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Thermal Solution
Automotive

*All products are RoHS compliant.

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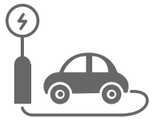
Sensor Blower

Silence, 20 phon
-40°C~105°C Operation Temperature

Seat Ventilation

Charger Station



ADAS System

Car Antenna for 5G Connectivity

Meet CISPR 25 EMI Class 3

HVAC BLDC Motor

Battery Pack / DCDC Convertor

Integrated Solution More Than 500W

ECU Fan

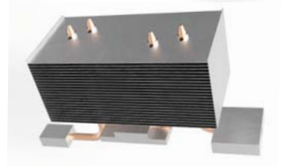
Stereo Amplifier

Small Size, Performance 20% UP

LED Head Light

High Temperature / Long Life
Pass 105°C for 3,000 hrs Running

Car Fridge



Onboard Charger

Wireless Charger

IP54, PWM Control

PM2.5 Air Purifier

Infotainment

HUD

Validation – **Mechanical / Environmental**

Test items will be defined per customer test/validation plan

- Thermal Shock Test
- Mechanical Shock Test
- Durability Test
- Salt Foggy Test
- Drop Test
- IP Protection
- Corrosion Protection
- Acoustic Quality
- G6.3 Compliant Balancing

Validation - Electrical

Test items will be defined per customer test/validation plan

- Locked-Rotor Protection
- Over/Under Voltage
- Over Current
- Over Temperature
- Local Interconnect Network (LIN)
- PWM Control
- Current Limiter
- ESD Protection
- Short Circuit Resistance
- Back EMF Design
- EMI/EMC Shield
- Inverse Polarity Protection

Sunon Offers Heat Dissipation Total Solution Technology and Services

- Satisfy High Safety & Security Standard
- Conform to Eco-friendly Requirement
- Realize Artificial Intelligence Technology
- Over 20 years Cooperation with Worldwide Automobile Manufacturers

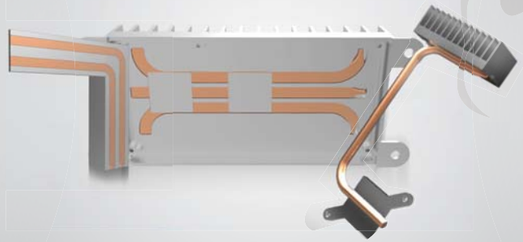
With 40 years of experience, Sunon has been focused on the research and development of core motor technologies and cooling to the advantage of a vast customer base with a wide variety of systems, applications and requirements. Sunon is proud of its' cooling problem-solving abilities, utilizing state-of-the-art equipment and innovative techniques to tailor-make optimized cooling systems for our clients' latest applications. From function, accessory shape and cost, to perception about commodity experience, Sunon has been paying careful attention to meet clients' particular goals and requirements.

~20W

Heat Sink+Fan

- Economic design solution
- Minature module size
- Efficient heat dissipation

Application	LED Head light
Material	AL heatsink+Heat pipe+Fan
TDP	20W
Size	D30x84mm



50W

Heat Pipe

- Overcome space limitation
- Efficient heat transfer
- Flexible design feasibility

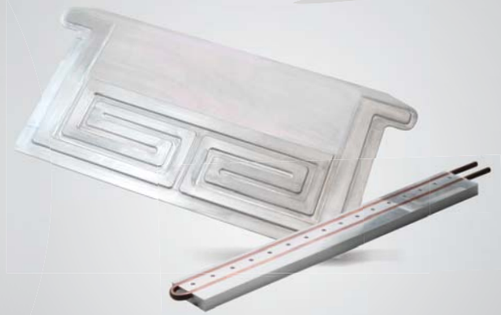
Application	HUD, ADAS, EV car charger, onboard charger…

200W

Total Solution

- Efficient cooling solution
- Optimized module weight
- Shorten and simplify the purchasing

Application	Stereo Amplifier and others



500W

Cold Plate

- High Power Density
- High performance design
- Multi heat source cooling solution

Application	Car Battery
Material	Aluminum
TDP	500W
Size	550 x 265 x 5mm

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Axial Fan

- AEC-Q100/Q200
- AEC-Q100
- Non AEC-Q

Axiel Fan

Remark : Spec. & size only for reference, please contact sales for further enquiry.
Production sample's available for request.

No.	size (mm)	Model	Bearing	Rated Voltage (V)	Operating Voltage Range (V)	Rated Current (mA)	Fan Speed (RPM)	Max. Air Flow (CFM)	Max. Air Flow (m^3/min)	Static Pressure (inch-H2O)	Static Pressure (mm-H2O)	Noise (dB(A)) 1M	Operating Temp. (℃)
1	40X40X10	MF40101V1	Vapo	12	6 ~ 13.8	78	7700	8.2	0.232	0.18	4.572	31	-20 ~ +90
2	40X40X10	EF40101B1	2 Ball	12	6 ~ 13.8	67	7200	7.9	0.224	0.18	4.572	28	-40 ~ +90
2	40X40X10	HA40101V4	Vapo	12	8~14	31	5000	5.4	0.153	0.09	2.286	19.3	-20 ~ +85
3	40X40X20	MF40201V1	Vapo	12	6 ~ 13.8	58	7000	8.5	0.241	0.22	5.588	27.4	-20 ~ +85
4	40X40X20	PF40201B1	2 Ball	13.5	6 ~ 16	180	13000	14	0.396	0.79	20.066	46.5	-40 ~ +105
5	50X50X15	EF50151B1	2 Ball	12	6 ~ 13.8	78	5500	11.9	0.337	0.19	4.826	36.3	-40 ~ +90
6	60X60X15	MF60151V3	Vapo	12	4.5~13.8	52	3800	18.4	0.521	0.08	2.032	25	-20 ~ +85
7	60X60X25	EF60252B3	2 Ball	24	12 ~ 27.6	25	3000	13.9	0.394	0.08	2.032	20	-40 ~ +90
8	80X80X15	PSD2408PHB1	2 Ball	24	12 ~ 28	210	4500	55.5	1.571	0.3	7.62	45.5	-40 ~ +70
9	80X80X25	MF80250V4	Vapo	5	3 ~ 5.5	105	2000	23.7	0.671	0.07	1.778	20.4	-20 ~ +85
9	80X80X25	EF80251B1	2 Ball	12	3.5 ~ 13.8	122	3200	39.2	1.11	0.16	4.064	33.6	-10 ~ +85
9	80X80X25	EF80251B2	2 Ball	12	3.5~13.8	95	2900	34.5	0.977	0.13	3.302	31.1	-10 ~ +85
10	92X92X25	PF92251B4	2 Ball	12	6~13.8	70	2400	36.9	1.044	0.1	2.54	27.9	-40 ~ +90

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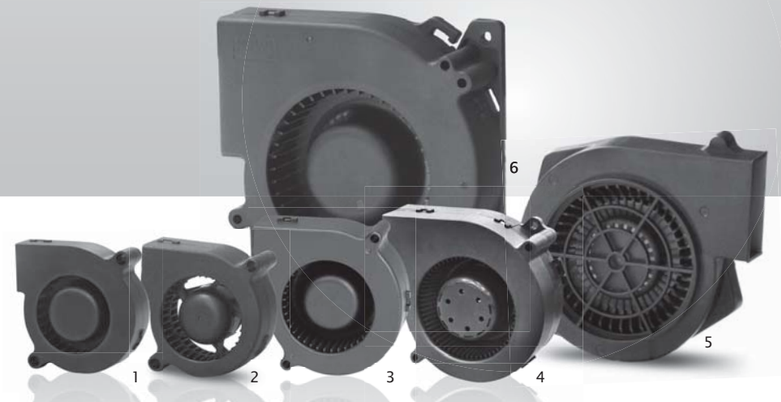
- AEC-Q100/Q200
- AEC-Q100
- Non AEC-Q



Blower

Remark : Spec. & size only for reference, please contact sales for further enquiry.
Production sample's available for request.

No.	size (mm)	Model	Bearing	Rated Voltage (V)	Operating Voltage Range (V)	Rated Current (mA)	Fan Speed (RPM)	Max. Air Flow (CFM)	Max. Air Flow (m^3/min)	Static Pressure (inch-H2O)	Static Pressure (mm-H2O)	Noise (dB(A)) 1M	Operating Temp. (℃)
1	50X50X15	MF50150V3	Vapo	5	4.5 ~ 5.5	108	3300	2.7	0.076	0.21	5.334	25.3	-20 ~ +85
1	50X50X15	MF50151V2	Vapo	12	6 ~ 13.8	54	4000	3.4	0.096	0.37	9.398	33.2	-20 ~ +85
2	50X50X20	PSB1205PKB1	2 Ball	12	6~13.8	145	5200	6.5	0.184	0.52	13.208	36.9	-40 ~+90
3	75X75X30	PF75301B1	2 Ball	12	10.2~12	500	4500	17.6	0.498	0.86	21.844	50.0	-40 ~+85
4	97X95X33	PF97331B1	2 Ball	12	8.5~16	1650	5600	46.2	1.308	3.21	81.534	61.4	-40 ~+90
5	110X100X25	PFA0201B1	2 Ball	13.5	9~16	235	3900	13	0.368	0.61	15.494	47.9	-40 ~+90
6	120X120X32	PFC0321B1	2 Ball	12	9~13.8	700	2800	37.5	1.062	1.00	25.4	56.0	-40 ~+90

LED Head Lamp / Sensor Blower

Application	size (mm)	Model	Bearing	Rated Voltage (V)	Operating Voltage Range (V)	Rated Current (mA)	Fan Speed (RPM)	Max. Air Flow (CFM)	Max. Air Flow (m^3/min)	Static Pressure (inch-H2O)	Static Pressure (mm-H2O)	Noise (dB(A)) 1M	Operating Temp. (℃)
LED Head Lamp	40X40X20	PF40201B1	2 Ball	13.5	6 ~ 16	180	13000	14	0.396	0.79	20.066	46.5	-40 ~ +105
Sensor Blower	40X40X20	MH40201V3	Vapo	13	8 ~ 16	46	2700	0.7	0.02	0.02	0.508	27.0	-40 ~ +90

Miscellaneous

- AEC-Q100/Q200
- AEC-Q100
- Non AEC-Q

- Non AEC-Q

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