

FILM CAPACITORS – DC Link Capacitor

PART NO.: YHF1422005K001HW

YUHUA ELECTRICAL

YHF Series, 1400VAC, 20 μ F, $\pm 10\%$, $-40^{\circ}\text{C}\sim 85^{\circ}\text{C}$, Radial, D84.5*H65mm, NUT

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AUTHORIZED DISTRIBUTOR

NextGen Components, Inc.

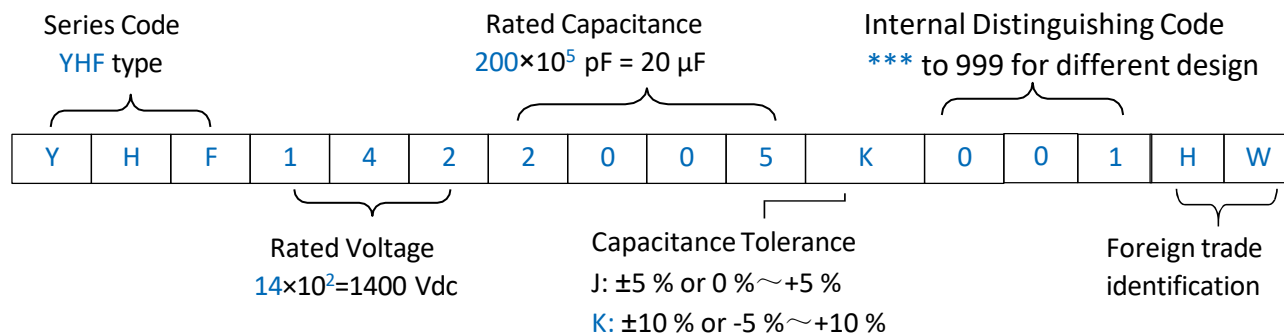
USA Office and Warehouse Location: 9 Orchard Road, Suit 106, Lake Forest, CA 92630, USA

RFQ/Order Support: sales@NextGenComponent.com

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■ PART NUMBER GUIDE

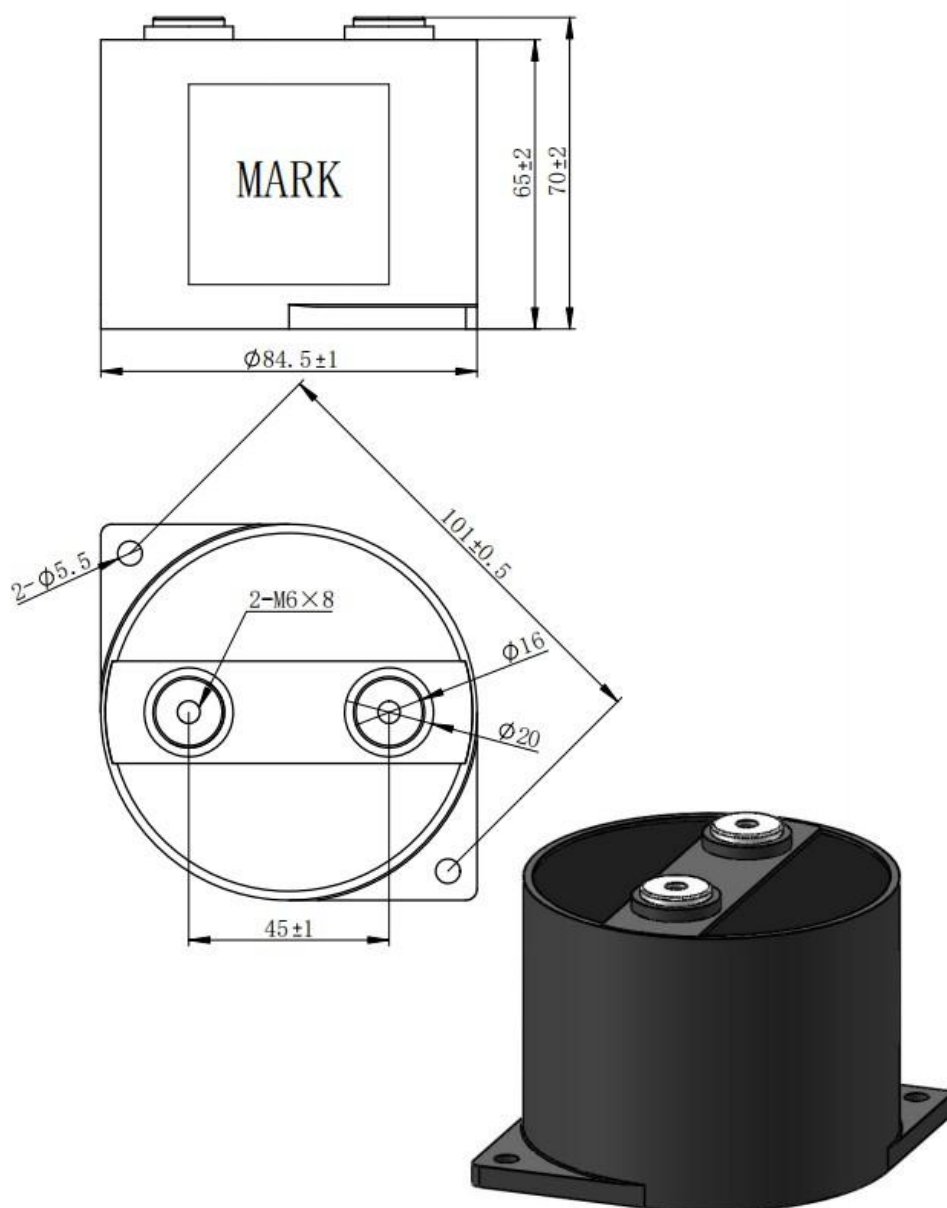
The 14 digits part number is formed as follow:



■ PRODUCT PICTURE



■ OUTLINE DRAWING



MARK



■ FEATURES

1. Plastic housing, resin encapsulation;
2. Low equivalent series resistance, high ripple current can be carried;
3. Long life-time;
4. Metallized polypropylene film structure, good self-healing.

■ APPLICATIONS

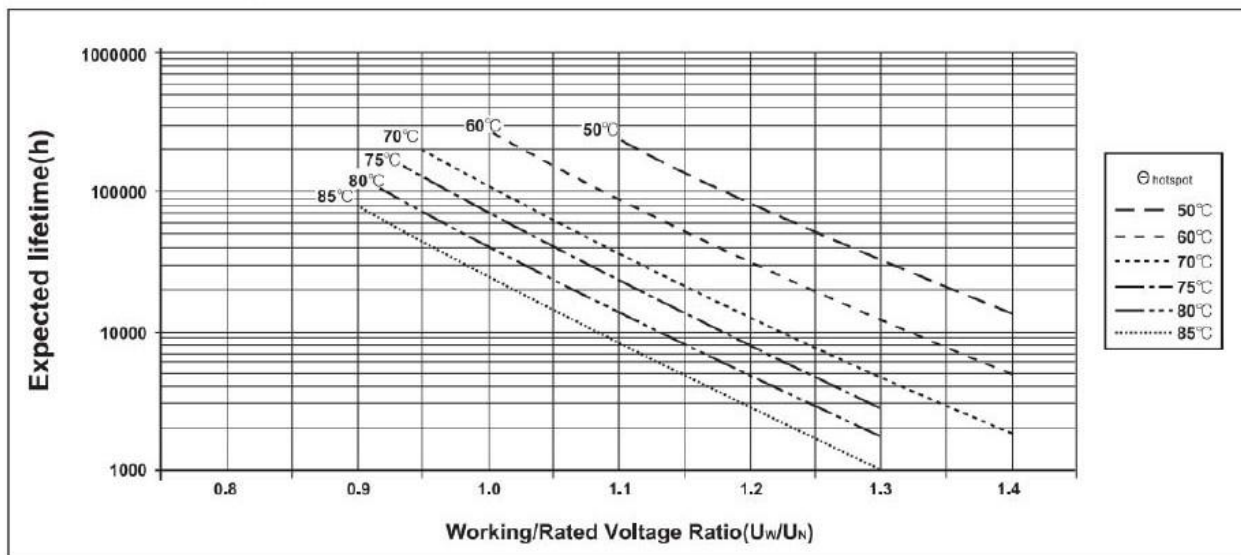
5. DC chain, DC filter circuit;
6. Electric vehicles, hybrid vehicles or charging piles.

■ TECHNICAL DATA

Reference Standard	IEC 61071
Rated Voltage	1400VDC
Rated Capacitance	20μF
Capacitance Tolerance	±10%
Main material and mechanical parameters	
Medium	Polypropylene film
Sealing material	Resin(UL94V-0)
Shell	Plastic housing
Terminal	Nickel-plated brass
Body size	Φ84.5*65mm(See drawing for details)
Max. Torque of terminals	M6-5 Nm
Max. Torque of Installation	2.5 Nm
Weight	≈0.5kg
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≤45°C, Irms=50A @10KHz
Maximum peak current (Î)	1kA(t ≤ 10 us,interval time ≥ 60 s)
Not-repetitive current(Îs)	3kA
Equivalent series resistance (ESR)	≤1.8mΩ (1V,10KHz)
Equivalent series inductance (ESL)	≤35nH (1MHz)
Tangent of loss angle (tanδ)	≤20×10 ⁻⁴
Loss tangent tanδ0	≤2×10 ⁻⁴
Thermal resistance (Rth)	6.9K/W
Insulation resistance (Ri×cN)	≥30MΩ @ 500VDC,60s, 25°C
Interpole voltage resistance test(UTT)	1.5UN (25°C,10S)
Voltage tolerance between polar shells (UTC)	4000VAC (50Hz,25°C,10S)
Expected lifetime	100000h(Un,70°C Reference expected lifetime curves)
Failure rate	≤100FIT
Enviromental parameters	

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

■ EXPECTED LIFETIME CURVES



■ PRODUCT CODE DESCRIPTION

The 14-bit product code is as follows: 1~3

Model code

Example: YHF= Series F products

4~7 Dc rated voltage

Example: 142=14×10²V=1400V

7~10 Nominal Capacity

Nominal capacitance is 1 to 3 significant digits,coded in four-digit notation,ABCD=ABC*10DpF

Example: 2005=200×10⁵pF=20μF

6006=600×10⁶pF=600μF

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%

12~16 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.