

PHZ9004 EMI Capacitors, 3xX2 with Separate Terminals for 3-Phase Filtering, 300VAC

Construction

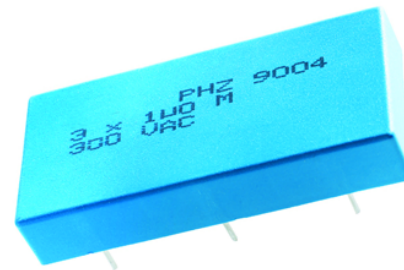
Metallized polypropylene film encapsulated with self-extinguishing resin in a box of material recognized to UL 94 V-0.

Benefits

- Rated Voltage: 300VAC 50/60Hz
- Capacitance Range: 3 μ F x 1.0 μ F
- Pitch: 27.5 mm
- Capacitance Tolerance: \pm 20% standard, other tolerances on request
- Climatic Category: 55/105/56, IEC 60068-1
- Tape and reel in accordance with IEC 60286-2
- RoHS compliance and lead-free terminations
- Operating temperature range of -55°C to +105°C
- 100% screening factory test at 2200VDC

Applications

For worldwide use as an electromagnetic interference suppressor in X2 and across-the-line applications for three phases.



Ordering Information

PHZ9004	E	F	7100	M	R06L2
Series	Rated Voltage	Pitch	Capacitance Code (pF)	Capacitance Tolerance	Packing Option & Leadform
Triple Capacitor X2, Metallized Polypropylene	E = 300VAC	F = 27.5	Digits 2-4(3) indicates the first three digits of the capacitance value. First digit indicates the total number of digits in the capacitance value.	M = \pm 20%	see Table 1

Ordering Options Table

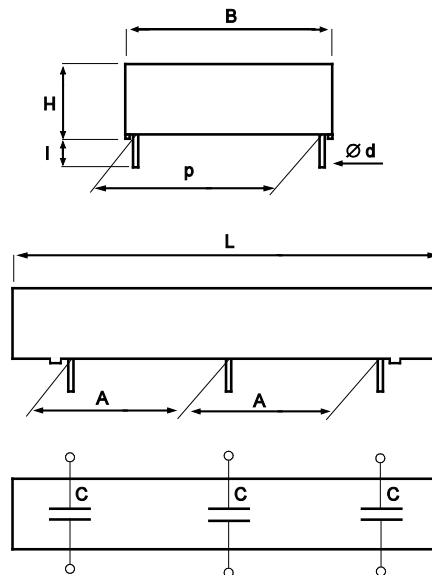
Standard Packaging Style	Lead Length	Ordering Code
	(mm)	
Loose, long leads	6 ^{+0/-1}	R06L2
Other options available on request		

Dimension Table

Pitch	Outer Dimension		
	B	H	L
27.5	30	11.5	64

Leadspacing Table

p	d	A	l
27.5 ± 0.5	1.0	21.0 ± 0.5	6 ⁻¹



Technical Data

Rated Voltage	300VAC 50/60Hz	
Capacitance Range	3 x 1.0 μ F	
Capacitance Tolerance	\pm 20%, other tolerances on request	
Temperature Range	-55 to +105°C	
Climatic Category	55/105/56	
Dissipation Factor	Maximum Values at +23°C	
	1 kHz	0.10%
	10 kHz	0.50%
Test Voltage Between Terminals	<p>The 100% screening factory test is carried out at 2200VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. This test may not be repeated due to potential capacitor damage. KEMET is not liable in such case for any failures.</p>	
Insulation Resistance	Between terminals: \geq 10,000s	
	Between terminals and case: \geq 100,000M Ω	

Environmental Test Data

Test	IEC Publication	Procedure
Endurance	IEC 60384-14	1.25 x UR VAC 50Hz, once every hour increase to 1000VAC for 0.1 s, 1000h at upper rated temperature
Vibration	IEC 60068-2-6 Test Fc	3 directions at 2 hours each 10 - 55 Hz at 0.75 mm or 98m/s ²
Bump	IEC 60068-2-29 Test Eb	1000 bumps at 390 m/s ²
Change of Temperature	IEC 60068-2-14 Test Na	Upper and lower rated temperature 5 cycles
Active Flammability	IEC 60384-14	UR + 20 surge pulses at 2.5kV (pulse every 5s)
Passive Flammability	IEC 60384-14	IEC 60384-1, IEC 60695-11-5 Needle Flame Test
Humidity	IEC 60068-2-3 Test Ca	+40°C and 90-95% R.H., 56 days

Environmental Compliance

All KEMET EMI capacitors are RoHS compliant



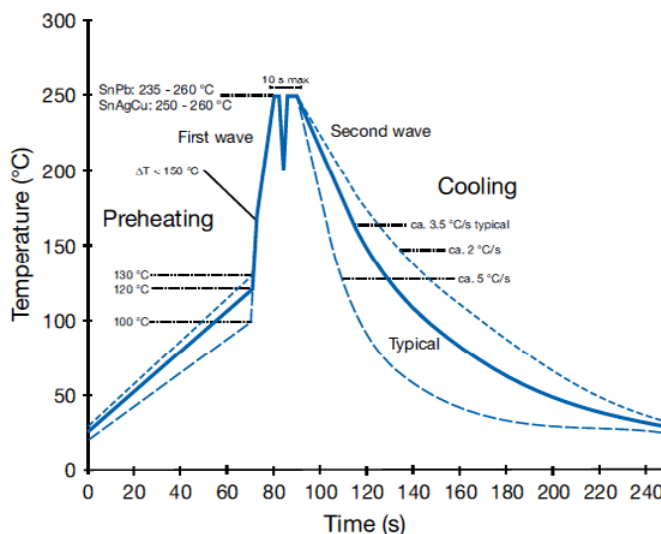
RoHS Compliant

Table 1 – Ratings & Part Number Reference

Lead Space	Cap Value (μF)	B (mm)	H (mm)	L (mm)	dV/dt (V/μsec)	F Article Code	Part Number
27.5	3 x 1.0	30.0	11.5	64.0	100	9004AA105M300CDECTV680	PHZ9004EF7100MR06L2
Lead Space	Cap Value (μF)	B (mm)	H (mm)	L (mm)	dV/dt (V/μsec)	F Article Code	Part Number

Soldering Process

The implementation of RoHS Directive has forced to select SnAuCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183°C for SnPb eutectic alloy to 217–221°C for the new alloys. This means that the heat stress to components, even in wave soldering, has increased considerably due to higher pre-heat and wave temperatures. The Polypropylene Capacitors are especially sensitive to heat (melting point of Polypropylene is 160–170°C). The wave soldering can be destructive especially for mechanically small Polypropylene Capacitors (lead spacings 5-10 mm), and great care has to be taken when soldering them. The recommended solder profiles from KEMET should be used. In case of doubt, KEMET should be consulted. In general the wave soldering curve from IEC Publication 61760-1 edition 2 gives a good guideline for successful soldering.



Marking

- Manufacturer's logo
- Article series
- Rated capacitance
- Rated voltage
- Capacitance tolerance code
- Manufacturing date code

KEMET Corporation World Headquarters

2835 KEMET Way
Simpsonville, SC 29681

Mailing Address:
P.O. Box 5928
Greenville, SC 29606

www.kemet.com
Tel: 864-963-6300
Fax: 864-963-6521

Corporate Offices

Fort Lauderdale, FL
Tel: 954-766-2800

North America

Southeast

Lake Mary, FL
Tel: 407-855-8886

Northeast

Wilmington, MA
Tel: 978-658-1663

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Milpitas, CA
Tel: 408-433-9950

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Zapopan, Jalisco
Tel: 52-33-3123-2141

Europe

Southern Europe

Geneva, Switzerland
Tel: 41-22-715-0100

Paris, France
Tel: 33-1-4646-1009

Sasso Marconi, Italy
Tel: 39-051-939111

Milan, Italy
Tel: 39-02-57518176

Rome, Italy
Tel: 39-06-23231718

Madrid, Spain
Tel: 34-91-804-4303

Central Europe

Landsberg, Germany
Tel: 49-8191-3350800

Dortmund, Germany
Tel: 49-2307-3619672

Kwidzyn, Poland
Tel: 48-55-279-7025

Northern Europe

Bishop's Stortford, United Kingdom
Tel: 44-1279-757201

Weymouth, United Kingdom
Tel: 44-1305-830747

Coatbridge, Scotland
Tel: 44-1236-434455

Färjestaden, Sweden
Tel: 46-485-563934

Espoo, Finland
Tel: 358-9-5406-5000

Asia

Northeast Asia

Hong Kong
Tel: 852-2305-1168

Shenzhen, China
Tel: 86-755-2518-1306

Beijing, China
Tel: 86-10-5829-1711

Shanghai, China
Tel: 86-21-6447-0707

Taipei, Taiwan
Tel: 886-2-27528585

Southeast Asia

Singapore
Tel: 65-6586-1900

Penang, Malaysia
Tel: 60-4-6430200

Bangalore, India
Tel: 91-806-53-76817

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Other KEMET Resources

Tools	
Resource	Location
Configure A Part: CapEdge	http://capacitoredge.kemet.com
SPICE & FIT Software	http://www.kemet.com/spice
Search Our FAQs: KnowledgeEdge	http://www.kemet.com/keask

Product Information	
Resource	Location
Products	http://www.kemet.com/products
Technical Resources (Including Soldering Techniques)	http://www.kemet.com/technicalpapers
RoHS Statement	http://www.kemet.com/rohs
Quality Documents	http://www.kemet.com/qualitydocuments

Product Request	
Resource	Location
Sample Request	http://www.kemet.com/sample
Engineering Kit Request	http://www.kemet.com/kits

Contact	
Resource	Location
Website	www.kemet.com
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Investor Relations	http://www.kemet.com/ir
Call Us	1-877-MyKEMET
Twitter	http://twitter.com/kemetcapacitors

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Although we design and manufacture our products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

