MWS
Metallized polyester film capacitor
MKT - High voltage

Main applications
High DC voltage applications, voltage multipliers, medical equipments

Dielectric
Polyester

Electrodes
Vacuum deposited metal layers

Coating
UL 510 / CSA TIL I-26 polyester tape wrapping; UL 94 V-0 resin end fill (flame retardant execution)

Construction
Extended metallized film (refer to general technical information) with internal series connection. Non inductive type

Leads
Tinned copper wire (Lead free)

Reference standard
IEC 60384/2, IEC 60068, RoHS compliant

Climatic category
55/100/56 (IEC 60068/1), FMD (DIN 40040)

Operating temperature range
-55°...+105°C

Rated capacitance (Cr)
1500pF to 0,56µF, in compliance with IEC 60063, E6 series. Refer to article table

Capacitance tolerance (at 1kHz)
±10% (code=K), ±5% (code=J), ±20% (code=M). Other tolerances upon request

Capacitance temperature coefficient
Refer to graphs in general technical information

Long term stability (at 1 kHz)
Capacitance variation ≤ ±2% after a period of 2 years at standard environmental conditions

Rated voltage (Ur)
2500, 4000, 6300, 10000 Vdc

Max. DC voltage up to +70°C: 2750, 4400, 7000, 11500 Vdc
(Permissible AC voltage at 60Hz: 500, 750, 1200, 1600 Vac)

Category voltage (Uc)
Uc=Ur at +85°C; Uc=0,8xUr at +100°C

Temperature derated voltage
For T>+85° Ur must be decreased 1,25% for every °C exceeding +85°C

Self inductance
≤ 1nH/mm of capacitor and leads length used for connection

Maximum pulse rise time
Refer to article table. The pulse characteristic Ko depends on the voltage waveform. In any case the value given in the article table must not be exceeded

Dissipation factor (DF), max.
tgδ x10^{-4}, measured at 25±5°C

Freq.	Cr ≤ 0.1µF	Cr > 0.1µF
1kHz	80	80
10kHz	150	150
100kHz	300	-

Insulation resistance (IR)

When measured between terminals, at 25±°C, after 1 minute of electrification at 100Vdc: IR≥ 100GΩ

Test voltage between terminals (Ut)
1,6xUr (DC) applied for 2s at 25±5°C (1 minute for type test)

Damp heat test (steady state)
Test conditions:
Temperature= +40±2°C
Relative humidity=93±2%
Test duration= 56 days

Performance:
Capacitance change ≤ ±5%
DF change ≤ 0.0050 at 1kHz
IR≥ 50% of initial limit value

Endurance test
Test conditions:
Temperature= +85±2°C
Test duration= 2000h
Voltage applied=1,25xUr(DC)

Performance:
Capacitance change ≤ ±5%
DF change ≤ 0.0030 at 10kHz
IR≥ 50% of initial limit value

Resistance to soldering heat test
Test conditions:
Solder bath temperature= +260±5°C
Dipping time (with heat screen)= 10±1s

Performance:
Capacitance change ≤ ±2%
DF change ≤ 0.0030 at 10kHz
IR≥ 50% of initial limit value

Warning: this specification must be completed with the data given in the "General technical information" chapter

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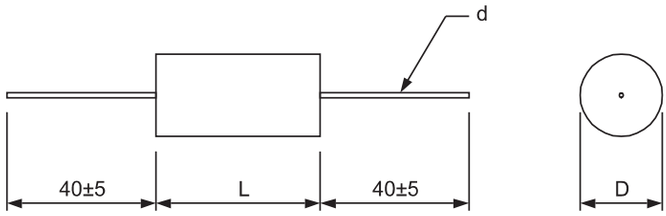

Dimensional tolerances (mm)

L	L±	D±
27,0	2,0	2,0
32,0	2,0	2,0
38,0	2,5	2,5
44,0	2,5	2,5
47,0	2,5	2,5
60,0	3,0	3,0

MWS article table (different values available upon request)

Rated voltage (+85°C)		Cap.	Dimension in mm			du/dt	Ko	ICEL ordering code[1]
Vdc	Vac[2]	value (µF)	D	L	d	V/µs	V2/µs	
2500	500	0,0047	6,5	27	0,6	200	1000E03	MWS2251470*G
2500	500	0,0068	7,5	27	0,8	200	1000E03	MWS2251680*G
2500	500	0,01	9	27	0,8	200	1000E03	MWS2252100*G
2500	500	0,015	11	27	0,8	200	1000E03	MWS2252150*G
2500	500	0,022	12,5	27	0,8	200	1000E03	MWS2252220*G
2500	500	0,033	12,5	32	0,8	125	625E03	MWS2252330*J
2500	500	0,047	15	32	0,8	125	625E03	MWS2252470*J
2500	500	0,068	18	32	1	125	625E03	MWS2252680*J
2500	500	0,1	16	47	1	70	350E03	MWS2253100*O
2500	500	0,15	19	47	1	70	350E03	MWS2253150*O
2500	500	0,22	23	47	1	70	350E03	MWS2253220*O
2500	500	0,33	28,5	47	1	70	350E03	MWS2253330*O
2500	500	0,47	35	47	1	70	350E03	MWS2253470*O
2500	500	0,56	38,5	47	1,2	70	350E03	MWS2253560*O
4000	750	0,0015	6,5	27	0,6	550	440E04	MWS2401150*G
4000	750	0,0022	7,5	27	0,8	550	440E04	MWS2401220*G
4000	750	0,0033	9	27	0,8	550	440E04	MWS2401330*G
4000	750	0,0047	10,5	27	0,8	550	440E04	MWS2401470*G
4000	750	0,0068	12,5	27	0,8	550	440E04	MWS2401680*G
4000	750	0,01	15	27	0,8	550	440E04	MWS2402100*G
4000	750	0,015	13	32	0,8	300	240E04	MWS2402150*J
4000	750	0,022	16,5	32	1	300	240E04	MWS2402220*J
4000	750	0,033	20	32	1	300	240E04	MWS2402330*J
4000	750	0,047	17,5	44	1	175	140E04	MWS2402470*N
4000	750	0,068	20,5	44	1	175	140E04	MWS2402680*N
4000	750	0,1	25	44	1	175	140E04	MWS2403100*N
4000	750	0,15	31	44	1	175	140E04	MWS2403150*N
4000	750	0,22	38,5	44	1,2	175	140E04	MWS2403220*N
6300	1200	0,0015	8,5	38	0,8	800	100E05	MWS2631150*L
6300	1200	0,0022	10,5	38	0,8	800	100E05	MWS2631220*L
6300	1200	0,0033	12,5	38	0,8	800	100E05	MWS2631330*L
6300	1200	0,0047	14,5	38	0,8	800	100E05	MWS2631470*L
6300	1200	0,0068	13	47	0,8	400	500E04	MWS2631680*O
6300	1200	0,01	15,5	47	1	400	500E04	MWS2632100*O
6300	1200	0,015	19	47	1	400	500E04	MWS2632150*O
6300	1200	0,022	23	47	1	400	500E04	MWS2632220*O
6300	1200	0,033	27,5	47	1	400	500E04	MWS2632330*O
6300	1200	0,047	33,5	47	1	400	500E04	MWS2632470*O
6300	1200	0,068	40	47	1,2	400	500E04	MWS2632680*O
10000	1600	0,0015	12,5	60	0,8	1200	240E05	MWS3101150*T
10000	1600	0,0022	14,5	60	0,8	1200	240E05	MWS3101220*T
10000	1600	0,0033	19	60	1	1200	240E05	MWS3101330*T
10000	1600	0,0047	22	60	1	1200	240E05	MWS3101470*T
10000	1600	0,0068	25,5	60	1	1200	240E05	MWS3101680*T
10000	1600	0,01	30	60	1	1200	240E05	MWS3102100*T
10000	1600	0,015	36	60	1	1200	240E05	MWS3102150*T
10000	1600	0,018	40	60	1	1200	240E05	MWS3102180*T

[1]Change the * symbol with the needed capacitance tolerance code: J=±5%, K=±10%, M=±20%

[2] Not suitable for across the line application

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Permissible AC voltage versus frequency (sinusoidal waveform) for ΔT=+10°C
Referred to the largest length execution among available ones