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INSTRUCTIONS

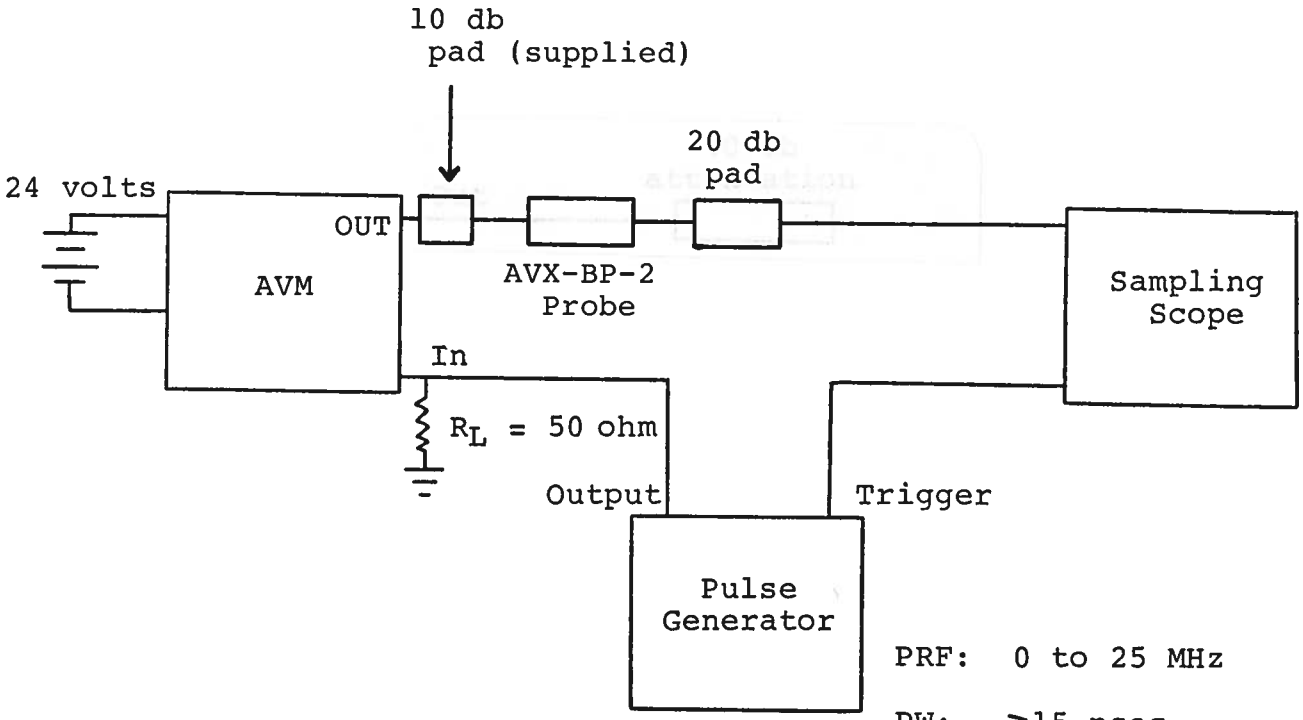
MODEL AVM-1-BM1 PULSE GENERATOR

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 dissembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

MODEL AVM PULSE GENERATOR TEST ARRANGEMENT



PRF: 0 to 25 MHz

PW: ⩾15 nsec

AMP: +3 to +5 volts

Notes:

1) The bandwidth capability of components and instruments used to display the pulse generator output signal (attenuators, cables, connectors, etc.) should exceed ten gigahertz.

2) The 10 db pad supplied with the unit ensures that the reflection from an open circuit load is attenuated by at least 20 db. The AVX-BP-2 probe provides a load impedance of 500 ohm (>> 50 ohms which approximates the open circuit). The AVX-BP-2 probe along with the 20 db pad provide an overall attenuation of 40 db. Note that amplitude presented to the open circuit can be increased by replacing the 10 db pad by a 6 db pad but this will also allow the reflection to increase.

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 AVM 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.

6) The output pulse width is controlled by means of the one-turn potentiometer (PW). The pot should initially be set maximum clockwise and the pulse width adjusted using an oscilloscope.

7) The output pulse amplitude is controlled by means of the one-turn potentiometer (AMP). The pulse width may change by several nanoseconds as the output amplitude is reduced from maximum to minimum. Therefore it is convenient to first set the desired amplitude and then set the desired pulse width. Rotation of the PW pot causes the position of the falling edge of the pulse to change.

8) Some properties of the output pulse may change as a function of the amplitude pot setting. For some demanding applications, it may be desirable to use a combination of external attenuators and the amplitude pot to achieve the desired output amplitude.

9) WARNING: Model AVM- may fail if triggered at a PRF greater than 25.0 MHz.

10) The AVM unit requires a maximum prime input power of about 12 watts. It is therefore strongly recommended that the unit be heatsunk in order to maintain a moderate chassis temperature.

11) With the 10 db pad removed, the unit will provide at least 5 volts to a 50 ohm load. In addition, with the 10 db pad removed the rear panel DC offset function may be used. 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.

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