

4G-Band 13 TEST DATA

Trade Mark: AIRBOLT

Test Model: ABGPS-23

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	987.0 kPa
Test Engineer:	Simba huang
Supervised by:	Seal Chen

TABLE OF CONTENTS

1.Effective (Isotropic) Radiated Power Output Data	3
Test Result.....	3
2.Peak-to-Average Ratio(CCDF)	4
Test Result.....	4
Test Graphs	5
3.26dB Bandwidth and Occupied Bandwidth	6
Test Result.....	6
Test Graphs	7
4.Band Edge	11
Test Graphs	11
5.Conducted Spurious Emission.....	15
Test Graphs	15
6.Frequency Stability	17
Test Result.....	17

1.Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	ERP(dBm)	Limit(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	24.45	24.72	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#12	24.47	24.74	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#24	24.36	24.63	34.77	PASS
Band13	5MHz	QPSK	23205	25RB#0	23.57	23.84	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	24.47	24.74	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#12	24.36	24.63	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#24	24.32	24.59	34.77	PASS
Band13	5MHz	QPSK	23230	25RB#0	23.61	23.88	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#0	24.48	24.75	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#12	24.23	24.5	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#24	24.15	24.42	34.77	PASS
Band13	5MHz	QPSK	23255	25RB#0	23.61	23.88	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#0	23.93	24.2	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#12	23.9	24.17	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#24	23.78	24.05	34.77	PASS
Band13	5MHz	16QAM	23205	25RB#0	22.63	22.9	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#0	23.89	24.16	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#12	23.93	24.2	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#24	23.46	23.73	34.77	PASS
Band13	5MHz	16QAM	23230	25RB#0	22.64	22.91	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#0	23.94	24.21	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#12	23.87	24.14	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#24	23.32	23.59	34.77	PASS
Band13	5MHz	16QAM	23255	25RB#0	22.58	22.85	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#0	24.3	24.57	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#24	24.35	24.62	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#49	24.12	24.39	34.77	PASS
Band13	10MHz	QPSK	23230	50RB#0	23.68	23.95	34.77	PASS

Band13	10MHz	16QAM	23230	1RB#0	23.89	24.16	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#24	23.81	24.08	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#49	23.83	24.1	34.77	PASS
Band13	10MHz	16QAM	23230	50RB#0	22.66	22.93	34.77	PASS

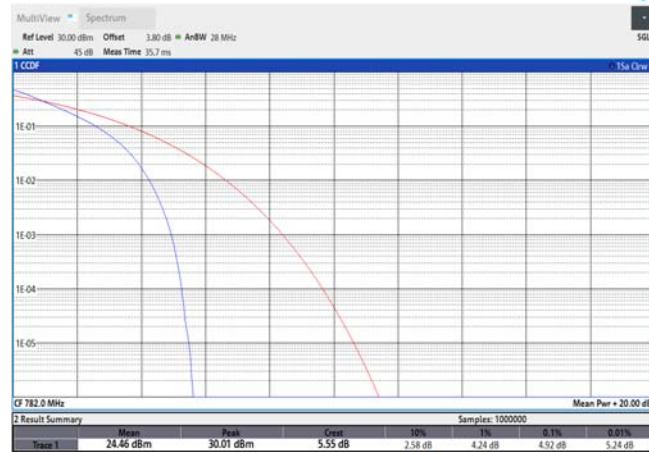
2. Peak-to-Average Ratio(CCDF)

Test Result

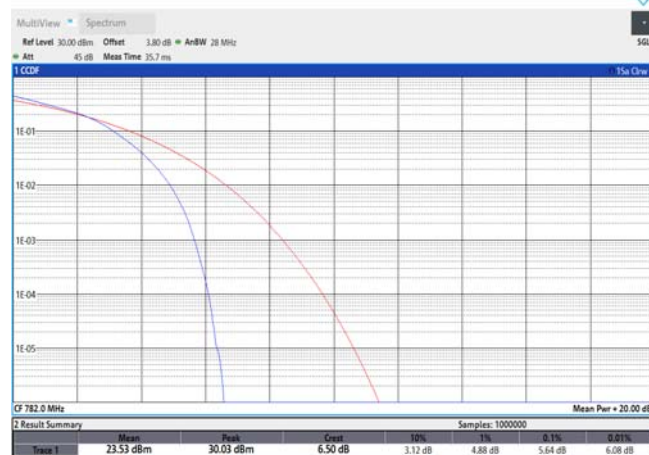
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	10MHz	QPSK	23230	50RB#0	4.92	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	5.64	13	PASS

Test Graphs

Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-50RB#0



3.26dB Bandwidth and Occupied Bandwidth

Test Result

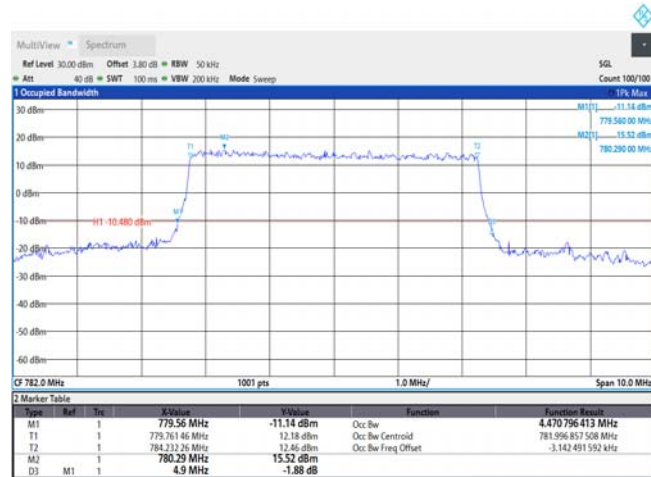
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.464	4.83	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.471	4.90	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.473	4.85	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.46	4.89	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.469	4.90	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.466	4.89	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.932	9.58	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.92	9.56	PASS

Test Graphs

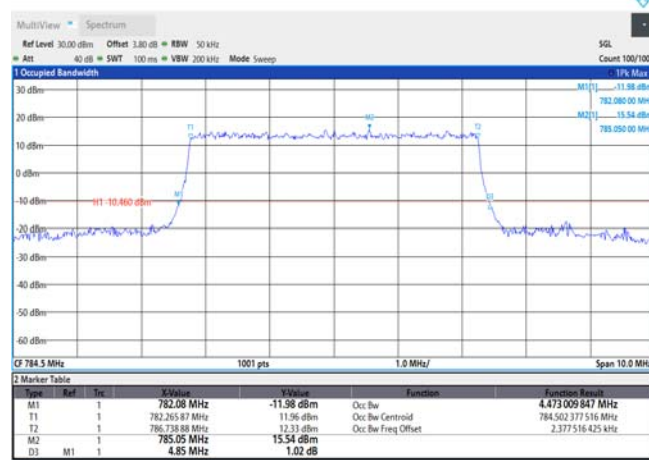
Band13-5MHz-QPSK-23205-25RB#0



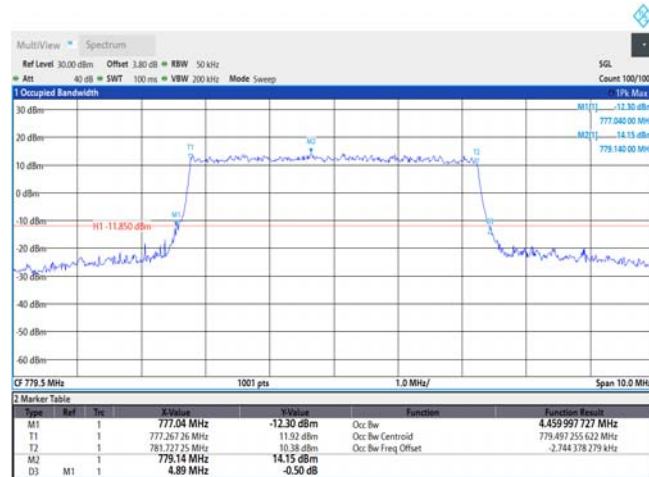
Band13-5MHz-QPSK-23230-25RB#0



Band13-5MHz-QPSK-23255-25RB#0



Band13-5MHz-16QAM-23205-25RB#0



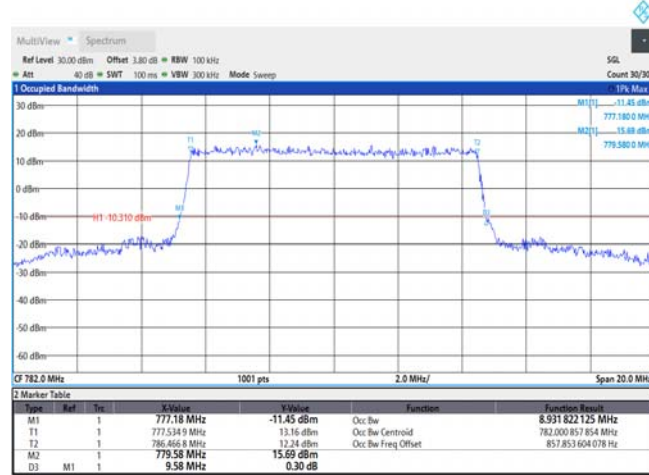
Band13-5MHz-16QAM-23230-25RB#0



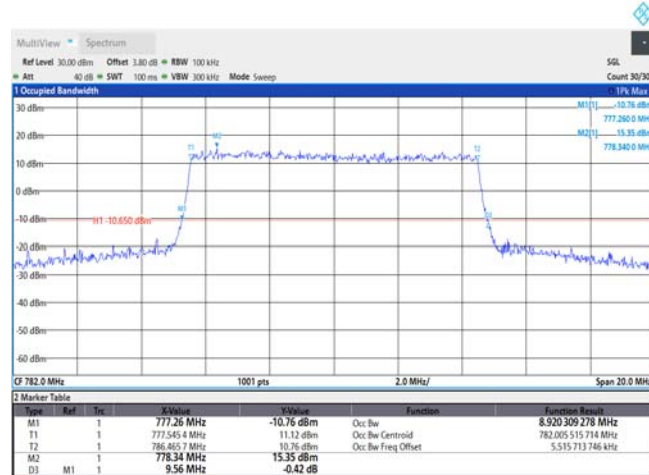
Band13-5MHz-16QAM-23255-25RB#0



Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-50RB#0



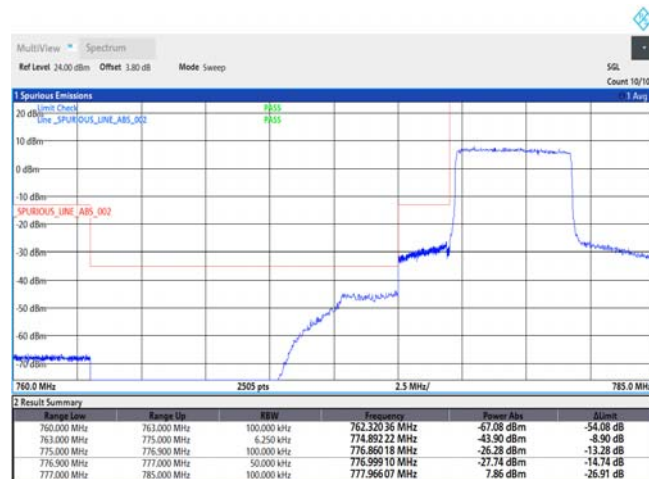
4.Band Edge

Test Graphs

Band13-5MHz-QPSK-23205-1RB#0



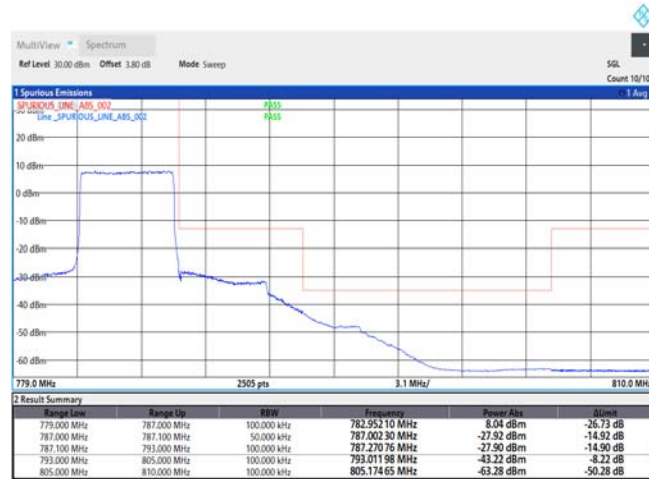
Band13-5MHz-QPSK-23205-25RB#0



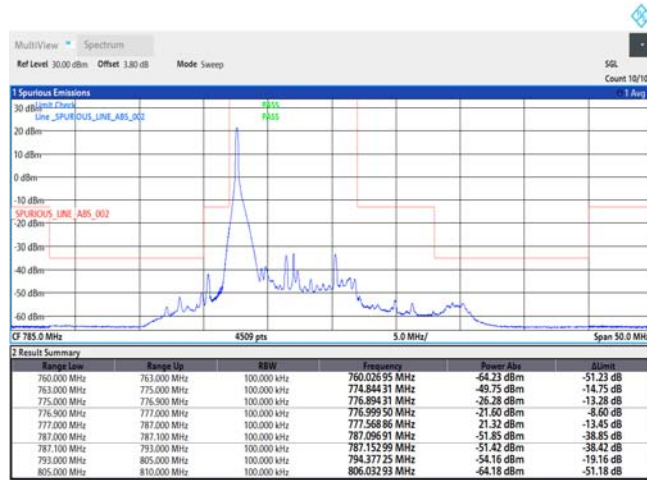
Band13-5MHz-QPSK-23255-1RB#24



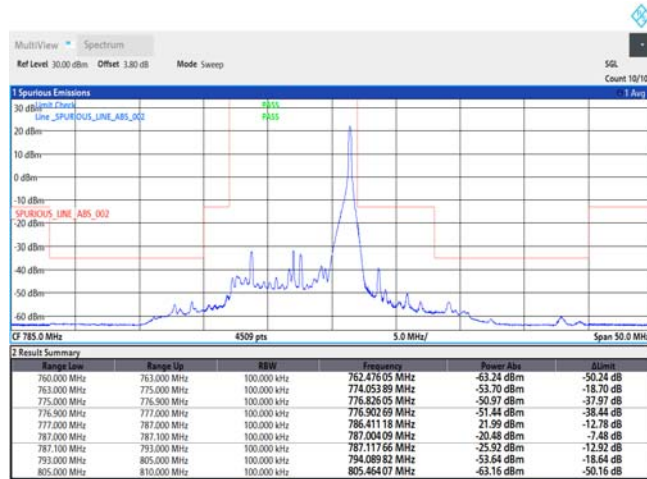
Band13-5MHz-QPSK-23255-25RB#0



Band13-10MHz-QPSK-23230-1RB#0



Band13-10MHz-QPSK-23230-1RB#49



MultiView Spectrum

Ref Level 30.00 dBm Offset 3.80 dB Mode Sweep

SQL Count 10/10 1 Aug

1 Spurious Emissions

30 dBm Chnol

Line SPURIOUS_LINE_ABS_002

20 dBm

10 dBm

0 dBm

-10 dBm

-20 dBm

SPURIOUS_LINE_ABS_002

-30 dBm

-40 dBm

-50 dBm

-60 dBm

760.0 MHz

4500 pts

5.0 MHz/

810.0 MHz

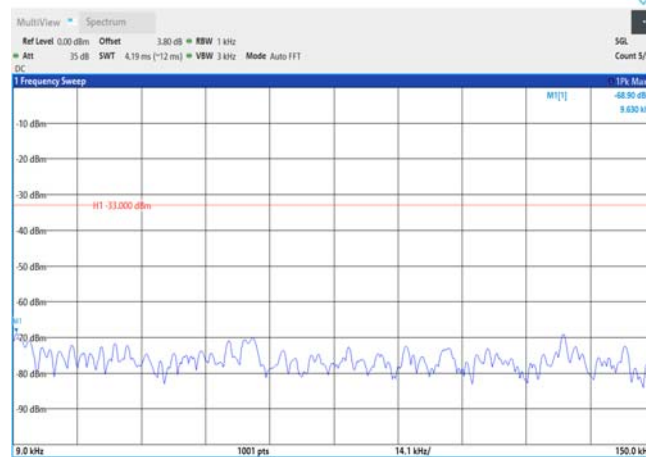
Result Summary

Range Up	RBW	Frequency	Power Abs	Margin	
760.000 MHz	763.000 MHz	100.000 kHz	762.27246 MHz	-63.68 dBm	-50.68 dB
763.000 MHz	775.000 MHz	6.250 kHz	774.48503 MHz	-41.70 dBm	-6.70 dB
775.000 MHz	776.500 MHz	100.000 kHz	776.71986 MHz	-27.60 dBm	-14.60 dB
776.500 MHz	777.000 MHz	100.000 kHz	776.52645 MHz	-27.18 dBm	-14.18 dB
777.000 MHz	787.000 MHz	100.000 kHz	778.72655 MHz	5.31 dBm	-29.46 dB
787.000 MHz	787.100 MHz	100.000 kHz	787.00269 MHz	-28.31 dBm	-15.31 dB
787.100 MHz	793.000 MHz	100.000 kHz	787.23471 MHz	-28.54 dBm	-15.54 dB
793.000 MHz	805.000 MHz	6.250 kHz	795.21517 MHz	-43.84 dBm	-3.84 dB
805.000 MHz	810.000 MHz	100.000 kHz	806.01297 MHz	-63.52 dBm	-50.52 dB

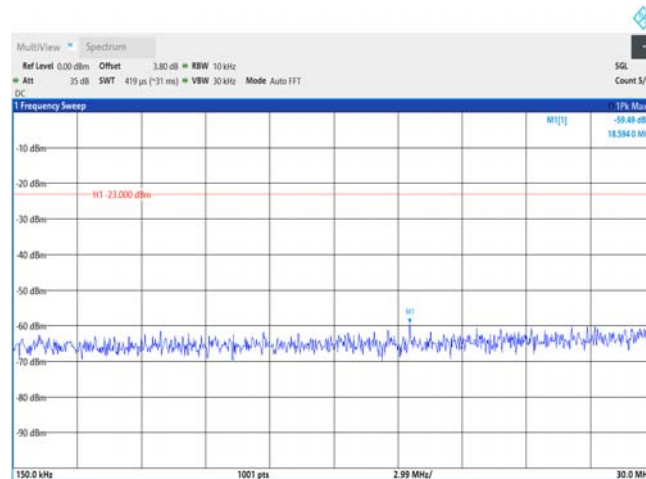
5. Conducted Spurious Emission

Test Graphs

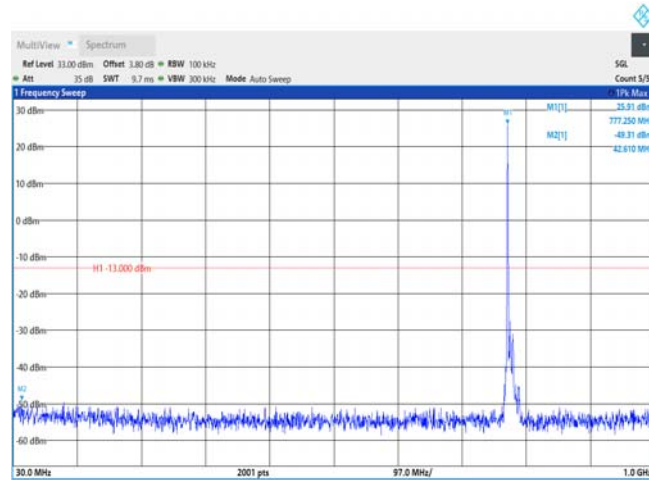
Band13-10MHz-QPSK-23230-1RB#0-Range1:0.009~0.15MHz



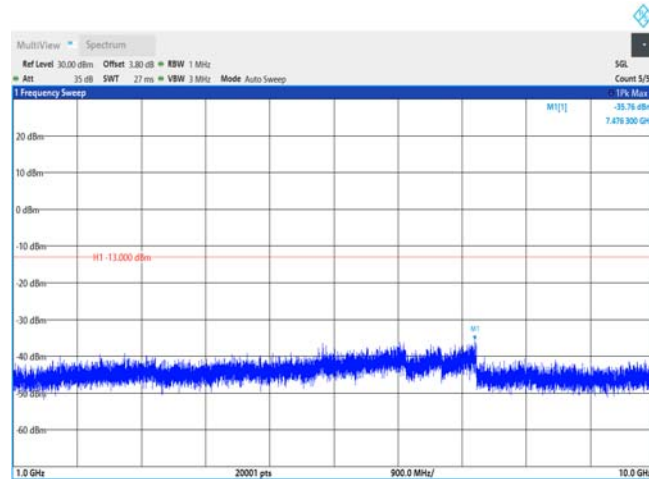
Band13-10MHz-QPSK-23230-1RB#0-Range2:0.15~30MHz



Band13-10MHz-QPSK-23230-1RB#0-Range3:30~1000MHz



Band13-10MHz-QPSK-23230-1RB#0-Range4:1000~10000MHz



6.Frequency Stability

Test Result

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band13	10MHz	QPSK	23230	50RB#0	VL	NT	-1.10	-0.001407	PASS
Band13	10MHz	QPSK	23230	50RB#0	VN	NT	-3.70	-0.004731	PASS
Band13	10MHz	QPSK	23230	50RB#0	VH	NT	-2.20	-0.002813	PASS

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band13	10MHz	QPSK	23230	50RB#0	NV	-20	1.10	0.001407	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-10	-0.50	-0.000639	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	0	-5.50	-0.007033	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	10	1.10	0.001407	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	20	-3.50	-0.004476	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	30	2.10	0.002685	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	40	-2.10	-0.002685	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	50	-1.70	-0.002174	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	65	-2.60	-0.003325	PASS

(END OF REPORT)