Metallized Polypropylene Film Capacitors (MKP) Coated (Powder Dipped)

B 32 612 ... B 32 614

Wound MKP capacitors

Construction

- Dielectric: polypropylene
- Wound capacitor technology
- Epoxy resin coating (UL 94 V-0)

Features

- High pulse strength

Typical applications

- TV S-correction
- Electronic ballast circuits
- High pulse load applications
- AC applications

Terminals

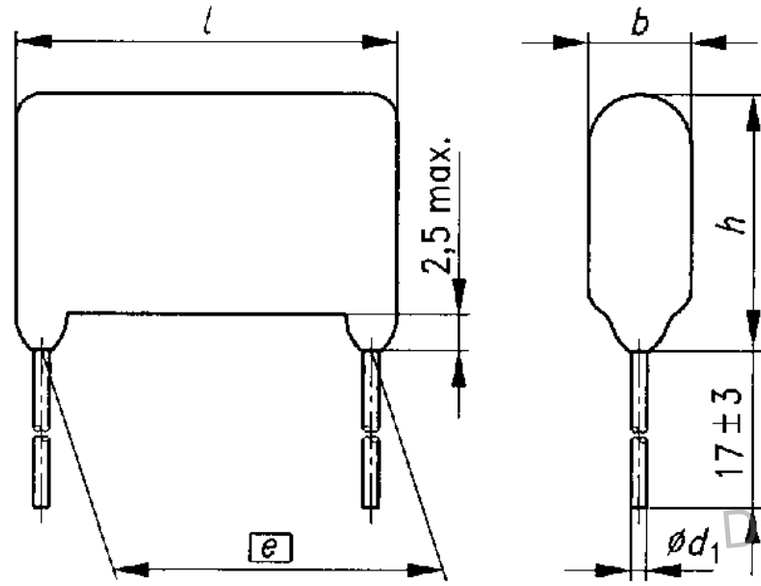
- Parallel wire leads, tinned

Marking

Manufacturer's logo,
style (MKP),
rated capacitance,
capacitance tolerance (code letter),
rated dc voltage

Delivery mode

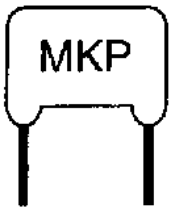
Bulk (untaped)



KMK0115-2

Dimensions in mm

Lead spacing e ± 0,8	Diameter d_1	Type
15,0	0,8	B 32 612
22,5	0,8	B 32 613
27,5	0,8	B 32 614



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Overview of available types

Lead spacing	15 mm		22,5 mm		27,5 mm	
Type	B 32 612		B 32 613		B 32 614	
Page	133		133		133	
68 nF		400 V_{dc}				
0,10 µF						
0,15 µF	250 V_{dc}					
0,22 µF						
0,33 µF				400 V_{dc}		
0,47 µF			250 V_{dc}			
0,68 µF						
1,0 µF						400 V_{dc}
1,5 µF					250 V_{dc}	
2,2 µF						

Ordering codes and packing units, lead spacing 15 mm

V_R (V_{rms} $f \leq 1$ kHz)	C_R	Maximum dimensions $b \times h \times l$ (mm)	Ordering code[1)]	Packing units (pcs) Untaped
250 V_{dc} (160 V_{ac})	0,15 µF	6,0 × 11,5 × 18,0	B32612-A3154-+	1000
	0,22 µF	8,0 × 13,5 × 18,0	B32612-A3224-+	1000
	0,33 µF	9,5 × 15,5 × 18,0	B32612-A3334-+	500
400 V_{dc} (200 V_{ac})	68 nF	6,0 × 11,5 × 18,0	B32612-A4683-+	1000
	0,10 µF	7,0 × 12,0 × 18,0	B32612-A4104-+	1000
	0,15 µF	8,0 × 13,5 × 18,0	B32612-A4154-+	1000
	0,22 µF	9,5 × 15,5 × 18,0	B32612-A4224-+	500

Ordering codes and packing units, lead spacing 22,5 mm

V_R (V_{rms} $f \leq 1$ kHz)	C_R	Maximum dimensions $b \times h \times l$ (mm)	Ordering code[1)]	Packing units (pcs) Untaped
250 V_{dc} (160 V_{ac})	0,47 µF	8,0 × 17,0 × 26,5	B32613-A3474-+	500
	0,68 µF	9,5 × 17,5 × 26,5	B32613-A3684-+	250
	1,0 µF	11,5 × 17,5 × 26,5	B32613-A3105-+	250
400 V_{dc} (200 V_{ac})	0,33 µF	8,0 × 17,0 × 26,5	B32613-A4334-+	500
	0,47 µF	9,5 × 17,5 × 26,5	B32613-A4474-+	250
	0,68 µF	11,5 × 17,5 × 26,5	B32613-A4684-+	250

Ordering codes and packaging units, lead spacing 27,5 mm

V_R (V_{rms} $f \leq 1$ kHz)	C_R	Maximum dimensions $b \times h \times l$ (mm)	Ordering code[1)]	Packing units (pcs) Untaped
250 V_{dc} (160 V_{ac})	1,5 µF	12,0 × 22,0 × 31,5	B32614-A3155-+	200
	2,2 µF	13,5 × 22,5 × 31,5	B32614-A3225-+	200
400 V_{dc} (200 V_{ac})	1,0 µF	12,0 × 22,0 × 31,5	B32614-A4105-+	200
	1,5 µF	13,5 × 22,5 × 31,5	B32614-A4155-+	200
	2,2 µF	15,0 × 25,5 × 31,5	B32614-A4225-+	150

Capacitance tolerance: ± 10 % ≙ K, ± 5 % ≙ J

Customized capacitance ratings and lead spacings upon request.

1) Replace the + by the code letter for the required capacitance tolerance

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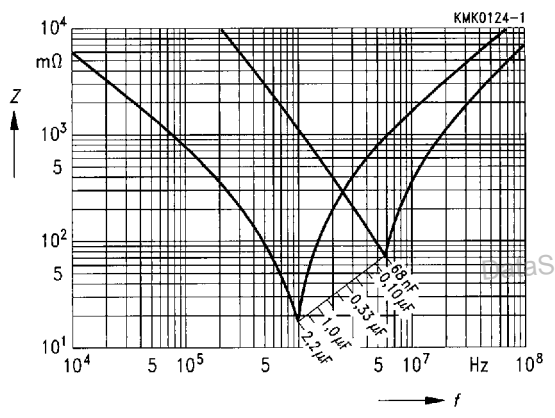
Technical data

Climatic category in accordance with IEC 68-1	55/085/56	
Lower category temperature T_{min}	– 55 °C	
Upper category temperature T_{max}	+ 85 °C	
Damp heat test	56 days/40 °C/93 % relative humidity	
Limit values after damp heat test	Capacitance change $\lvert\Delta C/C\rvert$	≤ 3 %
	Dissipation factor change $\Delta \tan \delta$	≤ $0{,}5 \cdot 10^{-3}$ (at 1 kHz) ≤ $1{,}0 \cdot 10^{-3}$ (at 10 kHz)
	Insulation resistance R_{is} or time constant $\tau = C_R \cdot R_{is}$	≥ 50 % of minimum as-delivered values
Reliability:		
Reference conditions	0,5 V_R; 40 °C	
Failure rate	$2 \cdot 10^{-9}$/h = 2 fit For a conversion table for other operating conditions and temperatures refer to page 273.	
Service life	200 000 h	
Failure criteria:	Short circuit or open circuit	
Total failure	Capacitance change $\lvert\Delta C/C\rvert$	> 10 %
Failure due to variation of parameters	Dissipation factor tan δ	> 4 · upper limit values
	Insulation resistance R_{is} or time constant $\tau = C_R \cdot R_{is}$	< 1500 MΩ (C_R ≤0,33µF) < 500 s (C_R >0,33µF)
DC test voltage	$1{,}6 \cdot V_R$, 2 s	
Category voltage V_C Operation with dc voltage or ac voltage V_{rms} up to 1 kHz	$T \leq$ 85 °C: $V_C = 1{,}0 \cdot V_R$ or $1{,}0 \cdot V_{rms}$ T = 100 °C: $V_C = 0{,}7 \cdot V_R$ or $0{,}7 \cdot V_{rms}$ for max. 2000 h	
Dissipation factor tan δ at 20 °C (upper limit values)	$1{,}0 \cdot 10^{-3}$ at 10 kHz	

Insulation resistance R_{is} or time constant $\tau = C_R \cdot R_{is}$ at 20 °C, rel. humidity ≤ 65 % (minimum as-delivered values)	$C_R \leq 0{,}33$ µF	$C_R > 0{,}33$ µF
	25 GΩ	7500 s

Impedance Z versus frequency f (typical values)



Pulse handling capability

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

V_R	Max. rate of voltage rise V_{pp}/τ in V/µs (for $V_{pp} = V_R$)		
	Lead spacing		
	15 mm	22,5 mm	27,5 mm
250 V_{dc}	50	25	20
400 V_{dc}	50	30	20

For $V_{pp} < V_R$, the permissible voltage rise rate value V_{pp}/τ may be multiplied by the factor V_R/V_{pp}. Also refer to the calculation example on page 246.

V_R	Pulse characteristic k_0 in $V^2/\mu s$ (for $V_{pp} \leq V_R$)		
	Lead spacing		
	15 mm	22,5 mm	27,5 mm
250 V_{dc}	25 000	12 500	10 000
400 V_{dc}	40 000	24 000	16 000

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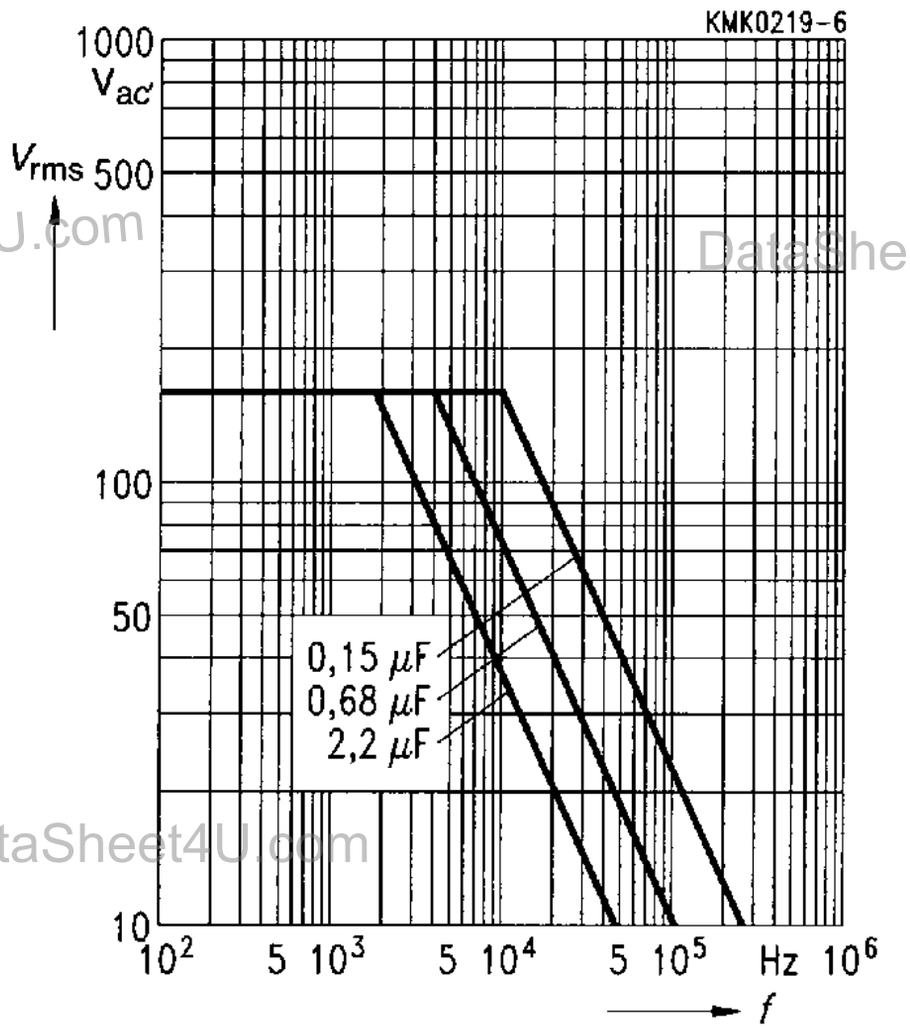
Permissible ac voltage V_{rms} versus frequency f

Lead spacing 15 ... 27,5 mm

250 V_{dc} / 160 V_{ac}



400 V_{dc} / 200 V_{ac}