

CLASSIFICATION UNCLASSIFIED		PAGE	
TRANSMITTER EQUIPMENT CHARACTERISTICS			
1. NOMENCLATURE, MANUFACTURER'S MODEL NO. P-Series radio transceivers		2. MANUFACTURER'S NAME FreeWave Technologies, Inc.	
3. TRANSMITTER INSTALLATION Fixed		4. TRANSMITTER TYPE GFSK Communication	
5. TUNING RANGE 1350-1390 MHz		6. METHOD OF TUNING Digital Synthesizer	
7. RF CHANNELING CAPABILITY 230.4 kHz increments starting from 1350.144 MHz		8. EMISSION DESIGNATOR(S) 230KF1D	
9. FREQUENCY TOLERANCE 1.5 ppm		12. EMISSION BANDWIDTH ☐ CALCULATED ☒ MEASURED	
10. FILTER EMPLOYED ☒ a. YES ☐ b. NO		a. -3 dB 180 kHz	
11. SPREAD SPECTRUM ☒ a. YES ☐ b. NO		b. -20 dB 230 kHz c. -40 dB 315 kHz d. -60 dB 400 kHz	
13. MAXIMUM BIT RATE 115.2 kbps		e. OC-BW 230 kHz	
14. MODULATION TECHNIQUES AND CODING 2 levels GFSK, frequency hopping		15. MAXIMUM MODULATION FREQUENCY 57.6 kHz	
16. PRE-EMPHASIS ☐ a. YES ☒ b. NO		17. DEVIATION RATIO 1	
19. POWER a. MEAN Programmed up to 1 Watt		18. PULSE CHARACTERISTICS a. RATE NA	
b. PEP NA		b. WIDTH NA	
20. OUTPUT DEVICE MOSFET		c. RISE TIME NA	
22. SPURIOUS LEVEL -70 dBc		d. FALL TIME NA	
23. FCC TYPE ACCEPTANCE NO. N/A		e. COMP NA	
24. REMARKS Item 10: Gaussian low-pass filter. Item 11: Frequency hopping is employed using up to 112 discrete channels in an orthogonal hop sequence. The total number of frequency channels available for the radio is 173. Minimum hop band required is not limited. The hopping rate is software defined. Any channel or group of channels can be locked out.		21. HARMONIC LEVEL a. 2 nd -50 dBc b. 3 rd -70 dBc c. OTHER -70 dBc	
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RECEIVER EQUIPMENT CHARACTERISTICS					
1. NOMENCLATURE, MANUFACTURER'S MODEL NO. P-Series radio transceivers				2. MANUFACTURER'S NAME FreeWave Technologies, Inc.	
3. RECEIVER INSTALLATION Fixed				4. RECEIVER TYPE Dual Conversion Superheterodyne	
5. TUNING RANGE 1350-1390 MHz				6. METHOD OF TUNING Digital Synthesizer	
7. RF CHANNELING CAPABILITY 230.4 kHz increments starting form 1350.144 MHz				8. EMISSION DESIGNATOR(S) 230KF1D	
				11. RF SELECTIVITY ☐ CALCULATED ☒ MEASURED	
9. FREQUENCY TOLERANCE 1.5 ppm				a. -3 dB 46 MHz	
				b. -20 dB 68 MHz	
				c. -60 dB NA	
10. IF SELECTIVITY		1st (U)	2nd (U)	3rd (U)	13. MAXIMUM POST DETECTION FREQUENCY 200 kHz
a. -3 dB	1.8 MHz	200 kHz			
b. -20 dB	3.4 MHz	230 kHz			
c. -60 dB	NA	290 MHz			
12. IF FREQUENCY					
a. 1st 45.1584 MHz					
b. 2nd 921.6 kHz					
c. 3rd NA					
15. OSCILLATOR TUNED		1st (U)	2nd (U)	3rd (U)	16. MAXIMUM BIT RATE 115.2 kbps
a. ABOVE TUNED FREQUENCY		X			17. SENSITIVITY a. SENSITIVITY -106 dBm b. CRITERIA 1X10 ⁻⁶ BER
b. BELOW TUNED FREQUENCY					
c. EITHER ABOVE OR BELOW THE FREQUENCY			X		
18. DE-EMPHASIS ☐ a. YES ☒ b. NO					c. NOISE FIG 1.5 dB
					d. NOISE TEMP NA Kelvin
19. IMAGE REJECTION 40 dB					20. SPURIOUS REJECTION 60 dB
21 REMARKS					
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