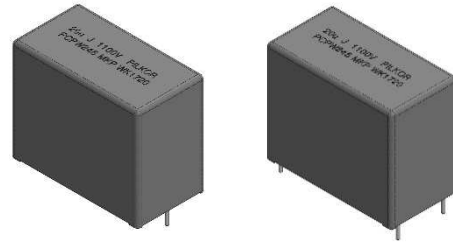


Metallized Polypropylene film capacitors (Switching Application)

PCPW226

CONSTRUCTION

- Dielectric : Metallized Polypropylene film
- Case : PBT (UL94 V-0)
- Filling : Epoxy resin (UL94 V-0)
- Terminals : Tinned copper wire (2-pin / 4-pin)



FEATURE

- . Self-Healing
- . Low contact resistance
- . Low loss dielectric
- . High ripple current

APPLICATION

- . Switching applications.
- . High frequency, high current applications
- . Industrial and motor speed control
- . induction heater

QUICK REFERENCE DATA

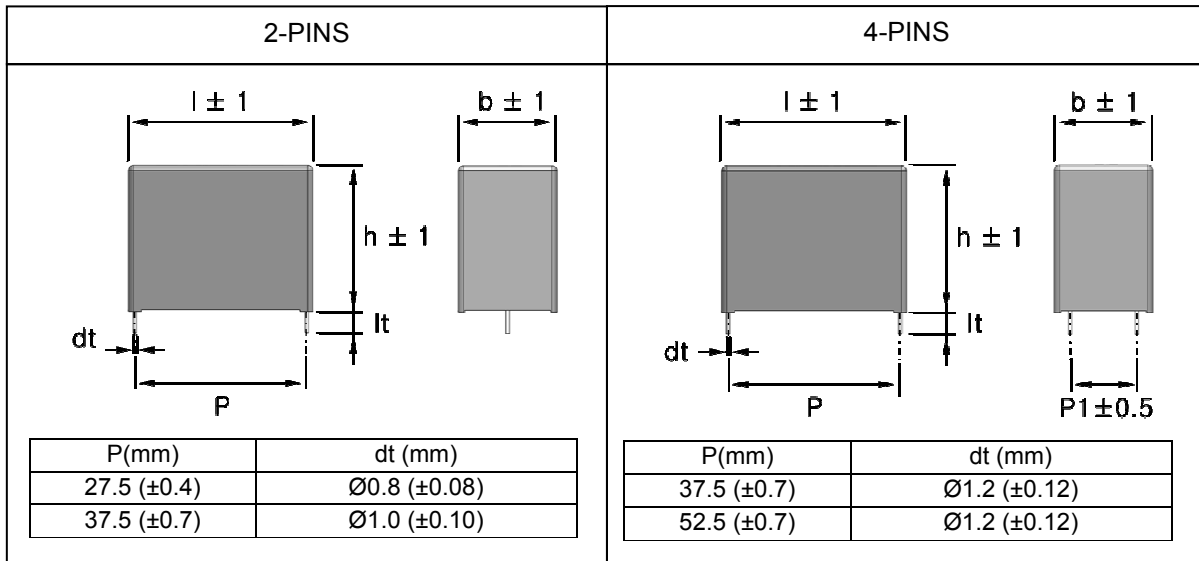
Capacitance range	1.0 to 30 μF
Capacitance tolerance	$\pm 5\%$, $\pm 10\%$
Rated voltage (VRdc)	250, 450, 630, 850
Max. repetitive peak voltage (Vpkr)	1.15 x VR (max. 30min. within one day)
Max. non-repetitive peak current (Ipk)	1.5 x Ipk
IEC Climatic category	40/ 105 / 56
Temperature range	-40 $^{\circ}\text{C}$ ~ +105 $^{\circ}\text{C}$
Life time expectancy	100,000 hours at VR, 70 $^{\circ}\text{C}$ 40,000 hours at VR, 85 $^{\circ}\text{C}$
Reference	IEC 60384-16 / IEC61071
Potting & Encapsulation material	Qualified in accordance with UL94V-0

- Design and specifications are subjected to change without notice. Please refer to caution and warning at <http://www.pilkor.co.kr/sub/download/Introductions.pdf> before using these products.

TYPE SPECIFICATION

Metallized Polypropylene film capacitors (Switching Application)

ORDERING INFORMATION



1	2	3	4	5	6	7	8	9	10	11	12	13	14
P	2	2	6	L	4	5	1	0	5	K	A	S	2

Digits 1~4	
Code	Series name
P226	PCPW226

Digits 5	
Code	Pitch
L	27.5 mm
Q	37.5 mm

Digits 6~7	
Code	Voltage
25	250Vdc
45	450Vdc
63	630Vdc
85	850Vdc

Digits 8~10	
Code	Capacitance
105	1uF
106	10uF

Digits 11	
Code	Cap. tolerance
J	5%
K	10%

Digits 12	
Code	Revision
A	Standard
M	Automotive
L	Low profile
B	Mini- I

Digits 13	
Code	Lead length
L	25.0±1.0
S	5.0±1.0
F	4.0±0.5
8	3.8±0.5(0.3)*
7	3.7±0.5(0.3)*
5	3.5±0.5(0.3)*
4	3.4±0.5(0.3)*
2	3.2±0.5(0.3)*
T	3.0±0.5(0.3)*

Digits 14		
Code	Lead type	Packing
L	2-PIN	Loose in box
2	2-PIN	Arrange
4	4-PIN	Arrange

* dt(mm) = Ø0.8, ±0.3

TYPE SPECIFICATION

Metallized Polypropylene film capacitors (Switching Application)

PCPW226

ELECTRICAL DATA AND ORDERING CODE

 $V_{Rdc} = 250V$

CAP. (μF)	Dimension (mm)			P (mm)	P1 (mm)	dv/dt (V/us)	Ipk (A)	I _{rms} ⁽¹⁾ (A)		ESR ⁽²⁾ (m Ω)		Ordering Code
	b	h	l					2P	4P	2P	4P	
1.0	11	21	31	27.5	-	55	55	4.4	-	10.1	-	P226L25105KA**
2.2	11	21	31	27.5	-	55	121	5.3	-	7.1	-	P226L25225KA**
3.3	11	21	31	27.5	-	55	182	5.5	-	8.0	-	P226L25335KA**
4.7	13	23	31	27.5	-	55	259	5.8	-	6.6	-	P226L25475KA**
5.0	13	23	31	27.5	-	55	275	6.0	-	6.3	-	P226L25505KA**
5.6	15	25	31	27.5	-	55	308	6.3	-	5.8	-	P226L25565KA**
6.8	15	25	31	27.5	-	55	374	7.0	-	5.0	-	P226L25685KA**
8.0	18	28	31	27.5	-	55	440	7.6	-	4.4	-	P226L25805KA**
10	18	28	31	27.5	-	55	550	8.6	-	3.4	-	P226L25106KA**
13	20	35	42	37.5	10.2	22	286	6.6	7.1	7.0	6.5	P226Q25136KA**
16	24	39	42	37.5	10.2	22	352	6.9	7.5	6.6	6.0	P226Q25166KA**
23	28	43	42	37.5	10.2	22	506	7.9	8.4	5.6	5.1	P226Q25236KA**
30	30	45	42	37.5	10.2	22	660	8.7	8.2	4.7	4.2	P226Q25306KA**

 $V_{Rdc} = 450V$

CAP. (μF)	Dimension (mm)			P (mm)	P1 (mm)	dv/dt (V/us)	Ipk (A)	I _{rms} ⁽¹⁾ (A)		ESR ⁽²⁾ (m Ω)		Ordering Code
	b	h	l					2P	4P	2P	4P	
1.0	11	21	31	27.5	-	70	70	4.4	-	10.1	-	P226L45105KA**
2.2	11	21	31	27.5	-	70	154	5.3	-	7.1	-	P226L45225KA**
3.3	13	23	31	27.5	-	70	231	6.5	-	5.8	-	P226L45335KA**
3.9	13	23	31	27.5	-	70	273	5.6	-	6.5	-	P226L45395KB**
3.9	15	25	31	27.5	-	70	273	7.0	-	5.2	-	P226L45395KA**
4.7	15	25	31	27.5	-	70	329	6.2	-	5.7	-	P226L45475KB**
4.7	18	28	31	27.5	-	70	329	7.7	-	4.6	-	P226L45475KA**
5.0	18	28	31	27.5	-	70	350	7.8	-	4.3	-	P226L45505KA**
5.6	18	28	31	27.5	-	70	392	8.3	-	4.1	-	P226L45565KA**
6.8	18	28	31	27.5	-	70	476	7.1	-	4.3	-	P226L45685KB**
6.8	21	31	31	27.5	-	70	476	8.9	-	3.4	-	P226L45685KA**
8.0	21	31	31	27.5	-	70	560	9.2	-	2.9	-	P226L45805KA**
10	21	31	31	27.5	-	70	700	10.0	-	2.2	-	P226L45106KB**
3.3	24	17	42	37.5	-	54	178	4.1	4.6	3.8	3.3	P226Q45335KL**
6.0	28	20	42	37.5	-	54	324	5.5	6.2	5.2	4.6	P226Q45605KL**
8.5	20	35	42	37.5	10.2	54	432	6.8	7.5	6.5	5.8	P226Q45855KA**
10	24	39	42	37.5	10.2	54	540	7.6	8.3	5.7	5.2	P226Q45106KA**
14	28	43	42	37.5	10.2	54	756	8.5	9.2	4.8	4.2	P226Q45146KA**
19	30	45	42	37.5	10.2	54	1026	9.0	9.6	4.6	4.1	P226Q45196KA**

(1) Maximum RMS current at +85 100KHz, $\Delta T=+10$ (2) Typical ESR values at 100KHz, 20 $^{\circ}C$

(Maximum ESR value : less than 2.5 x typical ESR value)

TYPE SPECIFICATION

Metallized Polypropylene film capacitors (Switching Application)

PCPW226

 $V_{Rdc} = 630V$

CAP. (μF)	Dimension (mm)			P (mm)	P1 (mm)	dv/dt (V/us)	Ipk (A)	I _{rms} ⁽¹⁾ (A)		ESR ⁽²⁾ (m Ω)		Ordering Code
	b	h	l					2P	4P	2P	4P	
1.0	11	21	31	27.5	-	90	90	4.4	-	10.1	-	P226L63105KA**
2.2	15	25	31	27.5	-	90	198	6.0	-	6.9	-	P226L63225KA**
3.3	18	28	31	27.5	-	90	297	7.2	-	5.2	-	P226L63335KA**
3.9	21	31	31	27.5	-	90	351	7.8	-	4.5	-	P226L63395KA**
5.0	18	33	42	37.5	-	73	365	5.9	6.4	7.8	7.2	P226Q63505KA**
6.5	20	35	42	37.5	-	73	438	7.1	7.6	6.3	5.8	P226Q63655KA**
7.0	24	39	42	37.5	10.2	73	511	7.6	8.0	5.8	5.2	P226Q63705KA**
8.0	24	39	42	37.5	10.2	73	584	8.0	8.5	5.3	4.8	P226Q63805KA**
10	28	43	42	37.5	10.2	73	730	8.5	8.9	4.8	4.2	P226Q63106KA**
13	30	45	42	37.5	10.2	73	949	8.9	9.3	4.6	4.1	P226Q63136KA**

 $V_{Rdc} = 850V$

CAP. (μF)	Dimension (mm)			P (mm)	P1 (mm)	dv/dt (V/us)	Ipk (A)	I _{rms} ⁽¹⁾ (A)		ESR ⁽²⁾ (m Ω)		Ordering Code
	b	h	l					2P	4P	2P	4P	
1.0	13	23	31	27.5	-	120	1210	5.0	-	9.2	-	P226L85105KA**
1.5	18	28	31	27.5	-	120	180	6.2	-	7.1	-	P226L85155KA**
2.0	21	31	31	27.5	-	120	240	7.5	-	4.9	-	P226L85205KA**
3.3	20	35	42	37.5	10.2	100	330	5.0	5.7	9.9	9.4	P226Q85335KA**
4.0	24	39	42	37.5	10.2	100	400	5.6	6.2	9.0	8.5	P226Q85405KA**
5.6	28	43	42	37.5	10.2	100	560	6.8	7.3	7.2	6.6	P226Q85565KA**
7.5	30	45	42	37.5	10.2	100	750	7.1	7.8	6.9	6.3	P226Q85755KA**

(1) Maximum RMS current at +85 100KHz, $\Delta T = +10$

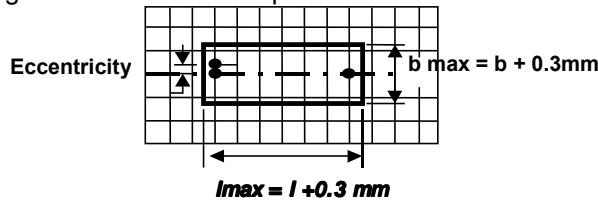
(2) Typical ESR values at 100KHz, 20°C

(Maximum ESR value : less than 2.5 x typical ESR value)

TYPE SPECIFICATION

SPACE REQUIREMENTS ON PRINTED-CIRCUIT BOARD

The maximum length and width of film capacitors are shown in the following drawing ;



- Eccentricity as in drawing
- The maximum eccentricity is smaller than or equal to the lead diameter of the product concerned.
- Product height with seating plane as given by IEC 60717 as reference : $h_{max} \leq h + 0.3 \text{ mm}$

CHARACTERISTICS

● **Test Voltage**

- . Test Voltage (between terminations) : $1.6 \times V_{Rdc}$, 1min
- . Test Voltage (between leads and case) : 2KV- 50Hz(or 60Hz) for 10 seconds

● **Dissipation Factor**

Pitch	Dissipation factor (x 10 ⁻⁴)
	1 kHz
27.5mm	≤ 10
37.5mm	≤ 15

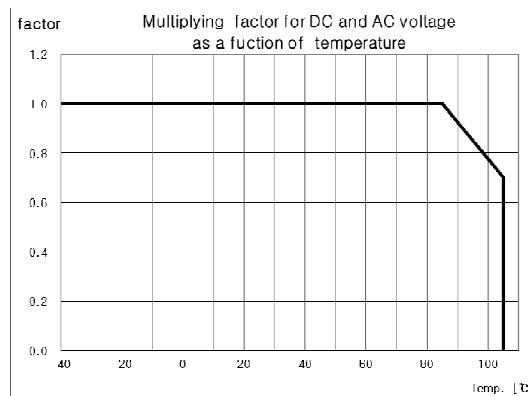
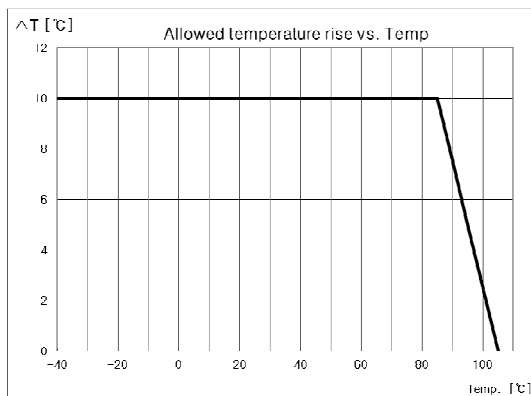
● **Insulation Resistance**

. The insulation resistance is measured for 1min. ±5s, at 100V for $V_{Rdc} < 500V$, at 500V for $V_{Rdc} \geq 500V$

Minimum RC	Minimum Insulation Resistance
Capacitance > 0.33uF	Capacitance ≤ 0.33uF
> 15,000s	> 45GΩ

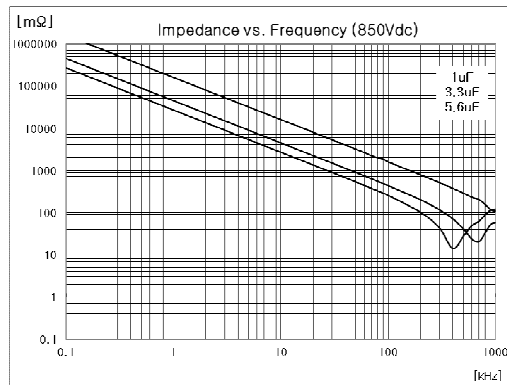
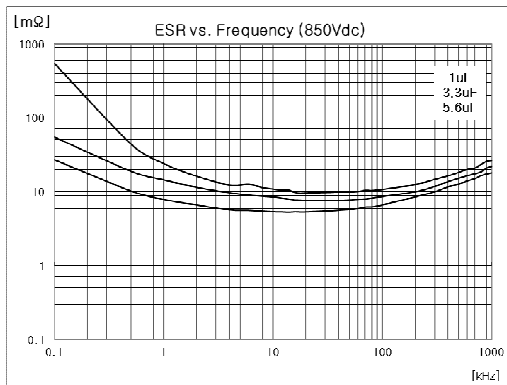
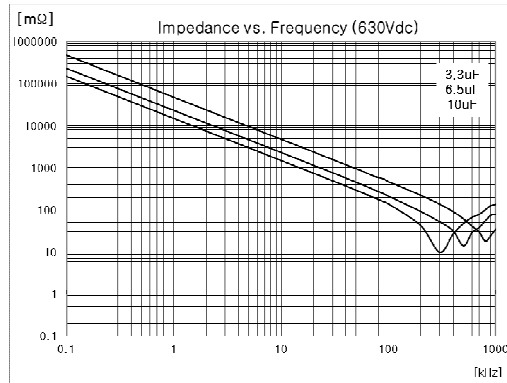
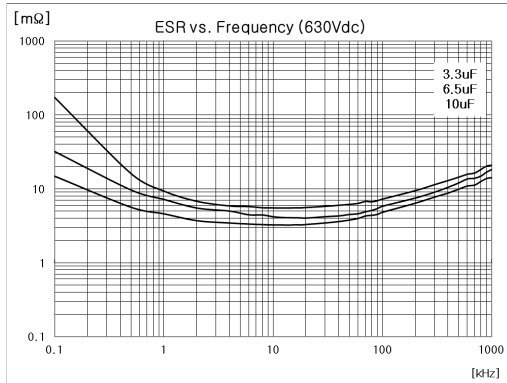
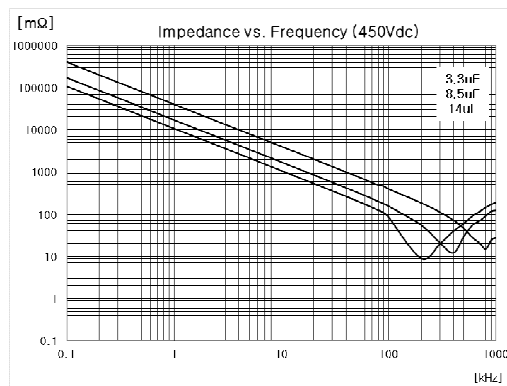
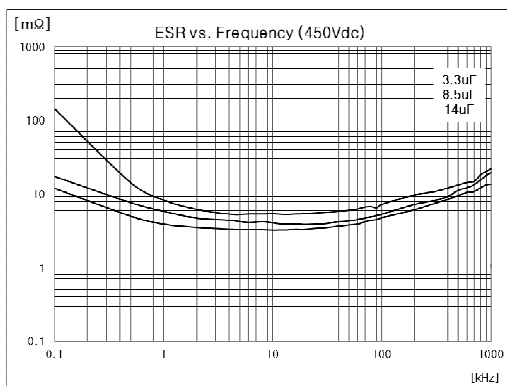
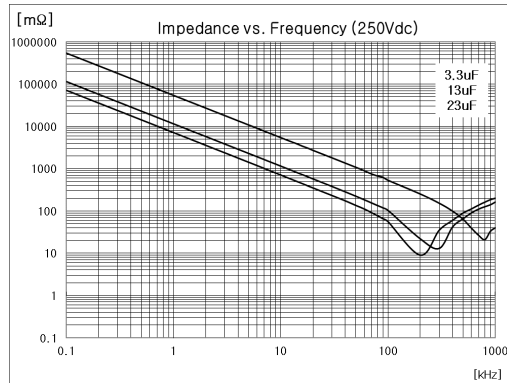
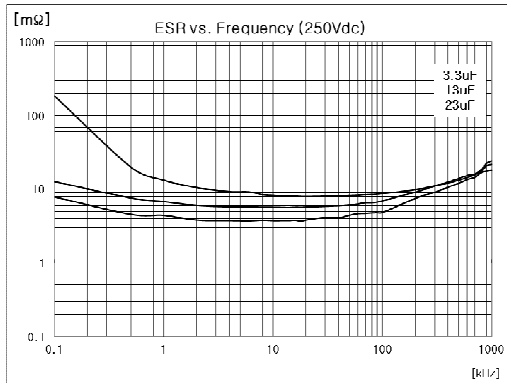
(R = insulation resistance between the terminations[Ω] , C= capacitance[Farad])

● **Self heating temperature ; Max 10 °C**



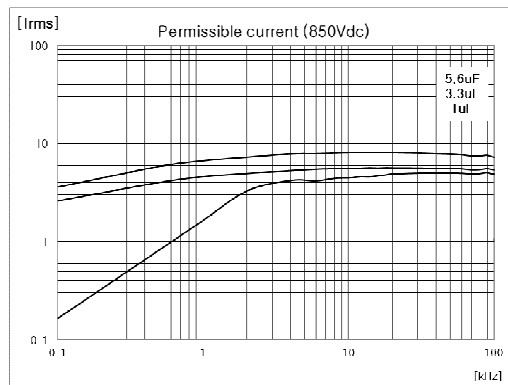
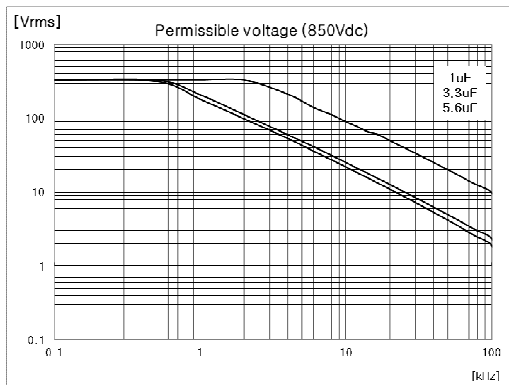
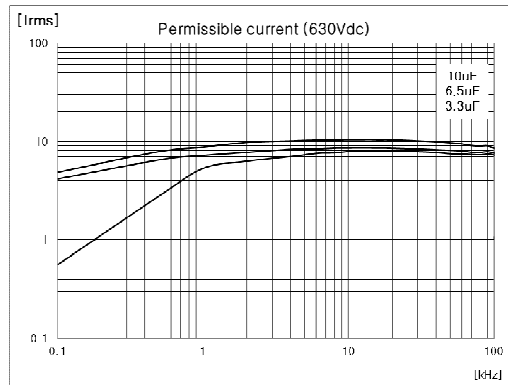
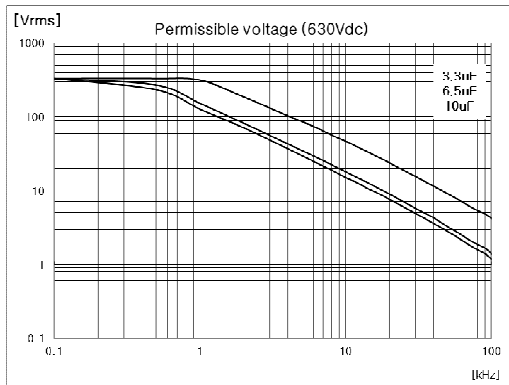
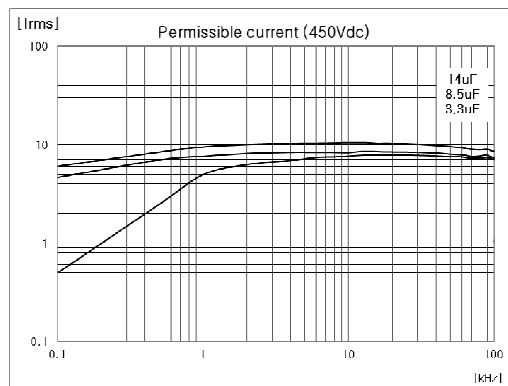
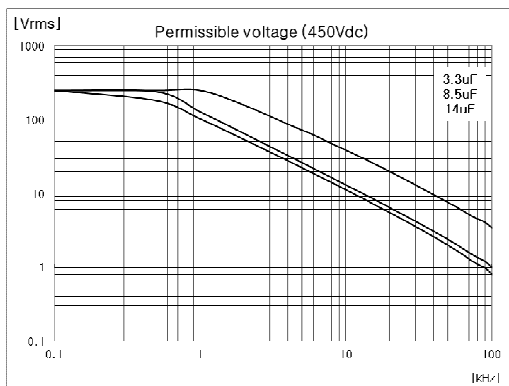
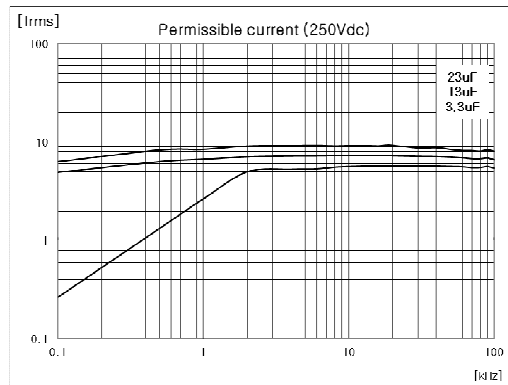
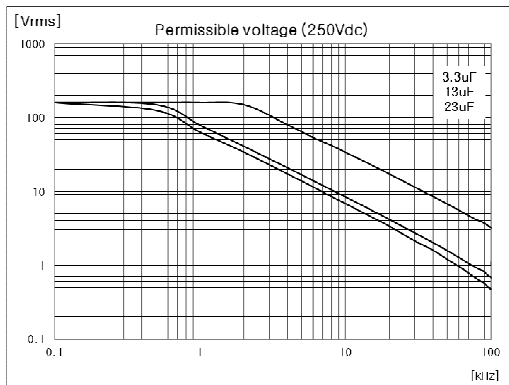
TYPE SPECIFICATION

THE GRAPHS OF CHARACTERISTICS



TYPE SPECIFICATION

PERMISSIBLE VOLTAGE AND CURRENT AS A FUNCTION OF FREQUENCY



TYPE SPECIFICATION

Metallized Polypropylene film capacitors (Switching Application)

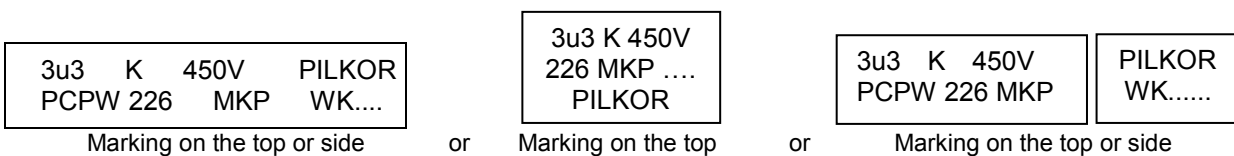
PCPW226

PRODUCT MARKING

Capacitors are marked with the following information :

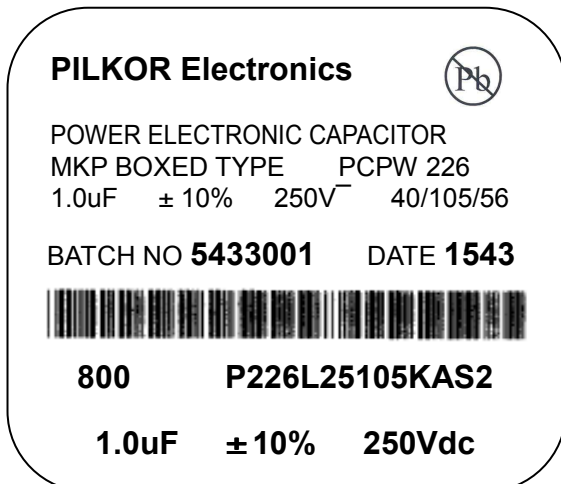
- . Rated capacitance code in accordance with IEC 60062
- . Tolerance on rated capacitance : J : $\pm 5\%$ K : $\pm 10\%$
- . Rated (DC) Voltage (e.g. 400 V)
- . Code for dielectric material (MKP)
- . Manufacturer's type designation (PCPW 226)
- . Manufacturer's name (PILKOR)
- . White or black color

Example of marking



PACKAGE MARKING

The package containing the capacitors is marked as shown.



LINE MARKING EXPLANATION

- 1 Manufacturer's name
- 2 Sub – family
3. Pb free marking(JEDEC-STD-97)
- 4 Type description & Series name
- 5 Capacitance value, tolerance,
Voltage and climatic category (IEC)
- 6 Batch no. & production period
year and week code
- 7 Quantity and Product code

TYPE SPECIFICATION