

Bandpass filters BPF-4

"BPF-4" – this is universal bandpass filters for 4 bands (1.8, 3.5, 7 and 14 MHz) with electronic switching. This unit can be used in transceivers "Druzhba", "Desna", "Druzhba-M", "Rosa", "Klopik", "Sloboda", "Amator" and in other designs.

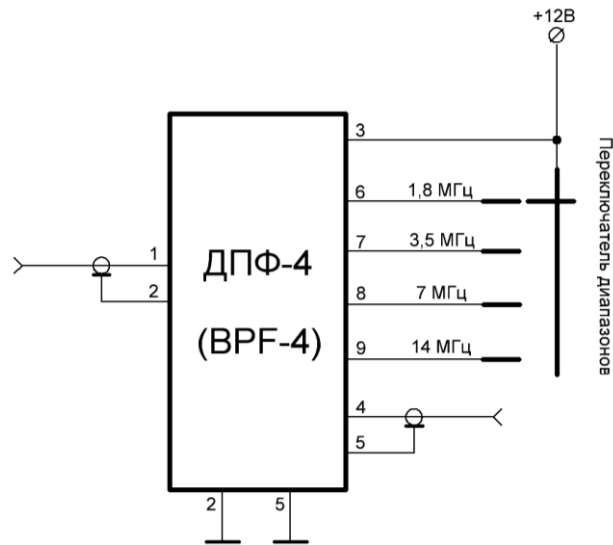
Bandpass are dual circuit, switching which is made by diodes KD409A. The schematic diagram of bandpass filters and elements of their electronic switching is shown in Fig. 1. According to the scheme, all these filters are identical and differ only in the data of inductors and capacitor ratings.

Consider their work. The pin 3 of the Board is constantly supplied with a voltage of +12V. From the divider on resistors R1, R2 to the cathodes of the diodes of the switch VD1-VD8 (KD409A), a locking voltage of about +6V is supplied. For connection of any bandpass filter, for example range, 1,8 MHz, on the control input of the switch (pin 6) it is necessary to submit the unlocking potential +12V. In this case, the diodes of the switch of the selected filter will open, and the filter itself will be connected between the input (pin 1) and the output (pin 4) of the node.

L2 - L17, bandpass filters are made on skeletons with a diameter of 5 mm with trimming cores. The winding of the bands of 1.8 MHz and 3.5 MHz in bulk made in sections, the other bands winding turn to turn. The communication coils are wound over the winding approximately in the middle. Winding data coils are shown in table. All coils has shields.

1.8 MHz	L6 and L10 – 50 turns, 0.16mm	L2 and L14 – 10 turns, 0.16mm (over L6,L10)
3.5 MHz	L7 and L11 – 35 turns, 0.16mm	L3 и L15 – 7 turns, 0.16mm (over L7,L11)
7 MHz	L8 and L12 – 25 turns, 0.16mm	L4 и L16 – 5 turns, 0.16mm (over L8,L12)
14 MHz	L9 and L13 – 17 turns, 0.35mm	L5 и L17 – 3 turns, 0.16mm (over L9,L13)

Adjusting of BFP-4 is by using the RF generator and voltmeter or according to the readings of the S-meter.



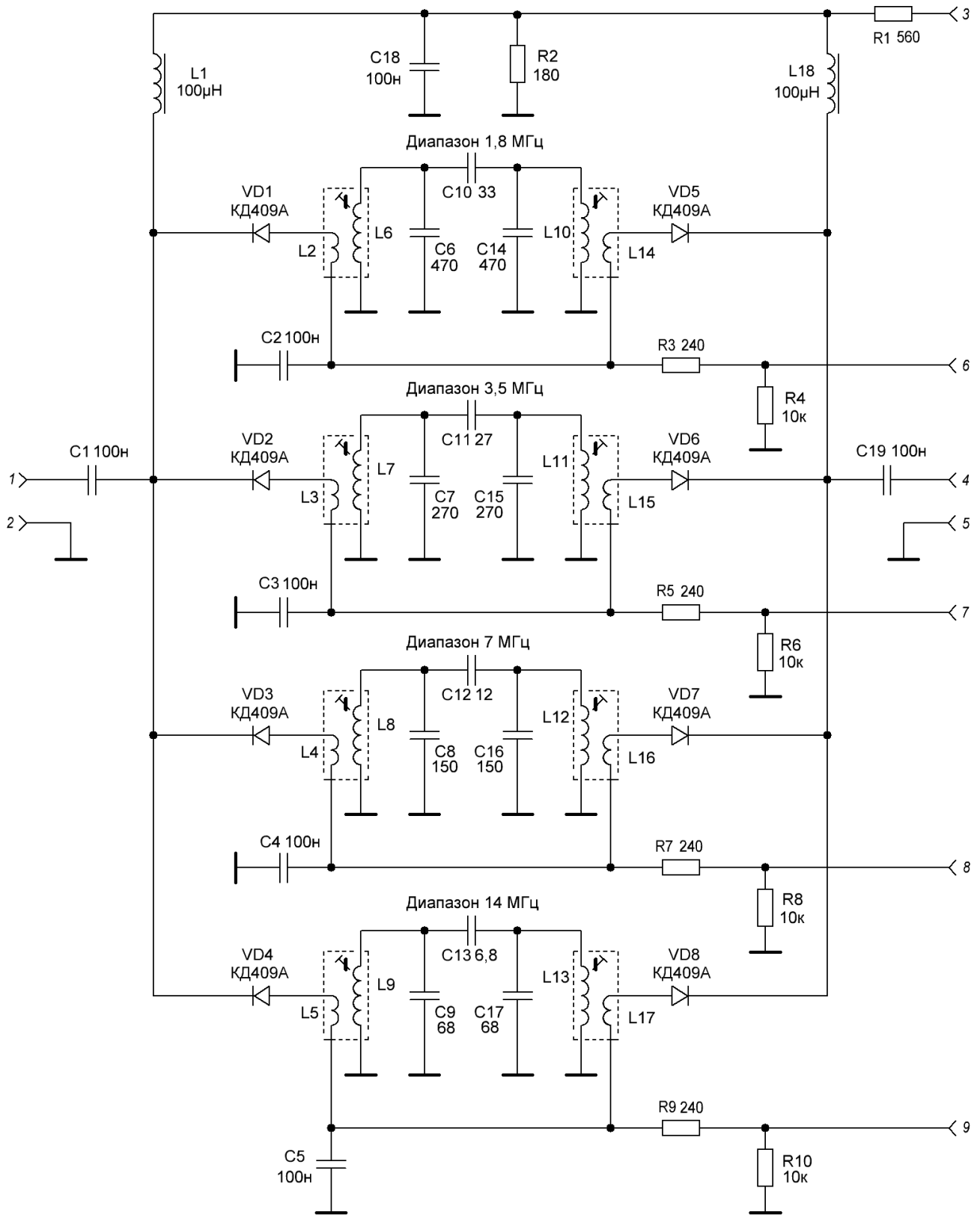


Рис.1.

