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SMD

metallisiert / *metallized*

	SMD-PET	SMD-PEN	SMD-PPS
Dielectric	Polyester film	Polyethylene-naphthalate film	Polyphenylene-sulphide film
Test category in accordance with IEC	55/100/21	55/125/21	55/140/56
Temperature ranges	-55°C to 100°C	-55°C to 125°C	-55°C to 140°C
Dissipation factor tan δ at 1 kHz and +20°C	≤8 x 10^{-3} >1 µF : ≤10 x 10^{-3}	≤8 x 10^{-3}	≤15 x 10^{-4} >0.1 µF : ≤20x 10^{-4}
*Insulation resistance at +20°C**	≥3.75 x 10^3 MΩ >0.33 µF : ≥1250 s	≥3.75 x 10^3 MΩ >0.33 µF : ≥1250 s	≥1 x 10^4 MΩ >0.33 µF : ≥3000 s
Voltage ranges	63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC	63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC	63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC
Capacitance tolerances	±20% ±10% (±5%*)	±20% ±10% (±5%*)	±20% ±10% (±5%*)

Rastermaß / *PCM* 2.5 mm

	FKP 02	MKS 02
	Film/Folie / *film/foil*	metallisiert / *metallized*
Dielectric	Polypropylene film	Polyester film
Test category in accordance with IEC	55/100/21	55/100/21
Temperature ranges	-55°C to 100°C	-55°C to 100°C
Dissipation factor tan δ at 1 kHz and +20°C	≤4 x 10^{-4}	≤8 x 10^{-3}
*Insulation resistance at +20°C**	≥5 x 10^5 MΩ	≥3.75 x 10^3 MΩ >0.33 µF : ≥1250 s
Voltage ranges	63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC	50 VDC, 63 VDC, 100 VDC, 250 VDC, 400 VDC
Capacitance tolerances	±10% ±5% ±2.5%	±20% ±10% (±5%*)

Rastermaß / *PCM* 5 mm

	FKS 2	FKP 2	MKS 2	MKP 2
	Film/Folie / *film/foil*		metallisiert / *metallized*	
Dielectric	Polyester film	Polypropylene film	Polyester film	Polypropylene film
Test category in accordance with IEC	55/100/56	55/100/56	55/100/21	55/085/56
Temperature ranges	-55°C to 100°C	-55°C to 100°C	Ur = 50 VDC: -55°C to 100°C Ur ≥ 63 VDC: -55°C to 125°C	-55°C to 100°C
Dissipation factor tan δ at 1 kHz and +20°C	≤7 x 10^{-3}	≤3 x 10^{-4} >1000 pF : ≤4 x 10^{-4}	≤8 x 10^{-3} >1 µF : ≤10 x 10^{-3}	≤0.5 x 10^{-3}
*Insulation resistance at +20°C**	≥3 x 10^4 MΩ	≥5 x 10^5 MΩ	≥5 x 10^3 MΩ >0.33 µF : ≥1000 s	≥3 x 10^4 MΩ
Voltage ranges	100 VDC, 250 VDC, 400 VDC	63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 800 VDC, 1000 VDC	50 VDC, 63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC	63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC
Capacitance tolerances	±20% ±10% ±5%	±10% ±5% ±2.5% (±2% ±1.5% ±1%*)	±20% ±10% ±5%	±20% ±10% ±5%

Die Ziffern in den Kapazitätsbereichen bedeuten: RM = Rastermaß am Drahtaustritt.

Drahtlänge ~ 6 mm
Lead Length ~ 6 mm

RM/PCM

The figures in the tables of capacitances refer to the PCM = Printed Circuit Module (lead spacing) at the lead exit points.

Rastermaß / *PCM* 7.5 – 15 mm

	FKS 3	FKP 3
	Film/Folie / *film/foil*	
Dielectric	Polyester film	Polypropylene film
Test category in accordance with IEC	55/100/56	55/100/56
Temperature ranges	-55°C to 100°C	
Dissipation factor tan δ at 1 kHz and +20°C	≤8 x 10^{-3}	≤4 x 10^{-4} >0.1 µF : ≤3 x 10^{-4}
*Insulation resistance at +20°C**	≥3 x 10^4 MΩ	≥5 x 10^5 MΩ
Voltage ranges	100 VDC, 250 VDC, 400 VDC	63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC
Capacitance tolerances	±20% ±10% ±5%	±20% ±10% ±5%

Für erhöhte Anforderungen / *For stringent requirements*

metallisiert / *metallized*

	MKS 4	MKP 4
Dielectric	Polyester film	Polypropylene film
Test category in accordance with IEC	55/100/56	55/100/56
Temperature ranges	Ur = 50 VDC: -55°C to 100°C Ur ≥ 63 VDC: -55°C to 125°C	-55°C to 100°C
Dissipation factor tan δ at 1 kHz and +20°C	≤8 x 10^{-3} >1 µF : ≤10 x 10^{-3}	≤10 x 10^{-4} >50 µF : ≤15 x 10^{-4}
*Insulation resistance at +20°C**	≥5 x 10^3 MΩ >0.33 µF : ≥1500 s	≥1 x 10^5 MΩ >0.33 µF : ≥30000s
Voltage ranges	50 VDC, 63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC, 1500 VDC, 2000 VDC	100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC
Capacitance tolerances	±20% ±10% ±5%	±20% ±10% ±5%

Für hohe Strombelastungen / *For high current ratings*

	MKP 10	FKP 4
	mit doppelseitig metallisierten Belagfolien / *with double-metallized film electrodes*	mit Metallfolienbelägen, metallisiert / *with metal foil electrode, metallized*
Dielectric	Polypropylene film	Polypropylene film
Test category in accordance with IEC	55/100/56	55/100/56
Temperature ranges	-55°C to 100°C	-55°C to 100°C
Dissipation factor tan δ at 1 kHz and +20°C	≤3 x 10^{-4}	≤3 x 10^{-4}
*Insulation resistance at +20°C**	≥1 x 10^5 MΩ >0.33 µF : ≥30000 s	≥1 x 10^5 MΩ >0.1µF : ≥10000 s
Voltage ranges	100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC, 1600 VDC, 2000 VDC, 2500 VDC, 3000 VDC	400 VDC, 630 VDC, 1000 VDC, 1250 VDC, 1600 VDC, 2000 VDC
Capacitance tolerances	±20% ±10% ±5%	±20% ±10% ±5% *(other tolerances')*

* Die Isolationswert-Angaben beziehen sich auf die jeweils niedrigste Nennspannung der Artikelreihen. Nähere Angaben für höhere Nennspannungen siehe Hauptkatalog.
* *The insulation resistance data refers to the lowest rated voltage of each range. Further details concerning higher rated voltages see general catalogue.*

* Eingeengte Toleranzen auf Anfrage.
* *Closer tolerances are available subject to special enquiry.*

Für hohe Strombelastungen / *For high current ratings*

mit Metallfolienbelägen u. innerer Reihenschaltung / *with metal foil electrodes, internally series-connected*

	FKP 1
Dielectric	Polypropylene film
Test category in accordance with IEC	55/100/56
Temperature ranges	-55°C to 100°C
Dissipation factor tan δ at 1 kHz and +20°C	≤3 x 10^{-4}
*Insulation resistance at +20°C**	≥1 x 10^5 MΩ >0.1 µF : ≥30000 s
Voltage ranges	250 VDC, 400 VDC, 630 VDC, 1000 VDC, 1250 VDC, 1600 VDC, 2000 VDC, 2500 VDC, 3000 VDC
Capacitance tolerances	±20% ±10% ±5% *(other tolerances')*

Funk-Entstörkondensatoren / *RFI capacitors*

nach IEC / *in accodance with IEC 60384-14*

	MKP-X2	MKP-X2 R	MKP-X1 R	MKP-Y2	MP 3-X2	MP 3-X1	MP 3-Y2	MP3R-Y2
Dielectric	Polypropylene film				Imprägniertes Kondensatorpapier / *Paper, resin impregnated*			
Test category in accordance with IEC	55/105/56	55/105/56	55/105/56	55/105/56	40/110/56/C	40/110/56/C	40/110/56/C	40/110/56/C
Temperature ranges	-55°C to 105°C	-55°C to 105°C	55°C to 105°C	-55°C to 105°C	-40°C to 110°C	-40°C to 110°C	-40°C to 110°C	-40°C to 110°C
Dissipation factor tan δ at 1 kHz and +20°C	≤15 x 10^{-4} >0.1:≤20x10^{-4} >1:≤30x10^{-4}	≤4 x 10^{-4} >1:≤5x10^{-4} >1:≤10x10^{-4}	≤15 x 10^{-4} >0.1:≤20x10^{-4} >1:≤30x10^{-4}	≤15 x 10^{-4} >0.1:≤20x10^{-4} >1:≤30x10^{-4}	≤13 x 10^{-3}	≤13 x 10^{-3}	≤13 x 10^{-3}	≤13 x 10^{-3}
*Insulation resistance at +20°C**	≥15 x 10^3 MΩ >0.33 : ≥5000 s	≥15 x 10^3 MΩ >0.33 : ≥5000 s	≥15 x 10^3 MΩ >0.33 : ≥5000 s	≥15 x 10^3 MΩ >0.33 : ≥5000 s	≥12 x 10^3 MΩ >0.33 : ≥4000 s	≥12 x 10^3 MΩ	≥12 x 10^3 MΩ	≥12 x 10^3 MΩ
Voltage ranges	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC, 1712 VAC	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC	275 VAC, 305 VAC, 310 VAC, 440 VAC, 760 VAC
Capacitance tolerances	±20% ±10% (±5%*)	±20% ±10% (±5%*)	±20% ±10% (±5%*)	±20% ±10% (±5%*)	±20%	±20%	±20%	±20%

Snubber Kondensatoren / *Snubber capacitors*

	Snubber MKP	Snubber FKP
	mit doppelseitig metallisierten Belagfolien / *with double-metallized film electrodes*	mit Metallfolienbelägen u. innerer Reihenschaltung / *with metal foil electrodes, internally series-connected*
Dielectric	Polypropylene film	Polypropylene film
Test category in accordance with IEC	55/100/56	55/100/56
Temperature ranges	-55°C to 100°C	-55°C to 100°C
Dissipation factor tan δ at 1 kHz and +20°C	≤3 x 10^{-4}	≤3 x 10^{-4}
*Insulation resistance at +20°C**	≥1 x 10^5 MΩ >0.33 µF : ≥30000 s	≥1 x 10^5 MΩ >0.33 µF: ≥30000 s
Voltage ranges	250 VAC, 275 VAC, 300 VAC, 310 VAC, 400 VAC, 440 VAC, 500 VAC, 760 VAC	250 VAC, 275 VAC, 300 VAC, 310 VAC, 400 VAC, 440 VAC, 500 VAC, 760 VAC
Capacitance tolerances	±20% ±10% ±5% *(other tolerances')*	±20% ±10% ±5% *(other tolerances')*

GTO Kondensatoren / *GTO capacitors*

	GTO MKP
	metallisiert mit innerer Reihenschaltung / *metallized, internally series-connected*
Dielectric	Polypropylene film
Test category in accordance with IEC	55/085/56
Temperature ranges	-55°C to 85°C
Dissipation factor tan δ at 1 kHz and +20°C	≤3 x 10^{-4} >20: ≤5 x 10^{-4} / >50: ≤8 x 10^{-4}
*Insulation resistance at +20°C**	≥10000 s
Voltage ranges	1400 VDC, 1650 VDC, 2000 VDC, 2200 VDC, 2500 VDC, 3000 VDC
Capacitance tolerances	±20% ±10% ±5%

DC-LINK Kondensatoren / *DC-LINK capacitors*

metallisiert / *metallized*

	DC-LINK MKP 4	DC-LINK MKP 4S
Dielectric	Polypropylene film	Polypropylene film
Test category in accordance with IEC	55/085/56	55/085/56
Temperature ranges	-55°C to 105°C (hot spot)	-55°C to 105°C (hot spot)
Dissipation factor tan δ at 1 kHz and +20°C	≤10 x 10^{-4} >50 µF: ≤15 x 10^{-4}	≤10 x 10^{-4} >50 µF: ≤15 x 10^{-4}
*Insulation resistance at +20°C**	≥30000 s	≥30000 s
Voltage ranges	100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC, 1100 VDC, 1500 VDC	450 VDC, 500 VDC, 630 VDC, 700 VDC, 800 VDC, 1000 VDC, 1500 VDC
Capacitance tolerances	±20% ±10% ±5%	±20% ±10% ±5%

DC-LINK Kondensatoren / *DC-LINK capacitors*

metallisiert / *metallized*

	DC-LINK MKP 3	DC-LINK MKP 5	DC-LINK MKP 6
Dielectric	Polypropylene film	Polypropylene film	Polypropylene film
Temperature ranges	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
Peak currents Î	up to 5 kA	up to 1.1 kA	up to 10 kA
Surge currents I²s	up to 20 kA	up to 3.5 kA	up to 40 kA
*Insulation resistance at +20°C**	≥5000 s	≥5000 s	≥5000 s
Voltage ranges	700 VDC, 800 VDC, 1100 VDC, 1300 VDC, 1500 VDC	500 VDC, 700 VDC, 800 VDC, 1100 VDC, 1300 VDC	500 VDC, 700 VDC, 800 VDC, 1100 VDC, 1300 VDC, 1500 VDC
Capacitance tolerances	±20% ±10% (±5%*)	±20% ±10% (±5%*)	±20% ±10% (±5%*)

* Die Isolationswert-Angaben beziehen sich auf die jeweils niedrigste Nennspannung der Artikelreihen. Nähere Angaben für höhere Nennspannungen siehe Hauptkatalog.
* *The insulation resistance data refers to the lowest rated voltage of each range. Further details concerning higher rated voltages see general catalogue.*

* Eingeengte Toleranzen auf Anfrage.
* *Closer tolerances are available subject to special enquiry.*

Neue Reihen.
New ranges.

* Verfügbar in verschiedenen Anschlusskonfigurationen. Nähere Angaben siehe Hauptkatalog.
* *Available in various contact configurations. Further details see general catalogue.*

* Abhängig vom Kapazitätswert
* *Depending on capacitances.*