
RoHS
compliant

7-3 Layout and installation of filters and duplexers:

7-3-1 How apart should the filter be placed from the nearby components? How close could the filter be placed near other chip components or metal casing covering RF circuits?

- If the filter/duplexer has the shielding metal, the shielding metal should not contact other components. Although the filter/duplexer performance is not affected by the metal shield contacting other components, it is recommended that the filter/ duplexer should have a certain distance to other neighboring components. This is to avoid any physical force exerted by other objects nearby which may damage or destroy the filter/duplexer.
- If there is no shielding metal on the filter/duplexer, the opening surface side shall be 2 to 3 mm apart from the nearby components or objects. (The space shall be equivalent to the height of the ceramic body.)
- Other surfaces shall have 1 mm spacing to the nearby components.

7-3-2 Land pattern layout and connection of the input and output lines.

- Prepare the PCB according to the manufacturer's recommended land pattern.
- Make sure to ground the shielding metal.
- Keep Input and Output traces as far apart each other as possible.

7-3-3 What kind of PCB is recommended for the installation of the filter/duplexer? Is there any recommended thickness of the PCB?

- There are no restrictions for the thickness of PCBs as far as the lines adjusted to 50 Ohms can be drawn on the PCB. It is however not recommended to use the PC board that is too thin, as the parallel capacitance often occurs in I/O pad area on very thin PCB.
- The filter /duplexer , in particular those of large size, shall not be installed very near the PCB’s fixture or fixture areas (such as bolts to the bases or the chassis), as the deformation of the PCB due to dropping or heat cycles may damage the filter/duplexer.

7-3-4 How shall the filter/duplexer be soldered to PCBs?

- Refer to the manufacturer's recommended land pattern.
- Use reflow oven and follow the manufacturer's recommended reflow temperature profile.
- It is not recommended to use soldering iron or manual soldering.