

PHG495

• Power electronic capacitor, metallized polypropylene

RoHS
Compliant

TYPICAL APPLICATIONS

The PHG495 capacitor is intended for use in power electronic equipment, for example such as a clamping capacitor. The capacitor is capable of operating continuously under non-sinusoidal current or voltage.

CONSTRUCTION

The PHG495 is a range of metallized polypropylene capacitors with low series resistance and high capability to withstand inrush current. The capacitor winding is encapsulated in self-extinguishing material meeting the requirements of UL 94V-0. The capacitor has axial screw terminals with inner M8 thread.

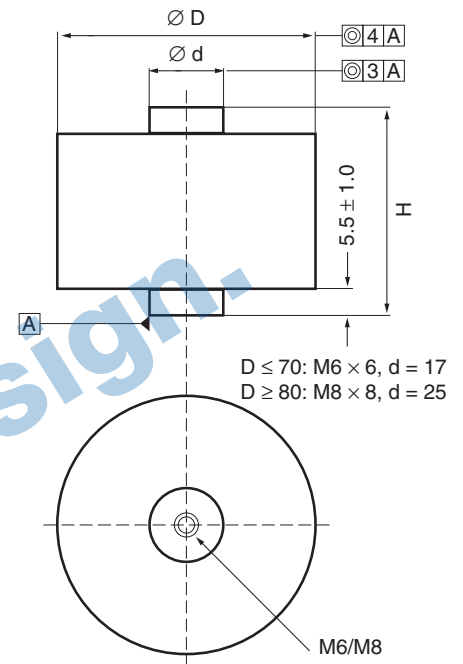
TECHNICAL DATA

Rated voltage, VDC	1000	1350	1650
Rated voltage, VAC	450	500	550
Capacitance range, μF	13 – 25	9 – 18	5 – 10
Capacitance tolerance	$\pm 5\%$		
Climatic category	40/085/56		
Temperature range	– 40°C to + 85°C		
Insulation resistance	Measured at 500 VDC after 60 s, T_{amb} 23 °C Between terminals $\geq 30\,000$ s.		
Dissipation factor	1 kHz $\leq 30\,000$		
Hot Spot temperature, Th	$\leq + 85^\circ\text{C}$.		

Quality and test data All capacitors are subjected to 100% screening inspection in respect of voltage between terminals, capacitance, dissipation factor and insulation resistance between terminals. Each lot is sampled to establish the function of the screening inspection.

ENVIRONMENTAL TEST DATA

Test	IEC Publication	Procedure	Requirements
Voltage proof	60384-1, clause 4.6		No flashover or permanent breakdown
Type test: between terminals		10 s 1700 VDC ($U_{\text{DC}} = 1200$ V) 2200 VDC ($U_{\text{DC}} = 1600$ V) 2700 VDC ($U_{\text{DC}} = 2000$ V)	
Routine test: between terminals		2 s 1700 VDC ($U_{\text{DC}} = 1200$ V) 2200 VDC ($U_{\text{DC}} = 1600$ V) 2700 VDC ($U_{\text{DC}} = 2000$ V)	
Insulation resistance between terminals	60384-1, clause 4.5	Measured at 500 VDC after 60 s, T_{amb} 23°C	3×10^4 s
Dissipation factor	60384-1, clause 4.8	1 kHz, 10 kHz	$\leq 3 \times 10^{-4}$ $\leq 8 \times 10^{-4}$
Damp heat, steady state	60068-2-3 (1969)		56 days
Bump	60068-2-27 test Ea	4000 bumps, 245 m/s ² in any direction	No visible damage No open or short circuit



MOUNTING

The capacitors can be mounted in any position. Max tightening torque:
M6 = 6 Nm
M8 = 10 Nm

MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Capacitance tolerance code
- Rated voltage
- U_{RMS} at 50 Hz
- MKP for metallized polypropylene
- Manufacturing code

ARTICLE TABLE

Rated cap	Dimensions in mm	dU/dt max	dU/dt rep	I ² x t	Dissipation factor ¹⁾	I _{rms} ²⁾	R _s	Inductance	Thermal resistance Hot spot-terminal R _{THHT} °C/W	Weight	Qty/ package	Article code
μF	Δ Dmax x H	V/μs	V/μs	A ² s	K	A	m Ω	nH		g	pcs	
U _s	1500 V (non rep.)											
U _{max}	1200 V (rep.)											
U _{DC}	1000 V											
U _{rms}	450 V											
13	80	52	35	0.60		65	0.7	10	2.9	350	16	PHG495LG 8130J
17	90	52	35	0.70		75	0.6	10	2.3	450	16	PHG495LL 8170J
25	90	62	25	1.10		60	0.7	10	3.0	500	16	PHG495LK 8250J
U _s	2000 V (non rep.)											
U _{max}	1600 V (rep.)											
U _{DC}	1350 V											
U _{rms}	500 V											
9	80	52	40	0.40		55	0.8	10	3.1	350	16	PHG495NG 7900J
12	90	52	40	0.50		80	0.7	10	2.4	450	16	PHG495NL 8120J
18	90	62	25	0.90		55	0.8	10	3.2	500	16	PHG495NK 8180J
U _s	2500 V (non rep.)											
U _{max}	2000 V (rep.)											
U _{DC}	1650 V											
U _{rms}	550 V											
5	80	52	55	0.30		50	0.9	10	3.4	350	16	PHG495VG 7500J
6.5	90	52	55	0.30		70	0.8	10	2.6	450	16	PHG495VL 7650J
10	90	62	35	0.60		50	0.9	10	3.5	500	16	PHG495VK 8100J

$$^1) \tan \delta \leq 2 \times 10^{-4} + K \times f_{\text{kHz}} \times 10^{-4}$$

ORDERING INFORMATION

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

MECHANICAL DATA

The capacitor winding is encapsulated in self-extinguishing material meeting the requirements of UL 94V-0. The capacitor has axial screw terminals with inner thread M6 respectively M8.