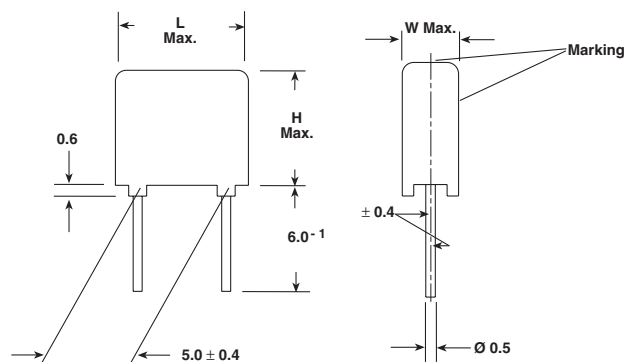


# Metallized Polyester Film Capacitors

## Related Document: IEC 60384-2

Dimensions in millimeters



### MAIN APPLICATIONS

Blocking, bypassing, filtering and timing, high frequency coupling and decoupling for fast digital and analog ICs, interference suppression in low voltage applications.

### MARKING

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

### DIELECTRIC

Polyester film

### ELECTRODES

Vacuum deposited aluminum

### COATING

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

### CONSTRUCTION

Extended metallized film (refer to general information)

### LEADS

Tinned wire

### IEC TEST CLASSIFICATION

55/100/56, according to IEC 60068

### TEST VOLTAGE (ELECTRODE/ELECTRODE)

1.6 x  $U_R$  for 2 s

### OPERATING TEMPERATURE RANGE

- 55°C to + 100°C

### MAXIMUM PULSE RISE TIME

PCM (mm)	Maximum Pulse Rise Time $d_v/d_t$ [V/μs]			
	63 VDC	100 VDC	250 VDC	400 VDC
5	15	24	44	100

If the maximum pulse voltage is less than the rated voltage higher  $d_v/d_t$  values can be permitted.

### DISSIPATION FACTOR $\tan \delta$

MEASURED AT	$C \leq 0.1\mu F$	$0.1\mu F < C \leq 1.0\mu F$
1kHz	$8 \times 10^{-3}$	$8 \times 10^{-3}$
10kHz	$15 \times 10^{-3}$	$15 \times 10^{-3}$
100kHz	$25 \times 10^{-3}$	—
Maximum values		

### FEATURES

Product is completely lead (Pb)-free.  
Product is RoHS compliant.

### CAPACITANCE RANGE

1000pF to 1.0μF

### CAPACITANCE TOLERANCES

± 20% (M), ± 10% (K), ± 5% (J)

### RATED VOLTAGES ( $U_R$ )

63 VDC, 100 VDC, 250 VDC, 400 VDC

### PERMISSIBLE AC VOLTAGES (RMS) UP TO 60HZ

40 VAC, 63 VAC, 160 VAC, 200 VAC

### INSULATION RESISTANCE

Measured with 100 VDC

(63 VDC series measured at 50 VDC) after one minute

For  $C \leq 0.33\mu F$  and  $U_R > 100$  VDC:

7500 MΩ minimum value (100,000 MΩ typical value)

For  $C \leq 0.33\mu F$  and  $U_R \leq 100$  VDC:

3750 MΩ minimum value (50,000 MΩ typical value)

### TIME CONSTANT

Measured with 50 VDC after one minute

For  $C > 0.33\mu F$ :

1250 s minimum value (10,000 s typical value)

### 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:  $U_C = 0.8 U_R$

### SELF INDUCTANCE

~ 6nH measured with 2mm long leads

### PULL TEST ON LEADS

≥ 30 N in direction of leads according to IEC 60068-2-21

### RELIABILITY

Operational life > 300,000h

Failure rate < 2 FIT (40°C and 0.5 x  $U_R$ )

For further details, please refer to the general information available at [www.vishay.com/doc?26033](http://www.vishay.com/doc?26033).



**RoHS**  
COMPLIANT

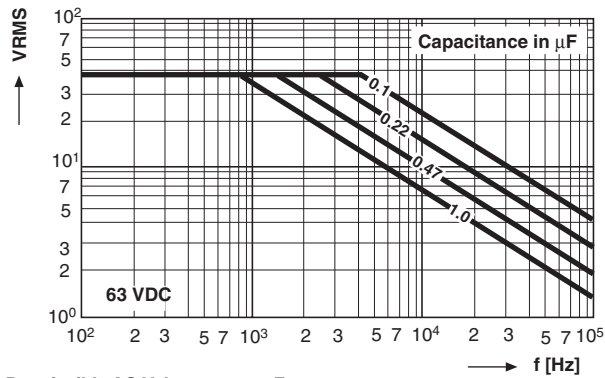
CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/40 VAC			VOLTAGE CODE 01 100 VDC/63 VAC			VOLTAGE CODE 25 250 VDC/160 VAC			VOLTAGE CODE 40 400 VDC/200 VAC		
		W	H	L	W	H	L	W	H	L	W	H	L
1000pF	- 210	—	—	—	—	—	—	—	—	—	2.5	6.0	7.5
1500pF	- 215	—	—	—	—	—	—	—	—	—	2.5	6.0	7.5
2200pF	- 222	—	—	—	—	—	—	—	—	—	2.5	6.0	7.5
3300pF	- 233	—	—	—	—	—	—	2.5	6.0	7.5	3.0	6.5	7.5
4700pF	- 247	—	—	—	—	—	—	2.5	6.0	7.5	3.5	8.5	7.5
6800pF	- 268	—	—	—	—	—	—	2.5	6.0	7.5	3.5	8.5	7.5
0.01μF	- 310	—	—	—	—	—	—	2.5	6.0	7.5	4.5	9.5	7.5
0.015μF	- 315	—	—	—	—	—	—	2.5	6.0	7.5	5.0	10.0	7.5
0.022μF	- 322	—	—	—	2.5	6.0	7.5	3.0	6.5	7.5	5.5	11.5	7.5
0.033μF	- 333	—	—	—	2.5	6.0	7.5	3.5	8.5	7.5	—	—	—
0.047μF	- 347	—	—	—	2.5	6.0	7.5	4.5	9.5	7.5	—	—	—
0.068μF	- 368	—	—	—	2.5	6.0	7.5	4.5	9.5	7.5	—	—	—
0.1μF	- 410	2.5	6.0	7.5	3.5	8.5	7.5	5.5	11.5	7.5	—	—	—
0.15μF	- 415	3.5	8.5	7.5	4.5	9.5	7.5	—	—	—	—	—	—
0.22μF	- 422	3.5	8.5	7.5	5.0	10.0	7.5	—	—	—	—	—	—
0.33μF	- 433	4.5	9.5	7.5	5.5	9.0	11.5	7.5	—	—	—	—	—
0.47μF	- 447	5.0	10.0	7.5	—	—	—	—	—	—	—	—	—
0.68μF	-468	5.0	10.5	7.5	—	—	—	—	—	—	—	—	—
1.0μF	- 510	5.5	11.5	7.5	—	—	—	—	—	—	—	—	—

Further values upon request. For C-values > 1.0μF please refer to type MKT 1826.

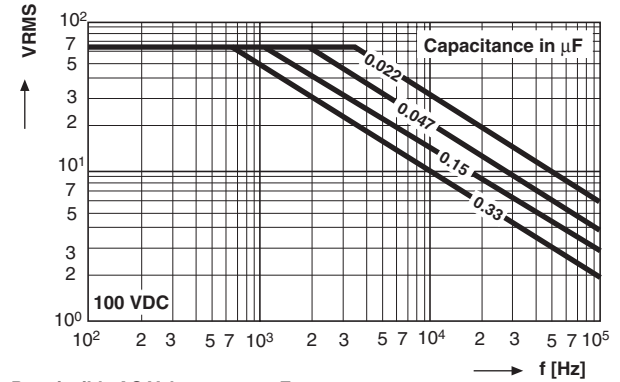
## RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	PCM 5
D	AMMO	16.5	S*	MKT 1817-233-255-D	X
G	AMMO	18.5	S*	MKT 1817-233-255-G	X
F	REEL	16.5	350	MKT 1817-233-255-F	X
W	REEL	18.5	350	MKT 1817-233-255-W	X
—	BULK	—	—	MKT 1817-233-255	X

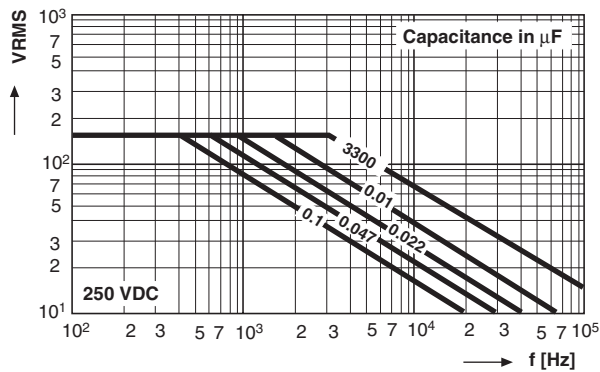
\*S = box size 55 x 210 x 340mm (W x H x L)



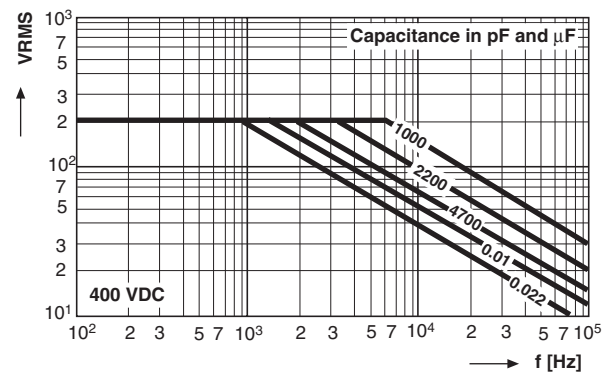
Permissible AC Voltage versus Frequency



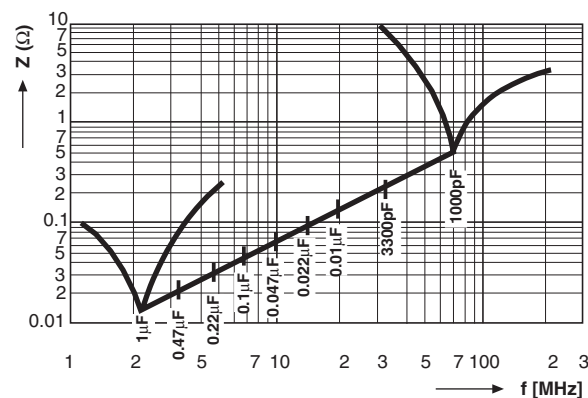
Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



Impedance versus Frequency  $Z = f$  (Lead Length 2.0mm)



### Disclaimer

All product specifications and data are subject to change without notice.

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 herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

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.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.