

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<sub>R</sub>):**

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<sub>R</sub> 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<sub>R</sub>) after 1 minute

**for C > 0,33 µF, U<sub>R</sub> = 50 VDC**

5 000 s minimum value (15 000 s typical value)

**for C > 0,33 µF, U<sub>R</sub> = 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<sub>C</sub>:**

At + 85 °C: U<sub>C</sub> = 1,0 U<sub>R</sub>

At + 100 °C: U<sub>C</sub> = 0,8 U<sub>R</sub>

**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<sub>R</sub>)

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

**Maximum pulse rise time :**

pcm [mm]	max. pulse rise time d <sub>v</sub> / d <sub>t</sub> [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:**

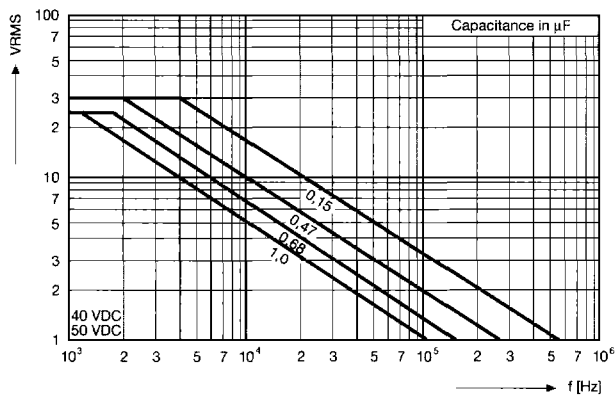
measured at	C ≤ 0,1 µF	0,1 µF < C ≤ 1,0 µF
	1 kHz	8 x 10 <sup>-3</sup>
10 kHz	15 x 10 <sup>-3</sup>	15 x 10 <sup>-3</sup>
100 kHz	30 x 10 <sup>-3</sup>	
maximum values		

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									

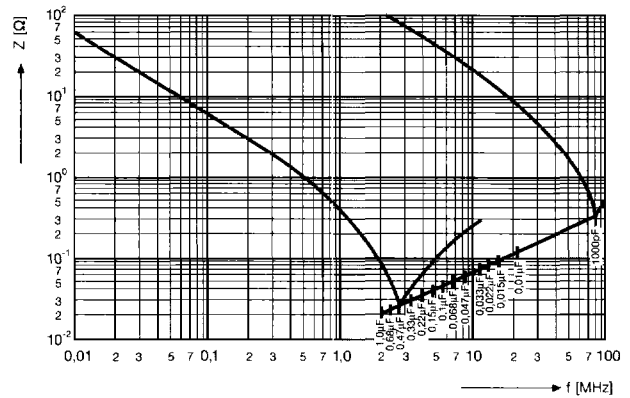
Further C-values upon request

**Recommended packaging:**

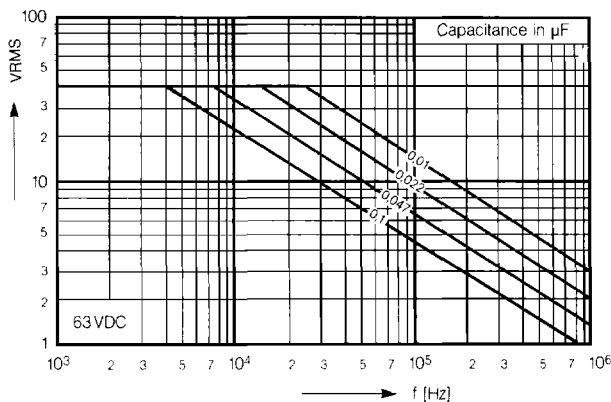
Letter code	Type of packaging	Height H (mm)	Reel diameter (mm)	Ordering code example	Preferred packaging
D	AMMO	16,5		MKT 1823-468/045- D	
G	AMMO	18,5		MKT 1823-468/045- G	
F	REEL	16,5	350	MKT 1823-468/045- F	X
W	REEL	18,5	350	MKT 1823-468/045- W	X
	BULK			MKT 1823-468/045	



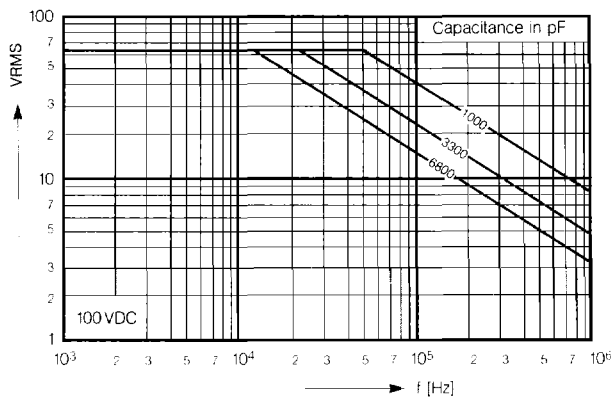
Permissible AC voltage versus frequency



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



Permissible AC voltage versus frequency



Permissible AC voltage versus frequency