

# Aplab

## 50MHz DDS PULSE GENERATOR PG502



**Aplab Model PG502** is a new generation Dual Channel 50 MHz Direct Digital Synthesized Pulse Generator. It is highly reliable, stable, precision, and simple to use. It uses the state of art technology SMD components and hence is very compact in size. A highly stable crystal controlled oscillator time base generate pulses of high frequencies, variable pulse-widths, variable delay, periods and time intervals. It accepts triggers from Internal, External or by manual key selections. The output is continuous, individually synchronized pulse, Single, or Double pulse.

It has wide applications in R&D Labs, Colleges Labs, Private Industries, Navigation, Communications, and Scientific Institutions.

### Features

- Direct Digital Synthesis Technique, Crystal Controlled Oscillator Reference, High Accurate Time and Frequency Generation.
- Use of VFD for Clarity and Comfortable Vision, Two-level Convenient Menu Operation.
- Keyboard Operation, Sequence Adjusting with Knob.
- Data Storage and Restore.
- Optional GPIB, USB, or RS232 Interface.
- Use of CPLD and SMD Component.

## TECHNICAL SPECIFICATIONS

### PULSE WAVEFORMS

<b>Pulse</b>	: Single pulse and Double-pulse, Logic positive, Logic negative, Positive polarity, Negative polarity.
<b>Pulse Rise/Fall time</b>	: $\leq 10\text{ns}$ .
<b>Overshoot</b>	: $\leq 10\%$ (amplitude 5Vpp).

### PERIOD

<b>Pulse Period Range</b>	: 20ns to 10000s.
<b>Frequency Range</b>	: 0.1MHz to 50MHz.
<b>Time Interval Range</b>	: 5ns to 10000s.
<b>Resolution</b>	: 5ns ( $T \leq 4\text{s}$ ), $10\mu\text{s}$ ( $T \geq 4\text{s}$ ).
<b>Time Interval Error</b>	: $\pm(T \times 5 \times 10^{-5} + 5\text{ns})$ .

(Note : T is the set time interval such as pulse period, delay time, and pulse width).

<b>Crystal Oscillator</b>	: $\pm 5 \times 10^{-5}$ ppm.
<b>Frequency Accuracy</b>	

### AMPLITUDE OFFSET

<b>Amplitude Range</b>	: 50mVp to 10Vp (open circuit).
<b>Amplitude Resolution</b>	: 10mVp.
<b>Amplitude Error</b>	: $\pm 2\% V_o + 50\text{mV}$ .
<b>Amplitude Stability</b>	: $\pm 2 / 3$ hrs.
<b>Offset Range</b>	: $\pm 50\text{mV}$ to 10V (open circuit).
<b>Offset Resolution</b>	: $\pm 20\text{mVp}$ .
<b>Offset Error</b>	: $\pm 5\% V_o + 50\text{mV}$ .
<b>Output Impedance</b>	: $50\Omega$ .
<b>Output Protection</b>	: Short Protection, Over-heat Protection.

Note :  $V_o$  is the set value of output amplitude.

### TTL AMPLITUDE (For Output C Only).

<b>TTL Level</b>	
Low Level	: $\leq 0.3\text{V}$ .
high Level	: $\geq 4.5\text{V}$ (Open Circuit).
<b>Output Impedance</b>	: $50\Omega$ .

### TRIGGER MODE

<b>Trigger source</b>	: Internal, external, manual.
<b>External trigger input</b>	: Frequency 1Hz to 10MHz (Square) Amplitude 1Vp-p to 20Vp-p.
<b>Input Impedance</b>	: $\geq 100\text{k}\Omega$ .

### BURST MODE

<b>Burst Count</b>	: 1 to 1000 periods.
<b>Interval</b>	: 0.1ms to 100ms.
<b>Burst Mode</b>	: Sequence, once.

### EXTERNAL REFERENCE PROPERTY

<b>Frequency</b>	: 10MHz.
<b>Amplitude</b>	: $\geq 0.5\text{Vrms}$ .

### DIMENSIONS AND WEIGHT

<b>Dimensions</b>	: 254 mm x 103 mm x 384 mm.
<b>Weight</b>	: 3 Kg.

<b>STANDARD ACCESSORIES</b>	: 3-core Power Cord, Signal Output Cable, Instruction Manual.
-----------------------------	---

<b>PROGRAMMABLE INTERFACE</b>	: GPIB/IEEE-488, USB or RS232 optional.
-------------------------------	---

### POWER SUPPLY

<b>Voltage</b>	: AC220V $\pm 10\%$ .
<b>Frequency</b>	: 50Hz $\pm 5\text{Hz}$ .
<b>Power Consumption</b>	: 50VA.

### ENVIRONMENTAL OPERATION

<b>Temperature</b>	: 0 to 45 deg.
<b>Humidity</b>	: 85%.

WE PURSUE A POLICY OF CONTINUOUS DEVELOPMENT AND PRODUCT IMPROVEMENT. THUS THE SPECIFICATIONS IN THIS DOCUMENT AND THE LOCATION OF CONTROLS ON THE FRONT PANEL MAY BE CHANGED WITHOUT NOTICE.

**Aplab** Test & Measurement Instruments

### APLAB LIMITED

APLAB HOUSE, A-5, WAGLE ESTATE, THANE 400 604. INDIA. TEL : 25821861 FAX : 91-022-2582 3137  
EMAIL : [tmisales@aplab.com](mailto:tmisales@aplab.com) WEBSITE : [www.aplab.com](http://www.aplab.com)

- BANGALORE Tel. : 080-23576001 to 07 Fax : 23576008 E-mail : [aplabblr@aplab.com](mailto:aplabblr@aplab.com)
- CHENNAI Tel. : 044-26680472, 26680477 Fax : 26680473 Email : [aplabchn@aplab.com](mailto:aplabchn@aplab.com)
- KOLKATA Tel. : 033-22455435, 22848834 Fax : 22454294 Email : [aplabcal@aplab.com](mailto:aplabcal@aplab.com)
- MUMBAI Tel. : 022-29201787, 29204642, 29203468 Fax : 29209066 Email : [aplabwr@aplab.com](mailto:aplabwr@aplab.com)
- NEW DELHI Tel. : 011-23515183/86, 23627467 Fax : 23634709 Email : [aplabnd@aplab.com](mailto:aplabnd@aplab.com)
- SECUNDERABAD Tel. : 040-27811012, 27843351, 27720339 Fax : 27897788 Email : [aplabsec@aplab.com](mailto:aplabsec@aplab.com)