Universal band decoder (frequency counter).

The algorithm of the decoder is such that an RF signal must always apply first at its input and then (if determined change of band only) the switching command is given, for example, to LPF relays. The relay has a switching time also of up to several tens of milliseconds. This could cause problems in operation until burn out relay, filter or antenna switch, or the combustion of the output transistors.

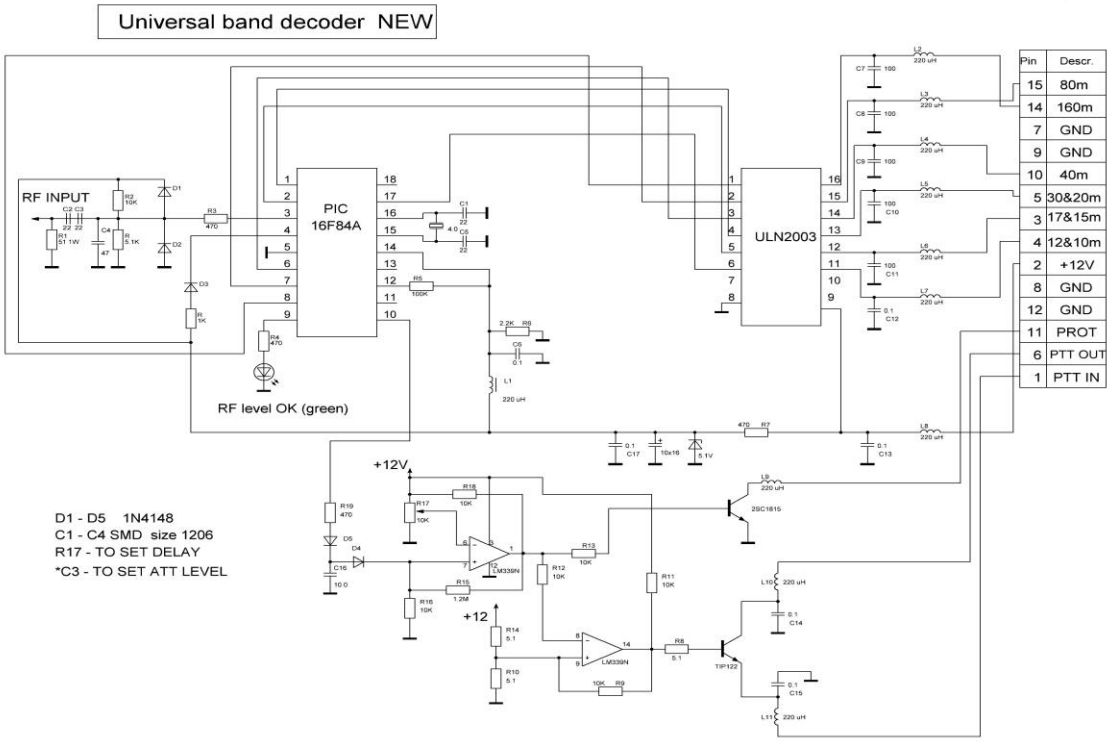
The new PCB version of the universal band decoder has added the circuit for additional external locking of devices during the relay switching time. Such an external device, for example, the emergency shutdown for power amplifier output stage implemented as a high-speed FETs could be used. At the time of switching the power supply switches off and, accordingly, the output disabled, thus prevents the triggering of protection device from a high VSWR. If there are no such a scheme, you can use an additional transistor key to broke, for example, the PTT line to control the amplifier. Use it at the time of relays switching forces the amplifier goes into receive mode. You can adjust the amount of delay by trimmer resistor, by varying the comparator threshold.

The described situation occurs when the decoder detects the change of the working band only. If not, the device does not change the normal operation of the amplifier. Thus the procedure described above occurs only when first turned on TX mode after the band changed, next subsequent occurring in the normal mode, without delay.

In addition, high VSWR protection eliminates the possibility of switching the output filter relay (or antenna switch) to a high power level, which prevents the burning of their contacts.

All outputs are equipped with on-board LC-filter for protection from RF interference, improves the stability.

A capacitive voltage divider is installed on the RF input of the decoder, it allows to maintain a low input voltage in a fairly wide range, simply by changing the value of the capacitors.



PCB size 75 x 80 x 25(h) mm