

## Key Features

- 24 to 6000MHz Coverage
- Extended Coverage to 12000MHz with Doubler
- >7 dBm Output
- USB PC Interface
- Industry Standard SCPI Commands
- 255 Settable frequencies via rear panel

# SG6000

## SIGNAL GENERATOR



### SG6000, A wideband RF Signal Generator

The SG6000 enables users to generate a high quality sine-wave in a compact package. The output covers 7 octaves from 24 to 6000MHz or to 12000MHz with the optional doubler output. The produced sine-wave wave is fully synthesized using modern fractional N synthesis. The step size of the non doubled RF output varies from a maximum of ~3KHz to less than 20Hz, depending on band of operation. The synthesized source can accept an external 10MHz reference or it can use its own internal 10MHz. Output power is typically above +7dBm and can be turned ON/OFF via USB commands.

### Ease of Use

The SG6000 is controlled using its USB port and a host PC. The user connects the PC to SG6000 and with provide software frequency output can be controlled as well RF ON/OFF function.

### Signal Generator Operation

With the SG6000 connected to the PC via USB port, industry standard SCPI commands are used to control frequency and RF output ON/OFF. The USB port is configured on the host PC as a COM port. This feature allows users to control the SG6000 for automated test applications.

In addition to PC control of output frequency a dual set of rear panel rotary switches allow the user to change output frequency without a host PC. Using the host PC, the user first programs the table of 255 custom frequencies into the SG6000 NVRAM. Later these frequencies can be recalled by changing the rotary switches *without* a host PC. This is particularly useful for field applications of the SG6000



# SG6000

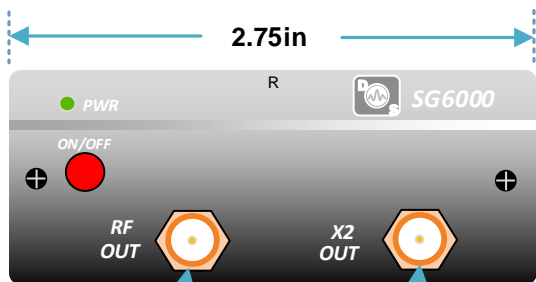
## SPECIFICATIONS

Parameter	Min	Max	Typ	Units
Output Frequency Range ( w/ Opt. 1 Doubler)	24	6000 (12000)		MHz
Output Power	+6	+11	+8	dBm
x2 Output Power (Opt. 1)	+6	+9	+7	dB
Output Flatness	-3	+3	+/-2	dB
Output Flatness (Opt. 1)			+/-2	dB
Phase Noise @ 5GHz, 10KHz Offset (-6dB for each sub-octave, +6dB for x2 Opt. 1)			-82	dBc
Output VSWR		1.5:1	1.3:1	VSWR
Output Power @ Min Setting			-20	dBm
Step Size (decreases by 2 as RF band reduces)	<20	<3000		Hz
10MHz Reference Input power Range (Opt. 2)	-20	+15		dBm
DC Power Input thru USB Port	4.75	5.2		vdc

## SG6000 Front and Rear Panel Features

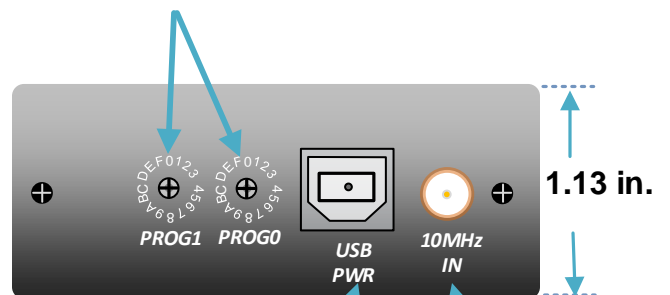
**CASE DIMENSIONS:**  
1.13(H)x2.75(W)x6.0(L) in.

Two rotary 16 position switches  
allows up to 255 SG Frequencies



SG doubled output Signal  
(SMA), to 12000 MHz @  
+7dBm (typ), Opt.1

SG output Signal (SMA), 24 to  
6000 MHz, +8dBm (typ)



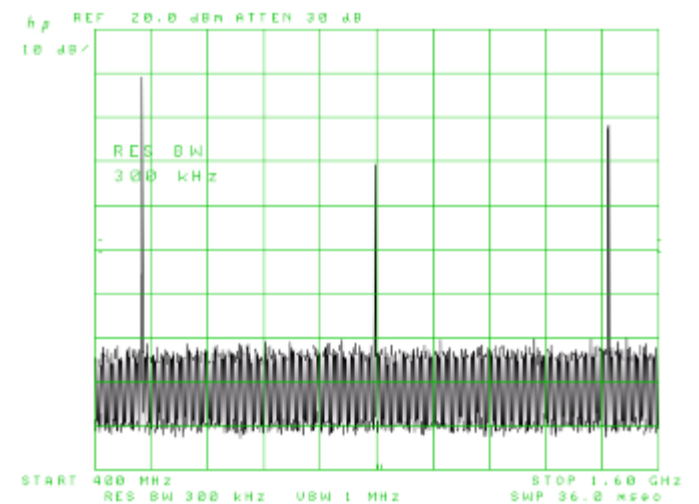
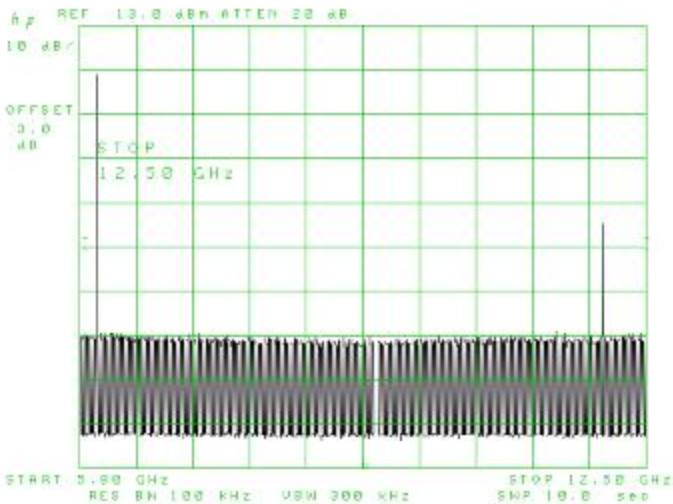
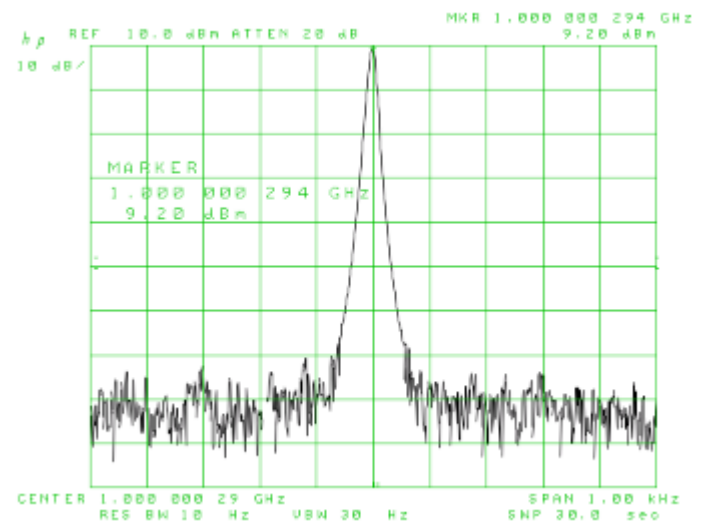
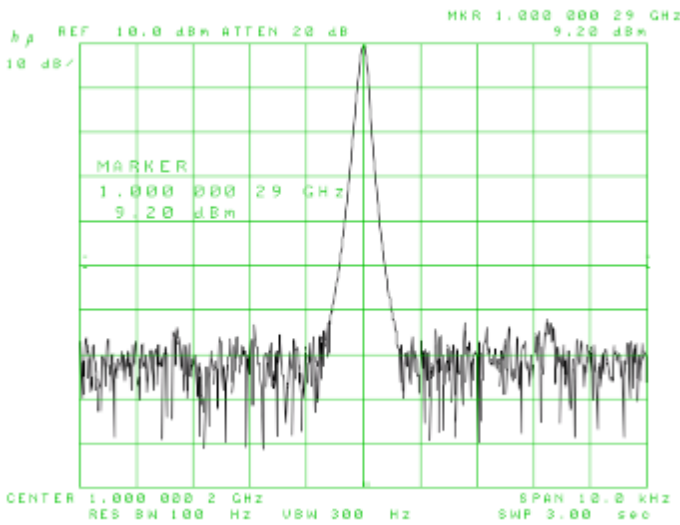
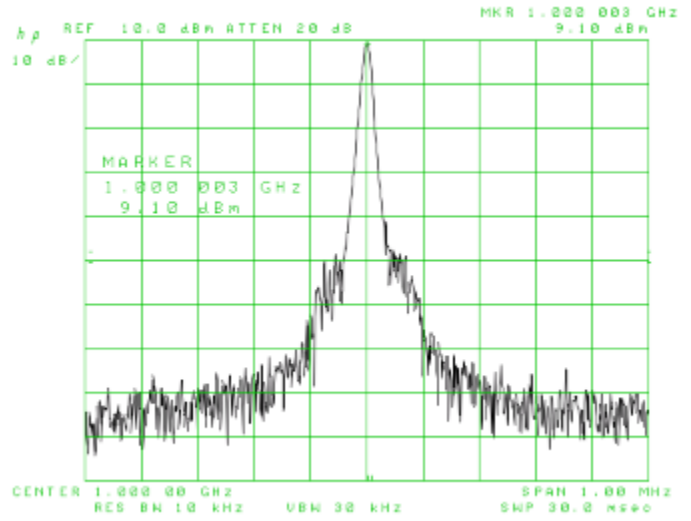
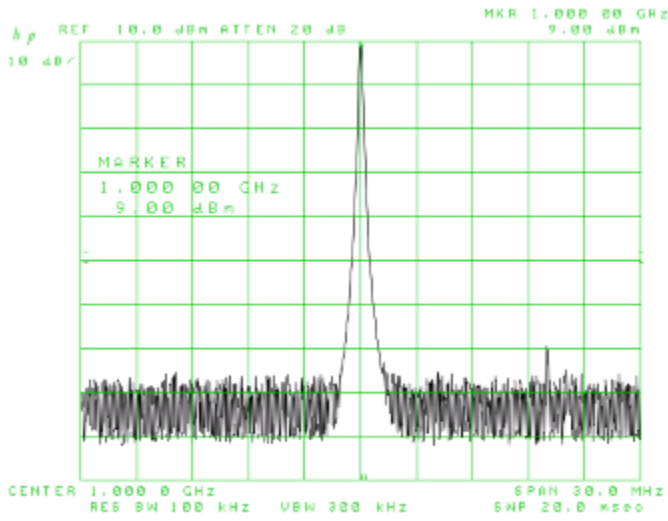
Opt.2, External  
10MHz reference  
IN (SMA)

USB Interface to PC  
and DC Power Input

# SG6000

## Typical Output Power Spectrums

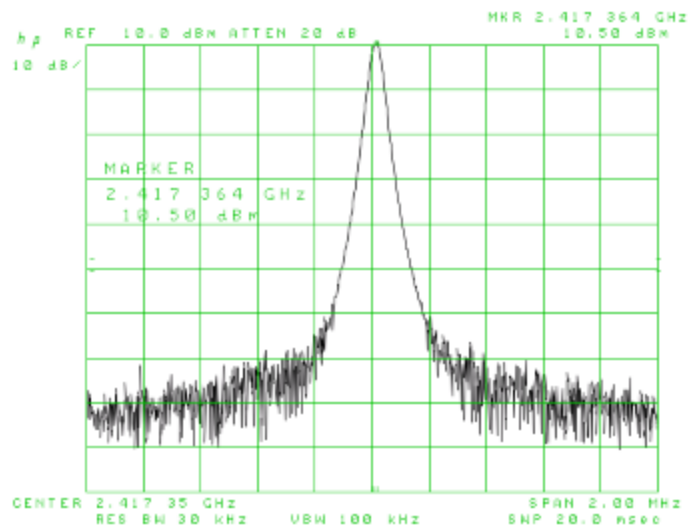
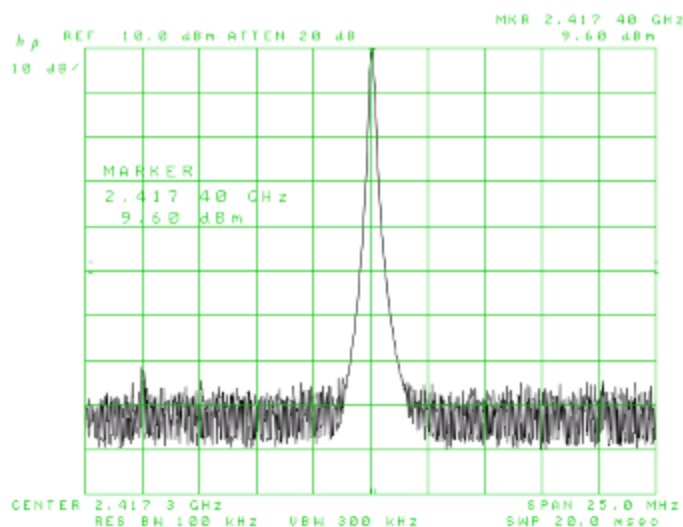
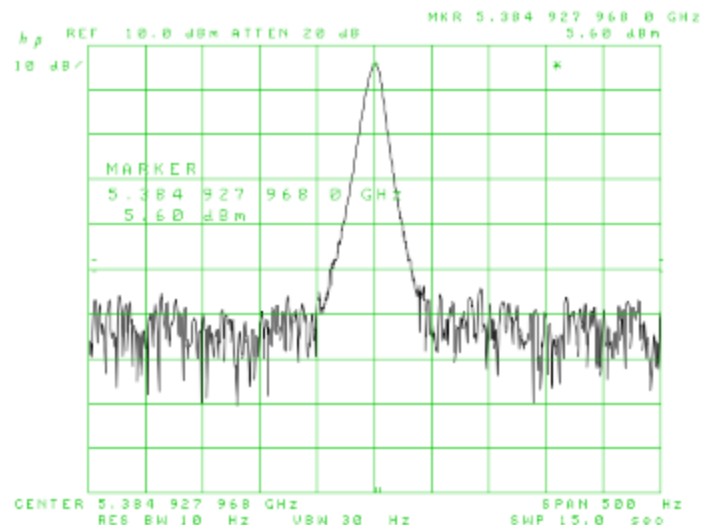
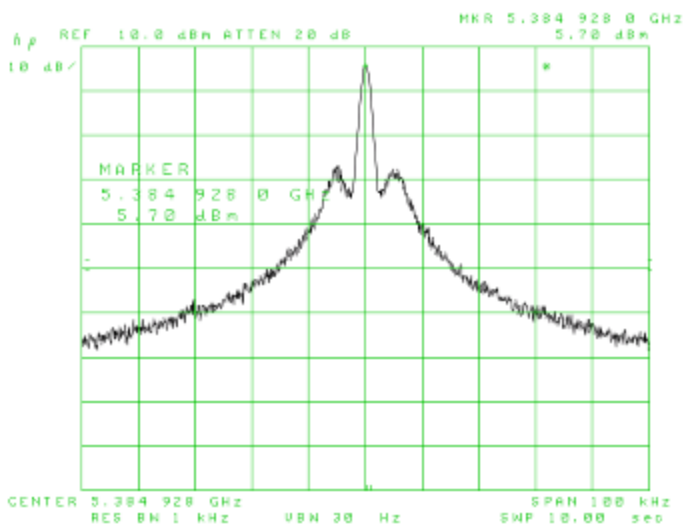
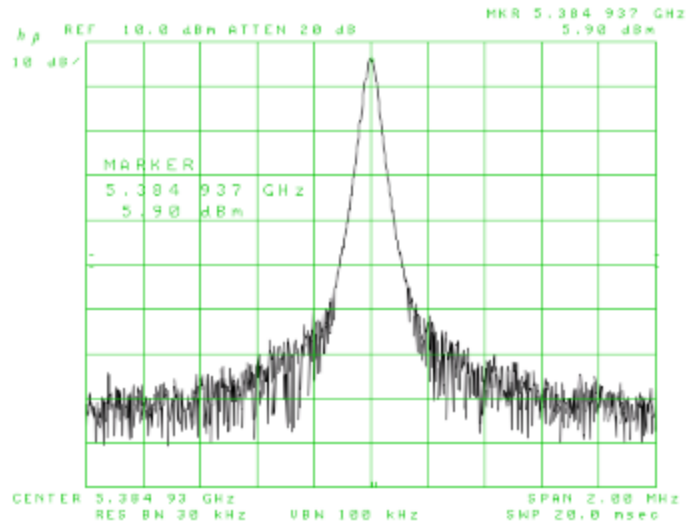
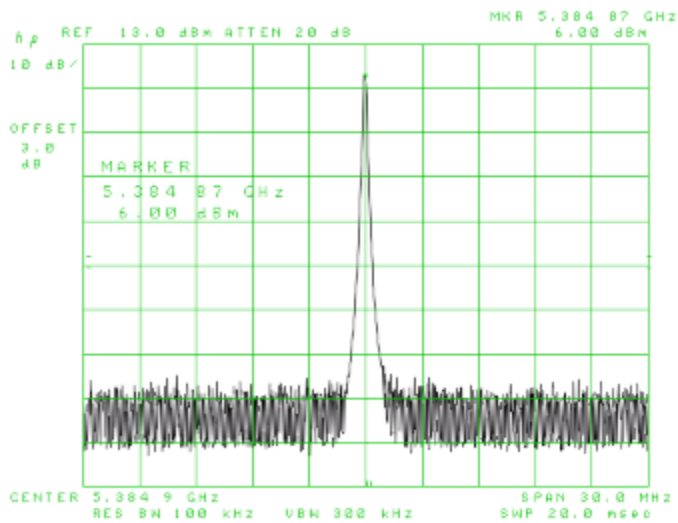
[ 25 Deg. C, USB Power , 10MHz supplied by Spectrum Analyzer ]



# SG6000

## Typical Output Power Spectrums, Cont.

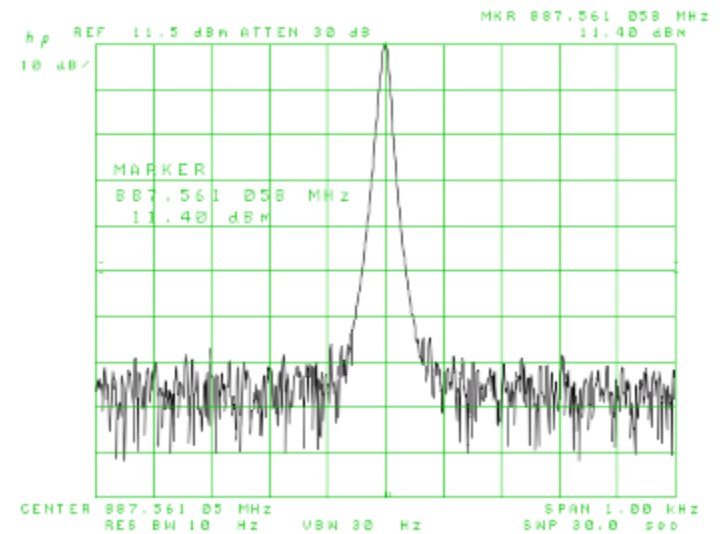
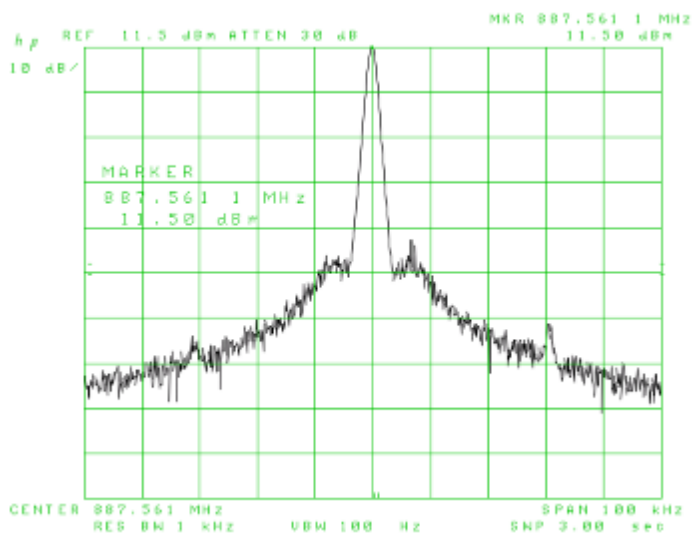
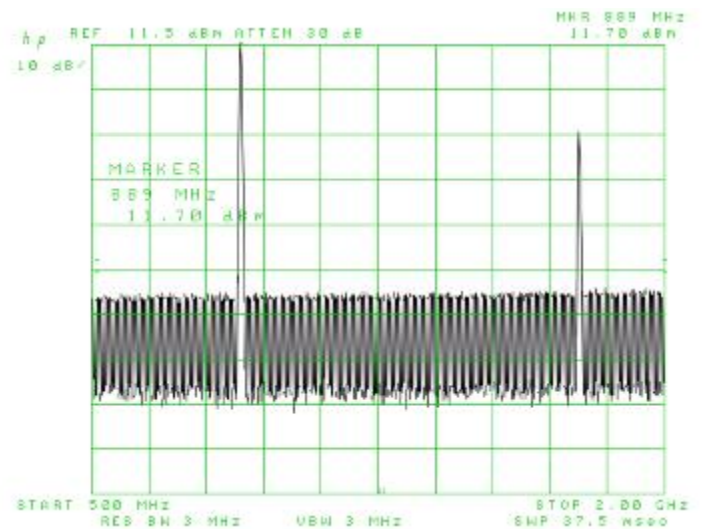
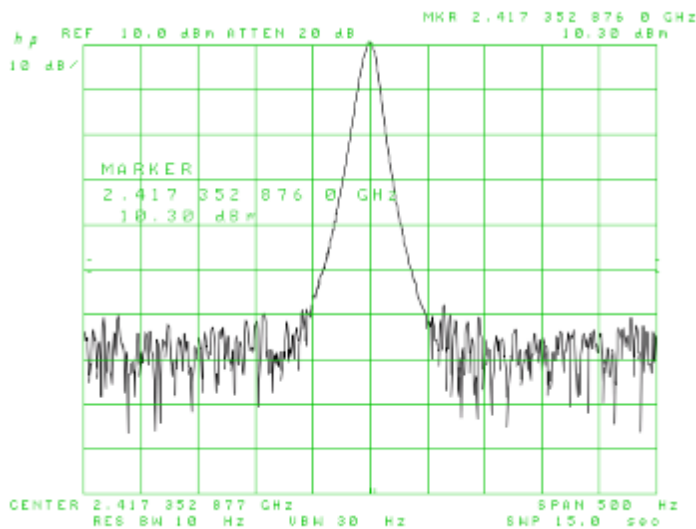
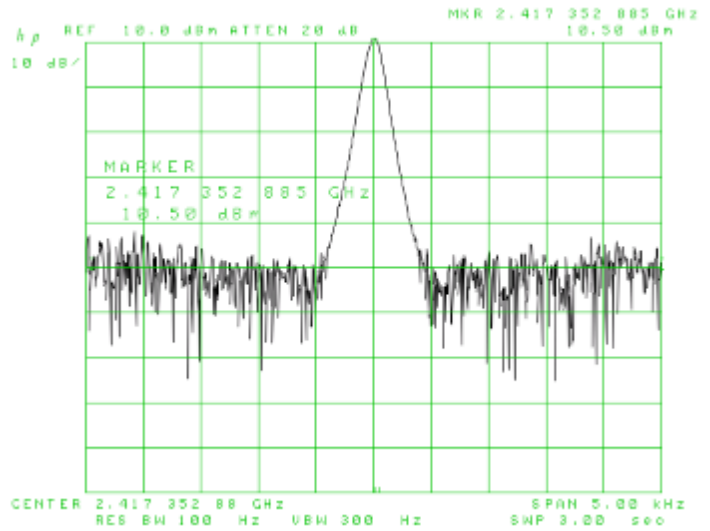
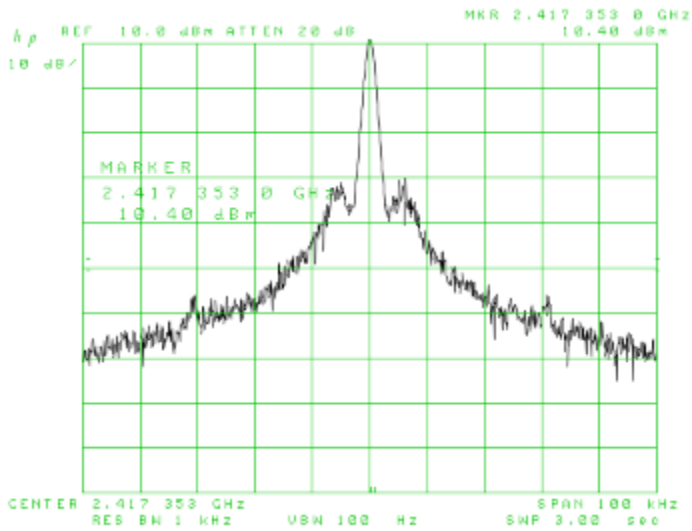
[ 25 Deg. C, USB Power , 10MHz supplied by Spectrum Analyzer ]



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## Typical Output Power Spectrums, Cont.

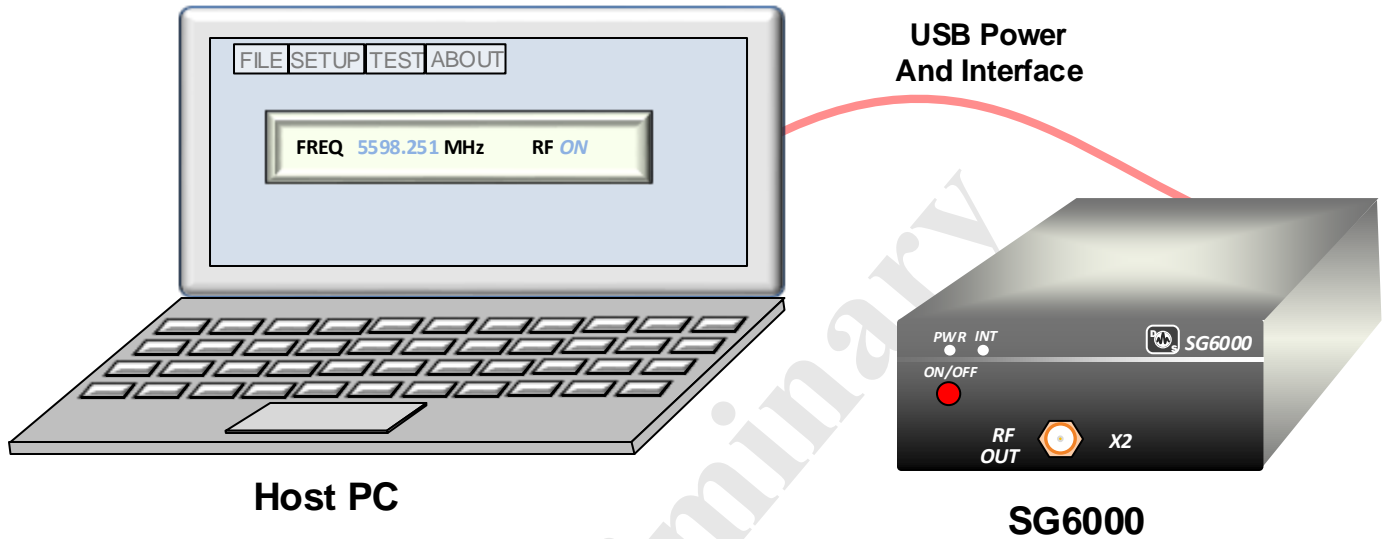
[ 25 Deg. C, USB Power , 10MHz supplied by Spectrum Analyzer ]



# SG6000

## Typical User connections

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## Ordering Information

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Model SG6000, 24 to 6000MHz	\$495.00
Option 1, Doubler Output (to 12000MHz)	+ \$400.00
Option 2, External 10MHz input ( Removes Int. 10MHz)	+ \$45.00