VISHAY

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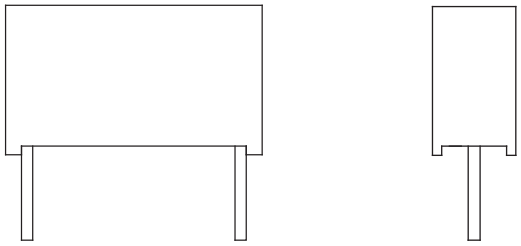
MKP1846

Vishay Roederstein

Double Metallized Polypropylene Film Capacitor
Radial AC and Pulse Capacitor



FEATURES

- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

High voltage, high current and high pulse operations, deflection circuits in TV sets (S-correction and fly-back tuning). Protection circuits in SMPS's. Snubber and electronic ballast circuits. Input and output filtering in SPS designs, storage, timing and integrating circuits.

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

QUICK REFERENCE DATA			
Capacitance range	1000 pF to 0.68 µF		
Capacitance tolerances	± 20 % (M), ± 10 % (K), ± 5 % (J)		
Climatic testing class according to IEC 60068	55/100/56		
Dielectric	Polypropylene film		
Electrodes	Vacuum deposited aluminum		
Construction	Extended double-sided metallized polyester film, internal series connection, single-sided metallized polypropylene film (refer to general information)		
Coating	Flame retardant plastic case (UL-class 94 V-0), blue, epoxy resin sealed		
Leads	Tinned wire		
Marking	Manufacturer's logo / type / C-value / rated voltage / tolerance / date of manufacture		
Operating temperature range	-55 °C to +100 °C		
Rated DC voltages (U_R)	630 V_{DC}, 1000 V_{DC}, 1600 V_{DC}, 2000 V_{DC}		
Permissible AC voltages (RMS) up to 60 Hz	400 V_{AC}, 600 V_{AC}, 650 V_{AC}, 700 V_{AC}		
Test voltage (electrode/electrode)	1.6 x U_R for 2 s		
Insulation resistance	Measured at 100 V_{DC} after one minute **For C ≤ 0.33 µF:** 100 000 MΩ minimum value		
Time constant	Measured at 100 V_{DC} after one minute **For C > 0.33 µF:** 30 000 s minimum value		
Temperature coefficient	-250 x 10^{-6}/°C (typical value)		
Capacitance drift	Up to + 40 °C, ± 0.5 % 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 = 0.7 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 60068-2-21		
Reliability	Operational life > 300 000 h Failure rate < 5 FIT (40 °C and 0.5 x U_R)		
Dissipation factor tan δ	**MEASURED AT**	**C ≤ 0.1 µF**	**0.1 µF < C ≤ 1.0 µF**
	1 kHz	0.3 x 10^{-3}	0.3 x 10^{-3}
	10 kHz	0.4 x 10^{-3}	0.4 x 10^{-3}
	100 kHz	1.5 x 10^{-3}	-
	Maximum values		

Note

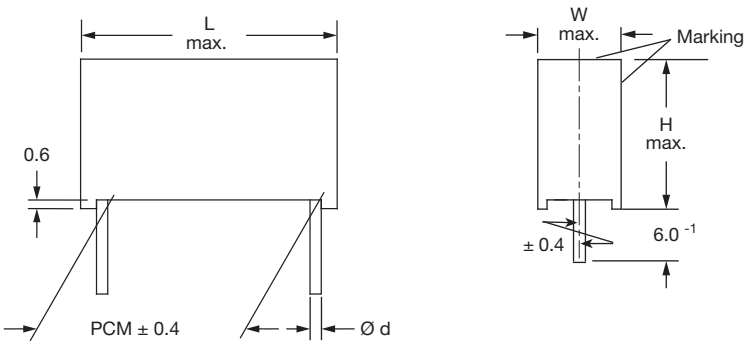
- For further details, please refer to the general information available at www.vishay.com/doc?26033

MAXIMUM PULSE RISE TIME				
PCM (mm)	**MAXIMUM PULSE RISE TIME dv/dt (V/µs)**			
	630 V_{DC}	**1000 V_{DC}**	**1600 V_{DC}**	**2000 V_{DC}**
15	3430	6600	11 100	-
22.5	2120	2800	3800	6200
27.5	1524	2000	2680	4200
37.5	980	1280	1690	2600

Note

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

DIMENSIONS in millimeters



W	Ø d
< 16.0	0.8
≥ 16.0	1.0

ELECTRICAL DATA

U_{RDC} (V)	CAP. (µF)	CAPACITANCE CODE	VOLTAGE CODE	V_{AC}	DIMENSIONS w x h x l (mm)	PCM (mm)
630	0.0068	-268	63	400	5.5 x 10.5 x 18.0	15
	0.010	-310			5.5 x 10.5 x 18.0	15
	0.015	-315			6.5 x 12.5 x 18.0	15
	0.022	-322			7.5 x 13.5 x 18.0	15
	0.033	-333			8.5 x 14.5 x 18.0	15
	0.047	-347			7.5 x 15.5 x 26.5	22.5
	0.068	-368			8.5 x 16.5 x 26.5	22.5
	0.10	-410			10.5 x 18.5 x 26.5	22.5
	0.15	-415			11.5 x 20.5 x 31.5	27.5
	0.22	-422			13.5 x 23.5 x 31.5	27.5
	0.33	-433			15.0 x 24.5 x 31.5	27.5
	0.47	-447			14.5 x 24.5 x 41.5	37.5
	0.68	-468			18.0 x 32.5 x 41.5	37.5
1000	0.0033	-233	10	600	5.5 x 10.5 x 18.0	15
	0.0047	-247			5.5 x 10.5 x 18.0	15
	0.0068	-268			6.5 x 12.5 x 18.0	15
	0.010	-310			6.5 x 14.5 x 26.5	22.5
	0.015	-315			6.5 x 14.5 x 26.5	22.5
	0.022	-322			6.5 x 14.5 x 26.5	22.5
	0.033	-333			7.5 x 15.5 x 26.5	22.5
	0.047	-347			10.5 x 18.5 x 26.5	22.5
	0.068	-368			11.0 x 21.0 x 26.5	22.5
	0.10	-410			11.5 x 20.5 x 31.5	27.5
	0.15	-415			13.5 x 23.5 x 31.5	27.5
	0.22	-422			16.5 x 29.5 x 31.5	27.5

ELECTRICAL DATA

U_{RDC} (V)	CAP. (µF)	CAPACITANCE CODE	VOLTAGE CODE	V_{AC}	DIMENSIONS w x h x l (mm)	PCM (mm)
1600	0.0010	-210	13	650	5.5 x 10.5 x 18.0	15
	0.0015	-215			5.5 x 10.5 x 18.0	15
	0.0022	-222			5.5 x 10.5 x 18.0	15
	0.0033	-233			6.5 x 12.5 x 18.0	15
	0.0047	-247			7.5 x 13.5 x 18.0	15
	0.0068	-268			8.5 x 14.5 x 18.0	15
	0.010	-310			6.5 x 14.5 x 26.5	22.5
	0.015	-315			7.5 x 15.5 x 26.5	22.5
	0.022	-322			8.5 x 16.5 x 26.5	22.5
	0.033	-333			10.5 x 18.5 x 26.5	22.5
	0.047	-347			11.5 x 20.5 x 31.5	27.5
	0.068	-368			11.5 x 20.5 x 31.5	27.5
	0.10	-410			15.0 x 24.5 x 31.5	27.5
	0.15	-415			14.5 x 24.5 x 41.5	37.5
	0.22	-422			16.0 x 28.5 x 41.5	37.5
2000	0.0010	-210	20	700	6.5 x 14.5 x 26.5	22.5
	0.0015	-215			6.5 x 14.5 x 26.5	22.5
	0.0022	-222			6.5 x 14.5 x 26.5	22.5
	0.0033	-233			6.5 x 14.5 x 26.5	22.5
	0.0047	-247			6.5 x 14.5 x 26.5	22.5
	0.0068	-268			7.5 x 15.5 x 26.5	22.5
	0.010	-310			8.5 x 16.5 x 26.5	22.5
	0.015	-315			10.5 x 18.5 x 26.5	22.5
	0.022	-322			11.5 x 20.5 x 31.5	27.5
	0.033	-333			13.5 x 23.5 x 31.5	27.5
	0.047	-347			15.0 x 24.5 x 31.5	27.5
	0.068	-368			16.5 x 29.5 x 31.5	27.5
	0.10	-410			16.0 x 28.5 x 41.5	37.5

Note

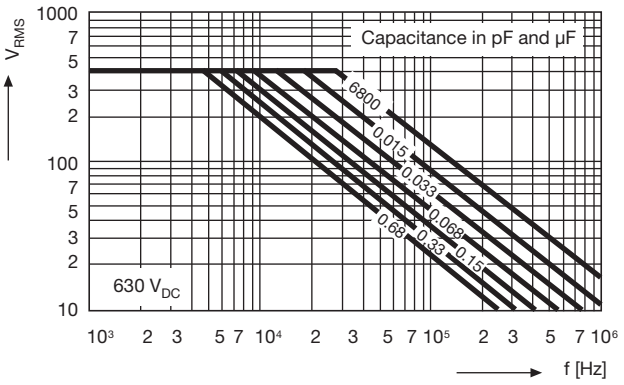
(1) Further C-values upon request.

RECOMMENDED PACKAGING

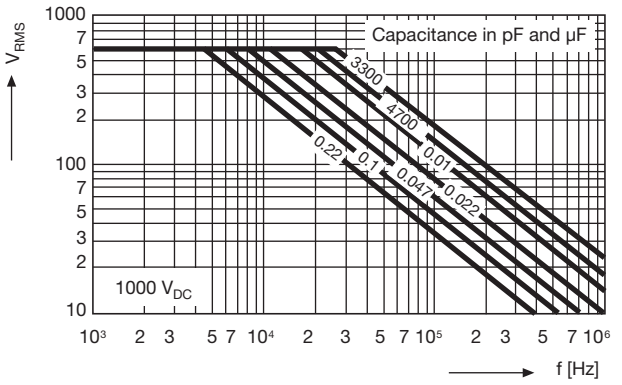
LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	PCM 15	PCM 22.5 TO 27.5	PCM 37.5
D	Ammo	16.5	S (1)	MKP1846-310/635-D	X	-	-
G	Ammo	18.5	S (1)	MKP1846-310/635-G	X	-	-
F	Reel	16.5	350	MKP1846-310/635-F	X	-	-
W	Reel	18.5	350	MKP1846-310/635-W	X	-	-
V	Reel	18.5	500	MKP1846-410/105-V	X	X	-
G	Ammo	18.5	L (1)	MKP1846-410/105-G	-	X	-
-	Bulk	-	-	MKP1846-422-135	X	X	X

Note

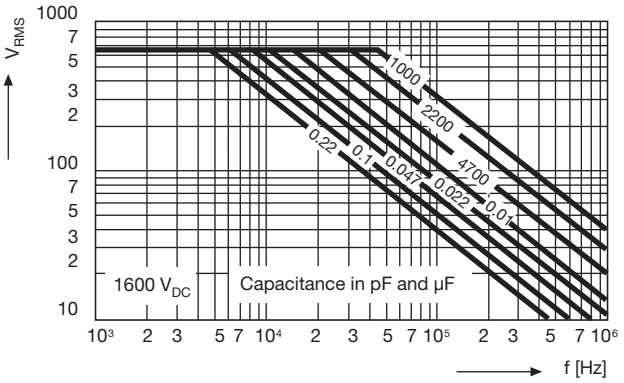
(1) S = box size 55 mm x 210 mm x 340 mm (W x H x L)
L = box size 60 mm x 360 mm x 510 mm (W x H x L)



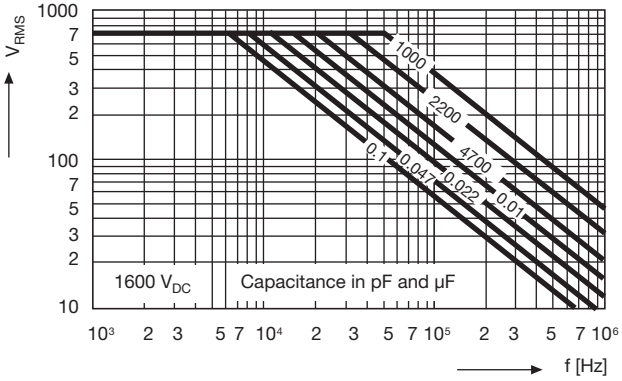
Permissible AC Voltage vs. Frequency



Permissible AC Voltage vs. Frequency



Permissible AC Voltage vs. Frequency



Permissible AC Voltage vs. Frequency

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