

HMAA Series

Soft-pack LIC Module 软包式LIC 模组

Typical applications 典型应用

- Smart-grid primary frequency modulation
- Energy-feedback systems
- Tunnel and mining locomotives
- Port trucks; pure electric buses
- Ferries, sightseeing cars, golf carts, AGV and RGV
- Energy-saving elevators
- Hybrid power-driven engineering and harbor machinery
- Emergency UPS; electric tools
- Wind, solar and other renewable-energy storage



Branding illustration / 品牌外观示意

Electrical characteristics 电气特性

Parameter / 项目	Specification / 规格
Rated voltage / 额定电压	12-720 V
Operating temperature / 工作温度	-25 to +55 °C
Capacitance range / 容量范围	277-14000 F
Capacitance tolerance at 25 °C / 容量偏差	-20% to +20%

Reliability characteristics 可靠性特性

Test / 项目	Condition / 条件	Requirements / 要求
Temperature characteristics 温度特性	-25 to +55 °C -25 至 +55 ° C	Capacitance change: within 50% of initial value at 25 °C ESR _{AC} : " 4 × initial specified value 容量变化: 50% 以内; 内阻: ≤4 倍
High-temperature load 高温负荷	Rated voltage, 55 °C, 1,000 h 额定电压, 55 ° C, 1,000 小时	Capacitance change: within 20% of initial value ESR _{AC} : " 2 × initial specified value 容量变化: 20% 以内; 内阻: ≤2 倍
High-temperature storage 高温存储	55 °C, 1,000 h 55 ° C, 1,000 小时	Capacitance change: within 20% of initial value ESR _{AC} : " 2 × initial specified value 容量变化: 20% 以内; 内阻: ≤2 倍
Cycle life 循环寿命	50,000 cycles, 25 °C 2.5-4.0 V 50,000 次充放电循环, 25 ° C	Capacitance change: within 20% of initial value ESR _{AC} : " 2 × initial specified value 容量变化: 20% 以内; 内阻: ≤2 倍

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Ratings and part numbers 额定值与料号

HMAA Modules

U_R 额定电压	U_{min} 最低电压	Rated Capacitance 25℃/额定容量 (*)	ESR_{DC} 直流内阻	Rated Current 额定电流	Size 尺寸 (LxWxH)	Weight 重量	P/N 产品代码
(V)	(V)	(F)	(mΩ)	(A)	(mm)	(Kg)	-
12	7.5	10600	4	100	320 x 140 x 105	5	SCMHAA012109MA
32	20	12000	5	300	650x160x345	27	SCMHAA032129MA
64	43	400	80	32	458 x 228 x 75	6.4	SCMHAA064407MA
136	90	277	100	50	305 x 138 x415	17.5	SCMHAA136277MA

HMAA System

U_R 额定电压	U_{min} 最低电压	Rated Cap. 25℃/额定容量 (*)	ESR_{DC} 直流内阻	Rated Current 额定电流	Size 尺寸 (LxWxH)	Weight 重量	P/N 产品代码
(V)	(V)	(F)	(mΩ)	(A)	(mm)	(Kg)	-
56	35	14000	5	1000	802 x 725 x 471	665	SCMHAA056149MA
600	375	400	100	300	950 x 600 x2350	980	SCMHAA600407MA
640	400	1250	30	1000	2872 x 1450 x865	2500	SCMHAA640128MA
720	460	520	110	300	1500 x 650 x2520	1325	SCMHAA720527MA

Custom products are available on request.