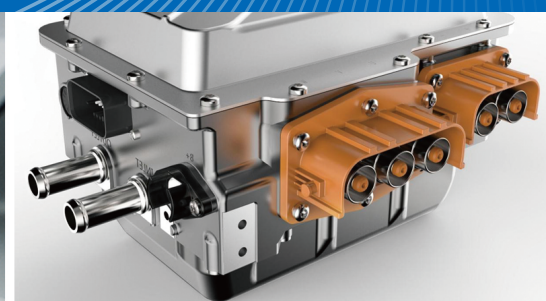
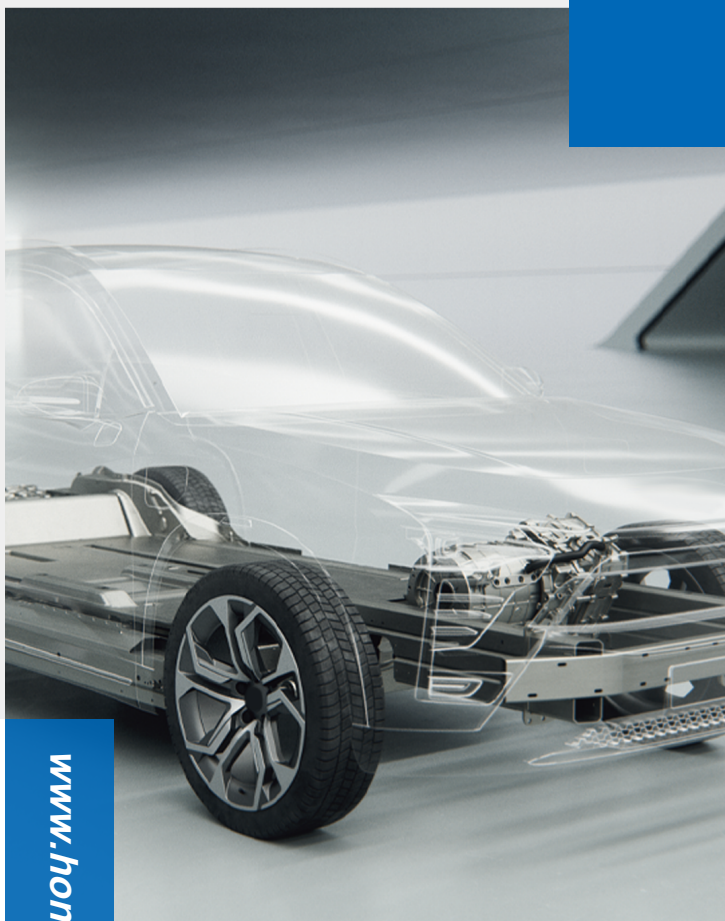


# CUSTOMIZED METALLIZED FILM CAPACITOR



[www.hongfa.com](http://www.hongfa.com)



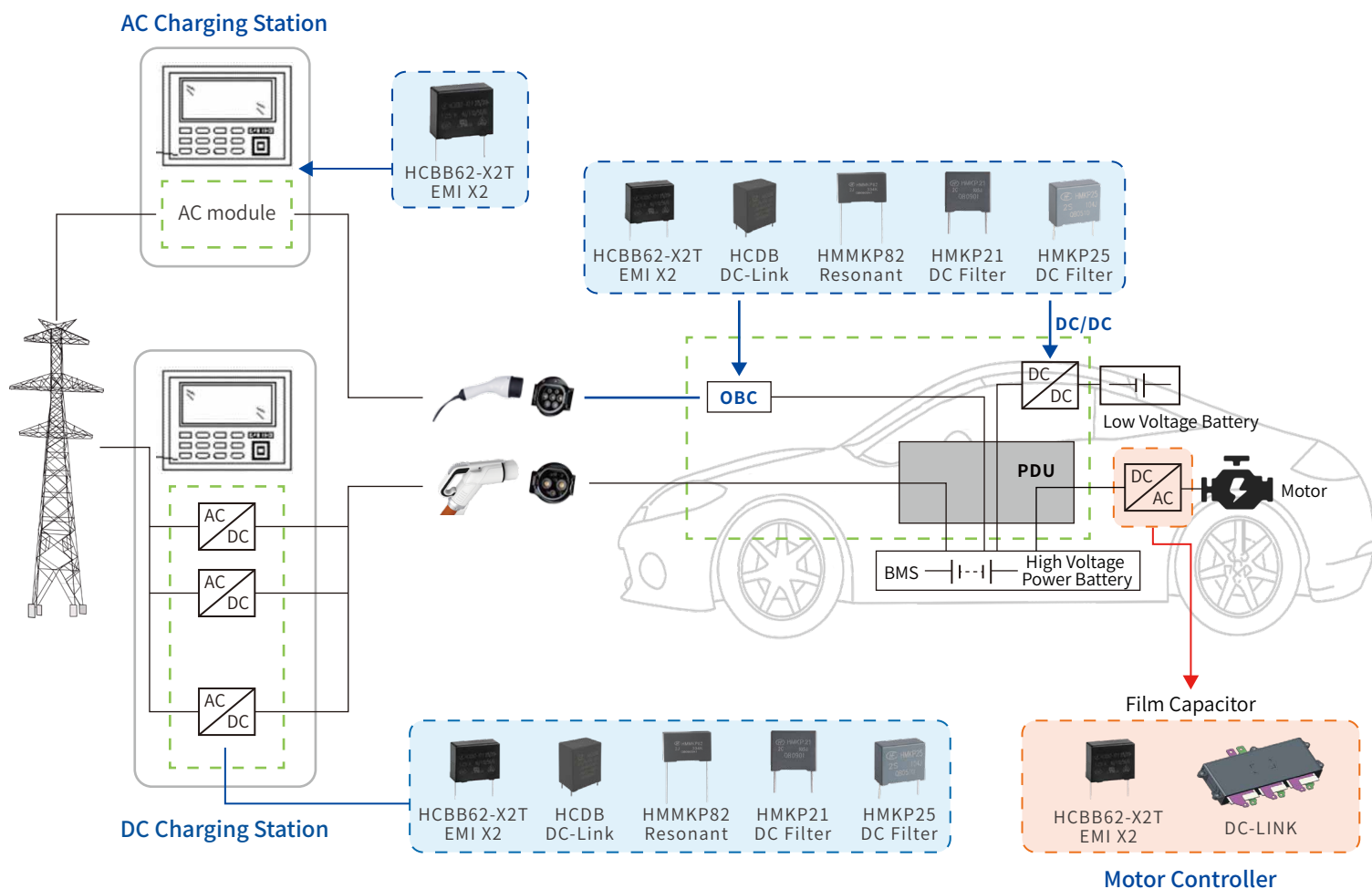
# INTRODUCTION



Hongfa (Shanghai Stock Exchange: 600885) is one of the leading relay manufacturers in the world. Founded in 1984, Hongfa has over 30 subsidiaries and produces products include relay, low-voltage device, high and low voltage complete equipment, connector, capacitor, precision parts, and automatic equipment & etc. Hongfa has successfully built manufacturing industry chain with complete categories and complete supporting facilities.

Zhejiang Hongfa Wufeng Capacitors Co. Ltd. is a professional film capacitor manufacturer with over 40 years film capacitor manufacturing experience. The company is located in Zhuji, Zhejiang province, with strong technical force, product research and professional simulation analysis team. The factory integrates the capabilities of film evaporation, plastic case, mold manufacturing and production of front-end parts. Customized metallized film capacitors are typically used in DC-Link DC filter circuit with the characteristics of self-healing, low ESL, low ESR, strong ripple tolerance and customizable design. Products are widely used in passenger vehicle, commercial vehicle, special engineering machinery vehicle and other fields.

## Film Capacitor Solution for New Energy Vehicle





## Leading Manufacturing Equipment



Germany Leybold Vacuum Coater



Germany Kampf Slitter



Switzerland METAR FLEX Winder



Eight-gun Automatic Metal Sprayer

### ■ Comprehensive Testing and Analysis Capability

Hongfa owns the largest and most comprehensive testing lab, certified by VDE (Germany), UL (North America), and CNAS (China). In 2007, Hongfa became Partner of VDE, the only VDE's partner in the global electronic component industry. In 2008, the Hongfa Chemical Analysis Lab earned CNAS accreditation, capable of providing reliable and RoHS compliance test report.

### ■ First-class Automatic Manufacturing Capability

Hongfa owns the first-class automatic assembly and manufacturing capability in China, and focuses on in-process quality factor analysis and optimization of process route.

### ■ Complete Quality Assurance System

Hongfa strictly insists on the operational philosophy of "Focus on the market, Winning through quality", and quality policy of "Pursue impeccable quality to win customer's satisfaction of our products and services", integrally fulfill the international systems of ISO9001, ISO14001, and IATF16949

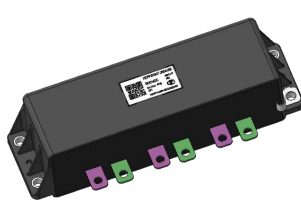
### ■ Customizable Parameters such as Capacitance, Voltage, Ripple Current and Structural Dimension

## 500VDC/550VDC

Model	Rated Capacitance	Capacitance Tolerance	Rated Ripple Current	Body Dimension (LxWxH)
HCPPA050	300 $\mu$ F	J	90Arms, 10kHz, 85°C	123mm×64.5mm×41.2mm
HCPPA051	450 $\mu$ F	J	120Arms, 10kHz, 85°C	176mm×57.5mm×56.2mm
HCPPA001	850 $\mu$ F	K	180Arms, 10kHz, 85°C	239.6mm×70.5mm×62.5mm
.....				



HCPPA050

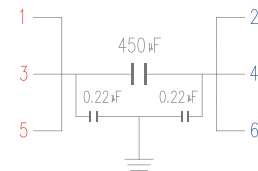
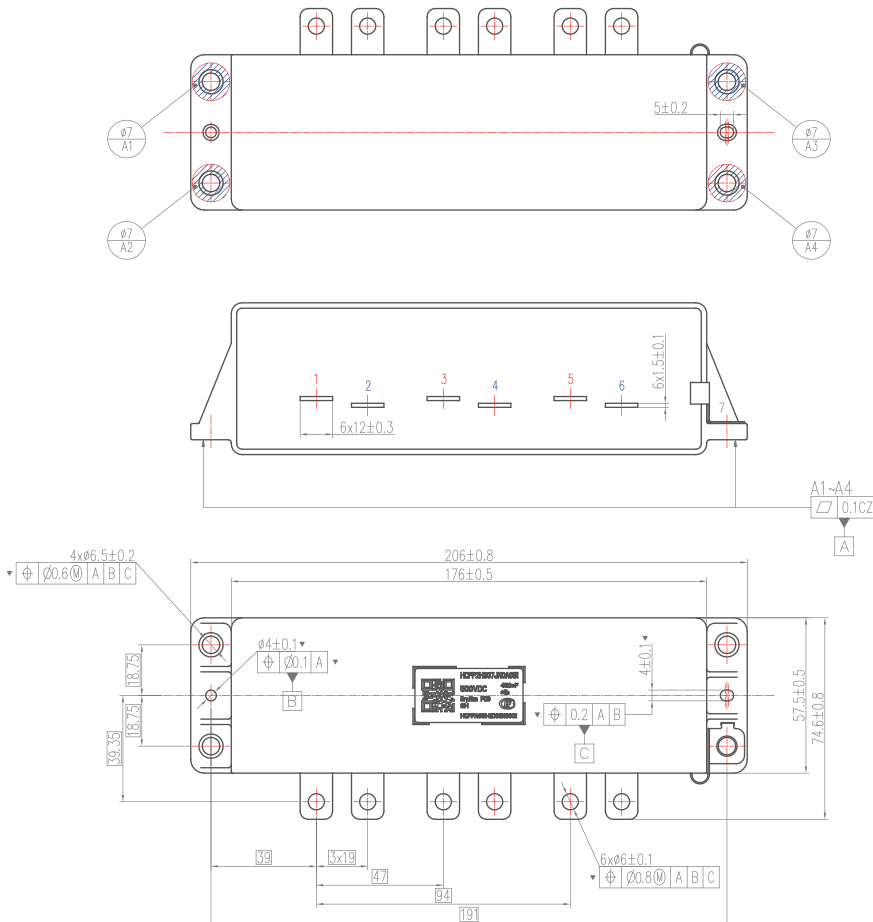


HCPPA051

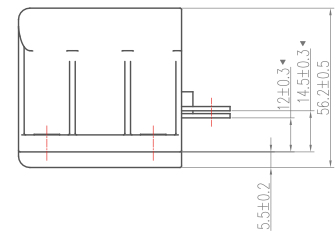


HCPPA001

## 2D-drawing HCPPA051



Electric Diagram



### Technical Requirement

1. Dry-type DC filter capacitor
2. Specification: 500VDC-450 $\mu$ F, 120Arms@10KHz, ambient temperature  $\leq 85^{\circ}\text{C}$
3. Specific parameters of capacitor refer to Specification
4. Unmarked linear dimension and contour refer to 3D
5. Unmarked Radius, Chamfer, and angle tolerance refer to GB/T 1804-e
6. Dimension with ▼ is critical dimension

Unmarked Linear Dimension Tolerance	
(0,30)	$\pm 0.4$
[30,50)	$\pm 0.5$
[50,100)	$\pm 0.6$
[100,170)	$\pm 0.8$
[170,260)	$\pm 1.0$
[260,400)	$\pm 1.5$



HCPPA061

## 2D-drawing HCPA062



### Technical Requirement

1. Dry-type DC filter capacitor
2. Specification: 600VDC-450 $\mu$ F, 120Arms @10KHz, ambient temperature  $\leq 85^{\circ}\text{C}$
3. Specific parameters of capacitor refer to Specification
4. Unmarked linear dimension and contour refer to 3D
5. Unmarked Radius, Chamfer, and angle tolerance refer to GB/T 1804-e
6. Dimension with ▼ is critical dimension

Unmarked Linear Dimension Tolerance	
(0,30)	$\pm 0.4$
[30,50)	$\pm 0.5$
[50,100)	$\pm 0.6$
[100,170)	$\pm 0.8$
[170,260)	$\pm 1.0$
[260,400)	$\pm 1.5$

## 700VDC/750VDC

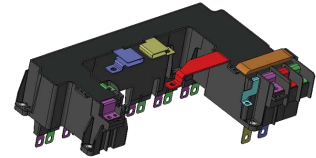
Model	Rated Capacitance	Capacitance Tolerance	Rated Ripple Current	Body Dimension (LxWxH)
HCPPA071	550 $\mu$ F	J	120Arms, 10kHz, 85°C	202mm×53.5mm×51.5mm
HCPPA072	520 $\mu$ F	J	95Arms, 10kHz, 105°C	212mm×80mm×41.5mm (Water Cooling)
HCPPA073	1200 $\mu$ F	J	150Arms, 10kHz, 85°C	346mm×40.5mm×74mm (Irregular Structure)
.....				



HCPPA071

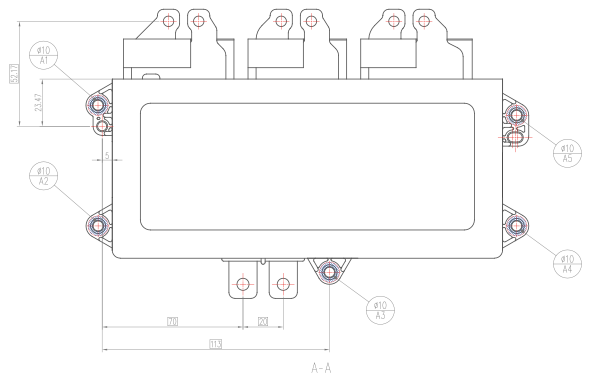
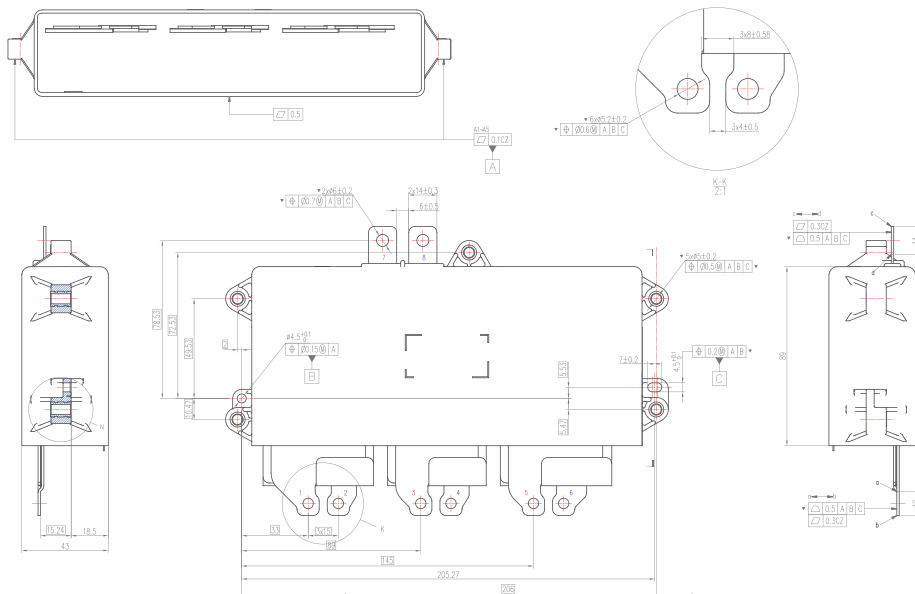


HCPPA072



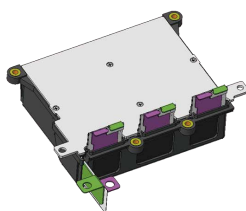
HCPPA073

## 2D-drawing HCPPA072

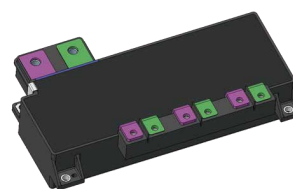




HCPA081

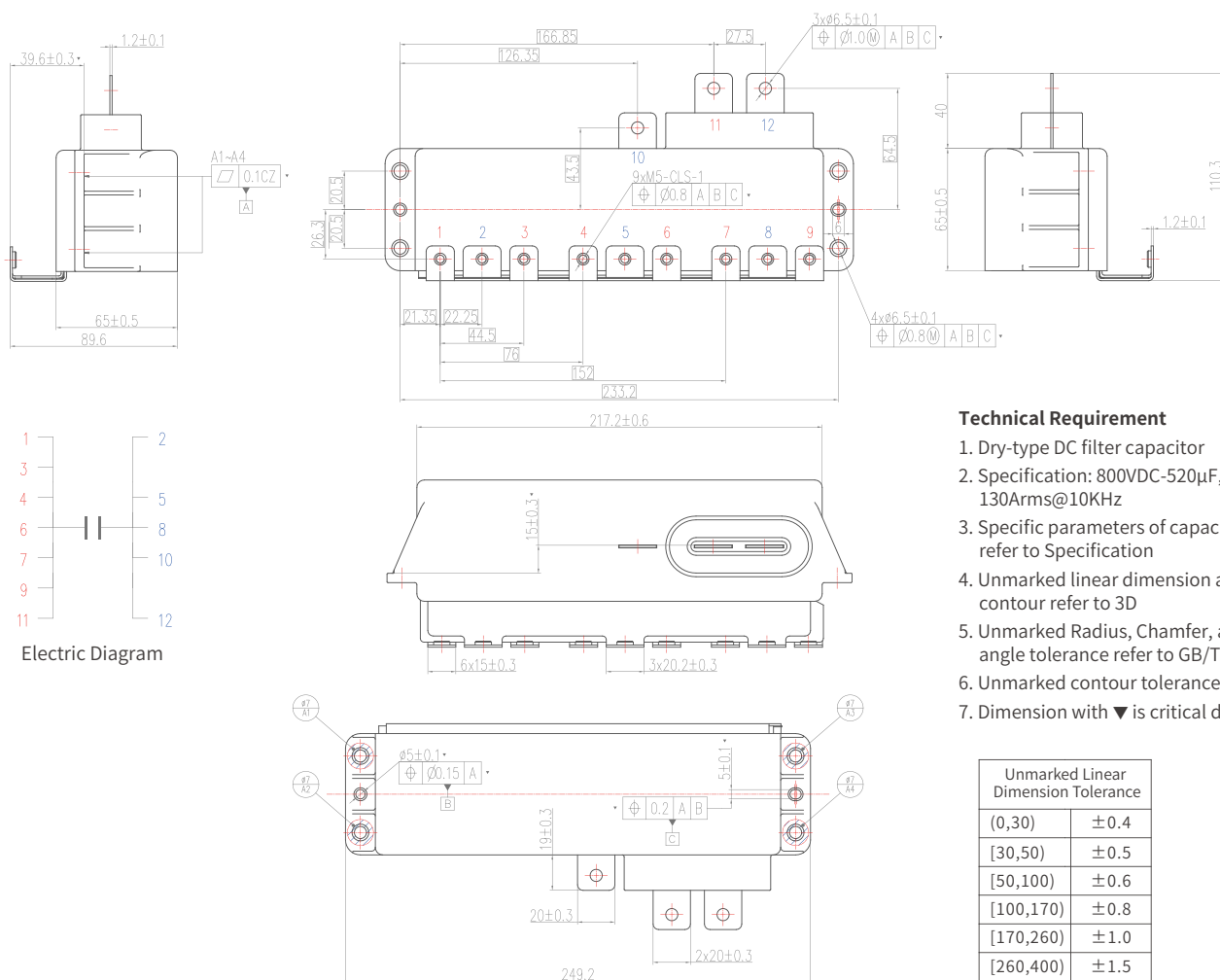


HCPPA082




HCPPA083

## 2D-drawing HCPA081



### Technical Requirement

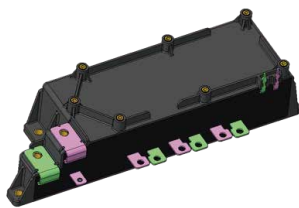
1. Dry-type DC filter capacitor
2. Specification: 800VDC-520 $\mu$ F,  
130Arms@10KHz
3. Specific parameters of capacitor  
refer to Specification
4. Unmarked linear dimension and  
contour refer to 3D
5. Unmarked Radius, Chamfer, and  
angle tolerance refer to GB/T 1804-e
6. Unmarked contour tolerance 

	1.0	A	B	C
---	-----	---	---	---
7. Dimension with ▼ is critical dimension

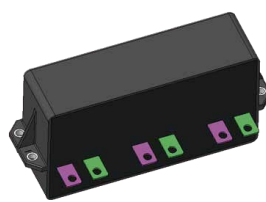
Unmarked Linear Dimension Tolerance	
(0,30)	$\pm 0.4$
[30,50)	$\pm 0.5$
[50,100)	$\pm 0.6$
[100,170)	$\pm 0.8$
[170,260)	$\pm 1.0$
[260,400)	$\pm 1.5$

## 800VDC

Model	Rated Capacitance	Capacitance Tolerance	Rated Ripple Current	Body Dimension (LxWxH)
HCPPA031	800 $\mu$ F	K	200Arms, 10kHz, 85°C	236mm×94.5mm×60mm
HCPPA032	500 $\mu$ F	K	170Arms, 10kHz, 85°C	188mm×57mm×103mm
HCPPA033	1300 $\mu$ F	K	260Arms, 10kHz, 85°C	262mm×84mm×111mm
.....				



HCPPA031

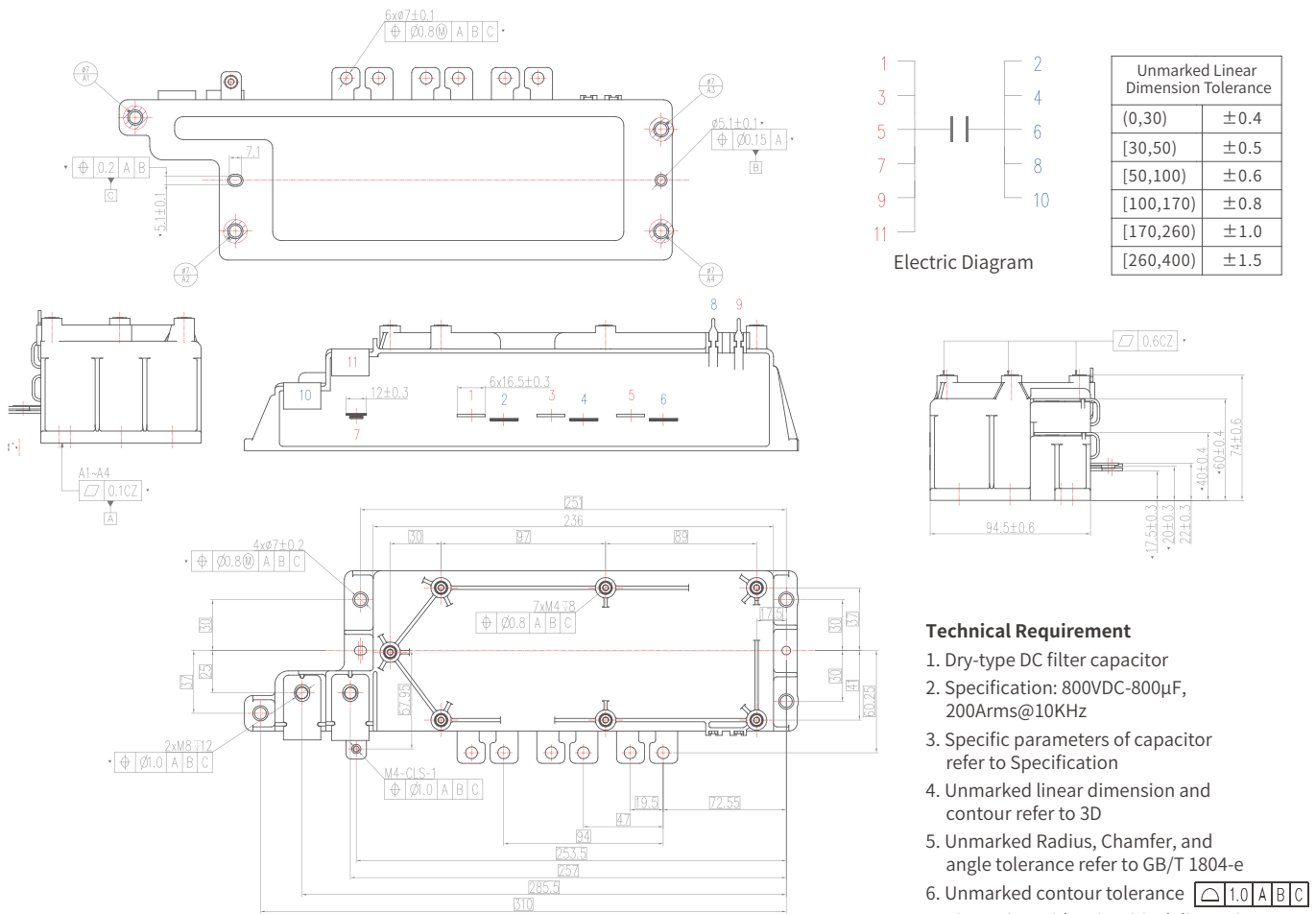


HCPPA032



HCPPA033

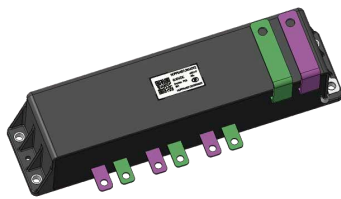
## 2D-drawing HCPPA031





## 900VDC

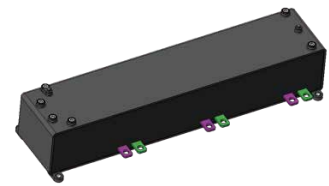
Model	Rated Capacitance	Capacitance Tolerance	Rated Ripple Current	Body Dimension (LxWxH)
HCPPA041	400 $\mu$ F	J	120Arms, 10kHz, 85°C	240mm×64.5mm×62.5mm
HCPCA022	1500 $\mu$ F	K	280Arms, 10kHz, 85°C	402mm×84mm×99mm
HCPCA002	1200 $\mu$ F	K	180Arms, 10kHz, 85°C	366mm×81mm×66mm
.....				



HCPPA041

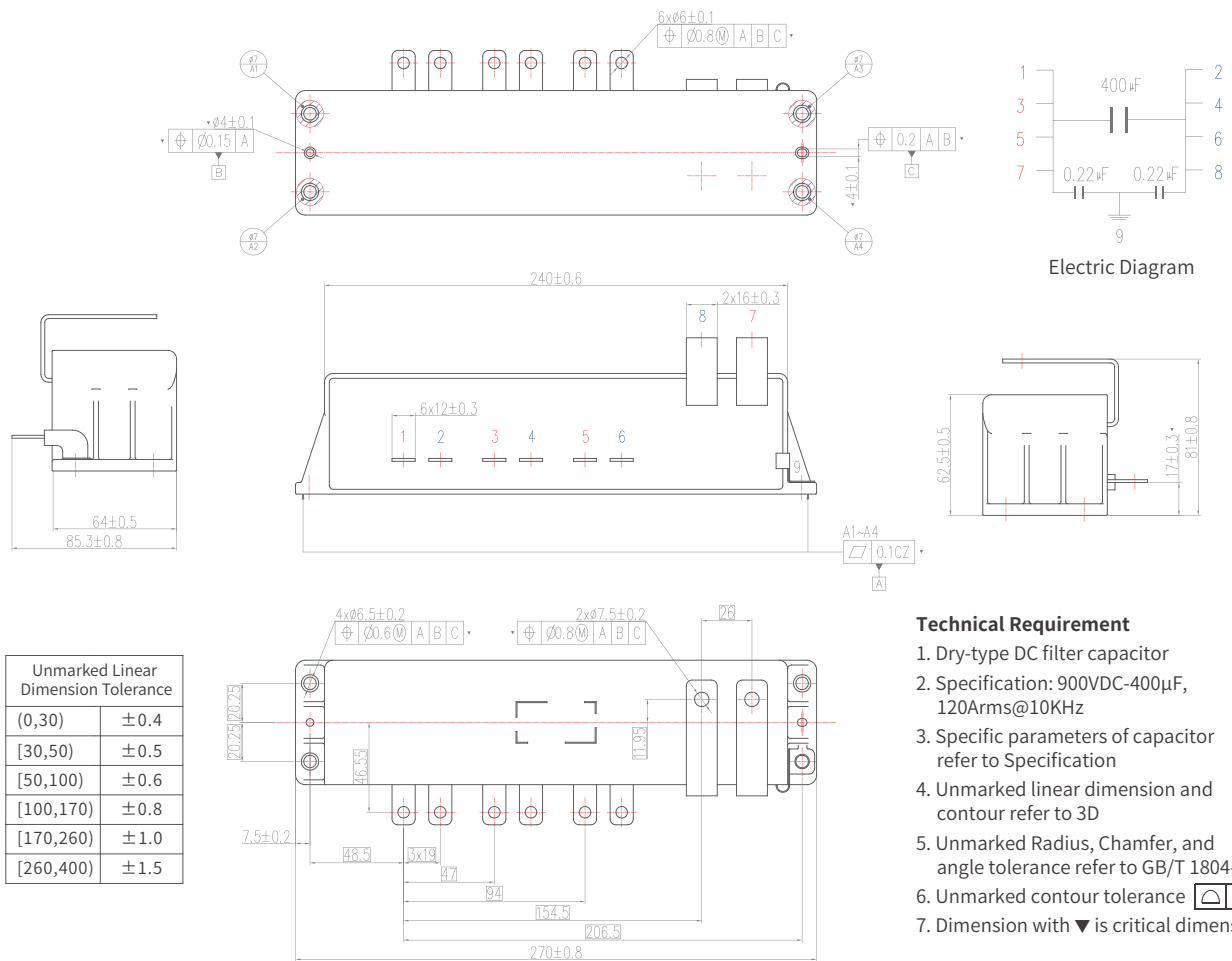


HCPCA022

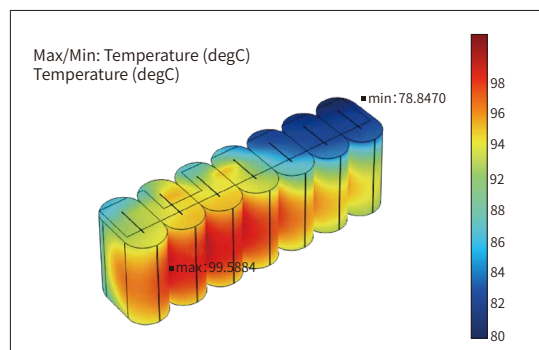
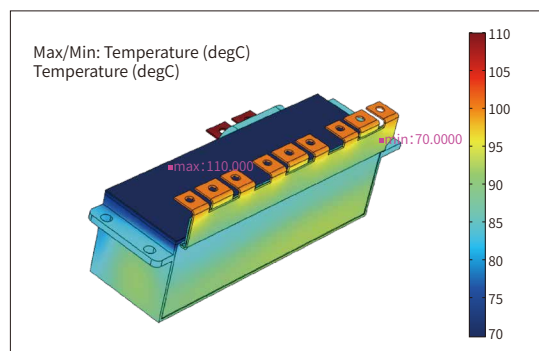
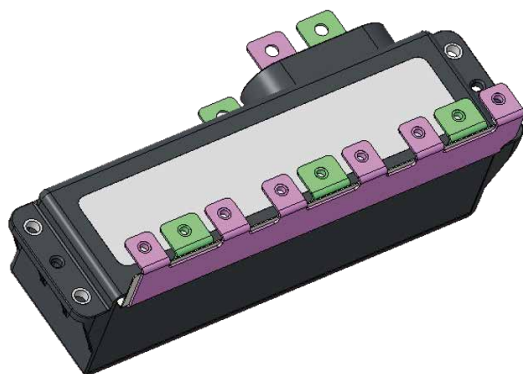


HCPCA002

## 2D-drawing HCPPA041

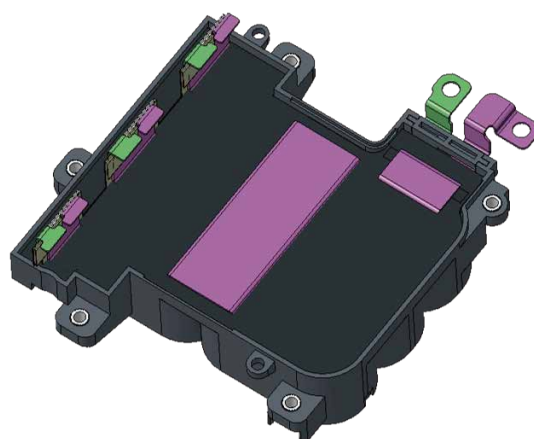
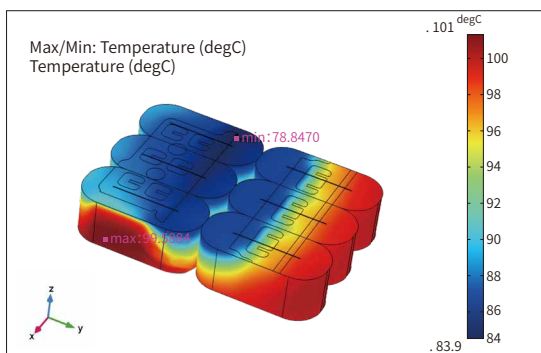
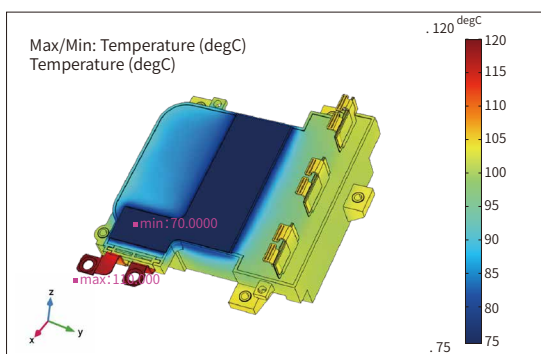


## Hongfa “Heat” Solution—Aluminum Plate Embedded in Case



**Operating temperature 105°C**  
**Terminal thermal boundary 110°C**  
**Core hot spot <99.6°C**

## Hongfa “Heat” Solution—External Copper Bar



**Operating temperature 105°C**  
**Terminal thermal boundary 120°C**  
**Core hot spot <101°C**



Hongfa “ESL” Solution A

☐ Resistance

Units: ohm

Matrix

1 (MHz)

Export...

☒ Inductance

Units: nH

Original

☐ All Freqs

Passivity Tolerance: .0001

Check Passivity

Equivalent Circuit Export...

11.519nH@1MHz

Hongfa “ESL” Solution B

Profile | Convergence | Matrix | Mesh Statistics

☐ Resistance

Units: ohm

Matrix

1 (MHz)

Export...

☒ Inductance

Units: nH

Original

☐ All Freqs

Passivity Tolerance: .0001

Check Passivity

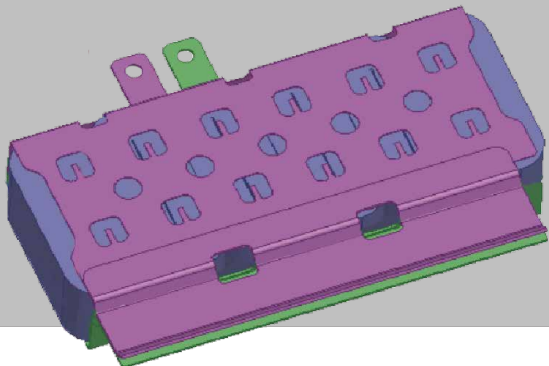
Equivalent Circuit Export...

7.9214nH@1MHz

## Hongfa "ESL" Solution C

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<input checked="" type="checkbox"/> Inductance	Units: nH	Original	<input type="checkbox"/> All Freqs	
Passivity Tolerance:	.0001	Check Passivity	Equivalent Circuit Export...	

	_P92_NEGATIVE_BUSBAR_17_1:Source1	
Freq: 1 (MHz)		
_P92_NEGATIVE_BUSBAR_17_1:Source1	0.9381	



**0.9381nH@1MHz**

**Xiamen Hongfa Electroacoustic Co., Ltd.**

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**E-mail:** marketing@hongfa.com

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