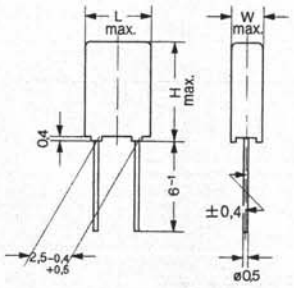
VISHAY
Roederstein

METALLIZED POLYESTER FILM CAPACITOR MKT 1823
Related Document: CECC 30 401-068



Dimensions (mm)

Main applications:
Blocking, bypassing, filtering and timing, high frequency coupling and decoupling, of fast digital and analog ICs, interference suppression in low voltage applications.
High pulse load.

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

Dielectric:
Polyester film

Electrodes:
Vacuum deposited aluminium

Coating:
Flame retardant plastic case (UL-class 94 V-0), green, epoxy resin sealed

Construction:
Stacked metallized film (refer to general information)

Leads:
Tinned wire

IEC test classification:
55 / 100 / 21, according to IEC publ. 68

Operating temperature range:
– 55 °C to + 100 °C

Capacitance range:
1 000 pF to 1,0 µF

Capacitance tolerances:
± 20 % (M), ± 10 % (K), ± 5 % (J)

Rated voltages (U_R):
40 VDC, 50 VDC, 63 VDC, 100 VDC

Permissible AC voltages (RMS) up to 60 Hz:
25 VAC, 30 VAC, 40 VAC, 63 VAC

Test voltage (electrode / electrode):
1,6 x U_R for 2 s

Insulation resistance:
Measured at 100 VDC (50 VDC and 63 VDC series measured at 50 VDC) after 1 minute
for C ≦ 0,33 µF
15 000 MΩ minimum value (100 000 MΩ typical value)

Time constant:
Measured at 50 VDC (40 VDC series measured with U_R) after 1 minute
for C > 0,33 µF, U_R = 50 VDC
5 000 s minimum value (15 000 s typical value)
for C > 0,33 µF, U_R = 40 VDC
1250 s minimum value (10 000 s typical value)

Capacitance drift:
Up to + 40 °C, ± 1,5 % for a period of 2 years

Derating for DC and AC. Category voltage U_C:
At + 85 °C: $U_C = 1{,}0\ U_R$
At + 100 °C: $U_C = 0{,}8\ U_R$

Self inductance:
~ 6 nH measured with 2 mm long leads

Pull test on leads:
≧ 30 N in direction of leads according to IEC publ. 68-2-21

Reliability:
Operational life > 300.000 h
Failure rate < 2 FIT (40 °C and 0,5 x U_R)

For further details, please refer to the general information provided in this catalogue.

Maximum pulse rise time :

pcm [mm]	max. pulse rise time d_v / d_t [V / µs]			
	40 VDC	50 VDC	63 VDC	100 VDC
2,5	60	80	100	120

If the max. pulse voltage is less than the rated voltage higher dv/dt values can be permitted.

Dissipation factor tan δ:

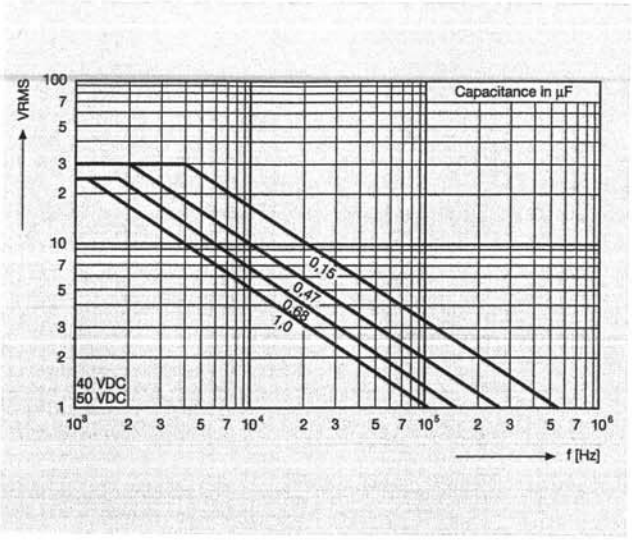
measured at	C ≦ 0,1 µF	0,1 µF < C ≦ 1,0 µF
1 kHz	8 x 10-3	8 x 10-3
10 kHz	15 x 10-3	15 x 10-3
100 kHz	30 x 10-3	
	maximum values	

Capacitance	Capacitance code	Voltage code 04 40 VDC / 25 VAC			Voltage code 05 50 VDC / 30 VAC			Voltage code 06 63 VDC / 40 VAC			Voltage code 01 100 VDC / 63 VAC		
		W	H	L	W	H	L	W	H	L	W	H	L
1000 pF	-210										2,5	7,0	4,6
1500 pF	-215										2,5	7,0	4,6
2200 pF	-222										2,5	7,0	4,6
3300 pF	-233										2,5	7,0	4,6
4700 pF	-247										2,5	7,0	4,6
6800 pF	-268										2,5	7,0	4,6
0,01 µF	-310							2,5	7,0	4,6			
0,015 µF	-315							2,5	7,0	4,6			
0,022 µF	-322							2,5	7,0	4,6			
0,033 µF	-333							2,5	7,0	4,6			
0,047 µF	-347							2,5	7,0	4,6			
0,068 µF	-368							3,0	7,5	4,6			
0,1 µF	-410							3,0	7,5	4,6			
0,15 µF	-415				3,0	7,5	4,6						
0,22 µF	-422				3,0	7,5	4,6						
0,33 µF	-433				3,8	9,0	4,6						
0,47 µF	-447				4,6	9,5	4,6						
0,68 µF	-468	4,6	9,5	4,6									
1,0 µF	-510	5,5	10,0	4,6									

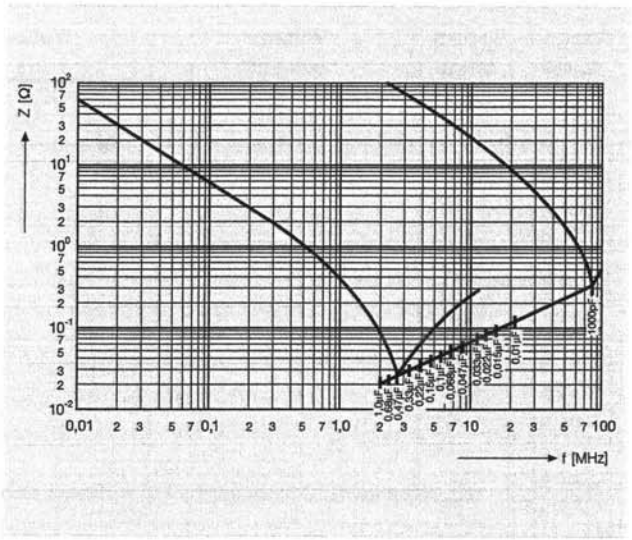
Further C-values upon request

Recommended packaging:

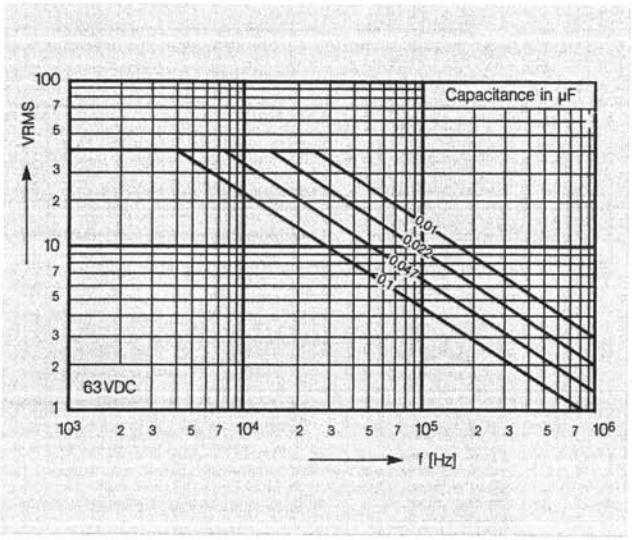
Letter code	Type of packaging	Height H (mm)	Reel diameter (mm)	Ordering code example	Preferred packaging
D	AMMO	16,5		MKT 1823-468/045-D	
G	AMMO	18,5		MKT 1823-468/045-G	
F	REEL	16,5	350	MKT 1823-468/045- F	X
W	REEL	18,5	350	MKT 1823-468/045-W	X
	BULK			MKT 1823-468/045	



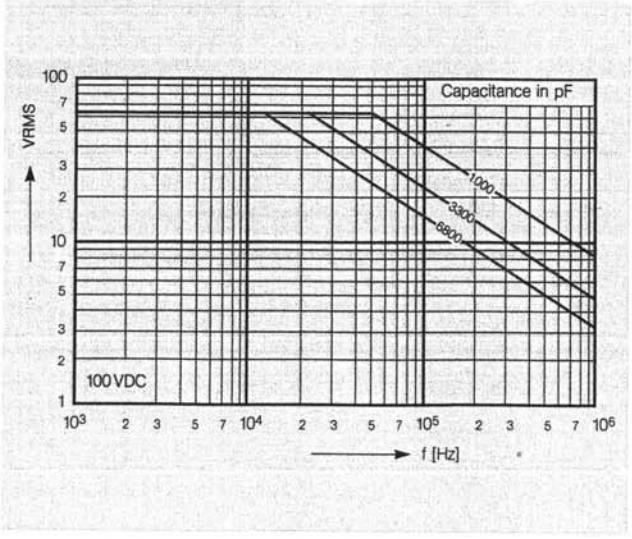
Permissible AC voltage versus frequency



Impedance versus frequency Z = f (f) (lead length 2 mm)



Permissible AC voltage versus frequency



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