

## Key Features:

- 400 to 6000MHz Coverage
- 360 Degree Phase Adjustment Range
- Accurate 0.5-Degree Steps
- Integrated Step Attenuator
- USB COM Interface
- Industry Standard SCPI Commands
- OLED Display and control buttons
- Very Cost Effective
- Incredibly Compact
- Conveniently USB powered
- Audio Feedback

DS Instruments

# PS6000L R3

## PORTABLE WIDEBAND PHASE SHIFTER



### PS6000L (Rev 3) – An active wideband RF phase shifter

The PS6000L enables users to phase shift an RF/Microwave signal in 0.5 degree increments easily and at low cost. The RF device bandwidth extends from 400 to 6000MHz, and phase adjustment range covers the entire -180 to +180 degree range. The PS6000L has a wideband active I/Q modulator core resulting in a typical power output level of +10dBm. An integrated step attenuator on the RF output allows for a 30dB range in 0.25dB steps.

### Stand-Alone Control

Manual operation sets the PS6000L above the competition with unparalleled flexibility. The PS6000L can be easily controlled from its front panel interface **without** a host system. Any standard USB port including wall chargers, battery packs, laptops, or desktops will provide sufficient power.

### USB Automated Operation

With the PS6000L connected to any computer via micro USB port, industry standard SCPI commands can be used to fully control the instrument. This USB virtual COM port allows users to control the PS6000L for automated test applications from many different operating systems and scripting languages and environments. No extra drivers, or API knowledge is needed.



# PS6000L

## TECHNICAL SPECIFICATIONS

Conditions: 25° C, USB supplied power

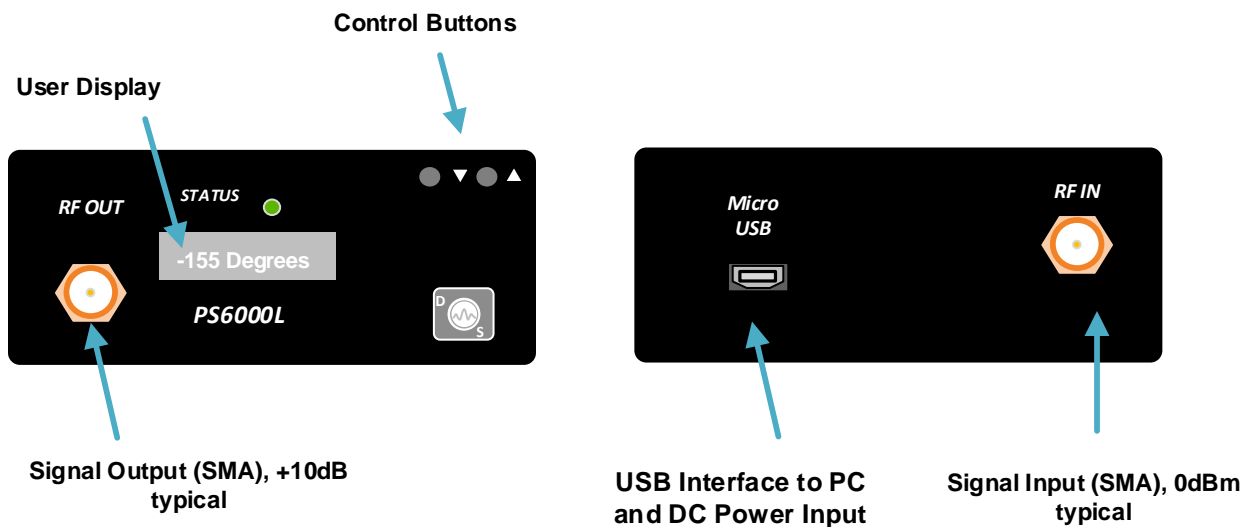
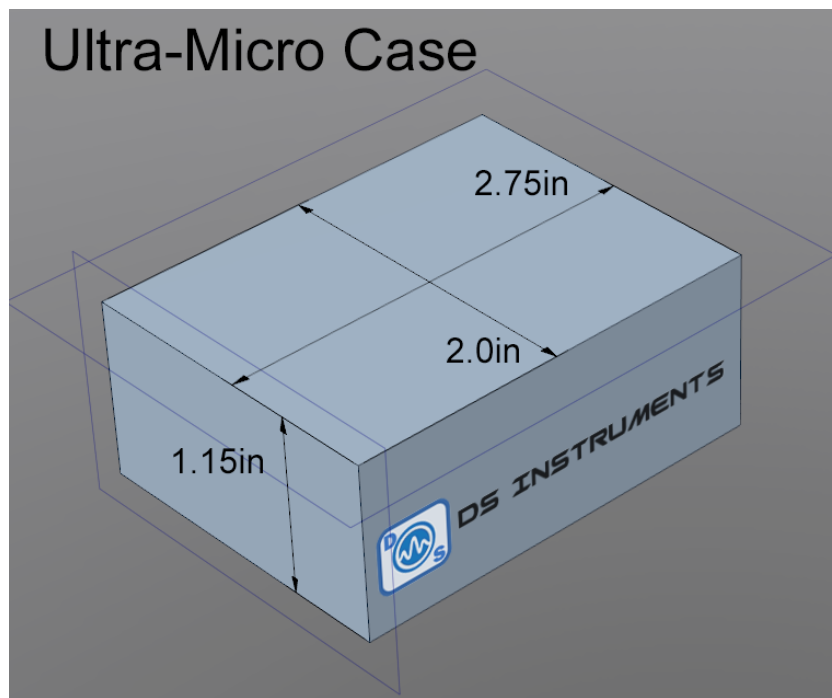
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Parameter	Min	Max	Typ	Units
Frequency Range	400	6000		MHz
Phase Adjustment Range	-180	+180		Degrees
Step Size / Resolution			0.5	Degrees
Phase Accuracy (400 - 4500MHz, ±90°)			±2.0	Degrees
Phase Accuracy (400 - 4500MHz, ±180°)			±3.0	Degrees
Phase Accuracy (4500 - 6000MHz, ±90°)			±4.0	Degrees
Phase Accuracy (4500 - 6000MHz, ±180°)			±8.0	Degrees
Response Time			<500	uS
RF Input Power	-20	+10	0	dBm
RF Output Level (Adjustable)	-20	+10	+5	dBm
Output Attenuator Step Size			0.25	dB
Input / Output Return Loss			10	dB
USB Current			200	mA
USB Voltage	4.75	5.35	5.0	V
Operating Temperature	-30	45	20	C

# PS6000L

## Case Dimensions & Front / Rear Panel Features

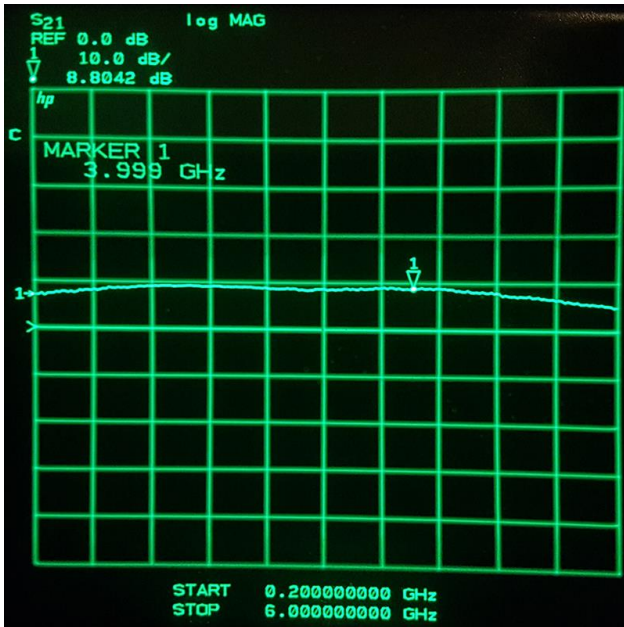
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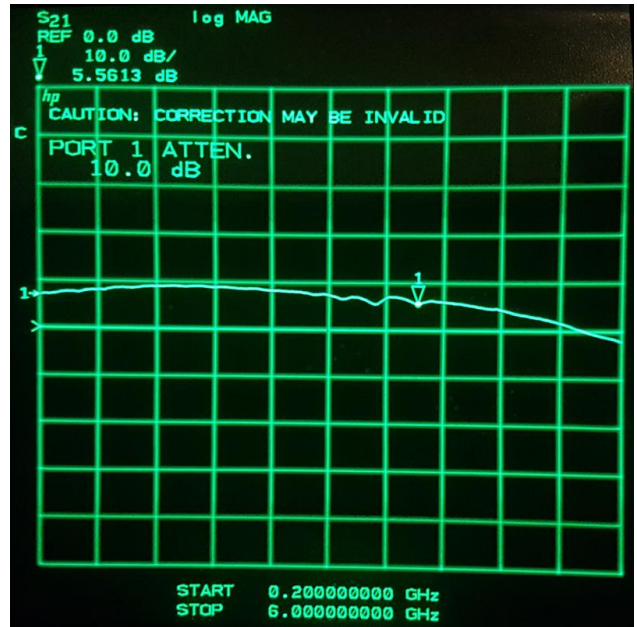
# PS6000L

## Gain Plots (Negative Insertion Loss)

[ 25 Deg. C, USB Power ]



RF input signal level: -5dBm



RF input signal level: -15dBm

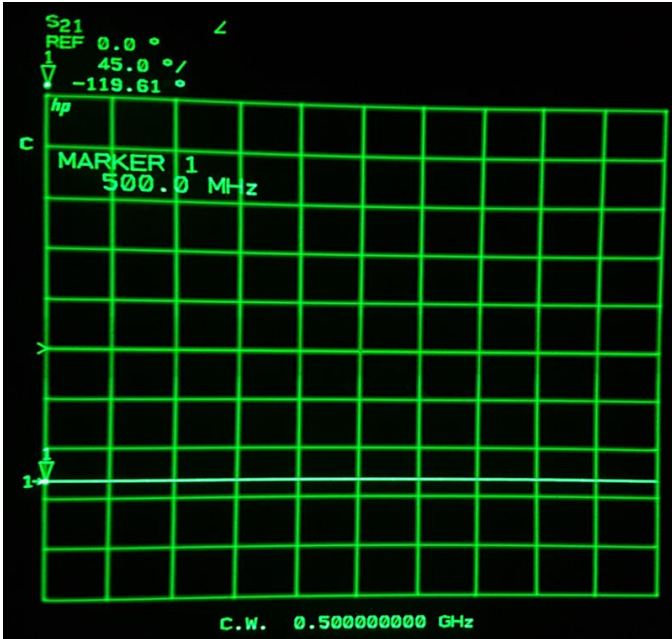


RF input signal level: -25dBm

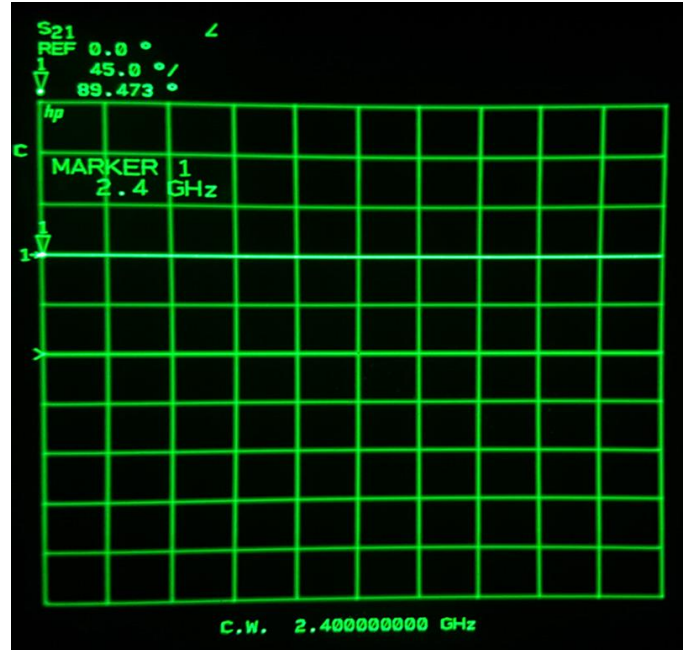
# PS6000L

## Typical Narrowband CW Frequency Response

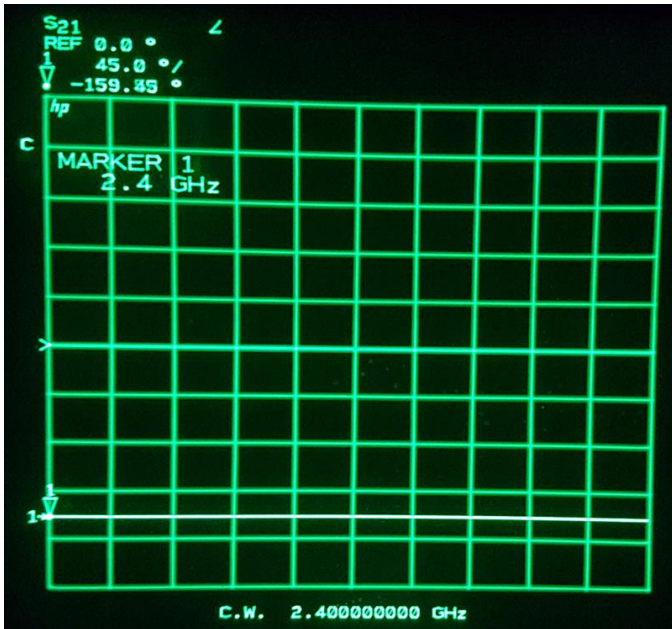
[ 25 Deg. C, USB Power ]



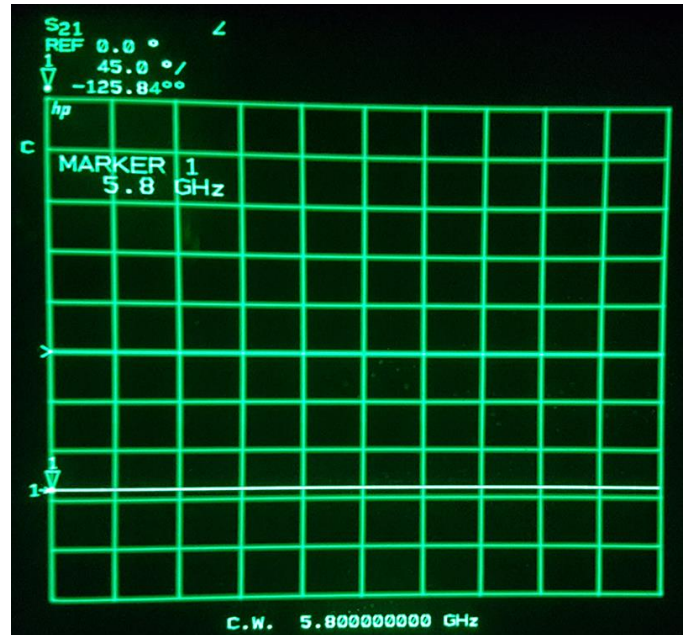
-120 degree setting at 500MHz



90 degree setting at 2.4GHz



-160 degree setting at 2.4GHz

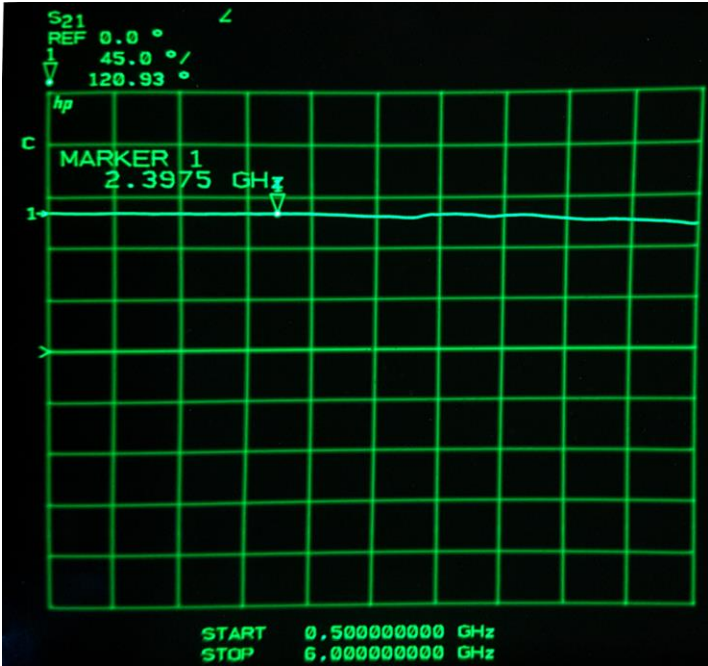


-130 degree setting at 5.8GHz

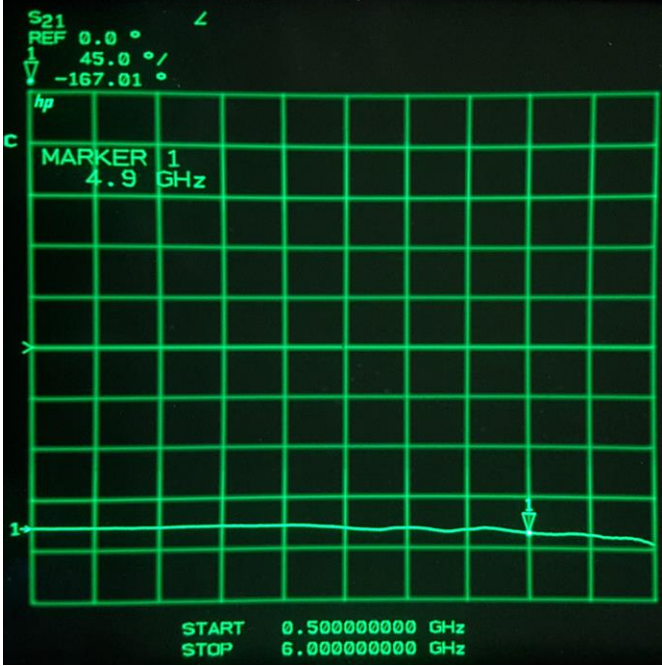
# PS6000L

## Typical Wideband Frequency Response

[ 25 Deg. C, USB Power ]



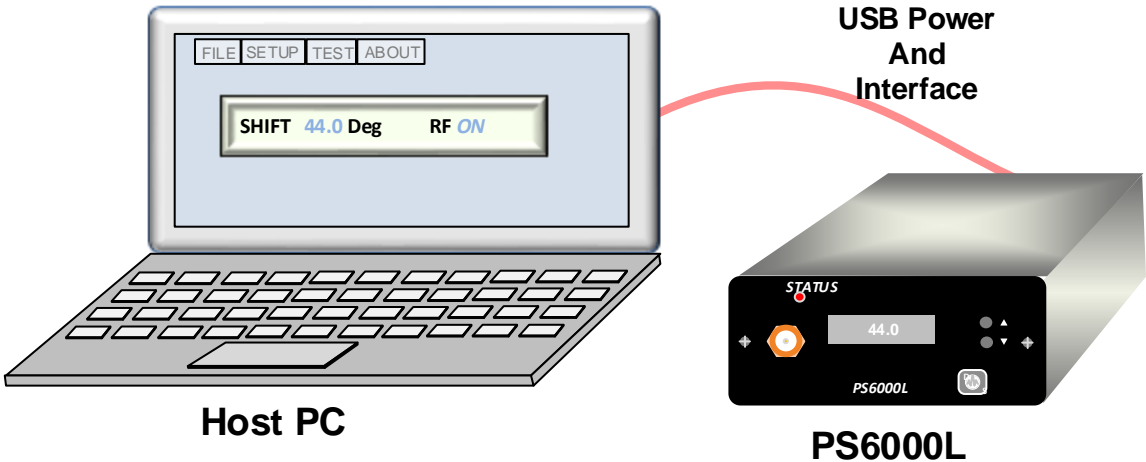
+120-degree setting, full frequency range



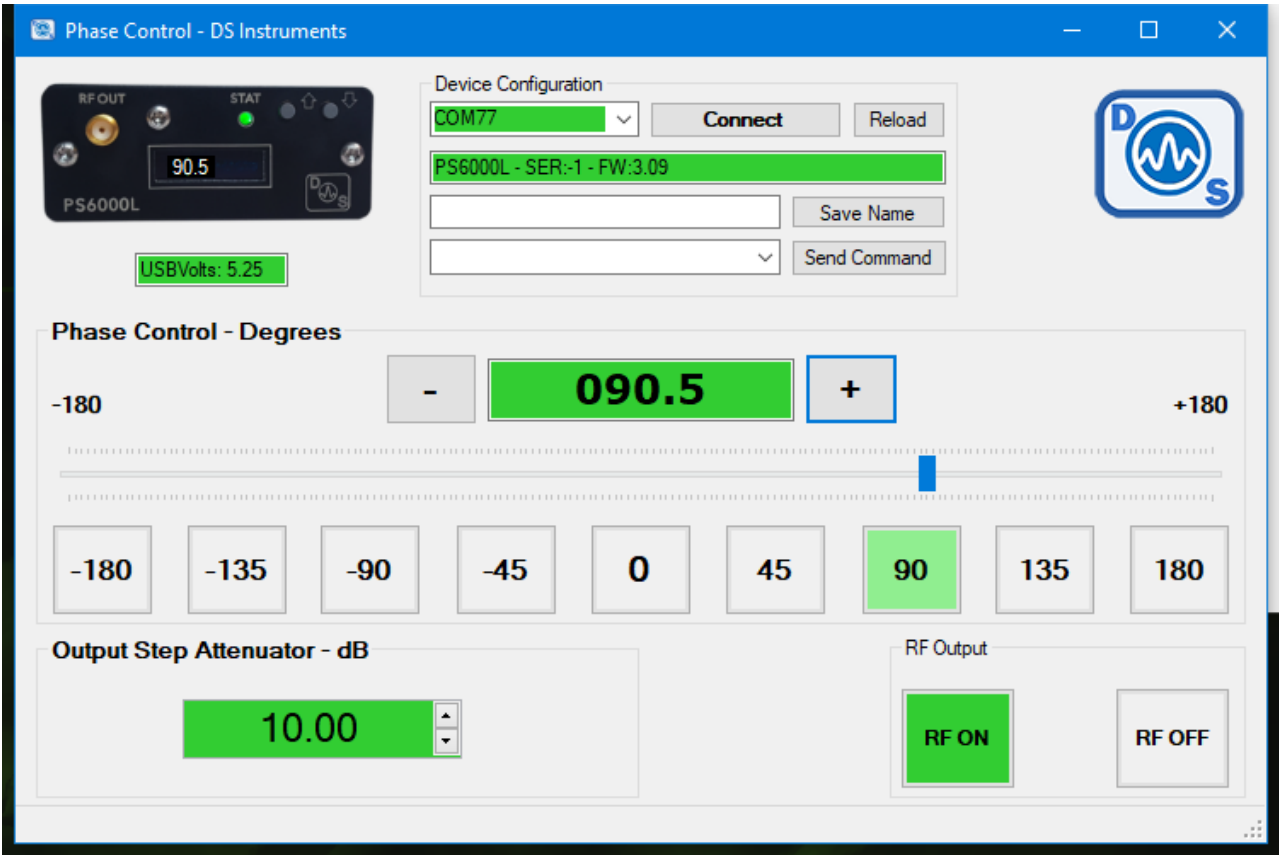
-160-degree setting, full frequency range

# PS6000L

## Typical User connections for remote Operation via USB



## Windows Control GUI Application



# PS6000L

## Product Photos

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# PS6000L

## *Ordering Information*

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**PS6000 - 400 to 6000MHz (No Display) (\$489.00)**

**PS6000L – 400 to 6000MHz (\$523.95)**

## *Contact Information*

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