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The **RF** Experts

POWER SENSORS
Precision Filtered RF

4027F SERIES



Filtered Power Measurement for Laboratory Applications

The Bird 4027F Series RF Power Sensors are designed specifically for use in semiconductor processing and other precision process applications where the effects of amplitude modulation and harmonics need to be eliminated from the measurement. Because accuracy is critical, these sensors are capable of ±1% accuracy at the calibrated frequency and power level. Calibration is traceable to the National Institute of Standards and Technology (NIST), providing additional confidence in sensor measurement.

±1% Accuracy, Precision Directional RF Power Sensors

PRODUCT FEATURES

- Provides filtered measurement where the effects of amplitude modulation and harmonics need to be eliminated
- ±1% accuracy at specified frequencies and power levels minimizing poor production yields
- Models do not need to be field calibrated before use and only need to be calibrated once every six months
- Plug and Play with the 4421A Series Multifunction Power Meter
- Dozens of connector options available
- Calibration traceable to the National Institute of Standards and Technology

FOR USE WITH

- 4421A Multifunction Power Meters
- SCC7 Calibration Cart
- MSCC7 Calibration Cart

Bird®

PRECISION FILTERED RF POWER SENSORS

4027F SERIES

Specifications

MEASUREMENT

Accuracy	±1% at calibration frequencies and power levels ±2% at other frequency and power levels Add 2% to uncertainty outside 25 ± 5 °C
Uniformity	2% maximum unit to unit, at calibration frequency and power levels
Speed	2 readings per second
VSWR Range	1.00 to 2.00
Directivity	28 dB
Insertion Loss	<0.05 dB
Calibration Power Level	1700 W
Maximum Power	10 kW units: 12 kW max 6 kW units : 7.2 kW max

CONNECTORS

RF Connectors	Customer specified

SYSTEM

Recommended Calibration Interval	6 month. Performance before and performance after data to be supplied for units
Power Supply	External DC, 12 VDC, supplied from Bird 4421 Power Meter

ENVIRONMENTAL

Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Humidity	95% max (non-condensing)
Altitude	Up to 10,000 ft (3,048 m)

PHYSICAL

Size	5.2 in x 2.5 in x 3.25 in (137 mm x 64 mm x 83 mm)
Weight	1 lb 13 oz (0.8 kg)

CERTIFICATIONS

EMC	Designed to carry CE mark

PRODUCT SELECTION GUIDE

Model Number	Freq Range	Power Range	Calibration Frequency, Typ	Harmonic Rejection, Min	LF Rejection	Max Error Induced by 10% AM
4027F2M	1.8 to 2.2 MHz	100 W to 10 kW	1.8, 2.0, 2.17 MHz	26 dB@3.6 MHz to 3.8 MHz, 30 dB@>3.8 MHz	Not specified	0.2%@<5 kW 1%@5kW to 10 kW
4027F10M	12 to 15 MHz	100W to 10kW	12.0, 12.5, 13.56, 14.0, 15.0 MHz	30 dB@>25 MHz	30 dB@<1 MHz	0.2%@<5 kW 1%@5kW to 10 kW
4027F60M	57 to 63 MHz	100W to 6 kW	57.0, 58.5, 60.0, 61.5, 63 MHz	30 dB@>114.0 MHz	30 dB@<15.0 MHz	0.2%@<1.5 kW 1%@1.5kW to 3 kW

birdrf.com/products

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Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

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Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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