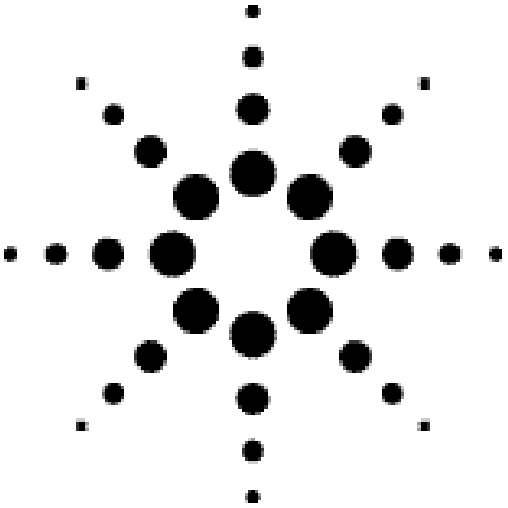

Agilent 5373A Modulation Domain Pulse Analyzer

Data Sheet

Product Specifications

Measurements (see also 5372A Frequency Measurements)

Frequency PRF: Ch A and B: 125 mHz [8 kHz with fast meas. mode] to 500 MHz Ch C: 100 MHz to 2 GHz

Period/PRI: Ch A and B: 2 nsec to 8 sec [131 usec with fast meas. mode] Ch C: 0.5 nsec to 10 nsec

Pulse Width/Off Time: Ch A: 10 nsec to 8.0 sec

Duty Cycle: Ch A: 0% to 100% (provided pulse width is >1 nsec, and the signal period is: <1 msec (auto trigger) <2 sec [32.5 usec with fast meas. mode] (manual trigger)

Rise/Fall Time: Ch A: 1 nsec to 100 usec transitions (auto trigger)

Input Characteristics (Channel A) The following refers to an HP 5373A with an HP 53702A envelope pod installed. All measurements are referenced to an input of 0 dBm at 275 MHz.

Frequency Range: 30 MHz to 500 MHz

Flatness: +/- 1.0 dB (40 MHz to 500 MHz)

AM Range: 20% to 85%

AM Accuracy: 2.0%

AM Frequency Range: 1 kHz to 9 MHz (typ)

Minimum Pulse Width/Off Time: <=100 nsec

Channel B Characteristics The following refers to an HP 5373A with an HP 54002A pod installed.

Range: dc coupled to 500 MHz

Sensitivity: -23.5 dBm (X 1 atten., minimum hysteresis) -27.0 dBm (typical) Hysteresis control is available to reduce input sensitivity to trigger noise.

Dynamic Range: X1: -23.5 dBm to +10 dBm X2.5: -14.8 dBm to +18 dBm

Coupling: dc

Input Impedance (nominal): 50 ohms

Max. Input Level: +16 dBm (X1 attenuation) +24 dBm (X2.5 attenuation)

Channel C Characteristics Range: 100 MHz to 2000 MHz (divide by 4 prescale)

Sensitivity (0 dB atten): -25 dBm (100 MHz to 1.5 GHz) -20 dBm (1.5 GHz to 2 GHz)

Dynamic Range: -25 dBm to +7 dBm (100 MHz to 1.5 GHz) -20 dBm to +7 dBm (1.5 GHz to 2 GHz)

Trigger Level: Fixed at 0V NOMINAL

Coupling: ac

Input Impedance (nominal): 50 ohms (VSWR <=2.5)

Max. Input Level: +20 dBm

External Arm Range: dc coupled to 100 MHz

Minimum Pulse Width: 5 nsec

Triggering Range: +/-5 V adjustable in 20 mV steps

Input Impedance (nominal): 1M ohm, shunted by <50 pf

Max. Input Level: 5 Vrms (+/-15 Vpk-pk, dc+/- peak ac)

Measurement Control Holdoff or Sample: 0 to 4e9 events (65,000 events with fast meas. mode) 2 nsec to 8.0 sec (131 usec with fast meas. mode)

Edge Holdoff or Sampling: HP 5373A becomes armed after a delay from edge as follows: <15 nsec Ext Arm arms A or B <8 nsec B arms A, A arms B <5 nsec A arms A, B arms B

Interval Sampling: 100 nsec to 8 sec (131 usec with fast meas. mode)

Cycle Sampling: Cycles of input signal or 500 MHz time base in discrete steps: 2^4, 2^8, 2^12, 2^16, 2^20, 2^24, 2^28 (2^4, 2^8, 2^12 with fast mode).

Random Sampling: Start of subsequent measurement delayed by a random number of events between 6 and 17 on channel A. Maximum input frequency 100 MHz.

Inhibit Input: Rear panel input will inhibit memory acquisition when signal is above/below threshold (programmable from front panel, or HP-IB). Inhibit is independent of other arming and sampling.

Pre-trigger: Measurement can be acquired before and after a pre-trigger event. These include an edge on the external arm channel for PRI/frequency, PRI/Period, or time interval measurements or a detected time interval value for time interval measurements.

Rear Panel Frequency Standard Output: 10 MHz, short term stability not specified

Frequency Standard Input: 1, 2, 5, or 10 MHz input

Gate Outputs: Falling TTL edge indicates measurement sample.

Delay Outputs: Falling TTL edge indicates completion of holdoff arming.

Inhibit Input: Programmable input level suppresses measurement acquisition.

TI Detect: Output is low for duration of out-of-range measurements.

FastPort Outputs (opt 020): Three 40-pin connectors provide unprocessed data directly from count hardware. 16 bits of data and 1 strobe for each connector.

200 ps single-shot LSD resolution
There is usually no need to repeat a signal simply to accommodate your test equipment. If you can work with a repetitive signal, the 5373A provides signal averaging to improve resolution.

Broad measurement selection
Measure pulse width, duty cycle, rise and fall time; amplitude parameters; phase coded signals; tracking and capture range of a PLL; and much more.

Built-in analysis
Statistical measures of parameters such as pulse width and PRI jitter provide valuable insight on the performance of even the simplest of pulsed systems.

Graphic display
Results reveal maximum information at a glance. Markers provide read-out and analysis of your measurements. Numerical results can also be displayed.