

# PHE426



- Single metallized film pulse capacitor, polypropylene dielectric
- According to IEC 60384-16, grade 1.1

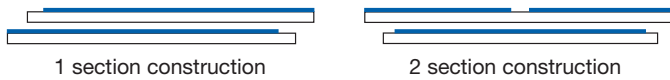
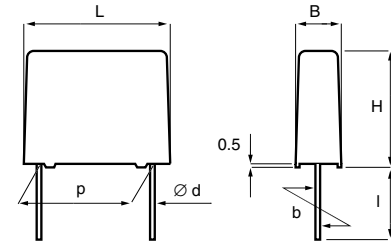
## TYPICAL APPLICATIONS

Pulse operation in SMPS, TV, monitor, electrical ballast and other high frequency applications demanding stable operation.

## CONSTRUCTION

Polypropylene film capacitor with vacuum evaporated aluminum electrodes. Radial leads of tinned wire are electrically welded to the contact metal layer on the ends of the capacitor winding. Encapsulation in self-extinguishing material meeting the requirements of UL 94V-0.

Two different winding constructions are used, depending on voltage and lead spacing. They are specified in the article table.



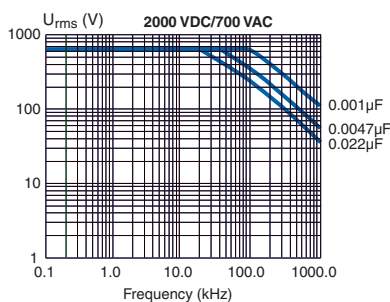
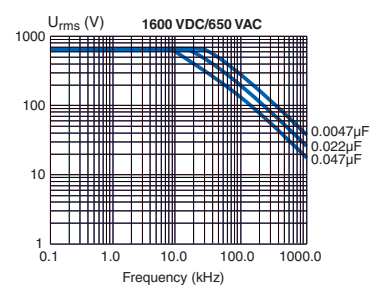
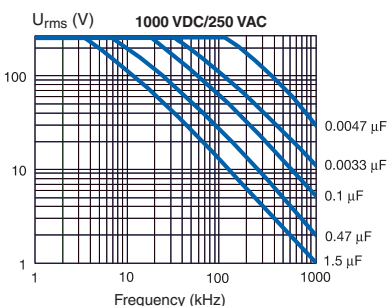
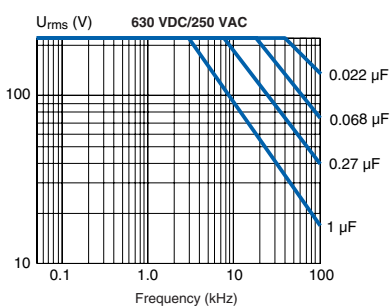
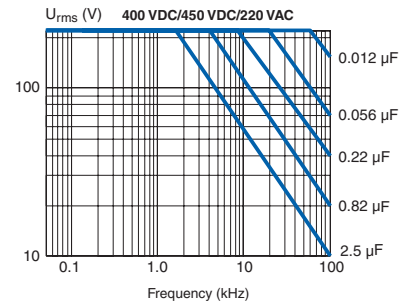
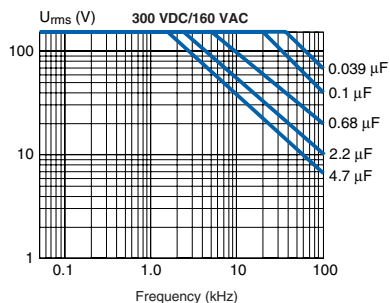
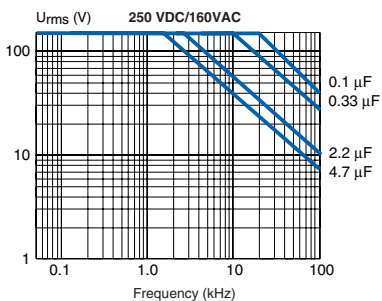
p	d	std l	max l	b
5.0 ± 0.4	0.5	5 <sup>-1</sup>	20	± 0.4
7.5 ± 0.4	0.6	5 <sup>-1</sup>	20	± 0.4
10.0 ± 0.4	0.6	5 <sup>-1</sup>	30	± 0.4
15.0 ± 0.4	0.8	6 <sup>-1</sup>	30	± 0.4
22.5 ± 0.4	0.8	6 <sup>-1</sup>	30	± 0.4
27.5 ± 0.4	0.8	6 <sup>-1</sup>	30	± 0.4
37.5 ± 0.5	1.0	6 <sup>-1</sup>	30	± 0.7

## TECHNICAL DATA

Rated voltage $U_R$ , VDC	100	250	300	400	450	630	1000	1600	2000
Rated voltage $U_R$ , VAC	63	160	160	220	220	250	250	650	700
Capacitance range, $\mu F$	0.001 -0.22	0.001 -27	0.033 -18	0.001 -10	0.1 -3.9	0.001 -5.6	0.0027 -3.3	0.0047 -0.047	0.001 -0.027

Capacitance values	In accordance with IEC E12 series																
Capacitance tolerance	±5%, other tolerances on request																
Category temperature range	-55 ... +105°C																
Rated temperature	+85°C																
Voltage derating	The rated voltage is decreased with 1.3%/°C between +85°C and +105°C.																
Climatic category	IEC 60068-1, 55/105/56/B																
Passive flammability	Category B according to IEC 60065																
Maximum pulse steepness:	dU/dt according to article table For peak to peak voltages lower than rated voltage ( $U_{pp} < U_R$ ), the specified dU/dt can be multiplied by the factor $U_R/U_{pp}$ .																
Temperature coefficient	-200 (+50, -100) ppm/°C (at 1 kHz)																
Self-inductance	Approximately 6 nH/cm for the total length of capacitor winding and the leads.																
Dissipation factor $\tan\delta$	Maximum values at +23°C <table border="1"> <thead> <tr> <th></th> <th>C ≤ 0.1 <math>\mu F</math></th> <th>0.1 <math>\mu F</math> &lt; C ≤ 1.0 <math>\mu F</math></th> <th>C &gt; 1.0 <math>\mu F</math></th> </tr> </thead> <tbody> <tr> <td>1 kHz</td> <td>0.05%</td> <td>0.05%</td> <td>0.10%</td> </tr> <tr> <td>10 kHz</td> <td>-</td> <td>0.10%</td> <td>-</td> </tr> <tr> <td>100 kHz</td> <td>0.25%</td> <td>-</td> <td>-</td> </tr> </tbody> </table>		C ≤ 0.1 $\mu F$	0.1 $\mu F$ < C ≤ 1.0 $\mu F$	C > 1.0 $\mu F$	1 kHz	0.05%	0.05%	0.10%	10 kHz	-	0.10%	-	100 kHz	0.25%	-	-
	C ≤ 0.1 $\mu F$	0.1 $\mu F$ < C ≤ 1.0 $\mu F$	C > 1.0 $\mu F$														
1 kHz	0.05%	0.05%	0.10%														
10 kHz	-	0.10%	-														
100 kHz	0.25%	-	-														
Insulation resistance	Measured at +23°C, 100 VDC 60 s for $U_R < 500$ VDC and at 500 VDC for $U_R \geq 500$ VDC  Between terminals: C ≤ 0.33 $\mu F$ : ≥ 100 000 M $\Omega$ C > 0.33 $\mu F$ : ≥ 30 000 s Between terminals and case: ≥ 100 000 M $\Omega$ .																

## DERATING OF $U_{RMS}$ VS FREQUENCY, +85°C AMBIENT TEMPERATURE AND 10°C INTERNAL HEATING, TYPICAL VALUES



More simulation possibilities  
in PCCAD software package.  
See page 94.

### ENVIRONMENTAL TEST DATA

According to IEC 60384-16, Grade 1.1 and Quality tests and requirements for Pulse Capacitors on page 95.

### ORDERING INFORMATION

The article code for the standard part is given in the article table.  
For other options, see page 11.

### MARKING

- RIFA
- Article code
- Rated capacitance according to IEC 60062
- Capacitance tolerance code
- Rated voltage
- Manufacturing code (year, month)









