



Triarchy

## DATASHEET



# VSG2G5C USB Vector signal generator

Accurate and stable in frequency/level  
Extra low cost, extra low weight, best performance to price ratio.  
Frequency range from 100MHz~2.5GHz. Output level from -70dBm~15dBm.  
Connect to PC through USB type C port without extra power unit.



## [www.triarchytech.com](http://www.triarchytech.com)

The VSG2G5C is a very cost effective USB RF vector signal generator. It can do most basic test functions of a regular sized RF vector signal generator can do. The VSG2G5C is very tiny instrument, but it can cover very wide measurement range.

RF frequency is from 100MHz to 2.5GHz, RF output level is from -70dBm to 15dBm. The most of modulation can be done by this tiny equipment. Such as pulse modulation, frequency hopping, I&Q modulation, it can generate FSK, MSK, GMSK, QPSK, 8PSK, 16QAM. It can generate TDD format signal for communication set. It also can generate radar signal.

VSG2G5C is very suitable for field test. Because it is very small and easy to be carried. It also can be integrated RF system as module. It can simulated most of RF system signal.

### Single frequency with/without pulse mode:

Frequency range: 100MHz to 2.5GHz.  
Frequency resolution: 1Hz. Pulse modulation with pulse width: 50us~5s,  
repeat time: 100us~20s, multiple pulse number: 2~250. Pulse modulation on/off ratio : 90dB

### Frequency sweeping with/without pulse mode:

Step:1Hz~1GHz. Pulse modulation with pulse width: 100us~5s, repeat time: 400us~20s

### Frequency hopping with/without pulse mode:

Hopping range: 100MHz to 2.5GHz.  
Hopping number: 2~4000, Pulse modulation with pulse width: 100us~5s,  
repeat time: 400us~20s

### Low band:

Frequency range: 100Hz~1MHz. I&Q file modulation. Raw data output,  
AM/FM/PM modulation with low band frequency.

### Amplitude range:

High band amplitude range: -70dBm~15dBm (100MHz~2.5GHz), Amplitude  
resolution: 0.25dB.

### Low band amplitude range (not calibrated):

-50dBm~0dBm (100Hz~1MHz)

### Reference clock:

Internal clock accuracy is 0.5PPM. Clock port is MMCX connector at back panel,  
ref clock out: 10MHz, ref clock in: 20MHz.

### Internal I&Q modulation:

Load I&Q file to generate different modulation. I&Q file size (max):  
100KB. I&Q clock: 1.1KHz~2MHz. Using I&Q engine to generate different modulation file.

### Analog modulation:

Demo file with AM, FM and PM.

### Digital modulation:

Demo file with MSK, GMSK and FSK.

### Phase modulation:

Demo file with QPSK, 8PSK and 16QAM.

### External I&Q modulation:

External modulation signal bandwidth: 500MHz, Signal level: 1Vpp.  
External signal input from 4 MMCX connectors (P, IN, QP, QN).

### Pulse signal out:

Output level: 3.3V COMS level. Pulse width: 50us~5s, Repeat time: 100us~20s,  
Multiple pulse number: 2~250. Pulse connector is MMCX at back panel.

### Temperature range:

working range: -10C ~+50C, stored range: -50C~+70C

### Power Source:

5V from USB type C port. Working Current: 500mA

### Dimensions:

115mm(L)x25mm(W)x25mm(H)

### Weight:

100g

Wireless Remotes,  
cordless phones,  
Monitors

ATE system

Industrial,  
Scientific,  
Medical (ISM)

Cellular  
and PCS

Two-Way Radio  
Trunk Radio

Bluetooth,  
WiFi, WiMax

Field Service  
and Installation