

 **Bird**[®]
Multi-Sensor
Calibration Cart
MSCC7 Series



The **RF** Experts

MSCC7 Series, Calibration Cart is designed to support two power sensors and also includes the 4421 Multifunction Power Meter and a low reflection 50 Ohm load that can dissipate up to 10 kW max. These components are installed on a cart for easy transportation and connected so that the only setup required is connecting AC and RF power. The cart is suitable for use in a clean room environment and is equipped with four swivel casters for maximum maneuverability.

- Turnkey RF Measurements.
- High return loss ensures minimal power measurement error contribution.
- Available in international and domestic versions.
- Frequency and power upgrades available.
- Service plans available with Bird Service Center.

PROBLEMS/SOLUTIONS

Need two precision sensors for your application

- Supports two Bird 4027 or 4020 Series Power sensors

Requires rugged design for daily use

- The mobile cart is stainless steel and has locking wheels.

Adaptable for future requirements.

- Frequency and power upgrades available.

Multi-Sensor Calibration Carts

MSCC7 Series

CHARACTERISTICS

Frequency Range	250 kHz - 30 MHz, depending on sensor (see below)
Power Levels	10 kW or 25 kW
Accuracy	±2% (2s) of reading at calibration frequency and power levels ±4% (2s) of reading at other power levels and frequencies within sensor range (add 2% to uncertainty outside 25 ± 10 °C)
Connector*	Customer specified, appropriate for power level
Impedance	50 Ohm nominal
Sensor VSWR	1.05 max (32.2 dB return loss)
Load VSWR	1.1 max (26.4 dB return loss)
Coolant	100% water or 35% industrial ethylene glycol / 65% water, 9 quarts (8.5 liters), forced air cooling
Particle Generation	156 per cfm (0.5 µm), 29 per cfm (1 µm), 0 per cfm (3 µm)
Material	Stainless steel cart
Casters	4 locking swivel
AC Power	115 VAC ± 10%, 60 Hz, 11 A nominal 230 VAC ± 10%, 50 Hz, 5.5 A nominal
Humidity	5% maximum, non-condensing
Altitude	Load derated above 5,000 feet (1,524 m)
Operating Temperature	+5 °C to + 30 °C, £ 25 kW, 100% water, derate sensor accuracy outside 25 ± 10 °C +5 °C to + 45 °C, < 20 kW, 100% water, derate sensor accuracy outside 25 ± 10 °C 0 °C to + 25 °C, £ 25 kW, 35% ethylene glycol / 65% water 0 °C to + 25 °C, < 20 kW, 35% ethylene glycol / 65% water
Storage Temperature	+5 °C to + 50 °C, 100% water -20 °C to + 50 °C, 35% ethylene glycol / 65% water
Size (LxWxH)	39.5" x 21.5" x 39.5" (100.3 cm x 54.6 cm x 100.3 cm)
Weight	240 lbs (109 kg)

* For connector options, please refer to our catalog or contact sales at 866.695.4569 or sales@birdrf.com

4027A SERIES POWER SENSOR

Model	Frequency Range	Power Input
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 1 kW
4027A25M	25-30 MHz	3 W to 10 kW
4028B3M	3-4 MHz	1 kW to 25 kW

HIGH POWER LOADS FOR SEMICONDUCTOR

Model	Frequency Range & VSWR	Power Input
8921A100	DC to 30 MHz at 1.1 max. (less than 1.05 typical)	10 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 & VSWR	Power Input
4024F2M	1.8 - 2.2 MHz	100 W - 10 kW
4027F10M	12 - 15 MHz	100 W - 10 kW

