

**4540 Peak Power Meter**



PRELIMINARY

*Taking performance to a new peak*

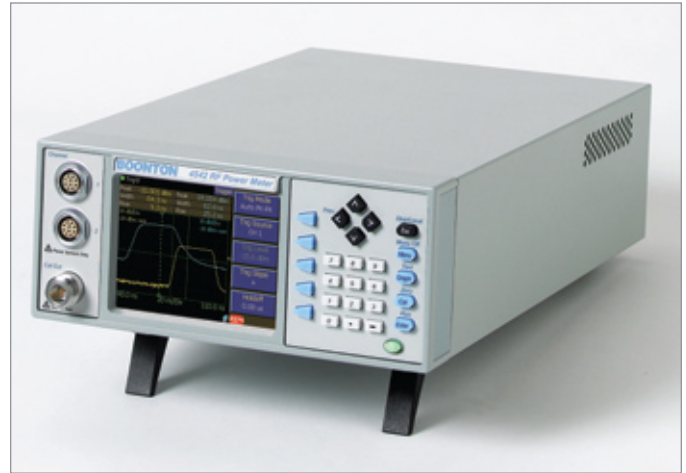
# 4540 Peak Power Meter

The Boonton model 4540 Series is the instrument of choice for capturing, displaying and analyzing RF power in both the time and statistical domains. Applications include pulsed RF signals such as radar, TDMA and GSM, pseudorandom or noise-like signals such as CDMA, WLAN and WiMAX.

The 4540 Series is a single or dual channel RF Power Meter that can measure modulated or CW signals using peak and average Boonton Power sensors.

The 4540 Series has three operating modes: Pulse, Statistical, and Modulated/CW. Features include:

- High Bandwidth Wide Dynamic Range Sensors
- Intuitive User Interface
- 4" color LCD display
- 200 psec time resolution
- Statistical analysis including CCDF
- Text view of 15 time and power measurements per channel
- GPIB, USB and LAN



## 4540 Series Specifications

### Sensor Inputs

RF Channels	1 or 2
RF Frequency Range	1 MHz to 110 GHz*
Peak Pwr range	-55 to +20 dBm*
CW Pwr range	-70 to +44 dBm*
Relative Offset Range	±100.00 dB
Single Shot Bandwidth	5 MHz (based on 10 samples/pulse)
Video BW	70 MHz*
Risetime	7 ns*

\* Sensor Dependent, Calibrator Dependent

### Acquisition and Measurement System

Time resolution	0.2 ns
A/D Converter	14 bit
DSP	32 bit floating point

### Trigger

Ext Trig range, impedance	±5V, 1 Mohm
Min trig pulse width	15 ns
Max trig rate	30 MHz

### Calibrator Source

Internal Calibrator	50MHz, CW -60 to +20dBm
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#### Pulse Mode Automated Measurements

Pulse width	Pulse power
Pulse rise-time	Overshoot (dB or %)
Pulse fall-time	Waveform average power
Pulse period	Top level power
Pulse repetition frequency	Bottom level power
Pulse duty cycle	Pulse delay (2 channel instruments only)
Pulse off-time	Peak power
Edge delay	

#### Statistical Mode Automated Measurements

Peak power	Power or Percent CCDF at cursor
Average power	Percent
Minimum power	Total time (indicated)
Peak to Average ratio	Total number of samples (indicated)
Dynamic Range	

#### Modulated Mode

Filtered Average, Peak and Min. (held or auto-decayed)

#### User I/O Signals

Sensors	USB device
Calibrator	Recorder/Status Out
GPIB	Trigger Out
Ethernet (LAN)	

#### Pulse and Modulated Mode Marker Measurements

Markers (Vertical Cursors)	Settable in time relative to the trigger position
Markers Independently	Power at specified times (Avg., Peak, Min.)
Pair of Marker	Power at two specified times with ratio or average power between them. The minimum and maximum power between the markers and the ratio or average power between them. The average power, peak power (hold) and peak-to average power ratio between the markers.
Marker Interval	Average, Min, Max, Pk-Avg ratio

#### Environmental Specifications

General	Manufactured to the intent of MIL-T28800E Type III, Class 5, Style E
CE Mark	Conforms to European Community(EU) specifications EN 61010-1(90)(+A1/92)(+A2/95) EN 61010-2-031 EN 61326-1(97) EN 55022(94)A2/97)ClassB
Operating Temperature	0 to 50°C
Ventilation:	Fan Cooled
Storage Temperature	-40 to 75°C
Humidity:	95% ±5% maximum (non-condensing)



**Other Characteristics**

Display type	4" Color LCD (320x240)
Keyboard	22 key, conductive rubber
Dimensions	20.8cm x 8.9cm x 34.3cm 8.2" x 3.5" x 16.5" Half rack, 2U
Weight	3.5kg / 7.7lbs
Power Supply	Universal Input 80 to 264 VAC, 47 Hz to 63 Hz

**Ordering Information**

4541	RF Peak Power Analyzer, single channel, front panel inputs.
4542	Dual channel, front panel inputs
-02	Rear sensor inputs
-03	Calibrator, rear panel output
-30	Warranty extended to 3 years

**Recommended Sensors**

**Peak Power\***

Model	Freq. Range	Dynamic Range	Risetime(Bandwidth)
57318	0.5 to 18 GHz	-24 to +20 dBm	<15 ns (35 MHz)
57518	0.1 to 18 GHz	-40 to +20 dBm	<100 ns (6 MHz)

**CW Power\***

Model	Freq. Range	Dynamic Range
51075A	500 kHz to 18 GHz	-70 to +20 dBm

\*other types @ [www.boonton.com/products.html/](http://www.boonton.com/products.html/)

Wireless Telecom Group Inc.  
Parsippany, NJ 07054  
USA  
Tel: +1 973 386 9696  
Fax: +1 973 386 9191  
[boonton@boonton.com](mailto:boonton@boonton.com)  
[www.boonton.com](http://www.boonton.com)

Wireless Telecom Group  
Cheadle Hulme, Cheshire  
United Kingdom  
Tel: +44 (0) 161 486 3353  
Fax: +44 (0) 161 486 3354

Wireless Telecom Group  
Roissy  
France  
Tel: +33 (0) 1 72 02 30 30  
Fax: +33 (0) 1 49 38 01 06

Wireless Telecom Group  
Ismaning  
Germany  
Tel: +49 (0) 89 996 41 0  
Fax: +49 (0) 89 996 41 440

Wireless Telecom Group.  
Singapore  
Tel: +65 6827 9670  
Fax: +65 6827 9601

Wireless Telecom Group  
Shanghai  
China  
Tel: +86 21 5835 8039  
Fax: +86 21 5835 5238

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