

<b>CLASSIFICATION</b> UNCLASSIFIED		<b>PAGE</b> of Pages	
<b>TRANSMITTER EQUIPMENT CHARACTERISTICS</b>			
<b>1. NOMENCLATURE, MANUFACTURER'S MODEL NO.</b> QSX-VDR2-1100-05-04-05AB-LD-VP SOQPSK		<b>2. MANUFACTURER'S NAME</b> Quasonix, Inc.	
<b>3. TRANSMITTER INSTALLATION</b>		<b>4. TRANSMITTER TYPE</b> Digital Telemetry	
<b>5. TUNING RANGE</b> 4400.0 MHz to 4950.0 MHz, 5091.0 MHz to 5150.0 MHz		<b>6. METHOD OF TUNING</b> Synthesizer	
<b>7. RF CHANNELING CAPABILITY</b> 0.500 MHz		<b>8. EMISSION DESIGNATOR(S)</b> See Remarks.  SOQPSK mode          3M90G1DDN	
<b>9. FREQUENCY TOLERANCE</b> ±20 PPM, maximum			
<b>10. FILTER EMPLOYED</b> ( <i>X one</i> ) <input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO			
<b>11. SPREAD SPECTRUM</b> ( <i>X one</i> ) <input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO		<b>12. EMISSION BANDWIDTH</b> ( <i>X and complete as applicable</i> ) <input type="checkbox"/> CALCULATED <input checked="" type="checkbox"/> MEASURED	
<b>13. MAXIMUM BIT RATE</b> 28 Mbps for SOQPSK  <b>14. MODULATION TECHNIQUES AND CODING</b>  SOQPSK: Offset QPSK with premodulation filtering, no coding		a. -3 dB          1.75      MHz	
		b. -20 dB        4.65      MHz	
		c. -40 dB        7.15      MHz	
		d. -60 dB        9.95      MHz	
		e. OC-BW        3.90      MHz	
<b>15. MAXIMUM MODULATION FREQUENCY</b> See block 24.		<b>16. PRE-EMPHASIS</b> ( <i>X one</i> ) <input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO	
<b>19. POWER</b> a. MEAN          5 W b. PEP            NA  <b>20. OUTPUT DEVICE</b> Transistor, operated in class C		<b>17. DEVIATION RATIO</b> 0.5 for SOQPSK	
		<b>18. PULSE CHARACTERISTICS</b>	
		a. RATE          NA	
		b. WIDTH        NA	
		c. RISE TIME    NA	
<b>22. SPURIOUS LEVEL</b> -68 dBc within ± 100 MHz, -80 dBc outside ±100 MHz  <b>23. FCC TYPE ACCEPTANCE NO.</b>		d. FALL TIME    NA	
		e. COMP RATIO NA	
		<b>21. HARMONIC LEVEL</b>	
<b>24. REMARKS</b> In all modes and all bands, waveform filtering is applied in three steps: <ul style="list-style-type: none"> <li>Digital premodulation filtering, scaled automatically with the bit rate.</li> <li>Multiple stages of LC and stripline filtering in the upconversion circuits.</li> <li>7-pole Butterworth LPF after the final output stage.</li> </ul> Block 15: Maximum modulation frequency:                      SOQPSK:              Fmax = 0.25 x bit rate		a. 2nd -57 dBc	
		b. 3rd -57 dBc	
		c. OTHER -80 dBc	
• All emission bandwidths in item 12, harmonic levels in item 21 and spurious levels in item 22 are measured values. • The two different sets of emission bandwidths in item 12 are for PCM/FM and SOQPSK mode, respectively. • For all modes, Emission Designator (Box 8) and Emission Bandwidths (Box 12) are for bit rate of 5 Mbps, and scale in direct proportion to bit rate. • Transmit rate with LDPC encoding is 25/16 of the input rate.			
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