

Metallized Polypropylene Film Capacitors (MFP) - B 32686-S

Plastic Case

Wound MFP pulse capacitors with highest possible contact reliability

Construction

- Dielectric: polypropylene
- Film metallized on one side and metal foils internally connected in series
- Plastic case (UL 94 V-0)
- epoxy resin sealing

Features

- Very high pulse strength
- Highest possible contact reliability
- Self-healing properties
- High-current

Typical applications

- Pulse circuits with steep voltage rise rates
- High-frequency ac loads
- Snubbing of power semiconductors

Terminals

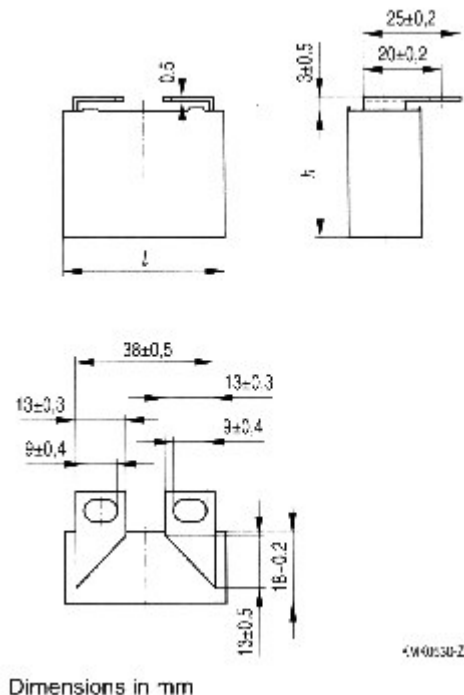
- Strap terminals, Cu, tinned

Marking

Manufacturer's logo,
lot number style(MFP),
rated capacitance (coded),
capacitance tolerance (code letter),
rated dc voltage,
date of manufacture (coded)

Delivery mode

Bulk (untaped)



Ordering codes and packing units, lead spacing 37,5 mm

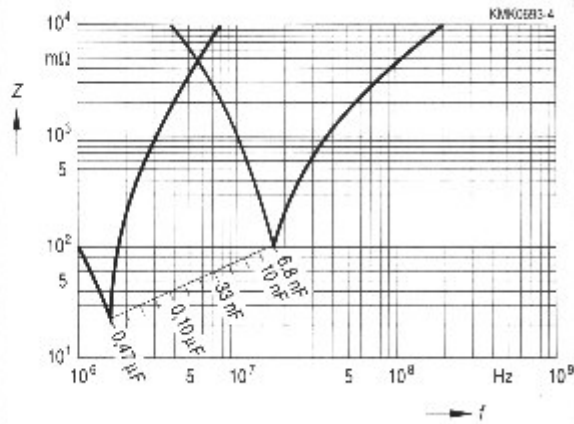
VR (Vrms f< 60 kHz)	CR	Maximum dimensions b x h x l(mm)	Ordering code	Packing units (pcs) untaped
1000 Vdc (400 Vac)	0,47 μ F	20,0 x 39,5 x 41,5	B32686-S0474-+502	24
1250 Vdc (450 Vac)	0,22 μ F	18,0 x 32,5 x 41,5	B32686-S7224-+501	32
	0,33 μ F	20,0 x 39,5 x 41,5	B32686-S7334-+504	24
1600 Vdc (450 Vac)	0,10 μ F	18,0 x 32,5 x 41,5	B32686-S1104-+503	32
	0,15 μ F	20,0 x 39,5 x 41,5	B32686-S1154-+504	24
2000 Vdc (500 Vac)	6,8 nF	18,0 x 32,5 x 41,5	B32686-S2682-+500	32
	0,10 μ F	20,0 x 39,5 x 41,5	B32686-S2104-+501	24

Capacitance tolerance: $\pm 20\% \cong M$, $\pm 10\% \cong K$, $\pm 5\% \cong J$, $\pm 5\%$

Technical data

Climatic category in accordance with IEC 60068-1 Lower category temperature T_{min} Upper category temperature T_{max}	55/100/56 - 55° C + 100 °C		
Damp heat test Limit values after damp heat test	56 days/40°C/93% relative humidity Capacitance change $ \Delta C/C $ Dissipation factor change $\Delta \tan \delta$ Insulation resistance R_{is} or time constant $\tau = C_R \cdot R_{is}$	$\leq 2\%$ $\leq 1,0 \cdot 10^{-3}$ (at 10 kHz) $\geq 50 \%$ of minimum as-delivered values	
Realiability: Reference condition Failure rate Service life Failure criteria: Total failure Failure due to variation of parameters	0,5 . V_R ; 40°C 1 . 10 ⁻⁹ /h = 1 fit 200 000 h Short circuits or open circuit Capacitance change $ \Delta C/C $ Dissipation factor $\tan \delta$ Insulation resistance R_{is} or time constant $\tau = C_R \cdot R_{is}$	 $> 10\%$ 4 . upper limit values $< 1500 \text{ M}\Omega$ ($C_R \leq 0,33$ μF) $< 500 \text{ s}$ ($C_R > 0,33 \mu\text{F}$)	
DC test voltage	2,0 . V_R , 2s		
Category voltage V_c Operation with dc voltage or ac voltage V_{rms} up to 1 kHz	$T \leq 85^\circ\text{C} : V_c = 1,0 \cdot V_R$ or $1,0 \cdot V_{rms}$		
Dissipation factor $\tan \delta$ (in 10^{-3}) at 20 °C (upper limit values)		$C_R \leq 0,1 \mu\text{F}$	$C_R > 0,1 \mu\text{F}$
	At 1 kHz 10 kHz 100 kHz	- 0,4 1,0	0,4 0,5 --
Insulation resistance R_{is}	$C_R \leq 0,33 \mu\text{F}$ 100 G Ω		$C_R > 0,3 \mu\text{F}$ 30 000 s

Impedance Z
versus
frequency f
(typical values)



Pulse handing capability

Maximum permissible voltage change per unit of time for non-sinusoidal voltages (pulse, sawtooth)

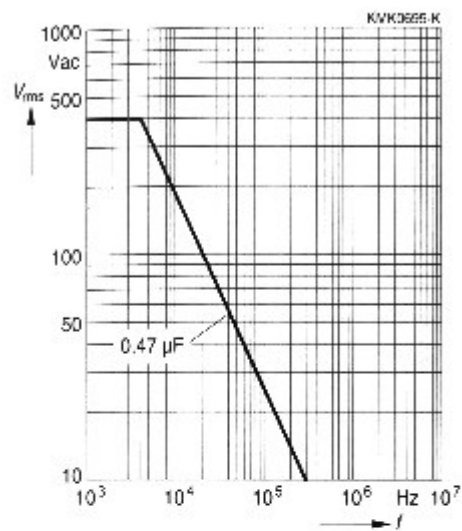
VR	Max. Rate of voltage rise V_{pp}/τ in $V/\mu s$ (for $V_{pp}=V_R$)
1000 Vdc	2000
1250 Vdc	2800
1600 vdc	3500
2000 vdc	4500

For $V_{pp} < V_R$, the permissible rise rate value V_{pp}/τ may be multiplied by the factor V_R / V_{pp} .

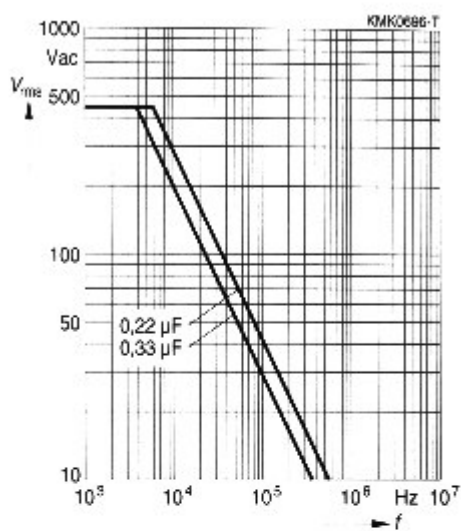
VR	Pulse characteristics k_0 in $V^2/\mu s$ (for $V_{pp} \leq V_R$)
100 vdc	4 000 000
1250 vdc	7 000 000
1600 vdc	11 000 000
2000 vdc	18 000 000

Permissible ac voltage V_{rms} versus frequency f

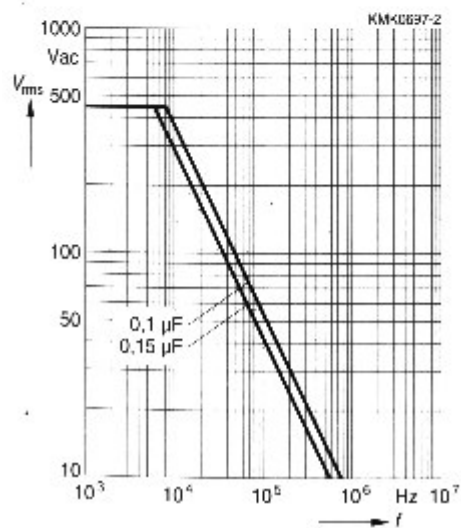
1000 Vdc/ 400 Vac



1250 Vdc/ 450 Vac



1600 Vdc/ 450 Vac



2000 Vdc/ 500 Vac

