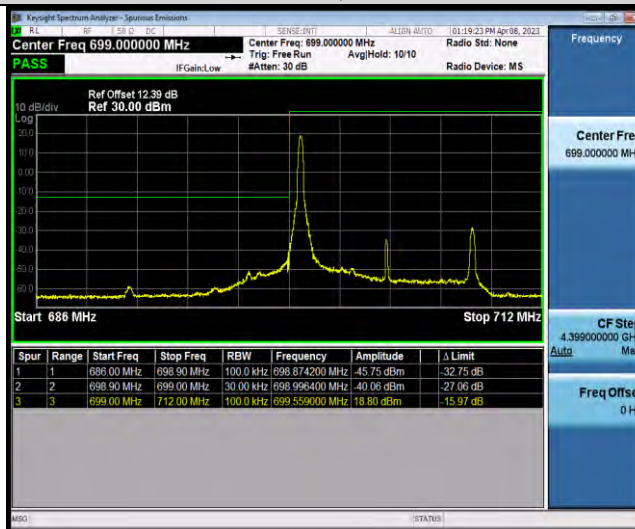
# Test Report No.: W7L-P23030025RF06



Band12-10MHz-QPSK-23130-50RB#0



Band12-10MHz-16QAM-23060-1RB#0

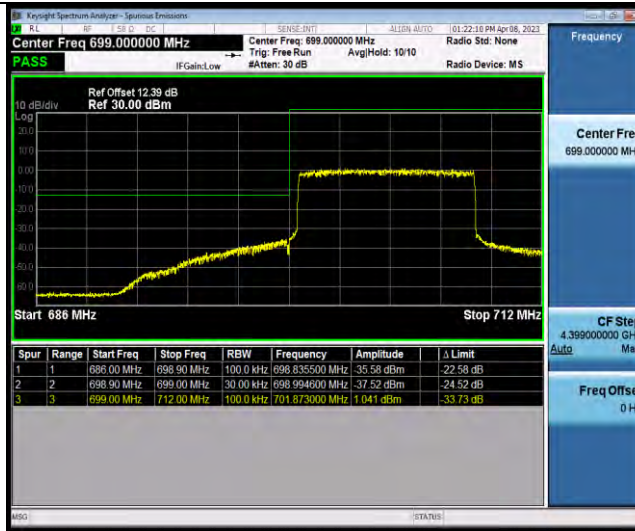


Band12-10MHz-16QAM-23060-50RB#0

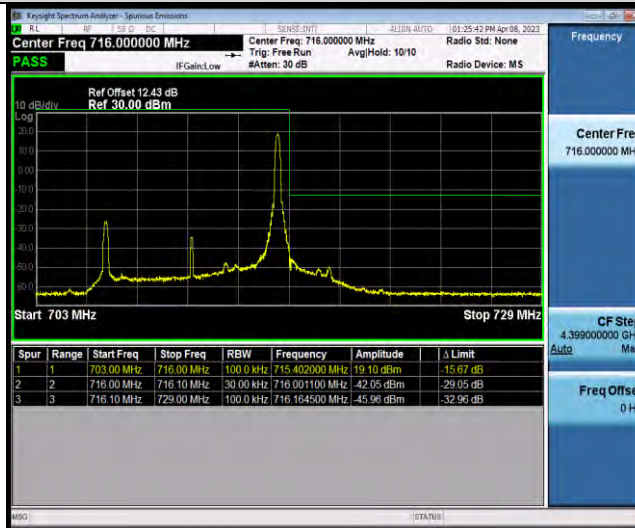


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VERITAS

Test Report No.: W7L-P23030025RF06



Band12-10MHz-16QAM-23130-1RB#49



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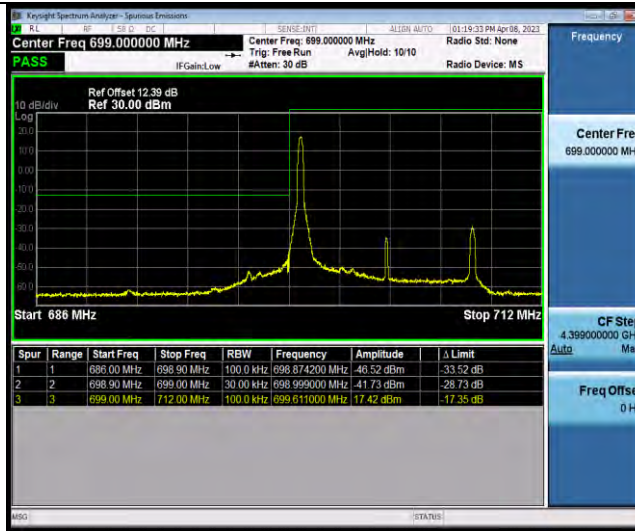


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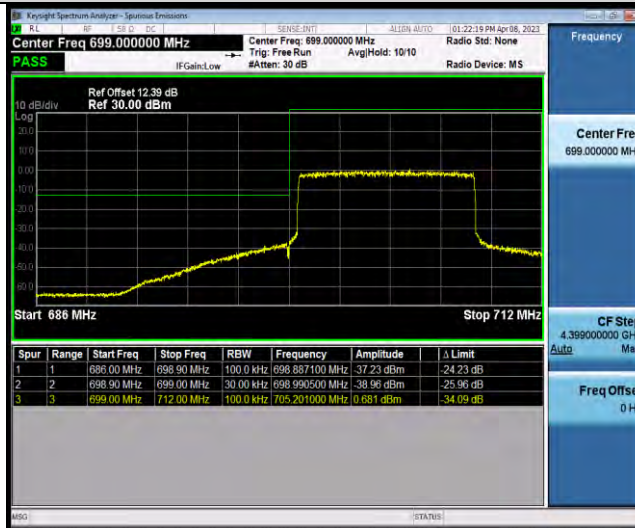


BUREAU VERITAS

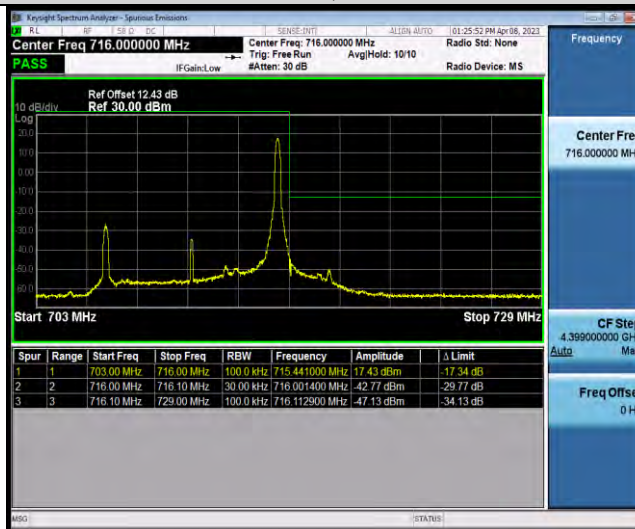
Test Report No.: W7L-P23030025RF06



Band12-10MHz-64QAM-23060-50RB#0



Band12-10MHz-64QAM-23130-1RB#49



Band12-10MHz-64QAM-23130-50RB#0





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Test Report No.: W7L-P23030025RF06





Test Report No.: W7L-P23030025RF06

## CONDUCTED SPURIOUS EMISSION

### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	Range1:30~1000MHz	-39.21	PASS
Band12	1.4MHz	QPSK	23017	1RB#0	Range2:1000~10000MHz	-33.23	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range1:30~1000MHz	-39.46	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range2:1000~10000MHz	-34.06	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range1:30~1000MHz	-39.51	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range2:1000~10000MHz	-34.08	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range1:30~1000MHz	-39.47	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range2:1000~10000MHz	-33.71	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range1:30~1000MHz	-39.8	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range2:1000~10000MHz	-32.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range1:30~1000MHz	-39.22	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range2:1000~10000MHz	-34.09	PASS
Band12	5MHz	QPSK	23035	1RB#0	Range1:30~1000MHz	-39.94	PASS
Band12	5MHz	QPSK	23035	1RB#0	Range2:1000~10000MHz	-34.25	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range1:30~1000MHz	-39.33	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range2:1000~10000MHz	-34.12	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range1:30~1000MHz	-39.1	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range2:1000~10000MHz	-33.98	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range1:30~1000MHz	-39.9	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range2:1000~10000MHz	-34.37	PASS
Band12	10MHz	QPSK	23095	1RB#0	Range1:30~1000MHz	-39.68	PASS
Band12	10MHz	QPSK	23095	1RB#0	Range2:1000~10000MHz	-33.66	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range1:30~1000MHz	-38.88	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range2:1000~10000MHz	-34.4	PASS