



Film Capacitors

Metallized Polyester Film Capacitors (MKT)

Series/Type: B32572, B32573

Date: August 2004

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Typical applications

- Ignition for gas, engines, generators
- Energy storage

Climatic

- Max. operating temperature: 125 °C
- Climatic category (IEC 60068-1): 55/125/56

Features

- Special dimensions available on request
- High pulse strength

Construction

- Dielectric: polyethylene terephthalate (polyester, PET)
- Stacked-film technology
- Uncoated

Terminals

- Parallel wire leads, lead-free tinned

Marking

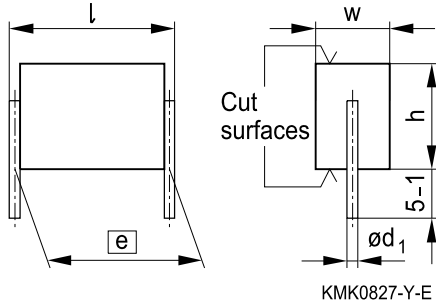
Rated capacitance (coded),
rated DC voltage

Delivery mode

Bulk (untaped)

Notes on mounting

When mounting these capacitors, take into account creepage distances and clearances to adjacent live parts. The insulating strength of the cut surfaces to other live parts of the circuit is 1.5 times the capacitors rated DC voltage, but is always at least 300 VDC.

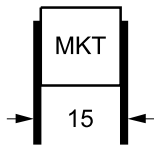
Dimensional drawing


Dimensions in mm

Lead spacing	Lead diameter	Type
$e \pm 0.4$	d_1	
15.0	0.8	B32572
22.5	0.8	B32573

Overview of available types

Lead spacing	15.0 mm	22.5 mm
Type	B32572	B32573
Page	4	5
V_R (VDC)	250	250
V_{rms} (VAC)	160	160
C_R (μF)		
0.68		
1.0		
1.5		
2.2		



B32572

Ignition (stacked) SilverCap™

Ordering codes and packing units (lead spacing 15 mm)

V_R	V_{rms} $f \leq 60 \text{ Hz}$	C_R	Max. dimensions $w \times h \times l$ mm	Ordering code (composition see below)	Untaped pcs./unit
VDC	VAC	μF			
250	160	0.68	$7.0 \times 11.0 \times 16.5$	B32572A3684+000	450
		1.0	$9.1 \times 11.7 \times 16.5$	B32572A3105+000	300
		1.5	$11.5 \times 13.5 \times 16.5$	B32572A3155+000	200
		2.2	$11.5 \times 19.8 \times 16.5$	B32572A3225+000	150

Further E series and intermediate capacitance values on request.

Special dimensions available on request.

For corresponding design rules, refer to chapter "General technical information".

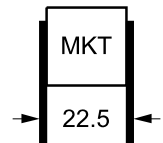
Composition of ordering code

+ = Capacitance tolerance code:

M = $\pm 20\%$

K = $\pm 10\%$

J = $\pm 5\%$


Ordering codes and packing units (lead spacing 22.5 mm)

V_R	V_{rms} $f \leq 60 \text{ Hz}$	C_R	Max. dimensions $w \times h \times l$ mm	Ordering code (composition see below)	Untaped pcs./unit
VDC	VAC	μF			
250	160	0.68	$5.6 \times 9.2 \times 24.0$	B32573A3684+000	1180
		1.0	$6.4 \times 11.8 \times 24.0$	B32573A3105+000	1050
		1.5	$7.6 \times 14.3 \times 24.0$	B32573A3155+000	930
		2.2	$8.9 \times 17.4 \times 24.0$	B32573A3225+000	560

Further E series and intermediate capacitance values on request.

Special dimensions available on request.

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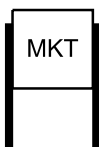
Composition of ordering code

+ = Capacitance tolerance code:

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Ignition (stacked) SilverCap™
Technical data

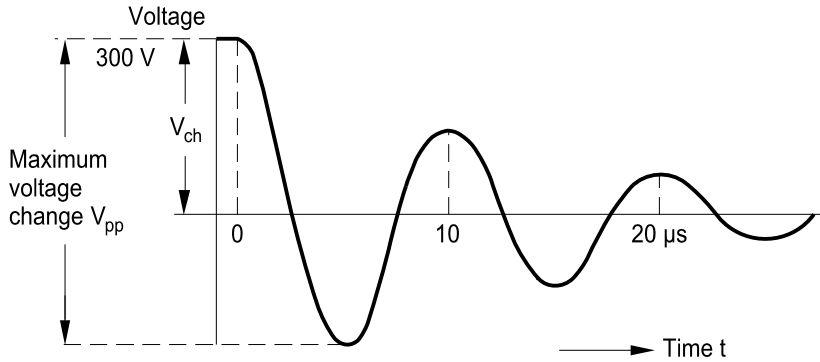
Operating temperature range	Max. operating temperature $T_{op,max}$	+125 °C	
	Upper category temperature T_{max}	+125 °C	
	Lower category temperature T_{min}	-55 °C	
	Rated temperature T_R	+85 °C	
Dissipation factor $\tan \delta$ (in 10^{-3}) at 20 °C (upper limit values)	at	$C_R \leq 1 \mu F$	$C_R > 1 \mu F$
	1 kHz	8	10
	10 kHz	15	—
Time constant $\tau = C_R \cdot R_{ins}$ at 20 °C, rel. humidity $\leq 65\%$ (minimum as-delivered values)	2500 s		
DC test voltage	$1.6 \cdot V_R$, 2 s		
Category voltage V_C (continuous operation with V_{DC} or V_{AC} at $f \leq 60$ Hz)	T_A (°C)	DC voltage derating	AC voltage derating
	$T_A \leq 85$	$V_C = V_R$	$V_{C,rms} = V_{rms}$
	$85 < T_A \leq 125$	$V_C = V_R \cdot (165 - T_A)/80$	$V_{C,rms} = V_{rms} \cdot (165 - T_A)/80$
Max. charging voltage C_{ch}	$1.2 \cdot V_R$ for ≤ 1 s		
Damp heat test Limit values after damp heat test	56 days ¹⁾ /40 °C/93% relative humidity		
	Capacitance change $ \Delta C/C $	$\leq 5\%$	
	Dissipation factor change $\Delta \tan \delta$	$\leq 3 \cdot 10^{-3}$ (at 1 kHz) $\leq 5 \cdot 10^{-3}$ (at 10 kHz)	
	Time constant $\tau = C_R \cdot R_{ins}$	$\geq 50\%$ of minimum as-delivered values	
Reliability: Failure rate λ Service life t_{SL}	2 fit ($\leq 2 \cdot 10^{-9}/h$) at $0.5 \cdot V_R$, 40 °C 200 000 h at $1.0 \cdot V_R$, 40 °C For conversion to other operating conditions and temperatures, refer to chapter "Quality assurance", page .		
Failure criteria: Total failure	Short circuit or open circuit		
Failure due to variation of parameters	Capacitance change $ \Delta C/C $	$> 10\%$	
	Dissipation factor $\tan \delta$	$> 2 \cdot$ upper limit value	
	Time constant $\tau = C_R \cdot R_{ins}$	< 50 s	

1) Test criteria must be met after exposure to damp heat for 21 days

Pulse handling capability

The capacitors are especially manufactured and tested to suit their intended applications.

Typical permissible loads:



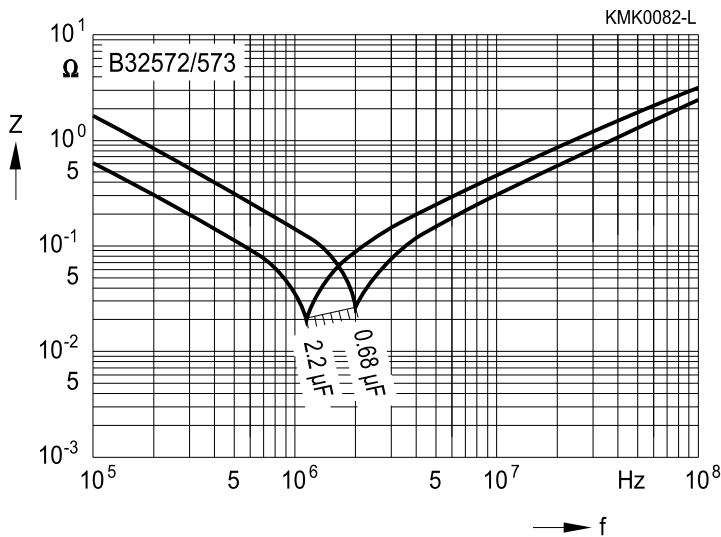
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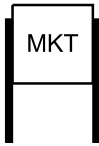
Lead spacing		15 and 22.5 mm
Max. rate of voltage rise V_{pp}/τ	(at $V_{pp} = 500 \text{ V}$)	200 V/ μs
Pulse characteristic k_0	(at $V_{pp} \leq 500 \text{ V}$)	200 000 V ² / μs
Max. charging voltage V_{ch}	($\leq 1 \text{ s}$)	300 VDC
Max. voltage change V_{pp}	(at $f = 100 \text{ kHz}$)	500 V

Unlimited number of pulses permitted.

Impedance Z versus frequency f

(typical values)





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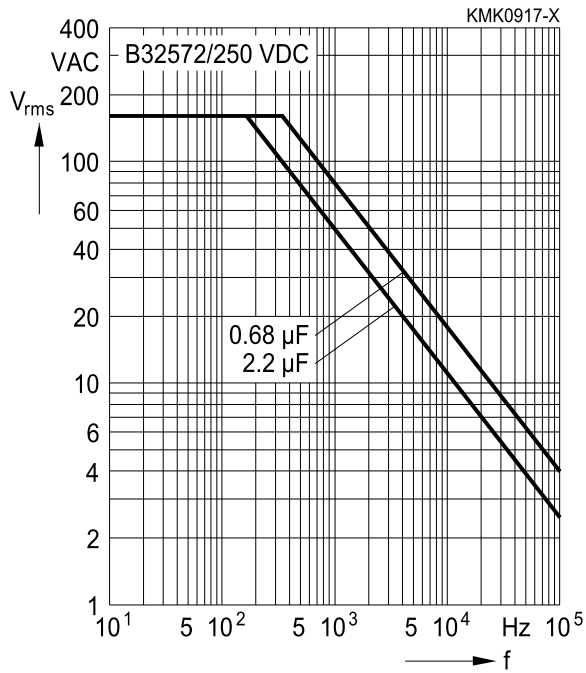
Ignition (stacked) SilverCap™

Permissible AC voltage V_{rms} versus frequency f (for sinusoidal waveforms, $T_A \leq 55^\circ\text{C}$)

For $T_A > 55^\circ\text{C}$, please refer to "General technical information", section 3.2.3.

Lead spacing 15 mm

250 VDV/160 VAC



Lead spacing 22.5 mm

250 VDC/160 VAC

