

## U.H.F. DETECTOR UN20/511

**Introduction**

The UN20/511 is designed to accept either a Band-IV or Band-V amplitude-modulated vision signal and provide a rectified output. The unit is constructed in a coaxial assembly with a type-C socket at the input and a BNC socket at the output.

**General Specification**

Input Impedance	50 ohms
Output Load Required	Between 1 kilohm and 2 kilohms
Maximum Frequency of Input Signal	900 MHz
Level of Input Signal Required	Between 500 mV r.m.s. and 2 volts r.m.s.
Level of Detected Signal (with respect to 10 kHz; double-sideband input signal and 1-kilohm load)	-1 dB at 3 MHz -3 dB at 5 MHz

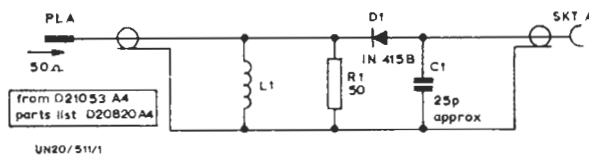


Fig. 1 Circuit of the UN20/511

**Circuit Description**

The circuit of the UN20/511 is given in Fig. 1. The input is shunted by an inductor to prevent disturbances due to 50-Hz signals. The diode is chosen so that the overall transfer characteristic is linear for input-signal voltages between 500 millivolts r.m.s. and 2 volts r.m.s. For inputs below that range there is considerable non-linearity.

If the input is a vision signal with a vestigial sideband there is a rise in the output at the lower video frequencies, and some equalisation may be necessary<sup>1,2</sup>.

**Maintenance**

This should be limited to checks for suspected short-circuit and open-circuit conditions in the diode, and to ascertaining that the value of C1 is between 20 pF and 30 pF. If there is any doubt about the transfer characteristic do not attempt to substitute another diode, but instead return the complete unit to Equipment Department.

**References to Typical Associated Equipment**

1. Television Automatic Monitor (Transmitter) MN2M/505.
2. Equalising Amplifier EQ1/509.

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