

CALIBRATION CART

Single Sensor

SCC7 SERIES

Turnkey Solution for RF Measurement

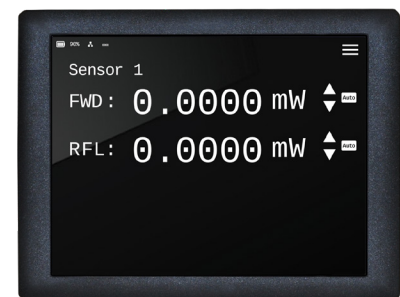
The SCC7 Calibration Cart provides the ideal solution for the calibration of RF generators. It combines a high accuracy Bird Power Sensor, a user friendly 4421A Multifunction Power Meter, and a low reflection load in an easily transportable mobile package. The system is indispensable for semiconductor fabs with multiple RF generators in various locations.

The Calibration Cart is factory configured to the user's requirements. A selection of Power Sensors is available covering various frequency bands from 250 kHz to 170 MHz. In addition, a number of loads are offered with maximum power ratings from 1kW to 10kW. Contact Bird for customization assistance to ensure that the calibration cart is optimized to your application.

Bird has updated the original Calibration Carts (SCC71-series) to now incorporate the latest 4421A-Series Multifunction Power Meter. These new Calibration Carts (SCC72-series) have a larger and more convenient user interface to display Forward Power, Reflected Power and Return Loss at the same time. By maintaining the same selection of Power Sensors and Loads, the measurement capability and high accuracy remains the same.

PRODUCT FEATURES

- Suitable for use in a clean room environment
- Stainless steel cart with locking wheels is designed for easy transportation and effortless use
- Customizable with choice of power sensor and load configuration
- High return loss ensures minimal power measurement error contribution
- System is adaptable for future requirements with available frequency and power upgrades



MODEL 4421A

INCLUDES

- **4421A Multifunction Power Meter** to display RF power readings with up to 1% accuracy
- **A 4020, 4027A or 4027F Series Power Sensor** for accurate RF measurement
- **An Ultra-Stable SC13 or High Power Load** for precision RF power regulation and control

SCC7 SERIES

Specifications

SYSTEM

Meter	4421A Multifunction Power Meter
Sensor Options	4020 Series, 4027A Series, or 4027F Series
Load Options	Ultra-Stable Load or High Power Load
Frequency Range	
4020 Series Sensor	100 KHz to 1000 MHz
4027A Series Sensor	250 KHz to 65 MHz
4027F Series Sensor	1.8 MHz to 65 MHz
Accuracy	
4020 Series Sensor	±3% across power and frequency range
4027A Series Sensor	±1% at calibration frequency and power levels ±2% over remainder of power range, and at other than calibration frequencies
4027F Series Sensor	±1% across power and frequency range ±2% over remainder of power range, and at other than calibration frequencies
Impedance	50 Ohm
Power Requirements	115/230 VAC, ±10%, 50/60 Hz
Connector Type	Customer specified
Operating Position	Vertical only
Casters	4 locking swivel
Material of Construction	Stainless steel cart

ENVIRONMENTAL

Ambient Temperature Range	0 °C to 35 °C (32 °F to 95 °F) (10 kW Model: 0 °C to 40 °C / 32 °F to 104 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Humidity	85% max (non-condensing)
Altitude	Load derated above 5,000 ft (1,524 m)

PHYSICAL

Size (fully assembled)	
1 kW & 2.5 kW Models	42 in x 20 in x 42 in (107 cm x 51 cm x 107 cm)
5 kW & 10 kW Models	52 in x 20 in x 42 in (132 cm x 51 cm x 107 cm)
Weight (fully assembled)	
1 kW & 2.5 kW Models	175 lb (80 kg)
5 kW & 10 kW Models	250 lb (114 kg)

CERTIFICATIONS

CE	CE Compliant
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PRODUCT SELECTION GUIDE

Example: SCC721510012 = SCC7 Calibration Cart with 4421A (CW) Power Meter, 4027A100M Power Sensor, 8931-115SC13 (10 kW) Load, 4240-062(N-F) Connector, with voltage of 230 V (NA).



Series	Meter	Sensor	Load	Connector	Voltage (Plug - Type)
SCC7	2 = 4421A (CW)	01= 4027A10M 02= 4027A250K 03= 4027A400K 04= 4027A800K 05= 4027A2M 06= 4027A4M 07= 4027A12M 08= 4027A25M 09= 4027A35M 10= 4027A60M 11= 4021 12= 4022 13= 4024 14= 4025 15= 4027A100M 16= 4027A150M 17= 4027F10M 18= 4027F2M 19= 4027F60M	01= 8251 02= 8890-300 03= 8921 04= 8931-115 05= 8931-230 07= 8890-300SC13 (2.5 kW) 08= 8921SC13 (5 kW) 09= 8931-115SC13 (10 kW) 10= 8931-230SC13 (10 kW)	01= 4240-062 (N-F) 02= 4240-344 (7/16-F) 03= 4240-031 (LC-F) 04= 4240-268 (HN-F) 05= 4240-371 (SQS-F) 06= 4240-372 (SQS-M) 07= 4240-063 (N-M) 08= 4240-376 (QRM-F) 09= 4240-050 (UHF-F) 10= 4240-373 (QDS-UL-F) 11= 4240-100 (C-F)	1= 115V - NA 2= 230V - NA 3= 115V - INT'L 4= 230V - INT'L

SCC7 SERIES CALIBRATION CART

POWER SENSOR SELECTION GUIDE

4020 SERIES

Model Number	Frequency Range	Power Input
4021	1.8 to 32 MHz	300 mW to 1 kW at 1.2 kW max
4022	25 to 1000 MHz	300 mW to 1 kW at 1.2 kW max
4024	1.5 to 32 MHz	3 W to 10 kW at 1.2 kW max
4025	100 to 2500 kHz	3 W to 10 kW at 1.2 kW max

4027F SERIES

Model Number	Frequency Range	Power Input
4027F2M	1.8 to 2.2 MHz	100 W to 10 kW
4027F10M	12 to 15 MHz	100 W to 10 kW
4027F60M	57 to 63 MHz	100 W to 6 kW

4027A SERIES

Model Number	Frequency Range	Power Input
4027A250k	250 to 400 kHz	3 W to 10 kW
4027A400k	400 to 550 kHz	3 W to 10 kW
4027A800k	800 to 950 kHz	3 W to 10 kW
4027A2M	1.5 to 2.5 MHz	3 W to 10 kW
4027A4M	3 to 5 MHz	3 W to 10 kW
4027A10M	10 to 15 MHz	3 W to 10 kW
4027A12M	10 to 15 MHz	3 mW to 1 kW
4027A25M	25 to 30 MHz	3 W to 9 kW
4027A35M	35 to 45 MHz	3 W to 7.5 kW
4027A60M	45 to 65 MHz	3 W to 6 kW
4027A100M	95 to 105 MHz	3 W to 4 kW
4027A150M	150 to 170 MHz	3.75 W to 3.75 kW

LOAD SELECTION GUIDE

HIGH POWER LOADS

Model Number	Frequency Range	Power Input
8251	DC to 1 GHz at 1.1 max	1 kW
8890-300	DC to 1 GHz at 1.1 max 1 GHz to 2 GHz at 1.25 max 2 GHz to 2.4 GHz at 1.3 max	2500 W continuous
8921	DC to 1 GHz at 1.1 max	5000 W continuous
8931-115	DC to 400 MHz at 1.15 max 400 MHz to 1 GHz at 1.20 max	10 kW continuous w/blower on 2.5 kW continuous w/blower off
8931-230	DC to 400 MHz at 1.15 max 400 MHz to 1 GHz at 1.20 max	10 kW continuous w/blower on 2.5 kW continuous w/blower off

ULTRA-STABLE LOADS

Model Number	Frequency Range	Power Input
8865SC13	DC to 28 MHz at 1.1 max (VSWR less than 1.05:1)	1 kW
8890-300SC13	DC to 28 MHz at 1.1 max (VSWR less than 1.05:1)	2.5 kW
8921SC13	DC to 28 MHz at 1.1 max (VSWR less than 1.05:1)	5 kW
8931-115SC13	DC to 28 MHz at 1.1 max (VSWR less than 1.05:1)	10 kW
8931-230SC13	DC to 28 MHz at 1.1 max (VSWR less than 1.05:1)	10 kW

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SCC7 SERIES



MODEL 4421A



HIGH POWER LOADS



ULTRA-STABLE LOADS



4020 SERIES



4027A SERIES



4027F SERIES

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