

PHE450



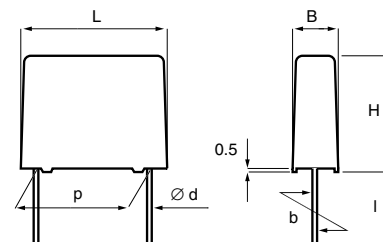
- Double metallized film pulse capacitor, polypropylene dielectric
- According to IEC 60384-17 Grade 1.1
- Small sizes
- Replacing PHE427, PHE428

TYPICAL APPLICATIONS

High frequency applications with high current stress, such as deflection circuits in TV-sets, protection circuits in SMPS and in electronic ballasts.

CONSTRUCTION

Polypropylene dielectric with double metallized polyester film as electrodes. Encapsulation in self-extinguishing material meeting the requirements of UL 94V-0.



TECHNICAL DATA

Rated voltage U_R, VDC	250	400	630	1000	1600	2000	2500
Rated voltage U_R, VAC	180	250	300/400	375/600	650	700	900
Capacitance range	330pF– 10 μ F	330pF– 5.6 μ F	330pF– 3.3 μ F	330pF– 1.8 μ F	2.7nF– 0.82 μ F	1.0nF– 0.56 μ F	1nF– 0.22 μ F

Capacitance values In accordance with IEC E12 series.

Capacitance tolerance $\pm 5\%$ standard. Other tolerances on request

Category temperature range -55°C to $+105^\circ\text{C}$

Rated temperature $+85^\circ\text{C}$

Voltage derating The rated voltage is decreased with $1.3\% / ^\circ\text{C}$ between $+85^\circ\text{C}$ and $+105^\circ\text{C}$

Climatic category 55/105/56/B

Test voltage between terminals The 100 % factory test is carried out at $1.6 \times U_R$ VDC

Insulation resistance Measured at 23°C , 100 VDC 60s for $U_R < 500$ VDC and at 500 VDC for $U_R \geq 500$ VDC
Between terminals:
 $C \leq 0.33 \mu\text{F}$: $\geq 100\,000\ \text{M}\Omega$
 $C > 0.33 \mu\text{F}$: $\geq 30\,000\ \text{s}$
Between terminals and case:
 $\geq 100\,000\ \text{M}\Omega$

Dissipation factor $\tan\delta$ Maximum values at 23°C

	$C \leq 0.1 \mu\text{F}$	$0.1 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$C > 1.0 \mu\text{F}$
1 kHz	0.03 %	0.03 %	0.03 %
10 kHz	0.04 %	0.06 %	–
100 kHz	0.15 %	–	–

Inductance Approximately 6 nH/cm for the total length of capacitor winding and the leads.

Pulse rise time The capacitors can withstand an unlimited number of pulses with a dU/dt according to the article table. For peak to peak voltages lower than the rated voltage ($U_{pp} < U_R$), the specified dU/dt can be multiplied by U_R/U_{pp} .

p	d	std l	max l	b
7.5 ± 0.4	0.6	5 ⁻¹	30	± 0.4
10.0 ± 0.4	0.6	5 ⁻¹	30	± 0.4
15.0 ± 0.4	0.8	6 ⁻¹	30	± 0.4
22.5 ± 0.4	0.8	6 ⁻¹	30	± 0.4
27.5 ± 0.4	0.8	6 ⁻¹	30	± 0.4
37.5 ± 0.5	1.0	6 ⁻¹	30	± 0.7

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



1 section construction



2 section construction

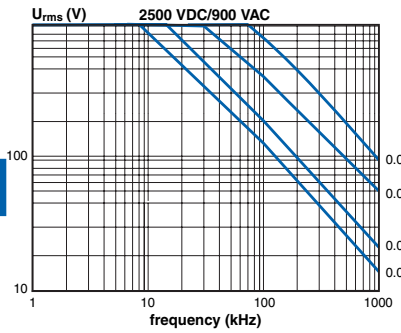
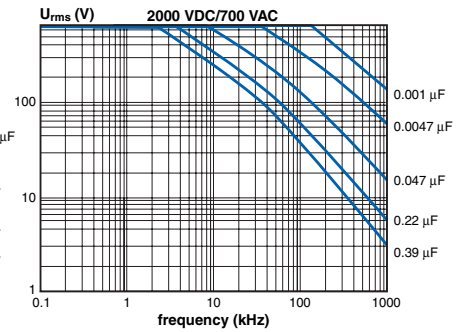
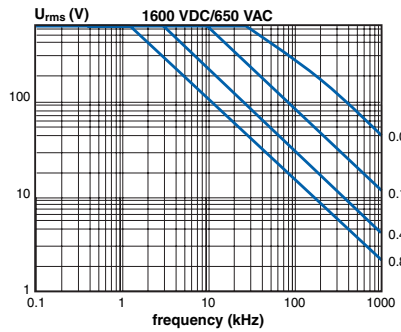
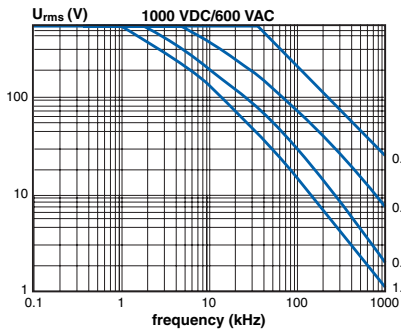
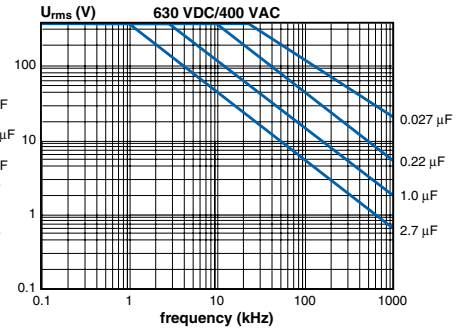
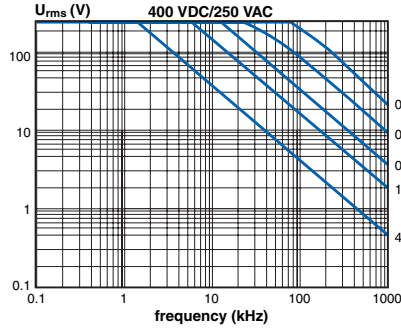
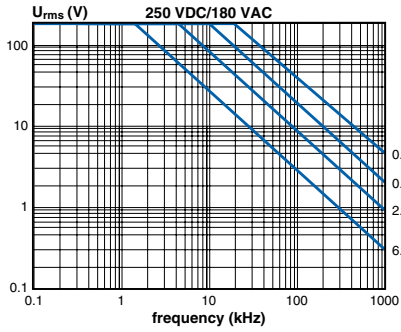


3 section construction

ENVIRONMENTAL TEST DATA

According to IEC 60384-17, Grade 1.1 and Quality tests and requirements for Pulse Capacitors on page 107.

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



More simulation possibilities in PCCAD. See page 106.

ORDERING INFORMATION

The article code for the standard part is given in the article table. For other options, see page 12.

MARKING

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

ARTICLE TABLE

Capacitance μF	Box code	Max dimensions in mm			Max dU/dt $\text{V}/\mu\text{s}$	Rthha $^{\circ}\text{C}/\text{W}$ 85 $^{\circ}\text{C}$ 0.2 m/s	Article code
		B	H	L			
2500 VDC / 900 VAC (3 SECTION)							
LEAD SPACING 15 MM							
0.0056	B11	8.5	16.0	18.0	2500	70	PHE450TB4560JR06
0.0068	B11	8.5	16.0	18.0	2500	70	PHE450TB4680JR06
0.0082	B14	9.5	17.5	18.0	2500	60	PHE450TB4820JR06
LEAD SPACING 22.5 MM							
0.0047	D13	6.5	14.5	26.0	1800	60	PHE450TD4470JR06L2
0.0056	D13	6.5	14.5	26.0	1800	60	PHE450TD4560JR06L2
0.0068	D13	6.5	14.5	26.0	1800	60	PHE450TD4680JR06L2
0.0082	D17	7.0	16.5	26.0	1800	55	PHE450TD4820JR06L2
0.010	D14	8.0	16.0	26.0	1800	53	PHE450TD5100JR06L2
0.012	D15	9.0	18.5	26.0	1800	52	PHE450TD5120JR06L2
0.015	D15	9.0	18.5	26.0	1800	52	PHE450TD5150JR06L2
0.018	D18	10.5	19.0	26.0	1800	50	PHE450TD5180JR06L2
0.022	D16	11.0	21.5	26.0	1800	45	PHE450TD5220JR06L2
0.027	D20	13.5	23.0	26.0	1800	45	PHE450TD5270JR06L2
0.033	D19	15.5	24.5	26.0	1800	35	PHE450TD5330JR06L2
0.039	D19	15.5	24.5	26.0	1800	35	PHE450TD5390JR06L2
LEAD SPACING 37.5 MM							
0.22	R06	21.0	38.0	41.0	800	18	PHE450TR6220JR06L2