



BIRD® MULTI-SENSOR CALIBRATION CARTS

MSCC7 SERIES
TURNKEY RF MEASUREMENTS
AT YOUR FINGERTIPS

MSCC7 Series Provides Quality Turnkey Calibration for Fab Houses and Equipment Suppliers.

The System Consists of:

- (1) 4421 Power Meter
- (2) Power Sensors
- (1) Oil Load
- (1) Mobile Cart and Minor Accessories



- Stainless Steel Mobile Cart with Locking Wheels
- High Return Loss Ensures Minimal Power Measurement Error Contribution
- Available in International and Domestic Versions
- Frequency and Power Upgrades Available (Contact factory for more details)
- Service Plans Available with Bird® Service Center

Bird® Calibration Cart Frequently Asked Questions (FAQs):

Q: Do I have the option to send the cart back or just the sensor for calibration?

A: Yes, you have the option to send the cart back or just the sensor depending on your accuracy requirements. Contact us for more information.

Q: Can I operate my cart with a higher power load and / or sensor?

A: Yes, power and frequency upgrades are available. Contact factory.

Semiconductor FAQs:

Q: What methods does Bird use for primary power measurement standards?

A: Two paths of traceability according to the National Institute of Standards and Technology (NIST) are used.

- High Power RF Calorimetry
- Modified Bramal Techniques
 - VSWR cascaded couplers and precision bolometer based power meters

Q: What is the typical VSWR of a Bird Oil Load within the specified frequency range?

A: Typically <1:05:1, 1:1:1 max

Q: What is our definition of measurement to measurement and unit to unit repeatability?

A: Measurement-to-measurement is defined as the uncertainty from one measurement to another measurement with the same power sensor.

Unit-to-Unit is defined as the uncertainty from one power sensor to another power sensor.

Q: What is the typical surface temperature of an Oil Load at rated power?

A: The sides and top fin area will typically run between 80 to 100°C depending upon the specific model and environmental conditions. The bottom of the radiator housing will typically be around 120°C.



RF Measurement and Management in Your World



Bird® Technologies Group, consisting of Bird® Electronic Corporation and TXRX Systems®, is a global, innovative supplier of RF products, systems, services and educational solutions.

Bird® Technologies Group reserved the right to modify specifications or discontinue any product without notice.

www.bird-technologies.com 440.248.1200/866.695.4569 sales@bird-technologies.com

365-MSCC7DS-1005

BIRD® MULTI-SENSOR CALIBRATION CARTS

MSCC7 SERIES SPECIFICATIONS

MSCC7 Series provides quality turnkey calibration for fab houses and equipment suppliers and consists of (1) 4421 power meter, (2) power sensors, (1) oil load, (1) mobile cart, and minor accessories.

Power Levels:	5 kW or 10 kW for either sensor
Meter:	4421
Sensor Options:	4020, 4027A or 4027F Series (See Below)
Load Options:	8921A100, 8931A400-115, 8931A400-230
Impedance:	50 Ohm
Frequency Range:	100 kHz - 30 MHz, depending on sensor
Accuracy:	4020 Series, $\pm 3\%$ (1σ) 4027A Series, $\pm 1\%$ (1σ) 4027F Series, $\pm 1\%$ (2σ)
Casters:	4 locking swivel
Connector Type:	*Customer Specified
Operating Position:	Vertical only
Power Requirements:	115/230 VAC, $\pm 10\%$, 50/60Hz
Ambient Temp Range:	0°C to 35°C
Storage Temperature:	-20°C to +70°C
Humidity:	85% Max., Non condensing
Altitude:	Load derated above 5,000 feet
Size/Weight:	20" wide x 52" long x 42" high / 290 lbs. Fully assembled
Material of Construction:	Stainless steel cart
Applicable Standards:	CE

*For connector options, please refer to our catalog or contact sales at 866.695.4569 / sales@bird-electronic.com

4020 SERIES POWER SENSOR

Model	Frequency Range	Power Input
4021	1.8-30MHz	300mW to 1 kW
4024	1.5-30MHz	3 W to 10 kW
4025	100-2500 kHz	3 W to 10 kW

4027A SERIES POWER SENSOR

Model	Frequency Range	Power Range
4027A250K	250-400 kHz	3 W to 10 kW
4027A400K	400-550 kHz	3 W to 10 kW
4027A800K	800-950 kHz	3 W to 10 kW
4027A2M	1.5-2.5 MHz	3 W to 10 kW
4027A4M	3-5 MHz	3 W to 10 kW
4027A10M	10-15 MHz	3 W to 10 kW
4027A12M	10-15 MHz	300 mW to 1kW
4027A25M	25-30 MHz	3 W to 9 kW

HIGH POWER LOADS FOR SEMICONDUCTOR

Model	Frequency Range & VSWR	Power Rating
8921A100	DC to 30 MHz at 1.1 max. (less than 1.05 typical)	5 kW
8931A400-115	DC to 30 MHz at 1.1 max. (less than 1.05 typical)	10 kW
8931A400-230	DC to 30 MHz at 1.1 max. (less than 1.05 typical)	10 kW

4027F SERIES FILTERED POWER SENSOR

Model	Frequency Range	Power Range
4027F2M	1.8-2.2 MHz	100 W - 10 kW
4027F10M	12-15 MHz	100 W - 10 kW