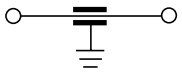
Ceramic Singlelayer Feed-Through and Filter Capacitors

GENERAL

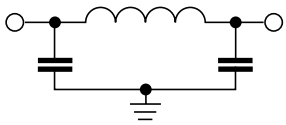
The Feed-through capacitors and filters on the following pages are either solder-in mounting or threaded mounting styles to prevent spurious signals from entering or leaving a chassis, compartment or equipment.

CIRCUIT CONFIGURATIONS

C STYLE : Feed-Through Capacitor



π STYLE : Feed-Through Filter with 2 Capacitors & Ferrite



INSERTION LOSS

The insertion loss values given in the datasheets are measured in a 50Ω-system at (25 ± 2)°C

This method is consistent with MIL Std. 220 measurements.

RF CURRENT

The components on the following pages are designed primarily for DC power line filtering where RF currents do not exceed 0.3A. The limiting value of each type may be taken from the relevant data sheets.

PERMISSIBLE REACTIVE POWER

The maximum power ratings stated in the data sheets are valid when the component is mounted in a metal plate. When mounting the components into a PCB or self-supporting, the maximum reactive power must be limited to one-half.

SOLDERING

Mounting of the component should be achieved using a SN62/36/2AG type or a silver-bearing type solder, whereby solder wire, cream or preforms are acceptable. Only a mild active, resin flux should be used.

We recommend the use of a sink adjacent to the component body if possible .

As ceramic capacitors are very sensitive to rapid changes in temperature (thermal shock) a pre-heat and post-heat cycle is strongly recommended. Both the component and the ground plate should be heated up to 120°C (heat must not be applied directly to the ceramic body and the temperature on the component surface should not be allowed to increase faster than 100°C per minute). After the pre-heat cycle, the mounting plate temperature should be raised to achieve solder flow.

The solder flow state should be maintained for a minimum period (recommendation: less than 5s) and the tip temperature should be as low as possible (max. 260°C). The assembly should be allowed to cool at a rate not exceeding 100°C per minute.

CLEANING

The components should be cleaned immediately following the soldering operation with vapor degreasers.

MOUNTING

Mounting hardware such as threaded nuts are supplied in bulk, not assembled.

The mounting torques that are given in the datasheets must be observed. Exceeding these limiting values may result in damage to the ceramic body of the capacitors. Twisting or elongating the metal case by over-torquing will fracture the capacitor elements .

We do not recommend modifying the lead terminals, e.g. bending, cropping or cutting. This action could break the sealing or crack the ceramic insert. If however, the lead must modified in that way, we recommend support of the lead with a clamping fixture next to the potted seal.