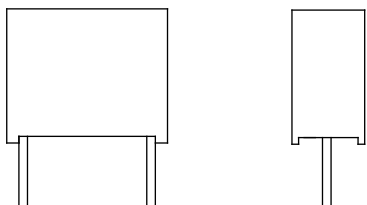


AC and Pulse Film/Foil Capacitors Radial Potted Type



FEATURES

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



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

APPLICATIONS

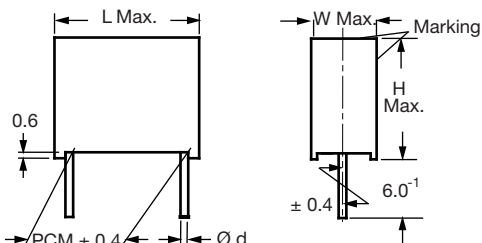
- High voltage, very high current and high pulse operations, deflection circuits in TV sets (fly-back tuning)
- Electronic ballasts, protection circuits in SMPS's
- Snubber and SCR commutating circuits

QUICK REFERENCE DATA

Capacitance range	100 pF to 0.22 μ F
Capacitance tolerances	$\pm 10\%$ (K), $\pm 5\%$ (J)
Climatic testing class according to IEC 60068	55/100/56
Dielectric	Polypropylene film
Electrodes	Aluminum foil
Construction	Extended aluminum foil, internal series connection, double-sided metallized, polyester carrier film
Leads	Tinned wire
Marking	Manufacturer's logo, type, C-value, rated voltage, tolerance, data of manufacture
Coating	Flame retardant plastic case (UL-class 94 V-0), epoxy resin sealed
Insulation resistance	Measured at 500 V _{DC} after one minute 100 000 M Ω minimum value (1000 G Ω typical value)
Operating temperature range	- 55 °C to + 100 °C
Rated DC voltages	630 V _{DC} , 1000 V _{DC} , 1250 V _{DC} , 1600 V _{DC} , 2000 V _{DC}
Permissible AC voltages (RMS) up to 60 Hz	300 V _{AC} , 350 V _{AC} , 400 V _{AC} , 500 V _{AC} , 600 V _{AC}
Test voltages (electrode/electrode)	2 x U _R for 2 s
Temperature coefficient	- 250 x 10 ⁻⁶ /°C (typical value)
Capacitance drift	Up to + 40 °C, $\pm 0.5\%$ 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 < 1 FIT (0.5 x U _R and 40 °C)

Note

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

DIMENSIONS in millimeters


W	Ø d
≥ 16	1.0
< 16	0.8

MAXIMUM PULSE RISE TIME

PCM (mm)	MAXIMUM PULSE RISE TIME dV/dt [V/µs]				
	630 V _{DC}	1000 V _{DC}	1250 V _{DC}	1600 V _{DC}	2000 V _{DC}
15	6500	8200	11 100	13 900	13 900
22.5	2600	3200	4600	6000	9800
27.5	1800	2300	3100	4000	6000
37.5	1200	1500	1900	2400	3500

Note

- If the maximum 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	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 x 10 ⁻³	-
Maximum values		

ELECTRICAL DATA

U _{RDC} (V)	CAP. (µF)	CAPACITANCE CODE	VOLTAGE CODE	V _{AC}	DIMENSIONS (W x H x L)	PCM
630	0.0027	-227	63	300	5.5 x 10.5 x 18.0	15
	0.0033	-233			5.5 x 10.5 x 18.0	15
	0.0039	-239			6.5 x 12.5 x 18.0	15
	0.0047	-247			6.5 x 12.5 x 18.0	15
	0.0056	-256			7.5 x 13.5 x 18.0	15
	0.0068	-268			7.5 x 13.5 x 18.0	15
	0.0082	-282			8.5 x 14.5 x 18.0	15
	0.010	-310			8.5 x 14.5 x 18.0	15
	0.012	-312			8.5 x 17.5 x 18.0	15
	0.015	-315			10.5 x 17.5 x 18.0	15
	0.018	-318			7.5 x 15.5 x 26.5	22.5
	0.022	-322			7.5 x 15.5 x 26.5	22.5
	0.027	-327			8.5 x 16.5 x 26.5	22.5
	0.033	-333			10.5 x 18.5 x 26.5	22.5
	0.039	-339			10.5 x 18.5 x 26.5	22.5
	0.047	-347			10.5 x 18.5 x 26.5	22.5
	0.056	-356			11.5 x 20.5 x 31.5	27.5
	0.068	-368			11.5 x 20.5 x 31.5	27.5
	0.082	-382			11.5 x 20.5 x 31.5	27.5
	0.10	-410			13.5 x 23.5 x 31.5	27.5
	0.12	-412			12.5 x 22.5 x 41.5	37.5
	0.15	-415			12.5 x 22.5 x 41.5	37.5
	0.18	-418			14.5 x 24.5 x 41.5	37.5
	0.22	-422			14.5 x 24.5 x 41.5	37.5

**ELECTRICAL DATA**

U _{RDC} (V)	CAP. (μF)	CAPACITANCE CODE	VOLTAGE CODE	V _{AC}	DIMENSIONS (W x H x L)	PCM
1000	0.0018	-218	10	350	5.5 x 10.5 x 18.0	15
	0.0022	-222			5.5 x 10.5 x 18.0	15
	0.0027	-227			6.5 x 12.5 x 18.0	15
	0.0033	-233			6.5 x 12.5 x 18.0	15
	0.0039	-239			7.5 x 13.5 x 18.0	15
	0.0047	-247			7.5 x 13.5 x 18.0	15
	0.0056	-256			8.5 x 14.5 x 18.0	15
	0.0068	-268			8.5 x 14.5 x 18.0	15
	0.0082	-282			6.5 x 14.5 x 26.5	22.5
	0.010	-310			6.5 x 14.5 x 26.5	22.5
	0.012	-312			7.5 x 15.5 x 26.5	22.5
	0.015	-315			7.5 x 15.5 x 26.5	22.5
	0.018	-318			8.5 x 16.5 x 26.5	22.5
	0.022	-322			8.5 x 16.5 x 26.5	22.5
	0.027	-327			10.5 x 18.5 x 26.5	22.5
	0.033	-333			11.5 x 20.5 x 31.5	27.5
	0.039	-339			11.5 x 20.5 x 31.5	27.5
	0.047	-347			11.5 x 20.5 x 31.5	27.5
	0.056	-356			12.5 x 22.5 x 41.5	37.5
	0.068	-368			12.5 x 22.5 x 41.5	37.5
	0.082	-382			12.5 x 22.5 x 41.5	37.5
	0.10	-410			14.5 x 24.5 x 41.5	37.5
	0.12	-412			14.5 x 24.5 x 41.5	37.5
	0.15	-415			16.0 x 28.5 x 41.5	37.5
	0.18	-418			16.0 x 28.5 x 41.5	37.5
	0.22	-422			18.0 x 32.5 x 41.5	37.5
1250	0.0012	-212	12	400	5.5 x 10.5 x 18.0	15
	0.0015	-215			5.5 x 10.5 x 18.0	15
	0.0018	-218			6.5 x 12.5 x 18.0	15
	0.0022	-222			6.5 x 12.5 x 18.0	15
	0.0027	-227			7.5 x 13.5 x 18.0	15
	0.0033	-233			7.5 x 13.5 x 18.0	15
	0.0039	-239			6.5 x 14.5 x 26.5	22.5
	0.0047	-247			6.5 x 14.5 x 26.5	22.5
	0.0056	-256			6.5 x 14.5 x 26.5	22.5
	0.0068	-268			6.5 x 14.5 x 26.5	22.5
	0.0082	-282			57.5 x 15.5 x 26.5	22.5
	0.010	-310			7.5 x 15.5 x 26.5	22.5
	0.012	-312			10.5 x 18.5 x 26.5	22.5
	0.015	-315			10.5 x 18.5 x 26.5	22.5
	0.018	-318			11.0 x 21.0 x 26.5	22.5
	0.022	-322			11.0 x 21.0 x 26.5	22.5
	0.027	-327			11.0 x 21.0 x 31.0	27.5
	0.033	-333			11.0 x 21.0 x 31.0	27.5
	0.039	-339			13.5 x 23.5 x 31.5	27.5
	0.047	-347			13.5 x 23.5 x 31.5	27.5
	0.056	-356			12.5 x 23.5 x 41.5	37.5
	0.068	-368			12.5 x 22.5 x 41.5	37.5
	0.082	-382			14.5 x 24.5 x 41.5	37.5
	0.10	-410			14.5 x 24.5 x 41.5	37.5
	0.12	-412			16.0 x 28.5 x 41.5	37.5
	0.15	-415			16.0 x 28.5 x 41.5	37.5
	0.18	-418			20.0 x 40.0 x 42.5	37.5
	0.22	-422			20.0 x 40.0 x 42.5	37.5



ELECTRICAL DATA						
U _{RDC} (V)	CAP. (μF)	CAPACITANCE CODE	VOLTAGE CODE	V _{AC}	DIMENSIONS (W x H x L)	PCM
1600	0.00068	-168	13	500	5.5 x 10.5 x 18.0	15
	0.0010	-210			5.5 x 10.5 x 18.0	15
	0.0012	-212			6.5 x 12.5 x 18.0	15
	0.0015	-215			6.5 x 12.5 x 18.0	15
	0.0018	-218			6.5 x 14.5 x 26.5	22.5
	0.0022	-222			6.5 x 14.5 x 26.5	22.5
	0.0027	-227			6.5 x 14.5 x 26.5	22.5
	0.0033	-233			6.5 x 14.5 x 26.5	22.5
	0.0039	-239			7.5 x 15.5 x 26.5	22.5
	0.0047	-247			7.5 x 15.5 x 26.5	22.5
	0.0056	-256			8.5 x 16.5 x 26.5	22.5
	0.0068	-268			8.5 x 16.5 x 26.5	22.5
	0.0082	-282			10.5 x 18.5 x 26.5	22.5
	0.010	-310			10.5 x 18.5 x 26.5	22.5
	0.012	-312			11.5 x 20.5 x 31.5	27.5
	0.015	-315			11.5 x 20.5 x 31.5	27.5
	0.018	-318			11.5 x 20.5 x 31.5	27.5
	0.022	-322			11.5 x 20.5 x 31.5	27.5
	0.027	-327			13.5 x 23.5 x 31.5	27.5
	0.033	-333			13.5 x 23.5 x 31.5	27.5
	0.039	-339			12.5 x 22.5 x 41.5	37.5
	0.047	-347			12.5 x 22.5 x 41.5	37.5
	0.056	-356			14.5 x 24.5 x 41.5	37.5
	0.068	-368			14.5 x 24.5 x 41.5	37.5
	0.082	-382			16.0 x 28.5 x 41.5	37.5
	0.10	-410			16.0 x 28.5 x 41.5	37.5
2000	0.00010	-110	20	600	5.5 x 10.5 x 18.0	15
	0.00015	-115			5.5 x 10.5 x 18.0	15
	0.00022	-122			5.5 x 10.5 x 18.0	15
	0.00033	-133			5.5 x 10.5 x 18.0	15
	0.00047	-147			5.5 x 10.5 x 18.0	15
	0.00068	-168			5.5 x 10.5 x 18.0	15
	0.0010	-210			6.5 x 14.5 x 26.5	22.5
	0.0012	-212			6.5 x 14.5 x 26.5	22.5
	0.0015	-215			6.5 x 14.5 x 26.5	22.5
	0.0018	-218			6.5 x 14.5 x 26.5	22.5
	0.0022	-222			6.5 x 14.5 x 26.5	22.5
	0.0027	-227			7.5 x 15.5 x 26.5	22.5
	0.0033	-233			7.5 x 15.5 x 26.5	22.5
	0.0039	-239			10.5 x 18.5 x 26.5	22.5
	0.0047	-247			10.5 x 18.5 x 26.5	22.5
	0.0056	-256			10.5 x 18.5 x 26.5	22.5
	0.0068	-268			11.5 x 20.5 x 31.5	27.5
	0.0082	-282			11.5 x 20.5 x 31.5	27.5
	0.010	-310			11.5 x 20.5 x 31.5	27.5
	0.012	-312			13.5 x 23.5 x 31.5	27.5
	0.015	-315			13.5 x 23.5 x 31.5	27.5
	0.018	-318			15.0 x 24.5 x 31.5	27.5
	0.022	-322			15.0 x 24.5 x 31.5	27.5
	0.027	-327			14.5 x 24.5 x 41.5	37.5
	0.033	-333			14.5 x 24.5 x 41.5	37.5
	0.039	-339			16.0 x 28.5 x 41.5	37.5
	0.047	-347			16.0 x 28.5 x 41.5	37.5

Note

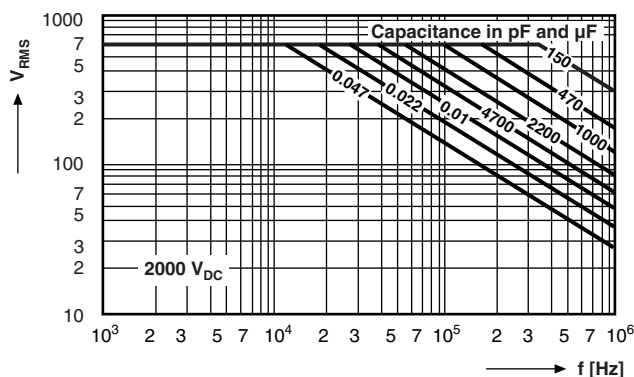
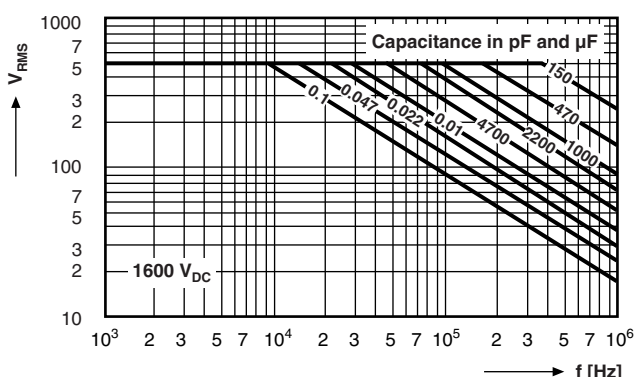
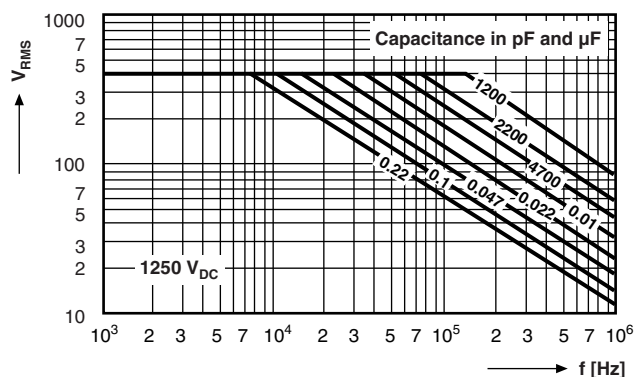
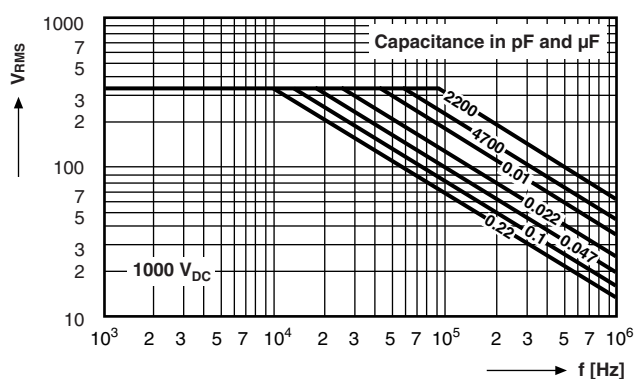
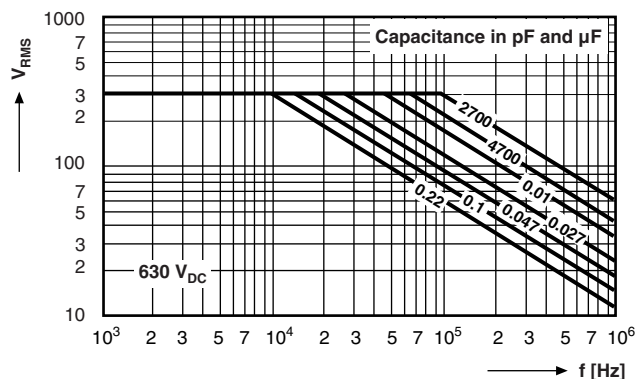
- Further C-values upon request.

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⁾	KP1836-168/205-D	x	-	-
G	Ammo	18.5	S ⁽¹⁾	KP1836-168/205-G	x	-	-
F	Reel	16.5	350	KP1836-168/205-F	x	-	-
W	Reel	18.5	350	KP1836-168/205-W	x	-	-
V	Reel	18.5	500	KP1836-310/134-V	x	x	-
G	Ammo	18.5	L ⁽²⁾	KP1836-310/134-G	-	x	-
-	Bulk	-	-	KP1836-310/134	x	x	x

Notes
⁽¹⁾ S = Box size 55 mm x 210 mm x 340 mm (W x H x L)

⁽²⁾ L = Box size 60 mm x 360 mm x 510 mm (W x H x L)

PERMISSIBLE AC VOLTAGE VS. FREQUENCY




Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

[KP1836122134](#) [KP1836168134](#) [KP1836410105](#) [KP1836210135](#) [KP1836233635](#)