





























Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Voltage						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	10.5	25	-0.000020	± 2.5	PASS
		24	25	0.000404	± 2.5	PASS
		32	25	0.000710	± 2.5	PASS
	MCH	10.5	25	0.001007	± 2.5	PASS
		24	25	0.001551	± 2.5	PASS
		32	25	0.000773	± 2.5	PASS
	HCH	10.5	25	0.000501	± 2.5	PASS
		24	25	0.000523	± 2.5	PASS
		32	25	0.000259	± 2.5	PASS
16QAM	LCH	10.5	25	-0.001316	± 2.5	PASS
		24	25	0.000161	± 2.5	PASS
		32	25	0.001183	± 2.5	PASS
	MCH	10.5	25	0.000584	± 2.5	PASS
		24	25	-0.000302	± 2.5	PASS
		32	25	0.001033	± 2.5	PASS
	HCH	10.5	25	0.001283	± 2.5	PASS
		24	25	-0.000020	± 2.5	PASS
		32	25	-0.000267	± 2.5	PASS
Temperature						
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	24	-30	-0.000911	± 2.5	PASS
		24	-20	-0.000628	± 2.5	PASS
		24	-10	-0.001620	± 2.5	PASS
		24	0	-0.000628	± 2.5	PASS
		24	10	0.001412	± 2.5	PASS
		24	20	0.000948	± 2.5	PASS
		24	30	0.000747	± 2.5	PASS
		24	40	0.000040	± 2.5	PASS
		24	50	0.000668	± 2.5	PASS
	MCH	24	-30	0.000383	± 2.5	PASS
		24	-20	0.000181	± 2.5	PASS
		24	-10	0.001733	± 2.5	PASS
		24	0	0.000604	± 2.5	PASS
		24	10	0.000484	± 2.5	PASS
		24	20	0.002116	± 2.5	PASS
24	30	0.000322	± 2.5	PASS		

	HCH	24	40	0.000242	± 2.5	PASS
		24	50	0.001431	± 2.5	PASS
		24	-30	0.001183	± 2.5	PASS
		24	-20	0.001043	± 2.5	PASS
		24	-10	0.000401	± 2.5	PASS
		24	0	0.001243	± 2.5	PASS
		24	10	0.000402	± 2.5	PASS
		24	20	-0.000966	± 2.5	PASS
		24	30	-0.000483	± 2.5	PASS
		24	40	-0.000302	± 2.5	PASS
		24	50	-0.000080	± 2.5	PASS
16QAM	LCH	24	-30	0.000000	± 2.5	PASS
		24	-20	-0.000992	± 2.5	PASS
		24	-10	-0.001154	± 2.5	PASS
		24	0	-0.000628	± 2.5	PASS
		24	10	0.000484	± 2.5	PASS
		24	20	0.000625	± 2.5	PASS
		24	30	0.001634	± 2.5	PASS
		24	40	-0.000040	± 2.5	PASS
		24	50	-0.000486	± 2.5	PASS
	MCH	24	-30	0.000665	± 2.5	PASS
		24	-20	0.000866	± 2.5	PASS
		24	-10	0.002136	± 2.5	PASS
		24	0	0.002196	± 2.5	PASS
		24	10	0.000846	± 2.5	PASS
		24	20	-0.000060	± 2.5	PASS
		24	30	0.000000	± 2.5	PASS
		24	40	0.000121	± 2.5	PASS
		24	50	0.000515	± 2.5	PASS
	HCH	24	-30	0.001183	± 2.5	PASS
		24	-20	-0.000100	± 2.5	PASS
		24	-10	0.000321	± 2.5	PASS
		24	0	0.001103	± 2.5	PASS
		24	10	-0.000463	± 2.5	PASS
		24	20	-0.000966	± 2.5	PASS
		24	30	-0.000845	± 2.5	PASS
		24	40	0.000101	± 2.5	PASS
		24	50	0.000240	± 2.5	PASS

Note: All bandwidth and modulation are tested, only the worst result is reported.

Appendix G :Field Strength of Spurious Radiation Measurement Test Result

Bandwidth:	5M		Test channel:	Lowest
Modulation:	QPSK		Temperature :	23~24°C
RB #:	1RB #0		Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1413.0	Vertical	-32.17	-13.00	PASS
2119.5	V	-44.35		
-	V	-		
1413.0	Horizontal	-31.40		
2119.5	H	-43.87		
-	H	-		
Bandwidth:	5M		Test channel:	Middle
Modulation:	QPSK		Temperature :	23~24°C
RB #:	1RB #0		Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1420.0	Vertical	-30.50	-13.00	PASS
2130.0	V	-43.26		
-	V	-		
1420.0	Horizontal	-31.54		
2130.0	H	-42.37		
-	H	-		
Bandwidth:	5M		Test channel:	Highest
Modulation:	QPSK		Temperature :	23~24°C
RB #:	1RB #0		Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1427.0	Vertical	-31.18	-13.00	PASS
2140.5	V	-42.95		
-	V	-		
1427.0	Horizontal	-30.54		
2140.5	H	-43.25		
-	H	-		

Bandwidth:	5M		Test channel:	Lowest
Modulation:	16QAM		Temperature :	23~24°C
RB #:	1RB #0		Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1413.0	Vertical	-31.91	-13.00	PASS
2119.5	V	-45.37		
-	V	-		
1413.0	Horizontal	-32.35		
2119.5	H	-46.10		
-	H	-		
Bandwidth:	5M		Test channel:	Middle
Modulation:	16QAM		Temperature :	23~24°C
RB #:	1RB #0		Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1420.0	Vertical	-30.55	-13.00	PASS
2130.0	V	-42.72		
-	V	-		
1420.0	Horizontal	-31.45		
2130.0	H	-43.61		
-	H	-		
Bandwidth:	5M		Test channel:	Highest
Modulation:	16QAM		Temperature :	23~24°C
RB #:	1RB #0		Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1427.0	Vertical	-31.29	-13.00	PASS
2140.5	V	-46.60		
-	V	-		
1427.0	Horizontal	-30.36		
2140.5	H	-42.78		
-	H	-		

Note: All bandwidth and modulation are tested, only the worst result is reported.