MIT PASSIVEN IN DIE TECHNIK-ZUKUNFT

Surface Mount & Panel Mount EMI Filters

knowles
DLI•Novacap•Syfer•Voltronics

The need for EMI Filters

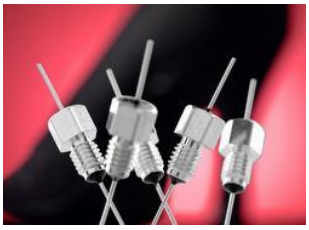
The use of electronic equipment is ever-increasing, with greater likelihood of interference from other pieces of equipment. Added to this, circuits with lower power levels that are more easily disturbed means that equipment is increasingly in need of protection from EMI (electromagnetic interference). To meet legislation such as the EU Directive on EMC, in addition to other international regulations such as FCC, EMI filtering is now an essential element of equipment design. Introducing screening measures, eg to the case orcables, may suffice in many instances, but some form of low-pass filtering will often be required.

Products

Knowles excellence in ceramic materials technology, combined with EMI filter expertise, has enabled us to offer an unrivalled range of EMI filter products:

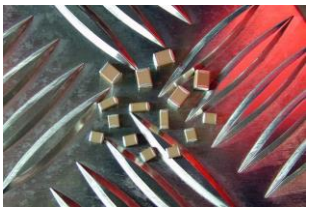
Surface Mount Filters

High capacitance, high voltage, high current Pi filters
Flexicap termination an option
AEC-Q200 approvals



Panel Mount EMI Filters

Use of Stable X7R and COG/NP0 ceramics
High capacitance values, high voltage
High frequency performance to greater than 10GHz



X2Y-Intergrated Passiv Components

Available with FlexiCap termination
AEC.Q200 and medical implatable
Available in surface mount, panel mount and planar array version

… more filters:

Discoidal and Planar Arrays;
Filters for Hi-Rel Applications (Space, Automotive, Military, Oil Industrial, Medical and Rail)

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Surface Mount & Panel Mount EMI Filters

Series E01 (300mA) E07 (1A; 2A; 3A)

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The Syfer E01 and E07 ranges of feedthrough MLCC chip 'C' filters are 3 terminal chip devices designed to offer reduced inductance compared to conventional MLCCs when used in signal line filtering. The filtered signal passes through the chip internal electrodes and the noise is filtered to the grounded side contacts, resulting in reduced length noise transmission paths. Available in C0G/NP0 and X7R dielectrics, with current ratings of 300mA, 1A, 2A, 3A and voltage ratings of 25Vdc to 200Vdc. Also available with FlexiCap™ termination which is strongly recommended for new designs.
Commonly used in automotive applications, a range qualified to AECQ-200 is also available.

Quick Reference Guide

E01 300mA Sizes 0805; 1206 & 1806 C-filter; Cap.-Range: 10pF – 200nF, Rated Voltage 25Vdc to 200Vdc
E07 1A to 3A Sizes 0805; 1206; 1806 & 1812 C-filter; Cap-Range: 10pF – 1,8µF; Rated Voltage 25Vdc to 200Vdc
E17 Size 0805 2A, Cap-Range 470pF; 1206 10A, Cap-Range 10nF,15nF; Rated Voltage 25Vdc to 200Vdc

Surface mount 'Pi'/'C' Filters

SBSG (5A) / SBSGC (10A)
The SBSG range has a 5A current rating for the Pi type, and 10A rating for the C type. Suitable for pick-and-place, these miniature surface mount filters offer assembly savings compared with conventional panel mounted filters.

Quick Reference Guide

SBSPP Size 1206 1A / Pi- filter; Cap.-Range: 22pF – 150nF; Rated Voltage 100Vdc
SBSGC Size 1812 10A / C- filter; Cap.-Range: 1.nF – 220nF; Rated Voltage 500Vdc
SBSGP Size 1812 5A / Pi-filter; Cap.-Range: 1.nF – 220nF; Rated Voltage 500Vdc

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SBCM (10A) / SBSMC (20A)

The SBSM range of surface mount EMI filters has been designed for use on pcbs, and is suitable for both signal and power lines. Capacitance values up to 470nF are available, with a 10A current rating for pi-section filters and 20A rating for 'C' types. The high capacitance, high current and high voltage ratings make them suitable for a wide range of applications including telecoms, mil/aerospace and industrial.

Quick Reference Guide
SBSMC Size 2220 20A / C-filter; Cap.-Range: 1.0nF – 470nF
SBSMP Size 2220 10A / Pi-filter; Cap.-Range: 1.0nF – 470nF

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Panel Mount EMI Filters

Benefits of Knowles Precision Devices Panel Mount EMI Filters

Use of Stable X7R and C0G/NP0 ceramics - no Z5U/Y5V
High capacitance values, high voltage
High frequency performance to greater than 10GHz

When choosing a filter, it is important to be aware of the different performance characteristics that may be available from different categories of ceramic materials employed in their capacitors. Generally, stability of dielectric constant (and therefore filter capacitance value), with respect to some operational and environmental parameters, deteriorates with increasing dielectric constant. Specific factors which affect dielectric constant are temperature, voltage, frequency and time (ageing). The three main classifications of ceramic dielectric employed in the manufacture of EMI filters are generally referred to as ultra stable (C0G/NP0), stable (X7R) and general purpose (Z5U, Y5V or X7W).

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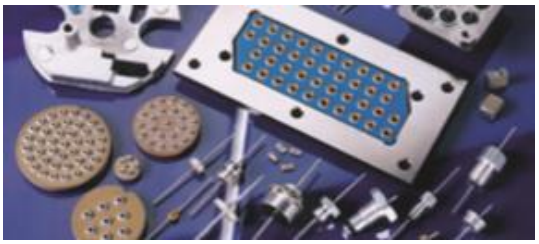
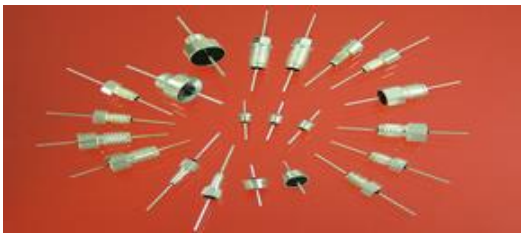
Surface Mount & Panel Mount EMI Filters

DO YOU NEED MORE EMI-Filters?

Discoidal and Planar Arrays;
Filters for Hi-Rel Applications (Space, Automotive, Military, Oil Industrial, Medical and Rail)





Für weiteren Fragen, Bemusterungen oder Applikationshinweise kontaktieren Sie gerne Ihren Ansprechpartner oder besuchen Sie unsere WEB-Seite: www.wts-electronic.de

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