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High Current DC-Link Capacitor for EV/HEV Car of Inverter

❖General Description

Standard Reference	IEC 61071	
Climatic Category	40 / 105 / 56	
Max . Altitude	2000 m	
Dielectric Material	Self-Healing Metallized Polypropylene	
Case Type)	Plastic or Aluminum Case, Resin filled, UL94V-0	
Terminals Type	Female screw or Flat Copper of terminals	
Capacitance Range	Cn: 100µF ~ 10000µF (1kHz , 20°C)	
Capacitance Tolerance	J (±5%), K(±10%)	
Dielectric Dissipation Factor	tg δo: 0.0002 (1kHz , 20°C)	
Insulation Resistance	IR × Cn : ≥10000s (100Vdc, 60s, 20°C)	
Rated Voltage	Un : 300VDC ~ 2000VDC	
Test voltage UTT	UTT: 1.5Un (10s , 20°C) –Test voltage between both terminals	
Test voltage UTC	UTC: 4000Vac (10s , 20°C) –Test voltage between terminals with case	
	1.1 × Un : 30% of on-load duration	
	1.15 × Un : 30 min/day	
Maximum Over Voltage	1.2 × Un : 5 min/day	
	1.3 × Un : 1 min/day	
	1.5 × Un : 30 ms/time, 1000 times during the life of the capacitor	
Operating Temperature	-40°C ~ +105°C (θhs≤105°C)	
	50% linear voltage derating from θhs 85°C to 105°C	
Lifetime Expectancy	100,000 hours (Un , θhs≤70°C)	
Max. Torque of terminals	M6 : 4.5 Nm , M8 : 6.5 Nm	
Applications	Wind/Traction Inverter , EV/HEV Inverter , High frequency power	
Remarks	RoHs compliant on request. Add "R" to p/n	
	*Other capacitance, voltage and dimensions are available on request.	

❖Electrical Characteristics

USMEV Series

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Part Number	Cn	Un	UTT	UTC	ESL	ESR	Irms	dv/dt	I peak	Dimension (mm)
	µF	Vdc	Vdc	Vac	nH	mΩ	Max.	V/µs	Amps	
USMHEV-307K450C	300	450	675	4000	≤ 25	≤ 0.8	80A	4	1200	Outline size on request . Other spec. on request.
USMHEV-507K450C	500	450	675	4000	≤ 25	≤ 0.8	120A	4	2000	
USMHEV-587K450C	580	450	675	4000	≤ 25	≤ 0.8	100A	4	2320	
USMHEV-108K450C	1000	450	675	4000	≤ 25	≤ 0.6	120A	3	3000	
USMHEV-507K600C	500	600	900	4000	≤ 25	≤ 0.8	90A	5	2500	
USMHEV-108K600C	1000	600	900	4000	≤ 25	≤ 0.6	120A	5	5000	
USMHEV-108K900C	1000	900	1350	4000	≤ 25	≤ 0.6	120A	6	6000	
USMHEV-208K900C	2000	900	1350	4000	≤ 25	≤ 0.5	250A	6	12000	

*Other capacitance , voltage and dimensions are available on request.

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