

IRD

4421

The Bird 4421 (often searched or miskeyed as IRD 4421) is a high-precision RF power meter designed for semiconductor processing and telecommunications applications. Highly regarded for its laboratory-grade accuracy, the 4421 operates with Bird's 4020 series power sensors to measure RF power, VSWR, and return loss in demanding environments.

SPECIFICATIONS

General

Interfaces	Optional GPIB (IEEE-488) or RS-232
Display	4-1/2 digit LCD with backlight

Physical

Power Supply	115 / 230 VAC ($\pm 10\%$), 50/60 Hz, or 8 C-cell NiCd rechargeable batteries
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	312 x 108 x 310 mm mm
Weight	5 kg kg
Rack Mount Option	Single or dual 19" rack mounting kits available

RF Performance Specifications

Frequency Range	100 kHz to 1 GHz (sensor dependent)
Power Measurement Range	300 mW to 10 kW (sensor dependent)

Measurement Accuracy & Resolution

Power Measurement Accuracy	$\pm 3\%$ of reading (with 4020 series sensors)
VSWR Range	1.0 to 199.9
Return Loss Range	0.0 to 40.0 dB

Measurement Modes & Functions

Measurement Modes	Forward Power (Watts or dBm), Reflected Power (Watts or dBm), VSWR, Return Loss (dB)
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Sensor Compatibility & Control

Compatible Sensors	Bird 4020 Series directional power sensors (e.g. 4021, 4022, 4024, 4025, 4027, 4028)
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Display & User Interface

Display Units	W, dBm, SWR, dB
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Environmental & Compliance

Storage Temperature Range	-20 to 70 °C
Operating Humidity	95% maximum (non-condensing)

Power & Electrical Requirements

AC Input Voltage Options	115 VAC / 230 VAC nominal (rear panel switchable)
Battery Operating Time	Up to 8 hours with fully charged NiCd batteries

Power

Power Consumption	17 VA
AC Line Frequency	50/60 Hz
Internal Battery Type	Rechargeable Nickel-Cadmium (Ni-Cad)

Performance

Overrange Indication	120% of full scale
Instrument Accuracy	±1% of reading (excluding sensor error)
Measurement Rate	Approx. 2 readings per second

Interfaces

GPIO (IEEE-488) Interface	Optional (field or factory-installable)
RS-232 Interface	Optional (field or factory-installable)

TECHNOLOGY

Directional RF Power Measurement

APPLICATIONS

Semiconductor manufacturing, RF transmitter maintenance, antenna system testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.