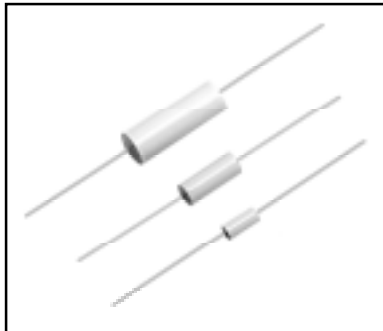


SERIES MKT 1813

Film Capacitors

Metallized Polyester



FEATURES

- Quality Assessment: CECC 30 401-021, CECC 30 401-012
Related Document: DIN 44 121
- Wide range of C-values
- Voltages to 1000 VDC
- Low profile
- Available in flame retardant version

APPLICATIONS

Applications include blocking, bypassing, filtering, timing, coupling and decoupling, interference suppression in low voltage applications. Low pulse operations.

SPECIFICATIONS

Temperature Range: - 55°C to + 100°C.

Capacitance Range: 470pF to 22μF.

Capacitance Tolerance: ± 10% (K), ± 5% (J).

Rated Voltage: (U_R) 63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC and 1000 VDC.

Permissible AC Voltages (RMS) Up To 60 Hz: 40 VAC, 63 VAC, 160 VAC, 200 VAC and 220 VAC.

Test Voltage (electrode/electrode): 1.6 x U_R for 2 s.

Insulation Resistance: Measured at 100 VDC (63 VDC series measured at 50 VDC) after one minute.

For C ≤ 0.33μF and U_R > 100 VDC: 30,000 Megohm minimum value. 60,000 Megohm typical value.

For C ≤ 0.33μF and U_R ≤ 100 VDC: 15,000 Megohm minimum value. 50,000 Megohm typical value.

Time Constant: Measured at 100 VDC (63 VDC series measured at 50 VDC) after one minute.

For C > 0.33μF and U_R > 100 VDC: 10,000 s minimum value. 20,000 s typical value.

For C > 0.33μF and U_R ≤ 100 VDC: 5,000 s minimum value. 15,000 s typical value.

Temperature Coefficient: Refer to graphs in General Information.

Capacitance Drift: Up to + 40°C, ± 1.5% for a period of two years.

Derating For DC and AC Category Voltage U_C:
At + 85°C, U_C = 1.0 U_R. At + 100°C, U_C = 0.8 U_R.

Storage Temperature: - 60°C to + 100°C.

Self Inductance: ~ 12nH measured with .236" [6.0mm] long leads.

Pull Test On Leads: ≥ 20 N in direction of leads according to IEC publication 68-2-21.

Bend Test On leads: Two bends through 90° with half of the force used in the pull test.

Solder Conditions: Refer to General Information.

Suitable Cleaning Solvents: Refer to General Information.

Dielectric: Polyester film.

Electrodes: Vacuum deposited aluminum.

Coating: Plastic wrapped, epoxy resin sealed. Also available as flame retardant version according to DIN 42 008.

Construction: Extended metallized film (refer to general information).

Taping: Refer to General Information.

Marking: Manufacturer's logo, type, C-value, rated voltage, tolerance, date of manufacture.

MAXIMUM PULSE RISE TIME d_v/d_t [V/μs] [Numbers in brackets indicate millimeters]						
CAPACITOR LENGTH	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC
.433 [11.0]	12	18	32	56	84	—
.551 [14.0]	11	13	22	37	66	175
.748 [19.0]	7	8	13	21	33	65
1.044 [26.5]	4	5	8	13	19	34
1.241 [31.5]	3	4	6	10	15	25
1.634 [41.5]	2	3	5	7	10	17

If the maximum pulse voltage is less than the rated voltage higher d_v/d_t values can be permitted. Refer to General Information for additional pulse load information.

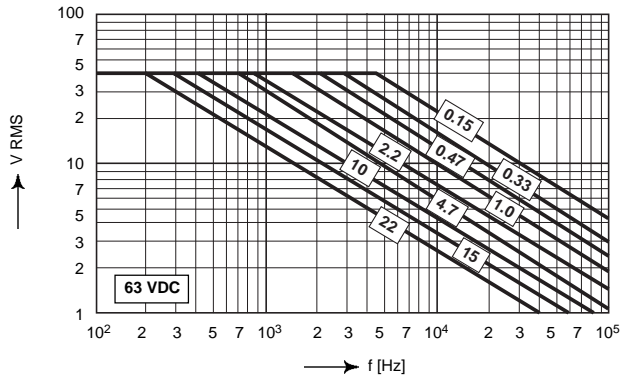
DISSIPATION FACTOR TAN δ (MAXIMUM VALUES)			
MEASURED AT	C ≤ 0.1μF	01μF < C ≤ 0.1μF	C ≤ 0.1μF
1kHz	8 x 10 ⁻³	8 x 10 ⁻³	10 x 10 ⁻³
10kHz	15 x 10 ⁻³	15 x 10 ⁻³	—
100kHz	30 x 10 ⁻³	—	—

DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]														
											d		D	
											.024 [0.6]		≤ .197 [≤ 5.0]	
											.028 [0.7]		> .197 ≤ .276 [> 5.0 ≤ 7.0]	
											.032 [0.8]		> .276 < .650 [> 7.0 < 16.5]	
.039 [1.0]		≥ .650 [≥ 16.5]												
CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/ 40 VAC		VOLTAGE CODE 01 100 VDC/ 63 VAC		VOLTAGE CODE 25 250 VDC/ 160 VAC		VOLTAGE CODE 40 400 VDC/ 200 VAC		VOLTAGE CODE 63* 630 VDC/ 220 VAC		VOLTAGE CODE 10* 1000 VDC/ 220 VAC		
		D	L	D	L	D	L	D	L	D	L	D	L	
470pF	- 147	—	—	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	—	—	
680pF	- 168	—	—	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	—	—	
1000pF	- 210	—	—	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	.217 [5.5]	.551 [14.0]	
1500pF	- 215	—	—	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	
2200pF	- 222	—	—	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	
3300pF	- 233	—	—	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	.276 [7.0]	.551 [14.0]	
4700pF	- 247	—	—	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.748 [19.0]	
6800pF	- 268	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.236 [6.0]	.748 [19.0]	
0.01µF	- 310	—	—	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.256 [6.5]	.748 [19.0]	
0.015µF	- 315	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.256 [6.5]	.551 [14.0]	.296 [7.5]	.748 [19.0]	
0.022µF	- 322	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.296 [7.5]	.551 [14.0]	.354 [9.0]	.748 [19.0]	
0.033µF	- 333	—	—	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.256 [6.5]	.748 [19.0]	.414 [10.5]	.748 [19.0]	
0.047µF	- 347	—	—	—	—	.236 [6.0]	.551 [14.0]	.276 [7.0]	.551 [14.0]	.296 [7.5]	.748 [19.0]	.472 [12.0]	.748 [19.0]	
0.068µF	- 368	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.315 [8.0]	.551 [14.0]	.335 [8.5]	.748 [19.0]	.433 [11.0]	1.044 [26.5]	
0.1µF	- 410	—	—	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.276 [7.0]	.748 [19.0]	.414 [10.5]	.748 [19.0]	.512 [13.0]	1.044 [26.5]	
0.15µF	- 415	.197 [5.0]	.433 [11.0]	.217 [5.5]	.433 [11.0]	.276 [7.0]	.551 [14.0]	.335 [8.5]	.748 [19.0]	.395 [10.0]	1.044 [26.5]	.532 [13.5]	1.240 [31.5]	
0.22µF	- 422	.197 [5.0]	.433 [11.0]	.236 [6.0]	.551 [14.0]	.276 [7.0]	.748 [19.0]	.315 [8.0]	1.044 [26.5]	.453 [11.5]	1.044 [26.5]	.630 [16.0]	1.240 [31.5]	
0.33µF	- 433	.236 [6.0]	.551 [14.0]	.236 [6.0]	.748 [19.0]	.315 [8.0]	.748 [19.0]	.374 [9.5]	1.044 [26.5]	.532 [13.5]	1.044 [26.5]	.630 [16.0]	1.634 [41.5]	
0.47µF	- 447	.276 [7.0]	.551 [14.0]	.256 [6.5]	.748 [19.0]	.354 [9.0]	.748 [19.0]	.433 [11.0]	1.044 [26.5]	.571 [14.5]	1.240 [31.5]	.748 [19.0]	1.634 [41.5]	
0.68µF	- 468	.256 [6.5]	.748 [19.0]	.276 [7.0]	.748 [19.0]	.335 [8.5]	1.044 [26.5]	.453 [11.5]	1.240 [31.5]	.571 [14.5]	1.634 [41.5]	—	—	
1.0µF	- 510	.296 [7.5]	.748 [19.0]	.335 [8.5]	.748 [19.0]	.394 [10.0]	1.044 [26.5]	.532 [13.5]	1.240 [31.5]	.650 [16.5]	1.634 [41.5]	—	—	
1.5µF	- 515	.335 [8.5]	.748 [19.0]	.315 [8.0]	1.044 [26.5]	.433 [11.0]	1.240 [31.5]	.551 [14.0]	1.634 [41.5]	—	—	—	—	
2.2µF	- 522	.335 [8.5]	1.044 [26.5]	.374 [9.5]	1.044 [26.5]	.512 [13.0]	1.240 [31.5]	.650 [16.5]	1.634 [41.5]	—	—	—	—	
3.3µF	- 533	.394 [10.0]	1.044 [26.5]	.453 [11.5]	1.044 [26.5]	.611 [15.5]	1.240 [31.5]	—	—	—	—	—	—	
4.7µF	- 547	.453 [11.5]	1.044 [26.5]	.472 [12.0]	1.240 [31.5]	.611 [15.5]	1.634 [41.5]	—	—	—	—	—	—	
6.8µF	- 568	.472 [12.0]	1.240 [31.5]	.551 [14.0]	1.240 [31.5]	.689 [17.5]	1.634 [41.5]	—	—	—	—	—	—	
10.0µF	- 610	.571 [14.5]	1.240 [31.5]	.650 [16.5]	1.240 [31.5]	.827 [21.0]	1.634 [41.5]	—	—	—	—	—	—	
15.0µF	- 615	.709 [18.0]	1.240 [31.5]	.808 [20.5]	1.240 [31.5]	—	—	—	—	—	—	—	—	
22.0µF	- 622	.689 [17.5]	1.634 [41.5]	—	—	—	—	—	—	—	—	—	—	

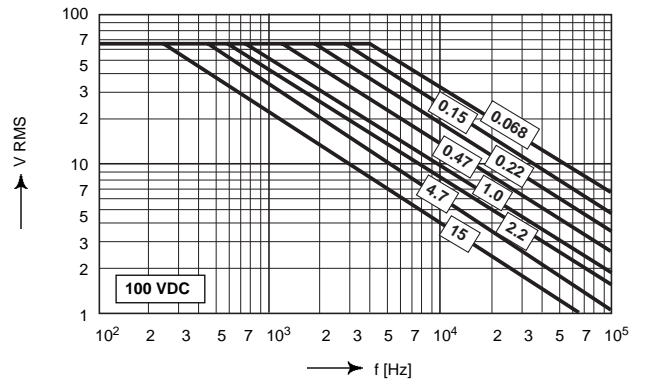
Further C-values and voltage ratings upon request. PCM = L + .138" [3.5mm].
 * Not suitable for across the line applications.

TYPICAL PARAMETERS

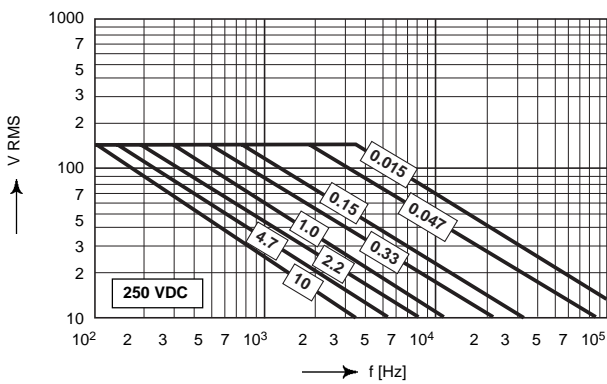
**Permissible AC voltage versus frequency
(Capacitance in μF)**



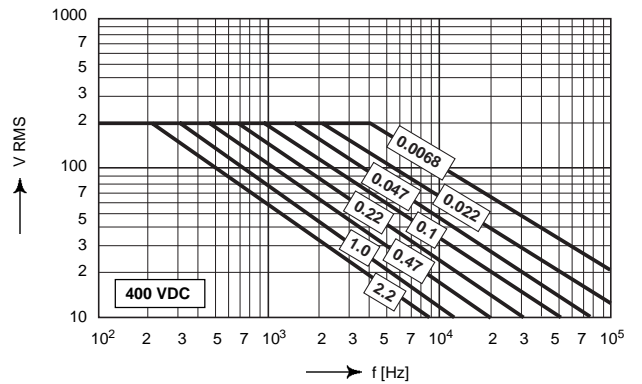
**Permissible AC voltage versus frequency
(Capacitance in μF)**



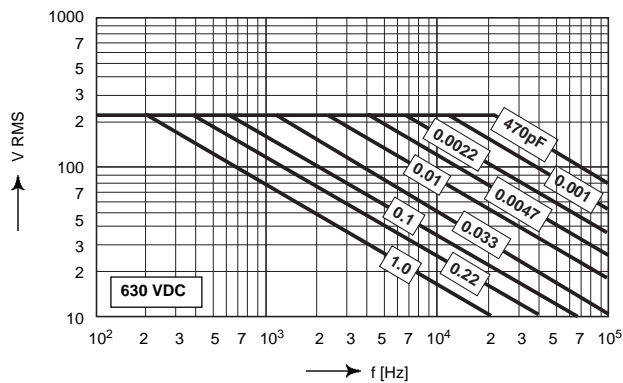
**Permissible AC voltage versus frequency
(Capacitance in μF)**



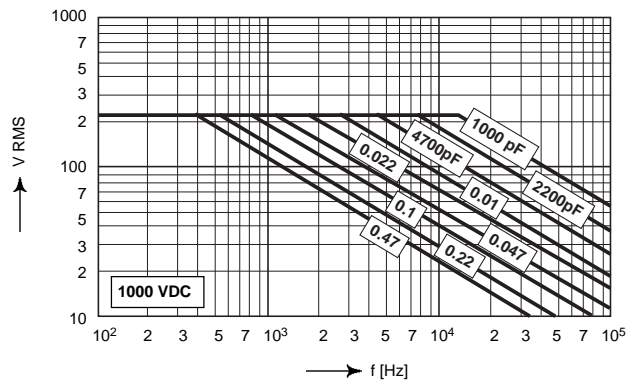
**Permissible AC voltage versus frequency
(Capacitance in μF)**



**Permissible AC voltage versus frequency
(Capacitance in μF)**



**Permissible AC voltage versus frequency
(Capacitance in μF)**



HOW TO ORDER

MKT 1813
SERIES

615
RATED
CAPACITANCE
C = 15 μF

06
RATED
VOLTAGE
U_R = 63 VDC

5
CAPACITANCE
TOLERANCE
± 10%