

# DS05020R12U AVC 12V 0.30A 50mm 5020 DC Axial Fan

**SKU:** DS05020R12U

**Price:** \$9.99

**Categories:** Fans

**Tags:** AVC

**Product Link:**

<https://www.electspares.com/product/ds05020r12u-avc-12v-0-30a-50mm-5020-dc-axial-fan/>

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## Product Description

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The AVC DS05020R12U is a high-velocity DC axial fan, commonly referred to as a "5020" size, engineered for intensive thermal management in space-constrained, high-impedance environments. This 50 x 50 x 20 mm unit features a specialized Hydraulic Bearing system and a 5-blade high-torque impeller optimized for maximum air pressure. Operating at a nominal 12 VDC with a 0.30 A current draw, it achieves a powerful 6000 RPM rotational speed. The 4-wire configuration provides a sophisticated interface including both a Speed Sensor (FG) and Pulse Width Modulation (PWM) input for dynamic, demand-based speed control. Built with a brushless DC motor and advanced electronic protection, this fan is a critical component for 1U server modules, high-density power supplies, and industrial communication controllers requiring precise, high-velocity air displacement.

DS05020R12U Fan Parameters

Manufacturer: AVC (Asia Vital Components)

Model Number: DS05020R12U

Industry Size Code: 5020

Type: DC axial fan

Bearing Type: Hydraulic Bearing (Hydro-dynamic)

Nominal Voltage: 12 VDC

Voltage Range: 10.8 - 13.2 VDC

Starting Voltage: 10.8 VDC

Dimensions: 50 x 50 x 20 mm

[Electrical Data]

Input Power: 3.60 W

Nominal Current: 0.30 A

Max. Current: 0.38 A

Nominal Speed: 6000 RPM (Tolerance  $\pm 10\%$ )

Motor Design: Brushless DC Motor, 4-pole

Signal Output: FG (Frequency Generator/Tachometer)

Speed Control: PWM (Pulse Width Modulation)

Motor Protection: Auto Restart, Polarity Protection, Locked Rotor Protection

Insulation Class: Class A (105 °C)

Insulation Resistance: 10M ohm at 500 VDC

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

#### [Performance & Acoustics]

Max. Air Flow: 18.25 CFM (31.01 m<sup>3</sup>/h / 0.52 m<sup>3</sup>/min)

Max. Static Pressure: 6.85 mmH<sub>2</sub>O (67.18 Pa / 0.27 inH<sub>2</sub>O)

Sound Pressure Level: 39.5 dB(A)

Number of Blades: 5

Direction of Rotation: Counter-clockwise (viewed toward impeller)

Airflow Direction: Intake over struts

#### [Materials & Construction]

Frame Material: Thermoplastic PBT (UL94V-0)

Impeller Material: Thermoplastic PBT (UL94V-0)

Installation Position: Any

Degree of Protection: IP54

#### [Reliability & Safety Standards]

Min. Ambient Temperature: -10 °C

Max. Ambient Temperature: 70 °C

Life Expectancy (L10): 50,000 hours at 40 °C

Standard Compliance: IEC 60950-1, EN 61000-6-1

Approval Agency: UL, TUV, CE, RoHS

#### Application

The AVC DS05020R12U axial fan is used in 1U server chassis, compact power supplies, network routers, industrial IPC controllers, and medical monitoring devices.

## Product Images

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Scan for product details:

