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INSTRUCTIONS

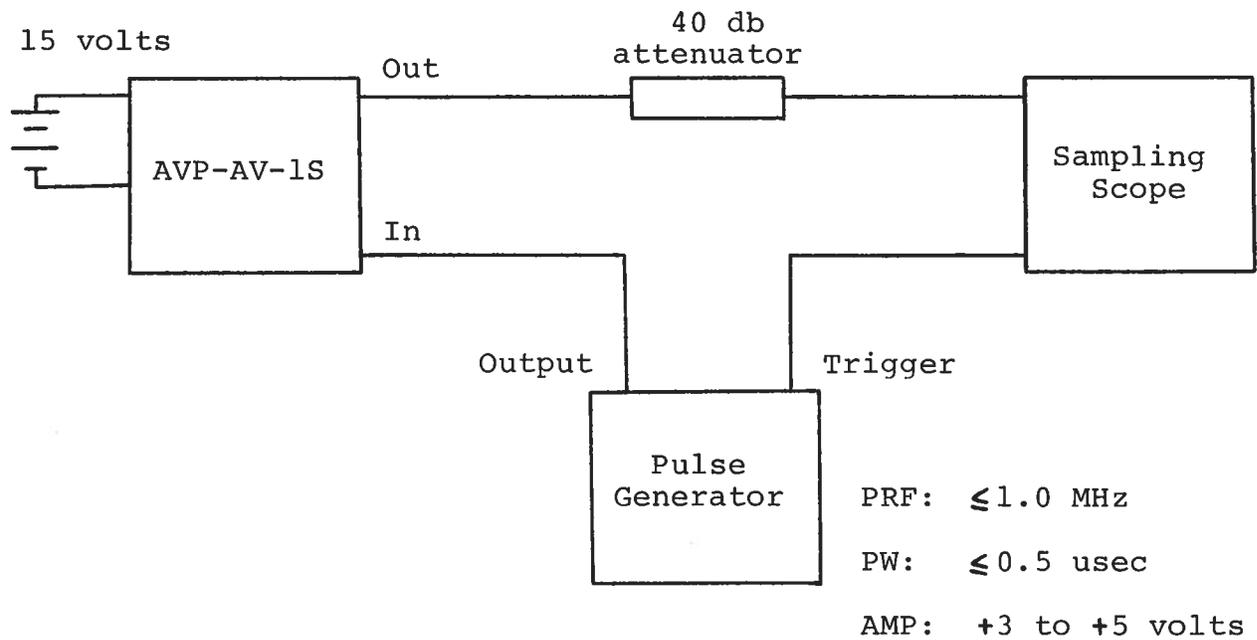
MODEL AVP-AV-1S-EW PULSE GENERATOR

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 or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

MODEL AVP-AV-1S PULSE GENERATOR TEST ARRANGEMENT



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 use of 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. Other settings should be as shown in the above diagram.
- 4) The Model AVP-AV pulse generator can withstand an infinite VSWR on the output port.
- 5) **WARNING:** Model AVP-AV may fail if triggered at a PRF greater than 1.0 MHz.
- 6) The output pulse width is controlled by a 0 to +10V control voltage applied to the front panel PW solder terminal ($R_{IN} \geq 1K$).
- 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) To DC offset the output pulse connect a DC power supply set to required DC offset value to the terminals marked O.S. The maximum attainable DC offset voltage is 50 volts. (option).
- 10) The monitor output port (M) provides a coincident attenuated ($\times 10$) replica of the main output to a 50 ohm load. (option).

- 10) For units with the dual output polarity option (-PN) a positive output pulse is obtained at the OUT P SMA connector. To obtain a negative output pulse, the OUT P port is connected to the IN N port via a short length of miniature 50 ohm coaxial cable. A negative output pulse is then obtained at the OUT N port.

For units with the dual output polarity option (-PN) a positive output pulse is obtained at the OUT SMA connector. To obtain a negative output pulse, connect the AVX-2-AVP module to the OUT SMA connector. A negative output pulse is then obtained at the output of the AVX-2-AVP module.

MONITOR OUT M. Provides an attenuated ($\times 10$) coincident replica of the main positive output pulse to fifty ohms. (option).

To invert the output, connect the AVX-2-T unit to the P OUT port. A negative pulse with a rise time <100 psec is then obtained at the OUT port of the AVX-2-T unit. To offset the negative pulse, apply the required DC level to the DC terminal of the AVX-2-T unit. To offset the positive pulse, apply the required DC level to the OS terminals of the AVP back panel. Note that the OS terminals are shorted to ground when the AVX-2-T unit is connected.

- 12) The AVX-2-T module can also be used to invert the output with less degradation of rise time. To obtain a negative output using the AVX-2-T module, connect the AVX-2-T unit to the P OUT port. A negative pulse with a rise time <100 psec is then obtained at the OUT port of the AVX-2-T unit. To offset the negative pulse, apply the required DC level to the DC terminal of the AVX-2-T unit. To offset the positive pulse, apply the required DC level to the OS terminals of the AVP back panel. Note that the OS terminals are shorted to ground when the AVX-2-T unit is connected.

For units with the dual output polarity option (-PN) a positive output pulse is obtained at the OUT SMA connector. To obtain a negative output pulse, connect the AVX-2-T module to the OUT SMA connector. A negative output pulse is then obtained at the output of the AVX-2-T module. To offset the negative pulse, connect the rear panel OFFSET OUT terminal to the DC terminal of the AVX-2-T module and set the rear panel OS ON-OFF switch to the ON position.

OS OUT. Output of internally generated offset. To offset negative output pulse, connect to DC terminal of AVX-T-2 module.

The output DC offset level is varied from -5 to +5V (to 50 ohm) by the front panel OFFSET one turn control. The DC offset may be turned off using the rear panel OS ON-OFF toggle switch.

OFFSET Control. The output DC offset is varied from -5 to +5V (to 50 ohms) by this one turn control. OFFSET may be turned OFF using the back panel OS ON-OFF toggle switch.

To turn DC output offset OFF put toggle switch in OFF position.

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- 12) The AVX-2-AVP module can also be used to invert the output with less degradation of rise time. To obtain a negative output using the AVX-2-AVP module, connect the AVX-2-AVP unit to the P OUT port. A negative pulse is then obtained at the OUT port of the AVX-2-AVP unit.