

MODEL 5011 TERMINATING POWER SENSOR (TPS)

The Model 5011 Terminating Power Sensor

is designed to make Terminating Power Measurements with the full flexibility of a portable precision instrument. The Model 5011, when used along with the **Bird Model 5000 Digital Power Meter** or the **Bird Site Analyzer™ Series** provides customers a **TOTAL RF POWER MEASUREMENT SOLUTION** to measure Base Station Power and/or Broadcast Transmitter Power with **Accuracy of +/-5%** of readings.



BENEFITS:

- Significant cost and time savings
- Easy to use
- Field ready
- No calibration required!

FEATURES:

- Easy-to-use
- Provides true average power accuracy ($\pm 5\%$ of reading, $\pm 1 \mu\text{W}$)
- No need to calibrate in the field
- Reliable
- Hand-held and field ready
- Frequency range: 40 MHz to 4 GHz
- Both digital as well as analog modulations including (CDMA, GSM, TDMA, 8-VSB and COFDM)
- Power range: 10 μW to 10 mW (-20 to +10 dBm)
- Optional 40 dB attenuator provides 100 mW to 50 W capability, other ranges also available
- Optional 30 dB attenuator provides 10 mW to 10 W capability
- Measure power directly or via coupled test port
- Fast warm-up time (5 minutes)
- Operates in temperatures as low as 14 F (-10 C)
- Broadband, does not require elements

PLUG & PLAY SOLUTION:

The TPS Model 5011 plug and play solution consists of three steps:

- STEP 1.** Connect the TPS to the Model 5000 (DPM) or the Site Analyzer Series (SA).
- STEP 2.** Connect the TPS (Model 5011) RF connector to the attenuator or coupler to measure the signal.
- STEP 3.** Obtain accurate readings. ($\pm 5\%$ of reading, $\pm 1\mu\text{W}$)

SPECIFICATIONS

TERMINATING POWER SENSOR

NOTE: The BIRD Model 5000 or the Bird Site Analyzer™ Series (SA 2500A or SA 2000A) is required.

POWER MEASUREMENT CHARACTERISTICS

Frequency Range:	40 MHz to 4 GHz
Power Measurement Range:	-20.000 to +10.000 dBm (10.000 μ W to 10.000mW)
Peak/Average Ratio:	12 dB maximum
Accuracy:	$\pm 5\%$ of reading ± 1 mW RSS (excluding mismatch uncertainty)*
Warm Up Time:	5 Minutes
Input Impedance:	50 Ohms (nominal)
Input VSWR:	Typical 1.03 (36.6 dB return loss); maximum 1.20 (20.8 dB return loss)
Input Connector:	Precision N Male
Output Connector:	Male DB-9 to interface to Digital Power Meter or Site Analyzer
Power Supply	From host instrument via cable connection

PHYSICAL AND ENVIRONMENTAL SPECIFICATIONS

General:	Terminated average power measurement
Operating Temperature:	-10° to +50°C (+14° to +122°F)
Storage Temperature:	-40° to +80°C (-40° to +176°F)
Mechanical Shock:	IAW MIL-PRF-28800F class 3
Vibration:	IAW MIL-PRF-28800F class 3
Humidity:	95% maximum (non-condensing)
Altitude:	15,000 ft operating
Safety:	Complies with EN-61010-1:1995 including Amendment 2 IAW Low Voltage Directive (73/23/EEC)
EMC:	Complies with EN 61326-1:1997 IAW EMC Directive (89/336/EEC)
Size:	6" long (including connectors); 1.5" diameter
Weight:	3/4 lb. Maximum

* When operating below 100 MHz and above 40°C, add 1%.

Model 5011 Accessories

Part #	Description
8353A040-50	50 W Attenuator, 40 dB, N(M) to N(F)* Note: For 100 mW to 50 W TPS applications
8353A030-10	10 W Attenuator, 30 dB, N(M) to N(F)* Note: For 10 mW to 10 W TPS applications
4240-500-1	Adapter, N(F) to N(F)
4240-500-3	Adapter, N(F) to N(M) Right Angle
4240-500-4	Adapter, N(F) to SMA(F)
4240-500-5	Adapter, N(F) to SMA(M)
PA-FNME	Adapter, N(F) to 7/16 DIN(M)
PA-FNFE	Adapter, N(F) to 7/16 DIN(F)
TC-MNFN-1.5-G	Test Cable, 1.5 Meters, N(F) to N(M)
TC-MNFN-1.5	Test Cable, 1.5 Meters, N(F) to N(M), Armored, Phase-Stable
TC-MNFN-3.0	Test Cable, 3.0 Meters, N(F) to N(M), Armored, Phase-Stable
5011A035-1	DC Block
5011-CALDATA	Calibration Data for TPS Accessories Recommended for attenuators, test cables, dc block and right angle adapter

Model 5000 Accessories

5A2238-1	Cigarette Lighter Adapter
5000-030	Soft Carrying Case
5000-035	Hard Carrying Case

For additional accessories:

- SA 2500A - see [www.bird-electronic.com/SA 2500A product information/SA 2500A Datasheet](http://www.bird-electronic.com/SA_2500A_product_information/SA_2500A_Datasheet)
- Model 5000 - see [www.bird-electronic.com/model 5000 product information/ brochure](http://www.bird-electronic.com/model_5000_product_information/brochure)

Contact factory to inquire about special orders to meet your specific application needs: Visit us at www.bird-electronic.com



30303 Aurora Road
Cleveland, OH 44139-2794
t: 866.695.4569 • f: 866.546.4306
e: sales@bird-electronic.com
web: <http://www.bird-electronic.com>

*Bird also offers other power levels. Please contact the factory for more details.