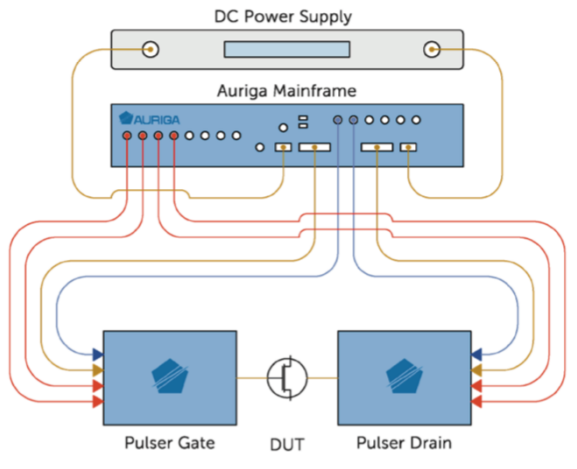


# AU5 Pulsed IV/RF Characterization System

# The New AU5 Pulsed IV System



# AU5 - System – Performance

## Building on the already “best-in-class” AU4750 Performance

- 20% faster measurements
- Precise pulses – accuracy and resolution
- Measurement set-up streamlined and easier
  - Improved and familiar graphical user interface (GUI)
  - Intuitive user paradigm requires less “clicks”



# AU5 - System – Features

## Features and functionality

- ◆ Smaller dimensions (2U vs. 5U)
- ◆ Powerful design
  - 64-bit architecture, 16 Gb memory, 480 Gb SDD, 4 cores
  - Architected to support higher voltage pulser heads
- ◆ 2-year software roadmap based on user feedback

# AU5 System – Flexibility

## Interchangeable pulser head family

- ◆ Right pulser head for right job
- ◆ Excellent accuracy/resolution
- ◆ Roadmap for higher voltage heads

## Integration with other leading products

- ◆ Agilent PNA-X and pulsed PNA (RF Option)
- ◆ Focus Load Pull (LP Option)
- ◆ Published Application Programming Interface (API)
  - Users may customize or generate own integration programs
  - Supports AU4750 APIs

# AU5 System – Flexibility

- A simple, updated user interface and new chart display.
- Fast calibration of the Auriga pulsed IV system.
- A preview of pulse settings before application.
- Easy pulse timing adjustments on the oscilloscope display using a mouse.
- The ability to perform accurate pulsed IV measurements on FET and BJT devices.
- Easy switching between different test scenarios ( $I_d$  vs  $V_d$ ,  $I_d$  vs  $V_g$ , etc.).
- A display of results in real time as they are measured.
- The ability to compare different measurement test runs.
- Pulsed S-Parameter measurements with a VNA
- The ability to remotely control the Auriga pulsed IV system by another programming environment or with Focus' FDCS software.
- Easy swapping of pulser heads or instruments and detect changes with the click of a button.

# AU5 - Interchangeable Pulsers Heads

Pulsers heads meet the most demanding requirements

- ◆ Hot-swappable
- ◆ Wide range of pulse widths
- ◆ RF microwave users: up to 220 V (2 A, 10 A or 30 A)
- ◆ Power electronics users: up to 600 V (1 A, 5 A, and soon 30 A)
- ◆ 900-1200 V
- ◆ Excellent pulse form – rapid rise, minimum “ripple,” flat
- ◆ Low pulse droop
- ◆ Resolution of 0.1% of max current

# AU5 - Pulser Head Specifications



Specifications:	PHG1001	PHD1020	PHD1100	PHD1300	PHD2010	PHD2050	PHD3100
Max Voltage	±20 V	220 V	220 V	220 V	600 V	600 V	1200 V
Max Current Pulsed	100 mA	2 A	10 A	30 A	1 A	5 A	100 A
Max Current DC	100 mA	0.85 A	1.7 A	5.0 A	1.0 A	1.0 A	1.0 A
Typical Error	0.1 %	0.1 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %
Max Power	2 W	40 W	200 W	1000 W	200 W	1000 W	<5000 W
Min Pulse Width	200 ns	200 ns	750 ns	1000 ns	200 ns	200 ns	>700 ns
Max Pulse Repetition Frequency (PRF)	250 KHz @ 20 V	20 KHz @ 200 V 80 KHz @ 100 V	20 KHz @ 200 V 80 KHz @ 100 V	20 KHz @ 200 V 80 KHz @ 100 V	80 KHz @ 200V	80 KHz @ 200V	28 KHz (V dep.) 1.4 KHz @1200V
Min Output Rise/Fall	30 ns	30 ns	55 ns	60 ns	35 ns	35 ns	35 ns
Test Port Connector	BNC (f)	BNC (f)	BNC (f)	BNC (f)	MHV (f)	MHV (f)	MHV (f)

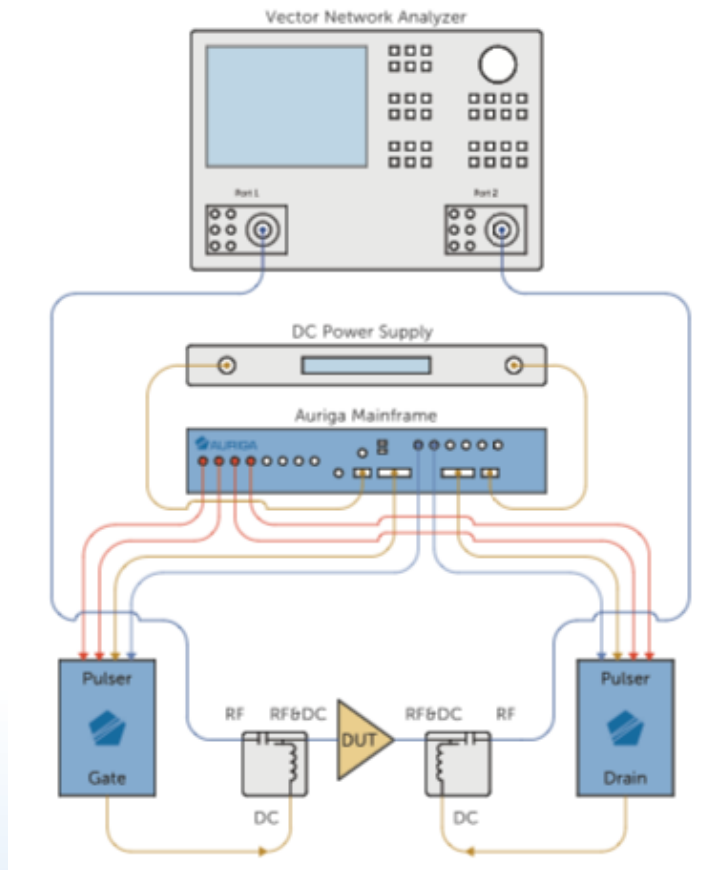
## Notes

1. System calibration based on precision resistors
2. Specifications may fluctuate based on customer DUT and fixturing





# Pulsed S-Parameter RF Option (II)



- ❖ Pulsed IV measurements stored in CITI and/or CSV formats; S-parameters stored in s2p format files
- ❖ Synchronization of timing of the pulsed DC and Pulsed RF (both RF modulation and RF acquisition) is handled by hardware timing triggers of the AU4850 controlling the PNA
- ❖ IC-CAP compatible (MDM files)

# AU5 Pulsed IV/RF Characterization System

For more information

[www.focus-microwaves.com](http://www.focus-microwaves.com)

