



# AVTECH ELECTROSYSTEMS LTD.

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SINCE 1975

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## INSTRUCTIONS

MODEL AVMM-2-EW-EA PULSE GENERATOR

S.N.:

### WARRANTY

Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech shall at its option repair or replace said defective item. This warranty does not apply to units which have been disassembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

### TECHNICAL SUPPORT

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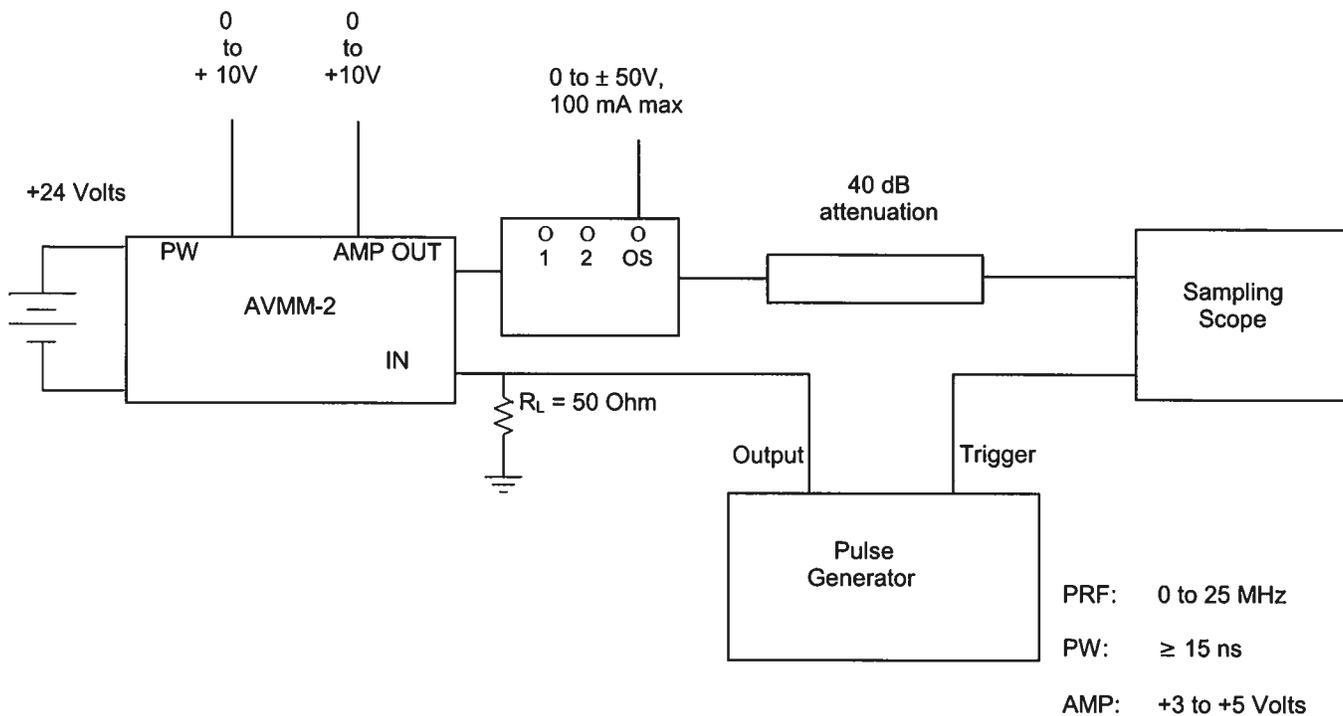
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Manual Reference: T:\instructword\avmm\AVMM-2-EW-edd.doc, created Aug. 17, 2004

**FIG. 1: PULSE GENERATOR TEST ARRANGEMENT**



Power Line: +24 Volts / 0.5 Amps DC, shielded twisted pair, < 3 meters length

Control Lines: 1 – Coaxial line, (trigger), SMA connector, < 3 meters length

1 – Shielded twisted pair, (offset), < 3 meters length

1 – Shielded twisted pair, (EW), < 3 meters length

Output: Coaxial, SMA, < 3 meters length

## GENERAL OPERATING INSTRUCTIONS

- 1) The bandwidth capability of components and instruments used to display the pulse generator output signal (attenuators, cables, connectors, etc.) should exceed ten gigahertz. The AVMM unit requires a maximum prime input power of about 10 watts. It is therefore strongly recommended that the unit be heatsunk in order to maintain a moderate chassis temperature.
- 2) The use of a 40-db attenuator will insure a peak input signal to the sampling scope of less than one volt.
- 3) In general, the source pulse generator trigger delay control should be set in the 0.1 to 1.0 usec range.
- 4) When testing using a general-purpose 50 ohm laboratory pulse generator as the input trigger signal source, the input signal should be applied via a 50 ohm feed-through load or alternatively, the input to the AVMM unit should be shunted with a 50 ohm resistor. This will prevent reflection (and degradation of the input pulse waveform) caused by the high impedance at the IN port. However, when triggering from a TTL source, no 50-Ohm feed-through load or resistor is necessary but lead length should be as short as possible. High-speed TTL Schottky logic is recommended for the driving circuitry.
- 5) The input trigger pulse width should be greater than 15 nsec and less than one half of the pulse repetition frequency period. The unit triggers on the leading edge of the input trigger signal. **WARNING:** Model AVMM-2 may fail if triggered at a PRF greater than 25.0 MHz.
- 6) The output pulse width (0 to 10 ns) is controlled by a DC voltage (0 to +10 VDC) applied to the PW solder terminal ( $R_{IN} > 10K$ ).
- 7) The output amplitude (0 to 5v) is controlled by a DC voltage (0 to +10 VDC) applied to the AMP solder terminal ( $R_{IN} > 10K$ ).
- 8) The output amplitude pulse width and PRF are inter-related. It is recommended that the following sequence be used:
  - a) Set PRF
  - b) Set output amplitude
  - c) Set pulse width
- 1) To DC offset the output pulse connect a DC power supply set to the required DC offset value to the terminals marked O.S. The maximum attainable DC offset voltage is 50 volts (100 mA max).

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