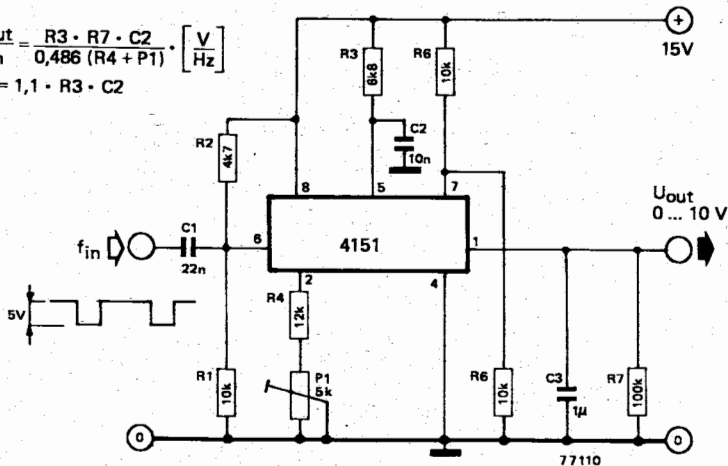


45

frequency-voltage converter

$$\frac{U_{out}}{f_{in}} = \frac{R3 \cdot R7 \cdot C2}{0,486 (R4 + P1)} \cdot \left[\frac{V}{Hz} \right]$$

$$T1 = 1,1 \cdot R3 \cdot C2$$



This frequency-voltage converter is distinguished by its markedly linear conversion ratio. With the given component values the conversion ratio of the circuit is 1 V/kHz. If a DC voltage is applied to the input (0 Hz) then the output voltage is 0 V. The duty cycle of the squarewave input signal has no effect upon the conversion ratio. However, if sinusoidal signals are to be converted to a DC-voltage, then the converter-IC should

be preceded by a Schmitt trigger. Other conversion ratios can be calculated using the formulae shown in the diagram. The circuit can also be connected to the output of a voltage-frequency converter and used as a means of transmitting DC signals over a long cable without the cable resistance attenuating the signal.

RAYTHEON product specifications