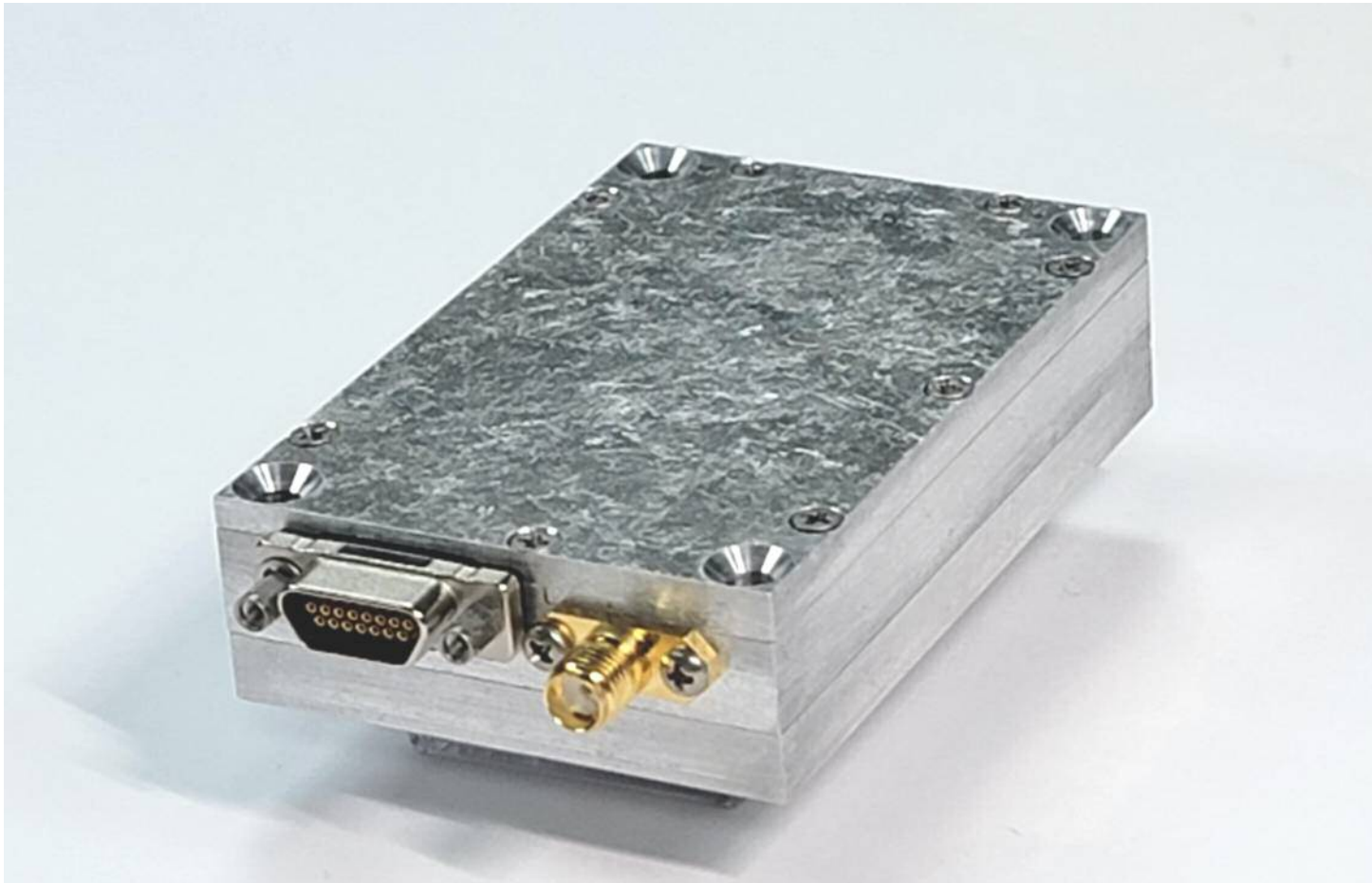


*ISO Picture*



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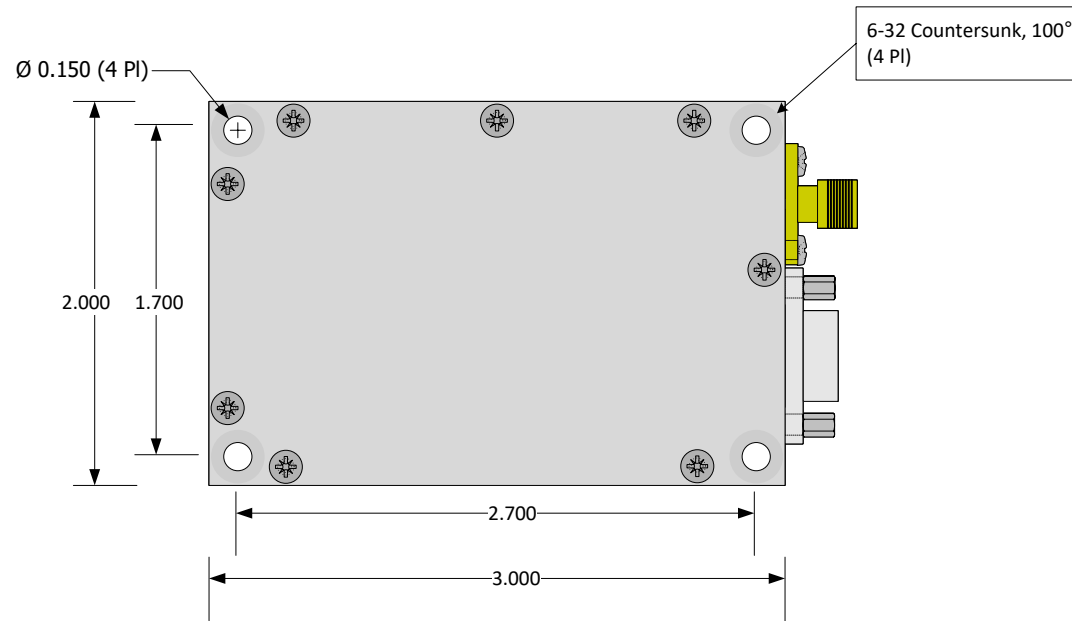
**Title: Specification Control Drawing (SCD) – LS-19-M RF Test Modulator**

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# Top View

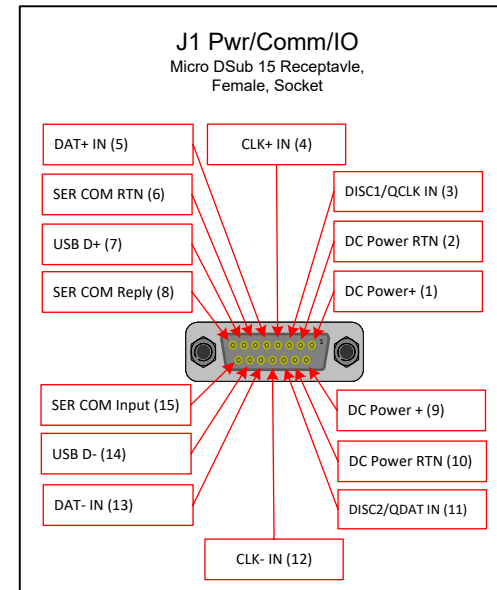
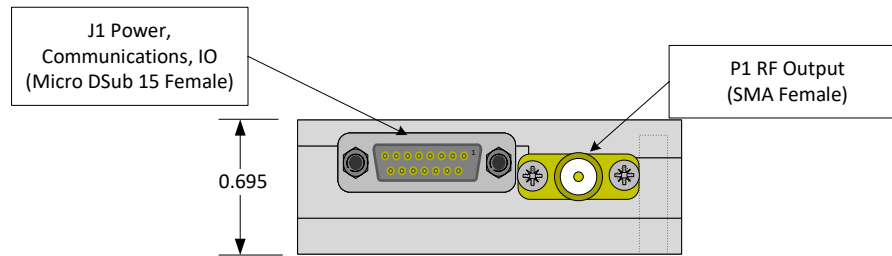


**Notes:**

- 1.) All dimensions shown are in inches.
- 2.) Tolerances are +/- 0.005 inches.

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# Front View /Pin-out



**Notes:**

- 1.) All dimensions shown are in inches.
- 2.) Tolerances are +/- 0.005 inches.

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<p>Size <b>A</b></p>	<p>Document Number: <b>DOC-19M-01-SCD-01</b></p>	<p>REV -</p>
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# Specifications

**Modulator Specifications/Notes:**

- |   |  |
|---|--|
| 1.) RF Modulation Frequencies (MHz):            | 1435-1535, 1710-1850, 2200-2395, 2185-2485, 4400-4950, 5091-5150, 5091-5250, Custom  |
| 2.) RF Tuning Step:                             | 50 kHz steps (typical); as small as 1Hz is possible upon request   |
| 3.) Maximum RF Output Signal:                   | +20 dBm (nominal) +15dBm (minimum); Frequency dependencies   |
| 4.) RF Output Power Adjustment Range:           | 31.5dB (Typ.) in 0.5dBm Steps  |
| 5.) VSWR:                                       | 1.5:1 typical  |
| 6.) Frequency Accuracy:                         | Within +/-0.001%   |
| 7.) RF Output Impedance:                        | 50 ohms  |
| 8.) Data Rate Support (quadrature formats):     | 10kbps to 45Mbps (typ.);10kbps to 60Mbps (optional)  |
| 9.) Data Rate Support (non-quadrature formats): | 10kbps to 22.5Mbps (typ.); 10kbps to 30Mbps (optional)   |
| 10.) Modulation Formats:                        | Linear PM, MS-PCMFm (Tier 0), BPSK, QPSK, OQPSK, SQPSK, SOQPSK (Tier 1), AUQPSK, AQPSK, Multi-H CPM (Tier 2)                                     |
| 12.) Future Modulation Formats:                 | PM w BPSK/QPSK subcarriers, GMSK   |
| 12.) FEC Encoding (optional):                   | Viterbi, LDPC (Rate 1/2, 2/3 and 4/5; block sizes 1024 and 4096)   |
| 13.) Data Inputs:                               | Single-Ended TTL (5V) or LVTTTL (3V); RS422 (Must be specified at time of purchase)  |
| 14.) Internal Pattern Generation:               | All 1s, All 0's, Alt 1's/0's, PN3, PN4, PN5, PN6, PN7, PN9, PN10, PN11,PN15, PN17, PN18, PN20, PN21, PN22, PN23, User Pattern                    |
| 15.) Discrete IO:                               | 2 Discrete IO; Only available if QCLK/QDAT are not required; Inputs or Outputs; TTL/LVTTTL Levels; Custom definitions                            |
| 16.) DC Input Power (calculated):               | 9-42VDC; 10W (typ.) / 15W (max.); mode and data rate dependent   |
| 17.) Control Interfaces:                        | Serial interface for control and general status; USB 2.0 and RS232 format; simultaneous operation (Baud Rate SW Selectable); Default = 57.6KBaud |

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