QCB61
Series

新能源汽车用金属化膜滤波电容器

DC-Link metallized film capacitors for energy vehicles

CJE 凭借自身设计制造薄膜电容数十年的技术积累，应用自主知识产权的专利技术，创新研发并推出了针对节能环保绿色新能源汽车需求的 EV 及 HEV 电驱控制器专用电容器。

这些电容器额定电压范围 200～1200VDC，电容量范围 200～2000μF，可以为 10KW～160KW 不同功率等级的 EV/HEV 电驱控制器提供膜电容解决方案。

这些电容均采用金属化聚丙烯薄膜设计，具有优良的自愈特性，可以有效避免由于过电压导致产品击穿；电容的工作温度范围可达-40～105℃。

采用独创的设计及制造技术，这些电容器的串联等效电阻 ESR 极低（低至 0.1mΩ以下），有效值电流持续荷载能力高达 250A 以上。

这些电容器都具有很小的串联等效电感（低至 5nH 以下），而且一般均采用内置叠层母排技术。特别适用于与 IGBT 的直联式安装，完全可以省略常规必须的缓冲电容器、直流母排，大大简化安装结构和安装程序，而且控制器的紧凑程度大幅度提高。

按照客户的需要，可以在电容器内部集成抑制共模干扰的“Y”电容。

注： 由于电池电压、驱动功率等不同，电驱控制器的空间尺寸、内部布局也千差万别，这些电容一般都是高度定制化的产品。请务必尽可能多地提供与电容相关的电气特性、机械配合等信息，并与我们的研发团队保持密切的沟通。

您的需求就是我们研发的动力！

CJE has technical experience in designing and manufacturing film capacitor for decades, adopts independent intellectual property rights of national patent technology, researches and develops EV and HEV electric drive controller capacitor used for New energy vehicles to promote ideas of energy saving and environmental protection .

The capacitors' rated voltage range is 200 ~ 1200VDC, capacitance range is from 200 to 2000uF, can provide the film capacitance solution for EV/HEV electric drive controller with different levels of power between 10 kw to 160 kw.

These capacitors are made of metallized polypropylene film design , with excellent self-healing properties , can effectively avoid the over-voltage lead to product breakdown ; capacitor operating temperature range up to -40 ~ 105℃.

After adopt the original designing and manufacturing technology, the capacitors' equivalent series resistance is very low (as low as 0.1 mΩ less), the RMS current load capacity can be up to 250 A or more.

These capacitors have very small equivalent series inductance (as low as 5nH less) , and generally are made of laminated busbar technology built. Especially suitable for direct contact with the IGBT mounting , can be omitted conventional buffer capacitors, DC bus, which greatly simplifies the installation structure and installation procedures, but how compact controller greatly improved.

According to the needs of customers, we can integrate the "Y" type capacitor to suppress common-mode interference within capacitor.

Note: Because the battery voltage, the drive power and so different, electric drive controller space dimensions, the internal layout is also vastly different, these capacitors are generally highly customized products. Be sure to provide as much capacitance associated with the electrical characteristics, mechanical with other information, and with our R & D team to maintain close communication .

Your demand is our development power!

30kw新能源汽车电控用母线电容
30kw bus bar capacitors for electric control of new energy vehicles

代表规格Representative Descriptions: QCB61 500VDC-250uF

技术参数 Technical data

引用标准 Reference Standard	GB/T17702-2013(IEC 61071：2007)；AEC Q200D	
气候类别 Climatic Category	40/105/21	
工作温度范围 Operating Temperature Range	-40℃ ~ 105℃ (θhs)	
贮存温度范围 Storage Temperature Range	-40℃ ~ 105℃	
额定电压（U_{NDC}） Rated Voltage	500Vdc	
额定容量（C_N） Rated Capacitance	250μF	
电容量准许偏差 Capacitance Tolerance	K：±10%	
耐电压 Voltage Proof	极间 Between Terminals ：	1.5U_N(10S, 20±5℃)
	极壳之间 Between Terminals and Case ：	3000Vac（10s， 50Hz，20±5℃）
	Y 电容极间 Between Terminals @ Clase Y：	3000Vdc（2s，20±5℃）
介质损耗角正切 tan δ_d	2×10^{-4}	
绝缘电阻 Insulation Resistance	≥120MΩ @ 100VDC,60s，20±5℃	
等效串联电阻 ESR	≤0.6mΩ @ 10kHz	
自感 Ls	≤13nH (Measure under the holes)	
最大直流侧电流 Max.I_{rms} for DC	120A	
最大纹波电流 Max.ripple I_{rms}	80A	
最大峰值电流 Î	2500A	

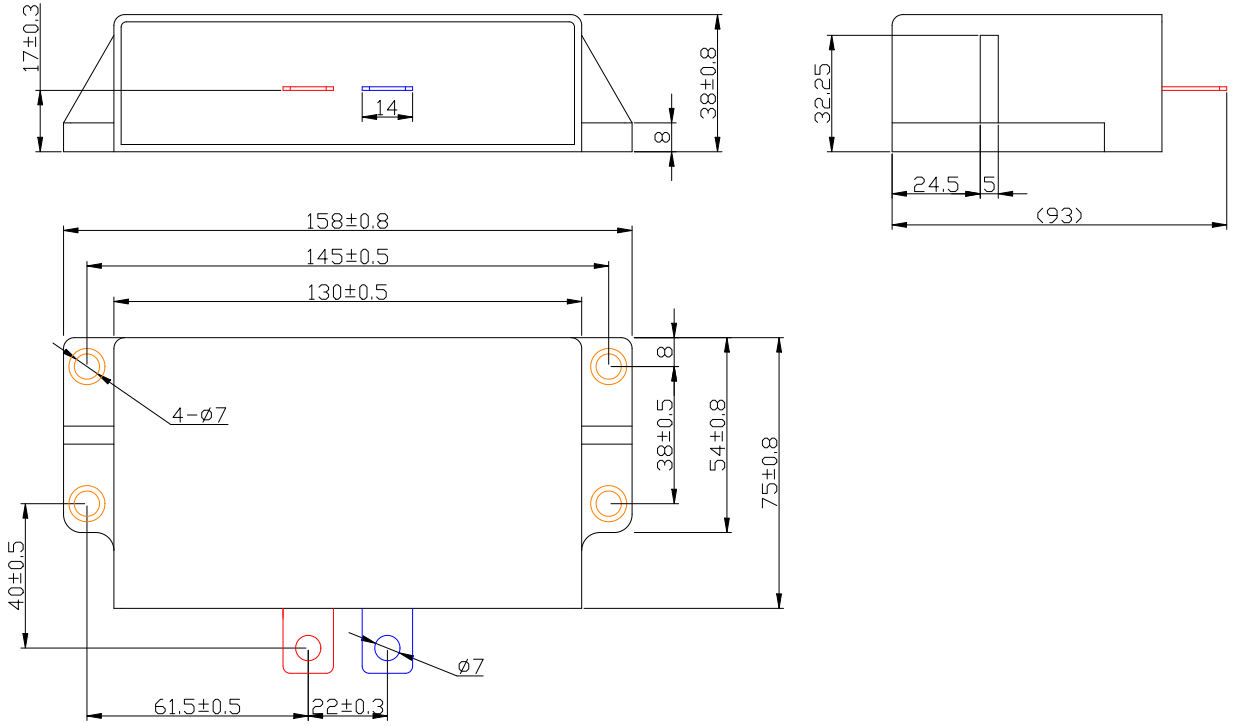
最大冲击电流Îs	6000A (non-repetitive)
非周期性冲击电压 Us	650V
爬电距离 Creepage distance	6mm
电气距离 Electrical distance	6mm
预期寿命 Expected lifetime	参考寿命曲线 Refer to expected lifetime curve
失效率 Failure rate	50FIT
本体尺寸 Dimension （L×w×h）	130mm×75mm×38mm
重量 Weight	≈0.5KG

θcase：外壳温度　　θcase:Temperature of case

ESR：　电容器内部等效串联电阻的总和　　ESR: The sum of all ohmic resistances occurring inside the capacitor

$\theta hs=\theta case+Irms^2\times ESR\times Rthhc$

外形图 Outline Drawing



60kw新能源汽车电控用母线电容
60kw bus bar capacitors for electric control of new energy vehicles

代表规格Representative Descriptions:QCB61 500VDC-750uF

技术参数 Technical data

引用标准 Reference Standard	GB/T17702-2013(IEC 61071：2007)；AEC Q200D	
气候类别 Climatic Category	40/105/21	
工作温度范围 Operating Temperature Range	-40℃ ~ 105℃ (θhs)	
贮存温度范围 Storage Temperature Range	-40℃ ~ 105℃	
额定电压（U_{NDC}） Rated Voltage	500Vdc	
额定容量（C_N） Rated Capacitance	750μF	
电容量准许偏差 Capacitance Tolerance	K：±10%	
耐电压 Voltage Proof	极间 Between Terminals ：	1.5U_N(10S, 20±5℃)
	极壳之间 Between Terminals And Case ：	3000Vac（10s， 50Hz，20±5℃）
	Y 电容极间 Between Terminals @Clase Y：	3000Vdc（2s，20±5℃）
介质损耗角正切 tan δ_d	2×10^{-4}	
绝缘电阻 Insulation Resistance	≥40MΩ @ 100VDC,60s，20±5℃	
等效串联电阻 ESR	≤0.4mΩ @ 10kHz	
自感 Ls	≤12nH (Measure under the holes)	
最大直流侧电流 Max.I_{rms} for DC	200A	
最大纹波电流值 Max.ripple I_{rms}	180A	
最大峰值电流Î	6000A	
最大冲击电流Îs	12000A （non-repetitive）	
非周期性冲击电压 Us	650V	
爬电距离 Creepage distance	6mm	
电气距离 Electrical distance	6mm	

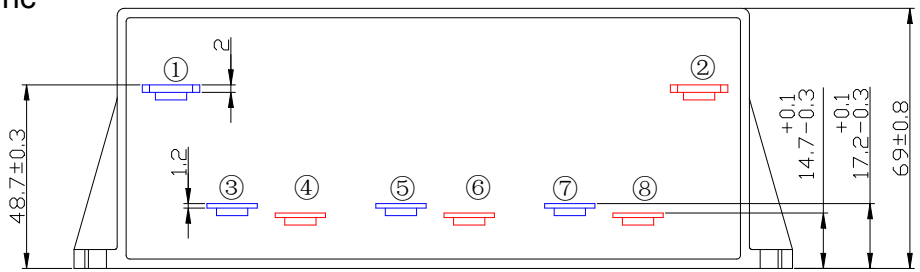
预期寿命 Expected lifetime	参考寿命曲线 Refer to expected lifetime curve
失效率 Failure rate	50FIT
本体尺寸 Dimension (L×w×h)	176mm×74mm×69mm
重量 Weight	≈1.25KG

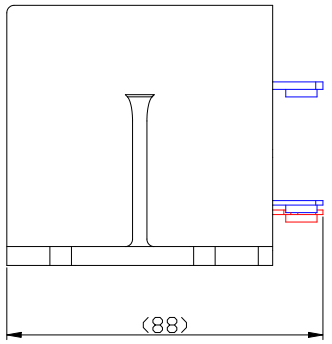
θcase：外壳温度　　θcase:Temperature of case

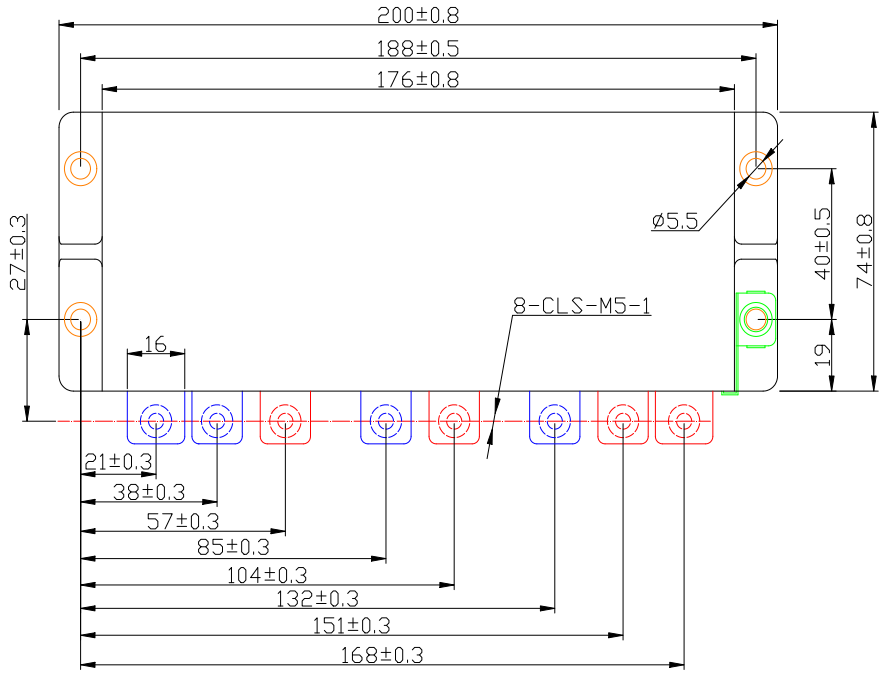
ESR: 电容器内部等效串联电阻的总和　　ESR: The sum of all ohmic resistances occurring inside the capacitor

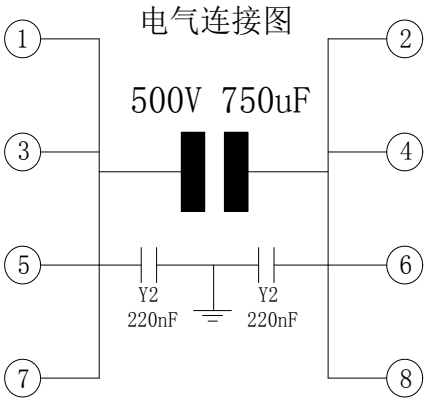
$\theta hs=\theta case+Irms^2\times ESR\times Rthhc$

外形图 Outline Drawing









100kw 新能源汽车电控用母线电容
100kw bus bar capacitors for electric control of new energy vehicles

代表规格 Representative Descriptions: QCB61 800VDC-900uF

技术参数 Technical data

引用标准 Reference Standard	GB/T17702-2013(IEC 61071：2007)；AEC Q200D	
气候类别 Climatic Category	40/105/21	
工作温度范围 Operating Temperature Range	-40℃ ~ 105℃ (θhs)	
贮存温度范围 Storage Temperature Range	-40℃ ~ 105℃	
额定电压（UN_{DC}） Rated Voltage	800Vdc	
额定容量（C_N） Rated Capacitance	900μF	
电容量准许偏差 Capacitance Tolerance	J：±5%	
耐电压 Voltage Proof	极间 Between Terminals ：	1.5U_N(10S, 20±5℃)
	极壳之间 Between Terminals And Case ：	3000Vac（10s， 50Hz，20±5℃）
	Y 电容极间 Between Terminals @Clase Y：	3000Vdc（2s，20±5℃）
介质损耗角正切 tan δ_d	2×10^{-4}	
绝缘电阻 Insulation Resistance	≥35MΩ @ 100VDC,60s，20±5℃	
等效串联电阻 ESR	≤0.3mΩ @ 10kHz	
自感 Ls	≤15nH (Measure under the holes)	
最大直流侧电流 Max.I_{rms} for DC	400A	
最大纹波电流值 Max.ripple I_{rms}	380A	
最大峰值电流Î	10000A	
最大冲击电流Îs	25000A （non-repetitive）	
非周期性冲击电压 U_s	1050V	
爬电距离 Creepage distance	10mm	
电气距离 Electrical distance	10mm	
预期寿命 Expected lifetime	参考寿命曲线 Refer to expected lifetime curve	
失效率 Failure rate	50FIT	
本体尺寸 Dimension (L×w×h)	339mm×97mm×67mm	

重量 Weight	≈3.75KG

θcase:外壳温度　　θcase：Temperature of case

ESR: 电容器内部等效串联电阻的总和　　ESR: The sum of all ohmic resistances occurring inside the capacitor

$\theta hs=\theta case+Irms^2\times ESR\times Rthhc$

外形图 Outline Drawing