

Exhibit 8LB

Report of Measurements for 39 – 50 MHz Transmitter

8LB.1 RF Power Output §2.1046

For each applicable frequency band of operation the RF power output into a 50 ohm dummy load was measured, as was the DC voltage and current input to the amplifying stage. The results are shown below.

RF Power Output						
Frequency Band	Test frequency	Channel Spacing (kHz)	Measured RF Power Output (W)	Measured DC Voltage (V)	Measured DC Current (A)	Note
39.0 - 50.0 MHz	44.5 MHz	25	102.3	13.6	19.7	

8LB.2 Modulation Characteristics §2.1047(a)

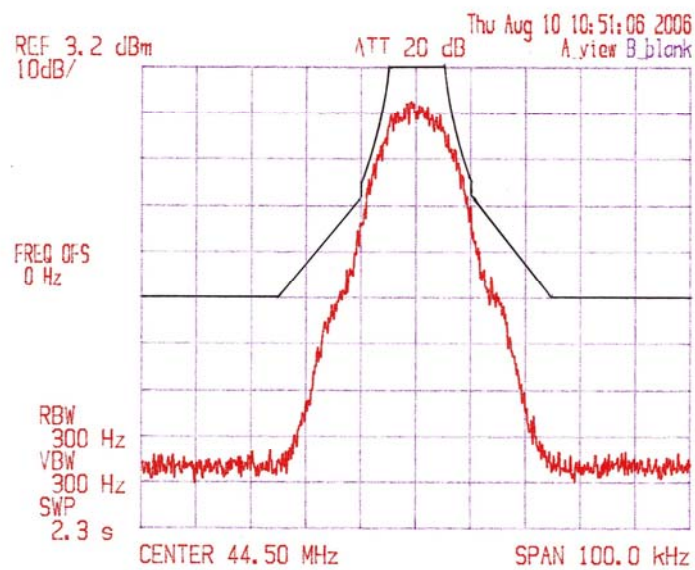
Not Applicable to Low Band modes (all digital)

8LB.3 Occupied Bandwidth §2.1049

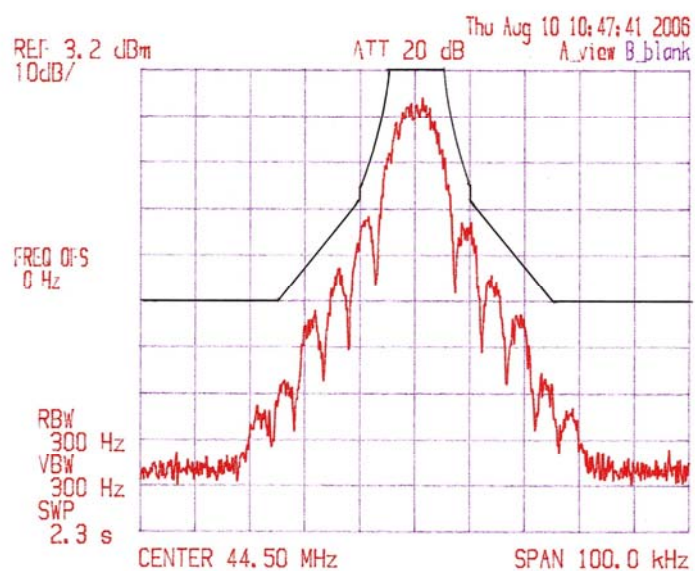
Applicable modes: See chart under Results.

Results: The following plots demonstrate the UUT emissions are confined to the respective emission mask limits.

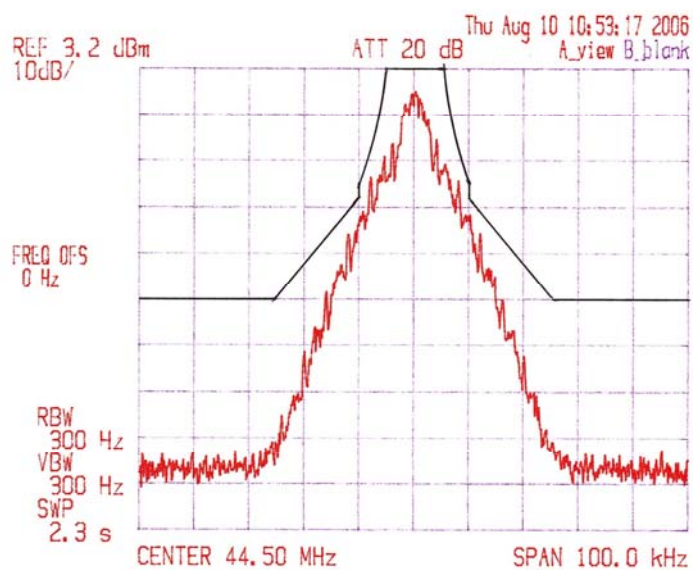
Occupied Bandwidth								
Fig 8LB.3.X	Band	Power Output	Test Frequency	Waveform	bit rate or deviation	Emission Designator	Mask	application
1	39-50 MHz	100W	44.500 MHz	0.22 GMSK	19.2 kbps	20K0F1D	C	20kHz P2P data
2	39-50 MHz	100W	44.500 MHz	1.0 GMSK	9.6 kbps	14K4F1D	C	20kHz P2P data
3	39-50 MHz	100W	44.500 MHz	CE-BPSK	4 kbps	8K00G1D	C	20kHz P2P data



**Figure 8LB3.1 $F_o = 44.500\text{MHz}$, 19.2kbps GMSK BT=.22
20K0F1D, Mask C**



**Figure 8LB3.2 $F_o = 44.500\text{MHz}$, 9.6kbps GMSK BT=1.0
14K4F1D, Mask C**



**Figure 8LB3.3 $F_o = 44.500\text{MHz}$, 4.0kbps CE-BPSK
8K00G1D, Mask C**

8LB.4 Transient Frequency Behavior, §90.214

Not Applicable to Low Band modes.

8LB.5 Spurious Emissions at Antenna Terminals §2.1051

Applicable modes:

Conducted Spurious Emissions Test								
	Band	Power Output (W)	Test Frequency (MHz)	Emission Designator	Most restrictive Mask	Spurious Attenuation Limit		absolute level limit (dBm)
						formula	dB	
1	39-50 MHz	100	44.500	20K0F1D	C	43+10logP	63.0	-13.0

Results:

State: 100W, 44.5MHz

No.	Frequency (MHz)	actual level (dBm)	limit (dBm)	margin (dB)
1	31.4	-19.2	-13.0	6.2
2	57.6	-23.6	-13.0	10.6

See Figure 8LB5.1-2 for 2 MHz and 20 MHz span spectrum sweeps. All other spurs were more than 20dB below the limit.

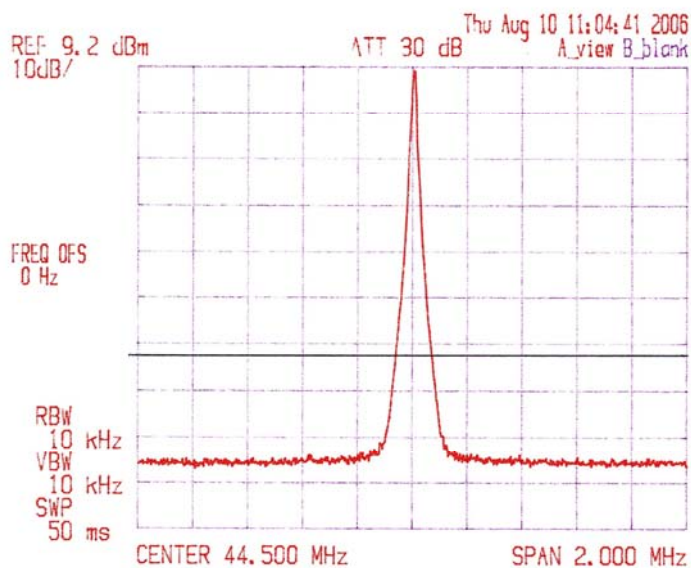


Figure 8LB5.1 44.500MHz 2 MHz Span

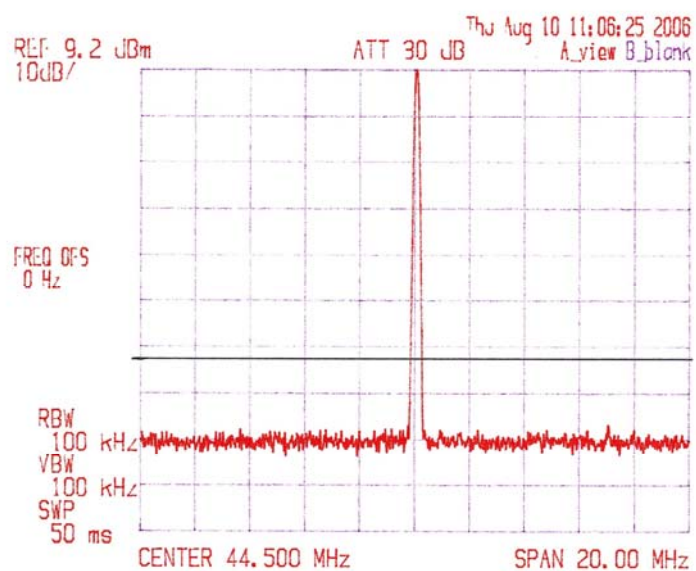


Figure 8LB5.2 44.500MHz 20 MHz Span

8LB.6 Field Strength of Spurious Radiation §2.1053

Applicable modes and results : See Exhibit 9 Test Report for Radiated Spurious Emissions.

8LB.7 Frequency Stability §2.1055

The requirements are, per §90.213, as follows:

Frequency Stability, Mobile				
	Band (MHz)	Power Output (W)	Channel Spacing (kHz)	Minimum Frequency Stability (ppm)
1	39-50	100	20	20

8LB.7.1 Frequency Stability vs. Temperature, §2.1055(a)Results:

The data was recorded, and parts-per-million stability was calculated and graphed and is shown below.

Frequency Stability vs. Temperature Fo=44.500000 MHz			
Temperature (degrees C)	Frequency (MHz)	Error (Hz)	Stability (ppm)
-30	44499953	-47	-1.06
-20	44499956	-44	-0.99
-10	44499968	-32	-0.72
0	44499997	-3	-0.07
10	44500003	3	0.07
20	44499995	-5	-0.11
30	44500002	2	0.04
40	44499994	-6	-0.13
50	44500001	1	0.02
60	44500045	45	1.01

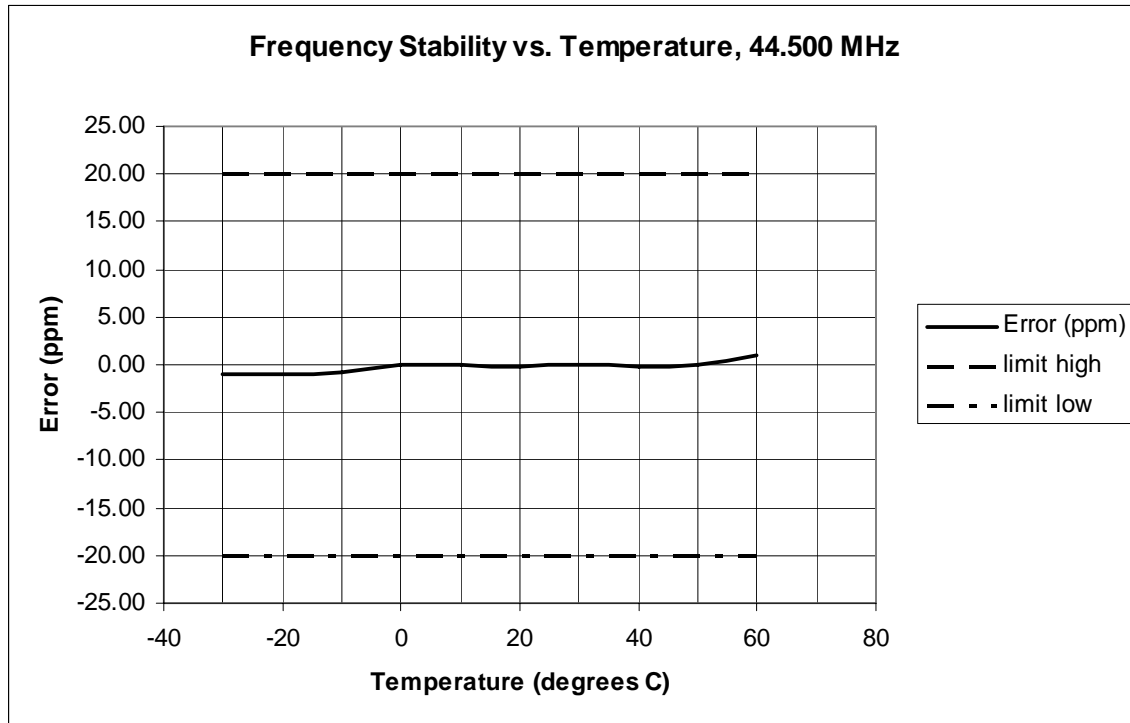


Figure 8LB.7.1 Frequency Stability vs. Temperature, $f_o=44.500$ MHz

8LB.7.2 Frequency Stability vs. Voltage, §2.1055(d)

Results:

The data was recorded, parts-per-million stability calculated and graphed and is shown below.

Frequency Stability vs. Voltage					
	Power Supply Variation	Voltage (V)	Frequency (MHz)	Stability (ppm)	Limit (ppm)
1	85%	11.56	44500011	0.25	20
2	90%	12.24	44500011	0.25	20
3	95%	12.92	44500010	0.22	20
4	100%	13.6	44500010	0.22	20
5	105%	14.28	44500010	0.22	20
6	110%	14.96	44500010	0.22	20
7	115%	15.64	44500010	0.22	20