DATASHEET

FILM CAPACITORS – DC Link Capacitor

PART NO.: YHA6016506J004

YUHUA ELECTRICAL

YHA Series, 600VAC, 650µF, ±5 %, -40℃~85℃ , Radial, D86*H105mm, NUT

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AUTHORIZED DISTRIBUTOR

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■ PART NUMBER GUIDE

The 14 digits part number is formed as follow:

Series Code
YHA type

Rated Capacitance
650×10^6 pF = 650 μF

Internal Distinguishing Code
*** to 999 for different design

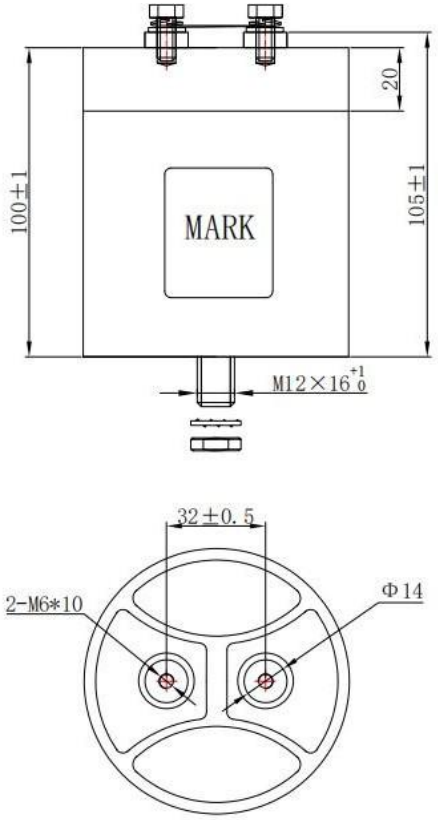
Y	H	A	6	0	1	6	5	0	6	J	0	0	4

Rated Voltage
60×10^1=600 Vdc

Capacitance Tolerance
J: ±5 % or 0 %～+5 %
K: ±10 % or -5 %～+10 %

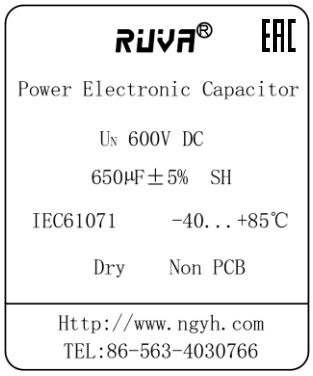
■ PRODUCT PICTURE

■ 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

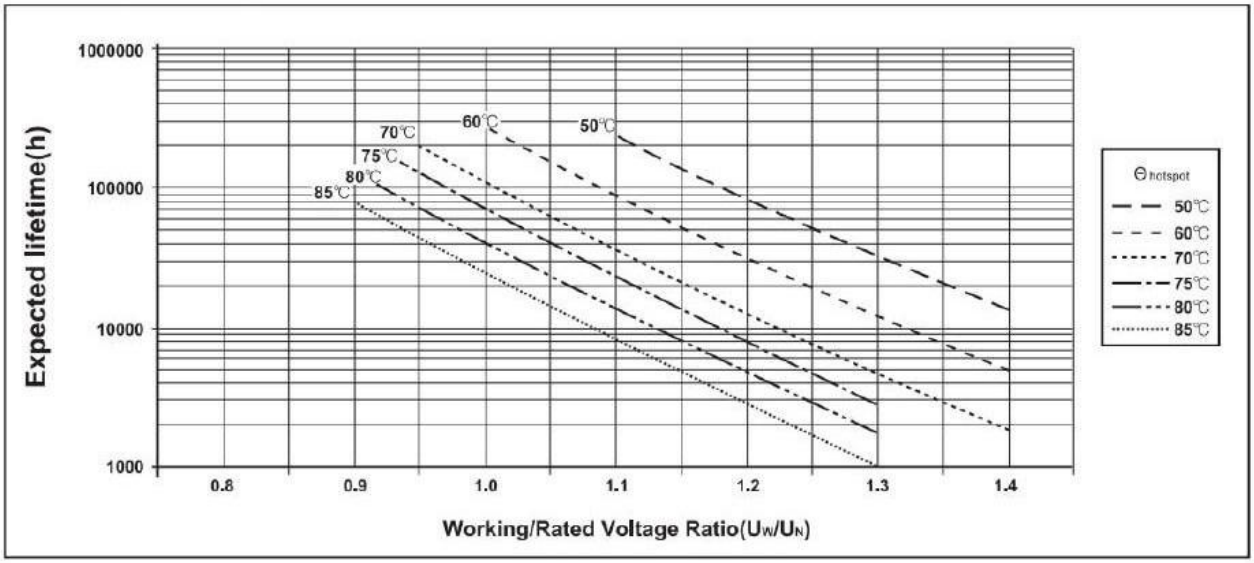
6. Wind power,solar power
7. High voltage frequency converters,SVG,SVC,etc

■ Technical Data

Reference Standard	IEC 61071
Rated Voltage	600VDC
Rated Capacitance	650μF
Capacitance Tolerance	±5%
Main material and mechanical parameters	
Medium	Polypropylene film
Sealing material	Epoxy resin(UL94V-0)
Shell	Aluminum
Terminal	Tinned brass
Body size	Φ86*100mm(See drawing for details)
Max. Torque of terminals	M6-5Nm
Max. Torque of Installation	M12-10Nm
Weight	≈0.8kg
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≤70℃，Irms=40A
Maximum peak current (Î)	3KA(t ≤ 10 us,interval time ≥ 60 s)
Not-repetitive current(Îs)	9KA
Equivalent series resistance (ESR)	≤1.2mΩ（1V、1KHz）
Equivalent series inductance (ESL)	≤40nH （1MHz）
Tangent of loss angle (tanδ)	≤20×10^{-4}（100Hz，20℃）
Thermal resistance (Rth)	6.9K/W
Insulation resistance ($R_i \times C_N$)	≥ 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
Enviromental parameters	
Relative humidity	≤90%

Operating Temperature Range	-40℃～+85℃（Θ_{hs}≤85℃）
Storage Temperature Range	-40℃～+85℃
Altitude	2000m

■ Expected lifetime curves



■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：601=60×10^1V=600V

7～10 Nominal Capacity

Nominal capacitance is 1 to 3 significant digits,coded in four-digit notation,ABCD=ABC*10DpF									
Example：6506=650×10^6pF=650μF　　5005=500×10^5pF=50μF									
If the nominal capacitance is 4 bits,ABCX=ABCXμF,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=1075μF									

11 Capacity level

J=±5%，K=±10%

12～14 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.