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| <b>APPLICATION FOR<br/>SPECTRUM REVIEW</b>                                                                                                                            | <b>CLASSIFICATION</b>                              | <b>PAGE</b><br><br>2                                                                                             |
| <b>NTIA GENERAL INFORMATION</b>                                                                                                                                       |                                                    |                                                                                                                  |
| <b>1. APPLICATION TITLE</b><br>AirRobot Unmanned Aerial System                                                                                                        |                                                    |                                                                                                                  |
| <b>2. SYSTEM NOMENCLATURE</b><br>Micro Unmanned Aerial System for ISR operations Force Protection                                                                     |                                                    |                                                                                                                  |
| <b>3. STAGE OF ALLOCATION</b> ( <i>X one</i> )                                                                                                                        |                                                    |                                                                                                                  |
| <input type="checkbox"/> a. STAGE 1 - CONCEPTUAL                                                                                                                      | <input type="checkbox"/> b. STAGE 2 - EXPERIMENTAL | <input type="checkbox"/> c. STAGE 3 - DEVELOPMENTAL <input checked="" type="checkbox"/> d. STAGE 4 - OPERATIONAL |
| <b>4. FREQUENCY REQUIREMENTS</b>                                                                                                                                      |                                                    |                                                                                                                  |
| a. FREQUENCY(IES) 225.000 MHz - 228.1875 MHz and 4500.0 MHz - 4900.0 MHz                                                                                              |                                                    |                                                                                                                  |
| b. EMISSION DESIGNATOR(S) 28K00F1N and 8M00X7D                                                                                                                        |                                                    |                                                                                                                  |
| <b>5. PURPOSE OF SYSTEM, OPERATIONAL AND SYSTEM CONCEPTS</b> (WARTIME USE) ( <i>X one</i> ) <input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO |                                                    |                                                                                                                  |
| Micro Unmanned Aerial System with VTOL for stealth ISR operations in complex and confined terrain, urban areas. Participation in AEWE Spiral F                        |                                                    |                                                                                                                  |
| <b>6. INFORMATION TRANSFER REQUIREMENTS</b>                                                                                                                           |                                                    |                                                                                                                  |
| <b>7. ESTIMATED INITIAL COST OF THE SYSTEM</b><br>\$ 72,000                                                                                                           |                                                    |                                                                                                                  |
| <b>8. TARGET DATE FOR</b>                                                                                                                                             |                                                    |                                                                                                                  |
| a. APPLICATION APPROVAL<br>10/01/2009                                                                                                                                 | b. SYSTEM ACTIVATION<br>11/01/2009                 | c. SYSTEM TERMINATION<br>TBD                                                                                     |
| <b>9. SYSTEM RELATIONSHIP AND ESSENTIALITY</b><br>Control of Aircraft, Video and Data Transmission to Ground Station                                                  |                                                    |                                                                                                                  |
| <b>10. REPLACEMENT INFORMATION</b>                                                                                                                                    |                                                    |                                                                                                                  |
| <b>11. RELATED ANALYSIS AND TEST DATA</b>                                                                                                                             |                                                    |                                                                                                                  |
| <b>12. NUMBER OF MOBILE UNITS</b><br>ONE                                                                                                                              |                                                    |                                                                                                                  |
| <b>13. GEOGRAPHICAL AREA FOR</b>                                                                                                                                      |                                                    |                                                                                                                  |
| a. STAGE 2                                                                                                                                                            |                                                    |                                                                                                                  |
| b. STAGE 3                                                                                                                                                            |                                                    |                                                                                                                  |
| c. STAGE 4 Fort Benning Georgia                                                                                                                                       |                                                    |                                                                                                                  |
| <b>14. LINE DIAGRAM</b><br>(See Page(s))                                                                                                                              | <b>15. SPACE SYSTEMS</b><br>(See Page(s))          |                                                                                                                  |
| <b>16. TYPE OF SERVICE(S) FOR STAGE 4</b><br>Mobile                                                                                                                   | <b>17. STATION CLASS(ES) FOR STAGE 4</b>           |                                                                                                                  |
| <b>18. REMARKS</b>                                                                                                                                                    |                                                    |                                                                                                                  |
|                                                                                                                                                                       |                                                    |                                                                                                                  |
| <b>DOWNGRADING INSTRUCTIONS</b>                                                                                                                                       | <b>CLASSIFICATION</b>                              |                                                                                                                  |
|                                                                                                                                                                       |                                                    |                                                                                                                  |

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| APPLICATION FOR FOREIGN SPECTRUM SUPPORT                                                                                                                                                                |                         | CLASSIFICATION                      | PAGE<br>3                  |
| FOREIGN COORDINATION GENERAL INFORMATION                                                                                                                                                                |                         |                                     |                            |
| 1. APPLICATION TITLE<br>Telluride 2.0 Unmanned Aerial System                                                                                                                                            |                         |                                     |                            |
| 2. SYSTEM NOMENCLATURE<br>Micro Unmanned Aerial System for ISR operations Force Protection                                                                                                              |                         |                                     |                            |
| 3. STAGE OF ALLOCATION ( <i>X one</i> )                                                                                                                                                                 |                         |                                     |                            |
| <input type="checkbox"/>                                                                                                                                                                                | a. STAGE 1 - CONCEPTUAL | <input type="checkbox"/>            | b. STAGE 2 - EXPERIMENTAL  |
|                                                                                                                                                                                                         |                         | <input checked="" type="checkbox"/> | c. STAGE 3 - DEVELOPMENTAL |
|                                                                                                                                                                                                         |                         |                                     | d. STAGE 4 - OPERATIONAL   |
| 4. FREQUENCY REQUIREMENTS                                                                                                                                                                               |                         |                                     |                            |
| a. FREQUENCY(IES) 225.000 MHz - 228.1875 MHz and 4500.0 MHz - 4900.0 MHz                                                                                                                                |                         |                                     |                            |
| b. EMISSION DESIGNATOR(S) 28K00FIN and 8M00X7D                                                                                                                                                          |                         |                                     |                            |
| 5. PROPOSED OPERATING LOCATIONS OUTSIDE US&P                                                                                                                                                            |                         |                                     |                            |
| 6. PURPOSE OF SYSTEM, OPERATIONAL AND SYSTEM CONCEPTS<br>Micro Unmanned Aerial System with VTOL for stealth ISR operations in complex and confined terrain, urban areas. Participation in AEWE Spiral F |                         |                                     |                            |
| 7. INFORMATION TRANSFER REQUIREMENTS                                                                                                                                                                    |                         |                                     |                            |
| 8. NUMBER OF UNITS OPERATING SIMULTANEOUSLY IN THE SAME ENVIRONMENT<br>2                                                                                                                                |                         |                                     |                            |
| 9. REPLACEMENT INFORMATION                                                                                                                                                                              |                         |                                     |                            |
| 10. LINE DIAGRAM<br>(See Page(s))                                                                                                                                                                       |                         | 11. SPACE SYSTEMS<br>(See Page(s))  |                            |
| 12. PROJECTED OPERATIONAL DEPLOYMENT DATE                                                                                                                                                               |                         |                                     |                            |
| 13. REMARKS                                                                                                                                                                                             |                         |                                     |                            |
| DOWNGRADING INSTRUCTIONS                                                                                                                                                                                |                         | CLASSIFICATION                      |                            |

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| <b>CLASSIFICATION</b>                                                                                                    |  | <b>PAGE</b><br>4                                                                                                                                          |  |
| <b>TRANSMITTER EQUIPMENT CHARACTERISTICS</b>                                                                             |  |                                                                                                                                                           |  |
| <b>1. NOMENCLATURE, MANUFACTURER'S MODEL NO.</b><br>CT4520                                                               |  | <b>2. MANUFACTURER'S NAME</b><br>BMS-Europe GmbH & Co KG ( <a href="http://www.BMS-INC.com">http://www.BMS-INC.com</a> )                                  |  |
| <b>3. TRANSMITTER INSTALLATION</b><br>Embedded in UAV                                                                    |  | <b>4. TRANSMITTER TYPE</b><br>Digital                                                                                                                     |  |
| <b>5. TUNING RANGE</b><br>4500 MHz - 4900 MHz                                                                            |  | <b>6. METHOD OF TUNING</b><br>Synthesizer                                                                                                                 |  |
| <b>7. RF CHANNELING CAPABILITY</b><br>First Channel 4500 MHz 1 MHz increments                                            |  | <b>8. EMISSION DESIGNATOR(S)</b><br>8M00X7D                                                                                                               |  |
| <b>9. FREQUENCY TOLERANCE</b><br>N/A                                                                                     |  |                                                                                                                                                           |  |
| <b>10. FILTER EMPLOYED</b> ( <i>X one</i> )<br><input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO |  |                                                                                                                                                           |  |
| <b>11. SPREAD SPECTRUM</b> ( <i>X one</i> )<br><input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO |  |                                                                                                                                                           |  |
| <b>13. MAXIMUM BIT RATE</b><br>5 Mbit/s                                                                                  |  | <b>12. EMISSION BANDWIDTH</b> ( <i>X and complete as applicable</i> )<br><input type="checkbox"/> CALCULATED <input checked="" type="checkbox"/> MEASURED |  |
| <b>14. MODULATION TECHNIQUES AND CODING</b><br>COFDM digital<br>No sub carrier, one data stream<br>DVB-T compliant       |  | a. -3 dB 5 MHz                                                                                                                                            |  |
|                                                                                                                          |  | b. -20 dB 14 MHz                                                                                                                                          |  |
|                                                                                                                          |  | c. -40 dB 25 MHz                                                                                                                                          |  |
|                                                                                                                          |  | d. -60 dB 32 MHz                                                                                                                                          |  |
|                                                                                                                          |  | e. OC-BW 16 MHz                                                                                                                                           |  |
|                                                                                                                          |  | <b>15. MAXIMUM MODULATION FREQUENCY</b><br>7 MHz                                                                                                          |  |
| <b>16. PRE-EMPHASIS</b> ( <i>X one</i> )<br><input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO    |  | <b>17. DEVIATION RATIO</b><br>1 : 2.5                                                                                                                     |  |
| <b>19. POWER</b><br>a. MEAN 100mW<br>b. PEP 100mW                                                                        |  | <b>18. PULSE CHARACTERISTICS</b><br>a. RATE N/A<br>b. WIDTH N/A<br>c. RISE TIME N/A<br>d. FALL TIME N/A<br>e. COMP RATIO                                  |  |
| <b>20. OUTPUT DEVICE</b><br>N/A                                                                                          |  | <b>21. HARMONIC LEVEL</b><br>a. 2ND < -30 dBm<br>b. 3RD < -30 dBm<br>c. OTHER < -30 dBm                                                                   |  |
| <b>22. SPURIOUS LEVEL</b><br>< -30 dBm                                                                                   |  |                                                                                                                                                           |  |
| <b>23. FCC TYPE ACCEPTANCE NO.</b><br>N/A                                                                                |  |                                                                                                                                                           |  |
| <b>24. REMARKS</b>                                                                                                       |  |                                                                                                                                                           |  |
| <b>CLASSIFICATION</b>                                                                                                    |  |                                                                                                                                                           |  |

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| CLASSIFICATION                                                            |        |     |                                                                                                                   | PAGE<br>5                                                                        |  |
| <b>RECEIVER EQUIPMENT CHARACTERISTICS</b>                                 |        |     |                                                                                                                   |                                                                                  |  |
| 1. NOMENCLATURE, MANUFACTURER'S MODEL NO.<br>DR4500                       |        |     | 2. MANUFACTURER'S NAME<br>BMS-Europe GmbH & Co KG ( <a href="http://www.BMS-INC.com">http://www.BMS-INC.com</a> ) |                                                                                  |  |
| 3. RECEIVER INSTALLATION<br>Portable Ground Station                       |        |     | 4. RECEIVER TYPE<br>Diversity                                                                                     |                                                                                  |  |
| 5. TUNING RANGE<br>4500 MHz - 4900 MHz                                    |        |     | 6. METHOD OF TUNING<br>Synthesizer                                                                                |                                                                                  |  |
| 7. RF CHANNELING CAPABILITY<br>First Channel 4500 MHz - 1 MHz increments  |        |     | 8. EMISSION DESIGNATOR(S)<br>N/A                                                                                  |                                                                                  |  |
| 9. FREQUENCY TOLERANCE<br>N/A                                             |        |     |                                                                                                                   |                                                                                  |  |
| 10. IF SELECTIVITY                                                        | 1ST    | 2ND | 3RD                                                                                                               | 11. RF SELECTIVITY ( <i>X and complete as applicable</i> )                       |  |
| a. -3 dB                                                                  | 17 MHz |     |                                                                                                                   | <input type="checkbox"/> CALCULATED <input checked="" type="checkbox"/> MEASURED |  |
| b. -20 dB                                                                 | 20 MHz |     |                                                                                                                   | a. -3 dB 18 MHz                                                                  |  |
|                                                                           |        |     |                                                                                                                   | b. -20 dB 22 MHz                                                                 |  |
| c. -60 dB                                                                 | 25 MHz |     |                                                                                                                   | c. -60 dB 27 MHz                                                                 |  |
| 12. IF FREQUENCY                                                          |        |     |                                                                                                                   | d. PRESELECTION TYPE                                                             |  |
| a. 1ST 480 MHz                                                            |        |     |                                                                                                                   | 13. MAXIMUM POST DETECTION FREQUENCY<br>4900 MHz                                 |  |
| b. 2ND                                                                    |        |     |                                                                                                                   | 14. MINIMUM POST DETECTION FREQUENCY<br>4500 MHz                                 |  |
| c. 3RD                                                                    |        |     |                                                                                                                   |                                                                                  |  |
| 15. OSCILLATOR TUNED                                                      | 1ST    | 2ND | 3RD                                                                                                               | 16. MAXIMUM BIT RATE                                                             |  |
| a. ABOVE TUNED FREQUENCY                                                  |        |     |                                                                                                                   | 17. SENSITIVITY                                                                  |  |
| b. BELOW TUNED FREQUENCY                                                  | X      |     |                                                                                                                   | a. SENSITIVITY -8 dBm                                                            |  |
| c. EITHER ABOVE OR BELOW TUNED FREQUENCY                                  |        |     |                                                                                                                   | b. CRITERIA 21 dBm V                                                             |  |
| 18. DE-EMPHASIS ( <i>X one</i> )                                          |        |     |                                                                                                                   | c. NOISE FIG 12 dB                                                               |  |
| <input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO |        |     |                                                                                                                   | d. NOISE TEMP N/A Kelvin                                                         |  |
| 19. IMAGE REJECTION                                                       |        |     |                                                                                                                   | 20. SPURIOUS REJECTION<br>N/A                                                    |  |
| 21. REMARKS                                                               |        |     |                                                                                                                   |                                                                                  |  |
|                                                                           |        |     |                                                                                                                   |                                                                                  |  |
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| CLASSIFICATION                                                                                                                                      |  | PAGE<br>6                                                                                                         |  |
| <b>ANTENNA EQUIPMENT CHARACTERISTICS</b>                                                                                                            |  |                                                                                                                   |  |
| 1. <input type="checkbox"/> a. TRANSMITTING <input checked="" type="checkbox"/> b. RECEIVING <input type="checkbox"/> c. TRANSMITTING AND RECEIVING |  |                                                                                                                   |  |
| 2. NOMENCLATURE, MANUFACTURER'S MODEL NO.<br>VLA 4503 Lp                                                                                            |  | 3. MANUFACTURER'S NAME<br>BMS-Europe GmbH & Co KG ( <a href="http://www.BMS-INC.com">http://www.BMS-INC.com</a> ) |  |
| 4. FREQUENCY RANGE<br>4.5 GHz to 4.9 GHz                                                                                                            |  | 5. TYPE<br>Dipol (Omni)                                                                                           |  |
| 6. POLARIZATION<br>vertical / linear                                                                                                                |  | 7. SCAN CHARACTERISTICS                                                                                           |  |
| 8. GAIN                                                                                                                                             |  | a. TYPE                                                                                                           |  |
| a. MAIN BEAM<br>3 dB Omni                                                                                                                           |  | b. VERTICAL SCAN                                                                                                  |  |
| b. 1ST MAJOR SIDE LOBE                                                                                                                              |  | (1) MAX ELEV      N/A                                                                                             |  |
|                                                                                                                                                     |  | (2) MIN ELEV      N/A                                                                                             |  |
|                                                                                                                                                     |  | (3) SCAN RATE      N/A                                                                                            |  |
| 9. BEAMWIDTH                                                                                                                                        |  | c. HORIZONTAL SCAN                                                                                                |  |
| a. HORIZONTAL<br>360° Omni / 90° Directional                                                                                                        |  | (1) SECTOR SCANNED      N/A                                                                                       |  |
| b. VERTICAL<br>78°                                                                                                                                  |  | (2) SCAN RATE      N/A                                                                                            |  |
|                                                                                                                                                     |  | d. SECTOR BLANKING ( <i>X one</i> )                                                                               |  |
|                                                                                                                                                     |  | <input type="checkbox"/> (1) YES <input type="checkbox"/> (2) NO                                                  |  |
| 10. REMARKS                                                                                                                                         |  |                                                                                                                   |  |
| CLASSIFICATION                                                                                                                                      |  |                                                                                                                   |  |

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| CLASSIFICATION                                                                                                                                             |  | PAGE<br><br>7                                                                                                     |  |
| <b>ANTENNA EQUIPMENT CHARACTERISTICS</b>                                                                                                                   |  |                                                                                                                   |  |
| 1. <input checked="checked" type="checkbox"/> a. TRANSMITTING <input type="checkbox"/> b. RECEIVING <input type="checkbox"/> c. TRANSMITTING AND RECEIVING |  |                                                                                                                   |  |
| 2. NOMENCLATURE, MANUFACTURER'S MODEL NO.<br>VLA4503 LP                                                                                                    |  | 3. MANUFACTURER'S NAME<br>BMS-Europe GmbH & Co KG ( <a href="http://www.BMS-INC.com">http://www.BMS-INC.com</a> ) |  |
| 4. FREQUENCY RANGE<br>4.5 GHz to 4.9 GHz                                                                                                                   |  | 5. TYPE<br>Omni                                                                                                   |  |
| 6. POLARIZATION<br><br>vertical / linear                                                                                                                   |  | 7. SCAN CHARACTERISTICS                                                                                           |  |
| 8. GAIN                                                                                                                                                    |  | a. TYPE                                                                                                           |  |
| a. MAIN BEAM<br><br>3 dB                                                                                                                                   |  | b. VERTICAL SCAN                                                                                                  |  |
| b. 1ST MAJOR SIDE LOBE                                                                                                                                     |  | (1) MAX ELEV      N/A                                                                                             |  |
|                                                                                                                                                            |  | (2) MIN ELEV      N/A                                                                                             |  |
|                                                                                                                                                            |  | (3) SCAN RATE      N/A                                                                                            |  |
| 9. BEAMWIDTH                                                                                                                                               |  | c. HORIZONTAL SCAN                                                                                                |  |
| a. HORIZONTAL<br><br>360°                                                                                                                                  |  | (1) SECTOR SCANNED      N/A                                                                                       |  |
| b. VERTICAL<br><br>78°                                                                                                                                     |  | (2) SCAN RATE      N/A                                                                                            |  |
|                                                                                                                                                            |  | d. SECTOR BLANKING ( <i>X one</i> )                                                                               |  |
|                                                                                                                                                            |  | <input type="checkbox"/> (1) YES <input type="checkbox"/> (2) NO                                                  |  |
| 10. REMARKS                                                                                                                                                |  |                                                                                                                   |  |
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| <b>CLASSIFICATION</b>                                                                                                                                                                                                   |  | <b>PAGE</b><br>8                                                                                                                                          |  |
| <b>TRANSMITTER EQUIPMENT CHARACTERISTICS</b>                                                                                                                                                                            |  |                                                                                                                                                           |  |
| <b>1. NOMENCLATURE, MANUFACTURER'S MODEL NO.</b>                                                                                                                                                                        |  | <b>2. MANUFACTURER'S NAME</b><br>BMS-Europe GmbH & Co KG ( <a href="http://www.BMS-INC.com">http://www.BMS-INC.com</a> )                                  |  |
| <b>3. TRANSMITTER INSTALLATION</b><br>Mobile Service                                                                                                                                                                    |  | <b>4. TRANSMITTER TYPE</b><br>FM communication                                                                                                            |  |
| <b>5. TUNING RANGE</b><br>225.0000 - 228.1875                                                                                                                                                                           |  | <b>6. METHOD OF TUNING</b><br>synthesizer                                                                                                                 |  |
| <b>7. RF CHANNELING CAPABILITY</b><br>256 - 12.5 KHz increments pre tuned fix                                                                                                                                           |  | <b>8. EMISSION DESIGNATOR(S)</b><br>28K00F1N                                                                                                              |  |
| <b>9. FREQUENCY TOLERANCE</b><br>10 ppm                                                                                                                                                                                 |  |                                                                                                                                                           |  |
| <b>10. FILTER EMPLOYED</b> ( <i>X one</i> )<br><input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO                                                                                                |  |                                                                                                                                                           |  |
| <b>11. SPREAD SPECTRUM</b> ( <i>X one</i> )<br><input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO                                                                                                |  | <b>12. EMISSION BANDWIDTH</b> ( <i>X and complete as applicable</i> )<br><input type="checkbox"/> CALCULATED <input checked="" type="checkbox"/> MEASURED |  |
| <b>13. MAXIMUM BIT RATE</b><br>9 K 6                                                                                                                                                                                    |  | a. -3 dB 28KHz                                                                                                                                            |  |
| <b>14. MODULATION TECHNIQUES AND CODING</b><br>FSK                                                                                                                                                                      |  | b. -20 dB 31KHz                                                                                                                                           |  |
|                                                                                                                                                                                                                         |  | c. -40 dB 34KHz                                                                                                                                           |  |
|                                                                                                                                                                                                                         |  | d. -60 dB 32KHz                                                                                                                                           |  |
|                                                                                                                                                                                                                         |  | e. OC-BW                                                                                                                                                  |  |
|                                                                                                                                                                                                                         |  | <b>15. MAXIMUM MODULATION FREQUENCY</b><br>15KHz                                                                                                          |  |
| <b>16. PRE-EMPHASIS</b> ( <i>X one</i> )<br><input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO                                                                                                   |  | <b>17. DEVIATION RATIO</b><br>2.5                                                                                                                         |  |
| <b>19. POWER</b>                                                                                                                                                                                                        |  | <b>18. PULSE CHARACTERISTICS</b>                                                                                                                          |  |
| a. MEAN 2W                                                                                                                                                                                                              |  | a. RATE N/A (FM)                                                                                                                                          |  |
| b. PEP 2W                                                                                                                                                                                                               |  | b. WIDTH N/A (FM)                                                                                                                                         |  |
| <b>20. OUTPUT DEVICE</b><br>transistor                                                                                                                                                                                  |  | c. RISE TIME N/A (FM)                                                                                                                                     |  |
|                                                                                                                                                                                                                         |  | d. FALL TIME N/A (FM)                                                                                                                                     |  |
|                                                                                                                                                                                                                         |  | e. COMP RATIO                                                                                                                                             |  |
| <b>22. SPURIOUS LEVEL</b><br>-72dB                                                                                                                                                                                      |  | <b>21. HARMONIC LEVEL</b>                                                                                                                                 |  |
|                                                                                                                                                                                                                         |  | a. 2ND -23dBm                                                                                                                                             |  |
|                                                                                                                                                                                                                         |  | b. 3RD -35dBm                                                                                                                                             |  |
| <b>23. FCC TYPE ACCEPTANCE NO.</b>                                                                                                                                                                                      |  | c. OTHER                                                                                                                                                  |  |
| <b>24. REMARKS</b><br>Item 10, Filter Types :<br><br>Crystal filter 30kHz 1st IF<br>Ceramic filter 30kHz 2nd IF<br><br>Item 1<br><br>Data sheet is in preparation, new developed product not listed on the man web page |  |                                                                                                                                                           |  |
| <b>CLASSIFICATION</b>                                                                                                                                                                                                   |  |                                                                                                                                                           |  |

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| <b>CLASSIFICATION</b>                                                                                                                                                                                                   |        |       |  | <b>PAGE</b><br><br>9                                                                                                                                                                                                                                                      |  |
| <b>RECEIVER EQUIPMENT CHARACTERISTICS</b>                                                                                                                                                                               |        |       |  |                                                                                                                                                                                                                                                                           |  |
| <b>1. NOMENCLATURE, MANUFACTURER'S MODEL NO.</b><br>Spec Sheet in Preparation                                                                                                                                           |        |       |  | <b>2. MANUFACTURER'S NAME</b><br>BMS-Europe GmbH & Co KG, http:// BMS-INC.com                                                                                                                                                                                             |  |
| <b>3. RECEIVER INSTALLATION</b><br>UAV Mobile                                                                                                                                                                           |        |       |  | <b>4. RECEIVER TYPE</b><br>dualconversion                                                                                                                                                                                                                                 |  |
| <b>5. TUNING RANGE</b><br>225.000 - 228.3875 MHz                                                                                                                                                                        |        |       |  | <b>6. METHOD OF TUNING</b><br>synthesizer                                                                                                                                                                                                                                 |  |
| <b>7. RF CHANNELING CAPABILITY</b><br>256                                                                                                                                                                               |        |       |  | <b>8. EMISSION DESIGNATOR(S)</b><br>28K00F1N                                                                                                                                                                                                                              |  |
| <b>9. FREQUENCY TOLERANCE</b><br>10 ppm                                                                                                                                                                                 |        |       |  | <b>11. RF SELECTIVITY</b> ( <i>X and complete as applicable</i> )<br><input type="checkbox"/> CALCULATED <input checked="" type="checkbox"/> MEASURED<br><b>a. -3 dB</b> 5 MHz<br><b>b. -20 dB</b> 6 MHz<br><b>c. -60 dB</b> 10 MHz<br><b>d. PRESELECTION TYPE</b><br>N/A |  |
| <b>10. IF SELECTIVITY</b>                                                                                                                                                                                               |        |       |  |                                                                                                                                                                                                                                                                           |  |
| <b>a. -3 dB</b>                                                                                                                                                                                                         | 30KHz  | 30KHz |  |                                                                                                                                                                                                                                                                           |  |
| <b>b. -20 dB</b>                                                                                                                                                                                                        | 100KHz | N/A   |  |                                                                                                                                                                                                                                                                           |  |
| <b>c. -60 dB</b>                                                                                                                                                                                                        | N/A    | 60KHz |  |                                                                                                                                                                                                                                                                           |  |
| <b>12. IF FREQUENCY</b>                                                                                                                                                                                                 |        |       |  | <b>13. MAXIMUM POST DETECTION FREQUENCY</b><br>20 KHz                                                                                                                                                                                                                     |  |
| <b>a. 1ST</b> 45MHz                                                                                                                                                                                                     |        |       |  | <b>14. MINIMUM POST DETECTION FREQUENCY</b><br>0 Hz                                                                                                                                                                                                                       |  |
| <b>b. 2ND</b> 445 KHz                                                                                                                                                                                                   |        |       |  |                                                                                                                                                                                                                                                                           |  |
| <b>c. 3RD</b>                                                                                                                                                                                                           |        |       |  |                                                                                                                                                                                                                                                                           |  |
| <b>15. OSCILLATOR TUNED</b>                                                                                                                                                                                             |        |       |  | <b>16. MAXIMUM BIT RATE</b><br>9 K 6                                                                                                                                                                                                                                      |  |
| <b>a. ABOVE TUNED FREQUENCY</b>                                                                                                                                                                                         |        |       |  | <b>17. SENSITIVITY</b>                                                                                                                                                                                                                                                    |  |
| <b>b. BELOW TUNED FREQUENCY</b>                                                                                                                                                                                         |        |       |  | <b>a. SENSITIVITY</b> -121                      dBm                                                                                                                                                                                                                       |  |
| <b>c. EITHER ABOVE OR BELOW TUNED FREQUENCY</b>                                                                                                                                                                         |        |       |  | <b>b. CRITERIA</b> 12D SINAB                                                                                                                                                                                                                                              |  |
| <b>18. DE-EMPHASIS</b> ( <i>X one</i> )                                                                                                                                                                                 |        |       |  | <b>c. NOISE FIG</b> dB                                                                                                                                                                                                                                                    |  |
| <input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO                                                                                                                                               |        |       |  | <b>d. NOISE TEMP</b> N/A                      Kelvin                                                                                                                                                                                                                      |  |
| <b>19. IMAGE REJECTION</b><br>> 60 dB                                                                                                                                                                                   |        |       |  | <b>20. SPURIOUS REJECTION</b><br>N/A                                                                                                                                                                                                                                      |  |
| <b>21. REMARKS</b><br>Item 1<br><br>Data sheet is in preparation, new developed product not listed on the man web page<br><br>Item 13<br><br>The transmitter has 28kHz bandwidth as the data rate is 9k6 for modulation |        |       |  |                                                                                                                                                                                                                                                                           |  |
| <b>CLASSIFICATION</b>                                                                                                                                                                                                   |        |       |  |                                                                                                                                                                                                                                                                           |  |

|                                                                                                                                                     |  |                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------|--|
| CLASSIFICATION                                                                                                                                      |  | PAGE<br>10                                                                                            |  |
| <b>ANTENNA EQUIPMENT CHARACTERISTICS</b>                                                                                                            |  |                                                                                                       |  |
| 1. <input checked="" type="checkbox"/> a. TRANSMITTING <input type="checkbox"/> b. RECEIVING <input type="checkbox"/> c. TRANSMITTING AND RECEIVING |  |                                                                                                       |  |
| <b>2. NOMENCLATURE, MANUFACTURER'S MODEL NO.</b><br>Omni Antenna DLA 225 VJ                                                                         |  | <b>3. MANUFACTURER'S NAME</b><br>Broadcast Microwave Services Europe (BMS)                            |  |
| <b>4. FREQUENCY RANGE</b><br>225.000 - 228.1875 MHz                                                                                                 |  | <b>5. TYPE</b><br>whip                                                                                |  |
| <b>6. POLARIZATION</b><br>vertical / linear                                                                                                         |  | <b>7. SCAN CHARACTERISTICS</b>                                                                        |  |
| <b>8. GAIN</b>                                                                                                                                      |  | <b>a. TYPE</b> N/A                                                                                    |  |
| <b>a. MAIN BEAM</b><br>5 dB                                                                                                                         |  | <b>b. VERTICAL SCAN</b>                                                                               |  |
| <b>b. 1ST MAJOR SIDE LOBE</b>                                                                                                                       |  | (1) MAX ELEV      N/A                                                                                 |  |
|                                                                                                                                                     |  | (2) MIN ELEV      N/A                                                                                 |  |
|                                                                                                                                                     |  | (3) SCAN RATE      N/A                                                                                |  |
| <b>9. BEAMWIDTH</b>                                                                                                                                 |  | <b>c. HORIZONTAL SCAN</b>                                                                             |  |
| <b>a. HORIZONTAL</b><br>360°                                                                                                                        |  | (1) SECTOR SCANNED      N/A                                                                           |  |
| <b>b. VERTICAL</b><br>60°                                                                                                                           |  | (2) SCAN RATE      N/A                                                                                |  |
|                                                                                                                                                     |  | <b>d. SECTOR BLANKING (X one)</b><br><input type="checkbox"/> (1) YES <input type="checkbox"/> (2) NO |  |
| <b>10. REMARKS</b>                                                                                                                                  |  |                                                                                                       |  |
| CLASSIFICATION                                                                                                                                      |  |                                                                                                       |  |