

1. GENERAL DESCRIPTION

The QF40009/QF40010 RF COAXIAL SWITCH is a general purpose microwave device with a broad frequency range of 0 ~ 12.4GHz.

It features small size, long life, low SWR, low insertion loss, reliable contact and easy use. It is well suited for switching signals in the laboratories of factories, schools, institutes and etc.

2. SPECIFICATIONS

Frequency Range:	0 ~ 12.4GHz
Characteristic Impedance:	50 Ω
VSWR:	< 1.2 (0~8GHz) < 1.3 (Typical 1.2~1.25) (8 ~ 12.4GHz)
Insertion Loss:	< 1 dB
Life: —	$> 100,000$ switchings
DC Resistance of Activating Coil:	145 Ω
Activating DC voltage:	18 VDC
Switching Time:	< 50 ms
Isolation:	> 60 dB (0~2GHz) > 45 dB (2~12.4GHz)
Demensions:	80×48×41 (mm ³)
Weight:	250 g

3. PRINCIPLES OF OPERATION

The schematic diagram of the coaxial switch is shown below. When the polarity of the DC voltage applied to the coil is reversed and the magnetic field induced in the coil is also reversed accordingly, hence, the slab line will move right-wards or leftwards driven by the mechanism. Adopting a deliberately designed slab line, the switch offers low SWR and concentrated magnetic field which yields a high isolation.

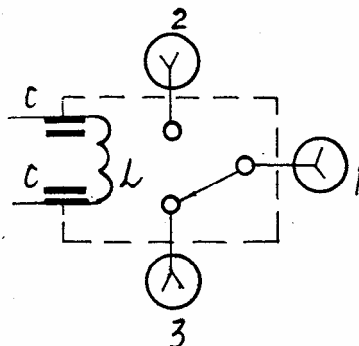


Fig. 1

4. STRUCTURE

The coaxial switch adopts an advanced structure of slab line. All the contacts and the strip lines are gold plated for protection and reliable contact.

5. OPERATION

- 1). The average power of RF input should not be larger than 2W.
- 2). The DC voltage applied to the activating coil should not be larger than $\pm 18V$, otherwise, the activating coil will be burned.

6. SERVICE

- 1). The switch requires no special service. If any contact problem occurs to the connectors, clean them with alcohol or replace the elastic contacts of flat-faced connector with special tools. The switch should be sent back to the manufacturer for repair in case of any failure occurred in the interior of it.
- 2). When the switch is in storage, keep it in its original packing box and protect it from any corrosion of salt, acid and alkaline.