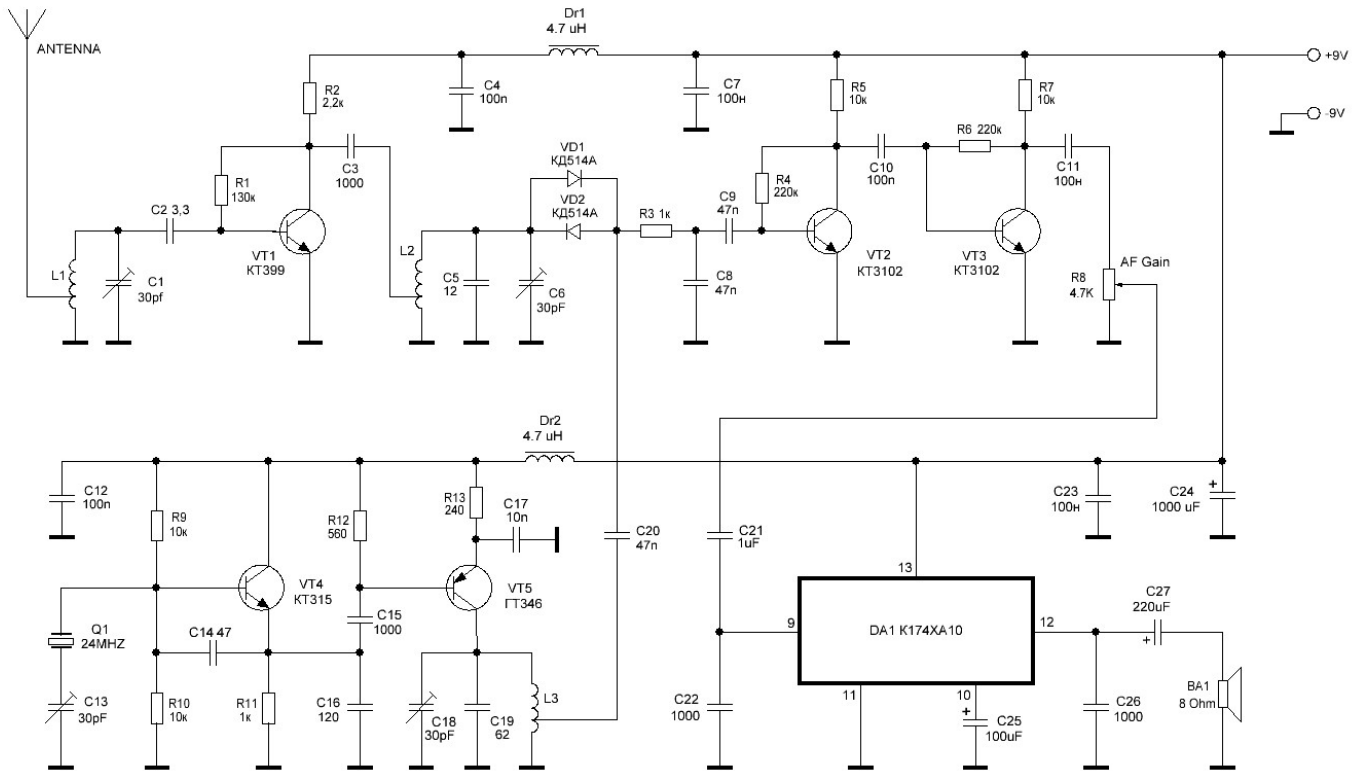


Приемник SSB и CW на 144 МГц.

The receiver is designed to operate in the range of 144.0 – 144.1 MHz. A feature of the receiver is to stabilize the frequency of the local oscillator with quartz 24 MHz. The sensitivity of the receiver is high enough that allows you to use this design for measurements on the 2-meter band, and as an independent device.

Power supply is better to use the battery, as everyone knows the sensitivity of such a simple receiver to network interference at a frequency of 50 Hz.

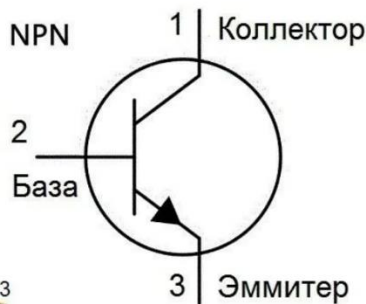


Input frequency of 144 MHz from the antenna is supplied to the RF amplifier, low-noise VT1 transistor (KT399). This amplifier has an input and output of pre-selector circuit tuned to 144 MHz. From the RF amplifier the signal goes to the mixer circuit assembled on diodes Schottky with counter-parallel switching. This makes it possible to simplify the design of the heterodyne, limiting the formation of the heterodyne frequency of 72 MHz. From the output of the mixer through the low-pass RC filter, the audio signal goes to the audio frequency amplification stages built on VT2, VT3 (KT3102) and the K174XA10 chip, where only the bass amplifier is used.

The receiver heterodyne has no peculiarities. On VT4 (KT315) assembled an oscillator that excited at the frequency quartz 24 MHz, at VT5 (ГТ346), assembled by the multiplier 3. When using the nominal values of the elements in the master oscillator specified in the scheme, it is easy to obtain a frequency tuning of the receiver 144.0 - 144.1 MHz

All IF coils has 4 turns of enameled copper wire 0.5 mm, wound on 5 mm skeleton with a step of 1.5-2 mm. Taps from 1 turn. (as skeleton for winding recommends to use the bit from drill with diameter 5mm). Circuits L1, C2 and L2, C6, C7 are adjusted to a frequency of 144 MHz, circuit L3, C21, C22 is adjusted to a frequency of 72 MHz. The

KT-26
(TO-92)



KT-17



correct setting of this circuit could be controlled by a RF voltmeter and frequency meter. IF coils on a signal path were adjusted on a basic quartz generator (harmonics of frequency multiple 144 MHz). When setting the cascade modes on VT1, VT2, VT3 DC - voltage at the bases of all transistors should be 0.6-0.7 volts.

The receiver showed good adjustability and stable performance.

