

FILM CAPACITORS – DC Link Capacitor

PART NO.: YHA1121107J004HW

YUHUA ELECTRICAL

YHA Series, 1100VAC, 1100 μ F, $\pm 5\%$, $-40^{\circ}\text{C}\sim 85^{\circ}\text{C}$, Radial, D116*H224mm, NUT

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Version: 2.0

AUTHORIZED DISTRIBUTOR

NextGen Components, Inc.

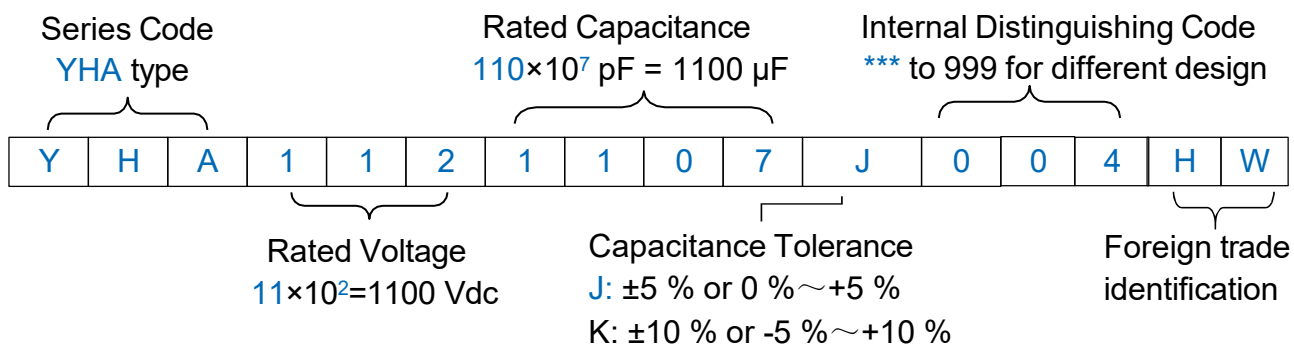
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■ PART NUMBER GUIDE

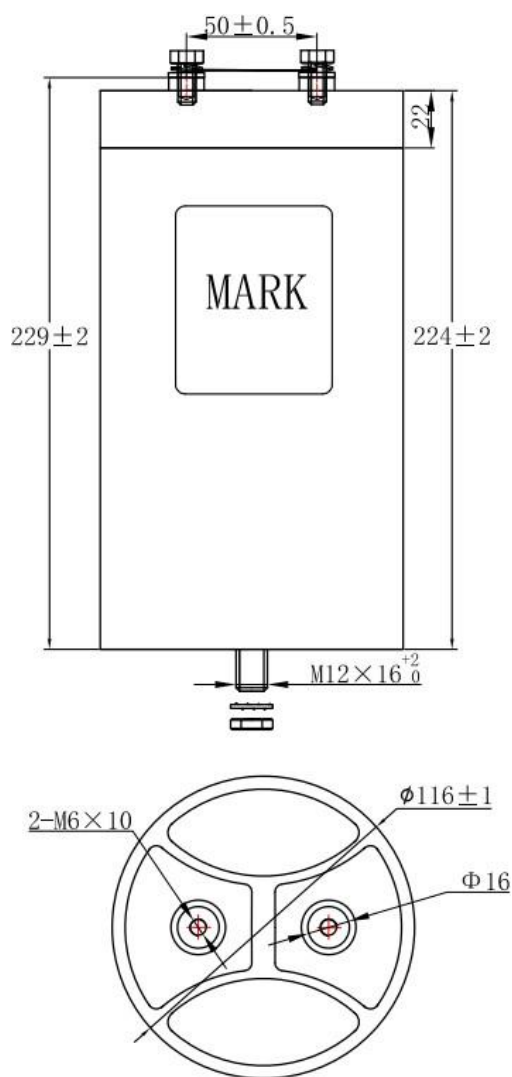
The 14 digits part number is formed as follow:



■ PRODUCT PICTURE

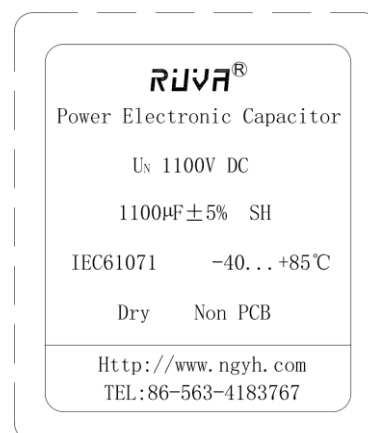


■ Outline Drawing



Size units: mm

MARK



■ Features

1. Used in DC-Link circuits, be able to replace electrolytic capacitor
2. Low ESR, high ripple current handling capabilities
3. Low ESL
4. Long life-time
5. Polypropylene dielectric, Self-healing property

■ Applications

1. Inverter for wind power generation and solar power generation
2. High voltage frequency converters, SVG, SVC, etc

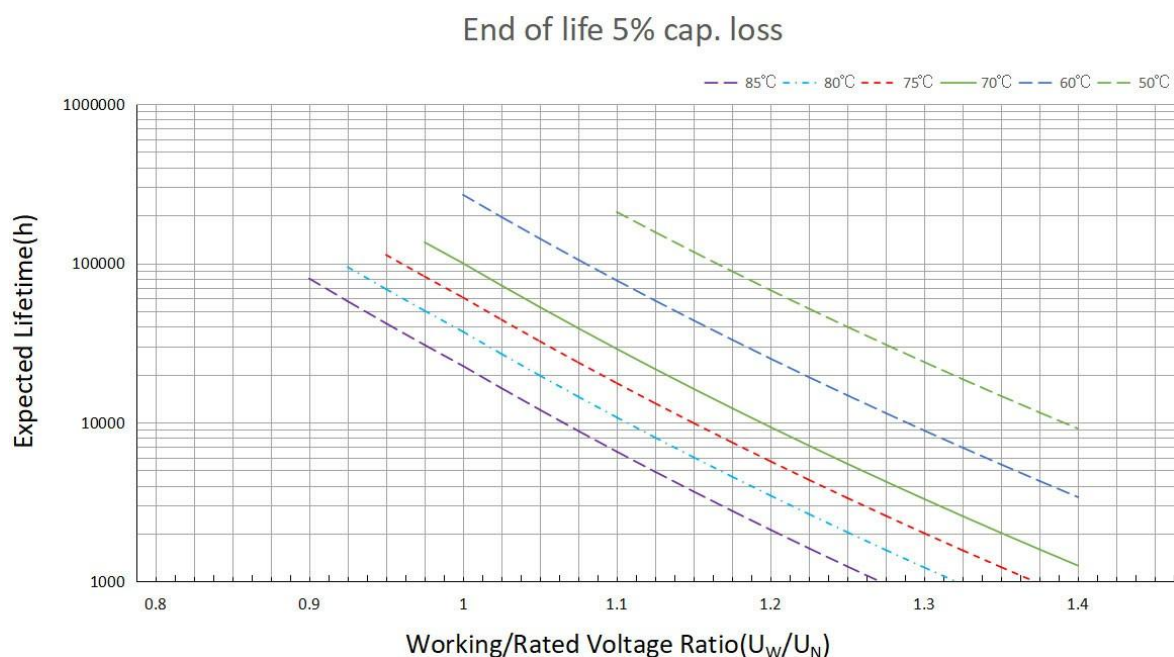
■ Technical Data

Reference Standard	IEC 61071
Rated Voltage	1100VDC
Rated Capacitance	1100μF
Capacitance Tolerance	±5%
Main material and mechanical parameters	
Medium	Polypropylene film (5.3 μm high temperature film)
Sealing material	Room temperature polyurethane + room temperature resin (UL94V-0)
Shell	Aluminum (1060 aluminum)
Terminal	Nickel plated H59 brass
Body size	Φ116*224mm(See drawing for details)
Max. Torque of terminals	M6-5Nm
Max. Torque of Installation	M12-10Nm
Weight	≈2.6kg
Electrical parameters	
Temporarily Overvoltage (per day)	1.1 x Un,30% on load duration.
	1.15 x Un for 30min
	1.2 x Un for 5min
	1.3 x Un for 1min
	1.5 x Un for 50ms each time,1,000 times during the life of the capacitor.
Maximum ripple current (Irms)	Θamb≤40℃, Irms=100A
Maximum peak current (Î)	4.8KA(t ≤ 10 us,interval time ≥ 60 s)
Not-repetitive current(Îs)	9KA
Equivalent series resistance (ESR)	≤1.5mΩ (1V、1KHz)
Equivalent series inductance (ESL)	≤90nH (1MHz)
Tangent of loss angle (tanδ)	≤20×10 ⁻⁴ (100Hz, 20℃)
Thermal resistance (Rth)	2.3K/W
Insulation resistance (Ri×Cn)	≥ 10000s (500V, 20℃)
Interpole voltage resistance test(U _{TT})	1.5U _N (20℃,10S)
Voltage tolerance between polar shells (U _{TC})	4000VAC (50Hz,20℃,10S)
Expected lifetime	Reference expected lifetime curves
Failure rate	≤100FIT
Environmental parameters	

Relative humidity	≤90%
Operating Temperature Range	-40℃～+85℃ (Θ _{hs} ≤85℃)
Storage Temperature Range	-40℃～+85℃
Altitude	2000m

■ Expected lifetime curves

In the application of capacitors, there are many factors that will affect the service life of capacitors, such as voltage, temperature, current, grid harmonics, light or radiation and some other unknown factors. The following life expectancy curve only considers the relationship between voltage and temperature, based on the qualified results of long-term durability test, and then calculates the life expectancy of the capacitor under different working conditions through the life expectancy theoretical calculation formula. Therefore, the life expectancy curve is only used as a reference for selection, and does not represent the actual service life of the capacitor, nor does it represent the warranty requirements.



■ Product code description

The 14-bit product code is as follows:

- 1~3 Model code
Example: YHA= Series A products
- 4~7 Dc rated voltage Example:
112=11×10²V=1100V
- 7~10 Nominal Capacity

Nominal capacitance is 1 to 3 significant digits,coded in four-digit notation,ABCD=ABC*10DpF									
Example: 1107=110×10 ⁷ pF=1100 μ F					5005=500×10 ⁵ pF=50 μ F				
If the nominal capacitance is 4 bits,ABCX=ABCX μ F,the fourth X rule is as follows:									
The fourth X	P	Q	R	S	T	W	X	Y	Z
Capacity	1	2	3	4	5	6	7	8	9
Example: 107T=1075 μ F									

11 Capacity level

J=±5%, K=±10%

12~16 Internal characteristic code of the capacitor

■ Packing and Shipment

For the packing box with capacitors ,any kinds of shipments are permitted. But the sprinkle of rain or snow and mechanical damage must be avoided.

■ Cautions and Warnings

1.In order to eliminate the risk of shock,the capacitor is packaged with terminals shorted.But when it starts to work,the stocked energy of the capacitor may be lethal. So please discharge through resistor before operating the capacitor,short-circuit capacitor is not permitted.

2.Do not use or store capacitors in corrosive atmosphere,especially where chloride gas,sulfide gas,acid,alkali,salt or other similar substance that exists.In the dusty environment,it needs regular maintenance and cleaning,especially the terminals which are required to avoid conductive path between phases.

3. If the depth of the dent is more than 1mm or any other mechanical damage,capacitors are forbidden to use.

4.Don't hesitate to contact our technical service for any doubts and more detail information.