

EF50201B2-Q020-S99 Sunon 12V 1.83W 5020 50mm DC Blower

SKU: EF50201B2-Q020-S99

Price: \$16.25

Categories: Fans

Tags: SUNON

Product Link:

<https://www.elecspares.com/product/ef50201b2-q020-s99-sunon-12v-1-83w-5020-50mm-dc-blower/>

Product Description

The Sunon EF50201B2-Q020-S99 is a high-performance 12 V industrial centrifugal blower with dimensions of 50 x 50 x 20 mm, purpose-built to deliver elite-level thermal cooling in high-resistance airflow paths. This unit features a heavy-duty brushless DC motor capable of sustaining a 1.83 W power input to drive its specialized multi-blade turbine impeller at a consistent 6000 RPM. Engineered specifically for concentrated air displacement in projection systems and medical devices, it utilizes a 20 mm thick blower housing to generate high static pressure, forcing air through dense optical engines and heatsink fins. The mechanical design relies on precision high-durability ball bearings and a fiberglass-reinforced PBT housing to ensure 70,000 hours of continuous operation at a 40 °C ambient temperature. Featuring a robust 4-wire electrical interface with dedicated PWM speed control and Tachometer (FG) output, this blower is a critical component for high-brightness projector thermal management, medical equipment, and compact electronics where directional cooling and intelligent thermal regulation are mandatory.

EF50201B2-Q020-S99 Fan Parameters

Manufacturer: Sunon

Model Number: EF50201B2-Q020-S99

Series: EF Blower Series

Industry Size Code: 5020 Blower

Type: DC Centrifugal Blower (Turbine)

Bearing Type: Ball Bearing

Nominal Voltage: 12 VDC

Voltage Range: 6 - 13.8 VDC

Starting Voltage: 6 VDC

Dimensions: 50 x 50 x 20 mm

Weight: 33 g

[Electrical Data]

Input Power: 1.83 W

Nominal Current: 0.152 A

Max. Current: 0.20 A (Peak startup current)

Nominal Speed: 6000 RPM (Tolerance $\pm 15\%$)

Motor Design: Brushless DC Motor

Signal Output: FG (Frequency Generator / Tachometer)

Speed Control: PWM (Pulse Width Modulation)

Motor Protection: Auto Restart, Polarity Protection

Insulation Class: Class A

Insulation Resistance: $>10M$ ohm at 500 VDC

Dielectric Strength: 500 VAC for 1 minute

Termination: 4-Lead wires (UL1007, AWG 26, Red/Black/Yellow/Blue)

[Performance & Acoustics]

Max. Air Flow: 6.2 CFM (10.5 m³/h / 0.18 m³/min)

Max. Static Pressure: 26.41 mmH₂O (259.0 Pa / 1.04 inH₂O)

Sound Pressure Level: 48 dB(A) (Measured at 1 m)

Number of Blades: Multi-blade Turbine

Direction of Rotation: Counter-clockwise (Viewed toward air inlet)

Airflow Direction: Radial (Intake from top, exhaust from side outlet)

[Materials & Construction]

Frame Material: Plastic (PBT reinforced with 30% glass fiber, UL94V-0)

Impeller Material: Plastic (PBT reinforced with 15% glass fiber, UL94V-0)

Installation Position: Any

Degree of Protection: IP20

[Reliability & Safety Standards]

Min. Ambient Temperature: -10 °C

Max. Ambient Temperature: 70 °C

Storage Temperature: -40 °C - 70 °C

Life Expectancy (L10): 70,000 hours at 40 °C

Standard Compliance: UL, TUV, RoHS

Approval Agency: UL, CUL, TUV, CE

Application

The Sunon EF50201B2-Q020-S99 axial fan is used in high-brightness cinema projectors, medical ventilation units, server-grade compact power modules, 3D printer hot-end cooling, and localized high-density industrial spot cooling.

Product Images



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