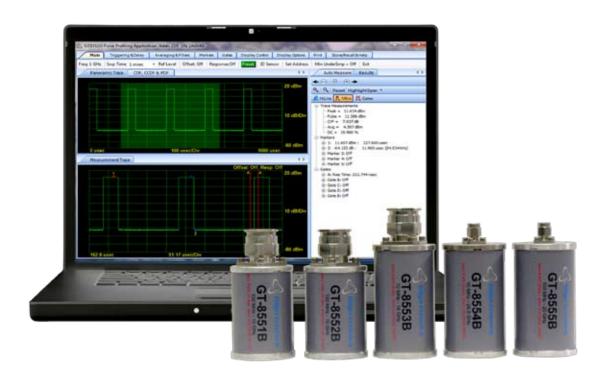
### **Technical Datasheet**

## **GT-8550B Series USB Power Sensor**

10 MHz to 26.5 GHz



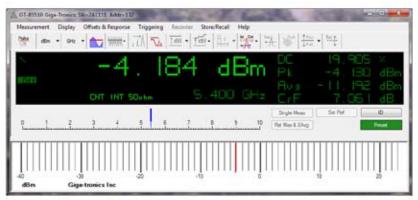
PC-based Power Meter



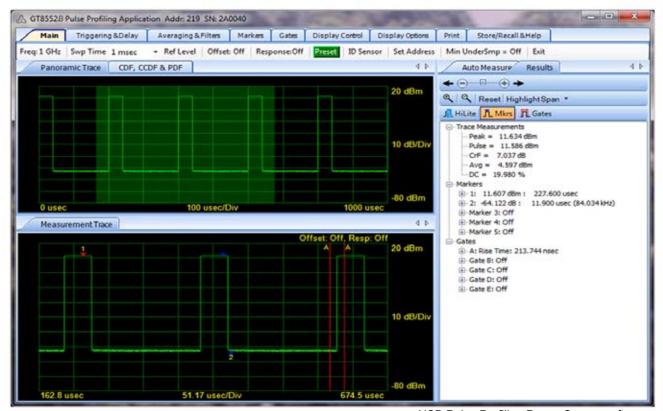
#### **GT-8550B Series USB Power Sensors**

#### **Advanced Power Sensor Technology**

- Outstanding accuracy and repeatability
- 2000 readings/sec exceptional speed
- Internal zero and cal ideal for ATE



USB Peak Power Sensor software



USB Pulse Profiling Power Sensor software

The Giga-tronics GT-8550B series USB Power Sensors are designed for fast measurement speed, wide dynamic range and high accuracy. The power sensor's unique circuit topology is highly reliable, with performance that excels where extremes of measurement speed and accuracy are required. The PC based platform allows for lower cost than traditional power meters and power sensors, and with a laptop PC, it is ideal for field portable power measurement or remote monitoring applications. The Giga-tronics GT-8550B series USB Power Sensors include the application software.



#### **Advanced Power Sensor Technology**

The Giga-tronics GT-8550B series USB Power Sensors offer accurate power measurement of RF and microwave signals. Fast measurement speed, wide dynamic range and low VSWR make these broadband power sensors ideal for R&D laboratory, manufacturing test, field installation and field maintenance applications.

The GT-8550B series USB Power Sensors are fully calibrated. Unlike traditional power meters and power sensors, there is no need to call or zero the sensor prior to making measurements, eliminating sources of error and enhancing ease-of-use.

The Giga-tronics GT-8551B 100 MHz to 8 GHz, operational to 10 GHz, USB Power Sensor can be used in wireless communications and component testing wherever signals with modulation are present. Measurement modes include average power, peak power, pulse power, duty cycle and crest factor.

The Giga-tronics GT-8552B 100 MHz to 8 GHz, operational to 10 GHz, USB Peak Power Sensor and GT-8555B 100 MHz to 20 GHz USB Peak Power Sensor, feature pulse profiling for use in measuring pulse parameters for defense and communication applications wherever pulse waveforms are present. The pulse profiling application includes multiple markers and gate functions for accurate pulse characterization. The GT-8552B and GT-8555B USB Peak Power Sensor measurement modes include average power, peak power, pulse power, duty cycle and crest factor.

The GT-8553B USB Power Sensor with 10 MHz to 18 GHz frequency range and the GT-8554B USB Power Sensor with 10 MHz to 26.5 GHz frequency range are both optimized for fast, accurate True-RMS average power measurement of RF and microwave signals.





## **GT-8551B Series USB Peak Power Sensor**

100 MHz to 8 GHz, operational to 10 GHz

#### **Technical Information**

Specifications apply over 0 °C to 50 °C unless otherwise indicated. Typical specifications describe expected but non-warranted performance.

#### **Frequency Range**

Sensor Model	Specifications
GT-8551B	100 MHz to 8 GHz, operational to 10 GHz

#### **Dynamic Range**

	Specifications		
Sensor Model	100 MHz to 6 GHz	6 GHz to 8 GHz	
GT-8551B	-60 dBm to +20 dBm	-50 dBm to +20 dBm	

Dynamic Range from 8 GHz to 10 GHz is typically -30 dBm to +20 dBm

#### **Maximum Peak Power (Damage Level)**

Sensor Model	Specifications
GT-8551B	+23 dBm (200 mW)

Maximum input power: +20 dBm Maximum input voltage: 25 Vdc

#### **VSWR**

	Specifications		
Sensor Model	100 MHz to 250 MHz	250 MHz to 8 GHz	8 GHz to 10 GHz
GT-8551B	1.18:1	1.15:1	1.18:1 typical

#### **Recommended Calibration Cycle**



#### **Accuracy**

Measurement uncertainty is computed from the individual cal factor, mismatch, linearity, noise and temperature error factors, and can be computed as either worst case (sum of the applicable error terms) or RSS, representing the most probable error, where RSS is the square root of the sum of the squares of the error terms.

Accuracy is typically < 2% (RSS) mid-band with source VSWR 1.2:1 (or better) at 25 °C +/- 5 °C.

#### **GT-8551B Error Factors**

Calibration Factor	100 MHz to 0.5 GHz	0.5 GHz to 8 GHz
-60 to +20 dBm	4%	1.7%

Linearity	100 MHz to 2 GHz	2 GHz to 8 GHz
+15 to +20 dBm	7%	5%
+10 to +15 dBm	5%	3%
-60 to +10 dBm	3%	2%

Noise <sup>1</sup>	100 MHz to 6 GHz	6 GHz to 8 GHz
-30 to +20 dBm	0.02%	0.04%
-50 to -30 dBm	0.04%	0.15%
-60 to -50 dBm	0.11%	N/A

Note 1: Noise measured with a 1 second integration time.

Temperature	0 °C to 10 °C	10 °C to 20 °C	20 °C to 30 °C	30 °C to 40 °C	40 °C to 50 °C
-60 to +0 dBm	1%	0.75%	0%	0.75%	1%
0 to +10 dBm	2%	1.75%	0%	1.75%	2%
+10 to +20 dBm	4%	3.75%	0%	3.75%	4%

Zero Offset	100 MHz to 8 GHz
-60 to +20 dBm	0.35 nW typical at 25 °C, 1.7 nW typical 0 °C to 50 °C



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## **GT-8551B Series USB Peak Power Sensor**

100 MHz to 8 GHz, operational to 10 GHz

#### **Measurement Speed**

Sensor Model	Specification
GT-8551B	2000 Reading/second typical

#### **Video Bandwidth**

Sensor Model	Specification
GT-8551B	10 MHz minimum

#### **Maximum Peak-to-Average Ratio**

Sensor Model	Specification
GT-8551B	70 dB typical

#### **General Specifications**

USB Voltage	+4.5 Volts to +5.5 Volts	
USB Power <sup>2</sup>	450 mA typical, 500 mA maximum	
Operating Temperature	0 °C to +50 °C	
Storage Temperature	-20 °C to +75 °C	
Cooling	Forced air, internal micro-fan	
USB Cable Length	15 ft (5 m) maximum	
Dimensions	1.6" H x 1.6" W x 3.2" D (40 mm H x 40 mm W x 81 mm D)	
Weight	< 1 lbs (< 0.5 kg)	
Environmental	MIL-PRF-28800F, Class 3 WEEE compliant, RoHS compliant	
Safety	EN 61010 and CE compliant	
Emissions	EN 61326 and FCC compliant	

Note 2: a USB 2.0 Power Hub is recommended, particularly when using multiple sensors.



#### **Trigger Functions**

Rate	1 Hz to 750 kHz
Resolution	2 μS
Modes	Single or Continuous
Trigger Source	Internal or External
Internal Trigger Signal Level Range	-20 dBm to +20 dBm (Manual or Auto)
Trigger Input	TTL compatible, Rising or Falling Edge
Trigger Input Operating Levels	0.0 V to 0.8 V (low), 2.0 V to 5.0 V (high), +/- 10 μA
Trigger Input Maximum Levels	-0.5 V (low) to 5.5 V (high)
Trigger-off Time <sup>3</sup>	1 μs minimum

Note 3: If the internal trigger is set to detect the rising edge of a pulse-modulated signal, then the signal pulse-off time must be greater than 1  $\mu$ s for reliable triggering. If the internal trigger is set to detect the falling edge of a pulse-modulated signal, then the signal pulse-om (or Pulse Width) must be greater 1  $\mu$ s for reliable triggering.





## **GT-8552B Series USB Peak Power Sensor**

100 MHz to 8 GHz, operational to 10 GHz (Peak and Pulse power measurement)

#### **Technical Information**

Specifications apply over 0 °C to 50 °C unless otherwise indicated. Typical specifications describe expected but non-warranted performance.

#### **Frequency Range**

Sensor Model	Specifications
GT-8552B	100 MHz to 8 GHz, operational to 10 GHz

#### **Dynamic Range**

Sensor Model	Specifications		
Sensor Woder	100 MHz to 6 GHz	6 GHz to 8 GHz	
GT-8552B	-60 dBm to +20 dBm	-50 dBm to +20 dBm	

Dynamic Range from 8 GHz to 10 GHz is typically -30 dBm to +20 dBm

#### **Maximum Peak Power (Damage Level)**

Sensor Model	Specifications
GT-8552B	+23 dBm (200 mW)

Maximum input power: +20 dBm Maximum input voltage: 25 Vdc

#### **VSWR**

Sensor Model	Specifications			
	100 MHz to 250 MHz	250 MHz to 8 GHz	8 GHz to 10 GHz	
GT-8552B	1.18:1	1.15:1	1.18:1 typical	

#### **Recommended Calibration Cycle**



#### **Accuracy**

Measurement uncertainty is computed from the individual cal factor, mismatch, linearity, noise and temperature error factors, and can be computed as either worst case (sum of the applicable error terms) or RSS, representing the most probable error, where RSS is the square root of the sum of the squares of the error terms.

Accuracy is typically < 2% (RSS) mid-band with source VSWR 1.2:1 (or better) at 25 °C +/- 5 °C.

#### **GT-8552B Error Factors**

Calibration Factor <sup>1</sup>	100 MHz to 0.5 GHz	0.5 GHz to 8 GHz
-60 to +20 dBm	4%	1.7%

Note 1: -50 to +20 dBm for 6 GHz to 8 GHz

Linearity	100 MHz to 2 GHz	2 GHz to 8 GHz
+15 to +20 dBm	7%	5%
+5 to +15 dBm	5%	3%
-60 to +5 dBm	3%	2%

Noise <sup>2</sup>	100 MHz to 6 GHz	6 GHz to 8 GHz
-30 to +20 dBm	0.02%	0.04%
-50 to -30 dBm	0.04%	0.15%
-60 to -50 dBm	0.11%	N/A

Note 2: Noise measured with a 1 second integration time.

Temperature	0°C to 10 °C	10 °C to 20 °C	20 °C to 30 °C	30 °C to 40 °C	40 °C to 50 °C
-60 to +0 dBm	1%	0.75%	0%	0.75%	1%
0 to +10 dBm	2%	1.75%	0%	1.75%	2%
+10 to +20 dBm	4%	3.75%	0%	3.75%	4%

Zero Offset	100 MHz to 8 GHz
-60 to +20 dBm	0.35 nW typical at 25 °C, 1.7 nW typical 0 °C to 50 °C



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## **GT-8552B Series USB Peak Power Sensor**

100 MHz to 8 GHz, operational to 10 GHz (Peak and Pulse power measurement)

#### **Measurement Speed**

Sensor Model	Specification
GT-8552B	2000 Reading/second typical

#### **Sample Rate**

Sensor Model	Specification
GT-8552B	48 MS/s typical

#### **Video Bandwidth**

Sensor Model	Specification
GT-8552B	10 MHz

#### **Maximum Peak-to-Average Ratio**

Sensor Model	Specification
GT-8552B	70 dB typical

#### **Rise Time / Fall Time**

Sensor Model	Specification	
GT-8552B	< 55 ns (10% to 90%) at 4 GHz typical	

#### **General Specifications**

•			
USB Voltage	+4.5 Volts to +5.5 Volts		
USB Power <sup>3</sup>	450 mA typical, 500 mA maximum		
Operating Temperature	0 °C to +50 °C		
Storage Temperature	-20 °C to +75 °C		
Cooling	Forced air, internal micro-fan		
USB Cable Length	15 ft (5 m) maximum		
Dimensions	1.6" H x 1.6" W x 3.2" D (40 mm H x 40 mm W x 81 mm D)		
Weight	< 1 lbs (< 0.5 kg)		
Environmental	MIL-PRF-28800F, Class 3 WEEE compliant, RoHS compliant		
Safety	EN 61010 and CE compliant		
Emissions	EN 61326 and FCC compliant		

Note 3: a USB 2.0 Power Hub is recommended, particularly when using multiple sensors.



#### **Measurement Capabilities**

- Pulse Profiling Gated Measurements: Peak Power, Average Power, Crest Factor (Peak-to-Average Ratio), Droop, Overshoot, Rise Time, Fall Time, Duty Cycle, Pulse Repetition Frequency (PRF), Pulse Repetition Interval (PRI) and Pulse Width.
- Pulse Profiling Marker Measurements: Peak Power and Delta Markers
- Statistical Chart Mode: PDF, CDF and CCDF

#### **General Measurement Capabilities**

Selectable Power Units, Relative Function, Offset Function, Adjustable Averaging, Upper and Lower Alarm Limits and Max Hold.

#### Minimum Pulse Width<sup>4</sup>

Sensor Model	Specification
GT-8552B	350 ns typical

Note 4: The minimum pulse width is the recommended minimum pulse width viewable on the measurement display, where power measurements are meaningful and accurate, but not warranted.

#### **Trigger Functions**

Rate	1 Hz to 750 kHz		
Resolution	20.8 ns		
Modes	Single or Continuous		
Trigger Source	Internal or External		
Internal Trigger Signal Level Range	-20 dBm to +20 dBm (Manual or Auto)		
Trigger Input	TTL compatible, Rising or Falling Edge		
Trigger Input Operating Levels	0.0 V to 0.8 V (low), 2.0 V to 5.0 V (high), +/- 10 μA		
Trigger Input Maximum Levels	-0.5 V (low) to 5.5 V (high)		
Trigger-off Time⁵	1 µs minimum		

Note 5: If the internal trigger is set to detect the rising edge of a pulse-modulated signal, then the signal pulse-off time must be greater than 1  $\mu$ s for reliable triggering. If the internal trigger is set to detect the falling edge of a pulse-modulated signal, then the signal pulse-om (or Pulse Width) must be greater 1  $\mu$ s for reliable triggering.





## **GT-8553B Series USB True-RMS Power Sensor**

10 MHz to 18 GHz

#### **Technical Information**

Specifications apply over 0 °C to 50 °C unless otherwise indicated. Typical specifications describe expected but non-warranted performance.

#### **Frequency Range**

Sensor Model	Specifications
GT-8553B	10 MHz to 18 GHz

#### **Dynamic Range**

Sensor Model	Specifications
GT-8553B	-50 dBm to +20 dBm

#### **Maximum Peak Power (Damage Level)**

Sensor Model	Specifications
GT-8553B	+23 dBm (200 mW)

Maximum input power: +20 dBm Maximum input voltage: 25 Vdc

#### **VSWR**

Sensor Model	Specifications		
	10 MHz to 10 GHz	10 GHz to 18 GHz	
GT-8553B	1.20:1	1.30:1	

#### **Recommended Calibration Cycle**



#### **Accuracy**

Measurement uncertainty is computed from the individual cal factor, mismatch, linearity, noise and temperature error factors, and can be computed as either worst case (sum of the applicable error terms) or RSS, representing the most probable error, where RSS is the square root of the sum of the squares of the error terms.

Accuracy is typically < 2% (RSS) mid-band with source VSWR 1.2:1 (or better) at 25 °C +/- 5 °C.

#### **GT-8553B Error Factors**

Calibration Factor	10 MHz to 1 GHz	1 GHz to 10 GHz	10 GHz to 18 GHz
-50 to +20 dBm	1.8%	1.7%	1.9%

Linearity	10 MHz to 18 GHz
+15 to +20 dBm	3%
-15 to +15 dBm	2.5%
-50 to -15 dBm	2%

Noise <sup>1</sup>	10 MHz to 18 GHz
-30 to +20 dBm	0.1%
-40 to -30 dBm	0.25%
-50 to -40 dBm	0.5%

Note 1: Noise measured with a 5 second integration time.

Temperature	0 °C to 10 °C	10 °C to 20 °C	20 °C to 30 °C	30 °C to 40 °C	40 °C to 50 °C
-50 to +20 dBm	2%	0.75%	0%	0.75%	2%

Zero Offset	10 MHz to 18 GHz
-50 to +20 dBm	1 nW typical at 25 °C, 5 nW typical 0 °C to 50 °C



## **GT-8553B Series USB True-RMS Power Sensor**

10 MHz to 18 GHz

#### **Measurement Speed**

Sensor Model	Specification
GT-8553B	2000 Reading/second typical

#### **Video Bandwidth**

Sensor Model	Specification
GT-8553B	100 Hz typical

#### **General Specifications**

USB Voltage	+4.5 Volts to +5.5 Volts		
USB Power <sup>2</sup>	450 mA typical, 500 mA maximum		
Operating Temperature	0 °C to +50 °C		
Storage Temperature	-20 °C to +75 °C		
USB Cable Length	15 ft (5 m) maximum		
Dimensions	1.6" H x 1.6" W x 3.7" D (40 mm H x 40 mm W x 94 mm D)		
Weight	< 1 lbs (< 0.5 kg)		
Environmental	MIL-PRF-28800F, Class 3 WEEE compliant, RoHS compliant		
Safety	EN 61010 and CE compliant		
Emissions	EN 61326 and FCC compliant		

Note 2: a USB 2.0 Power Hub is recommended, particularly when using multiple sensors.



## **GT-8554B Series USB True-RMS Power Sensor**

10 MHz to 26.5 GHz

#### **Technical Information**

Specifications apply over 0 °C to 50 °C unless otherwise indicated. Typical specifications describe expected but non-warranted performance.

#### **Frequency Range**

Sensor Model	Specifications
GT-8554B	10 MHz to 26.5 GHz

#### **Dynamic Range**

Sensor Model	Specifications
GT-8554B	-50 dBm to +20 dBm

#### **Maximum Peak Power (Damage Level)**

Sensor Model	Specifications	
GT-8554B	+23 dBm (200 mW)	

Maximum input power: +20 dBm Maximum input voltage: 25 Vdc

#### **VSWR**

Sensor Model	Specifications		
	10 MHz to 10 GHz	10 GHz to 26.5 GHz	
GT-8554B	1.20:1	1.30:1	

#### **Recommended Calibration Cycle**





## **GT-8554B Series USB True-RMS Power Sensor**

10 MHz to 26.5 GHz

#### **Accuracy**

Measurement uncertainty is computed from the individual cal factor, mismatch, linearity, noise and temperature error factors, and can be computed as either worst case (sum of the applicable error terms) or RSS, representing the most probable error, where RSS is the square root of the sum of the squares of the error terms.

Accuracy is typically < 2% (RSS) mid-band with source VSWR 1.2:1 (or better) at 25 °C +/- 5 °C.

#### **GT-8554B Error Factors**

Calibration Factor	10 MHz to 1 GHz	1 GHz to 10 GHz	10 GHz to 18 GHz	18 GHz to 26.5 GHz
-50 to +20 dBm	2.5%	2.4%	2.7%	3.7%

Linearity	10 MHz to 26.5 GHz
+15 to +20 dBm	3%
-15 to +15 dBm	2.5%
-50 to -15 dBm	2%

Noise <sup>1</sup>	10 MHz to 26.5 GHz
-30 to +20 dBm	0.1%
-40 to -30 dBm	0.25%
-50 to -40 dBm	0.5%

Note 1: Noise measured with a 5 second integration time.

Temperature	0 °C to 10 °C	10 °C to 20 °C	20 °C to 30 °C	30 °C to 40 °C	40 °C to 50 °C
-50 to +20 dBm	2%	0.75%	0%	0.75%	2%

Zero Offset	10 MHz to 26.5 GHz
-50 to +20 dBm	1 nW typical at 25 °C, 5 nW typical 0 °C to 50 °C

### **Measurement Speed**

Sensor Model	Specification
GT-8554B	2000 Reading/second typical

#### **Video Bandwidth**

Sensor Model	Specification
GT-8554B	100 Hz typical

#### **General Specifications**

USB Voltage	+4.5 Volts to +5.5 Volts		
USB Power <sup>2</sup>	450 mA typical, 500 mA maximum		
Operating Temperature	0 °C to +50 °C		
Storage Temperature	-20 °C to +75 °C		
USB Cable Length	15 ft (5 m) maximum		
Dimensions	1.6" H x 1.6" W x 3.3" D (40 mm H x 40 mm W x 84 mm D)		
Weight	< 1 lbs (< 0.5 kg)		
Environmental	MIL-PRF-28800F, Class 3 WEEE compliant, RoHS compliant		
Safety	EN 61010 and CE compliant		
Emissions	EN 61326 and FCC compliant		

Note 2: a USB 2.0 Power Hub is recommended, particularly when using multiple sensors.





## **GT-8555B Series USB Peak Power Sensor**

100 MHz to 20 GHz (Peak and Pulse power measurement)

#### **Technical Information**

Specifications apply over 0 °C to 50 °C unless otherwise indicated. Typical specifications describe expected but non-warranted performance.

#### **Frequency Range**

Sensor Model	Specifications
GT-8555B	100 MHz to 20 GHz

#### **Dynamic Range**

	Specifications
Sensor Model	100 MHz to 20 GHz
GT-8555B	-40 dBm to +20 dBm

### **Maximum Peak Power (Damage Level)**

Sensor Model	Specifications	
GT-8555B	+23 dBm (200 mW)	

Maximum input power: +20 dBm Maximum input voltage: 25 Vdc

#### **VSWR**

Sensor Model	Specifications		
	100 MHz to 10 GHz	10 GHz to 20 GHz	
GT-8555B	1.20:1	1.30:1	

#### **Recommended Calibration Cycle**



#### **Accuracy**

Measurement uncertainty is computed from the individual cal factor, mismatch, linearity, noise and temperature error factors, and can be computed as either worst case (sum of the applicable error terms) or RSS, representing the most probable error, where RSS is the square root of the sum of the squares of the error terms.

Accuracy is typically < 2% (RSS) mid-band with source VSWR 1.2:1 (or better) at 25 °C +/- 5 °C.

#### **GT-8555B Error Factors**

Calibration Factor	100 MHz to 0.5 GHz	0.5 GHz to 12.5 GHz	12.5 GHz to 18 GHz	18 GHz to 20 GHz
-40 to +20 dBm	4%	2.6%	3.2%	3.5%

Linearity	100 MHz to 2 GHz	2 GHz to 20 GHz
+15 to +20 dBm	7%	6%
+5 to +15 dBm	5%	4%
-40 to +5 dBm	3%	2%

Noise <sup>1</sup>	100 MHz to 20 GHz
-30 to +20 dBm	0.25%
-40 to -30 dBm	0.50%

Note 1: Noise measured with a 5 second integration time.

Temperature	0 °C to 10 °C	10 °C to 20 °C	20 °C to 30 °C	30 °C to 40 °C	40 °C to 50 °C
-40 to +20 dBm	2.5%	1.25%	0%	1.25%	2.5%

Zero Offset	100 MHz to 20 GHz
-40 to +20 dBm	200 nW typical at 25 °C, 450 nW typical 0 °C to 50 °C



## **GT-8555B Series USB Peak Power Sensor**

100 MHz to 20 GHz (Peak and Pulse power measurement)

#### **Measurement Speed**

Sensor Model	Specification
GT-8555B	2000 Reading/second typical

#### **Sample Rate**

Sensor Model	Specification
GT-8555B	48 MS/s typical

#### **Video Bandwidth**

Sensor Model	Specification
GT-8555B	10 MHz

#### **Maximum Peak-to-Average Ratio**

Sensor Model	Specification
GT-8555B	55 dB typical

#### Rise Time / Fall Time

Sensor Model	Specification
GT-8555B	< 55 ns (10% to 90%) at 4 GHz typical

#### **General Specifications**

USB Voltage	+4.5 Volts to +5.5 Volts
USB Power <sup>2</sup>	450 mA typical, 500 mA maximum
Operating Temperature	0 °C to +50 °C
Storage Temperature	-20 °C to +75 °C
USB Cable Length	15 ft (5 m) maximum
Dimensions	1.6" H x 1.6" W x 3.3" D (40 mm H x 40 mm W x 84 mm D)
Weight	< 1 lbs (< 0.5 kg)
Environmental	MIL-PRF-28800F, Class 3 WEEE compliant, RoHS compliant
Safety	EN 61010 and CE compliant
Emissions	EN 61326 and FCC compliant

Note 2: a USB 2.0 Power Hub is recommended, particularly when using multiple sensos.

#### **Measurement Capabilities**

- Pulse Profiling Gated Measurements: Peak Power, Average Power, Crest Factor (Peak-to-Average Ratio), Droop, Overshoot, Rise Time, Fall Time, Duty Cycle, Pulse Repetition Frequency (PRF), Pulse Repetition Interval (PRI) and Pulse Width.
- Pulse Profiling Marker Measurements: Peak Power and Delta Markers
- Statistical Chart Mode: PDF, CDF and CCDF

#### **General Measurement Capabilities**

Selectable Power Units, Relative Function, Offset Function, Adjustable Averaging, Upper and Lower Alarm Limits and Max Hold.

#### Minimum Pulse Width<sup>3</sup>

Sensor Model	Specification
GT-8555B	350 ns typical

Note 3: The minimum pulse width is the recommended minimum pulse width viewable on the measurement display, where power measurements are meaningful and accurate, but not warranted.

#### **Trigger Functions**

ingger i anotione	
Rate	1 Hz to 750 kHz
Resolution	20.8 ns
Modes	Single or Continuous
Trigger Source	Internal or External
Internal Trigger Signal Level Range	-20 dBm to +20 dBm (Manual or Auto)
Trigger Input	TTL compatible, Rising or Falling Edge
Trigger Input Operating Levels	0.0 V to 0.8 V (low), 2.0 V to 5.0 V (high), +/- 10 μA
Trigger Input Maximum Levels	-0.5 V (low) to 5.5 V (high)
Trigger-off Time⁴	1 μs minimum

Note 4: If the internal trigger is set to detect the rising edge of a pulse-modulated signal, then the signal pulse-off time must be greater than 1  $\mu s$  for reliable triggering. If the internal trigger is set to detect the falling edge of a pulse-modulated signal, then the signal pulse-om (or Pulse Width) must be greater 1  $\mu s$  for reliable triggering.





# 35424-Rev. A/ US122112

## **GT-8550B Series USB Power Sensor**

#### **Measurement Software**

The Giga-tronics GT-8550B series USB Power Sensors are designed for use with a standard PC running Microsoft® Windows. The Giga-tronics GT-8550B series USB Power Sensors include the easy-to-use application software.

#### **Recommended PC Requirements**

Parameter	Specification
Operating System	Microsoft® Windows XP, Windows Vista (32) or Windows 7 (32 or 64)
Processor Speed	> 1 GHz
RAM	> 256 MB
USB Interface	USB 2.0



#### **GT-8550B Series RF Input Front Connections**

Connection	Description
GT-8551B, GT-8552B, GT-8553B	Low VSWR RF input, Type-N (m) connector
GT-8554B, GT-8555B	Low VSWR RF input, SMA (m) connector

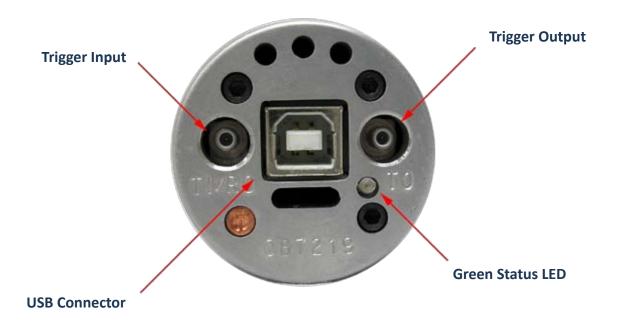
#### **GT-8550B Series Rear Connections**

Connection	Description
USB Port	Rugged 4-Pin USB 2.0
Trigger Input / Output*	SMB (m) snap-on, TTL levels

<sup>\*</sup> Apply to model GT-8551B, GT-8552B and GT-8555B only

#### Items included with the GT-8550B Series

The GT-8550B Series USB Power Sensor includes the following: 2 M (6 foot) USB cable; a USB flash drive containing the quick start guide, operation manual, the software, and a Calibration Certification certificate.





## **Ordering Information**

Giga-tronics has a network of RF and Microwave instrumentation sales engineers and a staff of factory support personnel to help you find the best, most economical instrument for your specific applications. In addition to helping you select the best instrument for your needs, our staff can provide quotations, assist you in placing orders, and do everything necessary to ensure that your business transactions with Giga-tronics are handled efficiently.

Model Number	Description
GT-8551B	USB Power Sensor, 100 MHz to 8 GHz, operational to 10 GHz, Average, Peak (Pulse)
GT-8552B	USB Power Sensor, 100 MHz to 8 GHz, operational to 10 GHz, Average, Peak (Pulse), Pulse Profiling
GT-8553B	USB Power Sensor, 10 MHz to 18 GHz, True-RMS Average Power
GT-8554B	USB Power Sensor, 10 MHz to 26.5 GHz, True-RMS Average Power
GT-8555B	USB Power Sensor, 100 MHz to 20 GHz, Average, Peak (Pulse), Pulse Profiling

#### **Available Options and Accessories**

Option	Description
01	Add 5 meter (15 foot) extra-long USB cable
05	Soft Carrying Case (Large case for laptop computer and sensors)

P/N 21460-003	SMB (f) snap-on to BNC 2 M (6 foot) cable
P/N JRXC-01300	Type N (f) to SMA (m) Adaptor
P/N JRXC-00400	Type N (m) to SMA (f) Adaptor

#### **Giga-tronics Support Services**

At Giga-tronics, we understand the challenges you face. Our support services begin from the moment you call us. We help you achieve both top-line growth and bottom-line efficiencies by working to identify your precise needs and implement smart and result orientated solutions. We believe and commit ourselves in providing you with more than our superior test solutions. For technical support, contact:

Tel: 1-800-726-GIGA (4442) or (925) 328-4669 Email: support@gigatronics.com

#### **Updates**

All data is subject to change without notice. For the latest information on Giga-tronics products and applications, please visit our website:

http://www.gigatronics.com

