

PFE 225

- High capacitance density
- High stability
- High reliability
- High test voltage
- MUAHAG approval
- French standard CPS 82
- CECC 30901-001

Applications

This capacitor is made in 7.5 mm module that, together with RM t ferrite cores, can be designed into very dense constructions, i.e. LC-filters in telephone systems or measurement equipment.

Specification

Capacitance range pF	> 13700-25000	> 1500-13700	47-1500
Rated voltage VDC	63	100	200
Capacitance tolerance	± 0.5-5% (min 1.0pF)		
Climatic category	40/85/56*		
Complies with IEC 384-7	Stability class 1 and 2.		
*) Damp heat steady state $\Delta C/C < 0.75\%$, 56 days.			

Technical data

Stability after one temperature cycle

Test is carried out in accordance with IEC 384-7. Stability class 1 for $C \leq 18 \text{ nF}$ $\Delta C/C \leq 0.3\% + 0.3 \text{ pF}$. Stability class 2 for $C > 18 \text{ nF}$ $\Delta C/C \leq 0.5\% + 0.5 \text{ pF}$.

Rated capacitance

The E48 series is standard, other values on request.

Test voltage

Between terminals and case 400 VDC

The test voltage between terminals is stated in the table. The capacitors will withstand the test voltage without any flashover for 60 seconds.

Rated voltage (VDC)	Test voltage (VDC)
063	190
100	425
200	425

Insulation resistance

It is measured at +23°C and after 60 seconds.

Test voltage is 100 VDC except for 63 VDC components tested at 10 VDC. The requirement is an insulation of at least 500 GΩ,

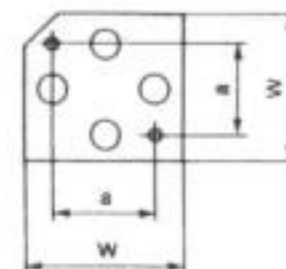
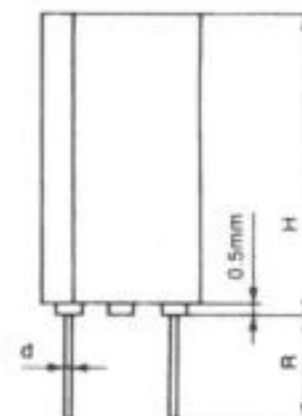
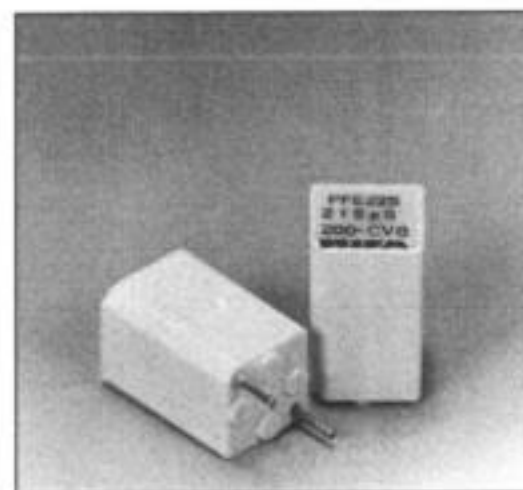
Pulse rise time, dU/dt

The capacitors can withstand an unlimited number of pulses with a pulse steepness of 2500 V/μs.

Basic design

PFE 225 is a polystyrene capacitor using extended foil to achieve low inductance. The winding is an extended foil construction to guarantee low ESR. The encapsulation is made of self-extinguishing material (UL 94/V-0).

The capacitor will withstand all commonly used solvents and rinsing liquids without damage. The mechanical design will assure narrow dimensional tolerances and highest possible packing density on PC-board.



W $7.4 \pm 0.1 \text{ mm}$

H $\leq 13.1 \text{ mm}$

a 5.08 mm

R Standard $3.1 \pm 0.3 \text{ mm}$

Optional 6-10 mm with tolerance ± 0.1

d 0.6 mm

Weight 1.2 g

The outer foil is always connected to the terminal that is closest to the cut-off corner.

Inductance

Measured at 1.5 mm from the capacitor body.

Typical value is 9nH and will not depend on the C-value. Maximum value 11nH.

Terminals

Heavily tinned, low resistance wire with low thermal conductivity.

Needle flame test

According to IEC Publ. 695-2-2 with underlying layer of tissue paper. The flame can be applied for 20 seconds, without any glowing particles falling.

Temperature coefficient

The linear relation between temperature and capacitance value is valid for the total temperature range (-40°C to +85°C).

Capacitance (nF)	Temp. coefficient (ppm/°C)
0.047-3	-100 ± 25
3-13.7	-125 ± 30
13.7-25	-160 ± 40

Long term stability

After three years at rated voltage, and maximum 70% relative humidity, the capacitance drift will not exceed 0.2% + 0.2pF.

Dielectric absorption

According to MIL-C-19978 B paragraph 4.6.15, the absorption is less than 0.01%.