

# Bird® Directional Power Sensor

## 5010B, 5014

The Bird Directional Power Sensor (DPS) is the most flexible RF sensor on the market today. With this Dual-Socket, Thruline® sensor, you may select from a wide range of Bird Elements to tailor the unit to your needs over a wide range of frequencies and power levels. Also, select field changeable input and output RF connectors from dozens of types including (N, BNC, HN, 7/16 DIN). Operate your sensor with either our new hand held display, the 5000-XT, or via a computer with our windows compatible software tool the VPM2.

The DPS measures True Average Power and/or Peak Power with exceptional accuracy that is traceable to National Institute of Standards and Technology (NIST). It is also a highly economical RF power measurement tool offering reliable results for hundreds, not thousands of dollars.



### PROBLEMS

Downtime is necessary

- Monitor and perform maintenance for monitoring while DUT is in-service
- Measure forward and reflected power to troubleshoot system failures

Over-spending on unneeded functionality

- Interchangeable sensing elements
- USB connectivity, no meter required
- Complimentary Virtual Power Meter (VPM2) software

Varying field tech skill levels

- Sensor plugs and plays with 5000-XT meter.

Need greater confidence in measurement

- No field calibration required
- NIST traceable calibration

### SOLUTIONS

### APPLICATIONS

DPS measures: True average power, peak power

Measurements performed: Standard elements; true average forward power, true average reflected power, Peak detecting elements; peak forward power

Calculations performed: VSWR, Return loss, Reflection Coefficient

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### DPS SPECIFICATIONS

<b>Frequency Range</b>	Element dependent, 2 MHz to 2.7 GHz
<b>Power Range</b>	Element dependent, 125 mW to 1 kW full scale
<b>Impedance</b>	50 Ohm
<b>Peak/Average Ratio</b>	10 dB maximum with DPM elements
<b>Accuracy</b>	True Average Power, $\pm 5\%$ of reading (15 °C to 35°C), $\pm 7\%$ of reading (-10 °C to 50°C), Peak Power, $\pm 8\%$ of full scale
<b>Insertion VSWR</b>	1.05:1 from 0.45 to 1000 MHz (with N connectors)
<b>Settling Time</b>	<2.5 seconds
<b>Connector(s)</b>	QC Type. Female N normally supplied
<b>Power Supply</b>	From host instrument via cable
<b>Interface</b>	<b>5010B</b> DB9 (proprietary configuration) <b>5014</b> USB 1.1 (Type B)
<b>Weight</b>	1.12 lbs (0.51 kg)
<b>Dimensions H x W x D [inches (mm)]</b>	2.3" H x 2.1" W x 3.5" D (58 mm x 53mm x 89 mm) excluding connectors
<b>Directivity</b>	30 dB typical (exact value depends on element selected)
<b>Humidity, Max.</b>	95% max. (non-condensing)
<b>Pulse width Parameters</b>	>100 MHz 800 ns minimum; 26-99 MHz 1.5 $\mu$ s minimum; 2-25 MHz 15 $\mu$ s minimum;
<b>Pulse Rep. Rate Peak</b>	15 pps minimum
<b>Pulse Duty Factor</b>	1 x 10 <sup>-4</sup> minimum
<b>Dynamic Range</b>	16 dB
<b>Operating Temp [°C (°F)]</b>	-10 to +50 (14° to 122°)
<b>Storage Temp [°C (°F)]</b>	-40 to +75 (-40° to 167°)

### Accessories

<b>5A2653-10L2</b>	USB Locking Cable 10'
<b>5A2653-6L</b>	USB Locking Cable 6'
<b>5A2653-10</b>	USB Cable 10'
<b>5A2264-09-MF-10</b>	DB9 Cable 10'

### ELEMENT SELECTION GUIDE

Frequency Range	Forward Power Range	Reflected Power Range	Forward Element	Reflected Element
2-30 MHz	1.25 to 50 W 1.5 to 500 W	125 mW to 50 W 1.25 to 50 W	DPM-50H DPM-500H	DPM-5H DPM-50H
25-60 MHz	1.25 to 50 W 12.5 to 500 W	125 mW to 5 W 1.25 to 50 W	DPM-50A DPM-500A	DPM-5A DPM-50A
50-125 MHz	1.25 to 50 W 12.5 to 500 W 25 to 1.0 W	125 mW to 5 W 1.25 to 50 W 2.5 to 100 W	DPM-50B DPM-500B DPM-1000B	DPM-5B DPM-50B DPM-100B
100-250 MHz	1.25 to 50 W 12.5 to 500 W 62.5 to 2.5 kW	125 mW to 5 W 1.25 to 50 W 2.5 to 100 W	DPM-50C DPM-500C DPM-2500C	DPM-5C DPM-50C DPM-250C
200-500 MHz	125 mW to 5 W 1.25 to 5 W 12.5 to 500 W	125 mW to 500 mW 125 mW to 5 W 1.25 to 50 W	DPM-5D DPM-50D DPM-500D	DPM-5D DPM-5D DPM-50D
400-960 MHz	125 mW to 5 W 1.25 to 50 W 2.5 to 100 W 12.5 to 500 W 25 to 1.0 kW	125 mW to 500 mW 125 mW to 5 W 250 mW to 10 W 1.25 to 50 W 2.5 to 100 W	DPM-5E DPM-50E DPM-100E DPM-500E DPM-1000E	DPM-5E DPM-5E DPM-10E DPM-50E DPM-100E
950-1260 MHz	125 mW to 5 W 1.25 to 50 W	125 mW to 500 mW 125 mW to 5 mW	DPM-5J DPM-50J	DPM-5J DPM-5J
1100-1800 MHz	125 mW to 5 W 1.25 to 50 W	125 mW to 500 mW 125 mW to 5 W	DPM-5K DPM-50K	DPM-5K DPM-5K
1700-1990 MHz	125 mW to 5 W 1.25 to 50 W 12.5 to 500 W	125 mW to 500 mW 125 mW to 5 W 1.25 to 50 W	DPM-5L1 DPM-50L1 DPM-500L1	DPM-5L1 DPM-5L1 DPM-50L1
1900-2200 MHz	125 mW to 5 W 1.25 to 50 W	125 mW to 500 mW 125 mW to 5 W	DPM-5L2 DPM-50L2	DPM-5L2 DPM-5L2
2200-2300 MHz	125 mW to 5 W 62.5 mW to 25 W	125 mW to 500 mW 62.5 mW to 2.5 W	DPM-5M DPM-25M	DPM-5M DPM-2.5M
2300-2500 MHz	125 mW to 5W	12.5 mW to 500 mW	DPM-5N	DPM-5N
2500-2700 MHz	125 mW to 5 W	12.5 mW to 500 mW	DPM-5R	DPM-5R

### COMPATIBLE DEVICES

<b>5010B</b>	5000-EX 5000-XT SA-1700 EXP SA-2500 EX SA-6000 EX SH-36S SH-361S SH-362 SH-362S
<b>5014</b>	5000-XT VPM2



**YOU'RE HEARD, LOUD AND CLEAR.**

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