



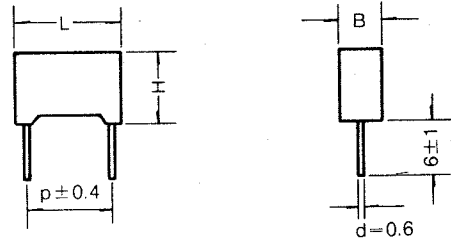
METALLIZED POLYESTER FILM CAPACITOR

MOLDED BOX, NON-INDUCTIVE, METALLIZED FILM CAPACITORS, RADIAL LEAD

FEATURES

- SEALED IN SPECIAL EXTERIOR RESIN CASES FOR SUPERIOR HEAT RESISTANCE, HUMIDITY RESISTANCE AND FLAME RETARDANT.
- SINGLE-ENDED CONSTRUCTION, UNIFORM DIMENSIONS, AND FIXED LEAD SPACING SIMPLIFY HAND INSERTION PROCEDURES.
- LOW SELF-INDUCTANCE, HIGH VOLTAGE STRESS CAPABILITY. IDEAL FOR IC DECOUPLING APPLICATIONS.

$p=7.5\text{ mm}$



All dimensions are in mm.

GENERAL TECHNICAL DATA

- Dielectric :**
polyester film
- Plates :**
aluminium layer deposited by evaporation under vacuum.
- Winding :**
non-inductive type.
- Leads :**
tinned wire(minimum lead content 5%).
- Protection :**
Plastic case, epoxy resin filled. Box made of solvent resistant material.
- Marking :**
capacitance. tolerance. DC nominal voltage.
- Climatic category :**
FME DIN 40040 55/100/56 IEC 68-1
- Technical terms and tests :**
IEC 384-2 CECC 30400 DIN 44110 T1 DIN 45910 T11.
- Detail specification :**
CECC 30401-011.

Reliability :

| |
|---------------------------|
| LR DIN 40040 |
| L = 300 FIT |
| R = 10 ⁵ hours |

1 FIT = 1 × 10⁻⁹ failures/components × h.
Considering a practical application at +40°C and 0.5 × V_n we can assume a failure quote of 4FIT.
Failure criteria(according to DIN 44122):
Short or open circuit
Capacitance change ΔC/C : > ±10%
Dissipation factor : < 2 × limit value
Insulation resistance : < 0.005 × limit value

ELECTRICAL DATA

- Nominal voltage(V_n) :**
63Vdc-100Vdc-250Vdc-400Vdc-630Vdc.
- Category voltage(V_c)**
up to 85°C V_c = V_n
For temperature between +85°C and +100°C a decreasing factor of 1.25% per degree°C on the nominal voltage V_n has to be applied.
- Capacitance range :**
1000pF to 1μF.
- Capacitance values :**
values in compliance with IEC 63 Norm. E6 series.
- Capacitance tolerances(at 1KHz) :**
±10% : ±20% : (upon request ±5%).
- Total self inductance : ≈ 8nH**
- Dissipation Factor(DF) :**
tg δ × 10⁻⁴ at +25°C ±5°C

| KHz | tg δ × 10 ⁻⁴ |
|-----|-------------------------|
| 1 | < 100 |
| 10 | < 150 |

Insulation resistance :

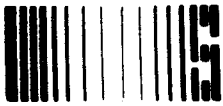
- Test conditions**
Temperature : +25°C ± 5°C
Voltage charge time : 1minute
Voltage charge : 50Vdc for V_n < 100Vdc
100Cdc for V_n > 100Vdc

- For V_n > 100Vdc :
> 30,000 MΩ (5.10⁴ MΩ) (*)
For V_n < 100 Vdc. :
< 10,000 MΩ C < 0.1 μF (5.10⁴ MΩ) (*)
> 1,000sec. for C < 0.1 (5000sec.) (*)

Test voltage between terminals :

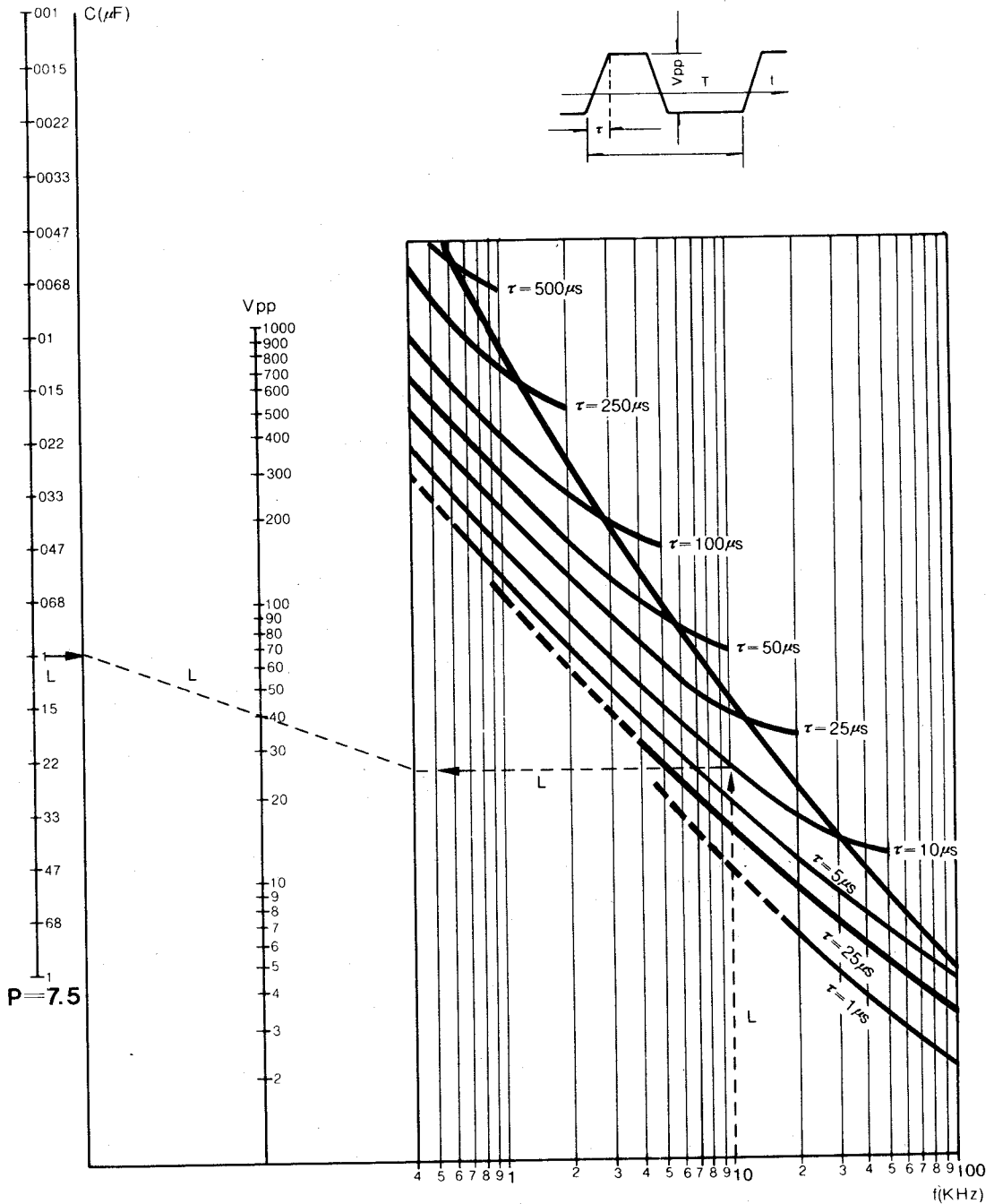
1.6 × V_n applied for 2sec. at +25°C ± 5°C

(*) Typical value



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NOMOGRAPH OF THE ADMISSIBLE PEAK VOLTAGE V_{pp} AS A FUNCTION OF FREQUENCY AND τ



EXAMPLE

Let us consider the following working data:
 $f = 10$ KHz (Repetition frequency)
 $\tau = 10 \mu$ sec (Rise time)
 a capacitor $C = .1 \mu$ F
 with $p = 7.5$ mm (lead spacing)
 The dashed line L identifies a max admissible

peak voltage of 40 Vpp.
 If the result is lower than the requested voltage load another capacitor with bigger dimension and/or lead spacing has to be chosen.